

The **LOON**

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The LOON Minnesota's magazine of birds and nature, is published four times each year by the **Minnesota Ornithologists' Union**, the statewide bird club. Permanent address: J. F. Bell Museum of Natural History, University of Minnesota, Minneapolis 55455. Anyone interested in birds and nature may join. Any organization with similar aims may affiliate. All MOU members receive our two quarterly publications: **The Loon** and the **MOU Newsletter**.

MEMBERSHIPS AND SUBSCRIPTIONS: Paul Egeland, 12 East 67th Street, Minneapolis, Minnesota 55423. To join the MOU and receive both MOU publications, send \$6.00 for a regular yearly subscription. Or other classes of membership that you may choose are: Family \$7.50 yearly; Contributing \$10 yearly; Sustaining \$25 yearly; Life \$100. Canadian and Foreign Subscriptions, \$10 yearly. Also available: back issues of **The Loon** (\$1.50 each ppd.) and MOU checklists of Minnesota birds (minimum lots of 20 for \$1.50 postage paid). Gifts, bequests, and contributions to the MOU Endowment Fund should also be sent to the treasurer.

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"**The Season**" section of **The Loon** publishes reports of bird sightings throughout Minnesota. We particularly invite reports from parts of the state that have been neglected or covered lightly in past reports. To become a contributor to "The Season," request the report forms from the **EDITOR OF "THE SEASON," Mrs. Janet Green, 9773 North Shore Drive, Duluth, Minnesota 55804.** (phone 218-525-5654).

EDITOR OF THE MOU NEWSLETTER: Mrs. Marilyn Mauritz, 6810 Tecumseh Lane, Excelsior, Minn. 55331. Publishes announcements and reports about activities of the MOU and its affiliated clubs. (Club officers should keep both MOU editors informed.)

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STILL MORE EDDIE T. ORIOLE OPINIONS

One of the dangers involved with the solicitation of letters of opinion from readers comes when these comments show editorial policy has messed up. Such is the case now as the recent decision to shorten the spring and fall seasonal reports appears to be an unpopular one. We thought this move was sufficiently justified by reducing those long, grueling hours put in by the compilers and by reducing the cost of printing these reports: both Paul Egeland and Terry Savaloja were on the verge of giving up their demanding duties unless their task was eased, and the combined cost of their latest reports was about \$400 less than the year before. But the following letters make a strong case for returning to those longer migration reports.

Vince Herring of Rochester says:

"I noticed . . . a change in the format for publishing the seasonal report in **The Loon**.

"I wouldn't be opposed to smaller print. However, I am strongly opposed to reducing the amount of information included. I hope by changing the format you don't mean eliminating dates, or numbers, or observers' initials.

"I realize a lot of work goes into the seasonal report. I feel it is the "heart" of **The Loon**. I, and others I have spoken to, hope you can continue the fine effort."

Vada Rudolph of Marine-on-St. Croix adds:

"I, too, feel the seasonal reports are of the greatest interest to me and I'm really sorry that they have been shortened. I find that I barely scan them

and then toss them aside. I've always liked seeing my own reports in them and observing what's been noted in my own county and surrounding counties as well as generally over the state. The reports seem much less interesting now. I do enjoy the Notes of Interest and would not like to see them dropped or reduced. However, I don't agree with anyone who suggests the technical material should be left out. I realize that there are many, many professional people in the M.O.U. — it is not just a bird club. Personally, I would prefer to pay even higher dues to see all these things covered in **The Loon**, although the seasonal reports mean the most to me."

Ken La Fond of Blaine not only comments but also volunteers his time to help us out:

"Regarding some of the comments on the editorial page of **The Loon**, I feel that colored covers are really not essential for the purpose of the journal. Regarding the division between academic and birding type articles, it seems to me that you have struck a good balance and that the journal serves both areas quite well.

"One other comment concerning the season reports. Having had the opportunity to go through all of the back issues while preparing my background data for the Anoka list, I feel very strongly that the more data contained in the seasonal reports, the more beneficial they become. I am sure it takes quite a bit of time to prepare these articles, particularly if fairly early dates for both north and south are included. Nevertheless, it is my feeling that perhaps this extra

effort is worth it with regard to increasing the overall value of the publication for future researchers. I feel strongly enough about this to go so far as to assist in data breakdown if it would facilitate a more complete seasonal report."

John Herman of Mansfield, Ohio, who has experience with such issues, also says:

"I am writing to state my opinions on the content of **The Loon**.

"I think that the increase in the M.O.U. dues is justified. I was editor of the ornithological publication **The Cardinal**, then the Ohio version of **The Loon**. As editor I was very aware of finances.

"Color covers of **The Loon** are absolutely worth the extra expense. There should be more of them. What is the price difference between a black and white and a color cover for **The Loon**? [about \$300 — Eddie]

"The long seasonal reports are the backbone of **The Loon**. I know how long it takes to compile these reports, as editor of **The Cardinal**, but the reports are very important. I do not like the format for the bird reports as used in the Fall 1977 and the Spring 1978 report. It is important to list the three most early or late dates of migration. By giving more dates, more contributors have an active and visual part of the report. If a person takes the time to fill in the report form but has no rare birds or extremely early or late dates of migration to report, he has no visual contribution in the compiled report for that season. This will discourage people to contribute reports if they know that none of their sightings will be printed.

"The Michigan **Jack-Pine Warbler** uses the format of reporting birds as used in the Spring 1978 issue of **The Loon**. Accidental and rare birds have their place, but they are not representative of an area's regular bird occurrence.

"The President's Page and Bert Lystor (now Eddie Oriole) are worthwhile. Eddie Oriole makes us laugh, in a world when sometimes it's hard to find something funny.

"It is important to have the M.O.U. Records Committee. There has to be a system that keeps the accuracy of the field reports at a high level. I have used documentation forms, as used by the Middlewestern Prairie Region of **American Birds**, to report rare birds. Documentation forms do not guarantee accuracy but they are better than no concrete evidence of the bird. Naturally the most accurate method is to collect the bird, but I am not in favor of this. A well written documentation and photograph of the rare bird is sufficient."

Finally this note from Mark Weldon of Ft. Wayne, Indiana: "I would just like to add that this will be my third year as a member, and I feel that you have one of the finest organizations in the country."

Just what does this last comment have to do with the seasonal report issue? Absolutely nothing, but we needed something to boost our morale after those first four letters. Thanks Mark! So tune in again, same time, same place, and see what the fall report looks like in the next issue of **The Loon** — you just might find we had to eat crow. (Get it? A bird publication . . . eating crow . . . well, it's the best we could come up with under the circumstances.)

ANOKA'S BREEDING BIRDS

Kenneth J. La Fond

A preliminary look at Anoka County's breeding bird population. Ken LaFond is attempting to determine the abundance of various species in the county with an ongoing breeding survey. 121 species have been reported as positively breeding in the county

INTRODUCTION

While reviewing data sources for preparation of the "Annotated List of Anoka County Birds," **LOON** 50:84-99, we found information suggesting that 116 species of birds have nested in Anoka County. We could not, however, find any substantial information concerning the relative scarcity or abundance of the various species.

To obtain preliminary data concerning the relative abundance of the nesting species, a series of roadside counts were made in June, 1978.

The purpose of this paper is to describe the methods utilized during the counts and to present the cumulative results of all count areas. A few brief comments are also included concerning the validity of the procedures and a speculative look at the possible breeding bird population of the county.

COUNT PROCEDURE

A total of twenty-five areas were surveyed between 6-11-78 and 6-25-78. Because of time limitations, the "single count" method was used. Each area was traversed once, by car, generally between 0500 and 1200 hours. The areas were traversed slowly and frequent stops were made. The start-stop times were recorded as was the initial mileage reading and direction of travel. Each singing male was assumed to represent a breeding pair (for Brown-headed Cowbirds only females were recorded). Each individual was identified by odometer readings

(mileage) from the starting point and further identified as left or right of the direction of travel. The distances were estimated to the nearest 0.05 mile. This permits mapping of the territories, if desired. An attempt was made to limit recorded species to those heard within 150' of each side of the road. This was an arbitrary decision and perhaps represents a strip too wide since many of the smaller Passerine species may be overlooked. Also, we wish to point out that we realize this procedure undoubtedly misses many of the species and thus results in an underestimate of the population.

All areas surveyed were east of the Rum River. They were chosen in an attempt to integrate the various habitats found in that portion of the county, although the overall results are undoubtedly biased towards the more wild, marshy and less populated eastern one-third of the area. A tabular description of the areas is included as an appendix.

RESULTS

Following is the cumulative results of all counts. The species are listed in descending order of total individuals and, where totals are identical, in taxonomic sequence:

Common Yellowthroat (287), Red-winged Blackbird (211), Song Sparrow (63), Black Tern (58), Veery (56), Bank Swallow (50), Yellow-headed Blackbird (47), American Robin (45), American Coot (33), Red-eyed

Vireo (33), Swamp Sparrow (32), Gray Catbird (30), Yellow Warbler (30), Eastern Wood Pewee (29), Long-billed Marsh Wren (20), Blue Jay (25), Common Grackle (25), Ovenbird (23), Great Crested Flycatcher (23), Brown-headed Cowbird (20), Mourning Dove (19), Rose-breasted Grosbeak (16), Chipping Sparrow (16), Willow Flycatcher (15), Vesper Sparrow (15), Ring-necked Pheasant (14), Eastern Meadowlark (14), Indigo Bunting (14), Barn Swallow (13), Northern Oriole (13), Killdeer (12), Starling (12), Western Meadowlark (12), Common Crow (10), Field Sparrow (10), Brown Thrasher (9), Pied-billed Grebe (8), Eastern Kingbird (8), Yellow-throated Vireo (8), Tree Swallow (7), Scarlet Tanager (7), American Goldfinch (7), Whip-poor-will (6), Common Flicker (6), Least Flycatcher (6), House Sparrow (6), House Wren (5), Cedar Waxwing (5), Virginia Rail (4), Sora (4), Rock Dove (4), White-breasted Nuthatch (4), Short-billed Marsh Wren (4), Grasshopper Sparrow (4), Savannah Sparrow (4), American Bittern (3), Red-tailed Hawk (3), Common Snipe (3), Brewer's Blackbird (3), Clay-colored Sparrow (3), Common Loon (2), Broad-winged Hawk (2), Marsh Hawk (2), American Kestrel (2), Downy Woodpecker (2), Black-capped Chickadee (2), Eastern Bluebird (2), Blue-gray Gnatcatcher (2), Rufous-sided Towhee (2), Northern Green Heron (1), Sandhill Crane (1), Common Gallinule (1), Barred Owl (1), Chimney Swift (1), Common Nighthawk (1), Belted Kingfisher (1), Pileated Woodpecker (1), Yellow-bellied Sapsucker (1), Hairy Woodpecker (1), Western Kingbird (1), Eastern Phoebe (1), Horned Lark (1), Wood Thrush (1), Warbling Vireo (1), Bobolink (1), Lark Sparrow (1).

Nests Found:

Pied-billed Grebe (6), Broad-winged Hawk (2), American Coot (10), Killdeer (3), Eastern Kingbird (1), Eastern Phoebe (1), Tree Swallow (1), Barn Swallow (1), Brown Thrasher (1),

American Robin (1).

DISCUSSION

The total distance along the twenty-five count areas was 52.25 miles. Assuming a stripe 300' wide gives a coverage of 2.97 square miles. Since Anoka County has a total area of about 443 square miles, the samples represent about 0.67% of the county.

A total of 1521 individuals representing 88 species was recorded. Of these 88 species, it appears that only nine comprise over 50% of the nesting birds in the areas traversed. These are (neglecting colonial or semi-colonial species), the Common Yellowthroat, Red-winged Blackbird, Song Sparrow, Veery, American Robin, Red-eyed Vireo, Swamp Sparrow, Gray Catbird and Yellow Warbler.

Stewart (**Breeding Birds of North Dakota**, Tri-Center College for Environmental Studies, Fargo, North Dakota, 1975) indicated a breeding density range of from 60 pairs per square mile to 1396 pairs per square mile for the state of North Dakota. The mean was 368 pairs per square mile. Using the above data results in an average population of 512 breeding pairs per square mile in the areas covered in Anoka County. This figure is undoubtedly in error for two principal reasons. First, the single count method undoubtedly underestimates the population and secondly, the assumption of a 300' wide strip is probably excessive and should have been reduced. Both of these factors would tend to increase the density. Extrapolating this figure to the full county area suggests a breeding bird population in excess of 200,000 pairs. This figure is, however, very preliminary because of the probable errors mentioned above and because of the strong bias towards the more wild portions of the county. It is our intention to perform additional surveys in other areas of the county to provide better coverage and permit a more reasonable estimate.

Somewhat surprisingly, it appears

that the Common Yellowthroat may be the most abundant breeding bird in the county. This is the only species recorded on all 25 counts (the Red-winged Blackbird was absent on one). There could be nearly 40,000 breeding pairs of yellowthroats in the county.

Conversely, over 50 species comprise less than 10% of the breeding population.

The above should not be construed as a complete or thorough study of Anoka's breeding birds. As the introduction implies, it is simply a preliminary data gathering exercise and should be treated as such.

ADDENDUM

Several additional species have been recorded as nesting in Anoka County since publication of the annotated list. The Wood Thrush and the Blue-gray Gnatcatcher were described as nesting in Anoka County in the **LOON** 50:19.

Two adult Western Grebes were observed with three half grown young on Rice Lake in Lino Lakes on July 16, 1978. One or two adults had been observed periodically in the area since late May. This may be the most easterly continental breeding record for the species.

Forster's Terns were observed in Lino Lakes from late May into July, and on July 16, two colonies were found. The first was on Marshan Lake and consisted of about 25 pairs. The second was about a mile to the south on Baldwin Lake. This consisted of about fifteen pairs. No nests were observed at either colony but when approached by boat the birds in both colonies were very disturbed.

There have been no county records of the Redhead nesting. Several males and at least two females were observed on Rice Lake all summer. In early August, at the same location, two half-grown broods were observed with adult females.

Thus, it appears that the number of species for which breeding status in Anoka County is confirmed or suspected should be increased to 121.

Spring 1979



APPENDIX

DESCRIPTION OF COUNT AREAS

Count Number	Date	Location: City-Street	Dominant Habitat	Length: Miles	Total Individuals
1	6-11	Carlos Avery WMA, N. of Game Farm	Oak Woods and Marsh	1.0	20
2	6-11	Carlos Avery WMA, East of Nursery	Oak Woods	3.1	120
3	6-11	Carlos Avery WMA, 205th Ave.	Marsh- Oak Woods	2.1	99
4	6-12	Blaine Xylite St.	Fields- Open Woods	1.0	45
5	6-12	Centerville West Side of Lake	Marsh- Brushy Woods	1.75	70
6	6-13	Coon Rapids Bunker Hills Park	Open Woods Pine Plantation	1.85	14
7	6-14	Lino Lakes Aqua Lane	Marsh	0.55	22
8	6-14	Lino Lakes Chain-O-Lakes Park	Fields, Marsh	1.4	24
9	6-16	Lino Lakes Marshan Lane	Oak Woods	1.2	39
10	6-18	Blaine Cloud Drive	Open Residential	1.8	32
11	6-18	Ham Lake, Lexington Ave.	Open Residential	5.9	173
12	6-18	Carlos Avery WMA, East of Pool #4	Marsh	3.8	263
13	6-18	Carlos Avery WMA, Stone Bridge Road	Marsh, Oak Woods	3.45	80
14	6-23	Andover, Prairie Road	Fields, Residential	5.0	68
15	6-23	Bunker Park Road B & C	Oak and Pine Woods	1.8	18
Count Number	Date	Location: City-Street	Dominant Habitat	Length: Miles	Total Individuals
16	6-24	Ham Lake Klondike Road	Open Woods, Residential	2.0	61
17	6-24	Cedar Creek East Bethel Blvd.	Fields, Woods	1.5	26

18	6-24	Carlos Avery WMA, West Road	Marsh, Woods	2.0	70
19	6-25	Blaine, 101st St. (East)	Fields, Residential	2.0	41
20	6-25	Carlos Avery WMA, Dike Road	Marsh	0.35	12
21	6-25	Blaine, 101st St. (West)	Grassy Field	0.20	14
22	6-25	Carlos Avery WMA, 205th Av. W. Bound	Marsh	0.25	22
23	6-25	Carlos Avery WMA, North Bound	Marsh, Woods	3.35	114
24	6-25	Carlos Avery WMA, Northwest Road	Marsh, Woods	1.3	34
25	6-25	Blaine, Radisson Road	Fields	3.6	40
		TOTAL		52.25	1521

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RUFIOUS HUMMINGBIRDS IN MINNESOTA

During September and October, 1978, there were at least two Rufous Hummingbirds in Minnesota. A third bird may have been in Cass County all summer. The species has only been recorded in the state once before, a single bird on August 4, 1974 at Grand Rapids, Itasca Co. (The Loon 46:167-168). The following are the accounts of the birds seen in 1978.

BEMIDJI, MINNESOTA

Sept. 6 through Oct. 25, 1978
Nel Marie Melville

The first sighting of the Rufous Hummingbird was at my feeder at 1:30, 6 September 1978. It was a warm sunny day. My formula was 1 part sugar and 4 parts water and no food coloring. The hummer flew up to the

windows of my home several times. I have some horizontal windows and it flew between the opened window and the screen and hovered in front for several seconds. When the Ruby-throated were at the feeder it gave way to them. This surprised me because I have read that the Rufous is among the most pugnacious of the hummers. When the hornets were at the feeder the Rufous would repeat

a "tzik, tzik" sound and try to avoid them. The sex of this bird has not been positively determined but I shall refer to it in the masculine gender.

On 8 September I called Dr. Harold Peters, Professor of Biology, (now retired) Bemidji State University and Mrs. Peters and he confirmed my finding. On September 9 and 10 I was out of town. September 11 was my last sighting of the Ruby-throated. I was out of town intermittently through most of September. I had assumed the Rufous had migrated with the Ruby-throats. For some unknown reason I had left the feeder out. On September 30 at 1:30, a glorious fall day, in zoomed the Rufous. I was stunned. I called Dr. Peters and Dr. A. S. (Laddie) Elwell and we decided to remove the feeder. We thought that perhaps a source of food was keeping him from leaving. After he fed well I removed the feeder. He returned twice within the next five minutes to the feeder area and from there he flew and fed on the funcia, nasturtium, lobellia, and hollyhock blossoms. We had not yet had a killing frost and there were many flowers still in blossom in my garden. He also hovered around some dried daylily blossoms.

The following week I was away Tuesday, Wednesday, and Thursday. The weather was cold and blustery. By the weekend it was sunny and warmer. At 3 p.m. on Sunday 8 October there zoomed in my Rufous, straight at the feeder area. He hovered there for a second and then flew and fed on lobellia, petunia, and hollyhock blossoms. Again I called Laddie and we decided to put the feeder out again. It was now so late in the season we felt we might as well feed him until nature would take its course. But, the more I thought about it, the more I wanted to try to save this hummer.

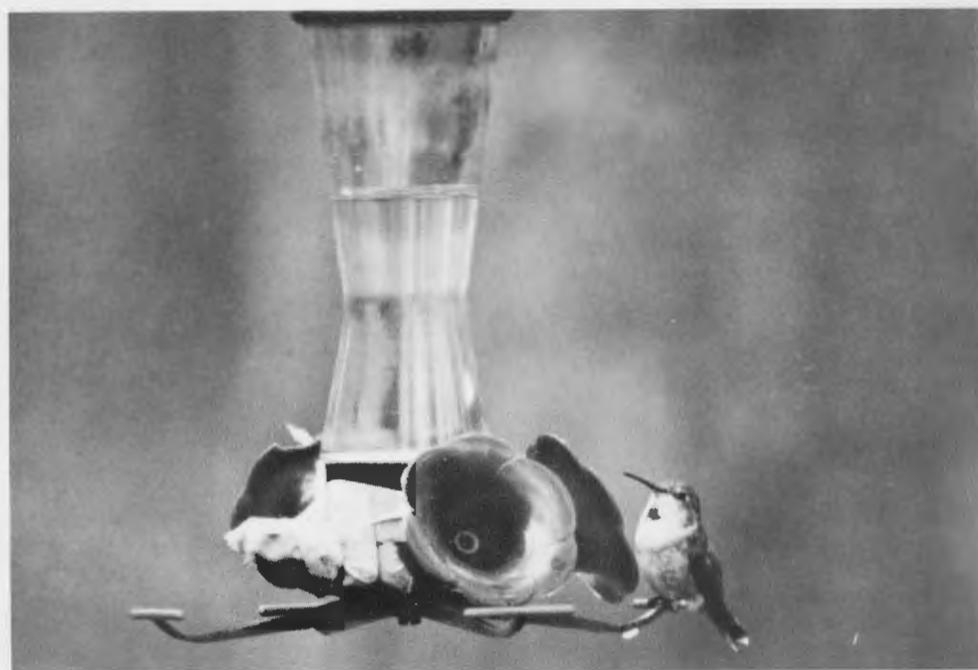
On Monday, October 9, I called the Minnesota Bird Alert and stated my plight and asked for help. Little did I know what excitement this would create in the bird world. I talked

with Bob Janssen Monday evening and he also suggested putting the feeder out again and asked me to watch for the Rufous. Monday evening I had attended the meeting of the Mississippi Headwaters Chapter of the Audubon Society. I asked the members for suggestions on how to save this bird.

Tuesday, October 10 the hummer appeared at the feeder 32 times! between 11:20 and 6:45. Laddie Elwell, Diane Morris, Jim Mattsson, Noel Benson and others observed and photographed the Rufous. Needless to say I was wild with excitement in reporting this great news to Bob Janssen Tuesday evening. Unfortunately I had to be away, but I was informed that Bob Janssen, Kim Eckert, Dr. Peters, Laddie Elwell, Diane Morris and Noel Benson observed the Rufous on Wednesday, October 11. I understand the Rufous even perched for 25 minutes. I was also informed that the Rufous was observed by Ruth Andberg, Gary Otnes, Liz Campbell, Lloyd Paynter, Mr. and Mrs. Steve Blanich, Ray Glasel and Dick Ruhme.

I was home on the week-end of October 21 and 22. Saturday, October 21 dawned a beautiful fall day. From 10:16 A.M. until I had to leave for the evening at 5:10 P.M. the Rufous was observed 23 times. Dr. and Mrs. Peters again observed him and Lloyd Paynter of Aitkin, Minn. spent the better part of the afternoon photographing him.

An interesting thing occurred at my first sighting this particular Saturday. As I said it was a glorious morning. I was having a cup of coffee on the deck and was wearing a brilliant Chinese red robe. The Rufous zoomed in to within three feet of me and hovered, looking at me. My feeling is that he was attracted by the color of my robe. He then flew to the feeder which was four feet from where I was sitting and he turned his back to me as he fed. I had not seen him do this before. Previously he would feed facing me or else he would peek at



Rufous Hummingbird at the Melville's feeder

Photos by Jim Mattsson

me from behind the feeder. I have a feeder that has four perches.

I wanted to somehow save this rare visitor. I placed a custard cup with my formula in it on a table on the deck and floated one of the plastic red "flowers" removed from my first feeder. I also hung another feeder right next to my house and under the roof overhang. My thought was to then place a fourth feeder inside of my house and try to lure him into the house. I thought perhaps the greenhouse of Bemidji State University could then be the home for the Rufous for the winter. I just had to try to do something to save him. I am a sentimentalist not a biologist.

At 11:55 I again observed an un-behavior. A red squirrel was stretched out on a limb of a tree by the deck. The hummer zoomed in and perched on a limb of an adjacent tree — just several feet away. Then the hummer zoomed to within 12 inches of the squirrel and hovered for several seconds and just observed the squirrel. He then flew to feeder No. 1 and fed. By 1 P.M. a front had moved in and it began to get cold, windy and cloudy. The hummer was having difficulty perching at feeder No. 1 because it was swaying in the breeze. He still did not feed at the two other feeders.

I am indebted to Al Grewe of St. Cloud, Minnesota who graciously loaned me several excellent books on the hummingbird. I can recommend **Life Histories of North American Cuckoos, Goatsuckers, Hummingbirds, and their Allies** by Arthur Cleveland Bent, and **Hummingbirds** by Walter Scheithauer. From **The Hummingbirds and their Flowers**, by Karen A. Grant and Verne Grant I read that the northernmost distribution of the Rufous is southeastern Alaska; there is one brood in late spring; by August they begin their migration; and the Rufous is the hardiest of the hummers and can tolerate cool weather quite well. I also read "on migration through Ranch Santa Ana Botanic Gardens the Rufous,

which passes through in early spring, is usually seen feeding on flowers growing in the deep shade of tall trees." This also was in the book by Grant and Grant. My home is situated amid tall Norway and White Pine trees and the yard is quite shaded. I have wondered if that attracted the Rufous to my feeder.

Sunday, October 22 was very cold and very windy — in the low 30's range all day. My first observation was at 9 A.M. From feeder No. 1 the hummer flew and hovered in front of an orange ceramic owl I have hanging on the house. At 9:20 he hovered around feeder No. 3 (under the roof overhang and right next to the house. This feeder was out of the wind. At 10:02 he again looked at this feeder after much difficulty perching to feed at feeder No. 1. At 10:12 he again looked over feeder No. 3 and then flew around the corner to the front of my house and down to where some nasturtiums were. The blossoms had frozen during the night. He flew up to my living room windows and hovered at the windows for a few seconds and then around the corner to my glass sliding doors and again hovered in front of the door. At 11:05 he flew into my flower garden — the flowers were mostly frozen here too — then around my bird bath in the middle of the flower garden and up to my winter bird feeder that contained sunflower seeds. Ordinarily he would feed and perch or feed and zoom away and be out of sight in a second. Between 9 A.M. and 11:30 there were 19 observations. Mr. and Mrs. Byron Bratlie of Blaine, Minnesota, were now observing and photographing the Rufous and several times I mentioned the erratic behavior of the hummer.

At 11:25 A.M. the Rufous fed from feeder No. 3 for the first time. It was getting colder outdoors so I opened full wide the sliding glass doors directly across from feeder No. 1. We would be sheltered but still be able to observe him. Mr. Bratlie observed the hummer perched on a brush pile

by my garage — about 50 feet from the house. Mrs. Bratlie and I took our binoculars with us and joined Mr. Bratlie. We all observed for a few minutes. From the brush pile he flew to feeder No. 1 and on to hover in front of the open door and then into the house. I closed the sliding door. The hummer was beating against the window. I closed the draperies and he was caught on the loose weave of the fabric. I got my butterfly net and carefully put it over him and then gently took him in my hand. I held him while my son and Mr. and Mrs. Bratlie, on instructions from Laddie Elwell, made up a perch in a box. While they were doing this, twice I took the hummer to feeder No. 1 and twice he fed. I observed his tongue working. He did not appear hurt. All this occurred at 11:30 A.M. We placed some fine netting over the top of the box and over that some aluminum foil to darken the box. While my son drove me into town I forced the tube of the feeder through the netting and again fed the hummer. He readily took food and he was on his perch. He was beating his wings so I knew he had not injured them beating against my windows. He appeared alert and chipper. While I was holding him he twice excreted a clear colorless liquid into my hand.

I turned him over to Laddie. We thought perhaps the Minnesota Zoological Gardens could winter him. She called but they did not have the facilities for so tiny a bird. The next step was to contact an airline and have him flown to south Texas. In Walter Scheithauer's book *Hummingbirds*, he told of how hummers are flown from South America to European Zoos.

Sunday, Laddie fed him a formula of a milk protein/carbohydrate solution. It included sweetened condensed milk. This is used by the Minnesota Zoological Gardens. She said he took this formula well. Laddie made perches for the Rufous about her house and he would fly about and

perch. By Monday she saw a change in him. He would feed when hand-held but when not held tended to slip backwards on his perch. By Tuesday it was obvious to her that he was failing. He fed very little, if any. On Wednesday, Oct. 25 he took no food essentially. He would flick his tongue into the feeder tube a couple of times when hand held. Wednesday evening Laddie took him with her (to force feed him) to the State Audubon Council which was held in one of our finer restaurants. There she tried to force feed him but he did not feed. He died at 6 P.M. on October 25, 1978.

My thoughts on luring him into my home and capturing him was to provide him with at least a chance to survive. It was so cold it is doubtful he would have survived the night.

The study skin was prepared by Diane M. Morris, Dr. A. S. Elwell and Jim Mattson assisted with sexing. The Rufous was probably a male. They found a "light-colored ovoid structure suggestive of testis but with softer structure" according to Diane Morris. A growth was discovered on the neck, dorsal to vertebral column. According to Laddie, "tissue appeared to be of epithelial origin — structure appeared glandular." Laddie stated that the growth, "unusual growth in the neck, dorsal to vertebral column when first seen, but appearing as though it may have slipped back from a ventral position." She told me that this growth perhaps could have blocked his esophagus and thus have prevented him from feeding.

On Wednesday, December 13, Laddie was to attend a raptor clinic in St. Paul. She said she would take the growth with her for further study and identification. At this writing I do not have the findings of the study. **Rt. 1, Box 249M, Bemidji, MN 56601.**

Editor's Note: The specimen was sent at my request to Dr. Harrison Tardoff of the Bell Museum at the University of Minnesota for positive identification. I thought this necessary because

of the possible confusion with Allen's Hummingbird. The specimen was positively identified as a Rufous Hummingbird. Dr. Tordoff commented that the most conclusive feature of the Rufous is the wider tail feathers as compared to the Allen's Hummingbird.

RUFOUS HUMMINGBIRD AT HASTINGS

Mr. & Mrs. Eugene Binder

The following letter and photographs were received via Sam Robins of Medford, Wisconsin.

"Enclosed are some pictures my husband took in October of this year



Rufous Hummingbird at Hastings

Photo by Eugene Binder

(1978). We thought you might enjoy seeing them. We are sure the subject is a hummingbird. The first sighting was at the end of September and we saw him until October 15. Then we were gone for a week so nobody refilled the feeder. When we came home, we didn't see him again. We have many Ruby-throated Hummingbirds throughout the summer. They had already gone for the summer before we spotted this bird. The bird was rusty-brown on the back, darker rust on the throat." 13815 Pt. Douglas Drive S., Hastings, Washington Co., MN 55033.

Editor's Note: The presence of a rufous back and a close examination of the two colored photos, one of which is reproduced above appear to definitely confirm a male Rufous Hummingbird.

TWO SPECIES OF HUMMINGBIRD AT LAKE ADA

Ronald L. Huber

Earlier this summer, one of my office co-workers, Eugene Nelson, asked me what the "larger species of hummingbird" was that had visited his mother's feeders at Lake Ada in Cass County, about 10 miles north of Pine River on Highway 84. Upon questioning him further, I found that he was familiar with both sexes of the Ruby-throated Hummingbird and had, for six previous summers, seen them bring family groups to the feeders. I suggested that if he saw the "stranger" again he should take a photograph or prepare a detailed sketch (Mr. Nelson is an accomplished artist and has a keen eye for detail). I promptly forgot the report for lack of any further details.

Then, after seeing the now-famous Rufous Hummingbird in Bemidji in

October, 1978, I recalled Mr. Nelson's report and sought him out for any further details. He volunteered the following details without any coaching from me: the noticeably larger species of hummingbird had appeared in late May, 1978 at the Lake Ada feeders, and had visited the feeders irregularly until the last week of August, 1978. It was noticeably larger than the Ruby-throated Hummingbirds, brownish on the back when viewed from any angle, and a broadly-fanned tail instead of slightly notched, and aggressively "bullied" both sexes of the smaller Ruby-throat away from any given feeder. In regard to this last detail, it is interesting to note comments by Bent (1940): "All observers seem to agree that jealous courage and pugnacity are among the chief attributes of the Rufous Humming-

bird; it seems to be the dominant species in the vicinity of its nest and about its feeding places, driving away, not only other hummingbirds, but other species of larger birds and animals; it seems to love to fight and often appears to provoke a quarrel unnecessarily."

Although the above data do not establish an identity for the "strange" hummingbird, the Rufous Hummingbird seems a very strong possibility, and hence my documentation of this report. 2896 Simpson St. N., Roseville, MN 55113.

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BIRD VECTORS OF BLACK SPRUCE DWARF MISTLETOE

MICHAEL E. OSTRY

THOMAS H. NICHOLLS

Don't let the title of this article scare you away. How many times, while birding in the Boreal forest, have you asked yourself what those clumps are in the tops of the Black Spruce trees? Read this article and find out how many birds may be the cause of them.

Eastern dwarf mistletoe causes the most damaging disease of black spruce in Minnesota, Wisconsin, and Michigan. It attacks many black spruce trees, robbing them of nutrients and eventually killing them (Ostry & Nicholls 1976). Black spruce fibers are used to produce high quality paper, so understanding how mistletoe is spread is important.

Each fall mistletoe produces a crop of berries which, upon maturity, explosively discharge sticky seeds that adhere to anything they strike. In this way healthy trees adjacent to infected trees are infected.

For years, scientists have speculated that birds and small animals may carry the sticky mistletoe seeds long distances on their feathers or fur.

Table 1 — Species of birds and mammals sighted or captured in a black spruce swamp in the Fond du Lac State Forest, Carlton County, Minnesota, Sept. of 1973-1975.

Species	Number Captured*		
	1973	1974	1975
Ruffed Grouse (<i>Bonasa umbellus</i>)			
Marsh Hawk (<i>Circus cyaneus</i>)		1	
Sharp-shinned Hawk (<i>Accipiter striatus</i>)		1	2
Red-tailed Hawk (<i>Buteo jamaicensis</i>)			
Broad-winged Hawk (<i>Bueto platypterus</i>)			
Rough-legged Hawk (<i>Bueto lagopus</i>)			
American Kestrel (<i>Falco sparverius</i>)			
Hairy Woodpecker (<i>Dendrocopos villosus</i>)	1	2	
Downy Woodpecker (<i>Dendrocopos pubescens</i>)	1		
Black-backed Three-toed Woodpecker (<i>Picoides arcticus</i>)			
Northern Three-toed Woodpecker (<i>Picoides tridactylus</i>)			
Yellow-bellied Sapsucker (<i>Sphyrapicus varius</i>)			
Common Flicker (<i>Colaptes auratus</i>)		2	1
Trail's Flycatcher (<i>Empidonax traillii</i>)			2
Blue Jay (<i>Cyanocitta cristata</i>)	5	3	1
Gray Jay (<i>Perisoreus canadensis</i>)	7	12	4
White-winged Crossbill (<i>Loxia leucoptera</i>)			
American Goldfinch (<i>Spinus tristis</i>)			
White-throated Sparrow (<i>Zonotrichia albicollis</i>)			2
Swamp Sparrow (<i>Melospiza georgiana</i>)			1
Dark-eyed Junco (<i>Junco hyemalis</i>)		5	4
Solitary Vireo (<i>Vireo solitarius</i>)			
Tennessee Warbler (<i>Vermivora peregrina</i>)			6
Yellow Warbler (<i>Dendroica petechia</i>)			1
Yellow-rumped Warbler (<i>Dendroica coronata</i>)	6	34	37
Magnolia Warbler (<i>Dendroica magnolia</i>)			1
Blackburnian Warbler (<i>Dendroica fusca</i>)			2
Pine Warbler (<i>Dendroica pinus</i>)		1	1
Palm Warbler (<i>Dendroica palmarum</i>)			12
Connecticut Warbler (<i>Oporornis agilis</i>)			8
Wilson's Warbler (<i>Wilsonia pusilla</i>)			1
House Wren (<i>Troglodytes aedon</i>)			
Brown Creeper (<i>Certhia familiaris</i>)	1	1	1
Red-breasted Nuthatch (<i>Sitta canadensis</i>)		1	
Black-capped Chickadee (<i>Parus atricapillus</i>)			
Boreal Chickadee (<i>Parus hudsonicus</i>)	4	8	8
Golden-crowned Kinglet (<i>Regulus satrapa</i>)		1	3
Ruby-crowned Kinglet (<i>Regulus calendula</i>)		2	2
Swanson's Thrush (<i>Hylocichla ustulata</i>)			3
Hermit Thrush (<i>Hylocichla guttata</i>)	2	1	2
American Robin (<i>Turdus migratorius</i>)			
Northern Flying Squirrel (<i>Glaucomys sabrinus</i>)		6	
Red Squirrel (<i>Tamiasciurus hudsonicus</i>)	3	3	6
TOTALS	30	84	111

*Does not include recaptures of previously banded birds.

This would account for the many small pockets of infection that occur far removed from major infection areas. The suspicion was confirmed during a 3-year study near Cloquet, Minnesota, in Carlton County, where radio telemetry was used for the first time to trace the movements of vectors of a plant pathogen (Ostry 1978).

Mist nets and cell traps were used to capture birds and squirrels in a spruce swamp during the mistletoe seed dispersal period in September of 1973, 1974, and 1975. A total of 225 birds and squirrels (not including recaptures) representing 43 species were captured in and near mistletoe infection pockets (Table 1). All were examined for seed adhering to their bodies. Birds were banded with U.S.

Fish & Wildlife Service bands and released. In 1974, 12 percent of the birds and animals captured had mistletoe seeds on their bodies. In 1975, 20 percent were carrying one or more seeds. All told, 28 birds and animals, mostly birds, representing seven species (Gray Jays; Dark-eyed Juncos; red squirrels; flying squirrels; and Yellow-rumped, Yellow, and Palm Warblers) were captured with seed on their bodies.

Experiments with caged birds showed that birds did not eat the mistletoe seed, but that they could inoculate healthy spruce trees when they removed seeds clinging to their bodies by preening and bill-wiping.

Now that there was evidence that birds and animals could indeed transport mistletoe seed, the next step was to see if their movements coincided with mistletoe infection.

Radio transmitters, weighing only 3.5 grams, were used to study the movements of Gray Jays now known to be one of the most important carriers of eastern dwarf mistletoe seed. Transmitters were attached to Gray Jays with a back-pack harness, adapted after Godfrey (1970). Fourteen Gray Jays were radio-tracked in September during the three years of this study. No injury to any of the birds carrying the radio package resulted during the 134 data days. The transmitters were effective for about two miles. Battery life averaged 15 to 25 days. One Gray Jay was radio-tracked in two consecutive years.

The birds were radio-tracked back and forth between healthy and infected stands of black spruce by means of radio receivers mounted on revolving antennas at three different locations within the forest. Birds could be located at any time by triangulating with these instruments — similar to the way forest fires are located from fire control towers.

The study showed that the Gray Jays utilized both infected and healthy areas of black spruce within their home ranges and that the pattern of



Figure 1 — Black spruce infected with eastern dwarf mistletoe. Large bushy, dense, masses of branches caused by the mistletoe are called "witches brooms." Gray Jays and red squirrels often make nests in them.



Figure 2 — A Gray Jay trapped in a black spruce swamp with a mistletoe seed (arrow) stuck to its feathers.

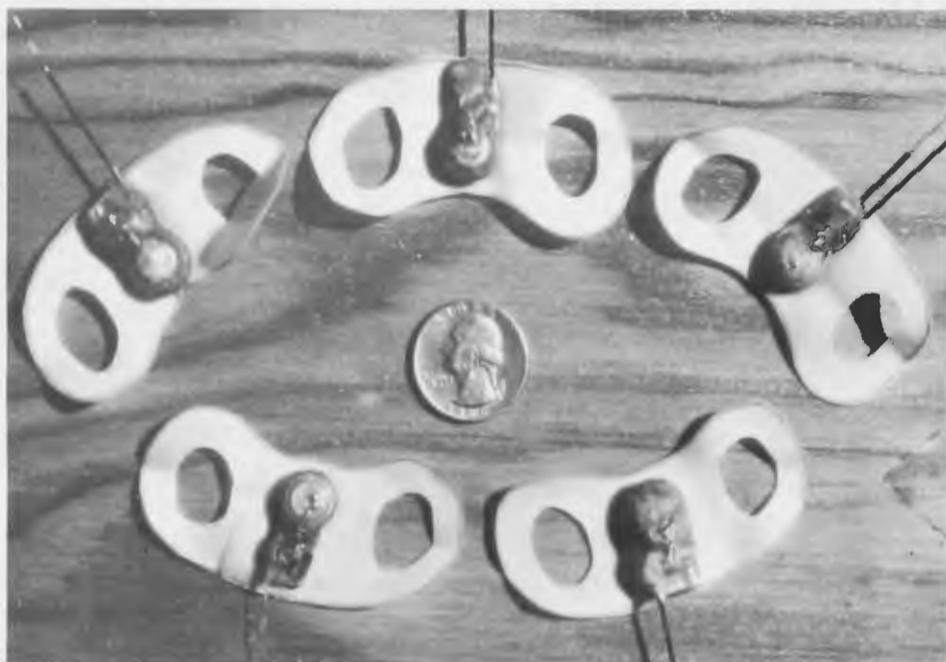


Figure 3 — Radio transmitters mounted on back-pack harnesses that were fitted onto the Gray Jays.



Figure 4 — A Gray Jay wearing a radio transmitter. All but the whip antenna is covered by feathers.

mistletoe infection in the area was similar to the pattern of movements by the Gray Jay.

Many migratory birds, mostly warblers, were captured in mistletoe infection pockets, several with seed on their bodies. These birds were extremely active in infected trees, feeding on insects associated with mistletoe-killed branches on these trees. In each year of the study, more bird activity was observed as more trees were killed by mistletoe and openings increased in size. Migrating birds could disseminate mistletoe seed over several miles and possibly introduce other species of dwarf mistletoe to new areas and conifer hosts.

The information gained in this study will help land managers to better understand and manage this disease. Data show that unless infection in black spruce is controlled, birds can

increase the rate of mistletoe spread by carrying the parasite to other spruce stands. Removal of infected trees through forest management is the best and easiest means of stopping the disease.

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FIRST BOREAL OWL NESTING RECORD SOUTH OF CANADA: A DIARY

Kim Eckert

March 1-2, 1978: Terry Savaloja and I head for the Ely area looking and listening for Boreal Owls calling in nesting territory. There has never been a Boreal Owl nest recorded in the U.S. outside of Alaska, although fledged juveniles have been found once in Colorado and once in Montana. But we've heard of nests found recently in nearby northwestern Ontario, and that the males started calling late in February. We've also obtained an excellent tape recording of one of these males. Twice we try after dusk along the Echo and Fernberg Trails but we hear nothing. A few days later I receive a letter from Soren Bondrup-Nielsen, who had found the nesting Boreal Owls in Ontario, and I'm informed that our preliminary information was wrong: he had found only one active nest, its location was northeast of Sault Ste. Marie (far from Minnesota), and a male Boreal Owl would not start calling until about April 1 (and stop calling in late April).

April 21-22: Terry and I still were intending to look for nesting Boreals and had decided to try along the Gunflint Trail in Cook County. But it's getting late in the season and we've been unable to get together for a search. Finally, although I have plans to be elsewhere, and although he has no flashlight or tape recorder, Terry gives it a try: "I arrived in Grand Marais about 11:30, the night was calm and the temperature was about 20°. For about the first 10 miles of the Gunflint I made stops at ½ mile intervals, hearing only a few woodcocks. I started making 1 mile stops. The first Boreal Owl was heard at the

Hungry Jack Burn (about 27 mi. from Grand Marais). At first I thought it was a snipe but I soon realized that the call was coming from one place and was much louder. I resumed the ½ mile stops and continued along to the end of the Gunflint. In the area between the first bird at the Hungry Jack Burn and Loon Lake (about 37 mi. from Grand Marais) I heard 4 more calling Boreal Owls. The first owl was heard at 1:10 a.m. and the last one at 2:15. I checked the owls at about 3:00 and again before sunrise but heard none calling. Although I did not have snowshoes and the snow in the woods was about 3 feet deep, I attempted to locate several of the owls or possible nest holes. The snow was hard enough to walk on until the sun warmed it up a little and then I kept sinking to my knees, and I finally had to give up."

April 27-28: Terry and I return to the Gunflint Trail in hopes of relocating some of the owls he heard and finding potential nest cavities. Boreal Owls seem to be calling everywhere: in a 20 mile stretch (starting about 16 mi. from Grand Marais) we hear what sounds like 24 different owls! Their call is very similar to the Common Snipe, not at all as most field guides describe: "high-pitched bell" or "dripping water" more aptly describes the Saw-whet Owl's call (we also hear a total of 11 Saw-whets). But none of the Boreals is close enough to the road for us to reach, so we see none of them and are unable to mark their exact location. Therefore, although we have snowshoes this time, we cannot find any



**"Gunflint Trail, 20.8 miles from Grand Marais. Boreal Owl nest tree located at edge of black spruce stand on the right."
(Photo by Kim Eckert.)**

potential nest holes, and our trip is somewhat of a disappointment.

May 5-6-7: Warren Nelson, a birder-photographer friend from Aitkin, joins us in our next search (Glenn Maxham of Duluth and Ray Glassel are also along part of the time). Most of the owls have stopped calling — it is apparently late enough in the season that almost all the males have either attracted females to their territories or have been unsuccessful and have left the area. We hear only five, and, as we had found last week, our tape recorder has little or no effect on the owls which are never heard before sunset or after about 2 a.m. We also hear one Boreal calling from a distance of one mile, much farther than we had thought last week, so our count of 24 calling male Boreal Owls is revised down to "only" 15. We're also making some progress:

with three extra people along we manage to finally see two of the owls calling from their favored calling perches and tape recordings are made. But once again we have trouble finding potential nest cavities in the day time, until a three-inch hole is found near the top of an 11-foot high balsam fir stump within one owl's territory. Although the cavity is empty, at dusk that evening we watch the male actually inspect the hole just before he starts calling from his perch nearby. However, there is still no female present the next day and, since it's already May and since the cavity is not in a preferred location according to Bondrup-Nielsen's findings in Ontario, we suspect this male will be unsuccessful.

May 20: Neither Terry nor I has been able to return to the area, but Tom Davis of Duluth is spending the

weekend up there and has agreed to do some checking for us. He especially checks the cavity we had found but it is still empty. It then seems certain we will find no nest this year and no further attempts are planned.

June 16: Denny Olson had called a few days earlier from Isabella to say he was joining Tom at his cabin this weekend and to ask if they should still check for Boreals. Although I tell him it's virtually impossible they'll find anything, they stop at the stump we had found. Tom points out the hole, naturally assumes Denny is wasting his time by tapping on the trunk, and turns back to the car. But Denny suddenly calls him back: there is a Boreal Owl staring down from the hole!



"Boreal Owl nest site. Balsam fir stump, 11 feet high. 1 foot in diameter. Entrance hole 3 inches in diameter, 1 foot from top of stump." (Photo by Warren Nelson.)

June 24-25: Terry and I are back at the stump early Saturday afternoon (location: 20.8 miles from Grand Marais at the edge of a black spruce bog,

15 feet in from the edge of a parking area along the Gunflint Trail) and need only to scratch lightly on the trunk to have the owl appear at the hole. But we're still not certain of success: couldn't this just be a roosting unmated male Boreal Owl? But just after dusk that night, after Terry has climbed up to the hole and after the owl has flown off to watch him from as close as 3-4 feet away, nesting is finally confirmed: although visibility into the cavity is difficult, Terry can see two eggs (the next morning with better light I can see three eggs). Also visible are what appear to be junco tail feathers. There's no doubt now it's an incubating female, but it's so late in the season we're still somewhat pessimistic: maybe these are just infertile eggs.

July 8: A few other birders have been given directions to the nest and the female was still present as of July 1. Thanks to the Boreal Owl invasion of the previous winter, there is not yet much pressure from birders to visit the nest which might cause the female to abandon it, but the nest's location so close to a wayside parking area where people sometimes camp is still cause for concern. But I don't know what to think of the California birder who reports that two days earlier he tapped on the trunk at three different times and saw nothing: had the nest been abandoned or was the stump so inconspicuous that he had the wrong tree? Luckily for us (but not for him) the female is still there when I arrive with some birder friends from Chicago. But the real news is that as I climb up to the hole to check on the eggs, the female refuses to fly off. Instead she backs part way into the cavity with her face flush with and completely filling the entrance hole. As before, she is not threatening or aggressive (only occasionally does she snap her mandibles on any of our visits), but hopefully her refusal to leave the nest indicates the eggs have hatched.

July 12: I return at dusk with two Twin Cities birders who've never seen a Boreal Owl. We wait in the car until 9:30, watching to see if the male might arrive or if the female will leave the cavity. Nothing seems to be happening, but when I shine my flashlight on the stump, there is the male (the first time he's been seen since May 6)! He flies up to the hole, hovers briefly as if dropping off prey, and then flies off. I decide to climb up to the hole and this time the female leaves the cavity. Again it's difficult to see into the cavity, but I can see at least two young, although it's difficult to see how many young there are and impossible to determine their age considering the poor visibility and my anxiety to leave the nest as soon as possible. At 9:45 I hear the male give a muted and abbreviated version of his territorial call, and a few seconds later he appears at the stump with mouse-like prey in his talons. He looks around for several seconds (perhaps wondering where the female is?), then transfers the prey to his bill, flies to the hole, drops in the prey and flies off. Five minutes later the female finally returns with no prey and re-enters the cavity, much to my relief.

July 15: Warren Nelson visits the nest site in the afternoon, hoping to take some photographs. He climbs up to the hole but the female acts as she did on July 8 and refuses to leave. However, while Warren is still waiting at the entrance hole, the female goes back down into the cavity, and when Warren looks into the nest he can see her back and half-spread wings as if she is mantling the young for protection.

July 17: A birder from Maryland flies out just to see his first Boreal Owl. He stops by my house in Duluth, and after I'm certain he'll be able to find the nest without the difficulty that others have had, he heads up to the Gunflint. He patiently watches the stump from 3 to 6:30 p.m., hoping to see something without

disturbing the nest. Seeing and hearing nothing he finally scratches on the trunk but gets no response of any kind. He is unable to climb up to look into the nest nor can he wait until after dusk, but he does notice a bad stench coming from the cavity. After hearing this report I call Terry, concerned that the adults have abandoned the nest and that the young have died. Since I am unable to visit the nest site for several days, Terry agrees to check things out next week-end.

July 22: Terry arrives at the nest early in the afternoon, scratches and taps on the trunk with no response. But much to his relief, when he climbs up to the hole and looks in, he can see the young alive and well — all five of them! Obviously back in June we were never able to see all of the eggs. Three of the young are a bit larger than the other two; all five have yellow eyes, dark gray-brown bodies and light gray eyebrow lines. They apparently are large enough so that the female no longer remains with them in the cavity.

July 23: Warren Nelson returns with his camera: "8:00 p.m. I set up my ladder at a distance of 7 feet from the tree. 8:20. The young owls began moving around inside the hole. They made scratching and pecking sounds. 9:35. The female owl flew up into a dead tree about 40 feet from the nest tree. Less than a minute later, the male owl began its song. As he began, the young owls began a soft "peeping." Note: the male continued his song for 15 to 20 minutes. 9:40. The female made a quick flight to the nest hole. She fluttered in front of the hole and made a quick peck with her beak on the wood near the hole and quickly flew back into the woods. 10:10. One of the adult owls landed in a tree about 20 feet behind me (25 to 30 feet from the hole) with a deer mouse in its claws. It made a loud peeping sound just like that of the young. Within seconds, the other adult owl came in and



**"Male Boreal Owl at nest hole with prey, presumably a woodland jumping mouse."
(Photo by Warren Nelson.)**



"Young Boreal Owl in nest cavity as seen with a mirror." (Photo by Warren Nelson.)



**"Juvenile Boreal Owl. Note dark brown plumage, white eyebrow lines and white spot below each eye."
(Photo by Warren Nelson.)**



**"Partly eaten prey and pellets retrieved from floor of nest cavity: 1 flying squirrel (top), 3 jumping mice (right), 8 red-backed voles (left and bottom), 4 pellets (center)."
(Photo by Dave Evans.)**

landed near the first, making the same sound, but without any prey. The one with the mouse flew to a limb of a pine tree about 10 feet behind the hole. Seconds later, it flew to the hole and landed on the branch near the hole (about a foot away). It moved up the branch and then jumped up and fluttered in front of the hole and dropped the mouse in without landing. Note: both adult birds continued their peeping sounds through whole feeding procedure and when the mouse was dropped in, both quit peeping and flew away. Note: the young continued peeping and got louder after the first feeding. 10:25. Second noted feeding occurred. One of the adults came in directly to the hole without any noted stop and without making any sound. It fluttered in front of the hole for no more than 3 to 5 seconds. 10:45. Third noted feeding occurred. One of the adults came in with what appeared to be another deer mouse and landed on the branch near the hole. It then fluttered up to the hole and dropped the mouse in. Again, it made no sound coming in. 10:55. Fourth noted feeding occurred. One of the adult owls came in and landed in the branch of a pine about 10 feet behind the hole. It made the peeping sound when it came in and it sat in the same place making the sounds for approximately 15 minutes. 11:10. At this time, I shined my lantern at the owl and noted it had yet another deer mouse in its claws. I moved toward it and it took the mouse into its beak still making the peeping. So I moved back and it placed the mouse back into its claws. About a minute later, the owl flew to the branch near the hole. It paused there for about 30 seconds still peeping. Then it flew to the hole and landed in the hole entrance. It paused there for about 10 seconds, half in and half out of the hole. This was the last feeding that I watched before leaving. Note: after each feeding, the young owls increased the volume of their peeping."

July 28-29: Terry, Warren, another California birder and I ride up with Steve and Jo Blanich, arriving at the nest at 11:15 p.m. At first we see and hear nothing but when I look into the cavity three young are still present. Their body plumage is dark brown except for whitish eyebrow lines and a whitish spot below each eye. At 11:30 we hear the male begin to call, and he continues to call at irregular intervals until 1:30, but we see him only once very briefly. The young respond to the male's first calls with their "peeping" calls which continue almost without interruption (the note is somewhat similar to the Killdeer's call). I tape record this call and when I play it or the male's territorial call back the young increase their calling. After a while we start hearing these peeping calls coming from two spots in the undergrowth near the nest. After a search Terry finally finds the source of the calling: a newly-fledged juvenile (its wings are fully feathered but its tail is not). Several photos are taken after which we leave the area at 2 a.m. When we return to the nest just before dawn one of the young can still be heard peeping in the cavity.

August 3: I return to the nest for the last time with Molly Kohlbry, Hawk Ridge bander Dave Evans and Lee Carson, one of his assistants. We arrive at 9:15 p.m. and see and hear nothing. I climb up to the hole and find that all the young have left the nest. The cavity is measured (10" in diameter, 12" deep), and Lee agrees to reach in and pull out the remains from the floor of the cavity. He retrieves 4 pellets and the remains of several partly eaten mammals; Dave later identifies these as 8 red-backed voles, 2 woodland jumping mice, 1 meadow jumping mouse and 1 northern flying squirrel. At about 10:00 I start hearing faint peeping calls to the north. We soon locate these calls about 100-150 yards from the nest tree; they are coming from concealed perches 30-40 feet up in some spruce,

but we cannot see the owls and it is difficult to tell how many are present. Dave climbs one of the trees and is finally able to see one of the juveniles perched about 5 feet from the trunk; it allows Dave to get about 10 feet away before it flies to another spruce and resumes peeping. The male is faintly heard two or three times, so Dave gets out a net, puts a mouse at the end of a line, and after two attempts the adult (male?) Boreal Owl is caught and banded. We then leave for Duluth about midnight.

August 9, 1978: The last observation is by John Sterling, a California

birder to whom I give directions for this and other nearby birding area: "I did see one imm. Boreal Owl, heard 3 others plus one adult or male (with the Screech Owl-like hoot). The owl that I did see came within 10 yards of me. At first he seemed annoyed at my presence, but soon became curious when I gave a few Pygmy Owl hoots. The owl responded and came fairly close. It was fairly active flying from tree to tree staying rather low, about up to 20 feet from the ground.

—9735 North Shore Dr., Duluth, MN
55804



THE SUMMER SEASON (June 1 - July 31, 1978)

Janet C. Green

50 observers turned up 262 species, 162 of them nesting, which is the best reporting effort for the last five years. The highlights were the first nesting record of the Boreal Owl in the United States south of Alaska and the first documented breeding record of the Bufflehead in Minnesota.

In comparison to the last three years there was a small increase in the number of people turning in seasonal reports with a subsequent tiny increase in the total number of species and a good increase in those found breeding. Lots of hours in the field combined with accurate record keeping continue to produce results that are important in charting bird life during that all important nesting season. There is much to be learned, however, which will be discussed later. For now, the figures on effort for the last four years are as follows: 1975, 42 reporters found 241 species with nesting evidence for 133; 1976, 45 reporters found 240 species with nesting for 156; 1977, 47 reporters found 261 species with nesting for 155; 1978, 50 reporters found 262 species with nesting for 162.

Many of the county listings were by peripatetic birders. Not surprisingly the places with the best steady coverage were where the population centers are — Duluth, the Twin Cities metro area, southeastern Minnesota and the St. Cloud area. Anoka (JLH; KJL, Beltrami (DW *et al.*), Lac Qui Parle (CMB) and Martin-Watonwan (EBK) Counties were especially well surveyed. No one at all ventured into Koochiching County and hardly into Pine or Itasca. Two other conspicuous gaps this year were the Minnesota River Valley segments of Renville-Redwood Counties and Carver-Scott Counties.

Without the indefatigable nest finding of NMH and the bird survey of the peatlands around Waskish by the Uni-

versity of Minnesota biologists the breeding species list would be meagre indeed. Brood or nest cards on file, giving actual breeding information, are necessary to change the many open dots in **Minnesota Birds** to solid dots and to accurately map the ranges of our breeding avifauna. Land use changes and climatic changes add a dynamic dimension to the breeding maps and we want to be able to describe them as well. A final reason for filling in the cards rather than just writing "nested" is to provide dates so that the normal incubation and fledgling times for different parts of the state can be determined.

The format I used in the species accounts differs slightly from past years. No attempt was made to count counties for many common species known to nest throughout the state. The word "seen" obviously means heard as well. The verbal summation of counties into range descriptions used the regions and the two halves of the state as outlined in **Minnesota Birds**. An index map showing the divisions is on page 29 of this report. Two dates were used for shorebird migration when they were available.

The highlights of the nesting season were the first nesting record of the Boreal Owl in the United States south of Alaska (see elsewhere in this issue) and the first documented breeding record of the Bufflehead for Minnesota. A few accidental or casual species were discovered, mostly shorebirds or gulls. A Laughing Gull and Arctic Tern lingered at Duluth to the first of June and in July a Ruff was



Regions of Minnesota as used in the summer report.
 (Reprinted from "Minnesota Birds" by Green and Janssen - 1975)

seen in Ottertail County and a California Gull in Big Stone County. The western prairie seems to be the place to go for surprises during early fall migration. A Scissor-tailed Flycatcher and a Kentucky Warbler again showed up in the summer in unlikely places — the former in Sibley County and the latter at Itasca State Park.

Several comments can be made about the rarer breeding species. Four regular nesting species that are at

best difficult to find were not located on territories this year at all — King Rail, Burrowing Owl, Philadelphia Vireo, and Yellow-breasted Chat. The Chukar may finally have vanished from Ely. Does anyone have any information negative or positive? The American Avocet and Western Wood Pewee showed up at the localities where they nested last year but breeding was not confirmed for this year. The "usual spot" was the only location

where Baird's Sparrow, Sprague's Pipit, Piping Plover, Bell's Vireo and Louisiana Waterthrush were found. Negative information for these species is very hard to evaluate. Did anyone look elsewhere? The Yellow-crowned Night Heron was not found at the "usual spot" in Houston County but was discovered trying to nest in Ramsey County and was seen a couple of times in the southwestern region.

There are several northern species whose breeding in Minnesota is possible but unconfirmed. Of these, singing male Wilson's Warblers were found briefly at two locations and White-winged Crossbills were seen twice. Rusty Blackbirds were not seen at all. The Solitary Sandpiper has possibly nested once in the state and may do so more regularly. Was the June record for St. Louis County a possible breeding location? Two other northern passerines, the Blackpoll Warbler and Gray-cheeked Thrush, were each seen once in early July but their presence should be conservatively interpreted as early migrants because their normal breeding ranges are far north of Minnesota.

Some interesting records that expand our knowledge of ranges of species within Minnesota were received. The Marbled Godwit and Wilson's Phalarope observed at the Expandere Wildlife Management Area in Cottonwood County were very encouraging since these species have become almost extirpated in the drastically altered prairie ecosystem. Also in the southwestern region evidence for a small population of Yellow-bellied Sapsuckers and Cardinals was turned up again this season. The continued breeding presence of Western Grebes in the Twin Cities area appears to be a range expansion. Acadian Flycatchers also were seen in the Twin Cities area which is north of their usual range; actual breeding needs to be documented. More work needs to be done as well on delineating the ranges of the Willow and Alder Flycatchers. The southern and western margins of the

range of many northern warblers are poorly known. This year new marginal localities for Black-and-white, Golden-winged, Black-throated Green, Blackburnian and Canada were found. These places should be checked in the future for signs of breeding.

In fact if anyone is tired of just making lists and is looking for a new vacation experience think of all the opportunities there are for summer bird investigations. The greatest need is across the range boundaries of many northern species, not just the warblers listed above (look in **Minnesota Birds** for examples). The most fruitful areas are probably Kittson-Roseau Counties, Becker-Ottertail Counties and Pine County. To add new squiggles in the range maps for northern passerines note of exact location by township is required. Searching for breeding evidence would also be most helpful. Looking for new localities for some of our rarest species should also offer a challenge. Does the Piping Plover just nest at Duluth (what about Lake of the Woods and Red Lake)? Is the only native prairie that will support the Baird's Sparrow and Sprague's Pipit at Felton (what about other Nature Conservancy tracts)? Is the only wooded stream where Louisiana Waterthrush can be heard at Franconia? Patient stalking might also turn some of our summer sightings of Wilson's Warbler, Rusty Blackbird and White-winged Crossbill into first state breeding records. Prepare for next season. Go find a comfortable log in a bog and buy plenty of bug dope.

Common Loon

Breeding reported from Anoka, Washington, St. Louis, Stearns, Wright, Cass and Becker; also seen in 12 other counties south to Lac Qui Parle (Big Stone NWR) and Hennepin.

Red-necked Grebe

Breeding reported from Marshall, Todd and Crow Wing; also seen in Roseau, Becker, Otter Tail, Douglas, Pope and Hennepin (French Lake).

Horned Grebe

Seen in Roseau, Marshall, Becker and St. Louis (6-16, 17, Lake Superior, JCG).

Eared Grebe

Breeding reported from Marshall, Lac Qui Parle; also seen in Mahnomen, Roseau, Becker, Lincoln, Lyon and Hennepin (French Lake).

Western Grebe

Breeding reported from Marshall, Big Stone, Lac Qui Parle, **Todd**, (Lake Osakis), and **Anoka** (Rice Lake); also seen in Lake of the Woods, Roseau, Becker, Otter Tail, Grant, Pope, Kandiyohi, Lincoln, Sibley, Nicollet, LeSueur.

Pied-billed Grebe

Breeding reported from Marshall, Beltrami, Becker, Stearns, Sherburne, Wright, Anoka, Ramsey, Kandiyohi, Lac Qui Parle, Watonwan, and Martin; also seen throughout the state.

White Pelican

Breeding reported from Big Stone (160+ nests, Marsh Lake); also seen in Marshall, Otter Tail, Grant, Douglas, Swift, Lac Qui Parle, Lincoln, Lake of the Woods, Beltrami (100s in June, Lower Red Lake), and Pope (200+ on 7-23)).

Double-crested Cormorant

Breeding reported from Pope (100+ nests, Lake Johanna) and Meeker; also seen in 14 other counties in all regions of the state except the south-central; present in the gull colony on Knife Island in June (J. Eaton).

Great Blue Heron

Breeding reported from Marshall (30+ nests), Becker (200+), Hubbard (34, Kabekina WMA), Morrison (50+, Royalton), Anoka (50+, Rice Lake), Wabasha (50), Grant (50+, Pelican Lake), Pope (Lake Johanna), Lac Qui Parle (75 nests, Big Stone NWR); also seen throughout the state.

Northern Green Heron

Breeding reported from Anoka; also seen in 24 other counties north to Becker, Aitkin and St. Louis (Duluth).

Little Blue Heron

Breeding reported from Lac Qui Parle (one nest, Big Stone NWR, CMB); also seen in Grant (Pelican Lake).

Cattle Egret

Breeding reported from Lac Qui Parle (32 nests, Big Stone NWR, CMB); also seen in Grant.

Great Egret

Breeding reported from Lac Qui Parle (30+ nests, Big Stone NWR), Grant (50+, Pelican Lake), and **Marshall** (one nest, Agassiz NWR); also seen in 14 counties in the South plus Becker and St. Louis (6-1 Duluth, KRE).

Snowy Egret

Breeding reported from Lac Qui Parle (12 nests, Big Stone NWR, CMB); also seen in the same county at Salt Lake.

Black-crowned Night Heron

Breeding reported from Lac Qui Parle (220+ nests, Big Stone) and Grant (50+, Pelican Lake), also seen in Washington, Anoka, Ramsey, Dakota, Hennepin, Wright, Nicollet, Martin, Cottonwood, Murray, Pope, Otter Tail, Clay, Marshall and Roseau.

Yellow-crowned Night Heron

Breeding attempted in **Ramsey** (Maplewood Park, **Loon** 50:214-215); also seen in Rock (7-1, KRE) and Lac Qui Parle (6-11, 6-22, 7-10, Big Stone NWR).

Least Bittern

Breeding reported from Stearns, Watonwan; also seen in Houston, Wabasha, Lac Qui Parle, Pope, Grant, Otter Tail, Marshall, Roseau (Roseau River) and St. Louis (Duluth, GN).

American Bittern

No breeding reported; seen throughout the state.

Whistling Swan

Seen in Morrison (5-24 to 6-6, Buckman, PM), Clay (6-4 to 6-20, Felton, KJL) and St. Louis (July, pair, Evelyn Baker).

Canada Goose

Breeding reported from Olmsted, Watonwan, Jackson, Carver, Ramsey, Anoka, Sherburne, Aitkin, and Marshall; also seen in Fillmore, Nicollet, Cottonwood, Lac Qui Parle, Hennepin, Washington, Mille Lacs, Todd, Otter Tail, Becker, Roseau and St. Louis (small flocks, Lake Superior).

Snow Goose

One seen on 6-4 near Grand Marais, Cook Co. (RBJ).

Mallard

Breeding reported from St. Louis, Hubbard, Washington, Wabasha, Wright, Cook, Sherburne, Cottonwood, Beltrami, Lac Qui Parle, Marshall, Anoka, Hennepin, Isanti and Stearns; also seen throughout the state.

Black Duck

Breeding reported from Cook, Washington, Wabasha (Lower Sand Prairie); also seen in Lake, St. Louis, Crow Wing, Beltrami, Otter Tail, Becker, Marshall and Roseau.

Gadwall

Breeding reported in Lac Qui Parle Big Stone, Marshall; also seen in Roseau, Marshall, Otter Tail, Becker, Nicollet, Grant, Sherburne, and St. Louis (Duluth).

Pintail

Breeding reported from Lac Qui Parle, Stevens, and Marshall; also seen in Roseau, Beltrami, Otter Tail, Clearwater, Sherburne, Nicollet, Wright, Anoka and St. Louis (Duluth).

Green-winged Teal

Breeding reported from Marshall, Beltrami, Wright and Big Stone; also seen in Washington, Anoka, Hennepin, Nicollet, Lincoln, Lac Qui Parle, Otter Tail, Becker, Kittson, Roseau,

Morrison, Pine, St. Louis (six males, Duluth), and Lake (6-8, Isabella).

Blue-winged Teal

Breeding reported from Anoka, Kandiyohi, Wright, Stearns, Beltrami, Marshall, Lac Qui Parle, Washington, Ramsey and Martin; also seen throughout the state.

American Wigeon

Breeding reported from Marshall and Lac Qui Parle; also seen in Roseau, Beltrami, Otter Tail, Becker, Aitkin, St. Louis, and Anoka.

Northern Shoveler

Breeding reported from Marshall and Big Stone; also seen in Anoka, Hennepin, Nicollet, Martin, Lyon, Lincoln, Lac Qui Parle, Douglas, Otter Tail, Mahnomen, Clearwater, Beltrami, Roseau, Aitkin and St. Louis (Duluth).

Wood Duck

Breeding reported from Anoka, Kandiyohi, Wabasha, Ramsey, Houston, Stearns, Sherburne, Grant, Lyon, Todd, Pipestone, and Lac Qui Parle; also seen throughout the state.

Redhead

Breeding reported from Marshall and Anoka; also seen in Hennepin, Sherburne, Wright, Meeker, Nicollet, Martin, Jackson, Lac Qui Parle, Stevens, Todd, Otter Tail, Becker, Clay, Roseau and St. Louis (6-1 Lake Superior, lingering migrant).

Ring-necked Duck

Breeding reported from Marshall, Beltrami, Sherburne and Cottonwood (Talcott Lake WMA); also seen in Roseau, Becker, Otter Tail, Crow Wing, Aitkin, St. Louis, Lake, Cook, Anoka, Hennepin and Nicollet.

Canvasback

Breeding reported from Kittson, Norman, Mahnomen, Becker, Big Stone, Hennepin, Faribault, Swift, Otter Tail, Clay, Marshall — DNR data; also seen in Roseau, Lac Qui Parle and Lincoln. (See Notes of Interest)

Greater Scaup

Late migrants 6-2 Duluth (JCG), 6-3 Roseau (DGW).

Lesser Scaup

Late migrant 6-15 Lake Superior, St. Louis (KRE); also seen in Aitkin, Wadena, Marshall, Crow Wing, Roseau, Jackson, Lyon, Lincoln, Anoka, Becker, Hennepin and Lac Qui Parle.

Common Goldeneye

Breeding reported from Cook and Itasca; seen also in Roseau, Beltrami, Becker, Aitkin and St. Louis.

Bufflehead

Breeding reported from Marshall (East Park WMA, Loon 50:213-214); seen also in Marshall (6-11, two males, Agassiz NWR, SV), Beltrami (6-5, Washish, DW), Roseau (6-3, Roseau River WMA, DGW) and Becker (7-30, 25 Tamarac NWR, TDA).

White-winged Scoter

Late migrant 6-1 Duluth (KRE).

Black Scoter

Late migrant 6-5 (KRE) thru 6-21 (BDC) Stoney Point, Lake Superior.

Ruddy Duck

Breeding reported from Sherburne, Stearns, Stevens, Big Stone and Marshall; also seen in Roseau, Becker, Clay, Otter Tail, Todd, Swift, Kandiyohi, Lac Qui Parle, Martin, Fari-bault, Nicollet, Wright, Hennepin, Ramsey and Anoka.

Hooded Merganser

Seen only in Cook, Becker, Wright, Nicollet and Houston.

Common Merganser

Breeding reported from Cook, St. Louis and Beltrami; not seen elsewhere.

Red-breasted Merganser

Breeding reported from St. Louis; not seen elsewhere — unusually scarce.

Turkey Vulture

Seen in Fillmore, Houston, Winona,

Wabasha, Goodhue, Hennepin, Stearns, Renville, Lac Qui Parle, Becker, Marshall (Agassiz NWR), Beltrami, Cass, Crow Wing, Aitkin, Carlton and St. Louis.

Goshawk

Breeding reported from Lake; also seen in Cook.

Sharp-shinned Hawk

Seen in Lake, St. Louis, Hubbard, Beltrami, Otter Tail, Becker, Anoka, Fillmore and Houston.

Cooper's Hawk

Seen in Crow Wing, Otter Tail, Wright and Houston.

Red-tailed Hawk

Breeding reported from Winona, Olmsted, Wright, Sherburne, Morrison and Lac Qui Parle; also seen throughout the state.

Red-shouldered Hawk

Breeding reported from Otter Tail (Maplewood State Park, GLO); also seen in Clearwater, Crow Wing, Aitkin, Pine (Hwy. 23, KJL), Morrison, Stearns and Anoka.

Broad-winged Hawk

Breeding reported from Roseau, Beltrami, Itasca, Anoka and Washington; also seen in Olmsted (Chester), Dakota, Hennepin, Chisago, Morrison, Becker, Polk, Marshall, Hubbard, Cass, Crow Wing, Aitkin, Carlton, St. Louis, Lake and Cook.

Swainson's Hawk

Breeding reported from Lac Qui Parle and Dakota; also seen in Kittson, Wilkin, Big Stone, Chippewa, Lincoln, Nicollet (JCF) and Olmsted.

Bald Eagle

Breeding reported from Otter Tail, Hubbard and Crow Wing plus the Chippewa NF (Loon 50:217-218) and Superior NF (Loon 50:219-220); also seen in Becker, Clearwater, Sherburne (Becker, EAH), St. Louis and Lake.

Marsh Hawk

Breeding reported from Anoka; also seen throughout the state.

Osprey

Breeding reported from Hubbard plus the Chippewa NF (Loon 50:217-218) and Superior NF (Loon 50:219-220); also seen in Beltrami, Becker, Clearwater, Itasca, Crow Wing, Aitkin, Mille Lacs, Washington and Cook.

Merlin

Seen in Cook, St. Louis (Ely) and Otter Tail (7-15, GLO).

American Kestrel

Breeding reported from Lac Qui Parle and Anoka; also seen throughout the state.

Spruce Grouse

Breeding reported from Beltrami (Waskish); not seen elsewhere.

Ruffed Grouse

Breeding reported from Marshall, Beltrami, Hubbard, Morrison, Stearns, Sherburne, Anoka, Lake and Cook; also seen in Roseau, Becker, Otter Tail, Wadena, Crow Wing, Aitkin, St. Louis, Washington, Olmsted (Byron), Fillmore and Houston.

Greater Prairie Chicken

Seen in Clay and Wilkin.

Sharp-tailed Grouse

Breeding reported from Beltrami; also seen in Aitkin and Marshall.

Bobwhite

Seen in Houston and Wabasha.

Ring-necked Pheasant

Breeding reported in Sherburne, Anoka, Hennepin, Washington and Olmsted; also seen in 16 other counties in the South plus Otter Tail, Mille Lacs and St. Louis (Duluth, Ely) in the North.

Gray Partridge

Breeding reported in Lac Qui Parle, Kandiyohi, Brown, Sherburne and Dakota; also seen in 10 other counties in the South plus Morrison (Buckman)

and Roseau (Roseau) in the North.

Turkey

Seen in Houston; wildness of other birds needs documentation.

Sandhill Crane

Breeding reported from Marshall, Beltrami and Sherburne; also seen in Kittson.

Virginia Rail

Breeding reported from Watonwan; also seen in Marshall, Mahnomen, Otter Tail, Big Stone, Lac Qui Parle, Pope, Aitkin and Anoka.

Sora

Seen in 21 counties throughout the state including Cook (Seagull Lake).

Yellow Rail

Heard in Beltrami (Waskish, Loon 50:205), Aitkin and Mahnomen.

Common Gallinule

Breeding reported from Houston (LaCrescent); also seen in Washington, Anoka and Ramsey.

American Coot

Breeding reported from Sherburne, Wabasha, Marshall, Clay, Ramsey, Washington, Stearns, Todd, Stevens, Big Stone, Lac Qui Parle, Anoka and Meeker; also seen throughout the state except the north-central and northeast where it was reported only from Duluth.

Semipalmated Plover

Late migrants North 6-4, 6-6.

Piping Plover

Breeding reported from St. Louis (Port Terminal at Duluth, 6 pair, GN); not seen elsewhere.

Killdeer

Breeding reported from Hennepin, Sherburne, Stearns, Wright, Stevens, Anoka, St. Louis, Lac Qui Parle, Beltrami and Marshall; seen elsewhere throughout the state.

Black-bellied Plover

Late migrants North 6-6, 6-11.

Ruddy Turnstone

Late migrants South 6-12 (Anoka, KJL), North 6-6, 6-11.

American Woodcock

Breeding reported from Sherburne, Stearns and Anoka; also seen in Cook, Lake, St. Louis, Beltrami, Marshall, Becker (Boot Lake; Tamarac NWR), Houston and Fillmore (Spring Valley, GBE).

Common Snipe

Breeding reported from Marshall and Beltrami; also seen in 14 other counties in the North plus Stearns, Meeker, Hennepin, Anoka and Chisago in the South.

Whimbrel

Late migrant 6-4 Duluth (ETS).

Upland Sandpiper

Breeding reported from Marshall; also seen in 24 other counties all in the northwest, west-central, southwest, central and east-central plus Aitkin in the north-central. Early migrant 7-20 Lake ("Milepost 7" near Silver Bay, John Green).

Spotted Sandpiper

Breeding reported from Beltrami, St. Louis and Hennepin; also seen in 19 other counties throughout the state.

Solitary Sandpiper

Seen in St. Louis (6-28, four, T65, R19, Bill Cottrell). Early migrants North 7-4 (Marshall), 7-13, South 7-8, 7-9, 7-13.

Greater Yellowlegs

Early migrants North 6-25 (Marshall), 7-9; South 7-9, 7-14.

Lesser Yellowlegs

Late migrant North 6-3. Early migrants North 6-29 (Marshall, Beltrami), 7-3, 7-9; South 7-7, 7-8.

Willet

Late migrants 6-7 (Lac Qui Parle, GLO), 6-23 (Duluth, DGW).

Pectoral Sandpiper

Late migrants North 6-1, 6-4. Early migrants North 7-14, 7-16; South 7-9, 7-14.

White-rumped Sandpiper

Late migrants North 6-5, 6-11, 6-17 (Kittson, KRE).

Baird's Sandpiper

Late migrants South 6-1; North 6-2. Early migrants South 7-15 (KJL).

Least Sandpiper

Late migrant North 6-4. Early migrants North 7-9, 7-14; South 7-9, 7-15.

Dunlin

Late migrants South 6-1; North 6-6, 6-11, 6-20 (KRE).

Semipalmated Sandpiper

Late migrants South (6-10 (RBJ); North 6-6, 6-11. Early migrants North 7-16, 7-17; South 7-9, 7-10.

Western Sandpiper

Late migrant North 6-11. Early migrants South 7-27, 7-29.

Sanderling

Late migrants North 6-6, 6-11.

Short-billed Dowitcher

Early migrants North 7-9, 7-22; South 7-9; 7-24.

Long-billed Dowitcher

Early migrants South 7-6 (OLJ), 7-9.

Stilt Sandpiper

Late migrant North 6-2. Early migrants North 7-22, 7-23; South 7-9, 7-15.

Buff-breasted Sandpiper

Early migrants 7-27 (Duluth, KJL), 7-29 (Anoka, KJL).

Marbled Godwit

Breeding reported from Polk; also seen in Kittson, Roseau, Marshall, Beltrami (KRE), Mahnomen, Norman, Clay, Wilkin, Douglas (near Osakis), Lac Qui Parle (Big Stone NWR), Lincoln (7-2, KRE), Cottonwood (6-18 three, Expandere WMA, EBK).

Ruff

One seen 7-22 Otter Tail (GLO, Loon 50:211).

American Avocet

Seen in Faribault (6-10, two, Wells, RBJ), Lac Qui Parle (6-20, 6-22, Big Stone NWR, CMB; 7-16, two, Salt Lake, DGW).

Wilson's Phalarope

Breeding reported from Lac Qui Parle; also seen in Kittson, Roseau, Lake of the Woods; Marshall, Beltrami, Clay, Wilkin, Otter Tail, Wright, Anoka, Dakota (near Randolph), Yellow Medicine, Cottonwood (Expandere WMA).

Herring Gull

Breeding reported from Cook, Lake, St. Louis (Duluth harbor, 23 pair, GN); also seen in Big Stone, Marshall, Otter Tail, Roseau, Beltrami, Anoka.

California Gull

One seen 7-27 Clinton, Big Stone Co. (NMH: Loon 50:205).

Ring-billed Gull

Breeding reported from St. Louis (Duluth 2662 pair, GN); also seen in 24 other counties predominantly in the western regions but also as far east as Martin, Anoka and Aitkin.

Laughing Gull

One seen 6-1 Duluth (KRE, Loon 50:168).

Franklin's Gull

Breeding reported from Marshall; also seen in 21 other counties as far east as Beltrami, Todd, McLeod and Martin plus farther east in Anoka, and Duluth (6-11, 7-29, KRE).

Bonaparte's Gull

Seen in June in Roseau (6-17, KRE) and Duluth (thru 6-20, KRE) plus all summer on Mille Lacs Lake (7-23, 250).

Forster's Tern

Breeding reported from Marshall, Todd and Anoka; seen also in 16 counties as far east as Lake of the Woods,

Stearns, Washington and Freeborn.

Common Tern

Breeding reported from St. Louis (Duluth, 177 pair, GN); also seen in Lac Qui Parle, Becker, Otter Tail, Pope, Cass, Sherburne, Beltrami, Lake of the Woods.

Arctic Tern

One seen 6-1 Duluth (KRE, Loon 50:174-5).

Caspian Tern

Seen in early June in Mille Lacs (6-4), Duluth (6-6) and Beltrami (6-9); seen from 6-11 thru 7-4 near Centerville Lake, Anoka, KJL (one to three seen except 12 on 7-3); also seen in Lincoln (7-2, KRE).

Black Tern

Breeding reported from Stearns, Anoka and St. Louis (Duluth, 43 pair, GN); seen also throughout the state except northeast of Duluth.

Rock Dove

Present throughout the state.

Mourning Dove

Breeding reported from Polk, Cottonwood, Sherburne, Anoka, Stearns, Morrison, Big Stone, and Rock; also seen throughout the state except northeast of Duluth.

Yellow-billed Cuckoo

Seen in 14 counties as far north as Otter Tail (RBJ; GLO), Crow Wing (OLJ), and Aitkin (NMH) plus in Marshall (6-9 Agassiz NWR, SV).

Black-billed Cuckoo

Breeding reported from Beltrami, Otter Tail, Washington and Watonwan; also seen in 31 other counties throughout the state including Lake and Cook.

Screech Owl

Breeding reported from Ramsey and Lac Qui Parle; also seen in Cottonwood.

Great Horned Owl

Breeding reported from Marshall, Sherburne, Wabasha and Nobles also

seen in 13 other counties throughout the state.

Barred Owl

Breeding reported from Anoka and Ramsey; also seen in Fillmore, Houston, Olmsted, Wabasha, Washington, Cook, Lake, St. Louis, Aitkin, Beltrami and Becker.

Great Gray Owl

Seen in Lake (Whyte, Tomahawk Trail), St. Louis (Elmer), Beltrami (Waskish) and Roseau (Roseau).

Long-eared Owl

Breeding reported from Polk and Watonwan (6-14, 3 young and 1 adult, T106, R30, DNR data).

Short-eared Owl

Breeding reported from Lac Qui Parle; also seen in Kittson.

Boreal Owl

Nested in Cook — first record for U.S. south of Alaska (KRE).

Saw-whet Owl

Breeding reported from Lake and Cook.

Whip-poor-will

Breeding reported from Polk; also seen in Marshall, Beltrami, Lake, Anoka, Wright, Washington, Wabasha, Olmsted, and Houston.

Common Nighthawk

Seen throughout the state.

Chimney Swift

Breeding reported from Stearns, Hennepin, Cottonwood; seen also throughout the state.

Ruby-throated Hummingbird

Breeding reported from Stearns; also seen throughout the state.

Belted Kingfisher

Breeding reported from Stearns and Anoka; also seen throughout the state.

Common Flicker

Breeding reported from Stearns, Hennepin, Beltrami and Anoka; also

seen throughout the state.

Pileated Woodpecker

Breeding reported from Stearns; also seen in 17 other counties in the northern and eastern regions plus Otter Tail and Nicollet.

Red-bellied Woodpecker

Seen in 8 counties in the southeast and east-central regions plus Martin, Nicollet, Lincoln (Lake Benton), Stearns (Grand Lake) and Becker (Tamarac NWR).

Red-headed Woodpecker

Breeding reported in Crow Wing, Stearns, Anoka, and Ramsey; also seen in 31 other counties north to St. Louis, Cass and Roseau.

Yellow-bellied Sapsucker

Breeding reported from Cook and Lake of the Woods; also seen in 22 counties south and west to Nicollet, Cottonwood (Mt. Lake), and Lac Qui Parle.

Hairy Woodpecker

Breeding reported from Cottonwood and Anoka; also seen throughout the state.

Downy Woodpecker

Breeding reported from Stearns, Grand, Cottonwood, Hubbard, and Wabasha; also seen throughout the state.

Black-backed Three-toed Woodpecker

Breeding reported from Beltrami (Waskish); also seen in Cook, Lake, St. Louis (Fairbanks), Hubbard (Itasca SP).

Eastern Kingbird

Breeding reported from Big Stone, Anoka, Hennepin, Sherburne, Beltrami, and Murray; also seen throughout the state.

Western Kingbird

Breeding reported from Grant, Murray and Sherburne; also seen in 19 other counties in the northwest, west-central, south-west and central regions plus Lake of the Woods and Anoka.

Scissor-tailed Flycatcher

One seen on 7-6 in Sibley Co. (Loon 50:212).

Great Crested Flycatcher

Breeding reported from Wabasha; also seen throughout the state.

Eastern Phoebe

Breeding reported from Stearns, Morrison, Anoka, Dakota, Hubbard and Beltrami; also seen throughout the state.

Yellow-bellied Flycatcher

Late migrant South 6-6 (Hennepin, DB). Seen in Cook, Lake, St. Louis, Aitkin, Crow Wing, and Beltrami.

Acadian Flycatcher

Seen in Houston, Hennepin (6-23, ETS), and Anoka (6-17, Carlos Avery, KJL).

Willow Flycatcher

Seen in Houston, Olmsted, Lyon, Lac Qui Parle, Stearns (Grand Lake, NMH), Clay (Felton, DGW), and Becker (Tamarac NWR, TDA).

Alder Flycatcher

Breeding reported from Beltrami; also seen in Cook, Lake, St. Louis, Aitkin, Mille Lacs, Crow Wing, Cass, Wadena, Marshall, Kittson, Roseau, Swift (Monson Lake, BASH), Stearns (Rockville, NMH) and Anoka (Cedar Creek NHA, JLH).

Least Flycatcher

Breeding reported from Beltrami; also seen throughout the state.

Eastern Wood Pewee

Seen throughout the state.

Western Wood Pewee

Seen in Pelan Park, Roseau Co. (6-10, bldg. nest, DGW; 6-25, SV).

Olive-sided Flycatcher

Late migrant 6-11 Anoka (KJL). Seen in Cook, Lake, St. Louis, Cass, Beltrami, Clearwater, and Roseau (Hayes Lake SP).

Horned Lark

Seen in 19 counties throughout the

state as far northeast as Duluth.

Tree Swallow

Breeding reported from Stearns, Anoka, Beltrami, Crow Wing, Pope, Wabasha, Hubbard, Murray; also seen throughout the state.

Bank Swallow

Breeding reported from Stearns, Anoka, Lac Qui Parle and Crow Wing; also seen throughout the state.

Rough-winged Swallow

Breeding reported from Stearns; also seen throughout the state.

Barn Swallow

Breeding reported from Stearns, Morrison, Grant, Big Stone, Beltrami, Anoka, Crow Wing, Otter Tail and St. Louis; also seen throughout the state.

Cliff Swallow

Breeding reported from Murray, Cass, Hennepin, Stearns, Mille Lacs, Beltrami, Lac Qui Parle, Grant, Big Stone, Crow Wing and Isanti; also seen throughout the state.

Purple Martin

Breeding reported from Stearns, Isanti, Olmsted and Beltrami; also seen throughout the state.

Gray Jay

Seen in Cook, Lake, St. Louis, Itasca and Beltrami.

Blue Jay

Breeding reported from Stearns, Watonwan, Hennepin and Anoka; also seen throughout the state.

Black-billed Magpie

Seen in Marshall, Roseau and Kittson.

Common Raven

Seen in Cook, Lake, St. Louis, Aitkin, Beltrami, Mahnomen (7-4, CMB), Lake of the Woods, and Roseau (Hayes Lake SP, DGW).

Common Crow

Breeding reported from St. Louis; seen also throughout the state.

Black-capped Chickadee

Breeding reported from Cottonwood, Hennepin and Beltrami; also seen throughout the state.

Boreal Chickadee

Breeding reported from Beltrami (Waskish); seen also in Cook and St. Louis (Babbitt).

Tufted Titmouse

Seen in Houston and Olmsted (Marion).

White-breasted Nuthatch

Breeding reported from Stearns; also seen throughout the state.

Red-breasted Nuthatch

Breeding reported from Beltrami; also seen in Cook, Lake, St. Louis, Hubbard, Clearwater and Hennepin (Mpls., DB).

Brown Creeper

Seen in Lake, Beltrami and Houston (LaCrescent, 6-9, one singing, FZL).

House Wren

Breeding reported from Morrison, Grant, Dakota, Anoka, Otter Tail, Watonwan, Cottonwood, Wabasha, Washington and Beltrami; also seen throughout the state.

Winter Wren

Seen in Cook, Lake, St. Louis, Beltrami, and Clearwater (Itasca SP).

Long-billed Marsh Wren

Breeding reported from Stearns; also seen in 23 other counties north to Roseau, Beltrami and St. Louis (Duluth).

Short-billed Marsh Wren

Seen in 16 counties in the northeast, north-central, northwest, east-central, and central regions plus Olmsted.

Mockingbird

Seen in Beltrami (6-12, Waskish) and Washington (7-19, JD).

Gray Catbird

Breeding reported from Stearns, Big Stone and Beltrami; also seen throughout the state.

Brown Thrasher

Breeding reported from Sherburne and Anoka; also seen throughout the state.

American Robin

Breeding reported from Stearns, Cass, Hubbard, Olmsted, Cottonwood, Sherburne, Hennepin, Goodhue, Anoka and Beltrami; also seen throughout the state.

Wood Thrush

Seen in Houston, Olmsted, Rice, Nicollet, Washington, Anoka, Hennepin, Cook (Heartbreak Ridge), Lake, St. Louis, Lake of the Woods, Beltrami, Becker and Clay (Buffalo River SP).

Hermit Thrush

Breeding reported from Beltrami; also seen in Cook, Lake, St. Louis and Aitkin.

Swainson's Thrush

Seen in Cook, Lake, St. Louis, Beltrami and Becker (7-28 Tamarac NWR, TDA).

Gray-cheeked Thrush

Seen in Dakota on 7-3 (Loon 50:206).

Veery

Seen in 24 counties in the wooded portion of the state as far west as Olmsted, Rice, Stearns, Otter Tail and Kittson.

Eastern Bluebird

Breeding reported from Wabasha, Anoka and Morrison; also seen throughout the state.

Blue-gray Gnatcatcher

Breeding reported from Houston and Wabasha; also seen in Goodhue, Olmsted, Carver and Anoka (Carlos Avery, KJL).

Golden-crowned Kinglet

Breeding reported from Beltrami (Waskish); also seen in Cook, Lake and St. Louis.

Ruby-crowned Kinglet

Breeding reported from Beltrami (Waskish); also seen in Cook, Lake,

St. Louis and Roseau (Hayes Lake SP).

Sprague's Pipit

Seen in Clay (Felton, BDC).

Cedar Waxwing

Breeding reported from Stearns; seen also in 26 other counties throughout the wooded portion of the state plus Cottonwood (6-3 to 6-6, RLG).

Loggerhead Shrike

Breeding reported from Sherburne and Anoka; seen also in Fillmore and Lac Qui Parle.

Starling

Breeding reported from Stearns, Grant and Anoka; also seen throughout the state.

Bell's Vireo

Breeding reported from Wabasha (Lower Sand Prairie). See Notes of Interest.

Yellow-throated Vireo

Seen in Winona, Hennepin, Washington, Chisago, Stearns, Mille Lacs, Aitkin, Cass, Beltrami, Becker and Marshall.

Solitary Vireo

Seen in Lake, Cook, St. Louis, Aitkin, Cass and Beltrami (Waskish).

Red-eyed Vireo

Breeding reported from Mille Lacs, Otter Tail, St. Louis and Beltrami; also seen throughout the state.

Philadelphia Vireo

Late migrants 6-1 Duluth, 6-4 Houston.

Warbling Vireo

Breeding reported from Hennepin, Wright, and Beltrami (Waskish); seen also in 27 other counties as far northeast as Cass, Aitkin and St. Louis (Duluth).

Black-and-white Warbler

Seen in 10 counties in the northern regions plus Anoka (Cedar Creek NHA, JLH) and Houston (Winnebago Twp., EMF).

Prothonotary Warbler

Breeding reported from Hennepin (Roberts Sanctuary); seen also in Houston and Winona.

Golden-winged Warbler

Breeding reported from Anoka; seen also in Hennepin, Washington, Becker (Tamarac NWR), Clearwater, Hubbard, Beltrami (Waskish), Cass, Crow Wing, Aitkin, St. Louis (Brimson, Babbitt) and Lake (Finland, DGW).

Blue-winged Warbler

Seen in Houston, Winona, Olmsted and Goodhue. "Brewster's" type hybrid seen in Anoka (Cedar Creek NHA, JLH).

Tennessee Warbler

Late migrant 6-1 Duluth. Seen in Beltrami (Waskish) and Cass (7-22, Bridgeman). Early migrants 7-23 Washington, 7-29 Houston.

Nashville Warbler

Breeding reported from Beltrami; also seen in Cook, Lake, St. Louis, Aitkin, Cass, Clearwater, Roseau, Marshall (T157, R41) and Anoka (Cedar Creek NHA).

Northern Parula

Seen in Cook, Lake, St. Louis, Clearwater, Beltrami and Becker (Tamarac NWR).

Yellow Warbler

Breeding reported from Otter Tail and Beltrami; seen also throughout the state.

Magnolia Warbler

Breeding reported from Beltrami; also seen in Cook, Lake, St. Louis and Clearwater.

Cape May Warbler

Seen in Cook (Sawbill Trail), Lake (Isabella) and Beltrami (Waskish). Early migrants 7-20 Marshall (Agassiz NWR, SV), 7-30 Duluth (JCG).

Black-throated Blue Warbler

Seen in Cook and St. Louis (Babbitt, Burntside Lake).

Yellow-rumped Warbler

Breeding reported in St. Louis and Beltrami; also seen in Cook, Lake, Cass, Clearwater and Becker (Tamarac NWR).

Black-throated Green Warbler

Breeding reported in Beltrami; also seen in Cook, Lake, St. Louis, Clearwater, Lake of the Woods and Anoka (Cedar Creek NHA, JLH).

Cerulean Warbler

Seen in Goodhue and Houston.

Blackburnian Warbler

Seen in Cook, Lake, St. Louis. Clearwater, Roseau (Hayes Lake SP), Becker (Boot Lake; Tamarac NWR), Beltrami and Chisago (6-30 Sunrise, ECL).

Chestnut-sided Warbler

Seen in 18 counties as far south and west as Washington, Anoka, Grant (Pelican Lake, NMH), Becker (Tamarac NWR), Pennington (T153, R39) and Kittson.

Bay-breasted Warbler

Late migrant 6-1 Duluth. Seen in Cook (N. Brule River) and Beltrami (Waskish, 7-19 - 7-27).

Blackpoll Warbler

Seen in St. Louis (7-2 near Ely, AJ).

Pine Warbler

Seen in Cook (Seagull Lake), St. Louis, Chisago (Sunrise), Crow Wing, Cass, Wadena, Clearwater, Beltrami and Becker (Boot Lake).

Palm Warbler

Late migrant 6-9 Ramsey (Loon 50:173). Breeding reported from Beltrami (Waskish); also seen in Clearwater (Itasca SP).

Ovenbird

Breeding reported from Itasca and Anoka; seen also in 19 other counties south and west to Olmsted, Wright, Otter Tail and Marshall.

Northern Waterthrush

Seen in Cook, Lake, St. Louis and Beltrami (7-1 Tamarac River).

Louisiana Waterthrush

Seen in Chisago (Franconia).

Kentucky Warbler

Seen in Hubbard (6-4 Itasca SP. Loon 50:169-178).

Connecticut Warbler

Breeding reported from Beltrami (Waskish); seen also in Lake, St. Louis, Aitkin, Clearwater (Itasca SP) and Roseau (Hayes Lake SP).

Mourning Warbler

Late migrant 6-5 Hinnepin (Roberts Sanctuary). Seen in Cook, Lake, St. Louis, Aitkin, Cass, Hubbard, Beltrami and Roseau.

Common Yellowthroat

Breeding reported from Beltrami; also seen throughout the state.

Wilson's Warbler

Seen in Cook (6-24 - 6-25 singing male, N. Brule River) and Beltrami (6-28 - 6-30 singing male, Waskish).

Canada Warbler

Seen in Cook, Lake, St. Louis, Beltrami (Waskish) and Anoka (Cedar Creek NHA, JLH).

American Redstart

Seen in 26 counties eastward from Olmsted, Stearns and Polk except Grant and Nicollet.

House Sparrow

Breeding reported from Isanti and Anoka; also seen throughout the state.

Bobolink

Breeding reported from Beltrami; also seen throughout the state.

Eastern Meadowlark

Seen in 18 counties in the south-east, east-central, central and north-central regions plus St. Louis, Becker, Otter Tail and Lac Qui Parle.

Western Meadowlark

Breeding reported from Clay, McLeod and Anoka; seen also in 25 other counties as far northeast as Mille Lacs, Cass and Lake of the Woods.

Yellow-headed Blackbird

Breeding reported from Ramsey, Anoka, Stearns and **St. Louis** (Duluth, GN). Seen also in 30 other counties throughout most of the state except the north-central (only in Lake of the Woods, Beltrami and Wadena) and northeast (only in **Lake** at Rice Lake, T62, R8W).

Red-winged Blackbird

Breeding reported from Stearns, Olmsted, Anoka and Beltrami; also seen throughout the state.

Orchard Oriole

Breeding reported from Grant and Big Stone; seen also in 10 other counties in the southeast and southwest plus Nicollet, Lac Qui Parle and Swift.

Northern Oriole

Breeding reported from Stearns, Anoka and Beltrami; also seen throughout the state.

Brewer's Blackbird

Breeding reported from Beltrami and Mille Lacs; seen also in 22 other counties all in the North except Stearns, Meeker, Hennepin, Anoka, Nicollet and Houston.

Common Grackle

Breeding reported from Stearns, Anoka and Beltrami; also seen throughout the state.

Brown-headed Cowbird

Breeding reported from Stearns and Beltrami; also seen throughout the state.

Scarlet Tanager

Seen throughout the state.

Cardinal

Breeding reported from Stearns and Ramsey; seen also in 13 other counties in the southeast, east-central and central regions plus Jackson (RLG), Nicollet (JCF) and Aitkin (CMB).

Rose-breasted Grosbeak

Breeding reported from Dakota,

Stearns and Pope; also seen throughout the state.

Blue Grosbeak

Breeding reported from Rock; seen also in Pipestone (Edgerton), Murray (Chandler) and Nobles (Leota).

Indigo Bunting

Breeding reported from Stearns; also seen throughout the state.

Dickcissel

Breeding reported from Martin; seen in 20 other counties north to Anoka, Morrison (Buckman), Otter Tail (Fergus Falls) and Clay (KJL).

Evening Grosbeak

Seen in Cook, Lake, St. Louis, Cass, Hubbard, Clearwater and Beltrami.

Purple Finch

Breeding reported from Cass and **Anoka** (adult feeding fledged young, Cedar Creek NHA, JLH); seen in 9 other counties in the northern regions plus Stearns, Washington (7-30, DMB) and Nicollet (6-21, KG).

Pine Siskin

Breeding reported from Stearns; seen also in Cook, Lake, St. Louis, Otter Tail, Clay (Moorhead) and Hennepin (thru 6-15).

American Goldfinch

Breeding reported from Rock; also seen throughout the state.

Red Crossbill

Seen in Cook, Lake, Beltrami.

White-winged Crossbill

Seen in Beltrami (7-7 - 7-8, Washish).

Rufous-sided Towhee

Seen in Houston, Winona, Wabasha, Olmsted, Nicollet, Anoka, Cass, Wadena, Marshall (T158, R42) and Rosseau (T159, R44).

Savannah Sparrow

Breeding reported from Beltrami; also seen throughout the state.

Grasshopper Sparrow

Breeding reported from Norman;

seen also in 23 other counties north to Anoka, Morrison, and Clay.

Baird's Sparrow

Seen in Clay (Felton, BDC).

Henslow's Sparrow

Seen in Winona (Kipp SP) and Swift (6-24 Halloway, BASH).

Le Conte's Sparrow

Breeding reported from Beltrami; seen also in Aitkin and Marshall.

Sharp-tailed Sparrow

Seen in Aitkin (McGregor), Beltrami (Waskish), Marshall and Kittson (Poppleton).

Vesper Sparrow

Breeding reported from Sherburne and Anoka; seen also in 31 other counties north and east to Washington, Cass and Lake of the Woods plus Lake (KRE).

Lark Sparrow

Breeding reported from Anoka; seen also in Wabasha, Nicollet, Sherburne, Renville, Yellow Medicine, and Polk.

Dark-eyed Junco

Breeding reported from Beltrami; seen also in Cook, Lake, **Otter Tail (6-1, 6-18, Fergus Falls, GLO).**

Chipping Sparrow

Breeding reported from St. Louis, Beltrami, Stearns, Hennepin, Anoka, Cottonwood and Olmsted; also seen throughout the state.

Clay-colored Sparrow

Breeding reported from Beltrami, Morrison, Sherburne, and Anoka; seen also in 20 other counties south to Olmsted, Lyon and Rock.

Field Sparrow

Breeding reported from Sherburne and Anoka; seen also in 13 other counties north to Stearns and Otter Tail (Fergus Falls, GLO).

White-crowned Sparrow

Late migrant 6-1 Duluth (KRE).

White-throated Sparrow

Breeding reported from Cook, St. Louis and Beltrami; seen also in Lake, Cass, Clearwater, Becker (common, Tamarac NWR), Roseau (Hayes Lake SP), and Anoka (7-30 Cedar Creek NHA, JLH).

Lincoln's Sparrow

Late migrant 6-1 Duluth (KRE). Breeding reported from Beltrami; seen also in Cook, Lake, St. Louis (Babbitt, Elmer).

Swamp Sparrow

Breeding reported from Beltrami; seen also throughout the state.

Song Sparrow

Breeding reported from St. Louis, Beltrami, Stearns and Olmsted; also seen throughout the state.

Chestnut-collared Longspur

Seen in Clay (Felton) and Wilkin (6-4, female, GLO).

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NOTES OF INTEREST

KENTUCKY WARBLER AT BIG STONE NATIONAL WILDLIFE REFUGE—

On the morning of July 23, 1978, while walking among the rock outcrops along the northside of the Minnesota River, within Big Stone NWR, Chuck brought my attention to a warbler-sized bird flitting in the Juneberry and Wolfberry shrubs approximately 100' distance. The bird was the approximate size of a Yellow Warbler and appeared quite content to remain within the shrubby interior. Upon attempts to approach closer, the bird presented a very nervous behavior flitting from bush to bush and elusively keeping from identifiable view amid the shrub growth. Finally the warbler emerged and alighted on an extended branch of an elm tree, about 50' distance, for a brief period, to provide us with opportunity for distinct identification. I made the following notations: Body color — olive cast to back and wings; yellow breast and belly; black cap, forehead, lores, and earpatch — extending like a whisker along side of head; bright yellow around eye; wingbars absent. The bird gave no alarm note, nor any call or song during the time it was observed. It was a species with which neither of us were familiar. The distinct facial pattern, size, and behavior eliminated any possibility of the less common Yellow-breasted Chat. The presence of the bright yellow around the eye would eliminate the Common Yellowthroat. Based upon observation, field notations and reference to Robbin's "Birds of North America" near where the species was last observed confirmed a probable Kentucky Warbler. Later two additional references: Peterson's "Field Guide to Birds," and the Audubon Society's "Field Guide to North American Birds" (Eastern region) confirmed with certainty that the species was a male Kentucky Warbler, though according to Green & Janssen's "Minnesota Birds" the bird seemed south and west of its known range. The morning provided excellent light conditions and was clear and still for good birding observation. The observation area is rock outcrop interspersed with catch-basins among the rocks and recesses creating damp pool ecosystems, and riparian woodland with a variety of shrubs and trees. Observation was made at distances varying from 50'-150' with 10x50 binoculars. **Chuck and Micki Buer, Route 3, Box 146, Canby, MN 56220.**

CANVASBACK BREEDING IN MINNESOTA — The summer of 1978 was the best year for Canvasbacks breeding in Minnesota in recent history. Ample rains throughout the breeding season provided ideal water conditions for Canvasbacks as well as other over-water nesters like Redheads and Ruddy Ducks. An example of the excellent productivity of the state's wetlands was provided by Area Wildlife Manager Gordon Nielsen of Fergus Falls. On August 3, he observed the following birds on a five acre type four marsh in Clay County: 3 broods of Canvasbacks, 2 broods of Blue-winged Teal, one brood of Mallards, one brood of Pintails, and one brood of Northern Shovelers. Canvasback broods were reported by Department of Natural Resources personnel in the 13 counties shown in Table 1. Forty-six broods counted included 284 young, for an average of 6.2 per brood. A total of 699 young Canvasbacks were seen. Wetland Wildlife Group (WWG), from Bemidji caught and banded 397 of these ducklings in the counties indicated. Another 302 ducklings were seen and reported during brood counts.

Table 1. A summary of Canvasback duckling observations for the summer of 1978 in Minnesota.

County	Number of broods seen	Number of young seen in broods	Number of young banded by WWG	Total young
Becker	?	18	44	62
Big Stone	1	6	0	6
Clay	10	52	4	56
Faribault	1	4	0	4
Grant	0	0	1	1
Kittson	8	45	0	45
Mahnomen	3	23	121	144
Norman	1	3	0	3
Otter Tail	4	22	5	27
Polk	0	0	69	69
Roseau	14	112	147	259
Stevens	0	0	6	6
Swift	4	17	0	17
Total	46	302	397	699

*WWG = Wetland Wildlife Group

Orville Nordsletten, Dave Soehren, Gordon Nielsen, Tom Carlson, Brad Schultz, George Davis, Jack Jensen, Jeff Miller, Dan Brehmer and the banding crew of the Wetland Wildlife Group are gratefully acknowledged for submitting the Canvasback observations reported here. **Robert Jessen, Waterfowl Research Group Leader, Department of Natural Resources, 2114 Bemidji Avenue, Bemidji, Minnesota 56601 and Carrol Henderson, Nongame Supervisor, Department of Natural Resources, Box 7, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155.**

GREAT GRAY OWL SPECIMEN FROM FILLMORE COUNTY — On March 15, 1977, as I was driving along U.S. Highway 16, between Spring Valley and Wykoff, Minnesota, I spotted a large clump of feathers lying on the shoulder of the road. Thinking it was large enough to be a turkey, I be-

came curious and stopped to investigate. The bird I discovered was an owl. Its wing was broken, its beak was broken off, and the gut contents were missing. Presumably, the bird had been hit by a vehicle and scavengers had eaten away the fleshy area. Unfortunately, I did not keep the carcass. A most interesting aspect of this find, however, was that the bird had been banded (638-57643). I sent the band to the U.S. Wildlife Service in Washington, D.C. and several months later, I received a card identifying the bird as a Great Gray Owl banded near Winnipeg, Manitoba in April, 1976. Subsequently, I received a letter from Robert Nero, of Winnipeg, who informed me that he and an associate had banded the bird along with four others, 50 miles east of Winnipeg. Since 1968, he and others have been responsible for banding 110 Great Gray Owls and my recovery was only the fifth one. Bob Nero says that the Spring Valley bird made a flight of 468 miles southeast of his nest while still less than a year old, and that this is the longest recorded flight for a banded bird of this species. Now I am told that the Great Gray Owl has never before been recorded in southern Minnesota. **Douglas H. Butler, 3917 16th Ave. N.W., Rochester, MN 55901.**

SUMMER OBSERVATION OF A GREAT GRAY OWL IN LAKE COUNTY —

On June 14, 1978 a Great Gray Owl was observed about one mile west of the intersection of Forest Route 424 and State Highway 1 in northcentral Lake County. The species was observed only briefly (about five seconds) as it sat on a tamarack snag in a black spruce-tamarack bog. Despite the brevity of the observation, the following characteristics identified the species: 1) large white chin patch, 2) yellow eyes, 3) lack of ear tufts, 4) large size, 5) concentric dark circles around eyes, and 6) grayish plumage (adult). The observation was made at about 7:00 p.m. with an overcast sky. In addition, the sighting was made from the car at a distance of about 10 to 15 meters and binoculars were not required. JoAnn Hanowski was with me at the time, but she only saw the owl as it flew away. We attempted to locate the bird afterward, but our attempts failed. The observation of the Great Gray Owl in June provides some support for potential nesting of the species in northeastern Minnesota. Currently, there are no breeding data for St. Louis, Lake, or Cook counties. Due to several factors such as the inaccessibility of breeding habitats, low population densities, and the lack of competent observers, it is difficult to locate breeding areas. In light of increased demand for peat, copper-nickel resources, and timber in the northeastern Minnesota conifer forests and bogs, it is important to evaluate the role of remote and extensive bogs to boreal species such as the Great Gray Owl. Little detailed life history data are available on these boreal species in northern Minnesota. This observation is of interest because it follows a winter invasion of Great Gray Owls (Eckert, K. E. 1978. *Loon* 50:63-68). **Gerald J. Niemi, Lake Superior Basin Studies Center, University of Minnesota, Duluth, MN 55812.**

LATE SWAINSON'S HAWK IN ANOKA COUNTY — On October 22, 1976, on a gravel road west of County Road 14 just northeast of George Watch Lake, I observed an unusual hawk. The time was late afternoon. This is the same area where the Mountain Bluebird was found earlier in the day. The hawk was flying almost directly overhead in a west-southwest direction. I had camera in hand and took three slides as the bird passed over.

The wing linings appeared light colored and the only field notes I entered were "possible Swainson's Hawk — check slides." Over six months passed before the film was processed. When I did view the slides they appeared to be a Swainson's Hawk, but I sent them to Bob Janssen for his opinion. Bob had some reservations and sent them to Dr. Tordoff at the University. He felt it was a Swainson's Hawk. I have since observed a number of Swainson's Hawks in North Dakota and western Minnesota. Re-examination of the slides shows a dark breast band and wing linings lighter colored than the primaries. The slides compare favorably with birds seen in North Dakota and I am convinced this was a Swainson's Hawk. This would be one of the latest fall dates for Minnesota. **Kenneth J. La Fond, 11008 Jefferson St. N.E., Blaine, MN 55434.**

SCAVENGER, PREDATOR ROLES REVERSED — Since the early weeks of the '78-'79 winter birding season were quite unproductive in Minnesota, I decided to go on a one-day "marathon" into the NW portion of the state to see what I could turn up. At 6.00 a.m. on Sunday, Jan. 7, I left Fergus Falls and was in Tamarack Nat'l. Wildlife Refuge by 7:15. By noon I was skirting Lower Red Lake on Highway 1. I'd picked up a few expected species, including a few Common Redpolls, which have been few and far between this year. Still hoping for a Great Gray or Hawk Owl, I decided to go all the way to Roseau. Just north of Roseau on Highway 310 I noticed scattered groups of Rock Doves feeding along the shoulder of the road. The sky was sunny, wind light from the west, temperature about -15°F. At 1:55 p.m., two miles north of Roseau, I spotted a Common Raven chasing a Rock Dove over an open field just east of the highway. The dove was headed for a nearby farm where it could undoubtedly escape the raven's harassment. When I first saw the birds, they were approx. 300 yards away and 30-40 feet above ground. The raven was slightly above and behind the dove. I assumed the raven to be merely "playing," and that the more agile pigeon would easily slip away. Ravens, however, are very aerobatic and can maneuver well despite their size. To all appearances, the dove was a healthy and fast-flying bird, but the raven kept closing in and forcing the dove lower, until both were within two to three feet of the ground. In one final movement, the raven forced its prey to the ground and began hammering at the dove's head and neck with its heavy beak. The raven stood on the dove's back, making it difficult for the prey to attempt escape. Three times the injured bird freed itself and made feeble 10-20 foot flights, but the raven easily forced it down each time. In about two minutes the dove ceased struggling. The raven began plucking its prey, frequently cleaning its beak of feathers by rubbing it in the snow. The head of the dove was dismembered and portions consumed, then the raven removed another portion (unidentified) and flew with it to a tree in the farm grove nearby. The whole episode took ten minutes. The distance of observation was approx. 250 yards, using Leitz 10x40 binoculars and a Bushnell 20-45x 'scope. I continued up to the border and checked the bog for Great Gray Owls, finding none. At 2:30 p.m. I was back where the dove had been killed, only in place of the raven, a Snowy Owl was standing on the kill. I observed the Snowy Owl feeding for a few minutes. I believe this account unusual for three reasons: 1) Ravens are basically scavengers, and although they will take live mammalian prey on occasion, I was unaware they would kill a healthy bird; 2) Rock Doves are fast, agile birds that could seemingly out-fly ravens; 3) Snowy Owls

are basically predators. This was a heavily marked owl, quite likely an immature taking advantage of the situation. **Steve Millard, Rt. 2, Fergus Falls, MN 56537.**

CINNAMON TEAL IN WATONWAN COUNTY — Dave Olson and I were on patrol on April 29, 1978 at about 2:30 P.M. when we noticed a Cinnamon Teal swimming in a waterfilled road ditch as we passed by on the road. The location was in Watonwan County near St. James, Twp. 107 R 32 W Sec. 1. We backed up to within 30 or 40 feet to get a better look and watched it for a minute or two before it flew away. It was the size of a Blue-winged Teal but had a solid reddish brown head and breast, obviously not a Blue-winged or Green-winged Teal. I have observed hundreds of Blue-winged and Green-winged Teal, this was my first sighting of a Cinnamon Teal. **Norm Floden, Department of Natural Resources, 925 6th St., Windom, MN 56101.**

SNOWY OWL AT MOORHEAD — On February 11, 1979 at 7:00 A.M. I was watching a group of seven Gray Partridge near the railroad tracks behind my home at Moorhead, Clay Co. I see them quite often and had my 7x35 binoculars on them, when something swooped down and scattered the birds into the Poplar trees behind the house. I turned my binoculars on this intruder and to my surprise it was a Snowy Owl. It was very chunky and as it turned over the tops of the trees and headed east I ran to the front of the house to catch it again. It was about 20 inches in length, with a wingspan of approximately four feet. I also noted that it was almost pure white as it headed straight out to the open country to the east. A very beautiful bird and my first Snowy Owl. **Roy W. Koskela, 655 Apple-tree Lane, Moorhead, MN 56560.**

PRAIRIE FALCON NEAR FERGUS FALLS — On October 21, 1978, I was birding at Orwell Refuge, seven miles SW of Fergus Falls, Otter Tail County, at 12:30 P.M. It was mostly sunny with a W-NW wind 10-15 mph. The temperature was pleasant — high 50's. On the NE side of the reservoir is an extensive stand of junipers that occasionally produces some good species, so I walked through hoping to flush something. When I broke out on the west side of the junipers, I noticed a Red-tailed Hawk soaring along the bluffs south of me. Almost immediately another raptor appeared, showing a definite falcon silhouette. The falcon soared near the Red-tail and made a couple of playful passes at it, then dropped into some trees on the bluff near the water. Soon it reappeared 300 yards from me and moved along the bluff in my direction. It passed over me quite closely, in what I call "shotgun range" (in this case 20-30 yards). I noted the large falcon shape, facial markings, light underparts and the dusky brown of the mantle. The bird flew east over a plowed field, then came back over me very close again. It flew back in the direction whence it came and disappeared to the south. The time was 12:40, the bird having been in view about three minutes in near-perfect light. Ten power binoculars were used. The most obvious field mark — the black axillars — were of course present, but I would like to point out something most field guides fail to mention. Not only the axillars, but the entire triangle of the inner wing lining from wrist to shoulder appeared dark. I have seen several other Prairie Falcons which were so marked, and have discussed this point with

other birders who have concurred with me. Though not totally black, this area of the wing is heavily suffused with dark markings, perhaps more so in young birds. Because of this, the area appears nearly all dark at a glance. Sightings of this species have become increasingly frequent in Minnesota the last few years, especially the western portion of the state. I'm optimistic it will become a regular in years ahead. **Steve Millard, Rt. 2, Fergus Falls, MN 56537.**

LARGE NUMBER OF AMERICAN REDSTARTS OBSERVED AT DULUTH —

On Monday, August 28, 1978 I observed a very large concentration of American Redstarts on Minnesota Point in Duluth. These birds were observed over a period of about 1½ hours beginning at approximately 11:30 A.M. and lasting until about 1:00 P.M. The birds were observed in good light with 8x40 Bell & Howell binoculars. The area covered began at the pines on Minnesota Point near the wooden ore boat in the picnic area. I hiked southeast through the trees, along the dunes, and then entered the pines beyond the airport. I followed the path through the pines past the first opening where there is a small building owned by the power company. I hiked about 50 yards beyond this opening, then I walked back out on the road that leads past the airport. The Redstarts in the pines at the picnic and beach area were so numerous it was impossible to count them accurately. I had a piece of paper that I used to list the species of birds and their numbers, but I gave up counting Redstarts because I couldn't be sure that I wasn't counting some of the birds more than once. Also, I ran out of room on the paper after a short time of trying to count them. I had counted 62 Redstarts in about 30 feet of walking in the pines when I gave up counting. The Redstarts were that abundant in the entire area between the wooden ore boat and the building at the beach area, an area about 1½ blocks long. The Redstarts were much less numerous in the pines east of the airport, but there were always about 8 to 10 Redstarts visible until near the opening by the power company building. While I was in this area I walked the side trails to the beach to look for shorebirds. The pines off the main trail contained similar numbers of Redstarts. Beyond the power company building, the number of Redstarts dropped off to almost zero. I don't have much experience at estimating numbers of birds, but considering that I counted 62 Redstarts in a very small part of the picnic area, I believe 1,000 would be a conservative estimate of the number of Redstarts seen on Minnesota Point. **Gary Simonson, 5407 Morgan Ave. N., Minneapolis, MN 55430.**

BELL'S VIREO NEST — Bell's Vireo has been reported on lower Sand Prairie near Kellogg, Wabasha County for a number of years. However, I do not believe anyone has reported finding a nest. On June 22, 1978 I decided to try to confirm nesting in the area. I approached the willow thicket in which it had been reported and very shortly was rewarded by first the song and then the sight of the birds. One had a worm in its mouth and was very agitated so I knew it must have young nearby — hopefully still in the nest. I watched the birds for almost an hour but failed to see them go to the nest. Finally, in desperation I decided to walk into the thicket to see if I could spot a nest outlined against the sky. As I was studying the area, I noted a shadow about two feet off the ground in a bush near where I had been standing earlier. It revealed a vireo's nest

with one fully feathered young in it. I had actually brushed the nest as I walked into the thicket. It explained why the adult did not venture near the nest as I waited. I backed off and set up my cameras and photographed the young one being fed by the adult. On June 24 I collected the nest and branch on which it was situated. It is now in the Bell Museum.



Bell's Vireo at nest — Wabasha Co., June 22, 1978 — Photo by Don Mahle

On July 6 a delightful couple from Indiana stopped by wanting to add the Bell's Vireo to their life list. Wynn and I took them down there and to their delight and ours, we heard and saw three birds. **Don Mahle, Rt. 1, Box 283, Wabasha, MN 55981.**

TWO MORE ARCTIC LOONS OBSERVED ON LAKE SUPERIOR — On the afternoon of September 11, 1978 Marj Carr reported to me that she had just seen a winter plumaged Arctic Loon off the Lester River in Duluth. I immediately drove down to the mouth of the Lester River and after a brief search found the loon in question. It was swimming 50 - 80 yards offshore with a few Common Loons and many Herring Gulls. Following is a description of the bird as taken from my field notes before any field guides were consulted: slightly smaller than an immature Herring Gull swimming next to it (another Duluth birder, Burnett Hojnacki, also had come to see it; she had direct comparison with a Common Loon swimming next to it, and commented that it was strikingly smaller and thinner, especially the neck and bill); back dark gray and unmarked; top of head and nape lighter gray than back; back of neck below nape darker gray than back and becoming blacker at the side of the neck, extending slightly into white fore neck (suggesting remains of Common Loon collar); white of throat and side of face extended to the eye to suggest a whitish eye ring (but this was difficult to see through binoculars and was visible only through

the scope); bill light at the base becoming dark at the tip. Because the basic pattern of the bird looked very much like that of the Common Loon, I was not ready to call it an Arctic Loon since I was aware of the difficulties presented by the small race of the Common Loon. However, a later search through the literature showed that even the small race of the Common Loon never gets as small as the bird we observed, and that the Arctic Loon in winter plumage can have at least some white around the eye. Also, "loon expert" Judy McIntyre was sent a copy of my description and she said it sounded like an Arctic to her based on the lighter top of head and thinner bill. Also convincing was another observation of another (same?) Arctic Loon off the Talmage River just northeast of Duluth by Marj Carr on September 23, 1978. This bird was in company with two average-sized Common Loons and a smaller Common Loon (which was similar in pattern to the Arctic Loon but had an obviously thicker bill). Marj managed to get recognizable photos of both small loons and the difference in their bills is clear — the Arctic Loon shows not only a thinner but also a shorter bill, while the "Lesser" Common Loon shows an obviously large and thick bill in spite of its small body size. Since this Arctic Loon looked to Marj to be nearly identical to the one we had seen at the Lester River, I was then ready to conclude that this September 11 loon was also an Arctic based mainly on the bill size (a mark which I had been unable to determine without direct comparison, but which Burnett had clearly noticed). Separating winter plumaged Arctic Loons from the small race of the Common Loon can therefore be very difficult (although some Arctics are more cooperative in fall/winter by retaining at least some of their breeding plumage). But when dealing with the more nondescript Arctics, also look for dark feathering above and in front of the eye (most winter Commons have a complete and obvious eye ring), the thinner and shorter bill (even smaller than a "Lesser" Common Loon, though direct comparison would be needed), and finally try to see a white patch at the water line near the tail (illustrated in Robbin's field guide and said by some to be the most diagnostic mark.) **Kim Eckert, 9735 North Shore Dr., Duluth, MN 55804.**

LATE OSPREY IN HOUSTON COUNTY — December 15, 1978 was sunny and relatively warm and we were returning from errands in Eitzen. We had just turned onto our township road from the county road and heading west to our house when we saw a large bird flying about 150 feet above the creek bed toward the east. We knew by the crook of its wings and the lightness of its breast and belly that it was not the Golden Eagle we sometimes see in the valley. As it came by us, we could even see the black "wrist" marks on its wings. As we watched, it increased its altitude and circled a hill which rises to the southeast of the county road, appearing to be looking for a spot to light and rest, but we lost it as it flew low over the trees on the top of the hill, and presumably far enough on the southeast of the hill so that we could no longer see it. Marilyn had her binoculars along and got a quick look with them (7 x 35 Bushnell) but only after it had passed us so it was not a particularly helpful additional view. When we first saw it (about 3:15 P.M.), the bird was about 100 yards south of the road. After we lost sight of it, we went on home, and suspecting that it was late to be seeing an Osprey, checked it out in the Green and Janssen book. It was late, indeed, but clearly an Osprey, and we wondered at his appearing in our valley, some ten miles from the Mississippi River (west), but were glad he had, since it is a first for our records here at "The Foundation." **Marilynn & Gene Ford, Route 1, Box 52A, New Albin, IA 52160.**

LATE COMMON LOON — While on the Bloomington CBC on 12-30-78, Al Preston, Marcella Martini, Ron and Jan Baker and I were making a last check of Black Dog Lake, Dakota Co. before going to the count tally. We had seen two Lesser Scaup earlier in the day and were trying to find them again. We had a 15-60X zoom scope and had walked to the edge of the lake. The patch of open water was about 300 yards away. While looking through the scope at 40X, I saw what I thought was a funny colored female merganser. However, when I examined the bird further I noticed the bird had a white throat and lower side, a dark back, a dark neck, and a dark top half of the head. In addition, the bird had a straight, large, tapered bill, the straight bill ruled out the possibility of the bird being a Red-throated Loon. I thought the bird had to be a loon or grebe. The others looked at the bird and were sure it was a loon. While they looked at the bird I went and got the field guides from the car. We all looked at the bird at 60X and were positive it was a Common Loon in winter plumage. We observed the loon for nearly half an hour, 4:00 to 4:30 p.m. The light was still good and there were no shadows on the loon. According to **Minnesota Birds** by Janssen and Green, the latest record for a Common Loon in southern Minnesota is December 26. Because of the bird's shape, coloring, and the bill's shape and size all of us are certain the bird was a Common Loon. **Mark Wright, 11009 Territorial Drive, Burnsville, MN 55337.**

WINTERING WHITE PELICANS — On December 24, 1978, I received a message over the Audubon Rare Bird Alert that there were four White Pelicans present on the open water between Fountain Lake and Albert Lea Lake in Albert Lea, Freeborn County. On January 1, 1979 Ray Glassel and I visited the area and found the four birds huddled on the shore of the open water. The temperature was around -10° Farenheit. As we approached, the birds swam into the open water and began feeding. They appeared to be in good shape and surviving the cold. On February 3, 1979 we (Ray and I) again visited the area and found the four birds in a small tributary channel near the railroad tracks. This channel comes directly from the power plant and probably contains warmer water than that where we first found the birds. At this time two of the birds were in very poor condition, and appeared to be affected by the cold. Once again the temperature was around -10°. The other two birds appeared in satisfactory condition. On March 17, 1979 Ray and I again visited the area and found two White Pelicans feeding in the large open water area where we first saw the birds in January. It is presumed that the other birds did not survive the continued cold that this area experienced in February. The two surviving birds represent the first overwintering record for White Pelicans in Minnesota. **Robert B. Janssen, 10521 S. Cedar Lake Rd., Minnetonka, MN 55343.**

GREAT HORNED OWL DISPLAY — Sometimes a person is extraordinarily lucky and doesn't realize it. This was the case when I was fortunate enough to observe the Great Horned Owl display to its mate on Feb. 25, 1979. Wynn and I spent the night at our daughter, Susan's new home on a wooded hill near Oronoco, Olmsted County. About daybreak I heard an owl hoot. I opened the French doors of our room, stuck my head out and hooted. Immediately I saw an owl fly to a tree about 200 feet away. It was clearly outlined against the eastern sky. Imagine our surprise when, as the owl

hooted (to me — or to its mate), it raised its ear tufts, tipped forward, pulled its tail feathers together and raised them vertically so it appeared as if a shingle protruded upward from its rear. It did this repeatedly — each time it hooted. It did not occur to us that this was an unusual observation, even though it was unusual for us even to see an owl. After relating the incident to Bill Drazkowski he researched it and found in **Birds of Prey of Wisconsin** this note: "If you are extraordinarily lucky you may see an owl display to its mate. With ear tufts raised, tail up, he reminds one of a prairie chicken as his low melodious call carries far over Wisconsin's fields and marshes." **D. G. Mahle, Rt. 1, Box 283, Wabasha, MN 55981.**

HAWK OWL SEEN IN STEVENS COUNTY — For whatever it's worth, I'd like to report a Hawk Owl for Stevens County. I'd never seen one in my life before — but I'm quite familiar with it from the books and reports in "The Loon," etc. I was driving out my driveway on the morning of January 6, 1979 when this bird almost flew right into my car. It swerved enough to go right over the car hood, and as it passed, it turned its head and looked straight at me, when I instinctively blurted out loud "Hawk Owl!" It was easily identifiable by the face mask or pattern, the prominent white spots on top of the head, and the intermediate size — between a Screech Owl and a Great Horned Owl, the two common owls of this area. I stopped my car and watched it fly away, low to the ground and across a small open field. The two white stripes on the back (scapulars) stood out as plain as the stripes on a skunk, just like the picture in "Robbins." Then on the morning of January 9 as I drove out the same driveway, the owl appeared again. Except for being about 10 - 15 feet further away, it staged a repeat performance of January 6. (This is a sort of postscript to the report I sent you a couple weeks ago, about the Hawk Owl I saw on Jan. 6 and 9. Up to the time I wrote you I hadn't seen the bird since — but now I think it must have been in this area all winter.) On both mornings of Feb. 26 and 27, it (the Hawk Owl) flew up from the ground out by my barn when I went out to feed my chickens. I'd been butchering some of my surplus young roosters, and I wonder if the Hawk Owl took an interest in the chicken heads that were scattered out there near the barn? I don't know anything about their feeding habits — but with all this snow we've got, those heads probably looked like fresh meat to a hungry owl. At first this sighting seemed to me so unlikely that I thought nobody would believe it (no picture — no back-up witness, etc.). Then I read in your and Jan Green's book that there are a few records of this bird in southern Minnesota. So I decided to send you a report. It might help to back up other possible reports of Hawk Owls in Minnesota this winter — just in case we have something like a "Hawk Owl" invasion. **Ernest H. Strubbe, Alberta, MN 56207.**

BOOK REVIEWS

Birds of the Superior National Forest by Janet C. Green and Gerald Niemi; Forest Service, U.S. Dept of Agriculture, 1978; 82 p., 23 photos, 3 line drawings.

Now that income tax time is upon us and we're all complaining that we don't get enough in return for the taxes we pay, it's kind of nice when something of value comes out from the government for free, compliments of the U.S. taxpayer. **Birds of the SNF** is 82 pages worth of birding information for which a dollar or two could have easily been charged, but it's free for the asking at any of the national forest ranger stations (or write: Forest Supervisor, Superior National Forest, Box 338, Federal Building, Duluth 55801).

One need only note that the authors of this publication are Jan Green and Jerry Niemi to know that the information provided is the best available — there is simply no one better qualified than these two to compile data on the birds of this area. But it is curious that the title page cryptically lists them after "Ornithological information provided by," and that the book is "compiled by: Karl P. Siderits." But these credits are misleading. Jan and Jerry are the authors, Karl merely coordinated the text, photos and drawings into its final layout. The problem is, however, that the only drawbacks with the book involve its final printed appearance. The color painting on the cover is certainly attractive, but beyond that this book's appearance goes downhill. While the eight bird photos are adequate (though the photographers of two are not acknowledged), their arrangement on their page is less than attractive. The reproduction of some of the 15 habitat photos is not the best (and again none of the photographers are credited). The three line drawings of the

Common Loon, Barred Owl and Ruffed Grouse can only be described as bad (and for once it's just as well that acknowledgments are lacking). The layout of the text is often sloppy and confusing, especially as the major sections of the book seem to run into each other and are difficult to quickly locate. One would think that at least one map of some kind would be included in such a book, but such is not the case so that it might become difficult for some readers to visualize the geography involved. Finally, the arrangement of the species in Table 2 is badly juggled, probably as a result of a printer's error, but this points up the fact that because of a rushed publication deadline neither author had an opportunity to proof-read the galleys, so unfortunately it is likely that other errors found their way into the final text. (note the curious "White Cedar Community" photo p. 29).

But these problems should not detract from the quality and value of the birding information involved. The first three introductory chapters are not only interesting but readable, even for the least scientifically-minded novice. Chapter 4 is an excellent and illustrated discussion of the habitats found in the forest, with descriptions of the characteristic plants and listing of the characteristic birds involved. Chapter 5 offers valuable bird finding information that includes many highly sought-after species that are the specialties of this area. Chapter 6 follows with an annotated list of all 265 species recorded in the forest; while some of the species accounts seem too abbreviated (e.g., all you'll find under towhee is "Occasional. Migration: May"), rest assured that most of the information here is more than adequate and that all of it is accurate. The book concludes with two useful

tables on the breeding species of the forest, one which ranks each species from abundant to very rare and the other which neatly capsulizes information on breeding bird censuses, feeding habits, nesting and habitats.

One final reminder and word of advice: don't buy this book! (It's free, remember?)

—Kim Eckert

The Birds of South Dakota by N. Whitney, Jr., B. Harrel, B. Harris, N. Holden, J. Johnson, B. Rose, P. Springer; South Dakota Ornithologists' Union, c/o W. H. Over Museum, Vermillion, SD 57069, 1978; 43 habitat photos, 54 line drawings, 380 range maps; \$10 (SDOU members \$8) plus \$1 postage.

For the most part, I'll have to admit that I like this book, although I'll also have to confess that I wasn't expecting to. Having lived in South Dakota for four years, I had ample time to experience a very interesting birding state with resident birders few and far between (the state's population is only about one-sixth of Minnesota's). Therefore, it's only natural that the level of S.D. ornithology cannot compete with that of Minnesota — **South Dakota Bird Notes** simply does not have the resources to compete with a publication like **The Loon**, eager listers combing the state for rarities are virtually non-existent (B. J. Rose, the only serious lister to roam throughout the state, has long since moved away), and the rigorous business of documenting unusual and significant observations that prevails here does not exist in S.D. on the same level (of the seven authors, only Bruce Harris has seriously concerned himself with such business since Paul Springer left the state). Add to that background the facts that seven authors are involved (too many cooks really can spoil the broth sometimes) and that the original manuscripts by these writers are now about five years old (a telling example of the frustrating editing delays is that the bibliography cites

Roberts, not Green and Janssen, as the current Minnesota authority), well gee, Bruce, can you really blame me for not being more optimistic?

But **Birds of S.D.** arrived as an unexpected and pleasant surprise, and I recommend it with relatively few reservations. For the most part it greatly transcends the previously casual level of South Dakota ornithology and emerges as far superior to its hopelessly inadequate predecessor of the same title by Over and Thomas. The introductory material is fairly brief and not only interesting but also uncomplicated and readable. It includes a description of the state, past and present, its representative birds, an ornithological history, a definition of terms, a neatly and conveniently numbered list of the 377 South Dakota species (although there are problems with this list), and an extensive section on the state's habitats told through black and white photos (more problems here, though) captioned with characteristic bird species.

The species accounts make up the bulk of the book, of course, and include sections on status, habitat (a category missing from Green and Janssen), nesting (all records are cited except for the more common species), and data on each applicable season (including migration dates). The most striking thing about these accounts is that they are informal and wordy, with an abundance of dates, locations and observers. For example, each early and late migration date also includes the year, place and observer, information that **Minnesota Birds** does not have room for. While some might find all this unnecessary, I found all this to be quite readable and harmless for the most part, although an occasional extraneous and dubious statement unfortunately creeps into the text at times (e.g., under Mockingbird, Brown Thrasher and Am. Robin).

But clearly, the best part of the species accounts, and the whole book for that matter, is its extensive use of range maps. These maps do not plot

counties, but rather use a more natural system by showing the major landforms of the state, the Black Hills, the Missouri River and its two major tributaries, the White and Cheyenne Rivers, and the Coteau des Prairies (although only the Black Hills and Missouri River would have had to be included since the other three features have virtually no correlation with any species' range). Shading is used to indicate migration, breeding and winter ranges, and dots of five shapes indicate extralimital or out-of-season records as well as records for those casuals and accidentals with no shading. This system basically works quite well except for a few maps that tend to look a bit confusing where migration shading meets breeding or winter shading. But the real plus with these maps is that **every** species is mapped, even those resident throughout the state and those with only one or two state records. Some might argue that maps for such species are not necessary, but I disagree. Such an extensive use of maps offers a clear and consistent view at a glance of the status of any and all species, and to me such a system is preferable to the selective use of maps in **Minnesota Birds** that leaves too many species that deserve maps without them.

No book is flawless, however, and this book does have its share of shortcomings. One is its use of sketches to decorate the text, a practice that I personally tend to dislike. While most of them are adequate enough, they don't really add much to the quality of the book, some of them just didn't come out well in the printing, and at least one of them is misidentified (the "Pine Grosbeak" looks more like a Purple Finch to me). Another problem is that some of the status definitions seem inconsistent and hard to apply, especially the terms casual and accidental which often seem interchangeable and vague in their application. Also the term hypothetical is assigned to some undoubtedly dubious species (e.g., Black Vulture, Smooth-

billed Ani, Lesser Nighthawk, Wheat-ear, Townsend's Warbler), which not only tends to lend them more credence than they deserve but also degrades the credibility of the more realistic birds on this list. Related to the problem of definitions is that several species include information that doesn't seem quite right. Difficulties begin in the list of species in the introduction which has a curious system of superscripts and three columns that is misleading and confusing in some cases. Here and in the species accounts and range maps I found many statements that I had a hard time agreeing with. Most glaring among these were: the assumption or assertion of regular status for Snowy Egret, Yellow-cr. Night Heron, Ross' Goose, King and Yellow Rails, Broad-tailed, Rufous and Calliope Hummingbirds, Sage Thrasher, Louisiana Waterthrush, and Henslow's Sparrow; inexplicable "holes" in the range maps of Olive-s. Flycatcher, Purple Martin, White-br. Nuthatch, Field Sparrow, and several of the migrant shorebirds; the claim that the Winter Wren winters regularly throughout; and the acceptance of four very dubious sightings (Swallow-tailed Kites in winter, a Boreal Owl in Watertown in August, summer resident White-eyed Vireos in Bon Homme Co. with no details, and four Hoary Redpolls based on "estimation of 15% Hoary in flock of 30 redpolls"?!).

The final problem with **Birds of S.D.** is no fault of any of the authors, but it remains an unfortunate and glaring one. The reproduction of many of the habitat photos (including the one on the cover) is a disaster: many are out of focus and several came out underexposed. This appears to be the fault of the printer and not the photographers since so many came out poorly and since the composition of most of them looks fine. It is difficult to imagine why these pages were allowed to appear in the final printing. I certainly hope, however, that this shortcoming does not deter any-

one from buying this book. As I said earlier, South Dakota is a most interesting birding state, and for the most part it should be satisfied with and even proud of his book which represents it.

—Kim Eckert

Birds of Man's World written by Derek Goodwin with line illustrations by Robin Prytherch was published by Cornell University Press in 1978. It is a small hard cover book of 183 pages, 6 by 8½ inches. Its price at publication was \$10.95.

Throughout the six chapters — “Man and the Environment,” “Birds in Towns,” “Birds Fed by Man,” “Introduced Birds,” “Birds and Bread,” and “Future Imperfect” — Mr. Goodwin emphasizes what is often forgotten: many birds thrive with man because of changes made by man, not in spite of those changes. Examples cited include the Horned Lark (Shorelark in England), Lapwing, Killdeer, Rook, and Cowbird.

Some Birds of Man's World would be a more modest title for this book, as it is obvious by its size and length it is not the last word on a vast subject. Also, the author emphasizes European birds, particularly British, but includes some birds he observed while traveling widely in such places as Brazil, Sri Lanka, New York City and Australia. Mr. Goodwin is a careful observer, and systematic, but his coverage is spotty and his text is patchy, as if consisting of notes sometimes detailed, sometimes impressionistic, linked together by his thoughts. One of the more detailed and interesting narratives is his record of a day spent watching Bourke's Parakeets, Mulga Parrots, Crested Pigeons, a Singing Honeyeater, a Diamond Dove, Galahs, Pink Cockatoos, and Bronze-wing Pigeons come to drink at a cattle station watering trough in interior South Australia.

At the other extreme of his subject, he reports that in London “official man” kills large numbers of Feral

Pigeons against the wishes of “non-official man,” and that black cotton put over crocuses to keep off the sparrows gets entangled in Pigeons' feet, resulting in loss of toes and even the whole foot.

Chapter Five, “Birds and Bread” contains some peculiar observations which a reader cannot refute, but which are not substantiated. The author reports that the enrichment of white bread with vitamins and minerals has ended the occurrence of beriberi in London's Feral Pigeons. Perhaps students of birdlife in London know that London's Feral Pigeons suffered beriberi before the bread was enriched, but it seems hard to believe. Incidentally, in his careful way, Goodwin defines bread to include “bread-like foods, such as cake, pastry, buns, scones, and biscuits.” No doubt he would also include crackers, tortillas, and lefse. Birds, of course, learn to eat bread either by experiment or by copying older, experienced birds.

Chapter Six, “Future Imperfect,” presents the reader with three unpleasant alternatives for man and birds in the future. A nuclear holocaust would reduce man to a few scattered neo-primitive groups. Birds dependent on man would fare worse, and most not depending on man would fare better. If man doesn't blow up his world, but slowly overpopulates it, food will be synthesized in laboratories or grown in soil-less cultures. In such a crowded, controlled, Huxleyan world, men and women would lose those qualities which make human life worthwhile, and numbers of birds would be greatly reduced. The third alternative, considered most probable by Goodwin, is that we will muddle on as we are, with a decreasing standard of living even in affluent nations, let alone in emerging nations. Centralized authority will increase, with “an increasingly intrusive, restrictive, and minatory officialdom” having an adverse effect on all birds relying in part on human bounty. After all, it is now a crime to feed the

pigeons in London's Waterloo Station! The exhaustion of fossil fuels will make it less possible to enjoy birds. [For example: no trips to Duluth.] We will have to study backyard and park birds, and learn to see with

fresh vision the "fiery eye and rainbow neck of the Feral Pigeon." I hope he is wrong, but who can prove that he is?

Fred Leshner

THE 200 COUNTY CLUB

Only three counties, Grant, Morrison and Wadena were added to the list but a number of people sent in their lists for counties previously reported with over 200 species. Our total counties is now 25, we have a long way to go to get all 87.

County	Observer	Species
Aitkin	Terry Savaloja	255
	Jo Blanich	237
	Bill Pieper	212
Anoka	Ken LaFond	237
	Bill Pieper	221
	Ruth Andberg	206
Becker	Gary Otnes	208
	Marion Otnes	207
Clay	Carol Falk	208
	Lawrence Falk	206
Crow Wing	Terry Savaloja	233
	Jo Blanich	222
Dakota	Ray Glassel	230
Goodhue	Ray Glassel	228
	Bob Janssen	224
	Bill Pieper	221
Grant	Kim Eckert	206
Hennepin	Bob Janssen	266
	Ray Glassel	260
	Violet Lender	252
	Oscar Johnson	252
	Bill Pieper	251
Lac Qui Parle	Micki Buer	231
	Chuck Buer	223
	Marion Otnes	213
	Gary Otnes	212
	Bob Janssen	205
	Ray Glassel	201
Lyon	Paul Egeland	251
Marshall	Sarah Vasse	235
Morrison	Pete Ryan	207
Mower	Ron Kneeskern	206
Olmsted	Joan Fowler	216
	Anne Marie Plunkett	210
	Vince Herring	201
Otter Tail	Gary Otnes	266
	Marion Otnes	248
Ramsey	Liz Campbell	229
	Bill Pieper	224
	Ray Glassel	201
Rice	Orwin Rustad	222
Rock	Kim Eckert	237
St. Louis	Jan Green	280
	Kim Eckert	263
	Bob Janssen	254
	Bill Pieper	243
	Ray Glassel	241
Stearns	Kim Eckert	230
Wabasha	Ray Glassel	204
Wadena	Dick Oehlenschlager	240
Washington	Liz Campbell	203
Yellow Medicine	Gary Otnes	220
	Marion Otnes	220

PURPOSE OF THE MOU

The Minnesota Ornithologists Union is an organization of both professionals and amateurs interested in birds. We foster the study of birds, we aim to create and increase public interest in birds and promote the preservation of birdlife and its natural habitat.

We carry out these aims through the publishing of a magazine, **The Loon**; sponsoring and encouraging the preservation of natural areas; conducting field trips; and holding seminars where research reports, unusual observations and conservation discussions are presented. We are supported by dues from individual members and affiliated clubs and by special gifts. The MOU officers wish to point out to those interested in bird conservation that any or all phases of the MOU program could be expanded significantly with gifts, memorials or bequests willed to the organization.



SUGGESTIONS TO AUTHORS

The editors of **The Loon** invite you to submit articles, shorter "Notes of Interest" and black/white photos. Photos should be preferably 5x7 in size. Manuscripts should be typewritten, double-spaced and on one side of the sheet with generous margins. Notes of interest should be generally less than two typewritten pages double-spaced. If reprints are desired the author should

so specify indicating number required. A price quotation on reprints will be sent upon receipt of information.

Club information and announcements of general interest should be sent to the Newsletter editor. See inside front cover. Bird-sighting reports for "The Season" should be sent promptly at the end of February, May, July and November to Janet Green. See inside front cover.

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MEMBERSHIPS AND SUBSCRIPTIONS: Paul Egeland, 12 East 67th Street, Minneapolis, Minnesota 55423. To join the MOU and receive both MOU publications, send \$6.00 for a regular yearly subscription. Or other classes of membership that you may choose are: Family \$7.50 yearly; Contributing \$10 yearly; Sustaining \$25 yearly; Life \$100. Canadian and Foreign Subscriptions, \$10 yearly. Also available: back issues of **The Loon** (\$1.50 each ppd.) and MOU checklists of Minnesota birds (minimum lots of 20 for \$1.50 postage paid). Gifts, bequests, and contributions to the MOU Endowment Fund should also be sent to the treasurer.

EDITOR OF THE LOON: Robert B. Janssen, 10521 S. Cedar Lake Rd., Minnetonka, MN 55343 (phone 612-546-4220). The editor invites articles, short notes, and black/white illustrations about birds and nature. See back cover for details.

"The Season" section of **The Loon** publishes reports of bird sightings throughout Minnesota. We particularly invite reports from parts of the state that have been neglected or covered lightly in past reports. To become a contributor to "The Season," request the report forms from the **EDITOR OF "THE SEASON," Mrs. Janet Green, 9773 North Shore Drive, Duluth, Minnesota 55804.** (phone 218-525-5654).

EDITOR OF THE MOU NEWSLETTER: Mrs. Marlyn Mauritz, 6810 Tecumseh Lane, Excelsior, Minn. 55331. Publishes announcements and reports about activities of the MOU and its affiliated clubs. (Club officers should keep both MOU editors informed.)

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THE PRESIDENT WRITES

"Tax on Birdseed?" Yes, and on birdfeeders and birdhouses too. Why does your president agree to taxes on these items? The answer can be stated in one sentence — "to give greater aid and protection to our non-game species."

Pending legislation in Washington for the Fish & Wildlife Conservation Act of 1979 would do three things:

1st Complete an inventory & assessment of the fish & wildlife in each state (both nongame & game)

2nd Develop a sound conservation plan for these species.

3rd Provide funds to implement management of **nongame** species

Hunters and fishermen have been paying a small excise tax since 1937 on equipment they buy and the money has been returned to the states under two Federal laws: Pittman-Robertson (wildlife) and Dingell-Johnson (fish).

Since enactment (41 years ago) some \$855 million dollars has been allotted back to the states — on a matching basis — for the betterment of species that are used or consumed.

Presently only 3% of the Federal and 2% of the State wildlife dollar go for the benefit of nongame species — the other 97% goes to benefit game species (animals taken for sport, fur, or food).

The National Audubon Society and many conservation groups believe that the time is now due (if not overdue) for us to support nongame legislation. Support in this case means paying a small excise tax on wild bird feed, birdfeeders, and birdhouses.

It is estimated that 90 million Americans are using wildlife in a non-consumptive fashion by hiking, birdwatching, camping, photography, and canoeing. These users would form the backbone of this nongame act just as the sportsmen do for the above two laws enacted in 1937.

This proposed legislation will allow the nonconsumptive users to show their serious commitment by taxing themselves (not the other guy) as a means to improve nongame species. Also we would be for something instead of always against legislation and would be "putting our money where our mouth is."

I know there are some that fear this law would result in more land acquisition for the government and another "lockup" of land. Past experience with the game and fish laws do not justify this fear. Over the past 41 years only .07% of the funds have been used to purchase land.

Most of the money goes for projects such as:

- identifying disease producing organisms & treating them.
- planting crops to provide food & cover for wildlife.
- furnishing information to landowners interested in wildlife.
- controlling noxious vegetation.
- improving water quality of streams.

There are two versions for funding this proposed legislation. The house bill calls for funding by Congressional appropriation. The other method (an excise tax) seems more desirable for several reasons. It would not be subject to the yearly hazards of congressional whims and would provide stability to allow for long range planning. With rising inflation, a percentage excise tax is also a built-in hedge.

I urge all members who agree with me to write their Senators and Representatives to support the FISH & WILDLIFE CONSERVATION ACT of 1979 and the excise tax method of funding it.

Harvey E. Djerf

MINNESOTA BREEDING BIRD SURVEYS: A SUMMARY

Robert B. Janssen

Breeding Bird Surveys have been run in Minnesota since 1967. The state contains 52 such routes. An 11 year summary is given for the Lakeville Survey. The Breeding Bird Survey gives valuable information on the states breeding bird population.

For those of you not familiar with a Breeding Bird Survey, the following is a short synopsis of the purpose and methods used in running a Survey.

The Cooperative Breeding Bird Survey of North America was initiated by the U.S. Fish and Wildlife Service, Migratory Bird and Habitat Research Laboratory in Laurel, Maryland in 1965. At that time survey routes were set up in all states east of the Mississippi River, including Minnesota. Survey routes, which are 25 miles long were picked at random in all states. To cover the state of Minnesota, a total of 52 routes were laid out (see Figure 1). Names of the routes and participants in the 1978 Surveys appear in Table 1.

The purpose of a Breeding Bird Survey is, to quote the Fish and Wildlife Service, "To obtain, by random sampling, an index of abundance of breeding birds. This Survey provides information on distribution and relative abundance of North American birds, and specifically measures changes in abundance that result from such factors as change in land use and widespread applications of pesticides."

Each route is covered once each summer, during the month of June, by the following standardized procedure: Begin exactly one-half hour before sunrise, make 50 stops one-half mile apart and count all birds heard at each stop or seen within one-fourth mile during a three minute watching and listening period. One observer

must do all the observing on a given route, but he/she may have an assistant to help with recording or driving. Unless driving conditions are very poor, most routes should be completed in 4 to 4½ hours.

Birds seen or heard are recorded on printed sheets furnished. This data is transferred to a summary sheet after the survey is completed. Additional data such as sky conditions, temperature, wind speed, start and stop times are recorded on the summary sheets.

The first survey routes were run in Minnesota in 1967. In that year, 19 of the 52 routes were run. Between 1967 and 1977 an average of 22 routes were run, with a low of 16 in 1968 and a high of 27 in 1969. In early 1978, Carrol Henderson and I put on a campaign to get as many of the Minnesota routes covered in 1978 as possible. We were successful in getting 46 of the 52 routes surveyed. Hopefully, in 1979 we will get all of the 52 routes covered.

In 1968 I did the first survey of the Lakeville Route (Number 8 on Fig. 1). I have covered the route ever since 1968 and the following table is a summary of the 11 years I have run the Survey. The first number indicates individuals seen, the second number the number of stops on which the species was recorded.

A quick examination of the numbers will show that the following are the ten most common species recorded

Table 1. Minnesota Breeding Bird Census Routs and Observers and Assistants on 1978 Counts

Route #	Route Name	Observer	Assistant
1.	Money Creek	Frederick Z. Leshner	Douglas Becker
2.	Chatfield	Donald G. Mahle	Winnifred Mahle
3.	Hartland	Merrill J. Frydendall	— — —
4.	Huntley	Robert B. Janssen	Jan Smith
5.	Chandler	Not run.	
6.	Ash Creek	Doug D. Campbell	Betty Campbell
7.	Millville	Donald G. Mahle	Winnifred Mahle
8.	Lakeville	Robert B. Janssen	— — —
9.	Minnnetonka	Elizabeth M. Campbell	T. R. Campbell
10.	Arlington	Jerome J. Gresser	Karol A. Gresser
11.	Courtland	Henry C. Kyllingstad	— — —
12.	Redwood Falls	Henry C. Kyllingstad	— — —
13.	Maynard	Not run.	
14.	Dawson	John L. Schladweiler	— — —
15.	Princeton	Edmund A. Hibbard	Mrs. Edmund A. Hibbard
16.	Osseo	Oscar L. Johnson	— — —
17.	Knapp	Jerome J. Gresser	Karol A. Gresser
18.	St. Stephen	Nester M. Hiemenz	— — —
19.	Appleton	Bruce A. Hitman	— — —
20.	Gluek	Charles S. Buer	Micki Buer
21.	Chokio	Steven P. Millard	Diane Hastings
22.	Cromwell	Pershing B. Hofslund	J. K. Bronoel
23.	Wigwam Bay	Nestor M. Hiemenz	— — —
24.	Mille Lacs	Lyle A. Herzog	Chris Hope
25.	Backus	Josephine G. Blanich	Greg Steuck
26.	Pine River	Josephine G. Blanich	Warren Nelson
27.	Edwards	Steve P. Millard	Diane Hastings
28.	Evergreen	Lee A. Pfannmuller	Gary Seim
29.	Glyndon	Oscar W. Johnson	Gary Trana
30.	Tenney	Gary L. Otnes	— — —
31.	Hovland	M. M. Carr	W. H. Carr
32.	Lockport	Janet C. Green	John C. Green
33.	Sawbill Landing	Janet C. Green	John C. Green
34.	Hart Lake	Ruth D. Kuchta	Richard Kuehta
35.	Floodwood	Kim R. Eckert	Beverly Raway
36.	Island Lake	Harriet I. Micensky	Selena McCracken
37.	Cohasset	Not run.	
38.	Sherry Lake	Harriet I. Micensky	Selena McCracken
39.	Bena	Jane N. West	Polly C. West
40.	Bemidji	Not run.	
41.	Oklee	Not run.	
42.	Debs	Dave M. Bosanko	— — —
43.	Beltrami	Frank I. Kelley	John Kelley
44.	Wylie	John I. Kelley	David Lambeth
45.	Crane Lake	Gerald J. Niemi	— — —
46.	Little Fork	Not run.	
47.	Lude	Arthur S. Hawkins, Jr.	Paul Rundell
48.	Waskish	Roger Eliason	Paul Rundell
49.	Erie	Sarah S. Vasse	— — —
50.	Grygla	Sarah S. Vasse	— — —
51.	Badger	Richard A. Wachtler	Gloria A. Wachtler
52.	Lake Bronson	Kim R. Eckert	— — —

Lakeville Bird Survey Summary - 1968 - 78

SPECIES	6/22 1968	6/30 1969	6/20 1970	6/19 1971	6/17 1972	6/24 1973	6/27 1974	6/20 1975	6/12 1976	6/25 1977	6/19 1978	Total Years	Total Ind.
Great Blue Heron	1/1		1/1				1/1		1/1	1/1		5	5
Northern Green Heron		1/1	1/1	2/1	1/1	2/2	1/1	1/1		2/2	1/1	9	12
Black-crowned Night Heron		1/1				1/1		1/1			1/1	4	4
American Bittern							1/1					1	1
Mallard	2/1		2/1	5/3	28/6		4/2	7/3	10/4		20/4	8	78
Blue-winged Teal		1/1		4/1		1/1	1/1					4	7
Wood Duck							2/2		2/1			2	4
Red-tailed Hawk						1/1		1/1			1/1	3	3
Marsh Hawk	2/1					2/2	1/1					3	5
American Kestrel	6/4	6/2	1/1	2/2	4/4	9/7	9/7	2/2	5/5	7/5	6/5	11	57
Ring-necked Pheasant	34/23	10/10	53/38	66/34	54/32	57/31	16/10	26/20	13/13	29/22	18/15	11	376
Gray Partridge					2/1		2/1			1/1		3	5
Sora								1/1	1/1			2	2
American Coot											2/1	1	2
Killdeer	14/10	16/12	9/9	9/7	27/14	12/9	8/5	11/10	6/5	9/9	16/12	11	137
Common Snipe		1/1						4/3				2	5
Upland Sandpiper					1/1	1/1	1/1					3	3
Spotted Sandpiper	3/2			1/1			1/1	1/1	1/1			5	7
Wilson's Phalarope						1/1	1/1					2	2
Black Tern	1/1	2/1					1/1		3/1	2/1	1/1	6	10
Rock Dove	18/5	18/4	59/8	22/5	23/9	27/8	42/14	41/9	48/12	27/7	43/13	11	368
Mourning Dove	55/29	43/19	31/22	35/20	56/33	67/32	49/28	63/29	56/29	94/36	58/28	11	607
Black-billed Cuckoo		1/1		1/1	1/1			1/1		1/1		5	5
Great Horned Owl										1/1		1	1
Common Nighthawk									1/1			1	1
Chimney Swift	4/3	6/4	1/1		1/1	3/3	2/2		2/1		4/2	8	23
Ruby-throated Hummingbird		1/1										1	1
Belted Kingfisher		3/3		1/1	1/1	1/1		1/1	1/1	2/2		7	10
Common Flicker	7/7	6/5	9/9	5/5	12/10	9/9	3/3	7/7	4/4	7/6	6/6	11	75
Red-headed Woodpecker	11/8	4/4	4/3	3/3	7/5	7/4		2/2	3/2	4/3		9	45
Hairy Woodpecker			1/1			2/2						2	3
Downy Woodpecker									1/1	1/1		2	2
Eastern Kingbird	1/1	1/1	4/2	1/1	7/6	4/3	3/2	1/1	2/2	6/5	3/3	11	33
Western Kingbird					3/2							1	3
Great Crested Flycatcher	1/1		2/2		1/1	1/1	2/2	1/1	1/1	2/2		8	11
Eastern Phoebe	1/1				1/1	1/1			2/2			4	5
Alder Flycatcher (Willow Flycatcher)	3/3	1/1	1/1	1/1						2/1		5	8

Summer 1979

Lakeville Bird Survey Summary - 1968 - 78

SPECIES	6/22 1968	6/30 1969	6/20 1970	6/19 1971	6/17 1972	6/24 1973	6/27 1974	6/20 1975	6/12 1976	6/25 1977	6/19 1978	Total Years	Total Ind.
Least Flycatcher						1/1						1	1
Eastern Wood Pewee	2/2	2/2	3/2	2/1	1/1	5/3	3/2	2/2		2/2	2/2	10	24
Horned Lark	4/2	2/2	8/5	4/3	12/7	10/7	5/4	5/5	4/4	3/3	9/9	11	66
Tree Swallow		1/1				3/2			2/2	1/1	4/2	5	11
Bank Swallow	1/1	5/4			1/1	2/1				1/1	2/2	6	12
Rough-winged Swallow							2/2		3/2		1/1	3	6
Barn Swallow	29/15	26/15	21/12	11/6	26/19	50/18	21/14	26/16	57/22	88/25	41/21	11	396
Cliff Swallow						1/1				4/1	5/1	3	10
Purple Martin	8/2	8/2		2/2	4/2	5/2	2/2	3/2		1/1		8	33
Blue Jay	3/3	2/1		1/1	3/3	6/3	1/1	3/2	1/1	4/3	1/1	10	25
Common Crow	10/10	7/5	8/8	8/6	12/11	17/11	13/11	10/8	12/7	22/12	17/13	11	136
Black-capped Chickadee									1/1			1	1
White-breasted Nuthatch		1/1					1/1					2	2
House Wren	7/6	4/3	9/9	4/4	18/14	11/8	11/10	13/11	7/7	15/13	10/8	11	109
Long-billed Marsh Wren									1/1	1/1		2	2
Short-billed Marsh Wren	10/10	7/5	4/4	6/5	4/2	17/7	3/2	6/4	2/2	6/5	1/1	11	66
Gray Catbird	8/7	7/6	2/2	3/2	13/9	6/6	3/2	1/1	3/3	9/5	7/6	11	62
Brown Thrasher	2/2	3/2	4/4	4/4	9/8	8/8	4/4	2/2	7/5	4/4	3/3	11	50
American Robin	24/19	39/17	21/13	38/25	41/25	40/25	34/23	34/26	41/23	55/30	30/19	11	397
Cedar Waxwing	2/1											1	2
Loggerhead Shrike						1/1			1/1	2/1		3	4
Starling	79/23	81/24	59/23	55/19	138/24	152/25	184/31	114/37	136/34	337/30	230/31	11	1,565
Red-eyed Vireo								1/1			2/1	2	3
Warbling Vireo	5/5	5/4	3/3	3/3		3/3	3/3	5/5	2/2	6/4	5/4	10	40
Yellow Warbler	4/4	2/2	3/2	1/1	4/2	2/2		2/2	3/3	1/1	1/1	10	23
Common Yellowthroat	25/22	18/14	13/12	18/14	30/19	39/26	19/17	22/18	17/13	28/23	23/21	11	252
House Sparrow	80/20	68/11	95/22	78/20	103/22	173/22	93/19	77/13	103/19	129/18	87/18	11	1,086
Bobolink	14/8	8/4	12/7	8/5	35/13	48/19	17/8	21/12	22/7	14/9	20/10	11	219
Eastern Meadowlark		1/1			3/2			2/2				3	6
Western Meadowlark	98/43	81/44	83/44	106/41	119/46	102/40	58/35	78/40	59/31	58/39	51/35	11	893
Yellow-headed Blackbird					2/2	1/1		2/2	14/2		1/1	5	20
Red-winged Blackbird	62/18	85/27	99/28	65/23	142/25	146/25	134/32	90/35	96/29	114/36	142/34	11	1,175
Northern Oriole	3/2	3/1	4/4	2/2	3/3	4/3	7/6	7/5	5/5	1/1	4/3	11	43
Brewer's Blackbird	4/1	5/1		9/3	1/1	6/3	3/2	3/1	1/1	2/1	6/2	10	40
Common Grackle	152/33	168/29	122/34	127/32	291/36	231/40	292/42	217/41	235/37	244/42	253/39	11	2,332
Brown-headed Cowbird	16/10	16/10	9/5	5/5	26/17	27/19	15/12	23/12	27/11	20/11	24/12	11	208
Scarlet Tanager							1/1					1	1
Cardinal								2/1	1/1			2	3

Lakeville Bird Survey Summary - 1968 - 78

SPECIES	6/22 1968	6/30 1969	6/20 1970	6/19 1971	6/17 1972	6/24 1973	6/27 1974	6/20 1975	6/12 1976	6/25 1977	6/19 1978	Total Years	Total Ind.
Rose-breasted Grosbeak			2/2		2/1	3/3	3/2	1/1	4/3	3/2		7	18
Indigo Bunting		4/4	2/2	3/3	8/6	5/5	3/3	7/6	1/1	8/7	2/2	10	43
Dickcissel	14/11	7/5	11/9	12/9	21/12	9/6	3/2	2/1	2/2	9/7	1/1	11	91
American Goldfinch	6/3	9/6	12/9	10/6	18/11	12/7	4/2	18/11	2/2	7/5	9/6	11	107
Savannah Sparrow	3/3	4/4	3/3	5/5	11/8	8/6	5/4	8/6	5/5	3/3	3/3	11	58
Grasshopper Sparrow	6/4	2/2	5/5	8/6	5/4	7/6	1/1	3/3	5/4	1/1		10	43
Vesper Sparrow	30/22	15/14	16/14	22/16	47/27	33/21	15/14	10/10	15/13	18/15	17/11	11	238
Chipping Sparrow	3/3	4/4	4/2	7/7	9/6	8/6	6/6	11/9	5/3	12/8	8/7	11	77
Clay-colored Sparrow	3/3	5/5	2/2	2/2	13/7	14/8	3/3	4/4	4/4	8/5	3/2	11	61
Field Sparrow	1/1		1/1		1/1	1/1	1/1		1/1			6	6
Swamp Sparrow		2/2				1/1		1/1	1/1	2/2		5	7
Song Sparrow	22/19	21/17	15/14	16/14	24/17	33/22	23/21	29/24	26/24	19/16	22/18	11	250
TOTAL SPECIES	51	55	46	47	54	61	57	56	60	57	50	87	
TOTAL INDIVIDUALS	904	850	834	803	1,430	1,460	1,147	1,037	1,097	1,460	1,227	11	12,249

in total numbers.

1. Common Grackle - 2,332
2. Starling - 1,565
3. Red-winged Blackbird - 1,175
4. House Sparrow - 1,086
5. Western Meadowlark - 893
6. Mourning Dove - 607
7. American Robin - 397
8. Barn Swallow - 396
9. Ring-necked Pheasant - 376
10. Rock Dove - 368

These are followed by Common Yellowthroat, Song Sparrow, Vesper Sparrow, Bobolink, Brown-headed Cowbird, Killdeer, Common Crow, House Wren, American Goldfinch and Dickcissel to complete the top 20 species.

The Lakeville Survey starts in Scott County, west of the town of Lakeville on County Road 60, and runs eastward into Dakota County, skirting the north edge of Lakeville and then generally eastward and turning south, ending a few miles south of State Highway 50 near Farmington. The general aspect of the route is rural agricultural land typical of Dakota County interspersed with a few areas of more densely populated city type

environment, this occurring mainly in the Lakeville area.

Again, looking at the raw numbers of birds counted over the years, it can be said that most populations of each species have remained relatively stable over the 11 years of the Survey.

However, there are a few exceptions and certain trends either upward or downward are indicated. One of the most obvious is the jump in numbers of Common Grackles occurring in the early 70's and continuing through 1978. The Common Grackle has been the most abundant bird on each census except the 1977 census when the Starling took first place. The grackle was in close second that year. The Common Grackle has also been the species recorded on the most stops since 1973. Between 1968 and 1972 the Western Meadowlark was recorded on the most stops. In 1973 the grackle and Western Meadowlark tied for most stops but since then it has been all grackle.

Other trends indicated by the numbers are the tremendous increase in Starling numbers starting in 1972. The

same type of increase beginning in 1972 is also noted in the Red-winged Blackbird. Barn Swallow numbers have shown a dramatic increase since 1976 but this may be too short a period to indicate a trend. However, observations from other parts of the state indicate a very definite increase in Barn Swallows in recent years.

Downward trends are generally indicated in the Ring-necked Pheasant. The fluctuations in pheasant numbers are probably influenced by severity of previous winters but prospects for high numbers in this area for the future are not bright as several extensive marshes along the route have been drained and more intensive farming is being practiced in the area. Urban sprawl is also taking up habitat as Twin City suburbs spread southward into this area. Western Meadowlark numbers have dropped rather consistently since the early '70's probably reflective of the conditions men-

tioned above. One species that seems to me to be in trouble is the Short-billed Marsh Wren with only one bird recorded in 1978 after highs of 17 in 1973 and 10 in 1968. Dickcissel numbers appear to be generally down since 1973, even though this species does fluctuate widely in numbers from year to year. General trends throughout the country seem to confirm smaller numbers of Dickcissels.

The above comments are not meant to be conclusive but it shows the kind of information that can be gained from a Breeding Bird Survey. Hopefully those who have participated in the Minnesota Surveys in the past will continue to do so and starting in 1979 and succeeding years, we will have all routes covered in the state. The information gained will be most helpful in determining breeding bird populations throughout Minnesota.

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COMMENTARY

THE AMATEUR IN ORNITHOLOGY

Harold F. Mayfield

No branch of biology has felt the hand of the amateur like ornithology. Other branches have had amateur participation, but always more limited in scope. In botany interest has centered mainly on wildflowers, in entomology on butterflies and moths, and in malacology on shells, while in ornithology the influence has been pervasive.

From ancient times inquiring minds have found birds attractive subjects for study. Beyond all other creatures on earth, birds capture the eye with

bright colors, the ear with music, and the imagination with the power of flight. Unlike many mammals and other forms of life, most of them are active in daylight in places where they can be seen and studied easily. For these reasons scholars long ago labeled ornithology the "scientia amabilis." Professional ornithologists usually have been captivated by birds long before they thought of themselves as biologists, and in this respect they differ from many of their col-

leagues, few of whom, for example, came to science through their love of fruit flies or rats.

Until the first quarter of this century ornithology was mainly the province of amateurs in America as well as in Europe. Before the invention of prism binoculars near the beginning of the century, most field observation took place down the barrel of a shotgun. Not surprisingly, sport hunters and taxidermists were prominent among those people with more than a casual interest in birds. Physicians calling on patients in horse-and-buggy days, with a gun under the seat and dissecting instruments at hand, were well situated to collect and preserve specimens. Clergymen and teachers, as the resident scholars in many communities, became also the bird experts. The Wilson Ornithological Society sprang from correspondence among teen-age egg collectors, and even the great professionals like Ridgway and Chapman often had no university training in biology.

In modern times the number of professionals, along with employment opportunities for them, has grown enormously, and the number of amateurs has fully kept pace. The literature has expanded accordingly and has reflected a widening spectrum of interests, from the superficial to the profound, loosely identified with "ornithology." To some professionals this brings a measure of embarrassment, lumping them with company they would prefer to disavow. Fieldwork is fun, and the public is not always able to distinguish what is purely recreational. In some quarters James D. Watson was dismissed lightly as a mere bird watcher before the elucidation of the double helix brought him the Nobel Prize in 1962. In the peck order of human society, indoor workers often look down on outdoor workers, and indeed, from the vantage point of controlled conditions in the laboratory, the outside world is deplorably untidy. Very recently "nat-

ural history" seemed headed for oblivion until restored to respectability in the name of ecology.

Although the scientist and the bird watcher may be hard to distinguish from a distance, the importance of ornithology to biology can no longer be questioned. Birds are the best studied class of vertebrates, and ornithology has led in many of the advances of biology. Observation of birds helped Darwin put the pieces together in arriving at the concept of evolution, and many recent refinements in evolutionary theory have come out of field studies of birds. Widespread recognition of the importance of ornithology came in 1973 when Konrad Lorenz and Niko Tinbergen shared a Nobel Prize for their pioneering role in the new discipline of ethology. It was no accident that the first Recovery Plans submitted under the Endangered Species Act of 1973 dealt with birds. And now a public far beyond the scientific community has become alerted to the significance of birds as indicators of the quality of the human environment. May I suggest that much of the vigor of ornithology has come from the amateur infusion?

The force of the amateur component is expressed in many ways. Most obvious is the financial support to institutions, scientific societies, and their publications. Notable especially in times of crisis is their function in educating the public and the legislatures on such issues as conservation and the teaching of biology.

Although research in this field as in all others is steadily becoming more sophisticated, amateurs continue to make major contributions to the advancement of knowledge. The Brewster Memorial Award for the "most important recent work on the birds of the Western Hemisphere" has been conferred 45 times beginning in 1921, and on one-fourth of those occasions it has gone to people not earning a livelihood as biologists. Although the last quarter of a century has brought

a vast increase in the number of professionals and consequently a relative decline in the prominence of amateurs, Kenneth C. Parkes has calculated that 12% of the papers in the four leading American ornithological journals in 1975 were written by people not employed in biology "in" J. R. King and W. J. Bock 1978, Workshop on a National Plan for Ornithology, Final Report, Panel on the Role of Ornithological Societies and the Amateur, Appendix vi). The size of this amateur element and the eagerness of its members are revealed in answers to a questionnaire addressed to "avian biologists" nationwide. In their responses 48% identified themselves as amateurs, and 90% of these expressed an interest in participating in research (King and Bock op. cit., p. 8).

In research the amateur brings to ornithology additional richness through diversity. Not seeking government grants nor academic status, the amateur is free to tread the byways of inquiry, without pressure for immediate results or conformity to current themes. In ornithology important problems are still accessible to the individual using his own resources. Discoveries are still possible without profound knowledge or elaborate equipment. The very complexity of biology has left unsolved mysteries within reach of any imaginative person. Compare, for example, mathematics, where basic simplicity and clarity has allowed centuries of progress to be piled layer on layer until the structure is so elaborate that mere comprehension of relevant questions is beyond the novice; or atomic physics and astronomy, where the equipment is so far beyond the reach of the individual that even the largest of institutions acquire it only through consortia.

Although solid work is performed by some amateurs on their own, the full potential of the whole group will not be developed without professional collaboration. This will become more

important in the future as increasing specialization and depth threatens to move the frontiers away from the avocational ornithologist. In field observations many amateurs have skill few professionals can match, and their forte is the gathering of data, but the full value of their work will not be realized without professional assistance to see the facts within the larger conceptual framework of biology. Thus, the professional touch is often vital in pinpointing the information needed, planning the studies, and analyzing the results.

Some aspects of ornithology would seem to depend on amateur assistance indefinitely. It is difficult to imagine investigations of populations, migration or reproductive success without the help of volunteers. The annual Christmas bird counts of the National Audubon Society have 30,000 people taking part and paying for the privilege. Selected volunteers work nearly 2,000 routes for the Breeding Bird Surveys coordinated by Chandler S. Robbins of the U.S. Fish and Wildlife Service. The greatest data bank on avian reproductive success in America is accumulating at the Cornell Laboratory of Ornithology mainly through the work of amateurs. These are some of the more conspicuous American examples, but the potential of amateur mobilization has been demonstrated best by the British Trust for Ornithology, whose projects already have included preparation of an atlas of breeding birds, coordination of all bird banding in the country, special censuses of farmlands and estuaries, and the accumulation of vast amounts of nesting data.

Perhaps the most important contribution of the amateur, and assuredly one that will not dwindle in the years ahead, is the nurture of young scientists. Nearly every scientific career in ornithology has been strongly influenced by early association with an enthusiastic amateur. Birds catch the imagination of the susceptible child

and then the spark is fanned by an adult hobbyist. In each locality amateurs usually lead the bird hikes, prepare the check-lists, organize the bird clubs, and write for the newspapers. Not all of them contribute to the scientific literature but nearly all of them read some of it. A case in point is a small-town biology teacher who proudly counts among her former students five Ph.D.'s in biology, including at least two fellows of the American Ornithologists' Union.

The opportunity represented by amateurs was the subject of discussion in February 1978 when about 30 invited people met at Ithaca, New York, under the auspices of the National Audubon Society and the Cornell Laboratory of Ornithology. These people were unanimous in believing this was a great and growing resource that had scarcely been tapped for its potential value. Although a few amateurs carry out independent research of professional caliber, everyone agreed that most of this energy and enthusiasm could be harnessed and enhanced only with professional leadership.

A similar view was supported and amplified by the Workshop on a National Plan for Ornithology reporting to the National Science Foundation and the American Ornithologists' Union in March 1978 (King and Bock op. cit.). This group urged that the professional societies become prime movers in raising the participation of amateurs, local bird clubs, and nature cen-

ters. The recommendations pressed for new initiatives, with attention to better communications, training, and cooperative projects. To move in this direction, leaders of the ornithological societies in editing their journals and planning their meetings should give more thought to the breadth of the audience and accordingly direct a proper share of communications to the interested layperson. This calls for selecting a balanced fare and minimizing jargon and obscurity in presentations. All of this will require special effort in the face of forces pushing in the opposite direction.

In ornithology a symbiotic relationship has existed between the amateur and professional. Societies in the field, increasingly dominated by professionals, should recognize in the amateur segment a beneficial force. To preserve a fruitful relationship, they must continue to serve this portion of their constituency also. No other branch of science has this rich resource.

In arguing that ornithology is fortunate to have drawn a clear line between the amateur and professional, I draw support from the view of science expressed by Jacob Bronowski in "A Sense of the Future" (1977, Cambridge, Massachusetts, MIT Press, p. 4): "Let no one tell you again that science is only for specialists; it is not. It is no different from history or good talk or reading a novel; some people do it better and some worse; some make a life's work of it; but it is within the reach of everybody."

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If you read one article in "The Loon" this year make it this one. Editor.

NOTES ON THE NESTING ECOLOGY OF THE PIPING PLOVER

Gerald J. Niemi and Thomas E. Davis

The Piping Plover is a characteristic species of the open sand beaches. This paper deals with important nesting aspects of this rare Minnesota shorebird.

INTRODUCTION

The natural history of the Piping Plover in the United States is not well known. The species has been on the Audubon Blue List (Arbib 1972) since 1973 and appears to be declining — especially in the midwest where it may be approaching endangered status (Arbib 1974). The population decline has generally been attributed to habitat vulnerability (Arbib 1973). The purpose of this paper is to describe and interpret our observations of Piping Plover breeding ecology in the Duluth-Superior Harbor.

STUDY AREA AND METHODS

The Duluth-Superior Harbor is located at the extreme western end of Lake Superior. The harbor is sheltered by two long, narrow sand spits, Minnesota and Wisconsin Points, which are collectively about 16 km long and vary from 60 to 500 m wide. The harbor land area and vegetation have been altered repeatedly during the past 100 years. In the process, suitable habitat for the Piping Plover has been both developed and destroyed.

As part of an assessment of bird populations in the Duluth-Superior Harbor (Niemi et al. 1977), we surveyed all potential Piping Plover habitats in May and June of 1977. During the 1978 nesting season we resurveyed (Davis et al. 1978) all 1977 Piping Plover nesting areas. We estimated the number of adults present and attempted to find as many nests as pos-

sible. We recorded location, nest contents, and date at each nest site. We also revisited many of the nesting areas to determine nesting success.

The habitat available to Piping Plovers within the Harbor was determined by delimiting habitat types on aerial photographs (lcm = 25m) and, then, adding the acreages of each habitat type identified. The major habitat types used were: 1) sand beach - waterfront, 2) sand dunes, and 3) inland sand beach. Within areas where the Piping Plover nested, we quantified the specific habitat type by: 1) using aerial photographs to delimit micro-habitats present (based on similar plant species, plant density, and plant height) and 2) measuring percent cover of plant species and vegetation height. These latter measurements were made on 1m^2 sample plots along transects through the defined microhabitats.

RESULTS

We found that Piping Plovers arrive in late April to early May and depart by late August. We recorded a peak count of 22 Piping Plovers on 11 May 1977. This probably included both migrant and summer resident birds. We observed copulation as early as 11 May 1977 and found nests in the period from 26 May to 20 June. All nests were typical small depressions in the sand, and many were lined with tiny pebbles as described by Wilcox (1959) and Stewart (1975). Nests were placed a minimum of (and

usually more than) 50 m apart.

We found a total of 11 Piping Plover nests in 1977 and 1978 with an average clutch size of 3.72 eggs. Ten nests were found (five each in 1977 and 1978) at the Port Terminal in Duluth. We observed an additional pair at the Port Terminal in 1977 and 1978, but failed to find evidence of nesting. Thus, we believe that six pairs of Piping Plover attempted to nest at the Port Terminal in both 1977 and 1978. The Piping Plover's nesting sites at the Port Terminal were all within a Common Tern colony and very close (one nest approximately 150 m) to a Ring-billed Gull colony. We located Common Tern nests approximately 10 m from several Piping Plover nests. The only other recorded nesting occurred on Wisconsin Point in Superior, Wisconsin in 1977. We also observed individual Piping Plovers during late May and June at the Superior Disposal area, Wisconsin, and at Hearing Island, Duluth, Minnesota.

We do not believe that the Piping Plovers nested at either of these locations and are confident that no other nest sites occurred within the Harbor area. We were unable to determine nesting success at all nest sites, but two nests at the Port Terminal in both 1977 and 1978, and the nest at Wisconsin Point produced young that left the nest.

Table 1 summarizes nine microhabitats at the Port Terminal excluding unsuitable areas such as parking lots, roads, and shrub habitat. Most Piping Plovers preferred the open sandy areas with the lowest percentage of ground cover (average 5%) and the shortest vegetation (average 13 cm high). One nesting did occur in area F in which the percent vegetation cover was 42 and vegetation height averaged 90 cm. However, the vegetation in this area occurred in well-defined bands and alternated with open areas which apparently provided acceptable habitat.



Piping Plover — Port Terminal, Duluth — Photo by Marj Carr

Table 1. Vegetation summary for the Port Terminal - Duluth, Minnesota.

Plant Species	MICROHABITAT - % Cover								
	A	B	C	D	E	F	G	H	I
Corispermum sp.	4.	4.		8.	1.			3.	2.
Cycloloma atriplicifolium		3.		2.				1.	
Salix interior		11.					1.		7.
Gramineae spp.		6.	2.		6.	3.	41.	1.	6.
Melilotus alba			27.		10.	21.		12.	5.
Oenothera spp.			5.		6.	7.	3.	1.	3.
Compositae spp.		13.	6.	2.	2.	11.	12.	4.	7.
Other	1.		1.	4.			6.	2.	5.
Total % cover	5.	37.	41.	16.	25.	42.	63.	24.	35.
Avg. veg. height - cm.	13.	70.	103.	29.	61.	90.	63.	60.	92.
Sample size	48.	20.	20.	25.	30.	20.	25.	20.	20.
Total area - ha	2.8	4	1.9	1.0	.8	1.1	2.0	.5	1.0
Number of Piping Plover nests	6.			1.	1.	1.		1.	

The Piping Plover nest at Wisconsin Point was found in an area disturbed by sand excavation just prior to the arrival of the plovers in late April. The excavation left an open, unvegetated site approximately 2 ha in size. This location received extensive use by motorized traffic throughout the incubation period, and we observed tire tracks within centimeters of the nest.

The amount of suitable habitat available to Piping Plovers in the Harbor was as follows: 1) 45 ha of waterfront sand beach, 2) 22 ha of inland sand, and 3) 47 ha of sand dune habitat. Within the Port Terminal nesting area, only microhabitats A and D were classified into these categories and, then, only as waterfront sand beach. Thus, only 8% of the waterfront sand beach habitat was used by the Piping Plover. Microhabitats F and H, where the Piping Plover also nested, were classified as weedy field. We considered most weedy fields (210 ha total in the Harbor) to be unsuitable Piping Plover habitat except at the Port Terminal where the weedy field happened to be close to sand beach, occurred in alternating bands of sand and vegetation, and had only recently (1976) been colonized by weeds.

DISCUSSION

Little previous research has been

conducted on the Piping Plover. Wilcox (1959) summarized a 20 year banding study of the species. Cottrell (1957) reviewed the species breeding in Michigan. Stewart (1975) described the Piping Plover as fairly common to uncommon and local in North Dakota. Green and Janssen (1975) described the species as a summer resident in a few areas of suitable habitat in the northern half of Minnesota.

The first recorded nesting of the Piping Plover in the Duluth-Superior Harbor was made in 1936 by Lakela (1940), although the species probably occurred here earlier. Since that time, the species has nested or attempted to nest in a variety of locations, including Minnesota Point (Lakela 1940), Barker's Island (Cohen 1958), and Hearing Island (Bronoel 1953), but no comprehensive census of the harbor has been made prior to the present study.

The Piping Plover requires a relatively long time period on the breeding ground. About seven days are needed for laying the normal clutch of four eggs, and 27 to 31 days are required for incubation (Wilcox 1959). The precocial young stay within 400 to 500 feet of the nest until they fly at about 30 to 35 days of age (Wilcox 1959). Thus, excluding the time required for site selection, nest excava-

tion, and copulation, the species requires about 65 to 70 days on the breeding grounds. If nesting begins in late May or June, the young presumably can fly by early August. Any delays in nesting will result in young not fledging until mid to late August.

The nesting of Piping Plovers with Common Terns and in close association with Ring-billed Gulls is of interest. Bent (1929) commented on the close association of nesting Common Terns and Piping Plovers. Although we can only speculate, based on our observations, Common Terns generally tolerate the small-bodied Piping Plovers near their nests. However, if a large-bodied gull (e.g. Herring or Ring-billed) attempts to come close to a Common Tern nest, it is attacked immediately. The apparent nesting relationship of Piping Plovers and Common Terns may be a form of commensalism. The Piping Plovers receive nest protection from the aggressive Common Terns, but the Common Terns seemingly receive no benefit or harm from the presence of the Piping Plovers.

Little data are available on what effect disturbance has on the nesting success of this species. In a study of the closely-related Snowy Plover, the following percentages of times the plovers left the nest were recorded when the disturbance was a function of disturbing agent (disturbance was defined as anything which caused the plover to temporarily leave the nest excluding feeding or tossing nest material): 1) ravens (87%), 2) Western Gulls (6%), 3) harriers (100%), 4) humans (34% when activity was between 100 and 250 m, 65% when between 50 to 100 m, 78% when within 50 m), and 5) people with dogs (52% when within 100 to 250 m, 57% when between 50 and 100 m, and 100% when within 50 m) (Halbiesen 1977). In these data, there also was much individual variation in Snowy Plovers' reaction to human disturbance. Those plovers repeatedly exposed appeared to become habituated to human inter-

ference.

The Port Terminal is not an undisturbed area, but rather is often traversed by cars and people. Despite this disturbance, successful Piping Plover nests were located within 10 m of roads. The successful nesting of the Piping Plover at Wisconsin Point despite disturbance has been previously described. We made no attempt to quantify such disturbances, but we feel that reactions vary between individuals. In addition, the type, pattern, duration, and intensity of disturbance are probably all important in the habituation process and ultimately on nest success.

In the Duluth-Superior Harbor, only a small percentage (8%) of the habitat deemed suitable to Piping Plovers was used for nesting. During migration, Piping Plovers occur in many of these suitable habitats — especially along both Minnesota and Wisconsin Points. We cannot explain why the species does not nest in these areas, but suspect that disturbance, food availability, low regional populations incapable of supplying birds for dispersal to new sites, and other reasons such as winter mortality, may play a role in this exclusion.

The history of Piping Plovers nesting on secluded, recently deposited dredge islands and in close association with Common Terns strongly suggests that protection from disturbance is a key factor in nesting success. The need for more detailed data regarding the life history of this species is critical. The species is apparently extirpated from the Niagara-Champlain region on the St. Lawrence River (Arbib 1977) and is approaching endangered status in the midwestern region of Ohio, Illinois, and Indiana (Arbib 1974). Currently, there is only one other nesting location in Wisconsin where the species is known to breed (Long Island - Chequamegon Point on Lake Superior), and the species is classified as endangered in Wisconsin. In Michigan, the Piping Plover is classified as threatened (Michigan

Dept. Nat. Res. 1976). In North Dakota, the Piping Plover apparently still nests at a number of locations (Stewart 1975). In light of the small population sizes reported, it is amazing to us that the species is still present. We strongly urge that a detailed investigation of the species status and its ecology throughout its range be conducted in order to insure perpetuation of the species.

SUMMARY

The life history and status of the Piping Plover are little known. We studied breeding of the Piping Plover in the Duluth-Superior Harbor. We located 11 nests in two years of study (1977 and 1978). Ten nests were located at the Port Terminal in Duluth, Minnesota and one nest at Wisconsin Point in Superior, Wisconsin. Nests were located in areas with very little ground vegetation. Success of these nest sites and factors attributed to success or failure of nesting were briefly discussed. About 8% of what appears to be suitable Piping Plover habitat in the Harbor was used for nesting. Reasons for the low use are generally attributed to habitat disturbance, but other more subtle causes also may be involved. The interspecific relationships of Piping Plovers and Common Terns are discussed. Low population levels and disappearance from breeding areas throughout the Piping Plover range are of particular concern in the future survival of this species.

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A WINTER TERRITORY STUDY OF THE WHITE-BREASTED NUTHATCH IN CENTRAL MINNESOTA

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INTRODUCTION

The Whitebreasted Nuthatch is a permanent resident in central Minnesota. From December 1977 to May 1978 I measured the territories of four pairs of nuthatches in The Partch Woods, a 197.6 hectare (ha) maple-basswood forest owned by The Nature Conservancy, in Stearns County, Minnesota.

MATERIALS AND METHODS

Nuthatches were captured with mist nets, but capturing was attempted only on days that were -5 degrees C or warmer. Seven birds from four mated pairs were captured and marked with colored plastic leg bands during the study (Table 1). The female from the Creek pair was not banded.

Foraging nuthatches were located by sight and/or sound, and by running after them, I watched specific foraging birds for hours as they flew from tree to tree.

The study area has a grid system of one meter high steel stakes. Plastic cruising tape was tied to these stakes as reference points to mark the trav-

Table 1. Banding dates for seven birds from four mated pairs of White-breasted Nuthatches in 1978.

Bird	Date Banded
Creek Female	Not Banded
Creek Male	23 Jan
Northeast Female	10 Feb
Northeast Male	17 Feb
Swamp Female	8 Apr
Swamp Male	8 Apr
West Female	22 Feb
West Male	22 Feb

els of foraging birds. A different color represented each bird pair's territory. All plastic tape locations were plotted on a map to define each territory.

RESULTS AND DISCUSSION

For all nuthatch pairs I observed, winter home range and territory were synonymous. Although nuthatches did not spend much time aggressively defending territories in the winter, all their travels were within the boundaries of the area they more actively defended toward spring. The four territories were labeled: "Creek," "North-

east," "Swamp," and "West."

Nuthatch territories may be divided into two discrete units, an exclusive area and a buffer zone (Figure 1 and Table 2). Both are defended. The exclusive area is that part of a territory which does not overlap with another nuthatch territory. Trespassing nuthatches were never seen in exclusive areas. The Swamp territory had an exclusive area of only 0.2 ha within The Partch Woods (Figure 1). I assume their exclusive area extended into that part of their territory that

Table 2. Exclusive area, buffer zone, and total territory sizes (in ha) for four nuthatch pairs.

	Territory			
	Creek	Northeast	Swamp	West
Exclusive Area	4.2	14.8	0.2+	3.7+
Buffer Zone	11.9	3.6	2.7+	7.4+
Total Territory	16.1	18.4	2.9+	11.1+

extended into the lowland woods southwest of the study area. Partial areas for the Swamp and West territories were 2.9 ha and 11.1 ha respectively. Since portions of these two ter-

ritories extended outside the study area, complete areas were not accurately measurable and were not determined. The Creek and Northeast territory areas (exclusive area plus buffer zones) were 16.1 ha and 18.4 ha respectively. Both territories were completely within heavily-wooded areas.

In the buffer zones, where two or more territories overlap, nuthatches often treated neighboring territory-holders as trespassers. During the breeding period (March-May) these encounters resulted in chasing. Birds closest to their exclusive areas were usually the chasers; therefore, toward the middle of buffer zones, chaser and chasee roles were usually in a state of flux. From 20 December 1977 to 19 March 1978 I never observed nuthatches chase trespassing nuthatches in the buffer zones. Because nuthatches require more foraging time to meet energy requirements in winter, active defense of territories would significantly decrease foraging time. Some vocalizations that nuthatches give while foraging — "kaan" or

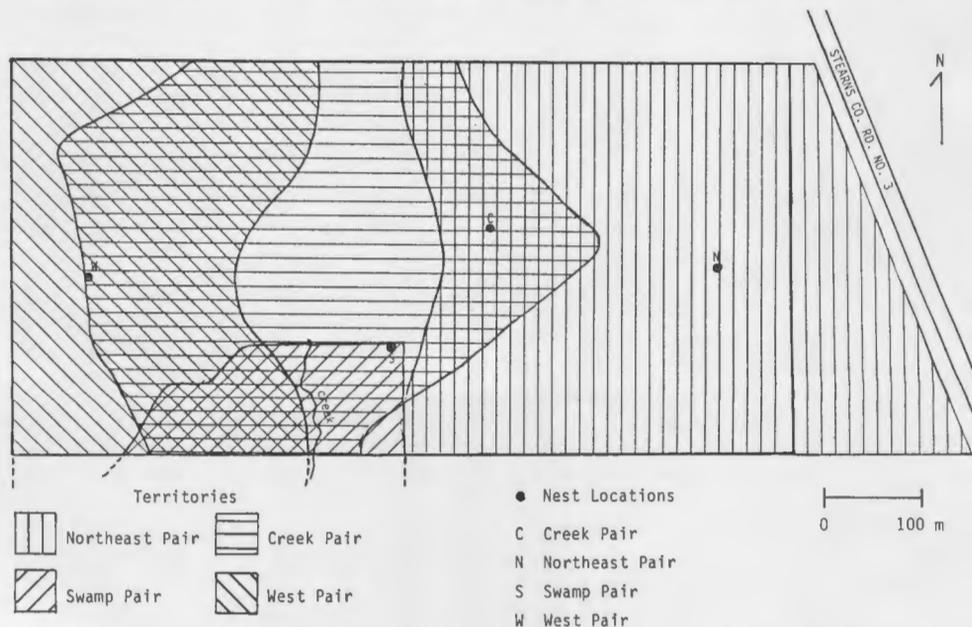


Figure 1. Map of four nuthatch territories and nesting locations in The Partch Woods.

“quank” — may function as passive territory maintenance while not sacrificing foraging time. Therefore, nuthatches may maintain winter territories more than it superficially appears.

While foraging, males would occasionally leave the female and make a territory patrol flight. The pair would be separated for three to ten minutes. All the territory patrol flights that I observed were in buffer zones.

After 8 April 1978 when birds from all four territories were marked, I observed two separate interactions in late April between a marked pair and an unmarked male; both interactions occurred in buffer zones. Unmarked birds (other than the Creek female) were not seen thereafter however, and were not considered permanent residents of The Partch Woods.

Nest sites were not restricted to either buffer zones or exclusive areas

(Figure 1). Only the Northeast nest was well within an exclusive area. The Swamp and Creek nests were well within buffer zones and the West nest was on the boundary. I witnessed no encounters between resident nuthatches and intruding nuthatches at nest sites; however, this does not ascertain that an exclusive area of some unknown radius does not exist around those nests within buffer zones. Availability of vacant nest cavities, more so than location either within or outside of an exclusive area, may determine where a nest is built. Exclusive area boundary shifting or establishment, then, may occur to include the nest site after nest site selection for those birds with nests located where what was previously a buffer zone.

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House Wren — Drawing by Jacque Rosenau

THE FALL SEASON (Aug. 1 through Nov. 30, 1978)

Don Bolduc, Oscar Johnson and Dick Ruhme

Drawings by Dana Gardner and Jacque Rosenau

One of the most fascinating aspects of birding in Minnesota is that no year or season can reasonably be called ordinary. Perhaps it's because of the notorious uncertainties of our climate, or possibly, it's due to the ever-increasing skills of Minnesota observers and better communications among them. For whatever reason, we've learned to expect the unexpected, and Fall, 1978 did not disappoint us.

For the record, 291 species were reported, six fewer than Fall, 1977, but still more than in any other previous year. 54 observers submitted reports; many others contributed miscellaneous notes on unusual sightings.

Early autumn weather was fairly normal, with August generally hot and humid with heavy rains in the southeast. September brought frequent spells of rain, cold and southeast winds at Duluth. Much to the dismay of visiting hawk-watchers, weekend flights were poor. Weekdays, however, must have been much better. The season count at Hawk Ridge was an excellent 74,558 birds; a single day record of 33,370 was set on Friday, September 15. While October weather was near normal, passerine migrants were down in numbers in most areas. Perhaps they knew something we didn't. In mid-November, as we'd rather not remember, the state was shocked by a harsh and snowy start to a long, bitter winter, driving autumn stragglers and even a good many common winter residents from the state.

Bird numbers may have been down, but their quality was not. One hypothetical species plus at least 9 casuals and accidentals were recorded along

with several notably rare regulars. As usual, Duluth led the listers' hit parade. Hawk Ridge recorded a Gyrfalcon, Swainson's Hawk (second area record) and a Red-shouldered Hawk as well. The rest of the Duluth area added Arctic Loon, Whimbrel, Red Knot, Pomarine and unidentified Jaegers, Black-legged Kittiwake, Sabine's Gull and a Townsend's Solitaire (also seen in Crow Wing County). From western Minnesota came three Prairie Falcon sightings in Lac Qui Parle, Otter Tail and Wilkin counties and a Least Tern in Lyon County. Dakota County chipped in a Cinnamon Teal report, but the unquestioned star of the season was the Rufous Hummingbird. The second state record for this species was confirmed at Bemidji by many observers. That was followed by identifiable photographs of another individual bird and a report of a third; all were seen at widely separated locations (see Spring 1979 **Loon** for details). These events should move the species from Hypothetical to Accidental classification on our state list, and should also provide a strong incentive for all of us to take more than a passing look at hummingbirds within our state borders.

Under the heading of a near miss, two Barn Owls were reported in November not far from Winona, but unfortunately across the Mississippi River in Wisconsin.

Two changes have occurred with this report. In response to many requests from **Loon** readers, it includes more dates, locations and observer credits than recent reports, a return toward the format of previous years. The report itself has been prepared by a team of three compilers, in an

effort to distribute the burden of the work. Capital letters have been used to identify species of special interest, and bold-faced type indicates out-of-the-ordinary dates and locations.

No July dates have been included in the regular listings. Most of them have been — and should be in the future — reported and listed in the Summer Season. However, a few early July migrants, previously unreported, have been mentioned in an addendum.

We would like to repeat the request of previous compilers that observers differentiate between north and south counties. If possible, use a different colored ink or underline in a different color. Also, when specifying locations such as lakes, refuges or towns (other than Duluth, Minneapolis, Rochester or St. Paul), please indicate the county as well. It may be obvious to you that Long Lake, East Overshoe or Bosky Dell Refuge is in a certain county, but necessarily to the compiler who must then stop and ferret out the location — a delay and a likely source of error. Finally, we wish to express our thanks to Kim Eckert and Bob Janssen for their considerable aid and counsel.

Common Loon

Late north 11-11 Mille Lacs RJ, 11-20 Cook KE, 11-22 Hubbard HF; late south 11-16 Hennepin VL, 11-19 Wright BS, 11-28 Ramsey EC.

ARCTIC LOON

Possible 9-11 Duluth KE, 9-25 St. Louis MC.

Red-throated Loon

10-21 St. Louis Dick Ruhme, Bill Pieper.

Red-necked Grebe

Late north 10-19 Aitkin OJ, 10-21 Cook KE, 11-12 Otter Tail GO. No reports south.

Horned Grebe

Early south 9-30 Washington DMB; late north 11-1 Cook KE, 11-8 Marshall ANWR; late south 11-16 Stearns NH, 11-25 Wabasha OJ, RJ.

Summer 1979

Eared Grebe

Peak 8-13 to 9-9 Marshall (200) ANWR; late north 9-15 Marshall ANWR, 9-25 St. Louis MG. Also reported from Freeborn, Lac Qui Parle and Wilkin counties.

Western Grebe

Late north 10-18 Marshall ANWR, 10-23 Lac Qui Parle CMB, 10-29 Otter Tail SM; late south 10-21 Hennepin DB; also reported 9-25 St. Louis MC.

Pied-billed Grebe

Late north 11-8 Marshall ANWR, 11-11 Mille Lacs WL, 11-25 Otter Tail GO.

White Pelican

Peak 9-17 Freeborn (1,000) DG; late north 11-1 Duluth KE, 11-3 Marshall SV; late south 11-29 Freeborn DG.

Double-crested Cormorant

Late north 10-21 Marshall SV, 10-25 Marshall ANWR, 11-25 Mille Lacs (35) WL; late south 11-13 Ramsey EC, 11-18 Houston FL.

Great Blue Heron

Late north 11-5 Lac Qui Parle CMB, 11-26 Crow Wing TS; late south 11-23 Hennepin PF, 11-25 Sherburne EH, 11-26 Hennepin RJ.

Northern Green Heron

Late north 9-20 Hubbard HF, 9-20 Marshall ANWR; late south 10-7 Washington DS, 11-4 Grant EH, 11-25 Freeborn DG.

Little Blue Heron

Summer resident Big Stone National Wildlife Refuge; reported 8-12 Lac Qui Parle (2) CMB, KE, 8-26 Big Stone (2) DB, OJ, 9-2 Lac Qui Parle (3) CMB, 9-9 Lac Qui Parle RJ.

Cattle Egret

Summer resident Big Stone National Wildlife Refuge; reported 8-2 Lac Qui Parle CMB, 8-12 Lac Qui Parle (3) CMB, KE, RJ, 9-1 Lac Qui Parle, KE.

Great Egret

Late north 10-3 Marshall ANWR, 10-23 Lac Qui Parle CMB, 11-14 Dul-

uth KE; late south 10-19 Wright ES, 11-18 Houston FL.

Snowy Egret

Summer resident Big Stone National Wildlife Refuge; reported 8-2 Lac Qui Parle CMB, 8-12 Lac Qui Parle (3) CMB, KE, 8-26 Big Stone (15) DB, OJ, 9-2 Lac Qui Parle (11) CMB, 9-9 Lac Qui Parle (14) RJ, 10-12 Lac Qui Parle (2) CMB.

Black-crowned Night Heron

Late north 10-11 Marshall ANWR, 10-22 Marshall SV; late south 11-25 Houston, OJ, RJ, 11-30 Houston FL.

Yellow-crowned Night Heron

Reported 8-2,4 Lac Qui Parle CMB, 8-8 Otter Tail GO, 9-9 Lac Qui Parle RJ, 9-24 Washington DS.

Least Bittern

Summer resident Martin EB, August Marshall (10) ANWR, 8-3 Otter Tail GO, 8-4 to 9-10 Lac Qui Parle CMB, 8-30 Hennepin VL.

American Bittern

Peak August Marshall (400) ANWR, summer resident Itasca MS; late north 9-23 Becker SM, 10-1 Aitkin PM, 10-25 Marshall ANWR; late south 9-22 Anoka KL.

Whistling Swan

Early north 8-10 Wilkin GO, 8-13 Wilkin CMB; late north 11-24 Crow Wing TS, 11-25 Otter Tail GW; late south 11-25 Wabasha (2,000) OJ, RJ, 11-29 Wabasha (100) WDM.

Canada Goose

Peak 10-30 Lac Qui Parle (75,000) OE.

White-fronted Goose

11-25 Olmsted VH, only report.

Snow Goose

Early north 8-7 Otter Tail GO, 8-25 St. Louis KE; early south 10-7 Cottonwood RG, 10-7 Renville RJ; late north 11-4 Otter Tail NJ, 11-29 St. Louis MC; late south 11-24 Hennepin VL; peak 11-5 Lac Qui Parle (25,000) OE.

Mallard

Peak 10-4 Marshall (64,540) ANWR, 11-18 Lac Qui Parle (40,000) OE.

Black Duck

Late north 11-29 (20) MC, 11-25 Houston OJ, RJ, FL, 11-26 Hennepin VL.

Gadwall

Peak 11-1 Marshall (25,000) ANWR; late north 11-15 Lac Qui Parle CMB; late south 11-18 Houston RBJ, 11-19 Anoka KL.

Pintail

Late north 11-6 Becker TA, 11-8 Marshall (200) ANWR; late south 11-18 Wabasha WDM, 11-25 Houston OJ, RJ, FL.

Green-winged Teal

Late north 10-31 St. Louis RJ, 11-8 Marshall (40) ANWR, 11-12 Becker TA; late south 11-15 Wabasha WDM, 11-18 Anoka KL.

Blue-winged Teal

Peak 9-7 Becker (7,230) TA; late north 10-25 Marshall ANWR; late south 11-25 OJ, RJ, FL.

CINNAMON TEAL

Reported 10-8 Dakota by Nick Dempsey fide JD.

American Wigeon

Peak 9-27 Marshall (5,720) ANWR; late north 11-12 Becker TA, 11-29 St. Louis MC; late south 11-18 Anoka KL, 11-18 Houston RJ, FL, 11-25 Hennepin BS.

Northern Shoveler

Late north 10-11 Becker TA, 11-1 Marshall ANWR; late south 11-18 Hennepin VL, 11-19 Anoka (8) KL.

Wood Duck

Peak 9-14 Becker (3,820) TA; late north 10-11 Marshall ANWR, 10-23 Becker TA; late south 11-18 Wabasha WDM, RJ, 11-26 Hennepin VL.

Redhead

Peak 10-6 Becker (2,830) TA; late north 11-4 Grant EH; late south 11-25 Wabasha OJ, RJ, 11-26 Anoka KL.

Ring-necked Duck

Peak 10-11 Becker (17,300) TA; late north 11-8 Marshall, 11-12 Becker TA; late south 11-23 Anoka KL, 11-29 Wabasha WDM.

Canvasback

Late north 11-11 Otter Tail GO, 11-15 Lac Qui Parle CMB, 11-29 St. Louis MC; late south 11-25 Wabasha (500) OJ, 11-29 Wabasha WDM.

Greater Scaup

Only reports 10-13 Otter Tail (3) GO, 11-25 Wabasha (2) OJ, RJ.

Lesser Scaup

Peak 10-11 Becker (12,900) TA and 10-18 Marshall (11,310) ANWR; late north 11-12 Becker TA; late south 11-25 Wabasha RJ, 11-29 Wabasha WDM.

Common Goldeneye

Late north interior 11-16 Becker EH; early south 10-28 Anoka KL, 11-9 Hennepin VL.

Bufflehead

Early north 9-30 Otter Tail GO, 10-10 Becker TA; early south 10-14 Hennepin; peak 10-23 Becker (1,755) TA; late north 11-20 Lake KE; late south 11-25 Wabasha OJ, RJ, Washington DGW, 11-26 Hennepin VL.

Oldsquaw

10-21 Cook (30) KE, 10-28 Cook (80) DGW, 11-5 Crow Wing TS 11-11 Mille Lacs RJ, OJ, TS, 11-24 Lake KE, 11-25 Wabasha (2) RJ.

White-winged Scoter

10-11 Marshall SV, 10-28 Cook (6) DGW, 11-11 Grant (6) GO, 11-18 Mille Lacs JB, TS, 11-20 Cook (2) KE, 11-25 Wabasha (2) OJ, RJ.

Surf Scoter

10-21 Cook (2) KE, 10-22 Crow Wing TS, 10-27 Crow Wing TS, 11-1 Cook KE, RJ.

Black Scoter

10-21 Cook (3) KE, 10-22 Aitkin ES, 10-28 Aitkin TS, Cook (5) DGW, 10-31 and 11-1 Cook (15) KE, 11-1 Cook (3) RJ, 11-18 Mille Lacs (2) JB, Aitkin TS, 11-25 Wabasha OJ, RJ.

Ruddy Duck

Peak 9-6 Marshall (2,290) ANWR; late north 10-25 Grant GO, 10-27 Crow Wing TS, 11-22 Duluth KE; late south 11-25 Wabasha RJ, 11-28 Wabasha DGM.

Hooded Merganser

Late north 11-1 Grant GO, Marshall ANWR, Mille Lacs TS, Otter Tail SM; late south 11-15 Olmsted VH, 11-20 Olmsted JEB.

Common Merganser

Late north 11-6 Marshall SV, 11-12 Otter Tail GO, 11-24 Hubbard HF; peak of thousands 11-25 Wabasha OJ, RJ.

Red-breasted Merganser

Late north 11-11 Crow Wing RJ, 11-12 Otter Tail GO; late south 11-25 Hennepin BS.

Turkey Vulture

Duluth Hawk Ridge total 487, peak Sept-Oct; late south 11-13 Wabasha EDM.

Goshawk

Duluth Hawk Ridge total 166, peak Oct; early south 9-11 Washington DMB, 9-17 Freeborn DG.

Sharp-shinned Hawk

Duluth Hawk Ridge total 14,293, peak Sept; late south 11-25 Houston OJ, RJ, FL, 11-26 Washington DGW, 11-27 Le Sueur HEC, 11-28 Sherburne EC.

Cooper's Hawk

Duluth Hawk Ridge total 71, peak Sept; late north 10-3 Marshall ANWR, 10-20 Lac Qui Parle CMB, 11-15 Hubbard HF.

Red-tailed Hawk

Duluth Hawk Ridge total 3,957, peak Oct; late North 11-18 Otter Tail NJ.

Red-shouldered Hawk

Late north 9-27 Crow Wing TS, 10-19 Aitkin NJ, 11-26 Duluth Hawk Ridge; late south 11-1 Dakota JD, 11-18 Anoka KL.

Broad-winged Hawk

Duluth Hawk Ridge total 53,027, peak Sept; late south 10-11 Washington WL, 10-26 Freeborn DG, 11-5 Renville CMB, 11-15 Olmsted JEB.

Swainson's Hawk

Late north 9-19 Duluth Hawk Ridge; late south 10-19 Martin EB. Also reported from Big Stone, Dakota, Lac Qui Parle, Olmsted, Otter Tail and Wilkin counties.

Rough-legged Hawk

Duluth Hawk Ridge total 636, peak Oct (several banded in Sept. underweight); early north inland 10-1 Wilkin RJ, 10-3 Morrison PM; early south 9-23 Freeborn DG, 9-24 Olmsted JEB.

FERRUGINOUS HAWK

Only report 10-2 Marshall (Thief Lake) NH.

Golden Eagle

Duluth Hawk Ridge total 13; other reports. 10-25 Wilkin SM, 11-5 Otter Tail GO, 11-26 Roseau WL.

Bald Eagle

Duluth Hawk Ridge total 79; late north 11-24 Otter Tail GO, 11-26 Becker TA, Marshall ANWR, 11-28 Beltrami, Hubbard HF; early south 8-13 Sherburne EH, 9-27 Lac Qui Parle CMB.

Marsh Hawk

Duluth Hawk Ridge total 614, peak Sept, Oct; late north 11-8 Crow Wing JB, 11-30 Morrison PM, late south 11-18 Fillmore RJ, 11-22 Fillmore EMF, 11-28 Sherburne EC.

Osprey

Duluth Hawk Ridge total 203, peak Sept; late north 10-1 Morrison PM, 10-23 Itasca MS, 10-29 Aitkin ES; late south 10-14 Ramsey RJ, 10-18 Murray AD, 10-22 Washington ES.

GYRFALCON

11-19 Duluth; one white phase immature banded by Dave Evans.

PRAIRIE FALCON

Three reports: 9-15 Lac Qui Parle

CMB, 10-1 Wilkin RJ, 10-21 Otter Tail SM.

Peregrine Falcon

Duluth Hawk Ridge total 8; also 10-2 Anoka KL and 10-8 Marshall ANWR.

Merlin

Duluth Hawk Ridge total 32; late north 9-30 Marshall ANWR, 11-11 Carlton KL; late south 10-31 Hennepin OJ, 11-16 Stearns NH.

American Kestrel

Duluth Hawk Ridge total 758, peak Sept; late north 11-23 Morrison PM, 11-25 Otter Tail GW, 11-28 Mille Lacs EC.

Spruce Grouse

St. Louis — seen frequently throughout the season near Babbitt, TH, 11-1 Cook (Lima Mt. Road) KE, RJ.

Ruffed Grouse

Permanent resident; reported from 17 counties.

Greater Prairie Chicken

8-1 Wilkin GO, 10-11 Cass RJ, 10-27 Wilkin (90) SM, 10-28 Wilkin GW, 11-10 Otter Tail SM.

Sharp-tailed Grouse

Only report from Marshall ANWR, "winter resident."

Bobwhite

Reported reintroduced in Olmsted VH. Only other reports: 8-24 Washington DS (escapee?), 11-24 Freeborn DG.

Ring-necked Pheasant

Permanent resident; reported from 13 counties.

Chukar

St. Louis (Ely) 5-6 reported during fall season fide Bill Toeft; first report for several seasons.

Gray Partridge

Permanent resident; reported from 13 counties.

Turkey

9-30 Fillmore GBE.

Sandhill Crane

9 reports: 9-30 Wilkin RJ, 10-1 Aitkin PM, 10-4 Marshall ANWR, 10-5 Pennington DB, 10-8 Norman (2,000) JB, 10-15 Wilkin GO, 10-21 Wilkin DGW, 11-1 Marshall ANWR, 11-25 Otter Tail GW.

Virginia Rail

Late north 9-1 Otter Tail GO, 9-8 Duluth KE; late south 9-19 Martin EB.

Sora

Late north 9-2 Becker (15) GO, 9-3 Becker TA, 9-6 Beltrami MM; late south 9-9 Lac Qui Parle RJ, Hennepin OJ, 9-19 Martin EB.

Yellow Rail

9-21 Aitkin TS and Kevin Wassen.

American Coot

Peak 9-6 Marshall (36,000); late north 11-25 Otter Tail GW, Becker TA, Washington DGW; late south 11-25 Sherburne EH, 11-26 Hennepin VL.

Semipalmated Plover

Late north 9-17 Duluth OJ, RJ; late south 9-3 Olmsted JF.

Piping Plover

9-11 Duluth KE; only report.

Killdeer

Late north 10-8 Clay LCF, 10-12 JB; late south 11-14 Goodhue JD, 11-25 Houston OJ, RJ, 11-30 Houston FL.

American Golden Plover

Early north 8-6 St. Louis DB; early south 8-3 Anoka KL; late north 10-21 Grant DGW, 11-2 Marshall SV; late south 10-27 Houston OJ.

Black-bellied Plover

Early north 8-12 Wilkin GW, GO, KE, Clay, JB; early south 8-20 Anoka KL; late north 10-28 St. Louis DGW, 11-3 Duluth KE.

Ruddy Turnstone

8-23 Washington JD, 9-16 St. Louis GO, SM, 10-7 Renville RJ, 10-20 St. Louis KE, 10-21 Lake KE.

American Woodcock

Late north 9-17 Otter Tail SM; late



south 10-21 Sherburne EH, 10-28 Washington DS, 11-6 Stearns EH.

Common Snipe

Late north 10-30 Marshall ANWR; late south 11-25 Houston OJ, RJ, FL.

WHIMBREL

8-28 Duluth KE, 9-24 Duluth J. Goin.

Upland Sandpiper

"Summer resident" Marshall ANWR, 8-2 Anoka KL, Otter Tail GO, 8-10 Lac Qui Parle CMB, 8-13 Clay LCF.

Spotted Sandpiper

Late north 9-17 Duluth DGW, 10-9 Clay LCF; late south 10-12 Hennepin OJ, 11-19 Anoka DS.

Solitary Sandpiper

Late north 8-25 Marshall ANWR; late south 9-20 Hennepin BH, Washington DMB.

Greater Yellowlegs

Late north 10-31 Cook KE, RJ, 11-6 Mille Lacs KE; late south 11-1 Wabasha VH, 11-11 Wabasha JF.

Lesser Yellowlegs

Late north 10-22 Mille Lacs ES, 10-25 Marshall ANWR; late south 10-22 Hennepin OJ, 10-23 Lac Qui Parle CMB.

Willet

8-19 Wilkin, SM, GO, GW; only report.

RED KNOT

3 reports: 9-6 DB, 9-12 (2) KE, 9-16 GO, all from Duluth.

Pectoral Sandpiper

Late north 11-6 Marshall SV, Mille Lacs KE; 11-22 Marshall ANWR; late south 11-11 Wabasha VH.

White-rumped Sandpiper

8-10 Wilkin GW, 8-13 Wilkin JB, 8-23 Hennepin OJ, 9-2 Anoka KL.

Baird's Sandpiper

Late south 9-17 Lac Qui Parle CMB, 10-7 Renville RJ.

Least Sandpiper

Late north 9-2 Lac Qui Parle CMB; late south 10-7 Renville RBJ.

Dunlin

Early south 9-2 Big Stone NWR CMB; late north 10-21 Mille Lacs TS; late south Wabasha JEB, JF, VH and 11-18 Houston FL.

Semipalmated Sandpiper

Late south 9-23 Freeborn DG and 10-7 Renville RJ.

Western Sandpiper

Late north 9-2 Duluth RJ; late south 9-2 Lac Qui Parle CMB and 9-8 Anoka KL.

Sanderling

Early north 8-10 GO and 8-12 Wilkin SW; early south 8-7 Anoka KL; late north 11-2 Wilkin GO and 11-3 Duluth KE; late south 10-21 Hennepin OJ.

Short-billed Dowitcher

Late north 9-24 Marshall ANWR

and 10-21 Mille Lacs TS (sp?); late south 11-1 Cottonwood RG.

Long-billed Dowitcher

Early north 8-20 Marshall ANWR and 8-28 Duluth KE; late south 10-14 Carver RJ.

Stilt Sandpiper

Late south 10-7 Renville RJ.

Buff-breasted Sandpiper

Early south 8-3 Anoka EC; late north 9-17 St. Louis OJ, RJ, DGW.

Marbled Godwit

8-12 Marshall ANWR 40, 9-9 Marshall ANWR and 9-9 Yellow Medicine RJ.

Hudsonian Godwit

9-13 Duluth KE.

American Avocet

8-2 Hennepin OJ, 8-10 Wilkin GO, 8-26 Big Stone DB, OJ.



Wilson's Phalarope

Late north 8-19 Wilkin SM 150; late south 9-9 Yellow Medicine RJ.

Northern Phalarope

Early north 8-10 Wilkin GO; early south 8-20 Washington DMB and 8-23 Washington JD; late south 9-9 Lyon and Yellow Medicine RJ.

POMARINE JAEGER

9-11 Duluth MC.

JAEGER (SP?)

9-12,16 KE, 10-1,2,27 (7 adults) D. Rau.

Glaucous Gull

11-19 Anoka KL; 11-25 Dakota (Black Dog) DGW (1-1st. yr.); 11-26 Black Dog RJ (1-1st. yr.) and SS (2 imm.).

Herring Gull

Late north 10-30 Itasca MS and 10-31 St. Louis RJ (1,000+); late south 11-25 Wabasha OJ, 11-26 Black Dog RJ (300+).

Thayer's Gull

10-20,28,29,31, 11-6 Duluth KE; 11-26 Dakota RJ.

Ring-billed Gull

Late north 11-5 Otter Tail DS, 11-18 Hubbard HF; late south 11-26 Anoka KL, 11-29 Wabasha WDM.

LAUGHING GULL

8-5 St. Louis (Stoney Pt.) JD, 8-26 KE (1 imm).

Franklin's Gull

Late north 10-7 Marshall ANWR, 11-21 Douglas NJ; late south 10-20 Dakota JD (230), 11-5 Redwood CMB.

Bonaparte's Gull

8-10 Otter Tail GO, 8-12 Wilkin KE; early south 8-17 Wabasha WDM, 9-20 Washington WL; late north 11-11 Mille Lacs RJ, Otter Tail GO, 11-18 Mille Lacs JB.

BLACK-LEGGED KITTIWAKE

9-12 St. Louis MC.

SABINE'S GULL

9-12 Duluth Molly Kohlbray, third state record.

Forster's Tern

Late north 10-11 Cass KE; late south 9-9 Lyon RJ, 9-10 Hennepin OJ.

Common Tern

Late north 11-4 Otter Tail DS; late south 10-30 Stearns NH.

LEAST TERN

8-10 Lyon Paul Egeland, fourth state record.

Caspian Tern

Early south 9-9 Ramsey BH; late north 9-15 Lake GO, 9-18 Duluth KE; late south 9-14 Dakota DB, 9-16 Anoka KL.

Black Tern

Late north 8-12 Wilkin GW, 8-19 Marshall ANWR; late south 9-6 Lyon RJ, 9-10 Lac Qui Parle CMB and Hennepin OJ.

Mourning Dove

Late north 11-26 Becker NJ, Otter Tail SM; late south 11-30 Ramsey RJ.

Yellow-billed Cuckoo

Late north 9-9 Duluth KE; late south 9-3 Anoka KL, 9-11 Houston EMF.

Black-billed Cuckoo

Late north 10-3 Kanabec WL; late south 9-3 Afton DMB, 9-9 Hennepin OJ.

Screech Owl

Late north 10-21 Otter Tail GO; late south 11-27 Houston EMF. Also reported from Cottonwood, Hennepin, Lac Qui Parle, Murray and Ramsey.

Great Horned Owl

Reported from about 17 counties.

Snowy Owl

Early north 9-17 Itasca Warren Nelson (fide JB); early south 9-23 Anoka KL.

HAWK OWL

11-18 St. Louis KE; 11-23 Aitkin

Jerry Beringer (fide TS).

Barred Owl

Reports from 7 counties.

Long-eared Owl

8-19 Otter Tail GO, 11-28 Houston EMF. Dave Evans banded 164 at Hawk Ridge.

Short-eared Owl

9-7,27 Duluth KE; 9-17 Duluth RJ, 11-7 Pierz PM.

BOREAL OWL

11-8 Duluth 1 banded at Hawk Ridge Dave Evans.

Saw-whet Owl

9-29 Otter Tail SM, 10-6 87 banded at Hawk Ridge by Dave Evans. The total banded 376.

Whip-poor-will

8-1,11 Houston EMF, 8-27 Otter Tail GO, 9-14,15 Hennepin PF, 9-23 Washington DS.

Common Nighthawk

Late north 10-1 Clay LCF, 10-2 Otter Tail GW; late south 10-9 Dakota JD, 10-10 Hennepin OJ.

Chimney Swift

Late north 9-23 Clay LCF, 9-28 Otter Tail GW; late south Hennepin 10-6 PF, 10-8 ES.

Ruby-throated Hummingbird

Late north 9-16 Duluth SM, Otter Tail GW; late south 9-26 Ramsey BH.

RUFIOUS HUMMINGBIRD

10-11 through 25 Beltrami near Bemidji RJ, SM, TS, ES, DGW. Also reported Washington and Cass (See Loon, Vol. 51 No. 1).

Belted Kingfisher

Late north 11-25 Otter Tail GW; late south 11-30 Fillmore GBE.

Common Flicker

Late north 10-19 Kanabec OJ, 10-23 Itasca MS; late south 11-16 Wabasha WDM, 11-26 Lac Qui Parle CMB.



Pileated Woodpecker

Reported from about 13 counties.

Red-bellied Woodpecker

Reported from 15 counties north to St. Louis and Otter Tail.

Red-headed Woodpecker

Reported from about 18 counties.

Yellow-bellied Sapsucker.

Late south 10-17 Houston EMF, 10-23 Lac Qui Parle CMB.

Hairy Woodpecker

Permanent resident.

Downy Woodpecker

Permanent resident.

Black-backed Three-toed Woodpecker

9-24 Clearwater SV, 9-30 St. Louis TH, 11-18 Cotton DB.

Eastern Kingbird

Late north 9-6 Clay LCF, 9-9 Todd GW and Big Stone RJ; late south 9-14 Goodhue DB, 9-17 Lac Qui Parle CMB.



Western Kingbird

Late north 8-20 Clay LCF, 9-6 Otter Tail SM; late south 8-21 Lac Qui Parle CMB, 9-10 Murray AD.

Great Crested Flycatcher

Late north 9-2 Clay LCF, 9-9 Itasca MS; late south 9-14 Cottonwood LF and Hennepin VL, 9-16 Washington DS.

Eastern Phoebe

Late north 9-21 Clay LCF, 10-4 Mille Lacs WL; late south 10-21 Cottonwood LF, 10-26 Olmsted VH.

Yellow-bellied Flycatcher

8-30 TSR VL, 8-31 Freeborn DG, 9-14 Anoka KL, 9-21 St. Paul BS.

Acadian Flycatcher

8-6 Chisago RJ.

Willow/Alder Flycatcher

9-4 Ramsey BH, 9-15 Houston EMF.

Least Flycatcher

Late north 9-6 Beltrami MM, 9-16 Duluth SM; late south 9-30 Hennepin OJ, 10-2 Mountain Lake LF.

Eastern Wood Pewee

Late north 9-1 Itasca MS, 9-7 Clay LCF; late south 9-24 Wabasha WDM, 9-27 Houston EMF.

Olive-sided Flycatcher

Early south 8-9 Afton DMB, 8-26 Olmsted JEB; late south 9-14 Anoka KL, 9-17 Olmsted JF.

Horned Lark

Late north 10-29 Otter Tail RG, resident south.

Tree Swallow

Late north 9-17 Itasca MS; late south 10-13 Hennepin OJ, 10-14 Carver RJ.

Bank Swallow

Late north 9-30 Rothsay RJ; late south 9-19 Wood Lake EB.

Rough-winged Swallow

Late north 9-2 Duluth RJ; late south 9-17 Lac Qui Parle CMB, 9-28 Hennepin VL.

Barn Swallow

Late north 9-24 Otter Tail NJ, 10-1 Otter Tail GM; late south 10-13 Swift DB, 10-28 Washington DS.

Cliff Swallow

Late south 9-22 Hennepin OJ and 9-24 Mountain Lake RG.

Purple Martin

Late north 9-17 St. Louis OJ and RJ, Clay LCF; late south 9-12 Mountain Lake RG, 9-23 Washington DGW.

Gray Jay

Reported from Cass, Cook, Itasca and Roseau.

Blue Jay

Permanent resident. 9-15 Duluth (100+) NH.

Black-billed Magpie

Early north 9-30 St. Louis (6) KE, 10-2 Marshall NH, 10-8 Pennington DB; south 11-11 Anoka KL.

Common Raven

Early south 9-23 Washington DS and 15 other counties.

Common Crow

Permanent resident.

Black-capped Chickadee

Permanent resident.

Boreal Chickadee

North reports from Cook, Itasca, Lake, Mille Lacs and St. Louis.

Tufted Titmouse

8-12 Houston EMF, 11-8,9,10 Rice VH, 11-18 Fillmore RJ, 11-30 Houston EMF.

Red-breasted Nuthatch

Early south 8-29 Hennepin VL, 9-2 Hennepin WKE; late north 11-30 Hubbard HF.

Brown Creeper

Early south 8-4 Chippewa CMB, 9-14 Cottonwood LF; late north 11-8 Otter Tail SM, 11-24 Clay LCF.

House Wren

Late north 9-9 Clay LCF, 9-20 Itasca MS; late south 10-8 Houston EMF and Hennepin ES, 10-12 Hennepin OJ.

Winter Wren

Early south 9-21 Ramsey EC; late north 10-3 Babbitt TH, 10-7 Crow Wing JB; late south 10-25 Houston EMF, 11-10 Cottonwood LF.

Long-billed Marsh Wren

Late south 10-7 Renville RJ, 10-25 Stearns NH.

Short-billed Marsh Wren

Late north 9-27 Marshall SV, 9-30 Wilkin RJ; late south 9-30 Hennepin OJ, 10-21 Washington DS.

Gray Catbird

Late north 9-30 Otter Tail GM, 10-7 Crow Wing JB; late south 10-1 Houston EMF, 10-7 Hennepin VL.

Brown Thrasher

Late north 9-18 Clay LCF, 11-11 Crow Wing JB; late south 10-31 Anoka PKL, 11-28 Olmsted JF.

American Robin

Late north 11-14 Hubbard HF, 11-21 Douglas NJ, 11-25 Otter Tail GM.

Varied Thrush

11-14 Hubbard Velma Sharkey, 11-19 Ramsey and 11-26 Hennepin RJ.

Wood Thrush

10-1 Washington DWG.

Hermit Thrush

Early south 8-29 Hennepin WKE; late north 10-7 Crow Wing JB, 10-9 Roseau SV; late south 11-21 Hennepin VL.

Swainson's Thrush

Early south 8-29 Washington DMB; late north 9-16 St. Louis OJ; late south 10-18 Cottonwood LF, 11-8 Martin EB.

Gray-cheeked Thrush

Early north 9-1 Otter Tail GO, 9-15 Roseau SV; early south 8-10 Freeborn DG; late south 9-19 Washington DMB, TSR, DB.

Veery

8-28 Duluth (40) GS, 10-4 Mille Lacs WL late north.

Eastern Bluebird

Late north Otter Tail 10-16 NJ, 10-21 GO; late south 10-25 Sherburne EH, Le Sueur HEC, 10-29 Anoka JH.

TOWNSEND'S SOLITAIRE

10-7 Crow Wing ES, TS and 10-16 St. Louis MC.

Blue-gray Gnatcatcher

8-18 Sherburne EH and 9-9 Houston EMF.

Golden-crowned Kinglet

Early south 8-21 Houston EMF; late north 11-11 Crow Wing RJ, Itasca PM, 11-13 Clay LCF; late south 10-30 Anoka JH, 11-23 Houston EMF.

Ruby-crowned Kinglet

Early south 8-27 Freeborn DG,

Anoka KL; late north 10-6 Clay LCF, 10-14 Roseau SV; late south 10-28 Cottonwood LF, 11-4 Anoka JF.

Water Pipit

Early north 9-24 Duluth KE, 9-30 Wilkin RJ; early south 9-23 Hennepin OJ; late north 10-31 Cook KE, RJ; late south 10-23 Olmsted JEB.

Sprague's Pipit

10-1 Wilkin TS.

Bohemian Waxwing

Early north Cook 10-29 DGW, 10-31 KE, RJ; early south 10-20 Cottonwood J. M. Smith fide LF.

Cedar Waxwing

Late north 11-25 Otter Tail GM, GO.

Northern Shrike

Early north 10-16 Lake KE, Aitkin TS; early south 10-8 Isanti OJ, 10-18 Dakota JD.

Loggerhead Shrike

8-3 Lac Qui Parle CMB, 8-11 Big Stone KE, 8-12 Big Stone RJ, 10-29 Ramsey BH.

Starling

Permanent resident.

Yellow-throated Vireo

Late north, 9-16 Beltrami MM; late south 9-20 Hennepin WKE, 9-26 Houston EMF.

Solitary Vireo

Early south 8-29 Houston EMF and Hennepin ES; late north 10-21 Crow Wing TS; late south 10-12 Houston WL.

Red-eyed Vireo

Late north 9-15 St. Louis SM and 9-16 St. Louis RJ; late south 9-21 Olmsted VH and 9-24 Washington DM.

Philadelphia Vireo

Early south 8-6 Cottonwood RG; late north 9-16 St. Louis RJ; late south 9-16 Anoka JH and 9-17 Washington DMB.

Warbling Vireo

Late north 9-6 Beltrami MM; late south 9-28 Hennepin ES.

Black-and-white Warbler

Late north 9-2 Beltrami GO, Becker GW and St. Louis RJ; late south 9-21 Freeborn DG and Olmsted VH, 9-25 Anoka KL.

Golden-winged Warbler

Late north 9-2 Becker GO; late south 9-14 Houston EMF.

Blue-winged Warbler

Four reports: 8-2 and 8-15 Houston EMF, 8-27 Olmsted JF and 9-13 Cottonwood LF.

Tennessee Warbler

Early south 8-3 Washington DMB and 8-4 Houston; late north 9-16 St. Louis RJ; late south 10-19 Houston EMF.

Orange-crowned Warbler

Early north 8-15 Clay LCF; early south 8-30 Hennepin WKE and 9-1 Houston EMF; late north 11-9 Beltrami Jim Mattson; late south 10-22 Washington DMB and 10-23 Hennepin ES.

Nashville Warbler

Early south 8-17 Houston EMF and 8-19 Rock RJ; late north 10-1 Clay LCF; late south 10-6 Dakota JD and 10-7 Cottonwood LF.

Northern Parula

Early south 8-24 Washington DMB; late north 9-10 Clay LCF; late south 9-17 Olmsted JF.

Yellow Warbler

Late north 8-29 Marshall SV; late south 9-10 Anoka KL.

Magnolia Warbler

Early south 8-27 Washington DMB and Anoka KL; late north 10-5 Hubbard HF; late south 9-21 Freeborn DG, Houston EMF and Olmsted VH.

Cape May Warbler

Early south Anoka KL; late north St. Louis GO; late south 9-9 Anoka KL.

Black-throated Blue Warbler

Early south 8-31 Cottonwood LF; late north 9-14 St. Louis KE; late south 9-19 Hennepin DB.

Yellow-rumped Warbler

Early south 9-2 Washington DS; late north 11-22 St. Louis KE and 11-24 Otter Tail NJ; late south 11-18 Dakota JD.

Black-throated Green Warbler

Early south 8-29 Hennepin DB; late north 10-7 Crow Wing JB; late south 9-29 Anoka JH.

Blackburnian Warbler

Early south 8-20 Hennepin DB, 8-23 Houston EMF; late north 9-15 Lake GO and 9-16 St. Louis SM; late south 9-20 Sherburne EH.

Chestnut-sided Warbler

Early south 8-16 Washington DGW; late north 9-16 St. Louis RJ; late south 9-25 Houston EMF and 9-25 Anoka KL.

Bay-breasted Warbler

Early south 8-20 Washington DMB; late north 9-17 St. Louis RJ; late south 9-30 Washington DMB.

Blackpoll Warbler

Early north 9-2 St. Louis RJ and 9-3 Clay LCF; early south 8-28 and 8-31 Anoka KL and JH; late north no dates; late south 9-17 Anoka JH.

Pine Warbler

Early south 8-27 Anoka KL and 8-28 Washington DS; late north 9-28 Hubbard HF; late south 9-15 Hennepin VL.

Palm Warbler

Early south 9-2 Washington DS; late north 10-1 Clay and Wilkin LCF and RJ; late south 10-10 Washington DMB.

Ovenbird

Late north 9-17 St. Louis RJ, only report north; late south 10-2 Hennepin VL and 10-3 Sherburne EH.

Northern Waterthrush

Early south 8-15 Hennepin DB; late north 9-3 Beltrami MM; late south 9-21 Cottonwood LF.

Louisiana Waterthrush

Only one report 8-6 Chisago RJ.

Connecticut Warbler

Early south 8-19 Washington DMB; late north 10-1 Clay LCF; late south 9-30 Hennepin OJ.

Mourning Warbler

Early south 8-8 Anoka JH and 8-8 Washington DMB; late north 9-2 Becker GO; late south Anoka KL, good details.



Common Yellowthroat

Late north 9-15 Clay LCF; late south 11-25 Houston RJ, OJ, FL.

Wilson's Warbler

Early north 8-15 Clay LCF and 8-17 Otter Tail GW; early south 8-1 Hennepin WKE; late north 9-23 Clay LCF; late south Anoka KL.

Canada Warbler

Early south 8-24 Sherburne EH; late north 9-2 Otter Tail GO; late south 9-10 Hennepin WKE.

American Redstart

Late north 10-28 St. Louis KE; late south 9-20 Hennepin WKE and Houston EMF.

Bobolink

Peak of 200 8-23 Marshall, Dick Vasse; late north 9-10 Clay LCF; late south 10-21 Anoka JH.

Eastern Meadowlark

Only report north 9-6 Otter Tail GO; late south 11-23 Fillmore GBE.

Western Meadowlark

Late north 11-30 Otter Tail NJ; late south 12-18 Fillmore RJ.

Yellow-headed Blackbird

Only report north 8-4 Otter Tail GO; late south 9-17 Lac Qui Parle CMB.

Red-winged Blackbird

Late north 11-26 Becker NJ 11-30 Otter Tail GW.

Orchard Oriole

Three reports 8-3 Washington DMB, 8-6 Clay LCF and 8-19 Rock RJ.

Northern Oriole

Late north 9-9 Todd GW; late south 10-7 Anoka KL.

Rusty Blackbird

Early north 9-15 Itasca MS; early south 9-29 Freeborn DG and 10-3 Hennepin GS; late north 11-25 Otter Tail GW and 11-26 Morrison PM.

Brewer's Blackbird

Late north 10-8 Clay LCF; late south 11-26 Freeborn DG.

Common Grackle

Late north 11-27 Otter Tail NJ and 11-29 St. Louis KE.

**Brown-headed Cowbird**

Two reports north: 8-3 Otter Tail GO and 8-5 Marshall SV; late south 11-25 Houston OJ, RJ, FL and Lac Qui Parle OE.

Scarlet Tanager

Late north 9-12 Morrison PM; late south 10-11 Swift WDM.

Cardinal

Reported only from South central and Southeast.

Rose-breasted Grosbeak

Late north 10-22,23 St. Louis KE; late south 10-10 Hennepin WKE.

Blue Grosbeak

One report: 8-19 Rock RJ.

Indigo Bunting

No reports north; late south 9-29
Houston EMF.

Dickcissel

Five reports: 8-1 Carver VL, 8-15
Sherburne EH, 8-19 Rock RJ, 8-21
Lac Qui Parle CMB and 8-30 Cotton-
wood LF.

Evening Grosbeak

Early south 10-30 Freeborn DG.

Purple Finch

Early south 9-3 Houston EMF.

Pine Grosbeak

Early north 10-26 St. Louis KE and
TH; early south 11-18 Washington DS
and 11-19 Anoka JH.

Common Redpoll

Early north 10-26 St. Louis; early
south 11-14 Cottonwood LF and 11-22
Anoka JH and Washington DGW.

Pine Siskin

Early south 11-2 Stearns NH, 11-5
Hennepin PF and 11-6 Swift WDM.

American Goldfinch

Late north 11-26 Otter Tail SM and
11-27 Hubbard HF.

Red Crossbill

Three reports: 10-7 Crow Wing JB,
10-15 Beltrami Lloyd Paynter and 10-
16 Hubbard HF.

Rufous-sided Towhee

Five reports: 8-2 Houston EMF, 8-4
Olmsted JF, 9-21 Aitkin TS and Mar-
shall SV and 10-24 Houston EMF.

Savannah Sparrow

Late north 11-3 St. Louis KE; late
south 10-7 Washington DMB and Ren-
ville RJ, 10-8 Hennepin OJ.

Grasshopper Sparrow

Four reports: 8-2 Lac Qui Parle
CMB and Wilkin GO, 8-19 Rock RJ,
8-21 Lac Qui Parle CMB.

Leconte's Sparrow

Two reports: 9-30 Wilkin RJ and
GO, 10-10 Wilkin SM.

Sharp-tailed Sparrow

10-1 Lyon Paul Egeland.

Vesper Sparrow

Late north 11-8 Otter Tail NJ; late
south 10-13 Murray AD.

Dark-eyed Junco

Early south 9-9 Fillmore GBE and
9-22 Houston EMF.

Tree Sparrow

Early north 10-1 Clay RJ and 10-3
Crow Wing JB; early south 10-16 Cot-
tonwood RG, 10-17 Murray AD and
10-18 Anoka JH.

Chipping Sparrow

Late north 10-12 Otter Tail NJ; late
south 10-19 Hennepin VL.

Clay-colored Sparrow

Late north 9-17 St. Louis DGW; late
south 10-8 Hennepin OJ.

Field Sparrow

Late north 8-1 Otter Tail GO only
report north; late south 11-20 Wash-
ington DMB.

Harris' Sparrow

Early north 9-28 St. Louis TH, 9-29
Itasca TS and 9-30 Otter Tail SM, Wil-
kin RJ and GO; early south 9-28 Hen-
nepin ES, 9-29 Murray AD; late north
11-30 Otter Tail GW; late south 11-27
Murray AD.

White-crowned Sparrow

Early north 9-21 Marshall DS; early
south 9-19 Washington DS; late north
10-5 Hubbard HF and 10-6 Clay LCF;
late south 10-12 Hennepin OJ and 10-
14 Lac Qui Parle OE.

White-throated Sparrow

Early south 9-17 Washington WL,
9-18 Dakota JD; late north 11-29 St.
Louis KE; late south 11-30 Fillmore
GBE.

Fox Sparrow

Early north 9-6 St. Louis MC; early
south 9-25 Houston EMF; late north
10-25 Clay LCF and 10-26 Hubbard
HF; late south 11-23 Houston EMF
and 11-25 Le Sueur HEC.

Lincoln's Sparrow

Early south 9-10 Anoka KL; late north 10-3 Wilkin SM and 10-4 Clay LCF; late south 10-19 Washington DMB.

Swamp Sparrow

Late north 10-21 Wilkin DGW; late south 11-6 Stearns NH.

Song Sparrow

Late north 11-29 St. Louis KE.

Lapland Longspur

Early north 9-16 and 9-17 St. Louis RJ and OJ; early south 9-30 Anoka KL; late north 10-15 Wilkin (300+) GO and 10-21 Wilkin DGW.

Smith's Longspur

One report north 10-21 Wilkin GO and DGW; one report south 11-15 Lac Qui Parle CMB.

Chestnut-collared Longspur

Two reports: 10-1 Clay RJ and 10-27 Grant (150+) NH.

Snow Bunting

Early north 10-8 Itasca MS and 10-9 Marshall SV; early south 10-27 Hennepin RJ and 10-30 Sherburne EH.

Additions

Summer 1978, early migrant dates: Semipalmated Plover 7-26 Anoka KL, 7-31 Olmsted JEB; Solitary Sandpiper 7-3 Renville KE; Lesser Yellowlegs 7-1 Cottonwood KE; Pectoral Sandpiper 7-2 Lac Qui Parle KE; Baird's Sandpiper 7-14 Anoka KL.

Correction

Winter 1977, change Saw-whet Owl 12-7-77 Marshall ANWR to Short-eared Owl.

OBSERVERS:

ANWR — Agassiz National Wildlife Refuge

TA — T. D. Atkins, Tamarac National Wildlife Refuge

Summer 1979

CMB — Chuck and Micki Buer

DB — Don Bolduc

DMB — Don and Mary Beimborn

EB — Ed Brekke-Kramer

JB — Jo Blanich

JEB — Jerry Bonkoski

EC — Elizabeth Campbell

HEC — H. F. and Esther Chamberlain

MC — Marj Carr

AD — Mrs. Arnold DeKam

JD — Joanne Dempsey

GBE — Gary and Bobby Erickson

KE — Kim Eckert

OE — Mrs. O. L. Eckhardt

WKE — Whitney and Karen Eastman

EMF — Eugene and Marilyn Ford

HF — Herbert Fisher

JF — Joan Fowler

LF — Mrs. L. A. Feil

LCF — Lawrence and Carol Falk

PF — Pepper Fuller

DG — Doris Gregerson

RG — Randall Goertner

BH — Bill Hilton, Jr.

EH — Edmund Hibbard

JH — James Howitz

NH — Nestor Hiemenz

TH — Thomas Hargy

VH — Vince Herring

AJ — Aliva Joul

NJ — Nancy Jackson

OJ — Oscar Johnson

RJ — Robert B. Janssen

FL — Fred Leshner

KL — Ken LaFond

VL — Violet Lender

WL — Wm. H. Longley

MM — Monte Mason

PM — Pat Meyer

SM — Steve Millard

WDM — Wynn and Don Mahle

GO — Gary Otnes

BS — Bruce Stranden-Hitman

DS — Dave Sovereign

ES — Evelyn Stanley

FS — Forest and Kirsten Strnad

GS — Gary Simonson

MS — Madeline Schuller

SS — Steve Schon

TS — Terry Savaloja

SV — Sarah Vasse

DGW — Dick and Gloria Wachtler

GW — Gerry Winkleman



NOTES OF INTEREST

SAW-WHET OWL NEST RECORD, MINNESOTA — On April 23, 1978 I located a Saw-whet Owl nest near Lake Bemidji State Park, Beltrami County. The nest was in an unidentified hardwood snag that measured 27 feet in height. The cavity was natural and was 17 feet from the ground. The floor of the cavity was nine inches wide and eight inches below the cavity opening. The nest tree was at the edge of a lowland alder swamp and a second growth upland mixed coniferous and deciduous woods. A moderate-use paved county road passes within 50 feet of the nest. To my knowledge, this is the only published twentieth century state nest record for this species using a natural (as opposed to man-made) site. The most recent record is in Kittson County, 1897 (T. S. Roberts **Birds of Minnesota**). Green and Janssen's **Minnesota Birds** lists the species as "resident throughout the wooded portions of the state as far south as the Twin Cities area." In view of the paucity of nesting data on this not so uncommon species in Minnesota, the following chronological information is provided:

April 23 — Nest tree found; adult perched in cavity opening when I tapped on base of tree.

May 10 — Cavity contained five eggs and one dead meadow jumping mouse. Adult female caught and banded.

May 23 — Cavity contained four owlets and one pipped egg. Prey items were three meadow jumping mice and one house mouse.

May 30 — Cavity contained only four owlets; no indication of disposition of fifth egg.

June 2 — Banded four nestlings.

June 11 — Prey items in cavity were one meadow jumping mouse and one redback vole.

June 14 — Oldest owlet perched in cavity opening. Flight feathers fully developed. (See front cover photo)

June 19 — Oldest owlet fledged and was found perched eight feet high in a balsam fir about 25 feet from the nest tree.

James P. Mattsson, Wildlife Biologist, P.O. Box 845, Bemidji, MN 56601.

Editor's Note: Because of the scarcity of breeding records for the Saw-whet Owl in Minnesota I asked Dick Oehlenschlager to give me the details on a nest he found in 1959 that has never been published before. "The data for the Saw-whet Owl nest I found in Wadena County are as follows: T136N, R33W S10, 29 May 1959, had five young ready to fledge. The nest site was a (Flicker-?) hole about 12 feet high in a dead Trembling Aspen stub (about 15-20 feet high). The hole faced to the east. The nest tree was located in a mixed, rather mature riparian forest along the Crow Wing River, just at the bottom edge of a fairly abrupt slope which formed the boundary between the flood plain and upland deciduous forest. The adults were never seen."

BLACK-BACKED AND NORTHERN THREE-TOED WOODPECKERS —

From January 4 to January 27, 1979, nine students from Pacific Lutheran University and I lived in a wilderness camp on Seagull Lake, at the end of the Gunflint Trail, Cook County, directly adjacent to the extensive 1977 Saganaga Burn. During this time, I birded extensively through the black spruce and balsam forests, looking particularly for Spruce Grouse (which I finally found — five of them). But by far the most common bird type in the region, besides Gray Jays, were the woodpeckers. On the second day there, January 5, I found near our cabin two Northern Three-toed Woodpeckers. These two I subsequently saw on the same trees, for about one week. Later in the first week, I found three more Northern Three-toed Woodpeckers near the main camp on Fishhook Island. While such rarities are exciting, the main story is probably the Black-backed Three-toed Woodpeckers. Usually uncommon, this species was almost abundant in the spruce bogs and woods on the islands. After seeing five or six individuals in two days, the reason for the abundance of woodpeckers (including Pileated) was the burn. Several hikes into the burn confirmed it. I could not go 100 feet without finding another woodpecker — some Hairies, but mostly Black-backed. In several hikes into different areas of the burn, I counted and photographed at least 20 individuals. I quit counting, although I saw and heard several more woodpeckers, and students continued to tell me of Black-backed Woodpeckers that they would see. **Charles A. Bergman, 3620 Thompson Ave. So., Tacoma, Washington 98408.**

OVERWINTERING EARED GREBE AT FERGUS FALLS — As Kim Eckert states in his book, "A Birder's Guide to Minnesota," "the open stretch of the Ottertail River at Fergus Falls . . . consistently produces the best variety of wintering waterfowl in the state." He goes on to list an impressive array of birds. Well, Kim, here's a new entry: On January 20, 1979, about 1:15 P.M., my wife, Marion, Lowell Deede of the Fish & Wildlife Service, and I were watching a partial albino Canada Goose, wintering Whistling Swan, and a large flock of Mallards at the "Levee," a portion of the Ottertail River within the city limits of Fergus. As the Mallards are routinely handled by city residents, they congregate along the shoreline when a car pulls up. On this particular date we had about 25 Mallards mooching about us a few feet away . . . and one winter plumaged Eared Grebe. We would have been surprised even if it would have been a Horned Grebe, which far outnumbered the Eared during the Spring/Fall migration in this area; but an Eared Grebe was unique! Also unique was the grebe's habit of cruising back and forth along the shore with the Mallards. It appeared that it was prepared to compete with the Mallards for bread that might

be tossed the flock. The grebe was observed two or three more times during February at different locations along the Ottertail River. Marion and I found it again just upstream of the Levee area on March 19, 1979. Gary L. Otnes, Route 1, Box 181, Fergus Falls, MN 56537.

Editor's Note: Yes this record is unique and represents the first wintering record for the Eared Grebe in Minnesota.

MINNESOTA'S FIRST OVERWINTERING CHIPPING SPARROW — The Chipping Sparrow picture was sent to you by Terry Dorsey of the Austin Audubon Society. The bird was first sighted by my wife and I on November 26, 1978 in our backyard. It was seen almost every day from November 26, 1978 to March 2, 1979 near or on one of our feeders. We did not see it after March 2nd. There were blood stains on one of our feeders, which was originally a bird bath. We assume a cat got the bird. Michael C. Beatrice, 1711 1st Ave. S.E., Austin, MN 55912.



Chipping Sparrow — Austin, Mower Co. — Photo by Terry Dorsey

Editor's Note: The above represents the first record of an overwintering Chipping Sparrow in Minnesota. There are two other records for the Chipping Sparrow in the winter; one, a specimen from Rochester, Olmsted County, found on December 6, 1975 (*The Loon* 48:77). This bird was probably a very late migrant. The other record is of a bird at a feeder in Ramsey County from December 12, 1976 to January 4, 1977 (*The Loon* 49:51).

MALLARDS NESTING IN GREAT BLUE HERON NESTS AND NEAR AN ACTIVE GREAT HORNED OWL NEST — The incidence of Mallards nesting in the crotches of tree has been reported in Bellrose (1976, *The Ducks, Geese, and Swans of North America*). Snell (1969, *The Loon* 41(4):132-133) reported a Mallard incubating on an abandoned squirrel nest. On 15 May 1978 I observed two Mallards nesting in old Great Blue Heron nests. The nests were located at the periphery of a colony of 125 heron nests, 75 of which were active. This colony is located on the shore of Marsh Lake, Big Stone Co. sec. 14, R44W, T120N. The Mallard nests were 6-7m above ground. Spring flooding had left the area under 0.5m of water. The hens

flushed when I walked under their respective nests. The first nest contained nine eggs which were partially covered by down. There were eight eggs in the second nest and a small amount of down. The second nest was 3m from the 0.5m below an active Great Horned Owl nest. There was one young owl on the nest and another in a tree 15m away. An adult was observed leaving the vicinity as I approached the colony. The owls were not observed on subsequent visits. On 25 May both Mallard nests contained nine eggs and were covered with down. Neither hen was observed. The ground was moist but no standing water was present. On 12 June the nests were still covered with down but the eggs felt cold. There was no change on 20 June. The reason for nest abandonment is unclear. The fact that additional down and eggs were present on my second visit indicates the birds had returned following my original observation. I found no evidence of predation in the vicinity of either nest on any visit. **Daniel J. Orr, Dept. of Biology, St. Cloud State Univ., St. Cloud, MN 56301.**

WHITE PELICANS MIGRATING UP THE ST. CROIX RIVER — At 5 p.m., Saturday, April 14, 1979, my wife Peggy and I were returning from a walk along the St. Croix River upstream above the dam at Taylor's Falls, Minnesota. When we got back to the dike and beaver pond at the north edge of Taylor's Falls, we saw a large flock of White Pelicans flying above the river — apparently some miles east of their normal migration route. When we first saw them, the pelicans were above the river and just below the dam, as if they had come up the river and had been stopped at the sight of the dam. Flying northward in an uneven, crooked V, they turned and began wheeling gracefully just below the dam. Flapping and sailing, they then broke formation and formed two or more smaller, loose, milling groups that intermixed and changed and worked downstream past the town of Taylor's Falls and out of sight. Before they disappeared I counted about 25 and judged that I had counted fewer than half — so I believe that in all there were about 60 birds. Presumably they went about 20 miles southward along the St. Croix to Stillwater and Bayport, because about a week after I saw "my" pelicans a TV news report indicated that a number of these birds had been staying at Bayport. The broadcast offered the theory that the pelicans were attracted to stay near Bayport for a while because of many winter-killed fish along the shores of the St. Croix there. **Robert E. Turner, Box 66, Shafer, MN 55074.**

**HAWK RIDGE NATURE RESERVE
DULUTH, ST. LOUIS COUNTY**

HAWK COUNT: 1978 SUMMARY

Composite from East Overlook and Banding Station

	Aug.	Sept.	Oct.	Nov.	Dec.
Number of days	15	28	31	18	92
Total hours	162	335	308	138	942
Average daily hours	10.8	12.0	9.9	7.7	10.2
Turkey Vulture	1	276	210	0	487

Goshawk	3	23	118	22	166
Sharp-shinned Hawk	658	10,762	2862	11	14,293
Cooper's Hawk	5	52	14	0	71
Red-tailed Hawk	110	886	2738	223	3957
Red-shouldered Hawk	0	0	0	1	1
Broad-winged Hawk	186	52,829	12	0	53,027
Rough-legged Hawk	0	22	583	31	636
Golden Eagle	0	0	11	2	13
Bald Eagle	1	21	14	43	79
Marsh Hawk	133	312	157	12	614
Osprey	14	183	6	0	*203
Peregrine Falcon	0	4	4	0	8
Merlin	1	25	6	0	32
American Kestrel	222	477	59	0	758
Swainson's Hawk	0	1	0	0	1
Gyr Falcon	0	0	0	1	1
Unidentified	32	111	62	16	221
TOTAL	1366	65,984	6856	362	*74,568

*new Hawk Ridge records

FERRUGINOUS HAWK, TRAVERSE COUNTY — On Saturday, April 7, 1979, at 9:45 a.m., my wife, Marion, and I were observing gulls and waterfowl at Mud Lake. We were parked at the federal wayside rest along Highway 117, with the car facing to the northwest. The sky was clear, but a southeast wind of 30-40 knots kept us in the car. While scanning about us, we noted a buteo approaching us at about 75 feet elevation from the southwest. The hawk traveled diagonally over us, soaring and dipping in the wind, and was identified as an adult Ferruginous Hawk. The bird was perhaps the cleanest plumaged raptor of this species we've ever seen. The upper parts were of a dark rufous; the head was quit white, as were the underparts . . . the white seeming nearly silver in the sunlight. The undertail was totally white and unbarred; the legs, or "flags" were of rufous, forming the oft mentioned "V." The rufous legs, however, were not as dark as shown in many field guides, but still clearly visible. The underwings were white, with rufous about the wrist area. The tips of the primaries were a rich black. Should we ever see primary tips quoted as "dipped in ink," this would have been the bird possessing them! **Gary Otnes, Route 1, Box 181, Fergus Falls, MN 56537.**

HOODED WARBLER AT CARLETON COLLEGE — On April 22, 1979 I saw a Hooded Warbler at the Carleton College Arboretum, Rice County. The bird was seen for about two minutes at noon from a distance of approximately 10 yards using Swift 8x40 binoculars. First seen as a small yellowish bird flashing through the underbrush in a jack-pine stand with box elder growing up. Then with binoculars I saw a small bird with a brilliant yellow head — with deep black contrasting exquisitely. The black covered the top of the head — narrowed and then covered the throat. The back contrasted with the yellow of the head, appearing to be olive (that is, a mixture of yellow and something (green) darker. The tail was not observed so no tail spots were noted. I was too amazed at the brilliance of the yellow of the face and the black pattern to look at the tail. **Michael Chick, Carleton College, Northfield, MN 55057.**

TWIN CITIES METROPOLITAN AREA WINTERING WATERFOWL SURVEY, 1979

Robert K. Green and James A. Cooper

Department of Entomology, Fisheries and Wildlife
University of Minnesota
St. Paul, MN 55108

A survey of the waterfowl species wintering in the Minneapolis-St. Paul area has been conducted during the third week of January since 1974 (The Loon 49(3): 121-135, 50(3): 177-178). Table 1 presents the results of the 1979 survey and for the five previous years. The methods and sites visited in 1979 were identical to those of 1978. The number of waterfowl observed in the 1979 survey was up 23% from 1978 and was the second highest total of the six winter surveys. The distribution of birds was similar to past years except in The Minnesota River Valley where during previous surveys the greatest number of waterfowl were found at Black Dog Lake in Burnsville. This was attributed to the large open expanse of water warmed by the Northern States Power's electrical generation plant. Immediately preceding the 1979 survey the plant was not operated and the water surface froze; consequently, the majority of the overwintering waterfowl left that site and apparently shifted to the sewage plant in Savage where an estimated 5,000 Mallards were found in contrast to the 250 Mallards tallied in 1978.

Species diversity was low this year and last. In 1978, we speculated that the low diversity might be related to the unusually cold weather prior to the survey. However, temperatures preceding the 1979 survey were much milder than in 1978, indicating that weather alone did not account for changes in species composition.

The variation in the occurrence of rarer species produced the disparity in diversity. A review of the observations of the 16 species encountered in the surveys showed that the birds could be separated into three classes: common — seen in every year; frequent — not seen in all but in at least half of the years; rare — seen in only one or two years. The species composition of each class was: common — Mallard, Canada Goose, Common Goldeneye, Black Duck, Gadwall and American Coot; frequent — Common Merganser, Wood Duck, Redhead, and Lesser Scaup; rare — Snow Goose, Pintail, Ring-necked Duck, Canvasback, American Wigeon, and Whistling Swan. A comparison of species observed minus the rare birds by year revealed that the species composition of wintering waterfowl has not changed in the six years. Furthermore, we believe that sampling intensity has influenced the reported occurrence of the rare birds. For example, a single American Wigeon would be easily overlooked among 5000 Mallards. Our surveys were confined to a two-day period each winter to minimize the effect of bird movement on population estimates. More lengthy viewing of the concentrations would have probably resulted in a more consistent discovery of rare birds.

In summary, no new species have been recorded since 1975, and further surveys would not likely result in observations of additional species that regularly winter in the Twin Cities. The surveys have delineated the relative species occurrence and wintering waterfowl populations, and thus, the 1979 survey was the last in this study.

Table 1. Species Composition of Wintering Waterfowl in the Twin Cities Metropolitan Area, Third Week of January, 1974-1979
Number and Percent of Total

Species ¹	1974	1975	1976	1977	1978	1979
Mallard	13,890(94.7)	17,862(95.6)	17,874(97.1)	21,095(95.2)	16,012(95.9)	19,943(96.8)
Canada Goose	556(3.8)	698(3.7)	133(0.7)	256(1.2)	347(2.1)	258(1.2)
Common Goldeneye	156(1.1)	53(0.3)	136(0.7)	486(2.2)	302(1.8)	135(0.6)
Black Duck	44(0.3)	16(0.1)	147(1.3)	294(1.3)	13(0.1)	256(1.2)
Common Merganser	0(0.0)	20(0.1)	90(0.5)	9(tr.)	10(tr.)	0(0.0)
Gadwall	4(tr.)	6(tr.)	14(0.1)	8(tr.)	1(tr.)	1(tr.)
Wood Duck	4(tr.)	3(tr.)	4(tr.)	3(tr.)	0(0.0)	2(tr.)
Pintail	0(0.0)	6(tr.)	2(tr.)	0(0.0)	0(0.0)	0(0.0)
Redhead	1(tr.)	3(tr.)	2(tr.)	1(tr.)	0(0.0)	0(0.0)
Lesser Scaup	1(tr.)	2(tr.)	0(0.0)	0(0.0)	0(0.0)	1(tr.)
Ring-necked Duck	0(0.0)	1(tr.)	1(tr.)	0(0.0)	0(0.0)	0(0.0)
Canvasback	1(tr.)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
American Wigeon	2(tr.)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Whistling Swan	0(0.0)	1(tr.)	0(0.0)	1(tr.)	0(0.0)	0(0.0)
Snow Goose	0(0.0)	1(tr.)	0(0.0)	0(0.0)	1(tr.)	0(0.0)
American Coot ²	4(tr.)	3(tr.)	4(tr.)	1(tr.)	2(tr.)	2(tr.)
Totals	14,633(100.0)	18,675(100.0)	18,407(100.0)	22,154(100.0)	16,688(100.0)	20,598(100.0)

¹Excluding captive birds

²Not a waterfowl species but included in the survey

EARLY SCISSOR-TAILED FLYCATCHER IN DULUTH — In early May I received a report from Koni Sundquist that Neil and Dorothy Waldo of Duluth had seen a Scissor-tailed Flycatcher at Park Point on April 29, 1979. On May 12 I happened to meet the Waldos while birding at Park Point and they gave me the following verbal description of the bird from memory: pearl gray head, reddish under wings and on sides of breast, and a forked tail estimated to be ten inches long; the bird was first spotted as it flew towards them across the bay from Superior and it landed in a tree about 50 feet from them for a couple minutes before it flew off again. Although the Waldos are not very experienced birders, although the above documentation is somewhat sketchy and comes after a two week delay, and although April 29 is an extremely early date for this species to occur (especially during this exceptionally cold spring), this report seems to be a valid one since the Scissor-tailed Flycatcher is such an obvious species (only the Forked-tailed Flycatcher is similar but lacks the gray head and reddish coloration), and since on May 6 there was another Scissor-tailed Flycatcher report across the harbor in Superior, Wis. (probably this same individual). **Kim Eckert, 9735 North Shore Dr., Duluth, MN 55804.**

HOODED WARBLER AT THEODORE WIRTH PARK — At 6:45 a.m. on May 10, 1979 while birding before work in Theodore Wirth Park in Golden Valley, I was walking along one of the footpaths on the southeast quadrant of Glenwood Ave. and Theodore Wirth Parkway. As I was passing through a brushy lowland area with scattered trees I spotted a small yellowish bird with a dark head along the path directly in front of me. It was on the ground and was never more than 2 or 3 feet above the ground the entire time I observed it. It was constantly on the move, hopping through the underbrush and fallen branches. It constantly flicked its tail. Its back and wings were olive green (no wing bars), as was its tail. As it flicked its tail it showed white spots on the outer edges. Its face was yellow and completely encircled with a black hood which was narrow on the sides of the head, dipping into a wider bib in front and going up to join the bill. It formed a cap on top of the head but didn't reach down to the bill, leaving the forehead yellow. The underparts were the same color yellow as the face and were unmarked. The bill and eye were black. I could detect no sound from the bird as I observed it. I viewed the bird at varying distances of approximately 5 to 15 yards with 7x35 binoculars for about 1 minute on a cloudy, misty morning. After having studied all of the standard field guides the previous day in preparation for my unsuccessful two hour search in Roberts Sanctuary in Mpls. looking for the Hooded Warblers which had been seen there I was adequately prepared to identify this bird as my first Hooded Warbler, a male. I returned the next day to the same spot at approximately the same time and saw another Hooded Warbler (same bird?) and observed it for about 30 seconds. Green and Janssen's "Minnesota Birds" lists the status of the Hooded Warbler as accidental, with only 5 spring records (the earliest being April 30) and 6 records overall. **Steven Schon, 4715 France Ave. N. #3, Brooklyn Center, MN 55429.**

WHITE PELICAN/SNOW GOOSE RELATIONSHIP — Saturday evening, May 12, 1979, about 6:30 P.M., my wife Marion and I noticed a large flock of White Pelicans approaching our farmsite, Ottertail County, from the south at several hundred feet elevation. As they drew closer we counted

61 individuals, then found a Snow Goose, white phase, flying with them. Of particular interest was the behavior of the goose; rather than the usual steady wingbeat, it alternately flapped and glided as he pelicans did, remaining in formation with them. After passing overhead, the Pelicans began their normal spiraling routine . . . with the Snow Goose joining in. The spiraling flight continued as the flock disappeared into the north. It was noted that the goose was far less graceful than the pelicans, and was obligated to flap its wings at many separate intervals to complete each 360 degree spiral. **Gary & Marion Otnes, Route 1, Box 181, Fergus Falls, MN 56537.**

RED-HEADED WOODPECKER BEHAVIOR — The Red-headed Woodpeckers in Mower Co. are almost totally migratory. Once in a great while access to a farmers corn will entice one to over winter. May 2, 1979 was our first sighting and within the next couple weeks they became quite abundant. May 12th, my wife and I were birding on a wooded floodplain along the Cedar River north of Austin. We witnessed Red-headed Woodpeckers evicting Starlings from a dead tree with nest holes. At the beginning there were two Red-headed Woodpeckers and two Starlings in the next tree. The first thing we noticed was a Red-head in contact with a Starling. They fluttered toward the ground together and when they reached two or three feet of the ground they separated. The Starling flew off and the Red-head returned to the nest tree. The other Starling made a pass at the Red-head and returned to a perch. This it did twice, but did not touch the woodpecker either time. The woodpecker then made contact with the Starling and they fluttered to the ground together where they were out of sight. The woodpecker, after about 30 seconds, flew back to the nest tree, but we did not see the Starling get up. I looked for the Starling but couldn't find it. The location had fallen branches and a pool of water. Shortly after the woodpecker flew to the broken top of the nest tree and drummed on it. **Ron and Rose Kneeskern, 1208 5th St. N.W., Austin, MN 55912.**

WORM-EATING WARBLER OBSERVATION — On May 5, 1979 I observed a Worm-eating Warbler in Theodore Wirth Park, Minneapolis. The time was 5:00 P.M. I saw the bird for five to eight minutes, from 25-35 feet, using 8x40 Leitz Binoculars under clear sky conditions. The following is a description of the bird: green warbler, lighter top of head with four bold dark brown stripes extending from nape to beak. A very distinct pattern over top of head. Otherwise, very plain green-warbler with paler color (pale green beige) not white over crown and belly. The plain bird and striking head stripes were easily visible, side, top and front views were seen. Heard call in same area the following evening. **Evelyn Stanley, 213 Janalyn Circle, Minneapolis, MN 55416.**

TOWNSEND'S SOLITAIRE IN AUSTIN — Thanks to Mr. Charles Wilson, Austin can now record a Townsend's Solitaire. During the week prior to Christmas, Chuck spotted a bird which he was aware was something quite unusual. He went to the library, did some research, and came up with the identification. He was then kind enough to make calls and share his information with birders in the community. Rose and I first observed it December 23rd and saw it on nine different occasions with the last being February 17th. These were all at a location where it was feeding on fruit from a bush which had barbs like a hawthorn. The fruit was less

than raisin size and swallowed whole. Once it was observed eating snow following feeding. On another occasion, while snowing, it made continual single note calls. These were fairly high pitched. The under side of the solitaire was lighter gray than the back and the tail was darker than the back. It had a dark bill with a small light spot just below the bill. It had a white eye ring, white edge on the sides of the tail and white edge on the ends of the primaries and secondaries. Once when it was perched at close range two buffy spots were visible on the wing. Once when it was in flight over its feeding bush there was a very distinct flash of buff which seemed to come from the under side of the wing. It blended beautifully with its background of oaks and snow and was very difficult to locate when sitting quietly. Generally it made its presence known through its movement. After taking your eyes from it you would sometimes have to struggle to refocus on it. This leads us to believe that most times it would probably be overlooked, even by keen observers who had no knowledge of its presence. **Ron & Rose Kneeskern, 1208 5th St. N.W., Austin, MN 55912.**

TOWNSEND'S SOLITAIRE NEAR LAC QUI PARLE STATE PARK — On March 21, 1979 I was birding the Minn. River Valley looking for early migrants. I left the entrance to Lac Qui Parle State Park about 9:15 A.M. and drove NW on L. Q. Parle Cty. Road 33. When I had gone just under two miles, I stopped to check a grove of junipers on the east side of the road. On the west side of the road opposite them, I noticed a couple of robins in a small wooded ravine. I decided to have a look at them before checking the junipers, since they were the first robins of the spring. Almost immediately I spotted a slimmer, small robin-like bird perched about 120 feet from me, slightly above eye level. I raised my 10x40 binoculars and had a nice Townsend's Solitaire in view. After having been very frustrated by a most uncooperative solitaire near Fergus Falls during the '76-'77 winter season, the bird now in view was quite obliging and afforded ample opportunities for viewing from all angles. The sky was cloudy but light conditions were good, temperature in the low 30's. American Robins chased the solitaire twice when it came too close to a large, fruit-bearing shrub (species undetermined) in which they were feeding. The solitaire's overall color was a soft, medium gray. The bill was slender and dark, similar to a bluebird's. The white eye ring, long slender tail, generally slim build and quick, erratic flight reminded me of a flycatcher. The white outer tail feathers were noticeable but — at least to me — not prominent. The most striking feature was the large amount of orange-rufous that showed very well in the upper wing whenever the bird flew. Observations were made from distances of 70-250 feet for fifteen minutes. The bird was seen on 3-24-79 by Bob Janssen and Ray Glassel, and again on 4-2-79 by Dick and Gloria Wachtler. **Steve Millard, Rt. 2, Fergus Falls, MN 56537.**

ICELAND GULL AT BLACK DOG — On November 18, 1978, while checking over a flock of some 2000 gulls at the Black Dog Dump near the Minnesota River and Freeway 35W, I noted a gull which I believe to have been an Iceland Gull. The bird in question was larger in size than the many Ring-billed Gulls at hand, but no larger than the few Herring Gulls observed near it. Its gray mantle, white head and white underparts led me to believe that this was an adult bird, but its outstanding feature was pure white wingtips. I watched the bird in flight and on the ground and the white of the wingtips were clearly visible in marked contrast to the gray

mantle, much as the white primaries so easily observed on Bonaparte's Gulls. I also noted a relatively slender neck, small head, light eyes and a moderate-sized yellow bill. Leg color was not observed. Tail was totally white. I watched the bird for 10 to 15 minutes at a distance of about 100 yards using both 7x42 binoculars and a 20-power scope. Viewing conditions were excellent. On the basis of size as well as the absence of a massive head and bill, I eliminated the possibility of a Glaucous Gull — although I've seen them in this area in early winter in previous years. Another possibility might be a Thayer's Gull, although most of this species I've seen do not have totally white wingtips nor light eyes. By elimination, while knowing the species to be rare in Minnesota, I judge the bird to have been an Iceland Gull. **Dick Ruhme, 9655 Upton Road So., Bloomington, MN 55431.**



Solitary Vireo — Drawing by Jacque Rosenau

BOOK REVIEWS

Wild Geese by M. A. Ogilvie, Buteo Books, P.O. Box 481, Vermillion, South Dakota 57069. Illustrated by Carol Ogilvie; 16 color plates, many drawings, maps and tables. Bibliography and Index, 350 pp 1978, \$25.00.

This compact yet comprehensive and attractive book has everything going for it. The impressive credentials of the author who has conducted nearly 20 years of research at the famed WildFowl Trust at Slimbridge, England provide an especially sound basis for its prime quality.

The book includes eight detailed chapters dealing with all fifteen species of the geese of the world, save for the near exclusion of the Hawaiian Goose or Ne-Ne. These deal with Classification, Identification, Ecology-Food and Feeding; Breeding-Censusing-Banding and Population Dynamics; and Distribution, Status, Migration, Exploitation and Conservation.

The text is not only thoroughly readable but downright enjoyable despite the fullness of detail. One may find, for example, under plumage descriptions that notations are included on any plumage aberrations ever recorded for each species, from hatching to adulthood, and even for colors of eye rings, bills, legs and feet!

The color plates are certainly adequate for this group which, with the near exception of the Red-breasted Goose lacks particularly vivid coloration. I do perceive a strong tendency for the grays to be too black or brown as is most evident on the plate showing various populations of Canada Geese. The plates, however, are admirable in that all species are figured in normal standing profiles and in flight profiles so that all aspects of the species are shown. For those species, especially the "gray" Eurasian ones, which show critical identifica-

tion features about the head and bill, a single plate of heads only is provided. The small but finely executed drawings that are sprinkled throughout the volume are placed most appropriately so as to enhance the text.

I have only two "faults" to find with this work, both of which will not likely concern many readers. First, the dismissal of the "Tule" Goose (a western race of the White-fronted Goose) as an invalid race whose breeding grounds are unknown, is absolutely erroneous. Second, Ogilvie's division of the Canada Goose into only four geographical groups is unrealistic, and I reject his treatment in favor of the concepts proffered by Harold Hanson. I strongly endorse this book to all potential readers.

Richard Oehlenschlanger
Environmental Coordinator
Camp Wilder
Marine on the St. Croix, MN 55047

Rare and Endangered Biota of Florida. Volume Two: Birds, edited by Herbert W. Kale II, Chairman, Special Committee on Birds; Florida Committee on Rare and Endangered Plants and Animals. Sponsored by the Florida Audubon Society and Florida Defenders of the Environment and published for the State of Florida Game and Fresh Water Commission by University Presses of Florida, Gainesville, Florida. 1978. 121pp., \$7.00.

As the pressures for land development continue to multiply, it becomes increasingly important for us to take note of those features of our national environment that cannot adapt to changes in land use patterns. Plants and animals that are less resilient to habitat alterations need to be identified and properly managed. The task begins by determining which species

require special consideration. Criteria may include such factors as restricted habitat requirements, limited geographic distribution or susceptibility to pesticide contamination. The State of Florida has done an admirable job in beginning such a task through the creation of the Florida Committee on Rare and Endangered Plants and Animals. To date, the work of this committee has already resulted in four important publications, each addressing the rare and endangered fauna among the four major vertebrate groups: mammals, birds, amphibians and reptiles, and fishes.

Chaired by Dr. Herbert Kale, the Special Committee on Birds has reviewed the population status of Florida's avifauna and has listed 74 species as belonging to one of the following categories: endangered, threatened, rare, species of special concern, status undetermined, recently exterminated or recently extinct. General criteria for assigning a species to a particular category were established. Species whose range extends outside of the state were assigned to categories on the basis of the status of their population in Florida, irregardless of their population elsewhere. In agreement with the Endangered Species Act of 1973, "species" were defined as referring to full taxonomic species, subspecies, and particular populations of a species or subspecies that do not have formal taxonomic status (for example, the white morph of the Great Blue Heron).

The thoroughness of the work on the part of the Florida Committee is impressive. As a prelude to the species accounts, a brief description of the state's major terrestrial and wetland habitats is presented. A table summarizing the occurrence of the 74 birds in each of the 14 major habitats is included, providing a handy reference and a guide to those habitats demanding the greatest attention by land managers and conservation interests. A brief historical account of the status of Florida's colonial

wader populations is also presented. The detrimental influence of the early plume hunters and, more recently, of altered hydroperiods and marshland destruction, are discussed.

Species accounts have been arranged taxonomically within each of the status categories, ranging from the category of greatest concern, the endangered species, to the category that is no longer of concern, species that have recently become extinct. Each account includes pertinent taxonomic information, distribution maps, and information on the species life history and habitat requirements. In addition, the basis for the status classification is fully substantiated and recommendations for future management are suggested. Selected references for readers interested in more detail are also provided.

Of particular interest is the fact that the Florida Committee has not only taken into account the status of breeding species but also wintering species and migrants. Biologists are becoming increasingly aware of the fact that winter and/or migration is often a period of greater stress to many species than the breeding season. In spite of efforts to protect important nesting areas, species populations may continue to decline because of the loss of important wintering areas. As a case in point, a breeding species in Minnesota, the Piping Plover, was designated as a "species of special concern." Several hundred wintering Piping Plovers are regularly found on Florida's outer beaches and large tidal sand flats. The limited amount of available habitat and the increasing demand for its recreational use by man merits special attention on the part of Florida biologists.

The only fault I found with the publication was the absence of any reference to the total number of birds that belong to Florida's avifauna. It is important to have a perspective on what percentage of the entire fauna merits special consideration. Another perhaps controversial point is the Com-

mittee's inclusion of several peripheral species. For example, the Louisiana Waterthrush and American Redstart, both peripheral nesters in northern Florida, are designated as "rare" species and management recommendations are outlined. Certainly such peripheral species should not be a priority in management decisions (and neither does the Florida publication advocate such), but they do deserve special recognition. Genetically such populations are of particular interest. Often their ability to colonize sub-optimum habitats on the periphery of their range reflects upon an element of genetic diversity that may be uncommon or even lacking in the species population near the center of its range.

Academically, the value of the Florida publication is beyond doubt. It provides the reader with a clear perspective on the status of the state's avifauna and the presence and availability of habitats that are particularly delicate ecosystems, harboring several species that are of special concern. The document is a valuable guide to neighboring states in the task of assessing the status of their avifauna, providing information about the pressures that a species is exposed to outside the state. It is also an indispensable tool to the entire process of environmental review. The task of assessing the impact of projected development projects to the terrestrial and aquatic ecosystems becomes more manageable with the aid of such documents.

Under the direction of The Nature Conservancy and the Minnesota Department of Natural Resources, a new program has been initiated in Minne-

sota that ultimately is designed to accomplish the same objective as the Florida Committee on Rare and Endangered Plants and Animals. The goal of the new program, the Minnesota Natural Heritage Program, is to create a continuing inventory process that identifies and locates significant examples of the diversity of Minnesota's plant and animal species, plant and aquatic community types, special geologic features and other outstanding examples of natural diversity. It creates a centralized data bank on the existence, numbers, condition and location of all significant elements in Minnesota. A centralized data base with information that is readily available to decision-makers involved in natural areas protection, environmental review processes and land-use planning. The publications by the Florida Committee on Rare and Endangered Plants and Animals are a valuable model in directing the efforts of this new program.

Lee Pfanmuller

Enjoying Indiana Birds, by Alfred (Bud) Starling. Ind. University Press, Bloomington, IN, 1978, 308 pp., \$17.50. Line Drawings by Donna L. McCarty.

Designed for non-birders, ENJOYING INDIANA BIRDS is arranged by monthly bird expectations. Of the estimated 200 possible species, 122 are the subject of personal essays about behavior, habitat and physical description. Birders will not like the inaccuracies in the drawings nor the author's habit of equating good with diet preference.

Marlyn Mauritz

(Don't miss reading the above well-written and informative review by Lee Pfanmuller)

PURPOSE OF THE MOU

The Minnesota Ornithologists Union is an organization of both professionals and amateurs interested in birds. We foster the study of birds, we aim to create and increase public interest in birds and promote the preservation of birdlife and its natural habitat.

We carry out these aims through the publishing of a magazine, **The Loon**; sponsoring and encouraging the preservation of natural areas; conducting field trips; and holding seminars where research reports, unusual observations and conservation discussions are presented. We are supported by dues from individual members and affiliated clubs and by special gifts. The MOU officers wish to point out to those interested in bird conservation that any or all phases of the MOU program could be expanded significantly with gifts, memorials or bequests willed to the organization.



SUGGESTIONS TO AUTHORS

The editors of **The Loon** invite you to submit articles, shorter "Notes of Interest" and black/white photos. Photos should be preferably 5x7 in size. Manuscripts should be typewritten, double-spaced and on one side of the sheet with generous margins. Notes of interest should be generally less than two typewritten pages double-spaced. If reprints are desired the author should

so specify indicating number required. A price quotation on reprints will be sent upon receipt of information.

Club information and announcements of general interest should be sent to the Newsletter editor. See inside front cover. Bird-sighting reports for "The Season" should be sent promptly at the end of February, May, July and November to Janet Green. See inside front cover.

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The LOON

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MEMBERSHIPS AND SUBSCRIPTIONS: Paul Egeland, 12 East 67th Street, Minneapolis, Minnesota 55423. To join the MOU and receive both MOU publications, send \$6.00 for a regular yearly subscription. Or other classes of membership that you may choose are: Family \$7.50 yearly; Contributing \$10 yearly; Sustaining \$25 yearly; Life \$100. Canadian and Foreign Subscriptions: \$10 yearly. Also available: back issues of **The Loon** (\$1.50 each ppd.) and MOU checklists of Minnesota birds (minimum lots of 20 for \$1.50 postage paid). Gifts, bequests, and contributions to the MOU Endowment Fund should also be sent to the treasurer.

EDITOR OF THE LOON: Robert B. Janssen, 10521 S. Cedar Lake Rd., Minnetonka, MN 55343 (phone 612-546-4220). The editor invites articles, short notes, and black/white illustrations about birds and nature. See back cover for details.

"**The Season**" section of **The Loon** publishes reports of bird sightings throughout Minnesota. We particularly invite reports from parts of the state that have been neglected or covered lightly in past reports. To become a contributor to "The Season," request the report forms from the **EDITOR OF "THE SEASON,"** Kim Eckert, 9735 North Shore Drive, Duluth, Minnesota 55804. (phone 218-525-6930).

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WAS IT A GLAUCOUS OR ICELAND GULL?

Robert B. Janssen

Gulls are a challenge to birders when it comes to identification. Separation of Glaucous and Iceland Gulls is especially difficult. An observation last winter at Black Dog points up this difficulty. However, there are ways to separate the two species.

On December 12, 1978 Dick Ruhme and I were observing gulls at the landfill near Black Dog Lake, Dakota County. There were three, "white-winged" gulls present among the Herring Gulls feeding in the dump. Two of the birds were quite obvious Glaucous Gulls, one of the birds was in second winter plumage, the body, head, wings and tail were all white. The eye was yellow, bill was flesh colored at the base with a black tip. This bird was obviously larger, more robust, thicker necked, larger headed and the bird appeared more massive than the nearby Herring Gulls. It was quite easy to see the size differential between the Glaucous Gull and Herring Gulls as the birds moved about in close proximity. The second bird, another Glaucous Gull, was the same size as the bird described above. The eye was dark on this bird and the all white plumage had a few flecks of brown on the lower sides. Probably a second winter bird still retaining some buffy feathers. The third bird was the most interesting of the group. This bird was, as best we could observe, almost identical in size to a Herring Gull, by direct comparison, when seen standing next to a Herring Gull. The plumage was white, including the tail, with an overall mottling from buffy feather edgings throughout the body. The wings and tail were white. The bill was Herring Gull size (direct comparison again), flesh colored at base with a black tip. The eye was dark. The neck was not thick

nor was the head as large as the two Glaucous Gulls. By every appearance this third bird was a probably first winter Iceland Gull except for the bill. The Robbins Field Guide and many other references state the first winter Iceland should have an all dark bill. This is presumably the main differentiating factor (along with size) between Glaucous and Iceland Gulls.

On December 17 I saw what I presumed to be the same bird as #3 above. The bird was standing on the ice of Black Dog Lake and I noted the wings extended beyond the tail (another possible mark of the Iceland Gull). A number of other people observed this bird, including students in Dr. Dwain Warner's ornithology class and Dr. Warner himself. Based on body size, bill size and shape of body and the wings extending beyond the end of the tail, Dr. Warner felt the bird was an Iceland Gull. Dr. Warner based his identification on information contained in "Evaluation of Some Arctic Gulls (Larus)" by Neal G. Smith, an A.O.U. monograph. I do not have space to discuss this monograph in detail, but generally, the study includes descriptions of Herring, Glaucous, Iceland (Kumlin's race) and Thayer's Gulls from Baffin Islands. Wing, tarsus and bill measurement studies show no overlap between Glaucous and Iceland Gulls, the Iceland being **much the smaller** in all these categories. Also, these studies from this area show the Iceland overlapping in **size** with the Herring Gull, **generally**

being smaller in this category than the Herring Gull.

The possibility exists that this bird might have been a Thayer's Gull, however, P. A. Buckley of the U.S. Department of Interior, National Park Service, and a recognized expert on gulls states "the operative character which seems to sort *thayeri* (Thayer's Gull) from the *glaucoides* (Iceland Gull) is whether there is a more or less solid tail band as opposed to barring. Even the lightest *thayeri* will show this character. All of this presupposes (possibly erroneously) no hybridization between *thayeri* and *glaucoides*." (Personal correspondence.)

Janet Green has done extensive field studies for a number of years on Lake Superior gulls and has noted the presence of what she calls "small" Glaucous Gulls similar in description to the third Black Dog bird described above. (See also Kay, *British Birds* V.XL P.371, "small female Glaucous and large male Iceland Gulls come very near to each other in (size)."

In a paper published in *British Birds* 68:24-37 "Identification and ageing of Glaucous and Iceland Gulls" by R. A. Hume, many interesting points are made on separating Glaucous and Iceland Gulls. One point he emphasizes is that great care must be taken in separating the two species. He states "Iceland is about the size of Herring and usually slightly smaller." It is an accepted fact that male gulls are on the average larger than females thus Hume goes on "although male Glaucous are larger and longer billed than any Herring Gulls, female Glaucous may be smaller than male Herring except in bill size." Thus one can assume that a light winged gull which is smaller than a nearby Herring need not necessarily be an Iceland Gull.

Hume feels that one of the main factors in differentiating a Glaucous from an Iceland is the shape of the head, small and rounded in an Iceland and a larger more angular head in the Glaucous.

An interesting illustration accompanies the Hume paper. This illustrates the heads of Glaucous and Iceland Gulls in First, Second, Third and Fourth winter plumages. Summarizing the First winter comparison, the Glaucous has a smoothly curved though **flatter**, longer and slightly lower crown profile. The nape is relatively higher than the Iceland and is not necessarily angled.

The illustration of the Iceland First winter head shows a more domed appearance with a rounded nape.

Now to the interesting part of the illustration, that of the bill. Nowhere does Hume show the Iceland in any plumage having an all dark bill. The first winter Glaucous has a "dipped in ink" appearance to the distal 1/3 of the bill whereas the Iceland has almost 1/2 of the distal end dark but with no sharp culoff. Either the Robbins Field Guide is wrong or they have omitted the fact that Iceland Gulls come with a black tipped (mottled) bill in first winter plumage.

Hume goes on to indicate that another most important factor in separating Glaucous from Iceland is bill length relative to head length. The Iceland bill averages less than 1/2 the length of the head and rarely if ever reaches half the head length. That of the Glaucous is rarely as small as half the head length and averages rather more. Also, while the Iceland bill is not necessarily slender, the tip is more pointed and less hooked than the bill of the Glaucous which has a markedly downcurved culmen (upper mandible).

In summary one can draw from the above that the Iceland Gull has a more domed, rounder head and a more centrally placed eye (because of smaller head), a shorter less robust bill than the Glaucous, giving it (Iceland) a more gentle appearance than the typical strong, robust Glaucous Gull.

One more point needs discussion and that concerns wing length. This is a most confusing subject but once again summarizing Hume, the Iceland

generally shows the greatest projection of wings beyond the tail. However, Glaucous also show some projection at different plumage stages. The only time a Glaucous does not show wings extending beyond the tail, according to Hume, is in adult plumaged birds.

All of this leaves the birder, especially me, very confused as to how to identify white-winged gulls (Glaucous, Iceland, Thayer's). It would seem the Black Dog bird was not a Thayer's Gull, based on the Buckley statement given above that Thayer's has a "more or less solid tail band." The Black Dog bird did not have any semblance of a tail band (confirmed with Dick Ruhme). Size of the Black Dog bird based on our sight observation, however, if compared with the statistics contained in the Smith study, would place the bird in question, as a very large Iceland Gull. This based on the fact that we said the bird was almost identical in size to the Herring Gulls present. It must be remembered that the measurements of the Baffin Island birds indicated that Iceland Gulls were generally smaller than Herring Gulls! One would ask the question, are there other populations of Glaucous Gulls in the Arctic that average smaller than those studied in the Baffin Island birds?

And also, are there populations of Iceland Gulls in the same general area that measure larger than those of the Baffin Islands?

Based on the Hume paper, our bird

is possibly an Iceland Gull based on body size, bill size and shape plus the wings extending beyond the tail. However, none of these are diagnostic and our bird could have been a "small" Glaucous Gull. It is quite obvious that we should have looked more closely at the head shape and bill shape, which are the definite distinguishing features between Glaucous and Iceland Gulls according to Hume. Also, even though Hume does not stress it other than in his illustration, we should have noted a more detailed description of the bill tip coloration. Did it have a dipped in ink appearance (Glaucous) or a more extensive mottled appearance (Iceland). On top of all this, it must be remembered that Hume was studying birds from the British Isles. One can thus ask the question — are there differences between European and North American races of these two species which could add confusion in field identification?

Also, another question needs to be answered, at what plumage stage does the all black bill of an Iceland Gull occur? This is referred to in American Field Guides as occurring in the first winter plumage but is not mentioned as far as I can see in the British literature referred to above.

This whole subject is most interesting to birders and should point out the need for careful written descriptions when these species are observed.
10521 S. Cedar Lake Rd., Minnetonka, Mn. 55343.



1978 MINNESOTA CHRISTMAS BIRD COUNTS

Kim Eckert

Thirty-four counts, one more than last year, were conducted and sent in to us (there were also three other CBCs not heard from that were sent to **American Birds**: Afton, Itasca S. P. and Marshall). Although winter 1978-79 will long be remembered as very cold and relatively birdless, these CBCs fortunately do not provide evidence of that. Most counts were taken in quite reasonable weather during the first two permissible weekends; those not run until Dec. 30 - Jan. 1 found temperatures colder as evidenced by Mt. Lake - Windom's high of -4° . Snow cover was generally ample but no count had to contend with any storms on count days. A composite total of 106 species was recorded, about average perhaps, but surprisingly good considering the paucity of birds generally noted that winter. Many individual CBCs also had higher than expected counts. Excelsior led them all with their best-ever 52 species, St. Paul N. E. was second with 50, and Fergus Falls was a surprising third with their best-ever 49.

Several interesting species were naturally recorded to produce these healthy totals: the four White Pelicans at Albert Lea were not only a first for any Minnesota CBC but somehow also overwintered, an imm. Golden Eagle at Crosby was quite far north, Austin managed a Merlin and a well-documented Chipping Sparrow during its count week but missed both on its count day, Rochester recorded Gray Partridge for the first time ever (yet another example of this species' amazing increase in the state), a Glaucous Gull wandered west to Big Stone N.W.R., St. Paul N. E.'s best rarity

was an unexpected Virginia Rail, surprising at Minneapolis were a Great Gray Owl (count week) and a Mockingbird, and for the second time in three years Cottonwood recorded Yellow-headed Blackbird. But the most interesting aspect of this year's CBCs was the low numbers of winter finches seen, especially Pine Grosbeaks (recorded on only six counts with 13 the highest number seen), redpolls (only 15 counts reporting, 34 the highest count) and crossbills (no White-winged at all and only one Red). This disappointment, however, was partly compensated by the unprecedented numbers of American Goldfinch reported.

Unfortunately there were still a few doubtful species reported. Some rarities with sketchy documentation were grudgingly allowed to stand as reported, but others had to be deleted: a long-crippled Whistling Swan (a recently injured bird like that Brewer's Blackbird at Hibbing is OK, but a crippled swan permanently present for eight years at the same spot hardly seems countable), Broad-winged Hawks on three counts with little or no description, an out-of-range Spruce Grouse, Turkeys on no less than four counts (as mentioned in this report last year, this species is established as wild and countable only at Whitewater W.M.A. and in Houston County), and a sketchily described flock of six Lincoln's Sparrows.

One final clarification. Please note that **American Birds** defines the Count Week for a CBC as the period extending three days before and three days after a count day. Species seen in your count circle on any of those six days

but not on your actual count day are to be mentioned in the appropriate place. Some compilers still use the entire Count Period as the time span for eligible species, but this is no longer in effect.

Albert Lea

32 species, 1502 individuals, Rose Foss compiler, Dec. 31; noteworthy — 4 White Pelicans, Red-headed Woodpecker, Brown-headed Cowbird.

Austin

39 species, 3290 individuals, Terry Dorsey compiler, Dec. 17; noteworthy — American Wigeon, Wood Duck, Merlin (count week), Short-eared Owl, Chipping Sparrow (count week).

Bemidji

26 species, 1769 individuals, Jim Mattsson compiler, Dec. 16; noteworthy — Sharp-tailed Grouse, Black-billed Magpie, Golden-crowned Kinglet, Rusty Blackbird (count week).

Big Stone N.W.R., Minn. portion

31 species, 1596 individuals, Gary Tischer compiler, Dec. 30; noteworthy — Gadwall Glaucous Gull. Varied Thrush, Cardinal (count week).

Bloomington

46 species, 12,886 individuals, Richard Hale compiler, Dec. 30; noteworthy — Common Loon, Wood Duck, American Coot, Glaucous Gull (count week), Swamp Sparrow.

Cedar Creek Bog, Anoka Co.

32 species, 1974 individuals, Boyd Lien compiler, Dec. 17; noteworthy — Great Blue Heron, Saw-whet Owl.

Cedar Lake, Scott Co.

20 species, 2077 individuals, Robert Lies compiler, Dec. 23; no noteworthy species reported.

Cottonwood

29 species, 1579 individuals, Paul Egeland compiler, Dec. 17; noteworthy — Yellow-headed Blackbird, Harris' Sparrow.

Crookston

20 species, 754 individuals, Thomas Feiro compiler, Dec. 16; noteworthy — Greater Prairie Chicken, Black-billed Magpie, 18 Dark-eyed Juncos.

Crosby

27 species, 1413 individuals, Jo Blanich compiler, Dec. 16; noteworthy — Golden Eagle, Belted Kingfisher (count week), Brown Thrasher, 129 American Goldfinch.

Duluth

39 species, 4656 individuals, Gerald Niemi compiler, Dec. 30; noteworthy — Green-winged Teal, Bufflehead, Sharp-shinned Hawk, 2197 Rock Doves (down about 5000 from past years), 10 Snowy Owls, Varied Thrush, White-throated and Song Sparrows.

Excelsior

52 species, 7293 individuals, Jack Mauritz compiler, Dec. 23; noteworthy — Whistling Swan, 26 Gadwall, Wood Duck, Ring-necked Duck, Canvasback, Redhead, Marsh Hawk, American Coot, Short-eared Owl, Varied Thrush.

Fargo - Moorhead, Minn. portion

26 species, 1245 individuals, Ron Nellermoe compiler, Dec. 16; noteworthy — Golden-crowned Kinglet, White-throated Sparrow.

Faribault

40 species, 1973 individuals, Orwin Rusted compiler, Dec. 16; noteworthy — Great Blue Heron, Long-eared Owl.

Fergus Falls

49 species, 3968 individuals, Paul Anderson compiler, Dec. 16; noteworthy — Pied-billed Grebe, Whistling Swan, Great Blue Heron, American Wigeon, Wood Duck, Greater Prairie Chicken, American Coot, Saw-whet Owl, Gray Jay, meadowlark sp., Red Crossbill.

Grand Forks - East Grand Forks, Minn. portion

14 species, 1468 individuals, Frank Kelley compiler, Dec. 17; noteworthy — Rusty Blackbird, 42 Dark-eyed Juncos, White-throated Sparrow.

Grand Marais

26 species, 1176 individuals, Dale Peterson compiler, Dec. 16; noteworthy — American Robin, 10 Common Grackles.

Hastings - Etter

26 species, 1025 individuals, Joanne Dempsey compiler, Dec. 17; no noteworthy species reported.

Hibbing

22 species, 849 individuals, Selena McCracken compiler, Dec. 30; noteworthy — Great Gray Owl (count week), Brown Creeper, Brewer's Blackbird.

La Crosse - La Crescent, Minn. portion

36 species, 1943 individuals, Jerome Rosso compiler, Dec. 16; noteworthy — Gadwall, Common Snipe, Red-headed Woodpecker, Brewer's Blackbird.

Minneapolis

42 species, 8019 individuals, Oscar Johnson compiler, Dec. 16; noteworthy — Great Blue Heron, Wood Duck, Great Gray Owl (count week), Mockingbird.

Mountain Lake - Windom

30 species, 3615 individuals, Ellis Gerber compiler, Jan 1, 1979; noteworthy — 1908 Horned Larks, 2080 Snow Buntings.

Owatonna

34 species, 3615 individuals, Darryl Hill compiler, Dec. 30; no noteworthy species reported.

Rochester

41 species, 30,533 individuals, Vince Herring compiler, Dec. 16; noteworthy — 22,000 Canada Geese, Gray Partridge, Brown Thrasher (count week), 1258 American Goldfinch, Field Sparrow.

St. Paul

29 species, 5719 individuals, Joseph McDonald compiler, Dec. 16; no noteworthy species reported.

St. Paul Northeast

50 species, 8919 individuals, Persis Fitzpatrick compiler, Dec. 30; noteworthy — Wood Duck, Virginia Rail, Common Snipe, Long-eared Owl, Brown-headed Cowbird, Brewer's Blackbird, 559 American Goldfinch, Fox Sparrow.

Sherburne N.W.R.

22 species, 757 individuals, Sharon Volker compiler, Dec. 16; noteworthy — Wood Duck.

Voyageurs National Park

6 species, 18 individuals, Mark Johnson compiler, Dec. 17; no noteworthy species reported.

Wabasha

38 species, 8699 individuals, Don Mahle compiler, Dec. 27; noteworthy — 4505 Mallards, 500 Black Ducks, Red-shouldered Hawk, 3 Golden Eagles.

Walker

18 species, 323 individuals, Harold Hanson compiler, Dec. 16; noteworthy — Black-billed Magpie, American Goldfinch, Dark-eyed Junco.

Warren

19 species, 741 individuals, Gladwin Lynne compiler, Dec. 16; noteworthy — Sharp-tailed Grouse, Black-billed Magpie, Dark-eyed Junco.

Wild River, Chisago Co.

36 species, 2232 individuals, Tom Anderson compiler, Dec. 16; no noteworthy species reported.

Willmar

31 species, 804 individuals, Ben Thoma compiler, Dec. 16; noteworthy — Ring-necked Duck.

Winona, Minn. portion

39 species, 3173 individuals, Don Mahle compiler, Dec. 16; noteworthy — Great Blue Heron, Whistling Swan, Pintail, Green-winged Teal, Wood Duck, Red-shouldered Hawk, American Coot, Red-headed Woodpecker, Yellow-bellied Sapsucker.

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SOCIAL ORGANIZATION IN WINTER FLOCKS OF BLACK-CAPPED CHICKADEES

Gary Ritchison

Flocking is a widespread phenomenon among birds that winter in temperate regions. Such behavior affords many benefits; for instance, it may aid in the location and efficient exploitation of food and assist in the detection of predators. However, flocking also may impose costs, not the least of which is the promotion of intraspecific competition for essential resources. The cost of such competition may be reduced by social systems, such as social dominance hierarchies, that function to order individual priorities at resources and to regulate the frequency, form, and intensity of aggressive behavior.

Two major categories of such dominance hierarchies within bird flocks have been recognized. Schjelderup-Ebbe (1922) recognized individuals within flocks, utilizing marked chickens and discovered they were organized into a "peck-right" unilateral despotism, in which the top bird never gets defeated, the second bird can be dominated only by the top bird, and so on. The other type of hierarchy, first described by Masare and Allee (1934), is often called "peck-dominance"; here the top bird is the one that wins the greatest proportion of encounters, but the outcome of any one encounter is not predictable.

The present study sought to explore both intra- and interflock social relationships in free-living Black-capped Chickadees (*Parus atricapillus*).

Study Area and Methods

Social relationships in flocks of Black-capped Chickadees were studied from 1 October 1972 to 1 February

1973 on an area one mile northwest of Elysian, Le Sueur County, Minnesota. The study area was covered with woodland, roughly 50% deciduous and 50% coniferous. The most common deciduous species were American elm and silver maple, the most common coniferous species were black hills spruce, colorado blue spruce, and white pine.

Feeding stations were set up in early October to attract chickadees for trapping and behavioral observations. Birds were provided with a U.S. Fish and Wildlife Service band along with various colored-plastic band combinations. The plumage of most individuals was also painted with felt pens to aid in recognition. The ages of the chickadees were determined by incision of the scalp and examination of the roof of the skull in the manner devised by Miller (1946). The sex of some individuals was determined by wing length (Tanner, 1952) and/or by observations made during the following breeding season.

Observations of chickadees in the study area were made throughout the study period while data on dominance-subordination were gathered from 20 hours of observation between 18 December 1972 and 3 January 1973. Criteria for dominance-subordination used in this study were the same as those used by Dixon (1965).

Results and Discussion

Trapping Data

Eighty-two chickadees were captured and color-marked during the study. Trapping data indicated a rela-

tively unstable population during October and November, with increasing stability in December. Many chickadees marked in October and November subsequently disappeared from the study area. The percentage of those chickadees marked that remained in the study area continued to increase throughout the study period. Odum (1942) reported similar results, i.e., the period between September and November was categorized by much wandering and generally high sociability. Smith (1976:97) reported that chickadee flocks were "apparently formed sometime around August." However, she also noted that "some unmarked birds moved through the study area in August and September each year; several chickadees banded then stayed for a few days and then disappeared." Weise and Meyer (1979) noted that most Black-capped Chickadees appeared at winter feeders in November and December, with very few new arrivals in January or February.

Flock Composition and Ranges

Five flocks of chickadees were observed in the study area (Figure 1), with the mean range covering 36 acres. This value corresponds closely with that calculated by other investigators. For example, Batts (1957) reported that winter ranges in the Black-capped Chickadee varied from 30 to 45 acres. Fitch (1958) estimated the average winter home range for 21 chickadees at 24.4 acres. Odum (1942) and Butts (1931) reported the average winter range of chickadee flocks to be 36.1 and 40 to 70 acres, respectively.

Trespassing by all flocks was common. Some individuals trespassed up to 0.4 miles from their home ranges, and occasionally moved from flock to flock. For example, chickadees 19 and 22 appeared to be members of Flock D when they were banded on 19 October, but were members of Flock C in late December. Smith (1976) also reported an individual that shift-

ed from flock to flock. Butts (1931), Odum (1942), and Hamerstrom (1942), respectively, pointed out that the size of winter flocks may vary from day to day and even from hour to hour. Robins and Raim (1970) examined winter ranges or chickadees on an individual basis and suggested that individual birds or mated pairs existed as entities in themselves, with flocks appearing only where the ranges of individual birds overlapped.

The sizes of two chickadee flocks were determined in the present study, with Flock B containing 12 birds and Flock C containing 13 birds. Butts (1931) reported that chickadee flock size varied from 2 to 50 or 60 individuals, with the average being approximately 12 birds. Odum (1942) observed that 7 and 12 birds were the average, under natural conditions and where feeding stations were located, respectively. Smith (1976) found that the average chickadee flock contained 6.6 individuals. Brewer (1961), on the other hand, reported that the mean flock size was only 3.3 birds. These differences in the estimation of flock size appear to be the result of differences in the definition of a flock.

Intraflock Dominance

Intraflock dominance relationships were examined in Flock C, and within that flock a peck-right dominance hierarchy was observed. Among the top three birds no reversals were noted; however, occasional reversals were observed among other flock members (Table 1).

Previous studies have also revealed the existence of linear peck-right dominance hierarchies within flocks of chickadees. For example, such hierarchies have been demonstrated for Black-capped Chickadees (Odum, 1942; Hartzler, 1970; Glase, 1973; Smith, 1976), Carolina Chickadees (Dixon, 1963), and Mountain Chickadees (Dixon, 1965; Minock, 1971). Investigators have generally found such peckright dominance hierarchies to be very stable, with few, if any, reversals (e.g.,

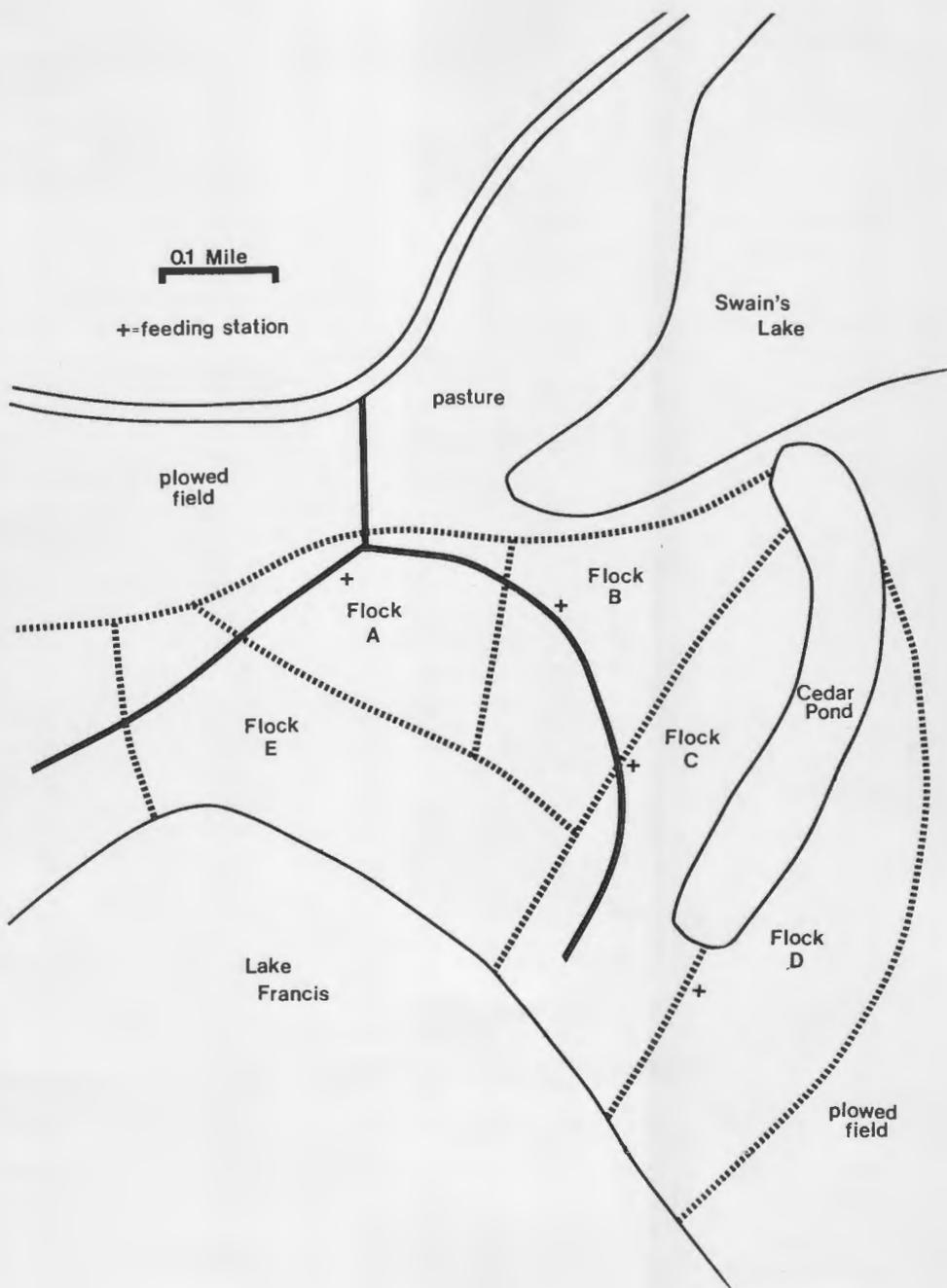


Figure 1. Disposition of chickadee winter flock ranges.

an individual appearing to be dominant over another individual in one encounter but in another encounter with the same individual appearing to be submissive). However, several such reversals were noted in Flock C (Table 1).

Many investigators have shown that whereas dominance relationships within newly assembled flocks of birds may be relatively unstable, such relationships frequently settle into more stable linear hierarchies (Murchison, 1935; Collias, 1944; Tordoff, 1954). Wilson (1975:280) described this process as follows: "Hierarchies are formed in the course of the initial encounters between animals by means of repeated threats and fighting. But after the issue has been settled, each individual gives way to its superiors with a minimum of hostile exchange." As discussed previously, flocks of chickadees in the present study were rather unstable, with frequent changes in composition. Such instability would certainly hinder the establishment of stable linear dominance hierarchies. The reversals noted in Flock C may have been, in part, the result of such instability. Some individuals were

relative newcomers (e.g., chickadee 72 was first observed on 14 December 1972) and relationships among flock members might not yet have reached the stage where "the issue has been settled."

Many investigators have noted that male chickadees are usually dominant over females (Dixon, 1963; Glase, 1973; Smith, 1976). And, with one important exception, this was also found to be the case in Flock C (Table 1). This exceptional female (chickadee 29) lost only three intraflock encounters and was ranked third in the dominance hierarchy. Observations made during the following breeding season revealed that this female was the mate of the alpha male (chickadee 36). This suggests that the position of a female within a dominance hierarchy may be influenced by the rank of its mate. Other investigators have also found this to be the case in *Parus*. For example, Smith (1976:103) stated that "with very few exceptions, the rank of females whose mates were known was correlated with the rank of their mates." Similar behavior has been reported in flocks of Carolina Chickadees (Dixon, 1963).

Table 1. Dominance-subordination relationships with Flock "C".
Winners read horizontally; losers vertically.

Age ¹	Sex ²	No.	36	81	29	46	61	19	42	22	73	72	75	74	Totals
A	M	36	—	1	2	0	1	4	1	1	7	0	3	2	22
I	M	81	0	—	1	1	0	2	1	0	3	0	1	2	11
A	F	29	0	0	—	1	0	9	1	1	11	3	1	3	30
I	M	46	0	0	0	—	2	0	2	3	1	0	2	1	11
A	U	61	0	0	0	0	—	0	0	0	2	3	1	0	6
A	F	19	0	0	0	1	0	—	2	2	6	4	2	3	20
A	F	42	0	0	0	0	2	0	—	0	1	1	1	2	7
I	F	22	0	0	0	0	0	0	0	—	1	2	2	1	6
A	U	73	0	0	0	0	0	1	2	0	—	2	2	2	9
I	M	72	0	0	0	1	0	1	0	0	0	—	2	1	5
A	F	75	0	0	0	1	0	0	0	1	0	0	—	3	5
A	F	74	0	0	0	0	0	0	1	0	0	0	1	—	2
Totals=			0	1	3	5	5	17	10	8	32	15	18	20	134

¹ A=adult, I=immature

² M=male, F=female, U=unknown

Interflock Dominance

All flocks in the study area appeared permissive to trespass by chickadees from other flocks. Similar observations have been made by Odum (1942) and Hartzler (1970).

Interflock relationships were observed between Flocks B and C (see Figure 1). Perhaps because the feeding station where these relationships were observed was located near the boundary of the two ranges, neither flock was found to be "dominant" over the other, i.e., the individuals in Flock C lost nearly as many encounters with individuals in Flock B as they won (Table 2). On one occasion the feeding station was moved approximately 100 feet into the range of Flock B and chickadee 29 from Flock C was subsequently observed waiting until chickadee 77 had finished feeding before going to the feeder. At the feeder's original location chickadee 29 had been dominant over chickadee 77. Hartzler (1970) and Smith (1976) presented data indicating that the outcome of intra-flock encounters is not site-related in the Black-capped Chickadee, i.e., birds formed linear peck-right dominance hierarchies that were identical at and away from the feeders. In contrast, the observation mentioned above suggests that the outcome of interflock

encounters in Blackcapped Chickadees may be site-related. Similar behavior has been reported in the Mountain Chickadee (Dixon, 1965; Minock, 1971), i.e., site-related dominance does not seem to be a factor operating at the intraflock level in Mountain Chickadees, but is important between flocks.

The dominance position of an individual within a flock appeared to be correlated with its success in interflock encounters. Table 2 reveals that chickadee 36 (alpha male of Flock C) won more interflock contests than any other bird in the flock, and, further, was the only bird with no losses.

Summary

The social behavior of individually marked Black-capped Chickadees was observed from 1 October 1972 to 1 February 1973 on an area one mile northwest of Elysian, Le Sueur County, Minnesota.

Eighty-two chickadees were captured and marked during the study period. Trapping data indicated a relatively unstable population during October and November, with increasing stability in December.

One of the flocks was observed for dominance-subordination relationships and within that flock a linear peck-right dominance hierarchy was noted.

Table 2. Outcome of encounters between members of Flock C and individuals in another flock (B).

No.	wins	losses	total encounters
36	14	0	14
81	5	1	6
29	11	8	19
46	3	1	4
61	0	2	2
19	8	6	14
42	4	4	8
22	2	6	8
73	6	7	13
72	3	4	7
75	1	8	9
74	1	8	9
Totals=	58	55	113

Previous studies have reported similar results.

In general, male chickadees were found to be dominant over females; however, observations suggested that the position of a female within the dominance hierarchy could be influenced by the rank of its mate.

Finally, although site-related dominance does not seem to be a factor operating at the intraflock level in Black-capped Chickadees, it appears to be important in interflock encounters.

Acknowledgements

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THE WINTER SEASON (Dec. 1, 1978 - Feb. 28, 1979)

Kim Eckert

As we all remember so well and would just as soon forget, Winter 1978-1979 was miserable. The theories of those of us trying to rationalize our tolerance of the Minnesota climate were shattered — we liked to think that if it were 30 below at least it was too cold to snow and when it did snow that temperatures in the balmy 20s and 30s were expected. Unfortunately, this past winter somehow heaped upon us both extreme cold and heavy snow. As an example of how severe things were, this writer had to endure a February in Duluth that was no less than 14 degrees below normal (a month only five or so degrees below the average is usually considered extreme enough) while being treated to a view of 100% frozen over Lake Superior (the first time on record this lake had so much ice)!

Knowledgeable birders, however, often claim that bad weather for people means good weather for birds. Yet another theory shattered. With only a very few exceptions, the number of birds around was obviously and drastically down. Sixty-four contributors and 37 Christmas Bird Counts managed a total of 131 species, almost the same as the last two winters. Although this sounds respectable enough and although many CBCs even recorded higher than normal species totals, the reality simply was that there just were not many species notable for either abundance or rarity to speak of. The good numbers and variety of water birds reported seems to be surprising on the surface, but a logical explanation would be that a shortage of open water produced by

severe cold served to concentrate birds into fewer and more observable locations. Obviously the most outstanding representatives of this group were the Eared Grebe and White Pelicans, both first Minnesota winter records, although many listers might prefer that Common Eider at Stoney Point. Diurnal raptors were glowingly represented by a lot of Golden Eagles, two Ospreys and many Sharp-shinned/Cooper's Hawks — at the time of this writing an eye-opening article on accipiter identification is appearing in the May issue of *American Birds* that no serious birder can afford to miss. The revival of pheasants and continued increase of Gray Partridge was again documented, a Virginia Rail chose an especially challenging winter to appear, and the lack of Herring Gulls on frozen Lake Superior may have been unprecedented. After last winter's spectacular owl influx, it might have been reasonable to expect an "echo invasion." But Great Gray and Boreal numbers were no more than average, in spite of a big influx farther east, with our sole consolation the excellent numbers of Snowy Owls at Duluth. Most impressive were the Red-bellied Woodpecker way up in Kittson County and the concentration of three-toed woodpeckers at Sea Gull L. in Cook County. As always, the Mockingbird reported was unpredictable, but the increase recently in Townsend's Solitaires seems more part of a logical pattern. On the other hand, part of an illogical pattern were the Yellow-headed Blackbirds again partial to the mundane Cottonwood CBC circle. The lack of winter finches, es-

pecially Pine Grosbeaks, redpolls and crossbills, was perhaps the most depressing part of the winter, but at least the tremendous numbers of American Goldfinch somewhat filled the vacancy left at feeding stations. Of final note, Minnesota's first overwintering Chipping Sparrow was photographed at Austin, providing documented proof that even the worst of winters can be survived by Chippies, people, and other animals that are ill-adapted to this Minnesota season.

Common Loon

A late migrant at Black Dog L. on the Bloomington CBC.

EARED GREBE

One at Fergus Falls, Otter Tail Co. from 1-20 on (GO); an amazing first winter record considering the severity of the season.

Pied-billed Grebe

Four reports: until 1-21 Otter Tail (SM); 2-10 Scott (OJ); from 2-11 on Hennepin (BJ); overwintered Martin (EB).

WHITE PELICAN

Another incredible first winter record in spite of the weather with four overwintering at Albert Lea, Freeborn Co. (m.ob.).

Double-crested Cormorant

A very late migrant at Big Stone N.W.R., Lac Qui Parle Co. on 12-10 (CMB).

Great Blue Heron

No less than 10 reports in December from Anoka, Dakota, Olmsted, Cottonwood, Otter Tail (until 12-21, SM), and the Cedar Creek Bog, Fari-bault, Minneapolis, Winona and Marshall CBCs; yet another species to defy the weather.

Whistling Swan

Overwintered at Fergus Falls, Otter Tail Co. (injured bird, GW); late migrants on the Excelsior and Winona CBCs; December and February migrants in Wabasha (JSD).

Canada Goose

Overwintered in 16 counties north to Otter Tail, Crow Wing and Cook (2 at Lutsen, m.ob.); December migrants on the Mt. Lake - Windom CBC and the Austin CBC week.

Snow Goose

Late migrant 12-17 Hennepin (ES).

Mallard

Reported from 31 counties north to Roseau (1-20, SKS), Polk (Crookston CBC) and Beltrami (Bemidji CBC); peak of 4505 on the Wabasha CBC.

Black Duck

Reported from 15 counties north to Crow Wing and Otter Tail (2-10, GO, GW); peak of 500 on the Wabasha CBC.

Gadwall

Reported on the La Crescent, Excelsior (26) and Big Stone CBCs; also seen 12-9 Lyon (HK).

Pintail

Migrants as late as 1-5 in Winona, Freeborn, Martin and Hennepin; also overwintered in Scott and Otter Tail (m.ob.).

Green-winged Teal

Reported on the Winona and Duluth CBCs.

American Wigeon

December migrants in Mower, Crow Wing and Otter Tail; also reported until 1-28 Scott (m.ob) and 2-18 Hennepin (AJ).

Wood Duck

December migrants in Winona, Mower, Hennepin, Dakota, Sherburne, Martin and Otter Tail; also until 1-11 Crow Wing (TS), until 1-24 Anoka (m.ob), and overwintered in Scott and Ramsey.

Redhead

Three reports: 12-16 Wabasha (BJ); until 1-14 Scott (RMA); Excelsior CBC.

Ring-necked Duck

Reported on the Excelsior and Will-

mar CBCs; also 12-19 Crow Wing (TS) and from 2-9 on Otter Tail (GW).

Canvasback

Reported on the Excelsior CBC; also overwintered at Fairmont, Martin Co. (EB).

Greater Scaup

Late migrant 12-16 Wabasha (BJ).

Lesser Scaup

Migrants as late as 1-1 in Houston, Dakota, Scott, Lac Qui Parle and Otter Tail; also 2-4 Wabasha (JSD).

Common Goldeneye

Reported from 18 counties.

Bufflehead

Reported on the Duluth CBC, 1-21 Cook (KG), and 2-25 Stearns (NH).

Oldsquaw

Only three reports from L. Superior; not surprising perhaps considering the lake was iced in almost completely much of the winter.

HARLEQUIN DUCK

Three reports: 1-20 Cook (imm., TS); 1-20 Two Harbors, Lake Co. (FL); 2-8 - 14 French R., St. Louis Co. (possibly same as Two Harbors bird, KE).

EIDER, SP.

An immature male 12-27 at Stoney Point, St. Louis Co. seems to best fit the description of the Common Eider (C. Bergman).

Hooded Merganser

Late migrant 12-10 Lac Qui Parle (CMB).

Common Merganser

Reported from 13 counties north to Otter Tail and Beltrami.

Turkey Vulture

One probably seen on the Rochester CBC (VH) (Needs details).

Goshawk

Reported from 11 counties south to Anoka and Washington.

Fall 1979

Sharp-shinned Hawk

Reported from 13 counties north to Duluth (CBC); more reports than usual.

Cooper's Hawk

Reported from Wabasha, Olmsted, Hennepin (4 reports), Hubbard (until 1-15, HF), and Cass (Walker CBC week); although this species is known to winter in the state, it is sometimes impossible to separate from the more likely Sharp-shinned (size and tail shape are not always reliable); immatures are also difficult to distinguish from the more likely imm. Goshawk (which does not always have a clear eye-line); the best policy in winter is not to report any Cooper's unless direct comparison with other accipiters is possible.

Red-tailed Hawk

Reported from 22 counties north to Cook (1-20, RMA) and Wilkin (12-26, Harlan's type, BJ).

Red-shouldered Hawk

Reported from Winona, Wabasha, Washington and Aitkin (1-16, TS).

Rough-legged Hawk

Reported from 20 counties; fewer reports than usual.

GOLDEN EAGLE

Probably the most reports ever; wintered as usual at Whitewater W.M.A., Winona Co.; also wintered in Houston (EMF); 12-16 Crow Wing (TS); 12-24 Anoka (KL); 2-11 Dakota (AJ); 1-21 Split Rock S. P., Lake Co., (FL) and 1-22 Gooseberry S. P., Lake Co. (possibly the same imm., M. Hoffman).

Bald Eagle

A total of 20 adults, 6 immatures and 9 unknown age reported from 19 counties north to Otter Tail, Crow Wing and Itasca.

Marsh Hawk

Reported 12-11 Anoka (BS), 12-18 Pope (HH), 1-27 Chisago (RH), and on the Excelsior CBC.

OSPREY

Two well documented reports: 12-15

Houston (EMF); 2-19 Red Wing, Goodhue Co. (fide C. Henderson).

GYRFALCON

Gray-phase individuals reported 1-24 Duluth (M. Hoffman), and along Hwy. 72 in n. Beltrami Co. a few times between 12-17 and 2-26 (D. Wells, D. Warner).

Merlin

Again appears to be rare but regular in winter: 12-13 to 1-2 Austin, Mower Co. (T. Dorsey); late Jan. in Duluth (2, D. Evans); 2-21 Lac Qui Parle (CMB).

American Kestrel

Reported from 28 counties north to Otter Tail.

Spruce Grouse

Two reports: 12-18 Babbitt, St. Louis Co. (TH); Itasca CBC (4).

Ruffed Grouse

Reported from 23 counties.

Greater Prairie Chicken

Reported from Polk, Wilkin and Otter Tail.

Sharp-tailed Grouse

Reported from Marshall, Beltrami, Aitkin and Carlton.

Ring-necked Pheasant

Reported from 42 counties; more reports than usual — still appears to be on the increase.

Gray Partridge

Obviously still increasing with reports from 29 counties including 163 on the Mt. Lake - Windom CBC, 80 along a 15 mi. drive in Murray Co. (AD), and the first report ever from the Rochester CBC.

Turkey

Again reported from Houston Co. and Whitewater W.M.A.

VIRGINIA RAIL

Reported on the St. Paul N. E. CBC; only about the fourth winter record.

American Coot

Migrants as late as 1-9 in Winona,

Dakota, Hennepin, Ramsey, Anoka and Freborn; also overwintered in Otter Tail (GO, GW).

Common Snipe

Reported on the La Crescent, Winona and St. Paul N. E. CBCs, and 12-4 Hennepin (CMB).

Glaucous Gull

Seven reports from L. Superior; also an imm. was reported on the Big Stone N.W.R. CBC and 2-3 were at Black Dog L., Dakota Co. until 12-21.

Herring Gull

Fewer than normal wintered on L. Superior (only 2 were seen at Grand Marais on the M. O. U. trip!); also seen 12-5 Olmsted (VH) and 2-19 Goodhue (WL).

Ring-billed Gull

Late migrants 12-1 and 12-2 in Dakota, Anoka and Otter Tail.

Rock Dove

Reported from 37 counties; after last winter's poisoning operation at Duluth, only 2197 were counted on the CBC.

Mourning Dove

Reported from 25 counties north to Otter Tail, Crow Wing, Aitkin and St. Louis.

Screech Owl

Reported from 10 counties; more reports than usual.

Great Horned Owl

Reported from 29 counties; there is some feeling that this the most common of all Minnesota owls may be down in numbers.

Snowy Owl

A very good winter with reports from 21 counties south to Murray, and Cottonwood; the Duluth-Superior harbor area had perhaps its best winter ever with at least 30 individuals present (D. Evans).

Hawk Owl

Four reports: 12-5 Duluth Twp., St. Louis Co. (M. Hoffman); late Feb. near

The Loon

Sax-Zim, St. Louis Co. (4, fide KE); 2-28 Hwy. 61, Lake Co. (LCF); overwintered from 12-31 on, Two Harbors, Lake Co. (possibly same individual as last year that was here).

Barred Owl

Reported from 17 counties.

Great Gray Owl

Nine reports from Aitkin (5 along Co. Rd. 18 in late Feb., WN, S. Loch), St. Louis (6 reports), Pine (late Feb., Nemadji St. For., M. Link), and **Hennepin** (12-19 - 12-27 Brooklyn Center, m.ob.); aside from the Hennepin Co. individual, a normal winter in spite of the massive influx in s.e. Canada and New England.

Long-eared Owl

Reported from the Faribault and St. Paul N.E. CBCs, 12-12 Aitkin (fide TS), and 12-12 and 2-11 Alden Twp., St. Louis Co. (DA).

Short-eared Owl

Reported on the Excelsior and Austin CBCs, 12-14 Beltrami (fide J. Mattsson), and 1-15, 16 Murray (AD).

Boreal Owl

Three reports: 2-4 and 2-22 Duluth (fide KE); 2-5 Itasca (found dead, fide C. Henderson); 2-25,26 Waskish, Beltrami Co. (heard, D. Warner).

Saw-whet Owl

Reported on the Cedar Creek Bog and Fergus Falls CBCs; another found dead 1231 Cass (JB).

Belted Kingfisher

Many more reports than usual, possibly concentrated and more visible because of the lack of open water; 14 December reports, January reports in Anoka and Fillmore, and overwintered in Houston, Hennepin, Lyon and Redwood.

Common Flicker

December migrants reported from 11 locations; overwintered in Martin, Murray, Cottonwood, Watonwan, Olmsted and Hennepin.

Pileated Woodpecker

Reported from 32 counties including Jackson (12-26 Kilen Woods S P., G. Hodnefield).

Red-bellied Woodpecker

Reported from 26 counties north to Otter Tail (12-26 and 1-7, SM) and **Kittson** (wintered, Lake Bronson S. P., L. Gross — undoubtedly the farthest north record ever for this species).

Red-headed Woodpecker

Numbers down drastically; reported only from the La Crescent, Winona and Albert Lea CBCs; apparently a bad winter for acorns.

Yellow-bellied Sapsucker

Reported without details on the Mt. Lake - Windom and Winona CBCs.

Hairy Woodpecker

Reported from 48 counties.

Downy Woodpecker

Reported from 51 counties.

Black-backed Three-toed Woodpecker

Six reports from Aitkin, St. Louis, Lake and Cook, including a concentration of at least 20 individuals in January in the Saganaga burn at Sea Gull L. at the end of the Gunflint Trail (C. Bergman).

Northern Three-toed Woodpecker

Five found in the Saganaga burn mentioned above (C. Bergman); this has been a very difficult species to find in recent years.

Horned Lark

December migrants reported from 12 counties; January reports (of wintering birds?) from 21 other counties north to Clay (1-23,24, LCF, SM), Aitkin and Roseau (1-7, SM); earliest February migrants south 2-2 Mower, 2-3 Cottonwood and 2-4 Olmsted and Wabasha, earliest north 2-5 Morrison, 2-25 Wilkin and Otter Tail.

Gray Jay

Reported from Roseau, Beltrami, Clearwater, Aitkin, Itasca, St. Louis, Lake, Cook and Otter Tail (Fergus Falls CBC).

Blue Jay

Reported from 47 counties, but thought to be down in numbers in s. Minnesota (also due to a poor acorn crop?).

Black-billed Magpie

Reported from Lake of the Woods, Marshall, Polk, Beltrami, Clearwater, Cass and Hermantown, St. Louis Co.

Common Raven

Reported from 16 northern counties.

Common Crow

Reported from 43 counties north to Polk, Clearwater, Beltrami, Itasca and Cook.

Black-capped Chickadee

Reported from 48 counties.

Boreal Chickadee

Seven reports from Beltrami, Clearwater, St. Louis, Lake and Cook.

Tufted Titmouse

Only two reports: wintered in Houston (EMF); 12-10 Marion, Olmsted Co. (JF).

White-breasted Nuthatch

Reported from 46 counties.

Red-breasted Nuthatch

Reported from 23 counties.

Brown Creeper

More reports than usual; migrants as late as 1-6 reported from 15 counties; also overwintered in 11 counties north to Clay (LCF).

Winter Wren

12-31 Houston (EMF); only report.

MOCKINGBIRD

Reported on the Minneapolis CBC; no other regular Minnesota species is more vague in its geographic and seasonal distribution than this one.

Brown Thrasher

Until 12-18 at Rochester, Olmsted Co. (JF) and overwintered at Crosby, Crow Wing Co. (JB).

American Robin

December migrants reported in 13 counties, wintering birds seen in Rice, Ramsey, Cottonwood, Hennepin and **Red Lake** (SKS), and February migrants seen in Otter Tail and Olmsted.

Varied Thrush

Six feeder reports from Duluth (2 wintered), Ortonville, Big Stone Co. (until 12-30), Hennepin (until 1-1), North Oaks, Ramsey Co. (until 12-30), and Rochester, Olmsted Co. (1-31 - 2-16).

TOWNSEND'S SOLITAIRE

12-23 to 2-17 Austin, Mower Co. (m.ob.); this species is appearing with increasing frequency the past few years.

Golden-crowned Kinglet

Perhaps coming back from its recently depressed numbers; 11 December reports north to Beltrami and Aitkin.

Bohemian Waxwing

Eleven reports from Clay, Otter Tail, Aitkin, Duluth, Cook (largest concentration of 300 on 12-9), Hennepin and **Redwood** (2-9-11, LJF).

Cedar Waxwing

December migrants reported on 8 CBCs; overwintered in Cottonwood, Lyon, Swift, Houston and Hennepin; late February migrants seen in Wabasha, Olmsted and Mower.

Northern Shrike

Reported from 32 counties but numbers seemed to be down.

Loggerhead Shrike

Possibly seen 12-21 Otter Tail and on the Bloomington CBC.

Starling

Reported from 33 counties.

House Sparrow

Reported from 35 counties.

Meadowlark, sp.

December migrants reported from 12 counties north to Clay and Crow Wing; one February migrant 2-28 Fillmore; apparently none overwintered.

YELLOW-HEADED BLACKBIRD

Again reported on the Cottonwood CBC, Lyon Co. (P. Egeland).

Red-winged Blackbird

Migrants reported into early January from 19 counties; wintered in Murray, Olmsted, Lyon, Hennepin, Aitkin (WN) and Duluth (DGW); late February migrants seen in Houston and Otter Tail.

Northern Oriole

One until 12-12 at a Winona feeder (G. Gordon).

Rusty Blackbird

Migrants as late as early January in 10 counties; wintered in Hennepin, Aitkin (until 2-1, WN) and St. Louis (1-21, TS); February migrants 2-28 Anoka.

Brewer's Blackbird

Late migrants seen on the La Crescent, Austin, St. Paul N. E. and Hibbing (injured) CBCs.

Common Grackle

Reported from 29 counties north to Polk (Crookston CBC), Crow Wing (Crosby CBC), Aitkin and Duluth (wintered), and Cook (Grand Marais CBC).

Brown-headed Cowbird

Reported on the Albert Lea, Winona and St. Paul N. E. CBCs, and from 2-2 on Lyon (HK).

Cardinal

Reported from 24 counties north to Big Stone and Aitkin (overwintered, (WN)).

Evening Grosbeak

Reported from 29 counties; fewer reports than in most winters.

Purple Finch

Reported from 32 counties north to Marshall, Polk, Crow Wing and Aitkin.

Pine Grosbeak

Way down in numbers with reports only from 13 counties south to Hennepin and Kandiyohi (no details); largest peak only 28 on the Itasca CBC.

Hoary Redpoll

Only three reports from Marshall, Clay and Cook.

Common Redpoll

Another winter finch scarcer than normal; reported from 26 counties with the largest concentration only 200 in St. Louis Co. 2-14 (TH).

Pine Siskin

Reported from 29 counties, which is about average, but once again actual numbers of individuals seemed low.

American Goldfinch

Perhaps the biggest winter ever for this species; reported from 33 counties north to Hubbard, Cass, Crow Wing (including 129 on the Crosby CBC) and Aitkin; largest concentrations of 559 on the St. Paul N. E. CBC and 1258 on the Rochester CBC; one of the few passerines common enough to almost overshadow the lack of other species.

Red Crossbill

Once again very scarce; reported only from Fergus Falls, Otter Tail Co. in December.

White-winged Crossbill

Only three reports: on the Itasca CBC; 1-1 Hennepin (VL); 2-17 St. Louis (DA).

Dark-eyed Junco

Reported from 42 counties north to Polk, Pennington, Hubbard, Cass, Clearwater, Crow Wing, Duluth and Cook; more north reports than usual.

Tree Sparrow

Reported from 31 counties north to Otter Tail (Fergus Falls CBC) and Crow Wing (Crosby CBC).

CHIPPING SPARROW

One overwintered at an Austin, Mower Co. feeder (M. Beatrice, photographed by T. Dorsey); only the third winter record and the first overwintering report; another possibly seen on the St. Paul N. E. CBC.

Field Sparrow

Late migrants 12-16 Houston (BJ) and on the Rochester CBC.

Harris' Sparrow

Late migrants 12-3 Lac Qui Parle (AE), until 12-26 Otter Tail (GW), and on the Cottonwood CBC; overwintered in Murray (AD) and Aitkin (WN).

White-throated Sparrow

Migrants as late as early January reported in 9 counties north to Polk (East Grand Forks CBC) and Duluth (until 1-13, KE); overwintered in Fillmore.

Fox Sparrow

Late migrants 12-1 Wabasha (DWM), 12-5 Houston (EMF), 12-9 Le Sueur (HC), and on the St. Paul N. E. CBC.

Swamp Sparrow

Reported on the Bloomington CBC; this species has been very scarce in recent winters.

Song Sparrow

More reports than usual; December migrants reported from 10 counties; seen in January in Martin (wintered), Fillmore (wintered), Hennepin (wintered), Duluth (until 1-5, KE) and Lake (until 1-20 Knife River, J. Eaton).

Lapland Longspur

December migrants reported from Freeborn, Wabasha, Big Stone, Wilkin; wintered in Murray, Lac Qui Parle and Otter Tail (SM); February migrants seen in Lyon, Fillmore, Carver, Olmsted.

Snow Bunting

Another big winter with reports from no less than 50 counties; peak of 2080 on the Mt. Lake - Windom CBC.

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CORRECTIONS AND ADDITIONS

The Loon, vol. 50, no. 4, The Spring Season — delete Eared Grebe 4-25 Hennepin and Oldsquaw 4-25 Hennepin; the Martin Co. Long-eared Owl and LeConte's Sparrow records should read Watonwan Co.

The Loon, vol. 51, no. 2, The Fall Season — delete Northern Shoveler 11-18 Hennepin and Bobolink 10-21 Anoka.
—9735 North Shore Dr., Duluth MN 55804

OBSERVATIONS ON A BOREAL CHICKADEE NEST

Miriam Axelrod

INTRODUCTION

Although a permanent resident in Minnesota, the Boreal Chickadee (*Parus hudsonicus*) is seen infrequently and its nest is rarely found. I had an unusual opportunity to observe a Minnesota nesting when Bruce Fall (1977) found a nest with young in Hubbard County at LaSalle Creek Bog, near the northeast corner of Itasca State Park, approximately four miles from the University of Minnesota's Forestry and Biological Station. I observed this nest for a total of 26 hours during a ten-day period from 27 June through 6 July, after which time the young were presumably destroyed by a predator. This report focuses on the feeding of nestlings and behavior of the parent birds.

METHODS

Bruce Fall mist-netted the adult chickadees and banded both with numbered U.S. Fish and Wildlife Service leg bands, and he also color-banded the male for convenient field identification. Since the birds were not disturbed by my presence I observed them successfully at a distance of six meters without the use of a blind. At

each observation I recorded weather conditions, counted the nestlings, and recorded the duration and number of trips to the nest by each adult, and the type of food brought to the young.

On all but two days observations were made at various times between 0600 hours and 1730 hours, and for continuous periods ranging from one half-hour to seven hours.

STATUS OF THE BOREAL CHICKADEE IN MINNESOTA

Roberts (1932) classified the Boreal Chickadee as "a rather uncommon permanent resident in the extreme northern part of Minnesota" and he reported only one nest, in St. Louis County in 1901. Adults with young have been observed regularly in and near Itasca State Park (Harrell, 1942; Swanson, 1943).

Hickey (1965) in **Early-summer bird-life of Itasca State Park** states that the Boreal Chickadee in recent years has been "restricted to the LaSalle Creek Bog in the northeast corner of the Park [Hubbard County], a pair being repeatedly seen in 1955 and 1956, and a nest found 12 feet up in a dead tree.

Green and Janssen (1975) report

positive nesting in Lake and St. Louis Counties, and inferred nesting in Aitkin, Itasca, and Clearwater Counties. The nesting reported here is the second positive record for Hubbard County.

HABITAT OF THE BOREAL CHICKADEE

The Boreal Chickadee is typically found in the northern coniferous forests of the North American continent. In Minnesota, this habitat is most extensive in St. Louis, Koochiching, Lake, and Cook Counties (Green and Janssen, 1975).

The LaSalle Creek Bog includes mature Black Spruce, Tamarack, and Balsam Fir, and also some areas that were logged as recently as the 1960's and have since grown back to hazel and alder thickets of about three meters in height. The ground cover is primarily sphagnum moss and low herbaceous vegetation including Labrador Tea and Bunchberry.

DESCRIPTION OF NEST AND NEST SITE

The Boreal Chickadee nest in LaSalle Creek Bog appears to be typical for the species according to habitats and sites described by Roberts (1932) and Bent (1946). The nest was at the bottom of a vertical cavity in a rotten stump 56 cm in height, and of 19 cm diameter. The entrance was at a height of 26 cm, and the depth of the hole was 17 cm, the nest itself being nine cm above the ground. The diameter of the entrance hole was four cm. The nest was a layer of unidentified gray mammal hair about two cm thick.

The nest stump was in an area of mature conifers about seven meters from the alder thickets. Although it was not concealed by low vegetation it was exposed to full sunlight for only two and one-half hours (11:30-14:00). The stump was six meters from a path frequented by researchers. The largest trees close by were two Black Spruces 12 to 13 meters in height, about 1.5 and 3.5 meters from the nest.

HISTORY OF THE NEST

On Day 1 (24 June) five newly hatched young were in the nest. On Day 11 (4 July) the nest still had five nestlings, but on Day 12 only two remained. I assumed that three had fledged. I searched for but failed to find the young; nor did I see the adults carry food to places other than the nest.

Only one nestling remained on Day 13. Since the adults carried food to the nest as they had at earlier stages of the nestling period, I became increasingly suspicious that the young had been taken by a predator. By Day 14 no nestlings remained but I noticed that a small amount of nest material was on the ground outside of the nest. The adults were calling but not carrying food in the immediate vicinity. According to McLaren (1975) the young leave the nest 17 days after hatching and remain within the territory for two weeks before dispersing. I can only conclude that the young were destroyed.

The predator may have been an Eastern Chipmunk or a Blue Jay. Both were observed in the area, and Blue Jays have been known to rob a nest of its eggs or nestlings one at a time on successive days (D. F. Parmelee, personal communication).

RESULTS

Parental Care

To quantify attentiveness and compare male and female parental effort I measured the duration and frequency of visits to the nest. Table One presents data on duration of nest visits, not including brooding time. The mean duration for all visits was 15.1 seconds \pm 10.33 sec. The large standard deviation indicates great variability in duration. The mean duration of visits for the male and for the female was 14.6 sec. and 16.8 sec., respectively, not a statistically significant difference.

TABLE ONE: DURATION OF NEST VISITS (NOT INCLUDING BROODING)

	Mean (sec.)	Range (sec.)	n=
Both Sexes*	15.1±10.33	4 - 93	128 nest visits
Male	14.6± 7.30	4 - 53	46 nest visits
Female	16.8±13.02	5 - 93	59 nest visits

*Includes observations of birds not always identified to sex.

The mean frequency of nest visits for both sexes was 3.1 ± 2.54 per half-hour (Table Two). Of 26 half-hour sampling periods in which the sex of the visiting bird was always known, the mean frequency was 1.2 visits per half-hour for the male and 1.9 visits per half-hour for the female. Of 81 visits, 39.51% were by the male, and 60.49% by the female, but the difference was not significant (χ^2 ; $P=.25$).

From the mean rate of 3.1 visits per half-hour, the rate of feedings per nestling per hour can be extrapolated to 1.2. Assuming that feeding continues for the approximately 15 hours of daylight, the number of feedings per nestling per day would be 18. Because the frequency of visits is highly variable, these extrapolations must be considered only very rough

estimates.

Table Three presents the percentage of all nest visits in which I observed fecal sac removal. The overall percentage was 26.0, with a wide range of from 4.2% to 50.0%.

The female and the male removed fecal sacs respectively on 34.50% and 65.50% of all removals during sampling periods in which sex of the parent was known. The difference was not significant (χ^2 ; $P=.25$).

I observed five periods of brooding during the first two days of observations. Brood periods ranged in length from 4 min. 27 sec. to 14 min. (mean = 8 min. 3 sec.). Only the female brooded.

I refer in following sections to four vocalizations, as follows:

TABLE TWO: NEST VISITS PER HALF-HOUR SAMPLING PERIOD

	Mean (visits/half-hour)	Range (visits/half-hour)	Total Sample Periods	Total Visits
Both Sexes ¹	3.1±2.54	0 - 8	49	153
Male	1.2	0 - 3	} 26 ²	32/81 (39.51%) ³
Female	1.9	0 - 6		49/81 (60.49%) ³

¹Includes birds not always identified to sex.

²26 half-hour samples in which sex of the visiting bird was known with certainty.

³The difference between male and female is not significant (χ^2 ; $P=.25$)

TABLE THREE: FECAL SAC REMOVAL

Date	June 27	29	30	July 2	3	6A	6B	Total
No. visits observed	17	24	4	56	20	11	13	147
No. fecal sac removals	4	1	2	18	6	4	1	38
% (removals/visits)	23.5	4.2	50.0	32.1	30.0	36.4	7.7	26.0

Call A: **Chicka-dee-dee-dee** or **Tsicka-dee-dee-dee**

This call has two to four "dee's" which drop in pitch, as **mi do do** (using the notes of the musical scale). The emphasis is on the first note "chicka" which may be either fully two notes (chick-a) or may be abbreviated to one (chick) or may be abbreviated still more to a lisped "tsip". This call is similar to that of the Black-capped Chickadee (*Parus atricapillus*).

Call B: **Chicka-day-day** or **Tsicka-day-day**

This is an atonal call with one to three "day's," the accent or emphasis on the "day's" rather than on the "chicka." It is the one most associated with the Boreal Chickadee, as distinct from the Black-capped Chickadee's calls.

Call C: High-pitched "see-see-see," with two to five "see's"

Call D: An ascending lisping note "tsip" or "tsip"

Calls A and B were given often by the female in situations of disturbance. Calls C and D were given often by the male when he arrived at the nest.

Behavior at the Nest

In the vicinity of the nest both sexes foraged in the spruce branches and occasionally in the alder thickets. They foraged at various heights, sometimes hopping along a branch and pecking at the bark, needles, or leaves, and other times hanging upside-down beneath a branch while flapping their wings for balance and pecking at the underside of leaves or branches.

The chickadees carried to the nest green caterpillars (about 20 mm long) in addition to brown, tan, and white objects thought to be pupae or larvae. Less frequently they carried moths and other small winged insects.

In approaching the nest with food, the birds consistently appeared first in the lower branches of a spruce southeast of the nest. The male usually flew directly to the nest cavity, uttering the C or D call. He occasionally made several very brief intermediate stops on branches and on top of the nest stump, but always entered the nest within a much shorter time of arrival than did the female. The female often remained relatively quiet for up to 20 minutes before entering the nest with food, perching first on one branch for several minutes, then moving to another for several minutes, and so on, until she was about one meter from the nest. Both birds flew immediately out of sight when leaving the nest.

On the rare occasions when the male and female arrived at or near the nest at the same time, one or both birds vibrated their wings rapidly. This wing-quivering, usually initiated by the first bird upon the arrival of the second, resembled the "begging" displays of other passerines, without the accompanying postural changes. Viewed anteriorly the wings appeared to curve downward, and the remiges appeared to spread and fold rapidly in the horizontal plane. The male wing-quivered more often than did the female.

Interactions with Other Species

I observed several interactions be-

tween the chickadees and other animals in the vicinity of the nest.

On 29 June, a female Northern Parula (*Parula americana*) foraged five meters from the chickadee nest. The female chickadee, who had been giving the A call, flew to the spruce branches near the Northern Parula and gave the B call. The Northern Parula flew out of sight. On 6 July the female chickadee flew directly at a female Northern Parula who was foraging in low branches near the nest, and again the warbler flew out of sight. At other times, the female warbler perched and preened in branches near the nest without interference from the chickadees. On the same day the female chickadee flew at and chased a Nashville Warbler (*Vermivora ruficapilla*) from the vicinity of the nest.

On 2 July the female chickadee dived at and chased away an Eastern Chipmunk foraging in the branches of a spruce sapling one meter from the nest. The chickadee returned and sat near the nest with rectrices spread. Nine minutes later the chipmunk returned, only to be driven off again. The chickadee returned and again sat with rectrices spread and did not feed the nestlings for 35 minutes.

When disturbed both sexes, especially the female, hopped from branch to branch in an agitated manner and did not enter the nest even when carrying food. They swallowed the food when badly agitated.

DISCUSSION

Parental Care

Though the sample size prevents generalization, and the differences between male and female behavior were not statistically significant, my impression is that the female Boreal Chickadee made a greater time and energy expenditure than the male during the period of nestling care. She made more and longer trips to the nest than did the male. She actively defended the nest and brooded the young — behaviors I never ob-

served in the male. She also vocalized more when the nest was disturbed. I never observed the male to defend territory against any species (no other Boreal Chickadees were observed in the area), or to "sing" in a manner that could be considered equivalent to the territorial song of other passerines.

The female's greater role in nest defense may explain why the burden seemed to be on the male to "appease" the female when he arrived at the nest. The male wing-quivered more often than did the female, and gave characteristic advertising calls upon arrival. Perhaps the wing-quivering display functions in pair-bond maintenance and has partly an "appeasement" function, insuring that the male will be recognized and not treated as an intruder.

SUMMARY

The nest of a pair of Boreal Chickadees was studied for a 10-day period from 27 June to 6 July, 1977. The nest was located in an area providing only patchy suitable habitat in comparison to the northeastern areas of Minnesota. The habitat was characteristic: northern coniferous bog-forest composed of Tamarack, Black Spruce, Balsam Fir, sphagnum moss, and herbaceous bog plants. The nest was characteristic: a cavity in a rotten stump, lined with mammal hair. The nest contained five young that were apparently taken by a predator about two weeks after hatching.

I identified four distinct adult vocalizations, two used primarily by the female when agitated and two used primarily by the male upon arriving at the nest.

A wing-quivering display occurred when both birds arrived at the nest simultaneously. The male wing-quivered more often than the female and the display appeared to have an "appeasement" function.

The female made more trips to the nest with food than did the male, and her trips were of longer duration, but the small sample size prevents gen-

eralization. The female vocalized more than the male, and only the female brooded the young and defended the nest site.

ACKNOWLEDGEMENTS

I am grateful to Bruce Fall for bringing the nest to my attention and helping to provide transportation, and to David F. Parmelee for providing invaluable assistance in the preparation of this manuscript. I undertook this study while a student at the University of Minnesota's Forestry and Biological Station in Itasca State Park.

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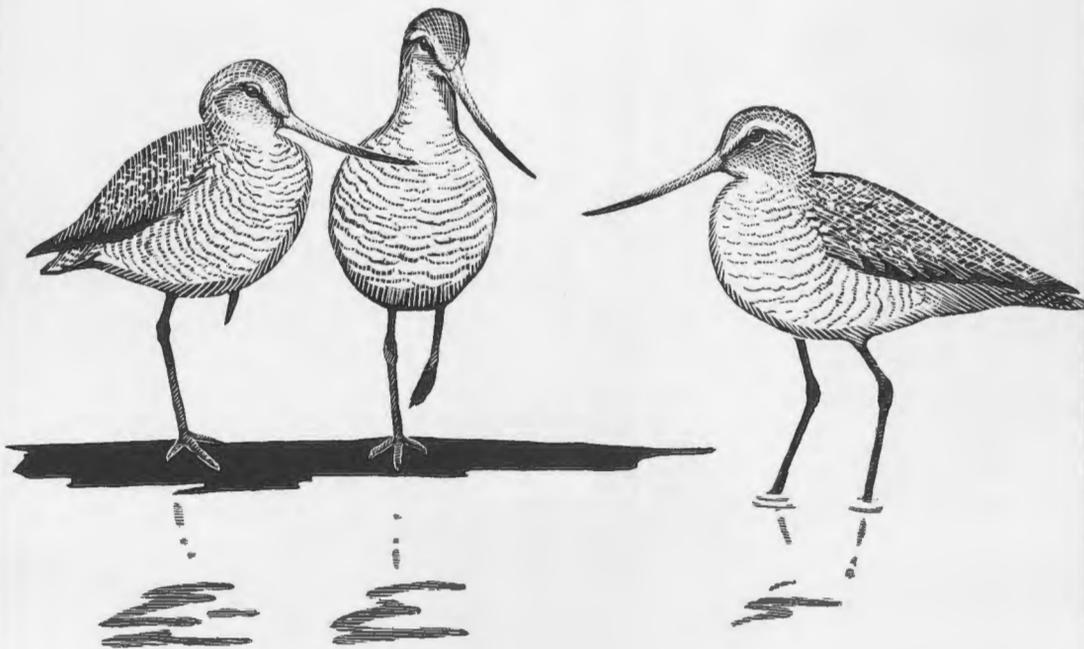
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NOTES OF INTEREST

MINNESOTA'S FIRST TOWNSEND'S WARBLER — The breeding range of the Townsend's Warbler (*Dendroica townsendi*) in North America is normally in and west of the Rocky Mountains (Bent, 1965; Peterson, 1961). This species has not previously been reported in Minnesota. On the morning of 22 May 1979, I was working on a bird census (in conjunction with a biological survey by the U.S. Fish and Wildlife Service) at the Rice Lake Wayside Park off Highway 101 between Savage and Shakopee (sec. 7, T.115N, R.21W, Scott Co., Minnesota). At 9:10 A.M., while in a stand of deciduous trees, largely oaks, where many different species of warblers were feeding, I saw what I identified as a male Townsend's Warbler. After my initial identification, I realized that this species was not normally found this far east and consulted my field guide (Robbins et al., 1966) for verification. The markings on the bird I observed matched those pictured for the Townsend's Warbler. The bird had white wing bars, a dark olive back shading into black on the top of the head, and bright yellow-gold sides of the head with a dark central patch. This patch was narrow at the base of the bill and extended around and behind the eye becoming wider than the eye in the back. The bird had a dark or black throat patch, narrow near the base of the bill, slightly wider near the base of the throat and then widening into a black band across the top of the breast. The breast below this dark band was bright yellow with broken black streaks down the sides. The belly was white. The warbler perched on the end of the lower branch of a tree 10 to 15 feet away from me where my view was unobstructed by vegetation. He remained there for approximately one and one-half minutes, then flew to a nearby branch, perched there briefly, then flew from view. I was unable to relocate him and two co-workers were unable to locate the bird in this area later in the day. I am familiar with the Townsend's Warbler in the western U.S. and Canada and with similar species such as the Black-throated Green Warbler here in Minnesota. I also looked at the skins of both species in the collection at

the University of Minnesota and feel certain that the bird I saw was indeed a Townsend's Warbler. Although Minnesota is far from its normal breeding range, the winter range of the Townsend's Warbler does overlap with that of the Black-throated Green Warbler and several other species of eastern warblers (Bent, 1963; Peterson and Chalif, 1973). LITERATURE CITED: Bent, A.C. 1963. Life histories of North American wood warblers. Part I. Dover Publications, Inc., New York, 367 pp.; Peterson, R. T. 1961. A field guide to western birds. Houghton Mifflin Company, Boston, 366 pp.; Peterson, R. T., and E. L. Chalif, 1973. A field guide to Mexican birds. Houghton Mifflin Company, Boston, 298 pp.; Robbins, C.S., B. Bruun, and H. S. Zim. 1966. Birds of North America. Golden Press, New York, 340 pp. **Barbara L. Clauson, J. F. Bell Museum of Natural History, 10 Church St. S.E., University of Minnesota, Minneapolis, Minnesota 55455.**

A BLACK RAIL IN HENNEPIN COUNTY — On the mornings of 11, 12 and 13 June 1979, I heard a Black Rail (*Laterallus jamaicensis*) calling from a marsh across the street from my house on Sunnyfield Road in Minnetrista Township in western Hennepin County. The rail was calling each morning when I awoke at 3:15 a.m. It gave its "kickee-doo" call continuously until about 4:00 a.m. when it ceased calling for the day. The nights were clear and calm with a full moon. Unfortunately, I did not know what I was hearing until after the third night, when I finally listened to a tape recording of bird calls and songs. The weather turned windy and wet for the next week, and I never heard the rail call again without prompting from recorded calls. Four groups of people, including Bob Janssen, Ray Glassel and Kim Eckert, were able to hear the Black Rail (16, 19, 24 and 30 June), and several people got brief glimpses of the rail when it flushed. It usually responded to its recorded call with a rattling call before starting its normal "kickee-doo" call, which is on most bird tapes. The responses diminished with each visit, but it was always heard in the same spot. This portion of the marsh has been grazed by cattle for years, but high water usually keeps cattle out until midsummer. The ground is full of hummocks and vegetation was very dense, consisting of reed canary grass, manna grass and water plantain. According to Green and Janssen (1975), this is the first time a Black Rail has been heard calling in Minnesota, although Black Rails have been seen in spring and fall. **Laurence N. Gillette, 6070 Sunnyfield Road, Mound, MN 55364.**

SABINE'S GULL AT DULUTH — On 26 May 1979 Shirley and Don Bolduc, Karol and Jerry Gresser, and I were birding the Port Terminal around 9:00 A.M. There appeared to be only one group of migrants on the ground in addition to the usual nesting Ring-billed Gulls and Common Terns. This group of about 50 Common Terns and several Bonaparte's Gulls and Caspian Terns was inconveniently located far off the road beyond a pond and behind a sand mound south of the loading dock. Only upon the urging of Karol did I decide to drive the car off the road on the sand as far as was possible bringing us to within 40 yards of the birds. While scanning the group with binoculars I detected the dark head of a gull with a yellow-tipped black beak — the body was hidden behind other birds. There were some real frustrating moments for awhile until everyone could get focused on "the head"; eventually after some movement among the birds we were able to see the entire bird, an adult Sabine's Gull. The weather that morning in Duluth started out rainy but by about 9:30 the sky had cleared up.



Sabine's Gull at Port Terminal, Duluth — Photo by Don Bolduc

This breaking of the weather during our observation period seemed to cause restlessness among this group of birds. Twice this group, including the Sabine's Gull, flushed for no apparent reason, but then settled again in the same spot. The third time they took to flight they ascended higher and headed off in a northwesterly direction. Although we birded the Duluth area all that day we never again found the Sabine's Gull. The only other birders who got to see the bird were Kim Eckert and Paul Egeland who happened along while on their Big Day trip. The bird at times was standing next to an adult Bonaparte's Gull for a convenient comparison and was noted to be about the same size. The head was not black as is the Bonaparte's Gull's, but a blackish-gray with a thin black border. The dull-yellow-tipped black beak was slightly thicker than a Bonaparte's Gull's and had a crook near the tip instead of the more continuous curve to the tip of the Bonaparte's Gull's. The neck, throat, breast, belly, and sides were all white. In a standing position the mantle and wing linings showed dark gray coloration with the wing tips showing a black and white spotted pattern similar to the Franklin Gull's, only more extensive. The legs were black. We were also able to have good observation from many angles of the bird flying. In flight the bird stood out conspicuously in a group with its striking wing pattern: a triangle of black from the wrist to the tips of the outer primaries, and triangle of white formed of the remaining primaries and secondaries. The rump and tail were white. The shape of the tail of this bird was only "slightly notched," not "forked" as the field guides indicate. Optical equipment used for this observation were binocu-

lars and 20X and 25X spotting scopes. Don was able to take some identifiable slides using a 35mm camera with a telephoto lens. This sighting is the 4th record of the Sabine's Gull for Minnesota, but is the first spring record, the others being fall records. Interestingly it was Kim and Paul who got the 2nd state record in 1975 at Minnesota Point. **Bill Litkey, 589 Granite Ave. N., St. Paul, MN 55119.**

A COMMON EIDER AT STONEY POINT — While scanning the waters along Stoney Point in the early morning gray light of December 27, 1978, I noticed two Common Goldeneyes with a third dark water bird some 20 yards farther along the shoreline. About 50% larger than the Goldeneyes, it was also marked very differently. The head was uniformly gray-brown, with a long sloping beak and forehead, straighter than a Canvasback's beak. I could not detect the length of the shield since the light left the gray shades undifferentiated. On the neck, the lower neck, throat and breast were a mottled brown and white. The mottling extended onto the belly and sides of the bird, gradually becoming solidly dark below. Above, the bird's back was dark. Each wing folded on his back, however, had a white patch where a speculum might be found. On the bird's left side, however, this white was not a patch, but rather a long streak, extending several inches from the base of the wing posteriorly. Because of the mottling, the slope of the beak and forehead, and the white on the wings, I have tentatively identified this bird as a Common Eider, probably a first year immature male. I have no experience with this species, but research into the individual variations of this species in the first winter plumage strengthens my predilection for Common Eider. **Ducks, Geese, and Swans of North America**, by Kortwright and updated by Frank C. Bellrose, was the primary non-field guide reference consulted. **Charles Bergman, 3620 Thompson Ave. S., Tacoma, WA 98445.**

SAY'S PHOEBE SEEN NEAR ROTHSAY — May 12, 1979; 7:15 a.m.; Sky: clear; Wind: calm; Temp.: 34°F; Near Rothsay Wildlife Management Area in Wilkin Co., MN. A **tyrannidae** was seen hunting in prairie habitat over a small area of marsh and open water. Its behavior was very phoebe-like as it moved short distances from perch to perch several feet above the water. Since it was morning, the orange breast was at first dismissed as due to the morning sun. Then we noticed that the phoebe had an orangish breast regardless of its angle to the sun. Carol and I independently concluded that the bird was indeed a Say's Phoebe (**Sayornis saya**). Its size (larger than the E. Phoebe) orangish breast, lack of eye-ring and wing bars identified it as this species. The species has been observed by us numerous times in its normal territory farther west (including this spring in the Chase Lake area in N.D.). The bird was observed at a distance of about 150 feet. Both observers used 10-power glasses. The bird was viewed from 10 to 15 minutes and it remained at the site as we left. Robbins, et al., **A Guide to Field Identification of North American Birds**, was used to verify our memory of this species at the site. **Laurence and Carol Falk, Rt. 3, Box 46, Moorhead, MN 56560.**

OBSERVATIONS FROM PINE/CURRY ISLANDS - LAKE OF THE WOODS — Paul Rundell and I visited Pine and Curry Island on 5 July 1979. As you probably know, the island is located in Lake of the Woods extending northeast approximately 3½ miles off Morris Point. Most of the island is

less than 100 yards wide. The very southwest end of the island, directly across from Morris Point is being used as a nest site by Common Terns, Piping Plovers, Spotted Sandpipers and Killdeer. The Common Tern nesting colony is estimated at about 50 pairs. Piping Plovers were estimated at 20-30 pairs. Young plovers were darting about the beach and dunes. Spotted Sandpiper young were also seen. We were able to get photos of plover young and tern nests and one young tern. We made four other stops along the island without finding any activity such as that on the southwest end. One feigning Solitary Sandpiper was encountered on the extreme northeast end. Also of interest were four Least Sandpipers found in Zipple Bay State Park and four adults and two young Piping Plovers on the northwest side of the entrance to Zipple Bay. There were two other interesting observations while on the southwest end of Pine Island. A Short-eared Owl flew out of some reed-canary grass right in the middle of the tern nesting area. When the owl flew, the terns, which were constantly circling and diving over our heads, immediately became silent and dispersed for several minutes. There were also four Bonaparte's Gulls resting on that part of the island. Characteristics were jet black bill (rather slender for a gull), gray cap and hind neck, bright white primaries and narrow black band near end of tail. **Bryce Anderson, Region I, Naturalist, Minnesota Dept. of Natural Resources, Bemidji, MN 56601.**

Editors Note: The presence of 20-30 pairs of Piping Plovers in one locality is unprecedented in Minnesota. Previous high counts recorded have been six pairs on Minnesota Point, Duluth (See **The Loon** 51:74-79).

HOODED WARBLERS AT ROBERTS SANCTUARY — On 7 May 1979 about 6:00 P.M. while birding at Roberts' Sanctuary, I noticed a warbler near the east gate, repeatedly flitting nervously from the ground to a small bush. The most noticeable marking was a flashing of white on the tail combined with a yellow facial characteristic. The warbler was within ten feet oblivious to my presence. The identification was of a female Hooded Warbler. This is only the second female Hooded Warbler I've seen in the state, the other in the spring of 1975. Interestingly the one common mannerism was the nervous movement from ground to bush and back again, coupled with the white tail display. On 9 May about 4:00 P.M. I was again at Roberts. The female wasn't sighted again, but I met two birders who pointed out a male Hooded Warbler in full plumage near the west gate. We agreed that this was certainly a Hooded Warbler. The bird, after remaining in the area about fifteen minutes, flew east about a hundred yards. It was at the area on the path near the knoll I relocated the bird. As I was watching the one, another male Hooded Warbler flew within 12 feet of the other so that both were visible at the same time in my wide-angle binoculars. The second bird then flew up and down the path twice and disappeared. I talked to the other two men (above) telling them what I had seen. Neither had seen two at once, but had previously discussed with each other that there could possibly have been two Hooded Warbler males, because of repeated sightings in different locations within such a short span of time. These, incidentally, were the first male Hooded Warblers I've seen in Minnesota. Two at once was extraordinary. **E. M. Brackney, 5025 12th Ave. S., Minneapolis, MN 55417.**

ROCK WREN AT BLUE MOUNDS STATE PARK — On 22 April 1979 Chuck and Micki Buer and I observed a Rock Wren in Blue Mounds State Park in Rock County. We were walking south along the top of the cliffs from the main park drive and were seeing very little until we reached a point about 300 yards north of the large abandoned quarry. A small bird flushed from the rocks several feet in front of us and for the next couple minutes moved about at the edge of the cliffs about 20 - 50 feet away. Following is a description of the bird as taken from field notes made immediately after the observation and before any field guides were consulted. Size larger than House or Winter Wren; bill straight and proportionally long for a wren; indistinct whitish eye-line; gray-brown upperparts; whitish underparts with no obvious streaking noticed; rump, flanks and under tail coverts distinctly rusty or buffy; end of tail narrowly edged with buff (visible only once as bird flew); legs black; shape and posture typically wren-like; behavior very distracting, as the bird constantly bobbed up and down as it stood on the rocks, sort of like it was doing endlessly rapid and jerky knee-bends (we were so engrossed in watching this nervous behavior that we perhaps missed noticing the breast streaking). The wren eventually flew over the edge of the cliffs and disappeared. Since all of us had seen Rock Wrens previously in the western U.S., we had no difficulty in identifying this distinctive species. This represents the sixth Rock Wren record for Minnesota. **Kim Eckert, 9735 North Shore Dr., Duluth, MN 55804.**

LONG-BILLED CURLEW AT ROTHSAY — On Monday, 14 April 1979 we were birding the Rothsay Wildlife Area, Wilkin Co. and had stopped to scan for Prairie Chickens and Sandhill Cranes. I saw a long-billed brownish shorebird flying towards us. The bill was obviously down-turned. Dick got out of the car in time to see it fly overhead and he also noted the long, down-curved bill and cinnamon wing linings. As the bird flew past it gave a short ker-lew cry. We watched it fly southwest until it was out of sight. We agreed we had seen a Long-billed Curlew because of the long, down-curved bill, reddish-brown wing linings, and unusual call, but we double-checked by consulting both Robbins' **Birds of North America** and Peterson's **Field Guide to the Birds**. We remained in the area for at least an hour but did not observe the curlew again. **Dick and Gloria Wachtler, 17 Oakridge Drive, Birchwood, MN 55110.**

WESTERN TANAGERS AT WOOD LAKE — I observed a pair of Western Tanagers at Wood Lake Nature Center in Richfield on May 19, 1979. At 10:30 as I was walking the east trail, just south of the two observation blinds I spotted a pair of Scarlet Tanagers. While watching these birds I was approached by a group of excited birders who claimed to have seen a pair of Western Tanagers in the same area earlier in the day. As we talked, the male Western Tanager appeared about 20 feet up in the branches of a cottonwood tree, overhanging the trail. There was no question as to its identity. It was bright yellow with black back, wings and tail. On the wings were two light-colored wing bars. The head and face were bright red, but more washed out as it extended into breast and nape. The bird sat very horizontal peering down at us. Within seconds another bird appeared on a nearby branch. It was greenish-yellow with light colored wing bars on a dark gray wing. It took the same position as the male and the light-colored beak was very evident. The bird's breast seemed to be yellower

than the female Scarlet Tanager seen nearby. The birds were quite shy and didn't stay in sight for very long. I had several more good views with my binoculars as they moved about in the foliage, then they were gone. I expected to see them again as I continued birding, but did not. The birds were in the company of the Scarlet Tanagers. An assumption might be that they were lured off their normal migration route by the other birds. The other birders who first identified the birds were Elinor Dunnewold, Sue Seitzlitz, Helen Smith and Beth Tiefenthal. Robbin's *Birds of America* was used to confirm the identity of the birds. I have previously seen this species at Wind Cave in South Dakota and Rocky Mountain National Park in Colorado. **Robert Erickson, 10101 Pillsbury Ave. S., Bloomington, MN 55420.**

MALE WESTERN TANAGER AT BEMIDJI — The Bemidji State University Biological Association saw a male Western Tanager at the outlet of the Mississippi River from Lake Bemidji in Beltrami County Minnesota. The tanager was in typical male breeding plumage having a yellow body, black tail, black wings with white and yellow wing bars. The red on the head did not extend below the eyes of the bird very much. The bird was observed at 8:30 A.M. on 10 May 1979 walking on floating vegetation that accumulated at the railroad tressle where the Mississippi River leaves Lake Bemidji. I returned at 10:30 A.M. with Jim Mattsson of the U.S. Fish and Wildlife Service and observed the bird at the same location. The day was overcast in the high 30's F. with a chilling SW wind coming off the lake. We approached within ten feet of the bird and observed with and without binoculars for a total of about 20 minutes. Those observing the bird were Cindy Johnson, Carrie Krejewske, Craig Longtine, Brian Groh, Roger Anderson, Jim Mattsson, and myself. **Steven Mueller, Bemidji State University, Bemidji, MN 56601.**



Male Western Tanager, Bemidji, Beltrami Co. — Photo by Jim Mattsson

RED-SHOULDERED HAWK NEST, HUBBARD COUNTY — In mid-April, 1979 Noel Benson told me he had seen a raptor with a banded tail and a reddish breast building a nest three miles south of Bemidji. On April 21 he showed me the nest which was visible from a dirt road located about 50m from the nest tree. The nest was about 10m from the ground in an aspen and contained a hawk which could not be indentified at that time. On May 1 I observed an adult Red-shouldered Hawk land at the nest and replace its mate in incubation. Both birds were in adult plumage and were characterized by alternating white and black banded tails with the white bands being noticeably narrower than the black bands; uniform reddish-buff breast and underparts; and reddish-brown wing coverts. On at least one occasion Laddie Elwell saw and heard a medium-sized buteo in the area giving a loud shrill call she described being unlike that of a Red-tailed or a Broad-winged Hawk. On May 28 I saw no activity at the nest and no sign of recent occupancy. At the base of the tree I found a shell fragment of one half of an egg. The nest had obviously failed several days previously. To my knowledge this species has not been reported nesting north of Crow Wing County, thus this represents the northernmost nest record in Minnesota. Of particular interest is that Laddie Elwell banded and released a rehabilitated immature Red-shouldered Hawk less than 300m from the nest site in 1978. Unfortunately, I was unable to determine if either adult was banded. **Jim Mattsson, Box 845, Bemidji, MN 56601.**

SNOWY OWL VOCALIZATION — Volume 48, Number 2, of *The Loon* describes a hissing sound given by a Snowy Owl seen in Duluth. Again this past winter on January 20, 1979 while birding in the Port Terminal area of Duluth near the Bridge Switch Station I heard this hissing call given by a Snowy Owl. I was first attracted to the bird due to the very dark color, almost black, of the nape and crown. Also a small green area was visible on the right wing when the bird was at rest. When first seen the bird was at rest on the top of a utility pole. The owl was initially seen and heard giving the hissing call at a distance of approximately 50 yards. As I made a closer approach, to determine the wing marking, at a distance of about 25 yards the bird uttered three sharp whistling notes in rapid succession. These sharp whistling notes were given in about two seconds. The posture and body action of the bird was very similar to that of a Common Crow when giving its call from a perch. When the sound and rhythm of this call was initiated the bird directed its attention toward me before flying about 200 yards to the west and alighting on the harbor ice. The above observations were made in mid-afternoon during a time of light snowfall. Later in the day I learned that the black as well as the green color marking was being used by Dave Evans as he studied the wintering Snowy Owls of the Duluth Harbor area. **Oscar L. Johnson, 7733 Florida Circle, Brooklyn Park, MN 55445.**

GYRFALCON IN BELTRAMI CO. — Two sightings in Beltrami Co., Minnesota during the winter of 1978-79 suggest that a single Gyrfalcon wintered in this area. The first sighting occurred on 14 December 1978 as I was driving south on Highway 72, 10 miles north of Waskish. I spotted a large hawk perched in a roadside stand of aspens and as I stopped the car and got out to observe the hawk, it flew off at tree-top level. The pointed wings and fairly long squarish tail identified it as a falcon. The lack of distinctive

facial markings or black axillaries, in addition to the large size of the bird, convinced me it was not a Peregrine or a Prairie Falcon. The head and back were a uniform brown color while the breast, belly and undersurface of the wing were whitish with moderately heavy mottling. The coloring was nearly identical to the gray phase Gyrfalcon pictured in *Birds of North America* (Robbins, Bruun and Zim, 1966, Golden Press, New York). As the bird flew the wings were slightly bent and the slow wingbeat pattern was very similar to that of a gull. At the time of sighting the weather was clear and sunny with the temperature in the mid 20's. The sun was a my back as I was observing the Gyrfalcon through 8x24 binoculars from distances of 75' to ¼ mile. On 26 February 1979, Dwain Warner (Bell Museum of Nat. History, U. of Minn.) observed a Gyrfalcon of identical plumage description within ½ mile of my original sighting. A large falcon was again seen at a distance of ½ mile in the same vicinity on 21 March 1979 by myself but could not be positively identified as a Gyrfalcon although the flight pattern was similar. Green and Janssen (*Minnesota Birds*, 1975, U. of Minn. Press) classify the Gyrfalcon as a casual, winter visitant with late spring migration dates in the north as March 3, 10, 31. **Douglas Wells, Bell Museum of Natural History, 10 Church St. S.E., Minneapolis, MN 55455.**

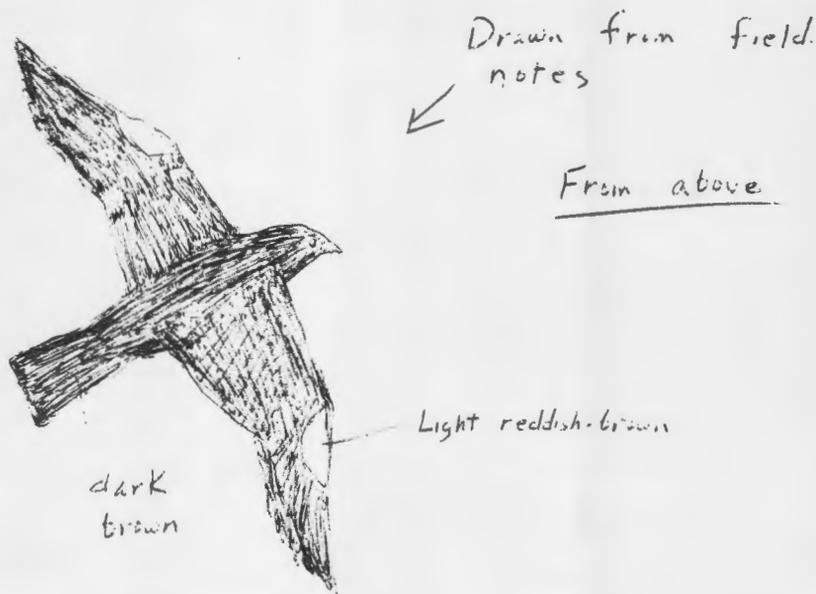
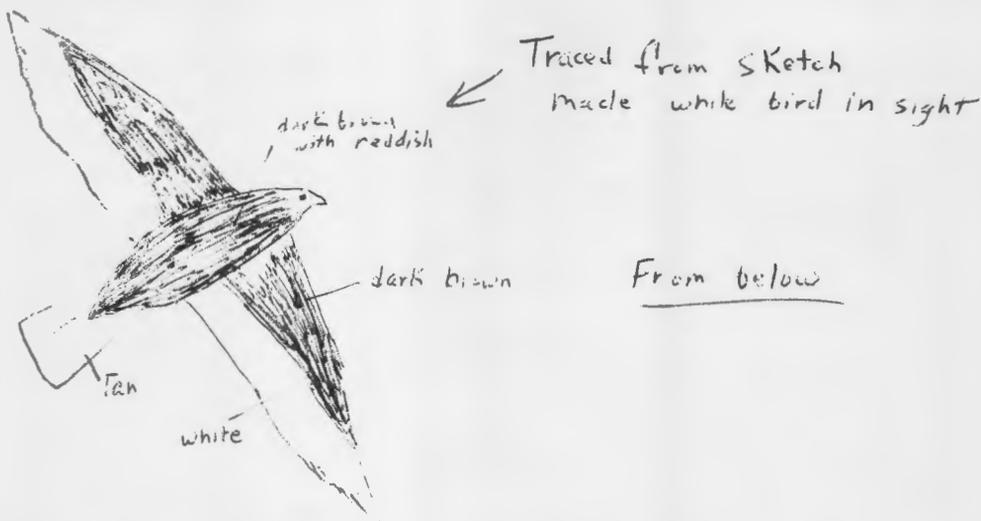
CROWS PREYING ON JUVENILE KILLDEER — On July 14, 1979 while scouting for migrant shorebirds in the northern part of Hennepin County I observed what I consider to be unusual feeding behavior for a group of five adult sized Common Crows. As I was coming to a stop near a 'mud flat' located in a corn field near the junction of Minnesota Highway 152 and Hennepin County Road 13 I heard unusually loud and profuse alarm calls being made by the Killdeers in the area. When observing the 'mud flat' I noticed that two crows were following after a third crow and attempting to take away its prey. With the aid of binoculars I was able to determine that the prey in question was a half grown juvenile Killdeer which was still calling and making an unsuccessful attempt to escape. One or two adult Killdeer, presumably the parents, were performing the classic broken-wing act and several other adult Killdeer in the area were running about uttering the 'dee-dee-dee' call. None of the Killdeer were making an attempt to leave the area. Other species noted in the area during this episode were Common Grackles and Red-winged Blackbirds. The above observations were made at about 8:45 a.m. under partly cloudy skies. **Oscar L. Johnson, 7733 Florida Circle, Brooklyn Park, MN 55445.**

EARLY BOBOLINKS — On April 21, 1979, about 3:00 p.m., Betty Jung and I were birding along Lac Qui Parle County Road 34, just west of State Highway 119. This road is commonly called the "Louisburg Road." We had birded the area for about an hour, seeing Upland Sandpipers, Marbled Godwits, Common Snipe, and many other species, and were heading east back to State Highway 119. We stopped for a final last look at a pair of Marbled Godwits along the side of the road, and I scanned the field with my 7x50 Swift binoculars for a last look before we left the area. I spotted a male Bobolink sitting on a tuft of grass about 100 feet to the east of me. His back was to me and it was very obvious that it was a Bobolink. I observed him for about one minute as he sat there. Betty was unable to find him in her scope, so I was the only observer. The bird took off to the south after my minute's observation. About noon on the next day, April 22, 1979, we were again in the area with two other people who were looking for

Upland Sandpipers. As we were birding along Co. Rd. 34, we heard and then observed two male Bobolinks flying across the same field in which I had made the observation of the day before. **Joanne Dempsey, 1017 W. 14th St., Hastings, MN 55033.**

CEDAR WAXWINGS EAT FLOWERS — Dr. Roberts, in *The Birds of Minnesota*, noted that Cedar Waxwings destroyed a certain amount of apple blossoms, but he thought the birds did not ingest the flowers. For a few days in May a group of about nine Cedar Waxwings frequented a large ornamental crab tree in my yard at the peak of its blossoming. It was plain to see that they were eating the petals. They pulled pieces from petals either in the bud or open blossoms and swallowed them forthwith. This went on for three or four days, several times a day, many minutes each time. I did not, however, notice any real effect on the overall beauty of the tree's display. **Bill Longley, 532 W. Broadway, Forest Lake, MN 55025.**

DARK PHASE FERRUGINOUS HAWK — On April 21, 1979, I was birding in the Salt Lake area of Lac Qui Parle county on a sunny morning. Eleven o'clock found me working my way west along County Road 14 S.E. of Marietta (Section 31 of Arena Township). Hawks had been showing up all morning and here was another very close, just north of the road. I wheeled into a handy approach and was out glassing the buteo in seconds. The bird was making lazy circles, slowly working its way northwest. It was a large dark hawk, unmistakably a dark phase and like nothing I'd seen before. I quickly made a rough sketch to note color pattern. My 20x scope was all set up so when the bird started to get out of binocular view I set it on the hood of the car and continued to watch until it was gone (about two minutes). Description of the bird: From below: the wing linings were a dark chocolate brown and the primaries and secondaries white. The long tail was very light tan with no markings. The breast and belly were dark brown to reddish brown. From above: it showed uniform chocolate brown color, including the tail, except for a light reddish-brown patch at the wrist. This was especially noticeable when it turned and caught the sunlight. The contrasting colors were so distinct and because there was no blending or mixing of colors I thought it would be easy to identify. When I turned to the **Golden Field Guide**, I immediately saw that from below the bird matched the painting of the dark phase Ferruginous Hawk. Unfortunately, there is no illustration or description of the upper portions of the bird. I had ruled out this hawk as a Red-tailed, as I had a light phase of that species in view at the same time for direct comparison. The dark hawk appeared much more streamlined and not as bulky like the Red-tailed. Of course the pattern of color could cause this optical effect. But even taking this into account the coloration is wrong for a dark phase Red-tailed. Peterson notes, regarding Red-tails, "Black adults usually show red tails, a point of distinction from other black buteos." However, this doesn't take into consideration immature dark phase hawks. I've reviewed descriptions in other books of dark phase and also found descriptions of rufous phase of Ferruginous Hawks. With all the variations it seems that the color of the upper tail feathers and the patch at the bend of the upper wing would decide whether this was a dark phase Ferruginous. **Robert Erickson, 10101 Pillsbury Ave. S., Bloomington, MN 55420.**



Editors Note: A majority of the members of the Minnesota Ornithological Records Committee (MORC) accepted the above report as a dark phase Ferruginous Hawk.

WHITE PELICANS ROB HERRING GULLS — How do White Pelicans feed when there are not enough of them to line up abreast and swim into shallow water driving the little fishes ahead of them to where they can be scooped up? I wondered about that when I saw two pelicans on Round Lake (at the town of Squaw Lake) in Itasca County on May 14, 1979. Watching these two and as many as eleven during the next three days, I decided "not to worry." These birds are big enough to take care of themselves. Their trick was to sail serenely on the water like a ship of state, seemingly stupid but

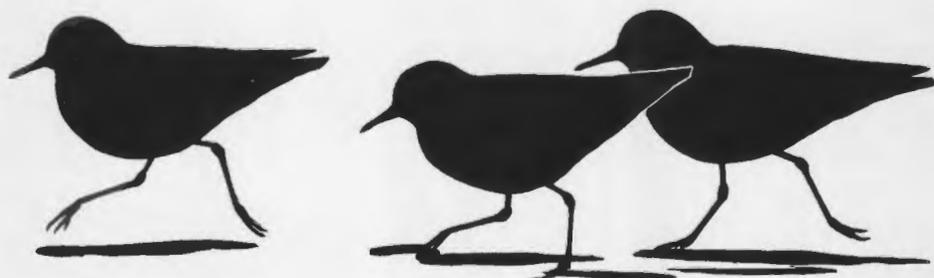
sharp-eyed. Seeing a gull successful in locating a fish, the big pelican would lumber into the air and make a bee-line directly at the gull. The gull would reluctantly give way as the behemoth soared relentlessly at him. In one motion the pelican would alight and gulp down the prize, I saw this act several times during the week's stay. According to long-time residents, pelicans had never been seen previously on Round Lake. The very late spring probably caused many unusual events. Ice did not go out on Round Lake until May 5. Normally the pelicans would be in nesting areas in Canada at the time they were still at Round Lake. **Bill Longley, 532 W. Broadway, Forest Lake, MN 55025.**

ANOTHER HOODED WARBLER — On May 29, 1979 I saw a male Hooded Warbler along John Berry Road near the T. S. Roberts Sanctuary in Minneapolis. The time was 1:30 p.m. with good light conditions. I observed the bird for about two minutes at a distance of 50 feet with Zeiss 8x30 binoculars. The bird was feeding in the trees with other birds, Canker worms had hatched. I caught a flash of yellow and followed (with my eyes) the bird until it landed. Right away I saw (side-view) a yellow face outlined in black and marveled, "another" Hooded Warbler just like the one I had seen three weeks earlier at Wirth Park. It soon flitted to a bare branch where I saw it briefly but clearly face on, the yellow face peering through the black hood. I wondered if it could be nesting in the area. As I had the cemetery fence between me and the old streetcar tracks, I could not pursue the bird as it went beyond through the branches. **Violet Lender, 2817 Robbins St., Minneapolis, MN 55410.**

SPRUCE GROUSE DISPLAY — On April 30, 1979 I photographed a male Spruce Grouse in display. The area was in northern Lake County near Wye Lake — T60N, R6W, Sec. 6. It was indeed a special opportunity. I have seen quite a few Ruffed Grouse displaying. but this was my first Spruce Grouse doing so. As I'm sure you know, they are normally quite tame, but this one was unusually so. Due to the presence of the female, I followed him around for a good half hour, shot a whole roll of 36 exposure film, approached to within 3' and never once did he fly. It was great to watch him walking stiffly around, partially fluffed up with his tail partially fanned, occasionally displaying a show of force or possibly displaced fear, by pecking at the ground or the log he was sometimes on. Most of the fun was in watching and listening to his tail, though. As he walked, with each step the rectrices on alternate sides of the tail would unfurl or unfold momentarily causing a rustling sound as if he were walking along shuffling a deck of cards. At varying intervals he would stop, throw his body completely erect, fluff his neck feathers to their gorgeous maximum and fan his tail out fully. This last act I can only compare soundwise to the sound made by one of those curled up party noisemakers that you blow through, and as they uncurl they make a crinkling sound followed by a resounding "pop" as it's extended to its fullest. This lasted only for a moment, and the only picture I have of it is not of exceptional quality. As for seeing a similar display next year, it would be a chancy thing. This was the first display I'd seen in the seven years I've lived up here. I would think you'd have to be especially lucky to find one that happened to be with a female at the time and be as cooperative as "my" bird. On the other hand, most of my time in the early spring has been spent outside prime Spruce Grouse areas. You don't really start to run into them much until you get a few miles

north of Grouse Lake. Perhaps if one were to expend some effort searching north of here, you might meet with success. I have recorded the location of all my Spruce Grouse sightings this year too, so that might be helpful as well. At any rate, if you want to come up and give it a try, I'd be happy to go out and beat the bush with you, understanding that our chances of success would not be all that great. If we did find one displaying though, it would be well worth the effort. As for the best time to look, our spring was exceptionally late this year, as it was everywhere else, but I'm not sure that it threw the grouse that much out of their normal pattern. The amount of snow left on the ground when this fellow was busy leads me to think perhaps not. **Steve Wilson, Grouse Lake, Isabella, MN 55607.**

Editor's Note: The above information was received from Mr. Wilson after he sent me the photo reproduced on the front cover of this issue.



THE M.O.U. 300 CLUB

Oscar Johnson is the newest member of the 300 Club with a Minnesota Life List of 302. Our membership is now 27. A total of 14 people added birds to their Minnesota Lists since I last published the list last winter. Ruth Andberg let with the addition of five new species.

Ray Glassel	345	Jo Blanich	319
Bob Janssen	343	Jerry Gresser	315
Harding Huber	339	Evelyn Stanley	314
William Pieper	338	Gary Otnes	311
Kim Eckert	337	Wally Jiracek	308
Ron Huber	336	Ruth Andberg	307
Paul Egeland	334	Henry Kyllingstad	304
Terry Savaloja	330	Doug Campbell	303
Liz Campbell	329	Oscar Johnson	302
Dick Ruhme	329	Gloria Wachtler	301
Jan Green	328	Dick Wachtler	301
Karol Gresser	323	Betty Campbell	300
Don Bolduc	323	Violet Lender	300
Bill Litkey	321		

Bob Janssen

SNOWY EGRET IN NICOLLET COUNTY — On May 5 and June 6, 1979 I observed a Snowy Egret in the flooded Minnesota River bottoms near Seven Mile Creek, Nicollet County. The bird was first seen at 8:00 A.M. on May 5, at a distance of 150 yards, using 10x50 Binoculars and a Space-master II 20-45x Spotting Scope. Skies were clear at the time of observation. The bird was standing in the water, near the edge, in a flooded plowed field (same field had many shorebirds and waterfowl). At first, I paid no attention, assuming it to be a Great Egret. When I did take a look, I immediately recognized it as a Snowy Egret, which I am very familiar with. The size, the black bill, were unmistakable. I waited some time for it to raise its feet, but when it did, the yellow feet were there. Note: The same (I assume) Snowy Egret appeared in the same field again on June 5, 1979, although it had not been there on two or three occasions between May 29th and June 5th. The bird was also seen by Merrill Frydendall of Mankato on May 5, 1979. **John Frentz, 316 Oak Knoll Blvd., Mankato, MN 56001.**

A SUMMER TANAGER AT FAIRMONT — Early in May I received a call about a mysterious red bird visiting a feeding station just north of Fairmont. Residents at the site had seen it on several occasions when it came to their suet balls. The bird usually arrived regularly early in the morning or very late in the afternoon. The caller thought it might be some kind of tanager, although others at the site thought it to be a Cardinal, and hence the call for help. My first attempt to locate the bird on May 10, 1979 failed. Not a red bird of any description appeared. There was a surprise in store none-the-less. My wife, Denece, and I were watching the many Rose-breasted Grosbeaks (with 8x40s and 7x50s) when we spotted one bird with unusual markings. It was close by, 12-15 meters but on the ground behind shrubbery. Its markings suggested a female Rose-breasted except for the breast. There was no obvious streaking but there was a bright golden yellow band across the breast, extending about an inch from the top margin (near the shoulder) to the lower margin. We had only a brief look at this unusual grosbeak before it flew and unfortunately we did not locate it again. With such a brief observation, it's difficult to know exactly what we saw, but we speculate that it was either a female hybrid Rose-breasted/Black-headed or an unusually marked female Black-headed Grosbeak. Neither of us has seen a female Black-headed Grosbeak so we had nothing to compare it to except Robbins et al, and Peterson. On May 12th I was able to revisit the site about 7 A.M. I waited at about 30 meters distance from the feeding station. Within minutes, the mysterious red bird arrived to dine on a suet ball. It was readily apparent that it was not a Cardinal nor did it have the black markings of the Scarlet Tanager. With the 8x40s I had along, the large yellow bill was obvious and convinced me that it was indeed a male Summer Tanager, the first I'd seen in Minnesota. One a subsequent visit two evenings later, with Denece, we were able to watch this beautiful bird for about 15 minutes. The local residents, there watching with us, were delighted to discover that they were seeing such an uncommon visitor. **Ed Brekke-Kramer, 317 E. 1st St., Fairmont, MN 56031.**

A WORM-EATING WARBLER OBSERVATION — On May 7, 1979, at T. S. Roberts Sanctuary in Minneapolis, Greg Pietila and I observed a Worm-eating Warbler. The bird was seen at Noon for about one minute at a distance of twenty feet with the use of 7x35 binoculars. Skies were

clear and light conditions excellent for observation. The bird instantly registered as a Worm-eating because of closeness and perfect lighting conditions. Thin bill eliminated sparrows as did body shape. Plain buff colored breast eliminated other brown-backed, ground walking warblers such as waterthrushes or Ovenbird. The bird was observed about 100 ft. from a male Hooded Warbler immediately after the Hooded Warbler first went out of sight. It was walking upon the ground slowly and could be seen easily as the undergrowth was not yet heavy. The face and underbody were a uniform soft buff or cream color, the back a light brown. The stripes of a dark brown or blackish color were very noticeable on the side of head and crown. After a short while the bird escaped our view by flying some distance low to the ground. Although we searched the immediate area thoroughly for another hour and a half, we saw neither the Hooded Warbler or the Worm-eating Warbler again that day. We observed 74 species at T. S. Roberts this day including 18 species of warblers. There was no doubt in either of our minds that the bird in question was a Worm-eating Warbler. **Steve Carlson, 1824 Park Ave. S., #3, Minneapolis, MN 55404.**

WORM-EATING WARBLER — OTTERTAIL COUNTY — On May 20, 1979, at 9:30 a.m., I was in the process of placing five mist nets in the groves of my farmsite, Otter Tail County, preparatory to the banding of a substantial warbler migration in progress. I'd positioned three nets in the south grove and had just reached the north site in the adjacent grove when a dull colored warbler caught my eye. It was about 25 feet away, and 8 feet or so off the ground in the branches of a poplar tree. It would move rather quickly along a branch for a distance, then flit to another branch and repeat the process. Whenever placing mist nets I always wear my 10x35 binoculars, and I observed the following Worm-eating Warbler characteristics: olive brown back; no wingbars; buff unstreaked underparts; buff median stripe bordered on each side by a dark line; dark eyeline which then created a buff superciliary eyebrow stripe. I watched the warbler as it moved about for a minute or so. Then, to my chagrin, it flew from the tree in a descending pattern and passed between the two 6 foot aluminum poles I was preparing to spread a mist net between. Had I opened this particular net before the others I would have captured it!! I then returned to my house and, after directing my wife, Marion, to the warbler's general location, called Steve Millard and Diane Hastings. The four of us searched for the bird, but in vain, for it apparently moved quickly through the area as other warbler species were similarly doing that morning. **Gary L. Otnes, Route 1, Box 181, Fergus Falls, MN 56537.**

THE KENTUCKY WARBLER A CASUAL SPECIES — On 22 May 1979 five years and two days after having observed my first Kentucky Warbler, (see *The Loon*, Vol. 46, No. 3), again a Kentucky Warbler visited the Shingle Creek area near Noble Avenue in Brooklyn Park less than 100 feet from the location where this species was seen in 1974. The bird was found perched on a branch about four feet above the ground. The tree in which the bird was sitting was located immediately adjacent to Shingle Creek. Once again the yellow spectacles, black whisker mark and clear yellow breast were noted. The back was a dark yellow-gray in color. As I recall the bird which I saw in 1974 had a brighter back. Later in the day when I checked the color plate of the Kentucky Warbler in **The Warblers of North**

America, edited by Griscom and Sprunt I found the illustration to be very similar to the bird I had seen that morning. As in my previous sighting of a Kentucky Warbler this bird was seen while leading students of the Park Center High School Ornithology class on their daily birding hike. This observation was made at about 9:00 a.m. at a distance of approximately 15 yards with good light at the time of sighting. I and my students of the second section of ornithology looked carefully in the area the following hour but we were unable to locate the bird again. **Oscar L. Johnson, 7733 Florida Circle, Brooklyn Park, MN 55445.**

LITTLE GULLS IN WRIGHT COUNTY — At 9:30 a.m. on May 15, 1979 while conducting an annual waterfowl breeding pair survey. Mike Zicus, Jane Cliff and I observed three adult Little Gulls at the state wildlife area one half mile south of Montrose. The flight characteristics and feeding behavior of the gulls were similar to the numerous Black Terns with which they were associated. Habitat consisted of a large cattail marsh with an interspersed of numerous open water areas. Characteristics observed included the following: head black; bill appeared short for the head size; wings uniform gray above and very dark below with a narrow white margin on tips of the primary and secondary flight feathers above and below; underparts white; tail white above and below and slightly rounded; body and wing lengths similar to the Black Terns; body size more robust than the terns. The gulls were observed at a distance of about 300 m from a high bluff on the east side of the marsh using 7x50 binoculars and a 15-60 zoom spotting scope. The sky was clear, winds were light and the temperature was about 60 degrees F. The birds were still present at our departure at 10:00 a.m. The identification was confirmed using **Birds of North America** by Robbins, Bruun and Zim. On May 17 from 7:30 to 9:30 a.m. Donn Mattsson looked for the gulls without success. **Jim Mattsson, Wildlife Biologist, Box 845, Bemidji, MN 56601.**

HOODED WARBLER NEAR ST. CLOUD — On June 7, 1979 in Sherburne County, about 5 miles south of St. Cloud, in an area of lush vegetation along the bank of the Mississippi River, I heard a strange song. It must be a warbler but which one? The bird sang constantly from the treetops but could not be located as it moved about. I taped its song and played it back. The bird became excited and flitted about close to me so that I got a glimpse of it. A Hooded Warbler it appeared, but I wanted to be sure. So more taping and more playing back. At last I got an excellent view of the bird as it sat on a dead branch. It was a Hooded Warbler. The song was quite loud and sounded to me like "dear - dear - dear — so - so sweet." It remained in one area and evidently was on territory but I never saw the female. I forgot all about this bird until July 1st when Bob Janssen and Ray Glassel came after I had sent them a copy of the tape. We drove down to the area and played the tape but with no response. The bird may have nested as a Yellow Warbler, which had a nest with eggs nearby on June 7, was already finished with nesting and had left the area. **Nestor M. Hiemenz, 705 18th Ave., St. Cloud, MN 56301.**

THE 200 COUNTY CLUB

Twenty-seven of Minnesota's 87 counties are represented in the 200 County Club. Ray Glassel added Scott and Nicollet Counties to the list since I published the totals last spring. Carver County is the only Metropolitan area county not on the list. who will be the first to add Carver to the list?

County	Observer	# of Species	County	Observer	# of Species
Aitkin	Terry Savaloja	255	Morrison	Pete Ryan	207
	Jo Blanich	237	Mower	Ron Kneeskern	216
	Bill Pieper	212		Rose Kneeskern	206
Anoka	Ken LaFond	248		Joel Dunnette	205
	Bill Pieper	221	Nicollet	Ray Glassel	201
	Ruth Andberg	217	Olmsted	Joan Fowler	216
Becker	Gary Otnes	214		Ted Lindquist	213
	Marion Otnes	213		Phyllis Lindquist	213
Clay	Carol Falk	208		Vince Herring	212
	Lawrence Falk	206		Anne Plunkett	210
Crow Wing	Terry Savaloja	233	Otter Tail	Gary Otnes	268
	Jo Blanich	222		Marion Otnes	249
Dakota	Ray Glassel	232	Ramsey	Liz Campbell	229
	Bob Janssen	201		Bill Pieper	224
Goodhue	Ray Glassel	228		Ray Glassel	202
	Bob Janssen	224	Rice	Orwin Rustad	222
	Bill Pieper	221	Rock	Kim Eckert	238
Grant	Kim Eckert	214	St. Louis	Jan Green	280
Hennepin	Bob Janssen	270		Kim Eckert	266
	Alvina Joul	263		Bob Janssen	258
	Ray Glassel	262		Bill Pieper	243
	Oscar Johnson	256		Ray Glassel	242
	Violet Lender	252	Scott	Ray Glassel	201
	Bill Pieper	251	Stearns	Kim Eckert	235
Lac Qui Parle	Micki Buer	231	Wabasha	Ray Glassel	204
	Chuck Buer	223	Wadena	Dick	
	Marion Otnes	213		Oehlenschlager	241
	Gary Otnes	212	Washington	Liz Campbell	203
	Bob Janssen	207	Yellow		
	Ray Glassel	201	Medicine	Gary Otnes	220
Lyon	Paul Egeland	251		Marion Otnes	220
	Henry Kyllingstad	251			
Marshall	Sarah Vasse	235			

BOOK REVIEWS

Guide to the National Wildlife Refuges by Laura and William Riley. Doubleday and Company, 245 Park Ave., New York, NY 10017. Illustrated, 672 pages. 1979. \$14.95.

Five Minnesota national wildlife refuges are featured in a new book, **Guide to the National Wildlife Refuges** by Laura and William Riley, to be published in July by Doubleday and Company. They are: Agassiz, Big Stone, Rice Lake, Sherburne, and Tamarac, and along with them Minnesota's wetland management districts and Minnesota sections of the great Upper Mississippi National Wildlife Refuge.

These refuges offer an extraordinary diversity of habitat and wildlife.

Agassiz, a 61,000-acre watery remnant of Lake Agassiz (which once covered an area larger than all of the present Great Lakes) harbors a herd of about 400 moose.

Big Stone has two-billion-year-old red granite outcroppings, virgin prairie, and a spot where Western Grebes can be observed throughout their courtship, mating and nesting cycle.

Rice Lake is in a region of flat bogs laced with glacial moraine. It has much the same wild feeling as the Boundary Waters Wilderness Area.

Sherburne, only an hour's drive from the Twin Cities metropolitan area, is a new refuge which came into being largely due to citizen action and is particularly interesting to see as a wildlife refuge in the development stage.

Tamarac in northern Minnesota is the locale of historic Indian hunting and camp grounds. It is rich in artifacts, wild rice (which is still harvested in the traditional way from canoes by Chippewa Indians), and

wildlife — coyotes, deer, beaver, and bear. Its fall foliage, including golden birch and aspen, crimson maple, sumac, and maroon oak, is among the most brilliant anywhere.

Upper Mississippi Refuge furnishes necessary habitat for hundreds of thousands of waterfowl and the Bald Eagles that migrate with them along the Midwest Flyway. During the fall Upper Mississippi harbors a good part of the world's population of Canvasback's.

Guide to the National Wildlife Refuges, published by Doubleday, is the first comprehensive guide to the 380 national wildlife refuges located in 49 of the 50 states in almost every kind of ecosystem. It tells how to get to the refuges, what to see and do there, and provides detailed information on motels and campgrounds, when are the best (and worst) times to visit, what to take along. It contains over 600 pages of text and almost 200 maps along with folios of color photographs of interesting birds and other animals to be seen in the refuges.

A Birdwatcher's Guide to the Eastern United States by Alice M. Geffen; Barron's Educational Series, Woodbury, N.Y., 1978; 346 pages, 26 maps; \$6.95.

If it weren't for the title of this book, I might have been able to state that the value of the information included outweighs the guide's shortcomings. The book does manage to be a convenient and apparently complete directory of National Wildlife Refuges, Audubon Centers, Nature Conservancy tracts, nature centers and sanctuaries, state and national parks and forests, and the like — in short, included are only places with fixed boundaries and permanent addresses. As useful as this might be, the book

simply is not a "birdwatcher's guide" as the title promises since far too many areas are excluded. The obvious truth is (obvious at least to everyone except the author) that many key birding areas do not fall into the categories above and that many spots fitting in these categories are not particularly good for birding. Although Minnesota is not one of the states east of the Mississippi included, if a similar Western guide came out, the following places would not be included: Duluth's Park Point, any sewage pond for shorebirds, the Yellow Rail marshes at McGregor and Waubun, Mille Lacs, Black Dog Lake, Grand Marais' harbor, Salt Lake, La Crescent's marshes, Rothsay's prairie, Stoney Point near Duluth, the Sax-Zim bogs . . . Enough said?

Not quite, unfortunately. If there is a flaw in the choice of birding spots, then it follows that the birds themselves are not adequately represented. Since too many good areas are missing, you will be out of luck if you rely on this book to find Northern Fulmar, Audubon Shearwater, European Wigeon, Curlew Sandpiper, Ruff, Lesser Black-backed, Thayer's Black-headed and Ivory Gulls, Fish Crow (!) or Spotted-breasted Oriole — none of them are listed anywhere! Just imagine how many more species there must be that may be in the book somewhere but not listed as often as they should be at the best areas. At the same time a lot of space is wasted on many of the more mundane species which are easy enough to find without

a book. The author, who can hardly be considered a birding expert, simply reprints information on birds that might be included on a location's brochure or checklist. And, as many birders are aware, checklists of birds from national wildlife refuges and national forests can be notoriously inaccurate. This is reflected in this book's very dubious advice that these species are to be expected: Barnacle Goose in Pennsylvania, Ferruginous Hawk in Illinois, Black-billed Magpie in West Virginia, Hawk, Great Gray and Boreal Owls regularly in Wisconsin, Western Wood Pewee in Mississippi, Bachman's Warbler and Skua in Virginia, Northern Three-toed Woodpecker in southern Indiana (!), Cinnamon Teal in three eastern states, Red Phalarope and Black-legged Kittiwake in Kentucky, etc. It now hardly seems important that the numbered key maps for each state are impractically sparse in detail and seldom sensibly or clearly coordinated with the locations in the text.

In the past few years there has been a proliferation of bird books on various subjects. Unfortunately in too many cases neither the authors or publishers are turning out quality material, even though some of these books sell well enough to an uninformed birding public. The only advice I can give is to assume a bird book is guilty of faults until proven innocent, and to be especially suspicious of books like this one that favor the word "birdwatcher" over "birder."

Kim Eckert



PURPOSE OF THE MOU

The Minnesota Ornithologists Union is an organization of both professionals and amateurs interested in birds. We foster the study of birds, we aim to create and increase public interest in birds and promote the preservation of birdlife and its natural habitat.

We carry out these aims through the publishing of a magazine, **The Loon**; sponsoring and encouraging the preservation of natural areas; conducting field trips; and holding seminars where research reports, unusual observations and conservation discussions are presented. We are supported by dues from individual members and affiliated clubs and by special gifts. The MOU officers wish to point out to those interested in bird conservation that any or all phases of the MOU program could be expanded significantly with gifts, memorials or bequests willed to the organization.



SUGGESTIONS TO AUTHORS

The editors of **The Loon** invite you to submit articles, shorter "Notes of Interest" and black/white photos. Photos should be preferably 5x7 in size. Manuscripts should be typewritten, double-spaced and on one side of the sheet with generous margins. Notes of interest should be generally less than two typewritten pages double-spaced. If reprints are desired the author should

so specify indicating number required. A price quotation on reprints will be sent upon receipt of information.

Club information and announcements of general interest should be sent to the Newsletter editor. See inside front cover. Bird-sighting reports for "The Season" should be sent promptly at the end of February, May, July and November to Kim Eckert. See inside front cover.

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(Drawings by Dana Gardner)

The LOON

WINTER 1979

VOLUME 51 — NUMBER 4



The LOON Minnesota's magazine of birds, is published four times each year by the **Minnesota Ornithologists' Union**, the statewide bird club. Permanent address: J. F. Bell Museum of Natural History, University of Minnesota, Minneapolis 55455. Anyone interested in birds may join. Any organization with similar aims may affiliate. All MOU members receive our two quarterly publications: **The Loon** and the **MOU Newsletter**.

MEMBERSHIPS AND SUBSCRIPTIONS: Paul Egeland, 12 East 67th Street, Minneapolis, Minnesota 55423. To join the MOU and receive both MOU publications, send \$6.00 for a regular yearly subscription. Or other classes of membership that you may choose are: Family \$7.50 yearly; Contributing \$10 yearly; Sustaining \$25 yearly; Life \$100. Canadian and Foreign Subscriptions: \$10 yearly. Also available: back issues of **The Loon** (\$1.50 each ppd.) and MOU checklists of Minnesota birds (minimum lots of 20 for \$1.50 postage paid). Gifts, bequests, and contributions to the MOU Endowment Fund should also be sent to the treasurer.

EDITOR OF THE LOON: Robert B. Janssen, 10521 S. Cedar Lake Rd., Minnetonka, MN 55343 (phone 612-546-4220). The editor invites articles, short notes, and black/white illustrations about birds and nature. See back cover for details.

"The Season" section of **The Loon** publishes reports of bird sightings throughout Minnesota. We particularly invite reports from parts of the state that have been neglected or covered lightly in past reports. To become a contributor to "The Season," request the report forms from the **EDITOR OF "THE SEASON," Kim Eckert, 9735 North Shore Drive, Duluth, Minnesota 55804. (phone 218-525-6930).**

EDITOR OF THE MOU NEWSLETTER: Mrs. Marlyn Mauritz, 6930 Tecumseh Lane, Chanhassen, MN 55317. Publishes announcements and reports about activities of the MOU and its affiliated clubs. (Club officers should keep both MOU editors informed.)

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WHITNEY EASTMAN 1888-1979

Minnesota Ornithologists Union members lost a very dedicated friend in the death of Mr. Whitney Eastman who died on December 3, 1979 in his 92nd year in the community hospital in Boca Raton, Florida. Most of us knew Whitney best as an ornithologist and conservationist since his avocational activities in these fields had great impact in furthering popular interest in all environmental subjects. Personally I recall with great appreciation his help in securing extensive financial aid in the building of the west wing of the University Museum then known as the Minnesota Museum of Natural History. His effective leadership in conservation work was recognized nationally in his being appointed to the Board of the National Audubon Society. As a life member of the National Executive Board of the Boy Scouts of America, he was the recipient of the Silver Buffalo, Scouting's highest award for distinguished service to boys. Locally he served Scouting as president of the Viking Council and he was a Board member of the Metropolitan Parks Foundation. His name is perpetuated in the dedication of the nature center in Elm Creek Park as the Whitney Eastman Nature Center.

No doubt one of Whitney's greatest personal satisfactions came from his enthusiastic pursuit of his hobby of bird identification. This search led him on birding trips encompassing all the continents of the world on which he compiled an enviable list of 2308 species including a sighting on March 3, 1950 of an Ivory-billed Woodpecker, a species that may now be extinct. He was a member of numerous bird clubs including life memberships in the Wilson Ornithological Society, Minneapolis Audubon Society and the Minnesota Ornithologists Union and he served as

the M.O.U. president in 1951-52. He always enjoyed retelling bird experiences and comparing notes with other enthusiastic birders.

His interest in birds, however, was only one of the many facets of Mr. Eastman's productive career. He was born in Fort Ann, New York on April 24, 1888 and was graduated from Dartmouth College in 1910; was a past national president of his fraternity, Sigma Phi Epsilon; and at the time of his death he was president and secretary of his class. As an industrialist, he was engaged in the linseed oil, soybean and organic chemical industries. His early career years were spent in Milwaukee, Wisconsin. After 1939 he served as vice president of the Archer-Daniels-Midland Company in Minneapolis and later as vice president of General Mills Inc. An early pioneer in the soybean industry, he organized the National Soybean Processors' Association and served as president. He wrote **The History of the Linseed Oil Industry in the United States**. He was one of the founders of the National City Bank of Minneapolis serving as a board member until 1976.

Certainly the ending of such a long and constructive life should not be the occasion for sadness but one for celebrating the many contributions Whitney Eastman made to his fellowmen and to the worthy cause of environmental protection.

He is survived by his wife, Karen Eastman; a daughter, Mrs. Morrow Peyton; three grandsons; three great grandchildren; two brothers, Bryan of Florida and Benjamin of Texas; and a sister, Mabel French of Florida. A memorial service was held in the Hennepin Avenue United Methodist Church in Minneapolis on Tuesday, December 11, 1979.

W. J. Breckenridge

WAS IT A BLACK-HEADED GROSBEAK?

Robert B. Janssen

The Black-headed Grosbeak is an accidental species in Minnesota. The following observation by a number of Twin City area birders shows the problems involved in identifying a fall female. Hybrids between this species and Rose-breasted Grosbeaks occur. Might this be what we saw?

On August 19, 1979, I received a call from Tom Malone over the Rare Bird Alert, informing me that he had observed a female Black-headed Grosbeak about noon in the T. S. Roberts Bird Sanctuary in Minneapolis. Here is his write up of that observation:

"On the afternoon of August 19, 1979, Dr. Robert Neal and I observed on three separate occasions a female Black-headed Grosbeak at Thomas Sadler Roberts Bird Sanctuary near Lake Harriet. The sightings were at 12:30 p.m. on the "main trail" between it and the Lakewood Cemetery fence. Each sighting was at a distance of between fifteen and twenty-five feet. The atmospheric conditions were overcast with a slight intermittent drizzle. The temperature was approximately 70 degrees Fahrenheit with a slight variable breeze. Dr. Neal was equipped with 7 x 35 Bushnell binoculars, and I with 7 x 50 Bushnells. The wild food crop, particularly berries, was excellent, and many American Robins and Rose-breasted Grosbeaks were evident. The bird was not immediately identified but both Dr. Neal and myself agreed that it was a grosbeak, albeit of a distinctly "buffy" hue. We observed the bird for a duration of approximately one minute and both noted the striped crown, very faint, fine streaks on the sides, and the buffy area extending down to the tail coverts. We noted a flash of lemon-yellow upon its flight. The second sighting of the bird occurred approximately three (3)

minutes later and was for approximately two (2) minutes. The same field marks were again observed against the only field guide present, Robbins, et al, **Birds of North America**. The bird was tentatively identified at this time as a Black-headed Grosbeak. The third and final sighting occurred five (5) minutes later, during which time we observed numerous male and female Rose-breasted Grosbeaks. We both agreed that "our" bird differed noticeably from this species. The third sighting provided the same field marks, from a range of approximately 20 feet.

The striping along the sides was **extremely** faint, most unlike the familiar bold stripes of the Rose-breasted. There was not a trace of rose upon the breast, which was clear and buffy in color. The buffy coloration extended down along the sides through the belly to under-tail coverts. The crown stripe was light buff in color and faintly streaked. Both Dr. Neal and I noticed lemon-yellow when the bird took flight, but, of course, for an extremely limited period of time.

I birded in California for a period of thirteen years and was, until my departure in 1975, very familiar with the Black-headed Grosbeak, which is a common species in that state. The species has also been previously observed by Dr. Neal, who has identified it in the mountains surrounding Las Vegas, Nevada, on at least one similar occasion. Both of us are quite

satisfied that our sighting was indeed an accidental occurrence of the Black-headed Grosbeak." **Thomas P. Malone, 900 Midland Bank Bldg., Minneapolis, MN 55401.**

A number of birders, including myself, Ray Glassel, Don Bolduc, Paul Egeland, Bill Pieper, Dick Ruhme and Ron Huber saw what is presumed to be the same bird as the one documented above. I saw the bird at 3:15 p.m. on the 19th and my notes taken at the time of observation are very similar to the description given by Malone, above. Here are my notes:

Was observing a juvenile or female Rose-breasted Grosbeak sitting on a dead twig about 20 yards off of path - another grosbeak flew to same spot - chasing the Rose-breasted away.

Description: Typical grosbeak bill; Head - boldly marked, appeared very dark - crown light - lightly streaked with brown - stripe over eye - dark brown - darkbrown cheek patch extending below eye - joined white of throat - breast and belly buffy orange - lightly streaked with brown streaking extended down flanks - under belly lighter - upper parts brown streaked with darker brown. Tail all light brown - no white could be seen. Wings brown with two narrow wing bars broken in segments - some white (2-3 spots) approximately 1/2 inch up from ends of primaries as bird sat with wings folded.

Bird sat in same spot for about five minutes preening and picking at breast and under wings. Could see yellowish under wing at shoulder, as bird picked at and lifted wing. Bird finally flew about 10 feet and could see yellowish wing linings.

While I was observing bird Don Bolduc came up and we used Robbins Field Guide to verify sighting. The only thing that bothered us was that Robbins Guide showed lower part of cheek patch separated by white - almost like a whisker mark. We did not observe this.

In checking other references Godfrey - "Birds of Canada" and Peterson

Field Guide this is not mentioned or illustrated.

The main field marks of the bird were the bold (dark) head markings and buffy breast and belly - the streaks were very fine on the breast and flanks and did not resemble the heavier streaks of the Rose-breasted Grosbeak.

On August 20, 1979 I checked Rose-breasted and Black-headed Grosbeak specimens at the Museum. After careful checking of fall specimens of both species, I was more convinced that the bird at Lake Harriet Refuge was a Black-headed Grosbeak - possibly a young male. (I based this on talking with Ray Glassel after he heard the bird sing). The specimens of fall Rose-breasted Grosbeaks all showed heavy streaking on breast and varying amounts of tan or brown coloration on breast (See Fig. 1). None showed the extensive tan color from throat to legs seen on the bird at Lake Harriet. Those that did were labeled Black-headed Grosbeak. I found one specimen that closely approximated the bird seen. Heavy dark face and head markings tan breast and belly with fine streakings that did extend across breast and down sides - also "yellow" color of under wing was rather dull - not bright - these characters were noted in the bird seen (See Fig. 2).

Ray Glassel observed a bird of similar description at 6:00 p.m. on August 19th in the same general area. He heard the song and call note of the bird and here is his description of the note:

"The call note was not the high pitched "eek" or "hip" of the Rose-breasted, but rather a softer note that I would phrase as "pip" or pit." If the females do not sing this would indicate a young male and therefore probably Black-headed, as young Rose-breasts should have pink at the bend of wings."

Jon Dunn writing in the "Western Tanager" Volume 43, No. 6, March, 1977, has this to say about Rose-breasted vs. Black-headed Grosbeak identi-

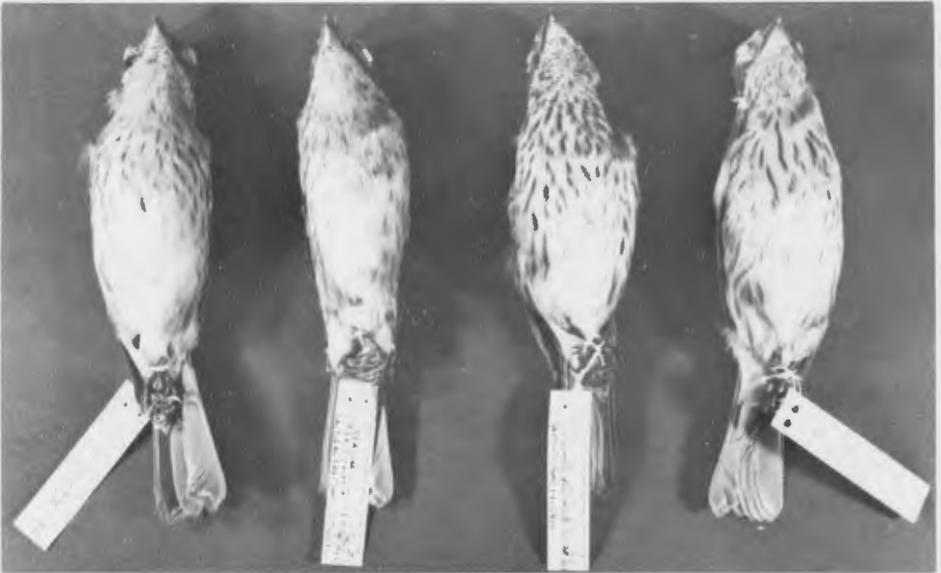


Figure 1. Rose-breasted Grosbeak specimens from Bell Museum of Natural History, Univ. of Minnesota. From left to right, Imm. male (#22847), 10 Sept. 1965, Eau Claire, Wisc.; Imm. male (#21610), 10 Sept. 1962, Stearns Co., Minnesota (this bird is labelled Pheucticus only); Imm. female (#21630), 10 Sept. 1962, Eau Claire, Wisc.; Imm. female (#30704), 24 Aug. 1976, Ramsey Co., Minnesota.



Figure 2. Black-headed Grosbeak specimens from Bell Museum of Natural History, Univ. of Minnesota. From left to right, female (#2910), 2 May 1896, Palo Alto, Calif.; female (#2908), 2 May 1896, Palo Alto, Calif.; Imm. male (#21060), 24 July 1965, Gregory Co., South Dakota.

fication in California:

"Rose-breasted Grosbeaks are rare but regular vagrants to California during late spring and autumn, and usually a few winter at feeders and other thickly-vegetated locations along the coast. Statistically, in fact, the Rose-breasted is more likely than the Black-headed in winter, so every female and immature sighted should be examined with care. The mature males of these two species present no problems of identification. The young male Rose-breasted basically resembles the female, but it normally has a trace of **rosy color** in the breast - and in flight the **bright pink underwings** will immediately separate it from any plumage of the Black-headed.

Telling the females apart, however, is another matter. Not only are the birds very similar, but the problem of identification is compounded by the fact that the plumage is somewhat variable, and the key characters emphasized in the field guides are not entirely reliable. Apart from the call note, no single character is, in itself, diagnostic — so the birder must rely on a combination of characters to identify the bird in question. This is especially the case if the bird shows ambiguous characteristics.

Probably the best field mark on the female Rose-breasted is the **heavy dark streaking** running vertically across the **whitish breast**. The Black-headed tends to have a more **buffy breast**, with **very fine streaks** — **restricted only to the sides of the breast**. Also, the head stripes of the Rose-breasted tend to be **whiter** than the **buffy** stripes of the Black-headed. In addition, the Rose-breasted has slightly more **prominent back streaks**, and the wing linings are a slightly brighter **saffron hue** — as opposed to the **duller buff** wing linings of the Black-headed.

Unfortunately though, these marks are not always definitive. The female Rose-breasted can sometimes have very thin streaks across the breast that has a slightly buffy cast. And conversely, the breast of a Black-headed can

become quite worn (in late spring and summer), so that the buffy cast disappears. Logically, then, some birds must remain unidentified. Unless they are heard . . .

Although both species give a whistled **wheet** flight-note, the regular call notes of the two birds are diagnostic. The call note of the Rose-breasted a sharp "eek" is much more high-pitched and squeaky than that of the Black-headed. If one learns the call of the common Black-headed Grosbeak then the call of the Rose-breasted should sound quite distinctive and provide confirmation of identification."

There are two problems with the above, first the illustration that accompanies the description shows a female Rose-breasted and a female Black-headed. The Black-headed shows light streaks going all the way across the breast which is contradictory to the statement in the text which says the streaks are "restricted only to the sides of the breast." Second, Dunn does not mention the possibility of hybrids which would negate the statement that the call notes of the two birds are diagnostic. (See Tordoff and Oehlenschlager comments on hybrids below).

Don Bolduc observed grosbeaks at Roberts Sanctuary from August 19 to 25 and here are his comments:

"In response to a call that a Black-headed Grosbeak was seen in T.S.R. Sanctuary on the north end of Lake Harriet, Minneapolis, I visited said refuge every day from August 19, 1979 Sunday through Saturday, Aug. 25. Sometimes I was there in the evening, sometimes afternoons, and a couple times in the morning.

I have come to the conclusion that immature grosbeaks can vary greatly in plumage. In looking over the grosbeaks I have seen the following:

BEAKS: dark gray to pale gray;
CROWN STRIPE: wide or narrow; buffy or white with dots on it, never going all the way to the nape. **MARGIN** above the eye line almost black to light brown, varying a little in width;

EYE LINE: white to light tan; EAR PATCH: varied from light brown to dark brown; shape oval; THROAT: white to a very light tan; BREAST: from buff to white with small spots or heavy streaking; sometimes rosy; SIDE AND FLANKS: buffy to tan with heavy streaking or light streaks; BELLY: varied from white with no streaks to light tan or buff; WINGS: brown to black with two white wingbars, sometimes abbreviated, sometimes with white spots on primaries, other times not; BACKS: mostly striped to two-toned brown, at times the heavy stripes were dark brown to black; UPPER SURFACE OF TAIL: dark brown; UNDER WING LININGS: lemon yellow on some birds; rosy red on others.

It is to be kept in mind that some of the observations were made when there was heavy cloud cover to misty rain, thereby increasing the chance of mistaking some of the colors. Several times I heard the typical "eek" call note and a few times I heard the "eh" call note. Also there was a short whistled "wheo."

Because the Black-headed Grosbeak is an accidental species in Minnesota and it is obviously difficult to separate immature birds from immature Rose-breasted Grosbeaks all of the above written details and notes taken in the field were submitted to the Minnesota Ornithological Records Committee (MORC) for verification. The committee turned down the observation based on mainly the comments by Dr. Harrison Tordoff as follows:

"Here's one where all of the participants know as much or more than I do about the "diagnostic" features involved. I've gone over Bell Mus. specimens with Bob Janssen and Don Bolduc. I think perhaps 95% of individual fall *Pheucticus* are safely identifiable by sight and sound given skilled observers. But I think there are some **not** safely identifiable (in fact, hybrids are regular and by definition not identifiable! What if you saw a hybrid?). My conservative instinct is to

not try to force these records into pigeonholes, unless they fit with no uncertainties. In contrast, probably, to most MORC members, I think our conscientiousness and competence is probably directly proportional to the number of difficult sightings we are willing to leave unresolved and unresolvable." **H. B. Tordoff, 13 Sept. 1979.**

And also the comments by Dick Oehlenschlager as follows:

"While the plumage and vocalization notes indicate a Black-headed Grosbeak was very likely observed, no evidence is presented which eliminates a hybrid or intergrade Black-headed - Rose-breasted Grosbeak from consideration. This possibility seems strong based upon the probable geographic origins for likely wanderers to Minnesota. My experience with banding and handling hundreds of T.V. tower-killed Rose-breasted Grosbeaks and collecting a large series of Black-headed Grosbeaks from west-central South Dakota leads me to believe that the range of plumage variation even within the same sex and age group is so great that breast streaking, degree of buffiness and head striping might well be ignored in field separation of Rose-breasted and (hybrid zone, at least) Black-headed Grosbeaks. Even in the hand, some individuals seem quite unidentifiable as to species. Call notes or other vocalizations would not necessarily remove doubt about possible hybrid ancestry for this bird — and hybrids are common at least in South Dakota. My bias is that short of seeing all characters on an adult male 100% Black-headed Grosbeak, I would be prone to not attempt field separation of many fall females and immature males even if I were suspicious about their appearances. I don't really accept the field guides and their oversimplifying the identification of these birds!" **Dick Oehlenschlager.**

Thus, it can be seen that the positive identification of immature birds is most difficult. I am not certain be-

yond a doubt from this observation that I have the Black-headed Grosbeak on my Minnesota Life List and this is probably true of the other observers. As Dr. Tordoff states, some sight observations are unresolvable. Hopefully

some day as Dick Oehlenschlager says I will see a "100% male Black-headed Grosbeak" and then I will have it on my Minnesota Life List. 10521 S. Cedar Lake Road, Minnetonka, MN 55343.

NEST SWITCHINGS AMONG AMERICAN ROBINS AND EASTERN PHOEBES AT ITASCA STATE PARK

David F. and Jean M. Parmelee

In Volume 50(40) of the *Loon*, we reported on a pair of American Robins that during the 1978 breeding season had successfully raised two consecutive broods in the same nest beneath the porch eaves of our cabin at the University of Minnesota Forestry and Biological Station at Lake Itasca. Since robins on rare occasions are known to repair and use their old nests of previous years, we hoped that our porch pair would return in 1979 and give us a repeat performance. Although robins, thought not to be our special birds, investigated the porch nest from time to time, none went so far as to replenish the structure with fresh material. Instead, a pair of Eastern Phoebes claimed the old robin's nest late in the season when other phoebe pairs at the station were laying their second clutches (phoebes are double brooded as a rule).

We had seen phoebes at the porch site occasionally in mid-June, but not regularly until the 28th when we no-

ticed a few widely scattered bits of green moss attached to the outer sides of the robin's nest — which had deteriorated very little under the protective cover of the eaves. Except for a fairly thick pad of moss and pliable plant fibers placed loosely at the bottom of the nest's inner cup, hardly any additional vegetation had been added by the time the first egg arrived on 30 June. The second appeared on 1 July; the third between 07:15 and 13:00 hours on 2 July, the fourth and last between 08:00 and 12:30 hours on 3 July. The incubating bird's head and tail barely showed above the rim of the deep-cupped nest which, dimension-wise, and at the time, seemed all the more appropriate for a robin-size bird. We noticed that the incubating phoebe flicked or wagged its tail as frequently in the nest as when perched on tree limbs near by.

Young from the first two eggs laid hatched between 19:00 hours on 17 July and 07:30 hours on 18 July; one

from the third egg laid hatched between 07:30 and 10:30 hours on 18 July; the fourth egg had no visible embryo. We are not certain when incubation actually began. We do know that the third egg was in the nest at least 15 days, 18.5 hours, at most 16 days, 6 hours, or approximately 16 days (\pm 6 hours).

On 31 July, at a time when the young were well feathered but not quite fledged, we handled them and found that they weighed 18.8, 18.4 and 17.2 grams respectively. The nest and young, we soon discovered, were alive with tiny mites. Despite these pests, the young fledged apparently in good condition. All three were in the nest at dusk (21:00 hours) on 2 August, according to Mr. James Fry, a student from New York City, who volunteered to check the nest during our absence. Two young were still in the nest at 07:30 hours the following morning, 3 August, but these flew off when Fry approached the site. Presumably one had left shortly before. The fledging period for the three was 15-16 days, or approximately that of the incubation period.

Whereas our porch phoebes had occupied an old robin's nest, a pair of robins earlier that year had claimed an old phoebe's nest on the north side of the Itasca campus. The nest was securely attached to an outer light fixture of the campground bathhouse; it had been occupied by phoebes in 1978 but not in 1979. Ms. Jeanne E. Chang (1979), stated that a robin had carried pine needles to the nest on 10 May, but evidently no activity had taken place at the site the following day during a snow storm. Nor was activity noted during more favorable weather on the 12th. When Ms. Chang returned to the site next on 18 May, she not only found a well formed nest of mud and pine needles but also noted that it contained three eggs that had been laid during the time the class was off campus on a week-long field trip.

Unlike our porch phoebes that had

added material to their appropriated robin's nest, the much larger robins at the bathhouse site found it necessary to build a large nest atop the phoebe's. And unlike our phoebes, the robins did not succeed in fledging a brood. Two young robins hatched some time during 30-31 May, and the third some time during 31 May-1 June, but two of the three young were missing by 2 June. Ms. Chang, who left the campus that day, thought that a Common Crow might be responsible, since one had been seen frequently close by. She had no proof of this, but some predator had taken the young, for shortly thereafter upon checking the nest ourselves we found the nest empty and deserted. Neither crows nor robins were about.

According to Howell (1953), robins do not often utilize the nests of other birds, and rarely use moss for their own nests. It has long been known that phoebes commonly use old nest sites of their species, either forming new layers on the old nests or constructing entirely new ones close to the old. It appears that the nest sites, rather than old nests, play a more important role in site selection, though such a hypothesis is difficult to test.

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BLUE-GRAY GNATCATCHERS NEST IN OTTER TAIL COUNTY

Steve Millard

The Blue-gray Gnatcatcher was considered to be a summer resident in southeastern Minnesota only. The following carefully documented nesting record in Otter Tail County indicates the species is expanding its breeding range in the state.

June 5, 1979 — Cloudy, S-SE winds 10-15 mph, low 70's. I arrived in Maplewood State Park about 7:30 p.m. with the intention of locating Cerulean Warblers. Two days earlier I'd found a singing male close to the area where one had been seen in May of 1978. Working through the park, I stopped in a "likely looking" area with a swamp on one side of the road, and a mature deciduous hillside on the other. The swamp is in an advanced stage of succession, containing many shrubs, a few small trees, and several inches of water. The wooded hillside opposite the swamp consists of American elm, bur oak, sugar maple, basswood, some poplar and birch, and ironwood.

After perhaps two minutes of looking and listening, I routinely put my binoculars (Leitz 10 x 40) up to check the movement of a small bird just off the road on the edge of the swamp. The distance was no more than sixty to seventy feet. The bird was very small and slender, with a long tail and prominent white eye-ring. The outer tail feathers were white and contrasted strongly with the inner black ones. These features, in combination with the slender bill, blue-gray head and back, and unbarred dull brown wings confirmed the species as a Blue-gray Gnatcatcher.

During the first seven minutes of observation, the bird sat quite still just above eye level about forty feet from me. I detected a soft song, dif-

ficult to describe, coming from this tiny bird. To me it sounded similar to the random whistles and squeaks of a shrike or Gray Catbird, but with some Ruby-crowned Kinglet-like warbling thrown in. Even at that close range, the song was very soft; it could easily have been missed with several other species calling and singing nearby. The bird finally stirred and began feeding in the swamp vegetation, occasionally flying into an elm over the road, but quickly returning to the swamp to continue feeding. At times it was actually below eye level, only three to five feet above the water. This seemed rather unusual to me, since I was accustomed to seeing this species high in the trees in SE Minnesota and elsewhere. It frequently called, giving various squeaks and pips, but only two or three times did it give the typical nasal buzz associated with its kind. The characteristic sideways jerking of the tail added to the animated restlessness of the bird.

At approximately 8:40 p.m., I was preparing to leave the area after some thirty minutes of observation, when I noticed another small bird near the first one. It was another gnatcatcher, not quite as neat-looking as the first. The eye-ring was prominent, but not quite as distinct. The ventral portions were more smudged, and the lower back and rump were a lighter, whitish blue-gray. Subsequent consultation of a few references confirmed my suspi-

cion that this was a female. This species is very small and such differences could only be noted at close range. At times the birds were as close as eighteen to twenty feet. I could move freely along the roadway without disturbing them at all. Thinking that this could be a mated pair, I decided to return the following day.

June 6 — Mostly sunny, calm, low 70's. I returned to the gnatcatcher area at 6:45 p.m. with Diane Hastings. We looked and listened carefully for about forty-five minutes without finding the birds. A chorus of frogs and many species of birds made it difficult to listen for the gnatcatchers. At 7:35 Diane yelled to me from 150 yards away, and I hurried down the road. She had located the birds very high in a large bur oak by carefully listening for them. Almost immediately I noticed one of them fly to a small, neat, cup-shaped nest and add some material to it. They were very vocal while working on the nest and while foraging for food between trips to and from it. The characteristic nasal buzz was given frequently.

The nest, similar in appearance to that of a hummingbird, was approximately fifty feet from the ground in the bur oak. The oak was roughly seventy-five feet tall and some thirty feet from the road. The nest was situated in the seat of a crotch with branches probably one inch or so in diameter, with the entire Y angled about forty-five degrees. It appeared to be nearly finished. With the spotting scope I could see bits of spider webs used to anchor the base of the nest to the lower arm of the Y. Lichens or similar materials were incorporated to decorate/camouflage the outer walls. The estimated height and width of the nest was slightly over two inches. The rim diameter seemed slightly smaller than the center; analogous to cutting the top one-third from a tennis ball which, incidentally, would be about the size of the nest. Both birds shared nest-building chores and made frequent flights to the

swamp to gather materials. They were also observed removing material from an old nest (probably of their own making) in a nearby tree and using it. Several references I checked mention this interesting behavior.

During five weeks of study, virtually all observations of the gnatcatchers took place from a paved road in an area of light traffic in the northwest portion of the park. What traffic there was didn't bother the birds. A Bushnell 20-45x spotting scope was employed for close observation of the nest; binoculars were used to follow local movements. A natural opening through the branches with no intervening leaves allowed a clear view of the nest at all times. Angle of observation was approximately forty to forty-five degrees, distance about 125 feet. The scope was set up in the same place on each visit. Due to relatively heavy vegetation and good numbers of mosquitos it was impractical to leave the road while viewing the birds.

June 8 — Partly sunny, wind light, 44 degrees. I arrived at the nest site at 5:45 a.m. The birds were not in the nest tree; the nest appeared complete. I found the birds feeding in the swamp 150-200 feet from the oak. I approached the male to within twelve-thirteen feet as he was singing. The song was exceedingly soft and quiet; at three times that distance it would probably have been inaudible to most human ears.

I returned in the evening with Gerry Winkelman and Daryl Jorud. We found the gnatcatchers in the nest tree, but no trips to the nest were noted. Both birds fed actively in the oak and occasionally an adjoining basswood and sugar maple, usually fifty feet or higher and in the vicinity of the nest. Strong sunlight and no wind enabled us to separate the sexes with binoculars, although throughout several weeks of observation this was not usually possible except with a spotting scope.

June 10 — Clear, mild. Diane and I arrived at the nest at 8:30 a.m. We

remained there for about three hours. At 11:00 o'clock we were joined by Gary and Marion Otnes and their son Mark. During three hours of observation, the female came to the nest at least seven times and remained on it for several minutes each time. She appeared to be pushing against the inside of the nest bowl in an action that I at first interpreted as final shaping of the nest. I believe, however, that egg-laying was occurring at this time; if so, she was probably settling over or rearranging eggs. Both birds remained in the oak the entire time, except for one brief trip to a neighboring tree by the male.

June 12 — Sunny, 75 degrees. I arrived at the nest site at 7:15 p.m. The female was on the nest, the male feeding nearby. She left the nest at 7:28, back at 7:30. She left again at 7:42, was back 4½ minutes later. I left at 7:55 with the female on the nest.

From June 12 through 23 the nest was checked by me on five different days at two to three day intervals. Both birds shared in incubation, but eighty to ninety percent was by the female. Several times per hour the male would bring her food. Occasionally she would leave the nest unattended for up to six or seven minutes at a time while she foraged for food. During incubation both birds fed in the nest tree or close to it. When switching at the nest, the changeover occurred quickly, with never more than five seconds elapsing before the incoming parent settled on the eggs.

The male was extremely possessive and defended the oak vigorously against other species. No other birds nested in the tree the gnatcatchers had chosen. He usually remained in the oak, generally forty to sixty feet high, and valiantly attacked almost every other bird that entered his area. Red-winged Blackbirds received the brunt of his aggression, although the following were also singled out for harassment: Hairy and Downy Woodpeckers, Northern Oriole, Rose-breasted Grosbeak, White-breasted Nut-

hatch, and Least Flycatcher.

June 24 — Sunny, low 70's. I spent about an hour at the nest site at midday. During this time there was a lot of activity at the nest. The eggs had apparently begun hatching earlier that morning. Gene Wells and Tom Smith, local birders who do some bird photography, had been taking pictures of the gnatcatchers early in the morning, and they reported much activity at that time.

On several occasions, the male removed eggshells or fecal sacs from the nest. He brought small insects to the female. Some of these were consumed by her, and she appeared to feed the others to the young. Because of the steep angle of observation, it was sometimes difficult to determine exactly what was happening in the nest. Both birds continued to share in the brooding. As usual, the female sat on the nest most of the time, raising up frequently to re-settle herself over the young.

Through the end of June several routine checks were made on the gnatcatchers. Some very bad weather with high winds, heavy rain and hail passed through the park during this period, but with no apparent ill effects to the birds.

Beginning June 29, the young were visible over the nest rim when being fed. By early July the female was doing all the brooding. As the days progressed, both parents foraged further from the nest, at times leaving the young unattended for fifteen minutes or more. On July 4 the young were heard begging for the first time. The most seen at once was three, although I thought there could possibly be four or five. Clutch size in this species varies from three to seven, but four or five is normal. The parents would fly thirty yards or more from the oak before releasing fecal sacs, which were dropped from a height of at least forty feet. Several times after feeding, I watched the female stand on the nest rim and wait for one of its young to eject a fecal sac, which she imme-

diately caught in mid-air and carried off.

On the fifth and sixth of the month the young began moving about and exercising more. In this group, as with many species, one particularly vocal and active individual was noted.

July 7 — Overcast, little wind, 70 degrees. I picked up Gerry Winkelman and Gary Otnes and we arrived in the park at 7:15 p.m. and remained for about twenty minutes. While I set up the scope, they located two fledglings, a few minutes later I found a third newly-fledged Blue-gray Gnatcatcher. One was close to the road in a fallen birch. The other two were quite high in a maple next to the nest tree. The one nearest us moved only a few feet up the birch while we were present, but the others made numerous short flights in the maple. Finding the young was quite easy because they were very vocal and the parents were constantly bringing them food. The adults stayed close to their offspring while finding food for them. We concluded there were just three fledglings.

The young gnatcatchers were close copies of the adults, having much the same colors and patterns. At this

stage, of course, the tails were extremely short—only one-half to three-quarters of an inch — but with the black center and white outer feathers. The eye-ring was also very prominent. Age at fledging was thirteen days.

Two subsequent checks of the area were made. Both times the family was located in the same area as above. They were last seen on July 11.

The gnatcatchers were also photographed by Lloyd Paynter and Steve Blanich on July 1, but photos suitable for reproduction were not obtained.

As a breeding species, the Blue-gray Gnatcatcher in Minnesota has been found nesting as far northwest as Grand Lake in southeast Stearns County (Bob Janssen, personal communication). The Otter Tail County record is approximately 115 miles northwest of that location. I do not view this as an extension of range, but rather as an established breeding species waiting to be discovered. Suitable habitat exists in Otter Tail County for other southern Minnesota "specialties." If they breed here, some diligent searching should turn them up. **503½ W. Spruce, Fergus Falls, MN 56537.**

THE M.O.U. 300 CLUB

Because of problems with the identification of the Black-headed Grosbeak seen at Lake Harriet Refuge in August 1979 (See article on page 164) a number of Minnesota Life Lists had to be adjusted. The following are the totals as of January 1, 1980.

Ray Glassel	344	Jo Blanich	319
Bob Janssen	342	Jerry Gresser	316
Harding Huber	339	Evelyn Stanley	314
Kim Eckert	338	Gary Otnes	311
William Pieper	337	Wally Jiracek	308
Ron Huber	335	Ruth Andberg	307
Paul Egeland	334	Henry Kyllingstad	304
Terry Savaloja	330	Doug Campbell	304
Dick Ruhme	330	Oscar Johnson	302
Liz Campbell	329	Gloria Wachtler	301
Jan Green	328	Dick Wachtler	301
Karol Gresser	323	Betty Campbell	301
Don Bolduc	322	Violet Lender	300
Bill Litkey	322		

THE 200 COUNTY CLUB

Two new counties were added to the list, Carver and Freeborn. My request in the last issue for Carver County was answered immediately by Kathy Heidel who sent in an impressive list totalling 218 species. On the last listing I mistakenly listed Joel Dunnette under Mower County. This has been corrected to Olmsted County, my apologies. We now have 29 counties in the "Club;" which will be next? Please keep me informed of changes in your totals.

Bob Janssen

County	Observer	# of Species	County	Observer	# of Species
Aitkin	Terry Savaloja	255	Marshall	Sarah Vasse	235
	Jo Blanich	237	Morrison	Pete Ryan	207
	Bill Pieper	212	Mower	Ron Kneeskern	216
Anoka	Ken LaFond	248		Rose Kneeskern	206
	Bill Pieper	221	Nicollet	Ray Glassel	201
	Ruth Andberg	217		John Frentz	200
Becker	Gary Otnes	214	Olmsted	Joan Fowler	216
	Marion Otnes	213		Ted Lindquist	213
Carver	Kathy Heidel	218		Phyllis Lindquist	213
Clay	Carol Falk	208		Vince Herring	212
	Lawrence Falk	206		Anne Plunkett	210
Crow Wing	Terry Savaloja	233		Joel Dunnette	205
	Jo Blanich	222	Otter Tail	Gary Otnes	268
Freeborn	Charles Flugum	212		Marion Otnes	249
Dakota	Ray Glassel	232	Ramsey	Liz Campbell	229
	Bob Janssen	201		Bill Pieper	224
Goodhue	Ray Glassel	228		Ray Glassel	202
	Bob Janssen	224	Rice	Orwin Rustad	222
	Bill Pieper	221	Rock	Kim Eckert	238
Grant	Kim Eckert	214	St. Louis	Jan Green	280
Hennepin	Bob Janssen	270		Kim Eckert	266
	Alvina Joul	263		Bob Janssen	259
	Ray Glassel	262		Bill Pieper	243
	Oscar Johnson	256		Ray Glassel	242
	Violet Lender	252	Scott	Ray Glassel	201
	Bill Pieper	251	Stearns	Kim Eckert	235
Lac Qui Parle	Micki Buer	231	Wabasha	Ray Glassel	204
	Chuck Buer	223	Wadena	Dick	
	Marion Otnes	213		Oehlenschlager	241
	Gary Otnes	212	Washington	Liz Campbell	203
	Bob Janssen	207	Yellow		
	Ray Glassel	201	Medicine	Gary Otnes	220
Lyon	Paul Egeland	251		Marion Otnes	220
	Henry Kyllingstad	251			

BALD EAGLE NESTING IN MINNESOTA

James Mattsson*
John Mathisen**
Karl Siderits***

This paper summarizes Bald Eagle nesting surveys and other pertinent information relative to populations statewide. Mathisen (1963) first reported on the status of nesting eagles in the Chippewa National Forest. Mattsson and Grewe (1976) and Siderits (1977) have summarized the status of the Superior National Forest population. In 1973 the U.S. Fish and Wildlife Service began intensive searching for and monitoring nest sites outside of national forests in Minnesota, the results of which are reported here for the first time.

METHODS

The survey area consists of three sub-areas of responsibility, the Chippewa and Superior National Forests (Forest Service), and all other portions of the state (Fish and Wildlife Service).

Eagle nests are surveyed by airplane in mid-April to determine occupancy and again in early July to determine success. In April, nesting territories are recorded as ACTIVE if an adult is in incubating posture or if eggs are present, as INACTIVE if there is no evidence of activity, or as OCCUPIED if one or more adults are present but no activity is observed. Nests which are down or in poor condition also are recorded. In July, active nests are rechecked to determine the number of young produced. At this time most nestlings are adult-size and relatively easy to count. Searches for new or previously unknown territories are conducted as time and funds permit.

Management plans are developed for all nest sites within the National Forests. On lands outside the National Forests, ownership and habitat maps

are prepared for each nest site; management plans are prepared for certain of these sites, particularly on federal and state-owned lands.

RESULTS

Bald Eagles nested in 18 counties in 1979, ranging from the extreme southeast (Houston County) to the extreme north (Lake of the Woods County) (Table 1). The largest concentrations occur in Cass, Itasca, Beltrami and St. Louis Counties.

A total of 166 breeding areas was active in April (Table 2). Of these, 111 (67%) were successful in raising one or more young to an advanced stage (8-10 weeks).

A total of 196 young was produced, an average of 1.8 per successful nest.

Land ownership of 319 nest sites is shown in Table 3. Nearly three-fourths (237) of these are in federal or state ownership and are afforded protection through a buffer zone management strategy as described by Mathisen (1977).

DISCUSSION

Minnesota ranks third among the 50 states in number of breeding Bald Eagles; Alaska and Florida are first and second. Only recently, however, has this high ranking become evident. Grewe (1966) estimated the known Minnesota population not to exceed 25 pairs prior to the 1960's. Since that time the number of known pairs has grown to 166 in 1979. This increase probably is due mostly to an accelerated effort to search for nest sites, rather than to an actual increase in the population.

TABLE 1. County distribution of Bald Eagle breeding areas in Minn. in 1979.

COUNTY	NUMBER OF BREEDING AREAS		COUNTY	NUMBER OF BREEDING AREAS
Aitkin	3		Itasca	68
Becker	5		Koochiching	1
Beltrami	22		Lake	19
Carlton	1*		Lake of the Woods	3
Cass	46		Mahnomen	1
Chisago	1		Mille Lacs	2
Clearwater	5		Morrison	1
Cook	5		Ottertail	1
Crow Wing	6		Roseau	1*
Houston	2		St. Louis	27
Hubbard	4		TOTAL	224

*Nest structure present but not occupied since 1977

In addition to counties listed in Table 1, Bald Eagles formerly nested in Hennepin, Jackson, Marshall and Stearns Counties and along the Red River between Moorhead and Pembina, North Dakota (Roberts 1932). Gross habitat alteration for agriculture and urban development has made these areas unsuitable for nesting.

Nest success (67%) and productivity appear to be at levels approaching those of historical times, and are as high as in Alaska populations which have been relatively unaffected by man. From 1939 through 1946 Florida eagles were successful 72% of the

time (Broley 1947), and from 1963 through 1970, Alaska eagles were successful 63% of the time (Sprunt et al. 1973). The production of 1.2 young per active nest that we observed in 1979 is the same as that reported by Broley and is considerably higher than the 0.7 necessary to maintain stability in a population (Sprunt et al. 1973).

This high level of production should not be viewed with false optimism, however. There remains much to learn regarding age-specific survival and population recruitment. For example, low survival and recruitment conceiv-

TABLE 2. Bald Eagle Reproduction in Minnesota in 1979.

Survey Area	Number of territories			Total	Number of young	
	Occupied	Active	Successful (%)		Per Active Territory	Brood Size
Chippewa NF	86	78	53(68)	95	1.2	1.8
Superior NF	38	36	23(64)	40	1.1	1.7
Other	57	52	35(67)	61	1.1	1.7
TOTAL	181	166	111(67)	196	1.2	1.8

TABLE 3. Land Ownership of 319 Bald Eagle Nest Sites in Minnesota

	Number of Nests	Ownership					
		Federal	State	County	City	Private	Indian
Chippewa NF	201	122	51	10		18	
Superior NF	40	31	5			4	
Other	78	5	23	10	1	30	9
TOTAL	319	158	79	20	1	52	9
Percent		49.5	24.8	6.3	0.3	16.3	2.8

ably could offset high reproduction, resulting in a declining rather than a stable or increasing population (Grier 1979). Also, the continuing incursion of seasonal dwellings and industrial developments upon many remote nesting areas is insidious and difficult to evaluate. Many of these remote nest sites are on lands in other than federal and state ownership and are afforded little or no protection. Efforts are underway to contact land owners and provide them with sound management recommendations to safeguard and enhance these nest sites.

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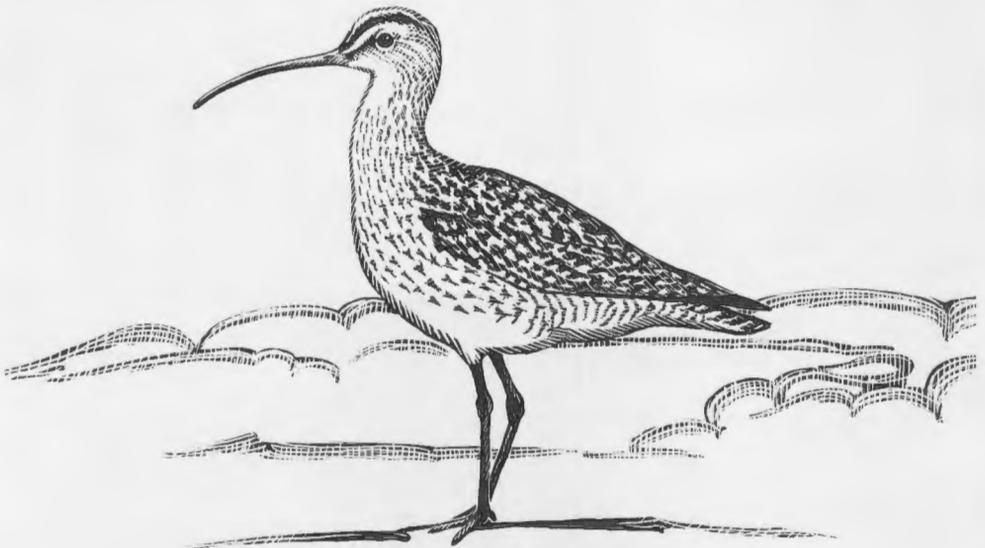
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- ** U.S. Forest Service, Cass Lake, MN
- *** U.S. Forest Service, Box 338, Duluth, MN



THE SPRING SEASON (March 1 to May 31, 1979)

Don Bolduc, Oscar Johnson and Dick Ruhme

For the greater part of this three-month period, most of Minnesota endured the "usual" run of weather we've experienced in recent years. That is, temperatures were cooler than normal, snow cover was heavier than normal and flooding was extensive in the Red River Valley. A few spurts of warmth in April gave us false hopes which were quickly cooled in early May. High lake levels and extensive casual water in fields seemed to scatter migrating shorebirds rather than concentrate them, but a mid-May cold front across the state stalled the movement of some late arriving passerines. On May 11, 12 and 13, thousands of migrating warblers, swallows and other species were killed by passing cars along US Highway 61 south of Lake City as cool weather delayed the normal insect hatch and forced them into a frenzy of feeding on low level insects along the roadside.

Despite the slow and fitful arrival of Spring, it was an eventful and interesting season. Some 83 observers reported a total of 298 species, including 14 casuals or accidentals and one new entry onto the state list.

Noteable sightings were fairly evenly distributed throughout the state. Among them were Snowy Egrets in Lac Qui Parle and Nicollet counties, a Little Blue Heron in Dakota, a Gyrfalcon in Aitkin, a Long-billed Curlew and Say's Phoebe in Wilkin. That perennial hot spot, Duluth recorded a Sabine's Gull, which now moves from Hypothetical to Accidental on the State List and a Scissor-tailed Flycatcher for good measure. Worm-eating Warblers were seen in Hennepin

and Otter Tail counties and Kentucky and Hooded Warblers observed in Hennepin and Rice. Western Tanagers appeared in Hennepin and Beltrami and a Summer Tanager in Martin County. A Lazuli Bunting was found dead in Hennepin as well. Carolina Wrens were seen in Goodhue and Dakota and a Rock Wren was discovered, appropriately enough, in Rock county. The outstanding bird of the season, however, was the Townsend's Warbler identified May 22 in Scott county, the first recorded observation of this species in Minnesota history.

As in previous reports, the listing that follows employs capital letters to call attention to species of special interest and bold-faced type to indicate out-of-the-ordinary dates or locations.

Finally, your compilers are again moved to repeat their plea for more consistency in reporting. Please use the appropriate MOU seasonal form to report anything more than a few sightings. If you don't have one, write Kim Eckert for a copy; his address is in the masthead of this magazine.

Computer printouts, check lists, and out-of-season forms made it difficult and tedious to check the more than 20,000 items which produced this report. Also, please identify locations other than your own base by county, not simply by town, refuge or lake. Inconsistent listings not only add work but also greatly increase the probability of errors which detract from the considerable value of your reports.

Common Loon

Early south **3-18** Dakota KG, ES, **3-25** Dakota SC, **4-2** Anoka KL; early

north 3-16 Cass HH, 4-17 St. Louis KE, 4-20 Beltrami JM.

Red-throated Loon

No reports for this period.

Red-necked Grebe

Early south 4-13 Chisago DGW, 4-14 Anoka KL, 4-17 Hennepin BS; early north 4-11 St. Louis KE, 4-16 Itasca WL, 4-20 Beltrami JM. Peak 5-8 Marshall ANWR (420).

Horned Grebe

Early south 4-10 Olmsted JB, 4-12 Hennepin RA and Olmsted JF; early north 4-18 St. Louis KE and Otter Tail GO, 4-20 Beltrami JM and Wilkin GS. Peak 5-8 Marshall ANWR (590).

Eared Grebe

Early south 4-20 Mower RRK, 4-21 Kandiyohi DBA and Lac Qui Parle LJF; early north 4-14 Itasca WL, 4-18 Otter Tail SM, 4-20 Grant KE. Peak 5-8 Marshall ANWR (210). Unusual 5-21 Lake SW.

Western Grebe

Early south 4-19 Stearns CM, 4-20 Anoka KL, McLeod RJ and Traverse KE; early north 4-18 Otter Tail SM, 4-27 Pennington SS, 5-6 Marshall ANWR. Peak 5-31 Grant GMO (300).

Pied-billed Grebe

Early south 3-2 Nicollet JCF, 3-11 Dakota RE, 3-15 Martin EB; early north 4-11 Becker TNWR, 4-17 Marshall ANWR, 4-18 Beltrami JM. Peak 5-8 Marshall ANWR (880).

White Pelican

Early south 4-7 Traverse GMO, 4-8 Freeborn DG, 4-10 Lac Qui Parle CMB; early north 4-9 Becker TNWR, 4-17 Marshall ANWR, Itasca JM. Unusual 4-21 St. Louis KE. Peak 4-16 Lac Qui Parle JS (300).

Double-crested Cormorant

Early south 4-6 Lyon HK, 4-7 Cottonwood LF, 4-8 Anoka KL, DGW; early north 4-18 Marshall ANWR, 4-20 Otter Tail GS, 4-21 Itasca JM. Peak

4-16 Lac Qui Parle JS (300).

Great Blue Heron

Early south 3-13 Fillmore John Weiss fide VH, 3-15 Freeborn DG and Ramsey BH; early north 3-17 Mille Lacs DB, Otter Tail GMO and Lake KE. Peak 5-31 Otter Tail GMO (808).

Northern Green Heron

Early south 4-4 Washington GS, 4-5 Hennepin RJ, 4-21 Hennepin ES, Ramsey DGW and Rice LB; early north 4-30 Otter Tail SM, 5-8 Becker TNWR, 5-14 St. Louis MMC, and Marshall ANWR.

Little Blue Heron

5-11 Lac Qui Parle CMB, 5-12 Goodhue JD, 5-19 Lac Qui Parle CMB.

Cattle Egret

5-9 Lac Qui Parle CMB, 5-15 Otter Tail DNR, 5-29 Jackson Ingeborg Hodnefeld, 5-31 Lac Qui Parle CMB.

Great Egret

Early south 3-30 Hennepin TD, LH, 3-31 Dakota KG, Winona DGW; early north 4-10 Marshall ANWR, Otter Tail GMO, 4-15 Beltrami JM, St. Louis Koni Sundquist. Peak 5-31 Grant GMO (720).

SNOWY EGRET

5-9 Lac Qui Parle (2), 5-29 Nicollet JCF.

Black-crowned Night Heron

Early south 3-15 Freeborn DG, 4-8 Anoka GS and Hennepin BS; early north 3-24 Otter Tail RJ, 4-17 Marshall ANWR, 4-25 Pennington SS. Peak 5-31 Grant GMO (412).

Yellow-crowned Night Heron

4-21 Lac Qui Parle OJ, 5-1 Cass DNR; 5-17 Hennepin OJ, 5-18 Stearns OJ. No reports from usual Houston County location.

Least Bittern

5-11 Lac Qui Parle CMB, Ramsey BDC, 5-13 Martin EB, 5-14 Le Sueur JM, 5-18 Beltrami ANWR, 5-26 Anoka BH and Hennepin RE, 5-31 St. Louis TS.

American Bittern

Early south 4-18 Wright DCF, 4-21 Anoka KL, Lac Qui Parle many observers and Winona JB, JSD; early north 4-17 Becker TNWR, Marshall ANWR, 4-18 Beltrami JM. Peak 5-16 Marshall ANWR (200).

Whistling Swan

Early south 3-1 Wabasha JSD, 3-8 Dakota KG, 3-11 Olmsted RE; early north 3-14 Otter Tail SM, 4-4 St. Louis KE, 4-17 Itasca MS. Peak 4-7 Wabasha DGM (3000).

Canada Goose

Early north 3-1 Otter Tail GMO, 3-20 Lake SW, 3-29 Becker TNWR. Peak 4-26 Lac Qui Parle JS (45,000). Reported from 42 counties.

White-fronted Goose

3-31 Wabasha DGW, 4-8 Anoka KL, 4-14 Otter Tail GMO, 4-16 Lac Qui Parle JS (25), 4-20 Lac Qui Parle KE.

Snow Goose

Early south 3-25 Olmsted JSD, 3-31 Dakota JD, 4-1 Lyon HK; early north 3-24 Otter Tail RJ, 4-2 Crow Wing TS, 4-14 Otter Tail GMO. Peak 4-14 Traverse DGW (30,000).

Mallard

Reported from 38 counties. Peak 4-30 Marshall ANWR (2260).

Black Duck

Early south 3-4 Ramsey RH, 3-8 Anoka KL and Olmsted JB; early north 3-24 Cook TS, 4-1 Otter Tail SM, 4-7 St. Louis KE.

Gadwall

Early south 3-2 Nicollet JCF, 3-10 Winona DB, OJ, 3-11 Scott RA; early north 3-16 Otter Tail GMO, 4-17 Marshall ANWR, 4-28 St. Louis KE. Peak 4-30 Marshall ANWR (1160).

Pintail

Early south 3-6 Nicollet JCF, 3-11 Olmsted, 3-12 Sherburne JH; early north 4-15 Beltrami JM, Marshall SS, 4-17 St. Louis KE. Peak 5-16 Marshall ANWR (1030).

Green-winged Teal

Early south 3-5 Nicollet JCF, 3-21 Lac Qui Parle SM, 3-31 Anoka KL, Brown RJ, Hennepin OJ, Murray JH; early north 3-29 Cass TS, 4-7 Aitkin TS, 4-17 St. Louis KE. Peak Marshall ANWR (360).

Blue-winged Teal

Early south 3-14 OJ, 3-16 Hennepin VL, 3-17 Goodhue DGW; early north 4-13 Marshall ANWR, 4-14 Otter Tail SM, 4-17 Wilkin FKS. Peak 5-8 Marshall ANWR (6720).

American Wigeon

Early south 3-5 Nicollet JCF, 3-11 Scott RA, 3-13 Lac Qui Parle JS, Olmsted JB; early north 3-18 Otter Tail GMO, 3-22 Becker TNWR, 3-24 Cook TS. Peak 5-8 Marshall ANWR (1000).

Northern Shoveler

Early south 3-19 Dakota RJ, Martin EB and Olmsted JF; early north 4-7 Otter Tail GMO, 4-12 Becker TNWR, 4-17 Marshall ANWR. Peak 5-16 Marshall ANWR (840).

Wood Duck

Early south 3-4 Ramsey DGW, 3-16 Nicollet JCF, 3-17 Houston RJ; early north 4-7 Aitkin TS, Otter Tail GMO, 4-15 Beltrami JM. Peak 5-1 Becker TNWR (1200).

Redhead

Early south 3-3 Wabasha DWM, 3-4 Nicollet JCF, 3-17 Dakota RE; early north 4-8 Otter Tail GMO, 4-19 Marshall ANWR, Polk SS. Peak 5-16 Marshall ANWR (1770).

Ring-necked Duck

Early south 3-6 Olmsted JB, 3-16 Olmsted JF, VH, 3-18 Dakota KG; early north 4-17 Marshall ANWR, St. Louis KE, 4-18 Beltrami JM. Peak 4-30 Marshall ANWR (2840).

Canvasback

Early south 3-11 Big Stone, Chippewa, Lac Qui Parle GMB, 3-21 Nicollet JCF, 3-24 Chippewa RJ; early north 4-14 Otter Tail GMO, 4-17 St. Louis KE, 4-19 Marshall ANWR. Peak 5-8 Marshall ANWR (1320).

Greater Scaup

Early south 3-11 Scott RA, 3-17 Sherburne JH, Wabasha RJ, Washington BL; early north 4-14 Otter Tail GMO, 4-19 Otter Tail KE; late north 5-29 St. Louis SM; late south 5-31 Lac Qui Parle CMB, Blue Earth MF.

Lesser Scaup

Early south 3-3 Wabasha DWM, 3-6 Olmsted JF, 3-10 Olmsted VH; early north 3-21 St. Louis KE, 4-7 Otter Tail GMO, 4-13 Itasca TOS. Peak 4-30 Marshall ANWR (16750).

Common Goldeneye

Late south 5-16 Cottonwood JB, 5-20 Sherburne EH, 5-25 Stearns NH; late north 5-25 Becker TNWR, 5-27 Hubbard HF, St. Louis SM. Peak 4-30 Marshall ANWR (660).

Bufflehead

Early south 3-24 Dakota RE, 3-26 Goodhue LH; early north 4-1 Otter Tail GMO, 4-17 St. Louis KE; late south 5-28 Nicollet JCF; late north 5-25 Becker TNWR. Peak Marshall ANWR (720).

Oldsquaw

5-2 Sherburne EH; 5-14 Cook MMC, KE.

Harlequin Duck

No reports for this period.

White-winged Scoter

3-6 Wabasha DWM, 5-6 Kittson DNR, 5-8 St. Louis KE, 5-10 St. Louis MMC, 5-12 KE, BL, 5-21 Lake SW, 5-26 St. Louis KE, 5-31 St. Louis BB.

Black Scoter

5-8 St. Louis KE, 5-10 St. Louis MMC, 5-12 St. Louis KE, BL, 5-21 Lake SW, 5-31 Kittson DNR, St. Louis BB.

Ruddy Duck

Early south 3-17 Sherburne JH, 3-20 Olmsted JB, JSD, JF, Wabasha DWM; early north 4-7 Otter Tail GMO, 4-22 Wilkin FKS, 4-28 Marshall ANWR. Peak 5-16 Marshall ANWR (1250).

Hooded Merganser

Early south 3-2 Nicollet JCF, 3-11 Wabasha DWM, 3-17 Houston RJ;

early north 3-11 Otter Tail GMO, 3-28 Itasca TOS, 4-4 Wadena JM.

Common Merganser

Early north 3-14 Cass TS, 3-23 St. Louis KE, 3-28 Becker TNWR; late south 4-21 Redwood LJF, Rice LB, 4-28 Pope BS. Peak 4-30 Marshall ANWR (309).

Red-breasted Merganser

Early south 3-14 Hennepin VL, 3-17 Dakota RE; early north 4-17 Otter Tail GMO; late south 5-12 Pope BS; 5-20 Anoka KL. Peak 4-13 Rice RJ (500).

Turkey Vulture

Early south 3-26 Goodhue LH, 4-7 Goodhue JD, 4-8 Carver DGW; early north 4-8 Cass HH, 4-10 Marshall ANWR, 4-11 St. Louis KE.

Goshawk

9 reports; late south 4-13 Nicollet JCF, 4-15 Hennepin ES; late north 5-2 Beltrami JM, 5-27 St. Louis BDC.

Sharp-shinned Hawk

Early south 3-1 Washington DGW, 3-8 Wabasha DWM, 3-21 Anoka JLH; early north 3-22 Becker TNWR, 4-2 Otter Tail GMO, 4-7 Clay LCF.

Cooper's Hawk

Early south 3-1 Olmsted JSD, 3-20 Hennepin TD, 4-6 Nicollet JCF; early north 3-21 Hubbard JM, 4-1 Otter Tail GMO, 4-18 Pennington SS.

Red-tailed Hawk

Early north 3-25 Lake SS, 3-29 Clay SM, Otter Tail GMO. Harlan's ssp. noted in Rice, L. Scott Johnson, and in Yellow Medicine, Le Sueur and Ren-ville RJ.

Red-shouldered Hawk

Early south 3-10 Winona DB, OJ; 3-17 Houston, 3-18 Pope BS; early north 3-29 Otter Tail GMO, 4-2 Becker TNWR, 4-19 Crow Wing TS.

Broad-winged Hawk

Early south 3-25 Lyon HK, 3-31 Ramsey RH, 4-7 Ramsey FKB; early north 4-22 Otter Tail SM, 4-24 St. Louis DA, KE, 4-25 Marshall ANWR.

Peak 5-10 St. Louis Mally Kohlbry (4000+)

Swainson's Hawk

Early south 4-2 Lac Qui Parle DGW, 4-7 Dakota JD, 4-8 Anoka KL; early north 4-21 Wilkin GS, 4-29 Wilkin SM. Reported from 13 counties.

Rough-legged Hawk

3-20 Otter Tail GMO, 3-22 Aitkin TS; late south 4-21 Traverse GS, Yellow Medicine RJ; late north 5-23 Lake MMC, 5-27 Itasca TOS.

FERRUGINOUS HAWK

4-7 Traverse GMO.

Golden Eagle

11 reports; Becker TNWR, Carver ES, Hennepin ES, Lac Qui Parle CMB, Marshall ANWR, Otter Tail GMO, Ramsey FKB, Wilkin SM, Winona JSD, RE, JF.

Bald Eagle

42 reports from 26 counties. Peak 3-11 Wabasha RE (18A, 51mm). Early north 3-1 Itasca MS, Becker TNWR, 3-4 Cass HH.

Marsh Hawk

Early south 3-5 Anoka KL, 3-16 Yellow Medicine JS, 3-17 Hennepin TD, Watonwan JB; early north 3-21 Marshall ANWR, 3-25 Pine KE, 3-29 Becker GMO.

Osprey

Early south 4-10 Hennepin RA, Washington DR, 4-12 Anoka BH, Olmsted JF, VH, Sherburne EH; early north 4-9 Hubbard HF, 4-12 Aitkin TS, 4-14 Otter Tail GMO.

GYRFALCON

4-1 Aitkin, one white phase bird reported by Warren Nelson fide TS.

Peregrine Falcon

Early March St. Louis fide KE, 4-2 Ramsey DNR, 4-19 Ramsey FKB, 4-26 Marshall ANWR, 5-6 Otter Tail GMO, SM, 5-21 St. Louis KE.

Merlin

7 reports. Early south 3-21 Martin EB, 3-25 Olmsted RH, 3-31 Olmsted

JSD, 4-7 Hennepin TD, 4-12 Clay LCF, 4-22 Anoka KL, 5-13 Otter Tail GMO.

American Kestrel

Early north 3-12 Otter Tail SM, Pennington SS. Reported from 40 counties.

Spruce Grouse

Permanent resident. Reported resident Lake sw, seen occasionally St. Louis TH. Only reports.

Ruffed Grouse

Permanent resident. Reported from 23 counties.

Greater Prairie Chicken

Reported from Clay, Otter Tail, Polk, Wadena and Wilkin counties; high count 4-2 Wilkin DGW (27).

Sharp-tailed Grouse

3-9 Beltrami, 3-31 Aitkin TS, 4-8 Aitkin BB, 4-13 Lake of the Woods JM, 4-30 Aitkin BB, 5-5 Pennington SS.

Bobwhite

No reports for this period.

Ring-necked Pheasant

Permanent resident. Reported from 31 counties.

Gray Partridge

Permanent resident. Reported from 30 counties including 3-4 Wilkin SM (105), 3-9 Beltrami KE, RJ.

Turkey

5-15 Houston EMF, only report.

Sandhill Crane

Early south 4-1 Anoka BH, 4-8 Anoka KL, 4-15 Stearns EH; early north 4-8 Otter Tail GMO, Wilkin SM (130), Anoka KL, 4-10 Marshall ANWR.

King Rail

No reports this period.

Virginia Rail

Early south 4-19 Ramsey RH, 4-21 Anoka KL, 4-29 Ramsey DGW; early north 4-20 Marshall ANWR, 5-16 Otter Tail GMO, 5-29 Aitkin SM.

Yellow Rail

5-18 Aitkin KE, 5-20 Pennington SS, last week of May Aitkin TS (15+).

Sora

Early south 4-13 Lac Qui Parle CMB, 4-15 Martin EB, 4-18 Hennepin AJ; early north 4-20 Marshall ANWR, 5-2 Hubbard JM, St. Louis DA.

Common Gallinule

5-11 Ramsey BDC, 5-12 Cottonwood LJF, 5-16 Hennepin RA, 5-18 Stearns NH, 5-27 Anoka KL, 5-28 Houston GS.

American Coot

Early south 3-2 Sherburne JH, 3-7 Winona DGW, 3-15 Martin EB; early north 3-18 Otter Tail SM, 3-23 Cook SW, 3-25 Cook TS. Peak 4-12 Lyon HK (1000s).

Semipalmated Plover

Early south 5-8 Nicollet JCF, 5-12 McLeod RJ, Mower RRK; early north 5-13 Otter Tail GMO, 5-15 Cook MMC, Otter Tail SM.

Piping Plover

5-5 Hennepin BDC, ES; 5-6 Hennepin RJ, 5-12 St. Louis KE, 5-31 St. Louis BB.

Killdeer

Early south 3-3 Goodhue JB, 3-11 Olmsted VH, 3-13 Houston EMF; early north 3-21 Cook SW, 3-31 Aitkin TS, Otter Tail GMO, 4-5 St. Louis KE.

American Golden Plover

Early south 4-20 Nicollet JCF, 4-21 Cottonwood LF, McLeod EW; early north 4-28 Mahnomen JM, 4-29 Otter Tail SM; late date 5-27 Jackson DGW. Peak 5-17 Big Stone PF (100).

Black-bellied Plover

Early south 5-12 Mower RRK, 5-18 Lyon HK, Nicollet JCF; early north 5-13 Otter Tail GMO, SM, 5-15 St. Louis KE; late 5-27 St. Louis SM.

Ruddy Turnstone

Early south 5-11 Anoka KL, 5-23 Todd NH; early north 5-15 St. Louis KE, 5-17 Marshall ANWR; late 5-31 St. Louis BB.

American Woodcock

Early south 3-26 Anoka BH, 3-29 Rice LB, 3-31 Blue Earth RJ, Le Sueur HFC, Olmsted VH; early north 4-2 Aitkin TS, 4-10 Marshall ANWR, St. Louis KE, 4-18 Cass HH, St. Louis DA.

Common Snipe

Early south 4-6 Nicollet JCF, 4-8 Mower RRK, 4-9 Wabasha DWM; early north 4-8 Otter Tail GMO, 4-14 Marshall ANWR, Otter Tail DGW.

LONG-BILLED CURLEW

4-14 Wilkin DGW.

Whimbrel

5-7 St. Louis DA (11), 5-24 Cook Don Goodermote (150). Only reports.

Upland Sandpiper

Early south 4-21 Yellow Medicine BL, OJ, 4-22 Chippewa JS, Lyon DGW, Rock KE, Yellow Medicine RJ; early north 4-29 Wilkin SM, Polk SS, 5-9 Clay HK.

Spotted Sandpiper

Early south 4-12 Anoka BH, 4-17 Nicollet JCF, 4-21 Rice LB, Winona JSD; early north 4-25 St. Louis KE, 4-28 Itasca MS, 5-7 Beltrami JM, Marshall ANWR.

Solitary Sandpiper

Early south 4-12 Anoka BH, 4-21 Lac Qui Parle RH, HK; early north 4-24 St. Louis KE, 5-3 Otter Tail GMO; late dates 5-23 Becker TNWR, 5-25 Mower RRK, Lac Qui Parle CMB.

Willet

Early south 4-21 Lac Qui Parle HK, 4-27 Hennepin TD; early north 5-1 Pennington SS, 5-10 St. Louis DA; late dates 5-22 Lac Qui Parle RE, 5-26 St. Louis BDC.

Greater Yellowlegs

Early south 4-7 Redwood RJ, 4-8 Lac Qui Parle CMB; early north 4-14 Otter Tail GMO, 4-17 Marshall ANWR; late dates 5-18 Nicollet JCF, 5-27 Lac Qui Parle CMB.

Lesser Yellowlegs

Early south 4-9 Nicollet JCF, 4-13

Cottonwood LF, Lac Qui Parle JSD; early north 4-14 Otter Tail GMO, 4-20 Mille Lacs SC; late 5-26 Lac Qui Parle KE.

Red Knot

5-23 St. Louis KE (6), Todd NH; 5-24 St. Louis PF.

Pectoral Sandpiper

Early south 4-2 Big Stone DGW, 4-14 Olmsted JF, JSD, Wabasha DWM; early north 4-27 Wilkin FKS, 4-29 Otter Tail SM. Peak 5-12 Sibley RJ (500+); late 5-25 Lac Qui Parle CMB.

White-rumped Sandpiper

Early south 5-12 Mower RRR, Redwood RJ, 5-14 Anoka KL, McLeod JM; early north 5-13 Otter Tail GMO, 5-20 Otter Tail HK. Peak 5-25 Lac Qui Parle CMB (50+); late dates 5-30 Olmsted JF, 5-31 Hennepin OJ, Nicollet JCF.

Baird's Sandpiper

Early south 4-21, 22 Lac Qui Parle RE, DGW; early north 4-27 Otter Tail GMO, 5-18 Marshall ANWR; late 5-31 Nicollet MF, St. Louis BB.

Least Sandpiper

Early south 4-21 Lyon HK; early north 4-14 Otter Tail GMO; late south 5-31 Lac Qui Parle CMB and Nicollet JCF.

Dunlin

Early south 4-27 Mower RRR, 5-4 Redwood LJF; early north 5-6 Otter Tail GMO and 5-13 Otter Tail SM; late south 5-31 Nicollet JCF and late north 5-31 Otter Tail SM.

Semipalmated Sandpiper

Early south 4-21 Lyon HK; early north 4-14 Otter Tail GMO and Grant SM; late south 5-31 Redwood LJF and Nicollet JCF.

Western Sandpiper

5-13 Renville HK, 5-15 Anoka KL, 5-19 Clay OJ, 5-22 Wilkin GMO, 5-25 Lac Qui Parle CMB.

Sanderling

Early south 4-26 and 5-1 Washington DS; early north 5-14 Otter Tail GMO,

5-15 St. Louis KE; late north 5-31 Marshall CMB.

Short-billed Dowitcher

Early south 5-12 Sibley RJ, 5-13 Hennepin OJ; early north 5-11 Beltrami JM, 5-13 Otter Tail SM, GMO.

Long-billed Dowitcher

Early south 4-20 Nicollet JCF sp?, 5-4 Redwood LJF; early north 5-8 Otter Tail GMO, 5-10 Marshall ANWR.

Stilt Sandpiper

Early south 4-18 Lyon HK, 5-12 Renville RJ; early north 5-7 Otter Tail GMO, 5-19 Clay KE, JM.

Buff-breasted Sandpiper

One report: 5-17 Jackson LJF.

Marbled Godwit

Early south 4-15 Lac Qui Parle SM, 4-21 Lac Qui Parle RE; early north 4-14 Otter Tail GMO, DGW.

Hudsonian Godwit

Early south 4-21 Lac Qui Parle RE, Kandiyohi BL, 4-22 Nicollet JCF; early north 4-16 Clay LCF, 5-13 Otter Tail GMO; late south 5-28 Nicollet JCF.

American Avocet

Early south Lac Qui Parle 4-20 KE, JS, 4-21 CMB, LJF; early north 4-27 Wilkin FKS, 5-13 Otter Tail SM; late south 5-27 Jackson DGW.

Wilson's Phalarope

Early south 4-22 Lincoln KE, CMB, 4-28 Jackson RJ; early north 5-6 Otter Tail SM, GMO; late south 5-28 Olmsted JF.

Northern Phalarope

Early south 5-11 Blue Earth MF, 5-17 Stevens PF; early north 5-19 Clay KE, OJ and Otter Tail HK.

Glaucous Gull

4-14/16 Lake KE, 4-15 Freeborn DMB, 5-10 St. Louis DA.

Herring Gull

Early south 3-6 Wabasha DWM, 3-17 Dakota RE, Goodhue DGW, Wabasha RJ; early north 4-2 Bemidji JM, 4-4 Traverse SM.

Thayer's Gull

5-29 Duluth KE, SM (imm). 5-23 Cook MMC.

Ring-billed Gull

Early south 3-16 Nicollet JCF, 3-17 Dakota RE; early north 3-17 Marshall HK, 3-23 St. Louis KE, 4-14 Rice RJ

Franklin's Gull

(2000+).

Early south 3-28 Lac Qui Parle JS, 4-4 Big Stone SM; early north 4-7 Tra-verse GMO, 4-16 Marshall ANWR.

Bonaparte's Gull

Early south 3-26 Goodhue LH, 4-14 Cottonwood RG, LF, Mower RRK; early north 4-23 Marshall ANWR, CMB; late south 5-20 Hennepin OJ; late north 5-21 Lake SW.

SABINE'S GULL

5-26 Duluth BL, KG, KE, DB (1 adult).

Forster's Tern

Early south 3-31 Dakota KG, 4-4 Kandiyohi OJ; early north 4-18 Clay SM, 4-21 Marshall CMB.

Common Tern

Early south 4-14 Hennepin VL (very early, needs details), Dakota JH, 4-16 Sherburne EH; early north 5-8 St. Louis KE, 5-12 Becker RA.

Caspian Tern

Early south 4-16 Olmsted VH, 5-5 Isanti OJ, 5-6 Carver TD; early north 5-9 Beltrami JM, 5-13 Otter Tail SM, 5-27 Carver RJ (125+).

Black Tern

Early south 5-2 Pipestone HK, Sherburne EH; early north 4-19 Clay LCF, Becker SM, 5-19 Becker TNWR (400+).

Mourning Dove

Early south 3-1 Sherburne JH, Hennepin RH, 3-2 Houston EMF; early north 3-6 Otter Tail SM, 3-30 Cass TS.

Yellow-billed Cuckoo

Five reports: 5-10 Hennepin BDC, 5-26 Hennepin TD, 5-28 Murray AD, 5-30 Hennepin DB, ES.

Black-billed Cuckoo

Early south 5-10 Anoka BB, 5-17 Hennepin SC, Nicollet MF; early north 5-17 Otter Tail GMO, 5-18 Marshall ANWR.

Screech Owl

Reports from Cottonwood, Hennepin, Lyon, Ramsey, Lac Qui Parle, Olmsted, Watonwan, Washington and Stearns counties.

Great Horned Owl

Permanent resident; reports from 26 counties.

Snowy Owl

Wilkin 3-4 GMO, 3-10 SM, 3-24 FKS; 3-7 Murray AD, St. Louis 3-11 TH, 4-10 KE.

Hawk Owl

Only report 3-15 Two Harbors KE.

Burrowing Owl

4-16 Blue Earth DNR, 5-15 Duluth KE.

Barred Owl

Reports from 15 counties.

Great Gray Owl

4-2 Aitkin TS, 4-5 Aitkin DD, 5-12 Lake TW. Nest near Makinen, St. Louis fide KE.

Long-eared Owl

4-21 Lac Qui Parle RJ, 4-25 Washington DMB, 5-12 Brown RJ, 5-29 Duluth SM.

Short-eared Owl

Reports from 5 counties. Early south 3-20 Lac Qui Parle JS, 4-4 Murray AD; early north 3-4 Wilkin GMO, 4-18 Otter Tail GMO, 4-22 Polk SS.

Boreal Owl

3-27 Lake (DOR) fide Koni Sundquist.

Saw-whet Owl

Early south 3-14 Lyon HK; early north 4-13 Beltrami JM, St. Louis DA; late south 4-17 Cottonwood LJF.

Whip-poor-will

Early south 4-22 Anoka JLH, 4-23

Houston FL; early north 5-15 Marshall ANWR, 5-22 Otter Tail GMO.

Common Nighthawk

Early south 4-25 Stearns NH, 5-1 Washington DS; early north 5-17 Marshall ANWR, 5-19 Itasca MS.

Chimney Swift

Early south 4-20 Nicollet JCF, 4-22 Rice OR, Stearns NH; early north 5-7 Beltrami JM, Otter Tail GMO.

Ruby-throated Hummingbird

Early south 5-9 Houston EMF, 5-10 Mower RRR; early north 5-15 Otter Tail SM, Itasca WL.

Belted Kingfisher

Early south 3-17 Redwood LJF, 3-20 Houston EMF; early north 4-7 Otter Tail GMO, 4-13 Itasca TOS.

Common Flicker

Early south 3-1 Wright (wintered) DCF, 3-2 Blue Earth JCF; early north 3-7 St. Louis JB fide KE, 4-18 Marshall ANWR.

Pileated Woodpecker

Reports from 29 counties.

Red-bellied Woodpecker

Reports from 23 counties.

Red-headed Woodpecker

Early south 3-18 Anoka KL, 4-15 Lyon HK; early north 3-9 (wintering) Pennington SS, 5-12 Otter Tail GMO.

Yellow-bellied Sapsucker

Early south 4-7 Blue Earth JCF, Hennepin SC; early north 4-12 Aitkin TS, 4-16 Itasca MS.

Hairy Woodpecker

Permanent resident.

Downy Woodpecker

Permanent resident.

Black-backed Three-toed Woodpecker

3-2 St. Louis TH, 5-19 Lake SW.

Eastern Kingbird

Early south 5-3 Hennepin TD, 5-5 Olmsted JSD; early north 4-19 Hubbard HF, 5-8 Itasca MS.

Western Kingbird

Early south 5-12 Freeborn DG,

Washington DR, 5-13 Sherburne EH, 5-14 Otter Tail GMO, 5-18 Douglas RJ.

SCISSOR-TAILED FLYCATCHER

4-29 Duluth KE.

Great Crested Flycatcher

Early south 5-3 Hennepin BDC, 5-7 Olmsted JSD, Dakota KG, Anoka JLH, BH, Hennepin ES; early north 5-13 Otter Tail DCF, 5-15 Itasca WL, Becker GMO.

Eastern Phoebe

Early south 3-30 Nicollet JCF, 3-31 Washington BL; early north 4-11 Aitkin TS, 4-15 Itasca MS.

SAY'S PHOEBE

5-12 Wilkin LCF.

Yellow-bellied Flycatcher

Early south 5-5 Hennepin VL, 5-7 Stearns NH, Hennepin ES; early north 4-26 (very early, needs details) St. Louis DA, 5-12 Beltrami JM; late south 5-30 Hennepin 10 DB, 5-31 Hennepin ES.

Acadian Flycatcher

5-23 Hennepin ES, Washington DMB.

Willow Flycatcher

Early south 5-12 Olmsted VH, 5-15 Freeborn DG; early north 5-27 Clay LCF.

Alder Flycatcher

Early south 5-6 Hennepin ES, 5-10 Hennepin JD; early north 5-23 Pennington SS, 5-26 St. Louis KE.

Trail's Flycatcher

9 observations, species ?

Least Flycatcher

Early south 4-26 Hennepin ES, 5-3 Rice LB; early north 4-21 Becker TNWR, 5-7 Otter Tail GMO.

Eastern Wood Pewee

Early south 4-13 Rice OR, 4-21 Sherburne JH; early north 5-19 Becker LH, 5-24 Otter Tail SM, Itasca TOS.

Olive-sided Flycatcher

Early south 5-6 Anoka KL, 5-7 Stearns NH, Dakota KG, Hennepin

BDC, DB, SC, ES; early north 5-12 St. Louis KE, Otter Tail RE.

Horned Lark

Reports from 15 counties.

Tree Swallow

Early south 3-31 Wabasha DWM, Houston DGW; early north 4-14 Cook KE, 4-15 Beltrami JM, Otter Tail, GMO.

Bank Swallow

Early south 4-14 Le Sueur EB, Dakota BL; early north 4-20 Otter Tail GS, 4-25 Otter Tail GMO.

Rough-winged Swallow

Early south 4-14 Le Sueur EB, 4-15 Le Sueur HFC; early north 4-19 Beltrami JM, 4-20 Otter Tail KE.

Barn Swallow

Early south 4-13 Anoka DAS, 4-14 LeSueur EB, Dakota RE; early north 4-15 Otter Tail SM, 5-7 St. Louis DA,

Marshall ANWR, 5-7 Lac Qui Parle JS (2000).

Cliff Swallow

Early south 4-14 Houston EB, 4-19 Lac Qui Parle CMB; early north 4-19 Beltrami JM, 4-21 Aitkin SC.

Purple Martin

Early south 3-31 Wabasha DWM, 4-8 Rice OR; early north 4-7 Otter Tail GMO, 4-8 Wilkin SM.

Gray Jay

Reports from Aitkin, Cass, Cook, Itasca and Lake counties.

Blue Jay

Reports from 34 counties. Permanent resident.

Black-billed Magpie

Reported from these counties: Marshall, Lake of the Woods, Pennington, Red Lake, Clay, Kittson and Norman.



Common Raven

Late south 4-26 Washington DS, and 10 other counties.

Common Crow

Permanent resident. Reports from 39 counties.

Black-capped Chickadee

Permanent resident.

Boreal Chickadee

3-25 Cook TS, 3-30 Lake SW, 4-13 St. Louis KE, 5-19 St. Louis DA, TH.

Tufted Titmouse

5-15 Scott AJ, daily Houston EMF.

White-breasted Nuthatch

Permanent resident.

Red-breasted Nuthatch

Early south 3-2 Ramsey RH, 3-5 Wabasha DWM; late south 5-13 Houston EMF, 5-23 Sherburne RJ.

Brown Creeper

Early south 3-2 Hennepin VL, Olmsted JF; early north 3-1 Clay LCF, 3-5 Otter Tail SM. (all wintering?)

House Wren

Early south 4-22 Hennepin TD, 4-23 Wabasha DWM; early north 5-3 Itasca

MS, 5-6 Clay LCF.

Winter Wren

Early south 4-7 Anoka SC, 4-14 Rice RJ; early north 4-17 St. Louis DA, 4-29 Cook KE.

CAROLINA WREN

5-12 Goodhue BDC, Dakota JD.

Long-billed Marsh Wren

Early south 5-7 Hennepin TD, Anoka BH, Washington DR; early north 5-12 Otter Tail RE, 5-15 Otter Tail SM, Pennington SS.

Short-billed Marsh Wren

Early south 5-6 Olmsted JSD, Hennepin SC; early north 5-7 St. Louis DA, 5-15 Marshall ANWR.

ROCK WREN

4-22 Rock KE, CMB.

Mockingbird

5-15 Morrison NH, 5-23 Cook MMC, 5-26 Babbitt TH.

Gray Catbird

Early south 4-21 Sherburne JH, 5-2 Lac Qui Parle CMB; early north 5-8 St. Louis DA, 5-11 Cass HH.



Brown Thrasher

Early south 4-4 Stearns NH, 4-13 Olmsted JB; early north 4-25 Cass HH, 4-28 St. Louis KE.

American Robin

Early south 3-5 Lyon HK, 3-13 Wabasha DWM; early north 3-19 Aitkin TS, 3-20 Hubbard HF.

Wood Thrush

Early south 5-6 Goodhue RE, Cottonwood LF, 5-7 Dakota KG, DB; early north 5-15 Marshall SS, 5-16 Lake KE, SW.

Hermit Thrush

Early south 4-7 Brown RJ, Mower RRK, Cottonwood RG, Redwood LJF; early north 4-8 Otter Tail SM, 4-10 Marshall ANWR.

Swainson's Thrush

Early south 4-14 Anoka BH, 4-17 Sherburne EH, Freeborn DG; early north 5-5 Otter Tail SM, 5-6 Clay LCF, 5-11 Lac Qui Parle CMB about 117.

Gray-cheeked Thrush

Early south 4-22 Hennepin BDC, 4-23 Hennepin OJ; early north 5-6 Clay LCF, 5-7 Otter Tail GMO, SM.

Veery

Early south 5-3 Rice OR, LB, 5-5 Hennepin SC, GS; early north 5-8 Duluth MMC, 5-11 Marshall ANWR.

Eastern Bluebird

Early south 3-16 Nicollet JCF, 3-21 Lac Qui Parle SM, Carver TD, Houston EMF; early north 3-25 Otter Tail SM, 4-15 Otter Tail GMO. Reports from 26 counties.

MOUNTAIN BLUEBIRD

4-1 Wilkin SM, Scott DGW, 4-2 Wilkin DGW, 4-7 Carver LH, 4-8 Carver DGW, RJ, 4-9 Otter Tail GMO.

TOWNSEND'S SOLITAIRE

3-21 Lac Qui Parle SM.

Blue-gray Gnatcatcher

Early south 4-18 Rice LB, 4-22 Carver TD, Dakota KG.

Golden-crowned Kinglet

Early south 3-25 Nicollet JCF, 3-31 Hennepin ES, GS, Rice LB; early north 4-15 Marshall ANWR, 4-18 St. Louis DA, Wilkin FKS.

Ruby-crowned Kinglet

Early south 3-19 Lac Qui Parle CMB, 4-4 Olmsted JF; early north 4-14 Cook TS, 4-16 Grant SM.

Water Pipit

4-22 Redwood RJ, 5-6 Carver ES, 5-12 McLeod RJ, 5-14 Cook KE, 5-22 Otter Tail GMO.

Bohemian Waxwing

Reports from 7 counties. Late south 4-2 Ramsey RH; late north 4-13 St. Louis KE.

Cedar Waxwing

Early north 3-3 Otter Tail GMO, SM; late south 5-12 Hennepin BB, 5-30 Hennepin DB.

Northern Shrike

Late south 3-21 Lac Qui Parle SM, 4-2 Lac Qui Parle DGW; late north 4-8 Aitkin BB, 4-10 St. Louis KE.

Loggerhead Shrike

Early south 3-16 Nicollet JCF, 3-21 Martin EB; early north 4-19 Otter Tail KE, 5-14 Clay LCF.

Starling

Permanent resident.

Bell's Vireo

Wabasha county 5-27 GS, 5-30 BB.

Yellow-throated Vireo

Early south 5-7 Anoka JCH, Dakota DB, KG, Ramsey FKB; early north 5-14 Morrison DCF, 5-16 Becker SM.

Solitary Vireo

Early south 5-2 Mower RRK; early north 5-5 Clay LCF, Otter Tail GMO.

Red-eyed Vireo

Early south 5-9 Olmsted JSD, JF; early north 5-8 St. Louis DA.

Philadelphia Vireo

Early south 5-6 Goodhue RE, Olmsted JF; early north 5-16 Becker SM; late south 5-27 Hennepin DB, Rock DGW, 5-29 Lac Qui Parle CMB.

Warbling Vireo

Early houth 5-6 Olmsted JSD; early north 5-16 Becker SM, Marshall ANWR.

Black-and-white Warbler

Early south 4-29 Rice BDC, Cottonwood LF; early north 5-2 Becker SM; late south 5-30 Anoka JLH.

Prothonotary Warbler

Four reports, 5-8 Anoka KL, 5-12 Ramsey FKB, 5-20 Sherburne JH, 5-22 Freeborn DG.

WORM-EATING WARBLER

Three reports: 5-5 Hennepin ES, 5-7 Hennepin SC, 5-20 Otter Tail GMO. (see *The Loon*, Vol. 51, No. 3).

Golden-winged Warbler

Early south 5-7 Anoka JLH; early north 5-19 Becker SM.

Blue-winged Warbler

Early south 5-4 Olmsted VH; also reported from Dakota, Goodhue and Mower Counties.

Tennessee Warbler

Early south 5-5 Hennepin RE, Lyon HK, Rice LB, Washington DR; early north 5-2 Otter Tail GMO; late south 5-30 Washington DR.

Orange-crowned Warbler

Early south 4-17 Mower RRK, 4-21 Lac Qui Parle OE, 4-22 Hennepin TD; early north 4-27 Marshall ANWR; late south 5-26 Washington DS; late north 5-24 Clay LCF.

Nashville Warbler

Early south 4-24 Hennepin AJ, 4-20 Martin EB; early north 5-5 Otter Tail SM, 5-6 Clay LCF; late south 5-30 Anoka JLH.

Northern Parula

Early south 5-6 Goodhue RE, 5-7 Anoka BH, Dakota DB and KG, Hennepin SC and ES, Houston EMF, Olmsted JSD; early north 5-16 Becker SM; late south 5-26 Olmsted VH.

Yellow Warbler

Early south 5-4 Olmsted JF, 5-5

Hennepin DB, Swift CMB; early north 5-8 Beltrami JM, Otter Tail GMO.

Magnolia Warbler

Early south 5-6 Washington DR; ten reports from nine counties on 5-7 and 5-8; early north 5-12 Aitkin DAS; St. Louis KE; late south 5-29 Martin EB.

Cape May Warbler

Early south 5-6 Hennepin DB and SC; early north 5-17 Lake SW, 5-19 Clearwater JM, 5-20 Otter Tail HK; Marshall ANWR.

Black-throated Blue Warbler

Five reports 5-10 Olmsted VH, 5-14 Dakota JD, 5-18 Ramsey BDC, 5-23 Becker GMO and TNWR.

Yellow-rumped Warbler

Early south 4-7 Hennepin SC, Ramsey FKB, 4-8 Hennepin ES and GS; early north 4-4 Otter Tail GMO, 4-6 Carlton fide KE; late south 5-27 Anoka BH.

TOWNSEND'S WARBLER

5-22 Scott Barbara Clauson, (see *The Loon*, Vol. 51, No. 3, First record for Minnesota.

Black-throated Green Warbler

Early south 5-2 Cottonwood LF, 5-3 Olmsted JSD; early north 5-6 Clay LCF, Grant SM, Otter Tail GMO; late south 5-27 Rock DGW.

Cerulean Warbler

Four reports: 5-20 Mower RRK, 5-21 Houston EMF, 5-25 Olmsted JSD, JF.

Blackburnian Warbler

Early south 5-6 Cottonwood RG, Goodhue RE, Lyon HK; early north 5-6 Grant SM; late south 5-30 Hennepin DB.

Chestnut-sided Warbler

Early south 5-1 Freeborn DG, 5-6 Carver TD, Mower RRK; early north 5-16 Becker SM, Itasca WL, St. Louis DA.

Bay-breasted Warbler

Early south 5-7 Washington DR, 5-9 Olmsted JF; early north 5-16 Becker SM, 5-17 St. Louis DA; late south 5-26

Anoka RA, BH and KL, Hennepin OJ.

Blackpoll Warbler

Early south 5-4 Nicollet JCF, Stearns CM; early north 5-8 Clay LCF, 5-9 Beltrami JM; late south 5-27 Anoka BH.

Pine Warbler

Early south 5-7 Hennepin SC, 5-10 Mower RRK; early north 4-28 Pine RH, 5-2 Hubbard HF; late south, beyond breeding range 5-28 Freeborn DG.

Palm Warbler

Early south 4-22 Lac Qui Parle LH, Ramsey FKB, 4-23 Ramsey RH; early north 5-5 Marshall ANWR, Otter Tail SM; late south 5-25 Anoka BH, Washington DR.

Ovenbird

Early south 5-2 Olmsted JF, Sibley MC; early north 5-6, Clay LCF, 5-7 Otter Tail GMO.

Northern Waterthrush

Early south 4-30 Hennepin ES, 5-1 Cottonwood LF; early north 5-5 Otter Tail SM and GMO; late south 5-28 Anoka JCH, Houston EMF.

Louisiana Waterthrush

Nine reports: 5-3 Rice LB, 5-5 Winona VH, 5-6 Hennepin TD, 5-7 Hennepin ES, 5-8 Anoka KL, Hennepin AJ, 5-10 Freeborn DG, 5-12 Goodhue FKB, Hennepin DB.

KENTUCKY WARBLER

Two reports: 4-22 Hennepin OJ (see *The Loon*, Vol. 51, No. 3); 5-5 Rice Don Hagenan (details?).

Connecticut Warbler

Early south 5-7 Olmsted VH, 5-10 Olmsted JF, Rice LB; early north 5-20 Otter Tail GMO; late south 5-31 Hennepin ES.

Mourning Warbler

Early south 5-6 Freeborn DG, 5-7 Cottonwood LF; early north 5-14 Itasca WL; late south 5-31 Hennepin ES.

Common Yellowthroat

Early south 5-5 Rice LB, Washington JD, DR; early north 5-13 Beltrami JM.

HOODED WARBLER

4-22 Rice M. Chick, 5-7 thru 5-29 Hennepin, many observers (see *The Loon*, Vol. 51, Nos. 2 and 3).

Wilson's Warbler

Early south 5-5 Washington DR, 5-6 Anoka KL, Olmsted JSD, 5-7 ten reports; early north 5-15 Otter Tail SM, 5-16 Otter Tail GMO, 5-17 Clay LCF; late south 5-31 Hennepin ES; Washington DR.

Canada Warbler

Early south 5-7 Dakota DB, 5-9 Washington DR; early north 5-16 Becker SM, 5-18 St. Louis TH; late south 5-30 Hennepin DB.

American Redstart

Early south 4-27 Rice EW (details?), 5-4 Hennepin TD, 5-5 Cottonwood LF, Rice LB; early north 5-13 St. Louis TH, 5-16 Becker SM, Marshall ANWR.

House Sparrow

Reported from 22 plus counties.

Bobolink

Early south 4-21 Lac Qui Parle JD (good details), 5-5 Freeborn DG, Houston EMF, Olmsted JB; early north 5-12 Otter Tail DCF, 5-13 Otter Tail SM.

Eastern Meadowlark

Early south 3-16 Anoka KL, Hennepin VL, Wabasha DWM; early north 4-7 Cass and Clearwater TS.

Western Meadowlark

Early south 3-16 Cottonwood LF, 3-17 Kandiyohi BS, Sherburne JH; early north 3-26 Wilkin FKS, 3-30 Marshall ANWR.

Yellow-headed Blackbird

Early south 3-17 Sherburne JH, 3-28 Redwood LJF; early north 4-15 Otter Tail GMO, 4-17 Marshall ANWR.

Red-winged Blackbird

Early south 3-2 Anoka KL, 3-3 Carver TD; early north 3-1 Otter Tail GMO, 3-19 Aitkin TS.

Orchard Oriole

Reported from 5-7 thru 5-28 from the following counties: Cottonwood,

Dakota, Freeborn, Hennepin, Lac Qui Parle, LeSueur, Mower, Murray, Nicollet Olmsted and Rock. Nine reports north: Cass, Clay, Douglas, Hubbard, Otter Tail and **St. Louis** (KE, MMC 5-21).

Northern Oriole

Early south 5-6 reported from eight counties; 5-7 reported from ten counties; early north 5-6 Clay LCF, 5-8 Itasca MS.

Rusty Blackbird

Early south 3-19 Hennepin RE, 3-23 Washington DS; early north 4-1 Wilkin GMO; late south 4-21 Sherburne JH; late north 5-9 Cass HH, **5-28** Lake SW (details submitted), **5-29** Douglas RH.

Brewer's Blackbird

Early south 3-21 Lac Qui Parle CMB, Redwood LJF; early north 4-2 Wilkin FKS, 4-4 Otter Tail GMO.

Common Grackle

Early south 3-1 Wright DCF, 3-2 Anoka KL, Rice LB; early north 3-29 Becker GMO, 4-4 St. Louis KE.

Brown-headed Cowbird

Early south 3-18 Olmsted JB, 3-19 Hennepin RE; early north 3-14 Marshall ANWR, **3-15** St. Louis KE.

WESTERN TANAGER

South 5-9 Hennepin RE (see **The Loon**, Vol. 51, No. 3); North 5-10 Beltrami Steven Mueller (see **The Loon**, Vol. 51, No. 3).

SUMMER TANAGER

Early south 5-3 Rice LB, 5-7 Hennepin SC; early north 5-10 Beltrami JM, 5-16 Becker SM.

Summer Tanager

5-12 Martin EB (see **The Loon**, Vol. 51, No. 3).

Cardinal

Reported northwest to Becker county 4-23 TNWR.

Rose-breasted Grosbeak

Early south 5-2 Freeborn DG, Hennepin BDC, Olmsted JF; early north 5-8 Clay LCF, Marshall ANWR, St. Louis DA.



Blue Grosbeak

One report: 5-23 Murray AD.

Indigo Bunting

Early south 5-5 Hennepin TD, 5-6 Cottonwood RG, 5-7 Houston EMF; early north 5-18 Douglas JM, 5-19 Cass HH, 5-20 Clay RJ.

LAZULI BUNTING

5-27 Hennepin Jack Gauvitte, found dead Plymouth, specimen at Bell Museum.

Dickcissel

Three reports: 5-13 Houston EMF, 5-18 Stearns NH, 5-27 Rock DGW.

Evening Grosbeak

Late south 4-21 Rice LB.

Purple Finch

Late south 5-19 Houston EMF.

Pine Grosbeak

Five reports: 3-5 St. Louis DA, 3-11 Cass RJ, Itasca LH, 5-15 Hubbard HF, 4-12 Anoka KL.

Common Redpoll

Fire reports south: 3-5 Dakota KG, 3-8 Olmsted DH, 3-18 Chippewa CMB, 4-6 Anoka JLH, 4-12 Anoka KL; late north 5-6 St. Louis K. Sundquist, 5-7 Otter Tail SM.

Pine Siskin

Present south and north throughout the entire period.

American Goldfinch

Early north 3-2 Hubbard HF, 3-18 Clay LCF.

White-winged Crossbill

One report: 3-22 Aitkin TS.

Rufous-sided Towhee

Early south 3-9 Lac Qui Parle (seen at feeder, may have been an overwintering bird), 4-19 Houston EMF, 4-20 Freeborn DG, Olmsted JF; early north 5-9 Becker RJ.

Savannah Sparrow

Early south 4-18 Olmsted JF, 4-19 Anoka KL; early north 4-22 Clay LCF, Otter Tail GMO, Wilkin SM.

Grasshopper Sparrow

Early south 4-28 Rock BL, 5-6 Hennepin OJ; early north 4-22 Otter Tail GMO, 5-8 Becker TNWR.

LeConte's Sparrow

Eight reports: 4-30 Martin EB, 5-7 St. Louis M. Hoffman, 5-11 Hennepin BDC, Red Lake JM, 5-13 Wilkin SM, 5-15 Ramsey BDC, 5-22 Wilkin GMO, Marshall ANWR.

Sharp-tailed Sparrow

One report: 5-19 Clay KE.

Vesper Sparrow

Early south 4-8 Carver RJ, 4-10 Freeborn DG; early north 5-18 Marshall ANWR, 5-10 Otter Tail GMO, 5-20 Wilkin GS, 5-21 Clay LCF.

Lark Sparrow

Early south 4-16 Sherburne JH, 4-27 Anoka KL, Nicollet LCF; one report: north 5-3 Clay LCF.

Dark-eyed Junco

Late south 5-10 Hennepin TD, 5-11 Hennepin ES, 5-12 Anoka JCH; late north 5-31 Otter Tail GMO.

Tree Sparrow

Late south 5-12 Redwood RJ; late north 5-12 St. Louis DA.

Chipping Sparrow

Early south 3-31 Washington DR, 4-9 Sibley MC, 4-10 Hennepin AJ; early north 4-18 Hubbard HF, 4-20 Clay LCF, Otter Tail GMO.

Clay-colored Sparrow

Early south 4-22 Lac Qui Parle JD, Lyon DGW; early north 5-3 Clay LCF, Otter Tail SM.

Field Sparrow

Early south 4-11 Hennepin RJ, 4-12 Washington DMB; two reports north: 4-20 Otter Tail GMO, 5-5 Otter Tail SM.

Harris' Sparrow

Early south 5-4 Lyon HK, Stearns NH; early north 5-5 Morrison DCF; Otter Tail GMO; late south 5-19 Lac Qui Parle CMB; 5-20 Redwood LCF; late north 5-21 Clay LCF.

White-crowned Sparrow

Early south 4-23 Lac Qui Parle CMB, 4-26 Lyon HK; early north 4-19 Becker TNWR, 4-22 Otter Tail SM; late south 5-23 Murray AD; late north 5-21 St. Louis DA.

White-throated Sparrow

Early south 3-27 Lac Qui Parle CMB, 4-1 Hennepin TD, 5-2 Mower RRK; early north 4-17 Clay LCF, 4-18 Hubbard HF, Otter Tail GMO; late south 5-24 Hennepin OJ, 5-29 Sibley MC.

Fox Sparrow

Early south 3-23 Wabasha DWM, 3-31 Blue Earth RJ; early north 4-8 Otter Tail SM, 4-13 Clay LCF; late south 5-5 Washington DR; late north 5-7 Lake SW.

Lincoln's Sparrow

Early south 4-22 Lincoln CMB and KE, Hennepin ES, 4-26 Cottonwood LF; early north 4-18 Otter Tail GMO, 4-22 Otter Tail SM; late south 5-25 Anoka KL, 5-28 Hennepin OJ.

Swamp Sparrow

Early south 4-8 Anoka KL, 4-18 Mower RRK; early north 4-22 Otter Tail GMO, St. Louis DA, Wilkin SM.

Song Sparrow

Early south 3-16 Nicollet JCF, 3-17 Houston RJ; early north 3-29 Becker GMO, 4-6 Clay LCF.

Lapland Longspur

Early south 3-31 Murray RJ (500 plus), 4-2 Traverse DGW; early north 3-3 Marshall ANWR; late south 4-13 Sibley LCF; late north 4-14 Otter Tail GMO (greater than 2000), Wilkin DGW, 4-15 Clay LCF.

Smith's Longspur

Four reports: 4-15 Clay LCF (150), 4-19 Wilkin KE, 4-21 Yellow Medicine KE and RJ.

Chestnut-collared Longspur

Six Reports: 4-18 Clay SM, 4-21 Yellow Medicine KE, 5-19 Clay HK, 5-20 Clay OJ, 5-22 Wilkin GMO, and 5-25 Clay BB.

Snow Bunting

Late south 4-7 Traverse GMO, 4-14 Hennepin OJ, Murray AD, 5-27 Mower V. Shay (injured bird); late north 4-28 St. Louis KE, 5-11 St. Louis TH.

Corrections to Fall, 1978 Report:

Short-billed Marsh Wren, late south 10-21 Washington county DS, should be Anoka County. Yellow-throated Vireo, late north 9-16 Beltrami MM, should be 9-6. Black-and-white Warbler, add 9-6 Beltrami MM. White-crowned Sparrow, early north 9-21 Marshall DS, should be SV.

Correction to Winter 1978-79 Report: Delete Lesser Scaup 2-4 Wabasha (JSD).

Winter 1979

OBSERVERS:

DA — Darryl Anderson
DBA — Donald B. Anderson
RA — Renner Anderson
BB — Byron Bratlie
CMB — Chuck and Micki Buer
DB — Don Bolduc
DMB — Don and Mary Beimborn
EB — Ed Brekke-Kramer
FKB — Frank and Kathi Berdan
JB — Jerry Bonkoski
LB — Larry Bahr
BDG — Betty and Doug Campbell
HFC — Horace F. Chamberlain
MC — Mabel Coyne
MMC — Marge Carr
SC — Steve Carlson
AD — Mrs. Arnold DeKam
JD — Joanne Dempsey
JSD — Joel and Sandy Dunnette
TD — Tim Dyer
KE — Kim Eckert
OE — Mrs. O. J. Eckhardt
RE — Robert E. Erickson
DCF — Dave and Carol Fiedler
EMF — Eugene and Marilyn Ford
HF — Herbert Fischer
JF — Joan Fowler
JCF — John C. Frenz
LF — Mrs. Loren A. Feil
LCF — Laurence and Carol Falk
LJF — Lee and Joan French
MF — Merrill J. Frydendall
PF — Pepper Fuller
KG — Karol Gresser
DG — Doris Gregerson
RG — Randall Goertzen
BH — Bill Hilton, Jr.
EH — Edmund A. Hibbard-Sharon
HH — H. R. Hanson
JLH — James L. Howitz
JH — Jerome Hegdahl
LH — Lyle Herzog
NH — N. M. Hiemenz
RH — Robert Hartz
TH — Tom Hargy
VH — Vince Herring
AJ — Alvina Joul
OJ — Oscar Johnson
RJ — Robert B. Janssen
HK — Henry Kyllingstad
RRK — Ron and Rose Kneeskern
BL — Bill Litkey
FL — Fred Leshner

KL — Ken LaFond
VL — Violet Lender
WL — Wm. H. Longley
CM — Clare Mohs
DWM — Don and Wynn Mahle
JM — Jim Mattsson
SM — Steve Millard
MO — Gary and Marion Otnes
ANWR — Agassiz National Wildlife
Refuge
DR — Dave Reynolds
DNR — Department of Natural
Resources
OR — Orwin Rustad
TNWR — Tamarac National
Wildlife Refuge

BS — Bruce Stranden-Hitman
DS — Dave Sovereign
DAS — D. A. Stein
ES — Evelyn T. Stanley
FKS — Forest and Kirsten Strnad
GS — Gary Simonson
JS — John Schladweiler
LS — Larry Sowden
MS — Madeline Schuller
NS — Nora Mae Smith
SS — Shelley Steva
TS — Terry Savaloja
TOS — Tom Sobolik
DGW — Dick and Gloria Wachtler
EW — Ernest R. Weidner
MW — Mark Wright
SW — Steven G. Wilson



NOTES OF INTEREST



RUFIOUS HUMMINGBIRD IN ST. LOUIS COUNTY — On the evening of June 16, 1979 I was doing some chores around the place when I noticed a hummingbird flying around. The bird visited some flowers and then landed on a dead branch in our apple tree. At this point I went into the house for my binoculars (6-12 x 30 zoom). When I got back to the spot where the bird was, he was gone, but I located him on another branch. My first look through my binoculars gave me a start, for it was apparent that this was no ordinary hummingbird (for this area). The sun was shining from the west and directly on the bird. I noticed that he (it was obviously a male) had a rufous back, green wings, yellowish-rust belly and sides and a reddish throat patch. He was in view for approximately 15 minutes, when he flew to the shady side of the tree. There is no doubt in my mind that I saw a male Rufous Hummingbird that day. I consider myself extremely lucky to have seen one, especially since I was looking for one since I heard of those others in the spring 1979 "Loon." Our farm is located in S.E. St. Louis Co., Alden Township (T35, R12, Sec. 27) about three miles west of the Lake County line. I checked my observations out in "Birds of N. America" by Robbins etc. **Darryl Anderson, Rt. 1, Box 98A, Two Harbors, MN 55616.**

Editors Note: The above observation represents the first summer record for the Rufous Hummingbird in Minnesota.

A RUFF IN LYON COUNTY — On July 9, 1979, my wife and I birded in the Cottonwood and Green Valley area. A snow-melt that refused to dry up this summer had many ducks and shorebirds. The pond is located about a third of a mile southeast of the Highway 23 overpass just south of Cottonwood. Among the many Blue-winged Teal, Lesser Yellowlegs, fourteen Stilt Sandpipers, two Wilson's Phalaropes, and a few peeps was another shorebird not quite so tall as the yellowlegs but with a stouter body. Its bill was straight, heavier and shorter than that of the yellowlegs, its legs greenish. The brown back had a scaly look, but the most striking feature was heavy black mottling on the breast ending abruptly at the white belly. The bird did not fly, but when it stretched its wings, we noted the dark center of the tail and the distinct ovals of white at the sides. We watched this bird for fifteen minutes with 8x40 glasses in excellent light. I think it could only be a male Ruff in late breeding plumage. It was gone when we returned to the pond on the next day. **Henry Kyllingstad, 205 - 6th St. S., Marshall, MN 56258.**

A PUZZLE FINALLY SOLVED — On June 22, 1979 a bird singing a strange new song was found at Grand Lake, some 12 miles west of St. Cloud. The bird sang from the top of a large basswood tree and remained hidden by the foliage. I saw it once but couldn't get any color against a gray sky. It appeared plain gray below and darker above. The song, which was taped, sounded to me like "pee-pee-peuer" "pe-pe-peuer" "pee-pee-pee-peuer." It would sing for a while, then stop, and after 5 or 10 minutes would start singing again. It did not respond to its taped song when played back to it. Flycatcher or vireo, I thought, too plain for a warbler. I went home and listened to all the taped songs of warblers, flycatchers and vireos but none corresponded to this song. One June 23rd I was back to see if I could get a better view of the bird. It was a beautiful day with a clear blue sky. The bird cooperated in that it was singing in the same tree, and after some time I got a somewhat better view of it. The underparts were grayish white with a definite yellow wash on the belly and under the tail, which appeared brown by transmitted light. The eye and bill were dark. It appeared dark gray-brown on the head and back. No streaks. No wingbars, I still did not know what it was and could find no similar looking bird in any book. I was back to this area on June 29th and 30th. The bird still sang from the same tree and the only thing I could add after seeing the bird several times, was that it may have a light eye-line. In response to my tape and letter, Bob Janssen and Ray Glassel came on July 1st. We discussed the song and apparently had it identified as a Western Wood Pewee. The bird was again singing as usual in the same tree. After more than an hour, this bird and another bird which sounded very much like a Red-eyed Vireo, chased a Blue Jay away. It was finally seen close-up by Ray Glassel with a Red-eyed Vireo as a partner. This identified it as another Red-eyed Vireo. But the underparts were definitely yellowish and the song was so different that even the bird did not recognize it as it did not respond to the tape as Red-eyed Vireos are accustomed to do. It was only because there were three of us in different locations, around the tree and there were two birds which reacted to the intrusion of the Blue Jay, that the puzzle was solved. An aberrant plumaged Red-eyed Vireo with a strange aberrant song. **Nestor M. Hiemenz, 705 18th Ave. St. Cloud, MN 56301.**

ANOTHER BOREAL OWL NEST FOUND IN COOK COUNTY — After Terry Savaloja and I had found 15 calling male Boreal Owls and one active nest in 1978 along the Gunflint Trail in Cook County, it was disappointing for us in 1979 not to hear or see any Boreals on any of our trips back into the area during spring. However, on June 17 Dick and Gloria Wachtler by chance found a Boreal Owl nest hole along National Forest Road 325 in T63N. R1W, Section 14 (this road had been washed out during the spring and was not checked for owls). They were birding along this road and happened to notice a cavity about 30 feet up in a live, overmature aspen, and when they scratched on the trunk a juvenile owl emerged at the entrance hole. Later that day on their way home they stopped at my house and told me of their find, assuming it was a Saw-whet Owl. But when they described it as being all dark brown with narrow white eye-brow lines, I was of the opinion that they had seen a juvenile Boreal Owl and not a Saw-whet. The following day Roger Eastman, a birder from Maryland, stopped by my house to get some birding information, so I directed him to the nest. From late that afternoon until dark he was at the nest site and twice observed the juvenile, once as it came down from the hole

and disappeared into the ground cover (presumably to leave the nest just prior to fledging — I visited the nest site later in June and early in July, once for three hours after sunset, but saw and heard nothing). I was not home when Roger returned to Duluth, so he left me a note describing what he saw. Although his description of the narrow eye-brow lines above and between the eyes and the round whitish cheek spots (not mentioned by the Wachtlers) pointed to Boreal Owl (the juvenile Saw-whet has no cheek patches and has much more white on the forehead), he was unclear about the owl's body color. So I sent him some slides of juvenile Boreals taken in 1978 and asked for clarification. He responded by saying the owl he saw looked very much like the slides, and if anything "the white eyebrows on my bird were distinctly thinner and less extensive." which reinforces even further my belief that the bird could not have been a Saw-whet — also both the Wachtlers and Roger agreed that the owl was dark like a juvenile Boreal without the striking buffy underparts of the juvenile Saw-whet. Therefore, although no adult Boreal Owls were found at the nest cavity and although none of the observers are experienced with juvenile Boreal/Saw-whet Owls, the evidence is strong that this was indeed another Boreal Owl nest record for Minnesota. **Kim Eckert, 9735 North Shore Drive, Duluth, MN 55804.**

GREAT GRAY OWL NEST IN ST. LOUIS COUNTY — Although Great Gray Owls are occasionally seen in summer in the northern third of Minnesota, the only actual nesting records have been those studied by Robert Nero in Roseau County. It is therefore of interest that a Great Gray nest was discovered in St. Louis County in May 1979. The nest was found in a predominantly birch/aspen woods in T56N, R16W, Section 5 by Sisters Mary Stephen Eckes and Theresa Spinler of the College of St. Scholastica who were hiking a trail near a cabin owned by the college. They first reported their find to Sister Julie Calligure of the Duluth Audubon Society who confirmed their identification late in May and informed me of its location. The nest was about 20 feet up in the crotch of a birch and appeared that it might have been an old stick nest of a Broad-winged Hawk. Two young were hatched probably about May 25, based on the development of their plumage that other birders and I observed during June and on the presence of the incubating female in mid-May. The young were never observed out of the nest, and usually one of the adults was nearby; on some occasions both adults were seen near the nest and on June 10 one of the adults was watched bringing in prey. Aside from the typical food begging calls of the young, the only vocalization heard was a loud "whoop" occasionally given by the adults. On June 30 and July 4 visits to the nest site revealed that the nest had blown down and neither the adults or young were seen, but it is assumed the young successfully fledged before this. **Kim Eckert, 9735 North Shore Drive., Duluth, MN 55804.**

SCISSOR-TAILED FLYCATCHER IN CLAY COUNTY — Date: July 8, 1979 and July 22; Time: 8:10 a.m. (7-8) and 8:15 a.m. 7-22); Location: 2½ miles S. of Moorhead, MN (Clay Co., Moorhead Twp.); Sky: Clear but with heavy haze from high humidity; Wind: 5 mph. We were watching birds along a gravel road and were counting a flock of Common Grackles. We noticed a very light-colored bird on the gravel at the edge of the flock of grackles. The bird flew a few feet in the air displaying a long tail which we immediately recognized as a Scissor-tailed Flycatcher. The bird displayed its

mostly white underparts and a grayish back. The bill was dark. The dark line from the base of the bill to the eye was clearly visible as was also the eye-ring. The bright red-rusty patch under the wings (at the front portion) was also clearly visible when the bird flew. (We note that the bird guides vary a good deal in describing this color.) The tail was not as long as some mature birds we have seen in the south (particularly in Texas where we lived for three years) but was quite long (we estimate about seven inches beyond the primaries of the folded wing). The tail was very light underneath and tipped with dark and dark above. We viewed the bird for five or more minutes and left to get our camera. We did not see the bird when we returned. However, Elsie Welter and Mary Bergan (both well known birders in this area) were informed of the sighting and saw the bird at the same location at about 9:00 a.m. We were within about 25 ft. of the bird using six and seven power binoculars. We used Robbins, *et. al.*, **Birds of North America**, at the site, though we have clear memories of this bird from Texas and Oklahoma. The fields along the road were in wheat that was headed but still green. There are no fences adjacent to the road and the roadside was fringed with unmowed grass. The site is about one mile from the Red River of the North. On 8:15 a.m., July 22, we saw a Scissor-tailed Flycatcher flying across the field at about the same location that the bird was seen on 7-8. We assume it was the same bird. but of course, we cannot be certain of that. **Laurence and Carol Falk, Route 3, Box 46, Moorhead. MN 56560.**

GREEN-WINGED TEAL VS. PEREGRINE FALCON — My wife, Marion, and I were observing shorebirds from our car at 10:45 a.m. on September 1, 1979 at a marshy area along County Road 1, about five miles south of Fergus Falls, Ottertail County. Besides peeps, there were many ducks about. As we watched, we abruptly became aware of a commotion about 45 degrees to our left: ducks were springing into the air and shorebirds wheeled about. Through the clouds of birds we could see a large falcon, low over the water, heading directly towards us. At a distance estimated at no more than 150 feet from us the raptor struck an adult Green-winged Teal on the water's surface, killing it. By that time we identified it as an adult Peregrine Falcon. The Peregrine then executed a sweeping 360 degree turn and plucked the teal from the water, grasping it by the head and carrying it to the near shore, scarcely over 100 feet from us. After devouring all soft parts of the teal the falcon flew several hundred feet away, alighting on the opposite side of the slough. There it rested for a few minutes, then again took to the air, flew directly overhead and landed in a plowed field about 800 feet distant. The time was 11:10 a.m. We had the luck to have watched a Peregrine Falcon for 25 minutes. We then drove to Fergus Falls and notified Diane Hastings of our find. Over the noon hour she and Steve Millard found and observed the falcon still resting where we had left it. **Gary and Marion Otnes, Route 1, Box 180, Fergus Falls, MN 56537.**

LARK BUNTING IN THE BWCA — While working on a Portage Crew in the Boundary Waters Canoe Area early this summer, I observed what I believe was a female Lark Bunting (LB). It was 10:30 a.m. on June 8, 1979, a sunny day. I was walking the portage between Quadga Lake and the Isabella River with my partner Roland Hamborg when upon spying the bird on the trail 25' ahead, I stopped dead in my tracks and let out with a "what the heck is that!" As my partner is not particularly fond of birds (such

people do exist!) he was quite disappointed to look over my shoulder and find that the object of my attention was a mere bird. My sense of excitement was immediate and pronounced though, as I could tell even without the aid of my binoculars that this was a bird I had never seen before. It was a bunting/longspur size bird, brownish, with a striking, broad white wing-stripe. As I trained my 10 x 50 pentax binoculars on it, I noted the following characters: finch-like bill, brown cap on head, dirty white eye-stripe, brown cheek patch over a distinct white stripe bordered underneath by a black jaw-stripe. And again, the broad, white wing patch. When it faced me, I could see striping on the breast and sides, more concentrated in the center of the breast but not to the degree you would find in most Song Sparrows. When it turned tail to me I could see fine, yet distinct striping on the lower flanks (the bird was on a rise in the trail ahead of us and at about eye level). It seemed almost semi-tame or robin-like in its actions. When it finally flew it stayed close to the ground and landed on or near the ground. Readers who are familiar with the BWCA know there is nothing remotely resembling LB habitat in the area. At the time I only had Robbins Field Guide with me and because the picture of the female LB doesn't give much emphasis to the wing patch I did not seriously consider the LB. The wing patch was very distinctive and definite in the individual I saw. It wasn't until I was back home and saw the female depicted in Peterson's book that I investigated the LB further. Until I saw that and read further on the LB, nothing else seemed to fit and I figured that this would remain a mystery bird. I imagined the possibility that a Purple Finch could display a case of wing patch albinism, but discounted that for several seasons. First was just the general impression of the bird. This is not very valid scientifically, but the fact is that Purple Finches are often the most common species at my window feeder in early spring (they were this year) and so I am very familiar with them. I even had one this spring that was so intent upon eating seeds that it allowed me to stroke it on the back and on the breast and didn't seem to mind so long as my hand didn't get between his beak and the seeds. And there was a size factor. I know there is overlap between the two species, but this would have been an exceptionally large Purple Finch. Also, the streaking on this bird was not of the heavy nature you'd find on a Purple Finch. The jaw stripe, breast (except in very center), sides and especially flanks had finer, crisper streaking than I think you would find in a Purple Finch. The final non-Purple Finch character was not morphological one, yet might prove to be of some significance. I'm not familiar with the behavior of the LB when startled into flight, but if my memory serves me correct, Purple Finches, when startled into flight from the ground, invariably fly up into the trees. This bird flew off at a low altitude and stayed close to the ground (3-4') until out of sight, giving the impression that it was about to land on the ground again. Unfortunately, I didn't get a good look at the bird in flight. When it took off, I was peering at it from close range through 10 x 50 binoculars and couldn't follow it. By the time I lowered the binocs and had my eyes focused on it, the bird was off into the fairly heavy brush. Because of the obscuring vegetation and the checkerboard pattern of shade and bright patches of light it flew through, I couldn't have picked up any distinguishing features, even though there may have been some. I didn't pursue the bird further because I had a good look at it already and we were on "government time." The location of the ob-

servation was in the northern half of Lake County, T62N, R9W, Sec. 35. Steven G. Wilson, Grouse Lake, Isabella, MN 55607.

Editors Note: The above observation was submitted to the Minnesota Ornithological Records Committee (MORC) for verification. Mr. Wilson kindly submitted additional information after consulting Roberts "Keys." A majority (6 of 7) of MORC members accepted the observation as a female Lark Bunting. This is a most interesting record of an unusual species far out of its normal range.

STRANGE BEHAVIOR OF A PAIR OF EASTERN PHOEBES — Arriving at our lake home on Big Trout Lake, Crow Wing County, on June 9, 1979, we found, as in years past, what is presumably the same pair of Eastern Phoebes nesting in the same corner of our front porch. The female was brooding the eggs which subsequently hatched on June 11th. For the next eleven days both phoebes were normally and busily feeding their four nestlings, but on the 12th day (June 23) an inexplicable sequence of events took place. It was a dark overcast morning, as it had been for the last five days, with temperatures ranging between 48 and 65 degrees F. (a total rainfall during those dark days of 1.3"). At 7:45 a.m. I observed one of the phoebe parents vigorously pecking and pulling one of the nestlings, sometimes lying on her side on the nest, in an effort to eject the baby. It took her about ten minutes of great physical effort and much fluttering to pull this baby half way out, and finally push it to the concrete floor below, still barely alive, but dying within fifteen minutes. By this time the parent was back, repeating the procedure until finally at 10:45 a.m. the last of the four was lying on the concrete floor. During all this work by the one parent, its mate was quite disturbed, and even on six or eight occasions brought food in an attempt to feed the increasing number of young dying on the floor. None of the four accepted any food. When the second nestling fell to the floor the ejecting parent followed it and for 15 to 20 seconds pecked at the fallen baby. No attention was paid to the others after they had fallen. That afternoon as well as the following morning the pair still occasionally visited the nest. We assume the "executioner" was the female, but can't be certain. When I disposed of the small babies their heads appeared to be scarred by pecking. One more thing, on the afternoon of the tragedy I noticed the pair side by side, and the female was crouching with fluffed feathers as in pre-copulation practice of birds in general, however they flew away before I could notice whether mating had taken place. Could all of this have been because of a timing hitch in the ovulation process? It has been a very late season here, 30 to 40 days late according to local people. Could nature have timed the female for a second brood and thus cause her to clear the nest for its coming? Sorry for the length of this report, but we felt the details were contributory to the event. Can you enlighten us on this sad tale of infanticide? Four days after the "ejection" incident, which resulted in the death of the young phoebes, the adult pair had refurbished the old, last year's nest at the rear of the house, under the eaves. By the sixth or seventh day, they had started to incubate eggs. In about nineteen days, the adults started feeding and brooding their new clutch, which about a week or so after hatching, could be seen to be four in number. As the young developed, they, unlike their earlier siblings, could be seen from the ground eagerly awaiting their parents' offerings of insect food morsels. After approximately 20 days,

the young, who were now large and uncomfortably overcrowding their quarters, left the nest with no accidents — and, to us observers, apparently healthy and normal — as in years past. **M. A. Gallup, Star Route 77, Pine River, MN 56474.**

Editors Note: The above letter was written to Dr. Harrison B. Tordoff, Director, Bell Museum of Natural History, University of Minnesota. Here is Dr. Tordoff's reply of July 27, 1979.

Dear Mrs. Gallup;

"Your account of the phoebes that killed and discarded their brood is extremely interesting.

I can only speculate about the cause, but this is what I would suggest as a possibly plausible explanation. The 1979 spring and summer season was late and cold, with a lot of evidence of stress to birds, particularly insectivorous birds. My guess is that conditions for rearing young for your phoebes were difficult enough so that the young birds were in poor condition. If we assume that the adults can assess the general health of their babies (there is good evidence that birds can do this), then perhaps the parent that killed the young had decided that the chances of survival of the young were too poor to justify further investment of parental time and energy. Even though it should not necessarily be viewed as conscious or rational behavior, this sort of decision is routinely made by birds. It takes healthy babies to produce healthy adults, and the payoff is for parent birds to invest their energies wisely.

As for the difference in opinion between the two parent phoebes, as judged by their different behavior, I can only guess that individual thresholds for deciding when to abandon (or kill) the young might differ, or that the feedback to the adults from the babies might be related to the amount of parental care. Thus, if the female fed two-thirds of the food to the brood, she might be expected to sense lack of vigor in the young before the male parent.

All of this is speculative, but is the best I can do. I suggest you consider writing your observations in a form suitable for publication in the **Loon**. I'm giving Bob Janssen, Editor of the **Loon**, a copy of your letter. Thank you for writing."

Sincerely, Harrison B. Tordoff, Director.

FULL ALBINO BLACK CAPPED CHICKADEE — I first saw the bird at mid-day November 8, 1979 during a light rain in my backyard in Anoka County. A light warbler, vireo and chickadee wave was moving through the yard. Bird was chickadee shape with moderately long tail and characteristic undulating, flitting kind of flight. It perched for several minutes in plain view. The bill and legs were pale (bone and flesh colored). Three of my family saw it clearly through the field glasses. The only trace of color was two small dark-gray smudges just where the bib would end on the throat. Before it flew off, it confirmed its own identification when it sang its full song four or five times. I saw and heard it sing so I know it was the same bird. Finally it moved out with the rest of the wave. **W. R. Pieper, 11731 Evergreen Circle, Coon Rapids, MN 55433.**

EAGLE OSPREY, HERON NESTING REPORT - 1979 — The Bald Eagle, Osprey and Great Blue Heron are maintaining strong populations on the Superior National Forest with this year's Bald Eagle production one of the

best in seven years. According to Karl Siderits, Forest Wildlife Biologist, forty young eagles were produced with a 64 percent nesting success. Only once in the past seven years have more than forty young been fledged. Past surveys indicate that approximately 35 percent of the nests in which adults are incubating in spring, fail in summer. However, with the average brood size during the past several years of 1.3 to 1.7 young per nest, the population is quite productive. To maintain a stable population, the average minimum production per successful nest is 0.7 young. The majority of the Bald Eagle activity continues to be northwest and north of Ely. Twenty-five active eagle territories are located in the Boundary Waters Canoe Area Wilderness with eleven active territories located outside the Wilderness. Most of the nests are found within several hundred feet of a lake or stream.

**SUPERIOR NATIONAL FOREST
BALD EAGLE SURVEY**

YEAR	Observed Territories	1/ Incubating Territories	2/ Successful Territories	Per Cent Successful	Number of Young	Young/ Incubating Territories	Average Brood Size
1973	48	31	17	55%	23	0.7	1.3
1974	43	30	13	43%	18	0.6	1.4
1975	55	32	23	72%	35	1.1	1.5
1976	52	28	21	75%	29	1.0	1.4
1977	52	35	29	83%	43	1.2	1.5
1978	50	31	26	84%	38	1.2	1.5
1979	51	36	23	64%	40	1.1	1.7

OSPREY SURVEY

1973	29	19	5	26%	9	0.5	1.8
1974	36	28	13	46%	22	0.8	1.8
1975	34	26	12	46%	13	0.5	1.3
1976	34	23	19	83%	32	1.4	1.5
1977	36	24	18	75%	24	1.0	1.3
1978	32	20	15	75%	20	1.0	1.3
1979	34	25	16	64%	24	1.0	1.5

1/ In Spring
2/ In Summer

The production of 24 young Osprey from 16 nests indicates the maintenance of a strong population of that species also. The number of successful nests increased slightly this year. The average brood size remains high at 1.5 young per successful nest. There are 15 active Great Blue Heron rookeries

on the Forest, and unlike the restricted eagle and Osprey territories, these are found throughout the Forest. Except for one rookery near a woods road, all are located in remote areas in beaver ponds, on islands or near lakes. Some rookeries are in conifer trees while others are in hardwoods. All eagle, Osprey and heron surveys are conducted by Forest Service wildlife personnel using float planes. Aerial surveys begin in April and continue through July. Management guidelines restrict disturbance near the nests from March to October. **Karl Siderits, Superior National Forest, P.O. Box 338, Duluth, MN 55801.**

LATE CATTLE EGRET — An unusual sighting of a Cattle Egret was recently made at Coon Rapids Dam Regional Park. The bird was first seen by myself on Monday, November 5, 1979 at 8:00 a.m. It was in the general vicinity of the Visitor's Center, pecking in the grass and flying around near the waters edge (Anoka County side of Mississippi River). I was unsure of its identification at that time since I had never seen that type of bird in the park before. Dave Weaver, Director of Natural Resources Management - Park Reserve District, was notified of the observation. The egret reappeared on Tuesday at about 1:00 p.m. Two other employees, Tom Knapp and Judy Voigt, and myself identified the bird as a Cattle Egret through use of the Audubon Society Field Guide To North American Birds, Eastern Region. On Thursday, November 7 the bird spent most of the day in the park, again within the general vicinity of the Visitor Center. Positive identification was made at that time by Charlie Gruett who has seen considerable numbers of them while vacationing in Florida. To my knowledge this was the last reported sighting. **John K. VonDeLinde, Coon Rapids Dam Regional Park, 9750 Egret Blvd., Coon Rapids, MN 55433.**

Editors Note: An unusual influx of Cattle Egrets occurred at a number of places in Minnesota during the last week of October and the first week in November 1979. A flock of eight was reported from Cloquet, Carlton County, on October 27 or 28, one was seen along the St. Louis River near Duluth a few days thereafter and several people (including myself) saw one on Minnesota Point, Duluth, on November 3 and 4. Specimens were taken at Grand Rapids, Itasca County and in Washington County during this time period. The only other November date for the Cattle Egret is one found in Faribault County on November 7, 1975 (**The Loon 49:170**). What caused this influx of late Cattle Egrets in northeastern Minnesota and in the Twin Cities area is not known. The species is known to breed only in the western part of the state. A possible cause might be the early winter storm that passed over areas to the south of Minnesota during the last week of October. This could have caused a reverse (northward) movement of birds into Minnesota.

PRAIRIE FALCON OBSERVED AT HAWK RIDGE — On September 30, 1979 I observed a Prairie Falcon flying over the main overlook at Hawk Ridge. The falcon was spotted at it flew through my binoculars' field of view as I was watching a small kettle of Sharp-shinned and Red-tailed Hawks. With its pointed wing tips, long and narrow tail, and direct rapid flight, it was immediately recognized as a falcon, and since it was clearly larger than the kettling Sharp-shinned and smaller than the Red-tailed I first assumed it was a Peregrine. But as I followed the bird in flight for about the next minute, its black axillars were quite obvious as it flew directly

overhead. Although the falcon was quite high (official counter Molly Kohlbry standing next to me was unable to pick it up until it was going away and too far for her to identify), these black axillars showed up quite well with the sun shining brightly on the underside of the bird (the blackish color was not limited to the axillars but also extended part way into the under wings in the shape of a narrow triangle — (Peterson's Western field guide illustrates this better than Robbins' guide). The upper side of the falcon was never visible, nor were any facial marks seen, but the under side of the bird was very pale with a suggestion of a light sandy brown cast which contrasted well with the black axillars. Although this represents the first record for Hawk Ridge, there have been at least two other sightings in the Duluth area over the years, and throughout Minnesota the number of Prairie Falcons seen in the past five years makes this species almost regular now in the state. **Kim Eckert, 9735 North Shore Dr., Duluth, MN 55804.**

PEREGRINE FALCON OBSERVATION — On Thursday, September 20, 1979 we were sitting at an overlook of the Mississippi River valley at Kipp State Park in Winona County. The sky was clear, visibility excellent, temperature in the sixties. It was about 7:10 p.m. and the sun was setting behind us as a large falcon approached from the left, flew across from left to right in front of us, turned and banked overhead, and flew off to our left rear over the trees and presumably out over the valley or upstream. At closest approach it was about fifty feet from us and nearly at our level as the hill drops steeply off at that point. The bird was not observed with binoculars as we had only several seconds, however the dark blue-gray back and distinctive hood of an adult male Peregrine Falcon were clearly visible. As this was only four days after the Hawk Ridge weekend we had had a chance to review our raptors but this was hardly necessary; the large size (nearly Ring-billed Gull size) and textbook-like hood would rule out a Merlin and the dark back any other large falcon. The angles and lighting were never correct to observe the axillars though we do not think it was a necessity to do so in this case. Although our experience with falcons is somewhat limited, we have seen an adult Peregrine and several Prairie Falcons before. **Jon Peterson and Ann McKenzie, 1360 Nakomis (#11), LaCrosse, WI 54601.**

SUMMER TANAGER AT MARSHALL — At about 9:30 a.m. on April 27, 1978, my wife observed an all red bird feeding among House Sparrows, American Robins, Pine Siskins, and Common Grackles on the ground under our dining room window. The light was excellent, and she watched the bird for about fifteen minutes at a distance of about eight feet. She described it as without any streaks or bars, just clear red, but the wings and tail were a little darker than the rest of the bird. Its bill was thick and heavy and about as long as the head and yellow in color. It was larger than the House Sparrows and smaller than the robins. The other birds paid it little attention. After noting the details of color, size, etc., she consulted Robbins' guide while the bird was still in sight and she said that it exactly matched the illustration of the Summer Tanager. Not knowing its rarity, she neglected to telephone me at the office, so that's one I still need for my Minnesota list! Friends down the street noted a similar bird a little later in the day, describing it in very similar terms, but it was not seen the next day. **Henry Kyllingstad, 205 - 6th St. S., Marshall, MN 56258.**

SUMMER Tanager AT DULUTH — From October 25 to November 1, 1979 an immature male Summer Tanager appeared at my feeders and in the vicinity of my yard. Although daytime temperatures then were mostly in the 40s with lows at night sometimes down in the low 20s, the tanager seemed quite healthy as it fed on mountain ash berries in the neighborhood and on suet, cracked corn and jelly at the feeders (the jelly was put out after I learned that another Summer Tanager at a Duluth feeder a few years ago fed on it). Several observers from Duluth and the Twin Cities came to see the bird, and Marj Carr and I took several recognizable color photos. The plumage of the bird is difficult to describe since the colors were not sharply defined or separated but blended in with each other and seemed to change shade and intensity depending on light conditions and the angle of observation. The general impression of the tanager when seen at a distance or flying was an obvious reddish- or orangish-brown. Top of head was orangish-brown; nape, cheeks and back mostly dull greenish; wings also mostly greenish but with dull reddish in folded primaries and dark grayish in the wing tips; rump and under tail coverts fairly bright red-orange; tail reddish; belly and chest greenish-yellow; throat dull but obvious yellow-orange; bill "tanager-shaped" with lower mandible pale and most of upper mandible fairly dark gray; yellowish eye-ring; call note a fairly loud and distinctive "pit-ter-tuck" (somewhat suggestive of the quality of the Least Flycatcher's "che-bek"). The tanager was last seen during the morning of November 1 when snow flurries fell, making conditions quite incongruous with the tanager's name, and it fed constantly at my feeders in apparent preparation for flying south. But the most interesting aspect of this record is that Koni Sundquist of Duluth received an unconfirmed report of a Summer Tanager in Silver Bay, about 45 miles up the North Shore from my house, on October 23, two days before my tanager first appeared — suggesting both Summer Tanagers were the same individual. **Kim Eckert, 9735 North Shore Dr., Duluth, MN 55804.**

BLUE-GRAY GNATCATCHERS AT MARSHALL, LYON COUNTY — On August 29, 1979, my wife and I selected for early evening birding one of our "warbler routes" instead of our more regularly followed "shore bird route." About a mile southwest of the Marshall airport, where a township road crosses a small creek, we saw movement in the cottonwoods and willows. Stopping the car, I focused my 8x40 binoculars on a small nervously active bird with all white underparts and a light bluish or dove-gray back. Its wings were darker than the back and the secondaries were edged with white. It had a white eye ring and a blackish line over the eye. Its long tail was blackish at the center but the outer feathers were white and it was frequently cocked up over the back wren fashion. Its bill was slender and black. It was joined by another bird of the same description. We watched both birds for about ten minutes in excellent light and at distances from twenty to thirty feet noting all the listed marks for both. I heard a couple of thin buzzing notes but could not be sure they came from either bird. These were the first Blue-Gray Gnatcatchers I had seen since the Big Day Count sighting at Collegeville a few years ago. I believe this is a new Lyon County record and possibly is the westernmost occurrence in the state. **Henry C. Kyllingstad, 205 - 6th St. S., Marshall, MN 56258.**

UNUSUAL RED-TAILED HAWK BEHAVIOR — On September 3, 1979, Labor Day, I was in Hayfield, Dodge County, visiting with relatives when my niece said, "What's that big thing!" and pointed to a Red-tailed Hawk perched on a power cable in the alley 150 ft. away. I quickly ran in the house to get a camera to photograph this unusual visitor to town. I snapped one picture when it flew, only to land on another power cable by the street, even closer to us. I wanted another picture, so I slowly walked up behind it. He didn't seem to mind. I passed under it and stood in front, only 20 ft. above me. He couldn't have cared less, so I motioned for my wife and four of our school aged nieces, nephew, and friend to come for a closer look. The hawk perched there for 15 minutes as we observed him, then swooped down over the street and landed on a light pole. As we walked toward it, we noticed that it had spotted someone's pet cat. The cat ran toward the six of us in the street, stood there for a moment, then sought shelter beside a house. The hawk swooped down near the cat, then flew around the house at window height and back to its perch on the light pole. The excitement ran high as my camera was ready for a possible attack. When the hawk flew again we ran after it. It landed on the ground in someone's front lawn. We all slowly walked toward it for a closer look. We were within 25 ft.



of this hawk when it pulled a worm out of the ground, ate it, and hopped away for another, just like a robin would. I was within 15 ft. when I took a picture of it tugging an angle worm out of the ground. We watched him in the neighborhood for another half hour and then it left. That afternoon I saw it again flying down the street at a height of 5 ft., then swoop up to perch on a light pole. My father-in-law said the hawk stayed in the neighborhood for three days, and that it did kill a squirrel in his neighbor's yard. **Marc Senjem, 1242 Seminary Ave., St. Paul, MN 55104.**

SNOWY EGRETS AT HERON LAKE — On August 14, 1979, Carrol Henderson of the Department of Natural Resources and I had just completed a boat tour of Heron Lake, Jackson County. It was approximately 5:00 p.m. when we left the home of Herman Becker, who had kindly given us the tour of the lake. We were about 1½ miles south of the town of Heron Lake when we noted a number of egrets feeding in a flooded pasture near some grazing cattle, about 150 yards east of the road. We noted two smaller egrets among the five Great Egrets and assumed they might be Cattle Egrets. We stopped along the road and put the scope (20x) on the birds. The smaller size of the two birds when compared directly with the Great Egrets was obvious. We watched the birds for several minutes and determined the all dark bill and legs. As we watched, one of the birds moved about, lifting its yellow feet out of the water confirming a Snowy Egret. In a few minutes all of the birds took flight and we saw the yellow feet on the second bird. To the best of my knowledge, this is the first record for the Snowy Egret in the Heron Lake area. **Robert B. Janssen, 10521 S. Cedar Lake Road, Minnetonka, MN 55343.**

EARLY MIGRANT SPRAGUE'S PIPIT IN HENNEPIN COUNTY — On August 13, 1979 while scoping the muddy 'shore-line' of a flooded field near French Lake in northern Hennepin County my attention was diverted to a weasel which was hunting in the grass adjacent to the water line. My interest in the weasel turned out to be short lived as I noticed a small passerine bird with light colored legs and white outer tail feathers walking on the ground. I continued to note additional field marks which included a streaked back; yellowish-orange lower mandible; light colored line above eye; striped crown; faintly streaked breast and primary feathers broadly outlined with buff. During the time of observation the bird flew from the ground to perch nearby in some of the 'swamp-grass' adjacent to the flooded area. The above observations were made using a Bushnell Spacemaster II telescope with a 20x wide angle lens. Time of observation was approximately 7:15 p.m. under partly cloudy skies. **Oscar L. Johnson, 7733 Florida Circle, Brooklyn Park, MN 55445.**



BOOK REVIEWS

First Aid and Care of Wild Birds
Edited by J. E. Cooper & J. T. Eley.
Published by: David & Charles Inc.,
North Pomfret, Vermont 05053, 228
pp. 1979. \$27.50.

On the basis of subject material in this book, its title could have been a technical and ominous sounding one, yet because of the completeness of presentation and direct manner of approach, the title complements the book's straightforward and easily understood contents. The first chapters ostensibly open with a general statement on what is to be gained by having many facets of the public involved in the rescue and care of injured wild birds. This is followed by a discussion of the legal status of engaging in such activities in Great Britain. (Note: In the U.S. federal and state laws as well as some local ordinances vary considerably from British law.) The real content of the book begins in Chapter 3 with an overview of bird structure and function which presupposes little in terms of the reader's previous knowledge of the inside machinery of a bird. An excellent and readily understood presentation of anatomy, physiology, behavior, and flight mechanics is given which should be of general interest to all who work with birds. The ensuing chapters cover all aspects of bird care from initial exam and diagnosis, to recognition and treatment of diseases, repair of fractures, special housing and feeding requirements for many of the diverse bird types that are likely to be encountered, and preparation for return to the wild. Special consideration is given to birds that have been poisoned or involved in oil spills, a very current problem in much of our environment.

Finally the subject of what to do with a crippled but otherwise healthy bird is addressed. Recommendations for aviary construction, long term maintenance and the care of these birds in public education and in some instances captive propagation are made. This section is well referenced with many citations from aviculturists who have successfully maintained many varieties of birds in captivity for extended periods of time.

The book is well illustrated throughout with line drawings and high quality black and white photographs demonstrating various techniques. Complete lists of therapeutic drugs, sources of supply, and dosages along with recommendations for use are provided. This particular material makes the book of particular interest to the veterinary practitioner who has occasion to have injured birds presented to him by his clients.

There are sixteen authors that participated in the writing of this book representing ornithologists veterinarians, aviculturists, and legal authorities. With a forward by Joy Adamson, the book brings together for the first time a compendium of information on how to deal with the everyday why's and what to do's of caring for injured birds. **Patrick T. Redig**, Department of Veterinary Biology, 295 Animal Science/Veterinary Medicine, College of Veterinary Medicine, St. Paul, Minnesota 55108.

Penguins, by Roger Tory Peterson
Houghton Mifflin Co., 2 Park St., Boston, MA 02107. Illustrated, color and black & white, 238 pp., 1979. \$25.00.

Roger Tory Peterson calls his new book **Penguins** "a pictorial essay."

This is certainly true as each of the world's 17 species of Penguins are illustrated by means of color photographs in their natural habitat. This, plus many black and white drawings make this book a marvelous pictorial experience. The end paper drawings in color are especially useful in identifying the species of Penguins. As I was reading the text I continually referred to these endpapers.

The text includes chapters on History and Prehistory, the Penguin Environment, Life in the Colony, Interacting with Man, plus a Gallery of Penguins which gives a brief description of habitat, range and plumage characters of each species.

I found the text somewhat repetitive and disorganized as if it were thrown together to supplement the photographs. However, in spite of this rather minor criticism, I would highly recommend this book to those of us who will probably have little chance to see this most interesting group of birds in their natural environment.

Bob Janssen

A Birder's Guide to North Dakota, by Kevin Zimmer; distributed by L & P Press, Box 21604, Denver, CO 80221; 18 maps, 23 photos; 1979; \$5.00.

Anyone familiar with a birder's guides knows that Jim Lane's are in a class by themselves, and anyone familiar with any one of his guides will quickly recognize the format of **A Birder's Guide to North Dakota**. This is because Lane published this book, and the author borrowed most of the devices Lane uses in his own books: e.g., the introduction's elements, the section on specialties, the abundance chart, etc. Even some of Lane's terminology and exact wording of some sentences appears here — there are even some uncanny similarities as well to **A Birder's Guide to Minnesota**.

But the important thing is that the usual Lane quality appears here with only a few exceptions, and most of them are relatively trivial. One flaw is that the layout of the guide is some-

what confusing. The state is divided logically into four sections — Southeastern, Northwestern, etc. — and each of these sections is then divided and handled by counties. This system would have worked except that the layout of some pages (i.e., the placement of maps, photos, captions and headings, and the use of capital letters and boldface type) makes it difficult to tell where some sections begin or end. This normally would be a minor point except that also there is no key map of counties, a more serious shortcoming that somewhat reinforces the difficulty mentioned above.

The section Specialties of North Dakota is also flawed. Here are very useful paragraphs with information on abundance, distribution, habitat, and specific locations of the state's "specialties," but the effectiveness of this section is diluted since too many species (121) are included. There is no doubt that North Dakota is as good a place as any to find such sought-after species as Yellow Rail, Sprague's Pipit and Baird's Sparrow but it is hard to imagine why Common Tern, Common Flicker, Eastern Kingbird, Least Flycatcher, Blue Jay, Black-capped Chickadee, Northern Oriole, Common Grackle and a few dozen others are worthy of special treatment here.

Several other minor points are also bothersome: the use of A.B.A. names is an unfortunate choice (why encourage the use of Northern Junco, for example, when too many birders still have trouble remembering the change from Slate-colored to Dark-eyed Junco?); the introduction includes a few dubious or useless statements, such as its undue emphasis on winter birding and not enough emphasis on summer when the state's true specialties are to be found, such as its claim that the dry summers on the prairie are somehow humid, such as its "sage" advice that a scope is helpful when birding and that high temperatures plus high humidity make you uncomfortable, or such as its overreaction

to the dangers of removing ticks (in Minnesota we just pull them right off with no ill effects Kevin); the Yellow Rail is inadequately covered, considering its desirable status among birders (only one spot is mentioned, and no advice is given as to when and how to look for it); a few identification hints are included and are useful, but the discussion on Common/Fors-ter's Terns offers nothing the field guides haven't already said, and the advice on Ferruginous Hawk identification is just plain wrong (wing windows and flight profile are not diagnostic).

But **A Birder's Guide to North Dakota** remains a quality guide, thanks mainly to the guidance of the Jim Lane style. The book may never be a birding best-seller — after all, North Dakota hardly rates with the likes of the other states covered by Lane's guides — but if you find yourself with the time to bird your way through the state (the two weeks suggested in the introduction is a bit excessive — a few days is enough), this guide is to be recommended.

Kim Eckert

Birding Areas of Iowa, edited by Peter C. Petersen; Iowa Ornithologists' Union, 1560 Linmar Dr., Cedar Rapids, Iowa 52404; 36 maps, 11 drawings; 1979; \$4.50 plus 75¢ postage.

Most introductions tell the reader what to expect, but the one in **Birding Areas of Iowa** has its main importance in telling what not to expect. "This book is the result of the work of 31 contributors. In this type of endeavor some variation in style is always encountered." It is unfortunate that the editor who clearly has the necessary skill and knowledge, did not put this whole effort together on his own, since the quality found in different parts of the book is even more uneven than he leads us to expect. While the authors of some sections, based primarily along county lines, offer plenty in the way of concrete information on sought-after species, other

writers did no more than take a single trip through an area and wearily recount their weekend of trivial birds and visits to birdless picnic grounds.

The introduction also reminds us that "since the sections were originally articles in **Iowa Bird Life** some individuality of style was encouraged . . . and not be too outdated by the time of reproduction in book form." But with some of the information dating back to 1972, its timeliness has to be somewhat dubious. And that "individuality" also extends to the maps. One excellent feature of this guide is that each section is accompanied by a map, although some are hand drawn, others are sections of the state map, and a few are county highway maps. All are helpful and even indispensable, but not as readable and consistent as they might have been.

Also in the introduction is an acknowledgement of Ross Silcock's valuable contribution in preparing the indices. Although too many areas are superficially mentioned, no one can accuse this book of having a shortage of locations. The contributors offer a proliferation of birding spots, with the result that Silcock was left with the monumental task of compiling a 12 page location index containing about 1200 places! The index of birds, on the other hand contains a mere 4½ pages of listings. (This index, by the way, takes the unfortunate and confusing route of using those A.B.A. names — a choice difficult to justify considering most of the text still uses the "old" A.O.U. nomenclature!).

Finally, the introduction notes the inclusion of Iowa's Top Ten Birding "Hot Spots," certainly a necessary section to highlight a few of the best areas that would otherwise be lost among the hundreds of other spots. Indeed, when reading about these areas in their appropriate sections, one often is not aware that they do stand out according to some compiler's accounts. "This section will be useful for out-of-state birders travel-

ing through Iowa," explains the introduction, adding: "Unlike birder's guides this book is not written for the avid birder and they will probably find it of minimal value." This judgment may be overly harsh. In spite of its shortcomings, **Birding Areas of Iowa** remains a valuable guide to ex-

perts and amateurs alike. While avid listers from across the country may find little to attract them in Iowa, there are more than enough birding spots mentioned in this guide to keep both visiting and resident birders interested and occupied.

Kim Eckert

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DULUTH - SUPERIOR SNOWY OWL STUDY

I have been studying wintering Snowy Owls in the Duluth - Superior harbor area since 1973, concentrating on banding and colormarking to investigate migration, winter numbers, territorial behavior, food habits, and mortality. Owls are captured in the harbor area, primarily near grain elevators, where Norway Rats provide an abundant food source. They are fitted with U.S. Fish and Wildlife leg bands. I record age, sex, wing and tail measurements, weight, plumage characteristics, and any injuries or abnormalities present. The owls are individually colormarked with black dye and fitted with a green patagial wing marker. After processing, which requires 10-15 minutes, they are released at the site of capture.

Individual colormarking is invaluable in assessing territorial behavior and in making estimates of the wintering population. Since 1974 Snowy Owls on territory in the immediate harbor area have ranged from a low of 3 or 4 in 1977 to a maximum of about 25 in several years. My yearly estimates of the total number of owls passing through the harbor area range from 10, up to 50 or more. In 1977 I began using wing tags to identify owls returning to Duluth in subsequent years. Four of 31 owls banded in 1974 and 1975 were recaptured in subsequent years; the green wing tags will identify returning owls that don't respond to trapping.

IDENTIFICATION OF INDIVIDUAL OWLS

Snowy Owls banded in the Duluth - Superior harbor area may be initially identified by the black head mark while perched or by the green wing tag and/or black colormarks in flight (see examples). If perched, marked owls should be approached and flushed for individual identification (out-

side of 10 mile limit - see **Reporting Observations** below). Binoculars are usually necessary for accurate identification. There will be only one area marked on the flight feathers (i.e., primaries, secondaries, and tail), corresponding to 1 through 9. Tail marks are the most difficult to discern as the tail is spread only on take-off and landing. The wrists of the wings will be unmarked (1 - 9), left wrist marked (10 - 19), right wrist marked (20 - 29), or both marked (30 - 39).

REPORTING OBSERVATIONS

To minimize disturbance I prefer that marked owls within 10 miles of Duluth - Superior **NOT** be flushed but instead that I am contacted to make the individual identification. Due to financial time and considerations I am only able to regularly cover an area bounded on the north by Lake Ave. and on the west by I-35 in Duluth, on the south by Tower Ave. and the Arrowhead Bridge, and on the east at the Jct. of Hwy 2 and 53 in Superior. Any observations of marked owls should be reported. Outside of these areas, make the individual identification and call or write **as soon as possible**. Include date(s), of observation, number of owls, exact location - Town, Range, $\frac{1}{4}$ Section or exact mileage from a known point, and any behavioral observations including habitat - farmland, scattered brush, residential, industrial, etc. **Please leave name, address, and phone number.**

By law, the Bird Banding Lab must also be informed of observations of colormarked birds. I will forward these observations if so desired.

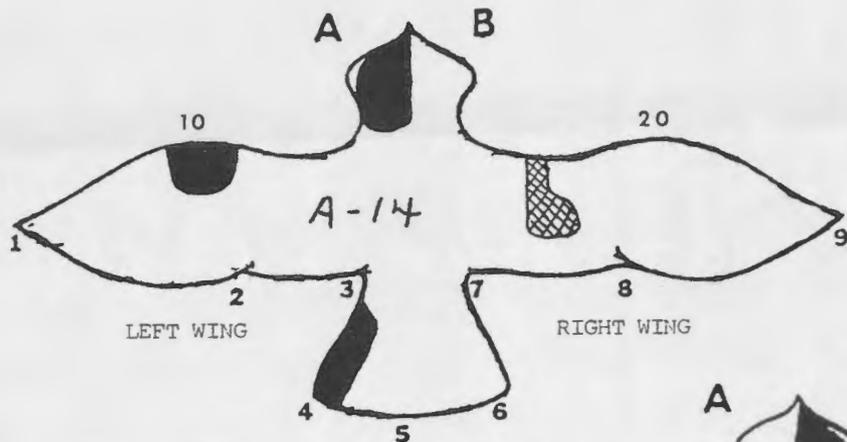
Bird Banding Laboratory, Office of Migratory Bird Management, Fish and Wildlife Service, Laurel, Maryland 20810.

David L. Evans, 2928 Greysolon Rd., Duluth MN 55812. (218) 724-0261.

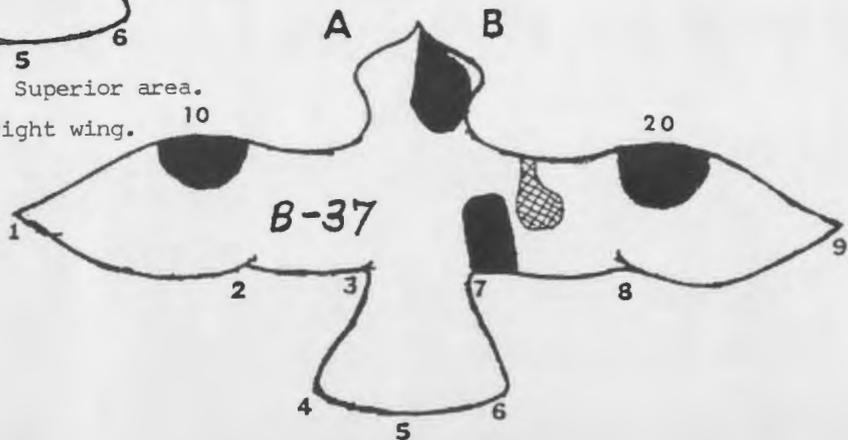
SNOWY OWL

MARKING

SYSTEM



BLACK DYE for Duluth - Superior area.
GREEN WING MARKER on right wing.



PURPOSE OF THE MOU

The Minnesota Ornithologists Union is an organization of both professionals and amateurs interested in birds. We foster the study of birds, we aim to create and increase public interest in birds and promote the preservation of birdlife and its natural habitat.

We carry out these aims through the publishing of a magazine, **The Loon**; sponsoring and encouraging the preservation of natural areas; conducting field trips; and holding seminars where research reports, unusual observations and conservation discussions are presented. We are supported by dues from individual members and affiliated clubs and by special gifts. The MOU officers wish to point out to those interested in bird conservation that any or all phases of the MOU program could be expanded significantly with gifts, memorials or bequests willed to the organization.



SUGGESTIONS TO AUTHORS

The editors of **The Loon** invite you to submit articles, shorter "Notes of Interest" and black/white photos. Photos should be preferably 5x7 in size. Manuscripts should be typewritten, double-spaced and on one side of the sheet with generous margins. Notes of interest should be generally less than two typewritten pages double-spaced. If reprints are desired the author should

so specify indicating number required. A price quotation on reprints will be sent upon receipt of information.

Club information and announcements of general interest should be sent to the Newsletter editor. See inside front cover. Bird-sighting reports for "The Season" should be sent promptly at the end of February, May, July and November to Kim Eckert. See inside front cover.

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(Drawings by Dana Gardner and Jacque Rosenau)