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LOON

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GARDNER

The LOON Minnesota's magazine of birds and nature, is published four times each year by the **Minnesota Ornithologists' Union**, the state-wide 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: Gary and Linda Ash, 5638 Trading Post Trail, Afton, Minnesota 55001. To join the MOU and receive both MOU publications, send \$5 for a regular yearly subscription. Or other classes of membership that you may choose are: Family \$6 yearly; Sustaining \$25 yearly; Life \$100. 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, 14321 Prince Place, Minnetonka, Minnesota 55343. (phone 612-938-7464). 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. 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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THE PRESIDENT WRITES . . .

Amid disheartening news of energy shortages, water shortages, northern finch shortages at most of our feeders, coffee shortages sending prices into the stratosphere, there come occasional words of cheer for the future. Witness:

1. President Carter has suspended funding on several controversial projects of the U.S. Army Corps of Engineers and the Bureau of Reclamation pending further study of the impact on our environment. Some of these projects may survive the scrutiny and be funded, but we can take some comfort from the fact that this will only occur after full study.
2. Commissioner Robert Herbst has been appointed to head the U.S. Fish and Wildlife Service. We have every reason to believe that Minnesota's loss is the nation's gain and that he will do an outstanding job of protecting our wildlife.
3. Governor Perpich has announced his determination to settle the Reserve Mining Company taconite dumping problem. He has shown concern for our environment in many other instances. Let us hope he can accomplish an acceptable solution.

The prognosis is good, but that doesn't mean we should let our guard down. There are still a number of pressing concerns. This being a legislative year, we should all remember Dr. Jim Ludwig's admonition given at the 1972 annual meeting to spend a day watching the legislature for every day we spend birding, and this should not be passive watching. Let your legislatures know what we stand for as well as what we oppose.

Your M.O.U. Board has planned a number of exciting field trips for the year. Watch for the announcements in the Newsletter and plan to attend as many as possible for that is the way to get the most out of your membership. With your help and participation I look forward to a rewarding year of Minnesota birding.

Henry C. Kyllingstad

DEWAR'S PROFILES: BERT LYSTOR

Bert Lystor was jealous. He was looking at one of those Dewar's Scotch Whiskey magazine ads — the one that shows a picture of some successful guy on the top of the page, and below that lists his home town, age, profession (always something glamorous and mysterious like systems analysis programmer or component software engineer), hobbies (usually something fashionable like yoga, backgammon or transcendental meditation), most memorable book (someone actually claimed it was "Kristin Lavransdatter" by Sigrid Undset), last accomplishment (something along the lines of discovering the cure for some disease), quote (always something sounding important full of words Bert never heard of — it was all Bert could do to keep up with words like Empidonax and ornithology), profile (they were usually inquisitive, sensitive, dedicated or intellectual), and scotch (invariably Dewar's White Label, of course).

"How come they never have a bird-watcher, I mean birder, I mean bird lister, in their ads? I'm sort of famous here, got more lists and longer lists than anyone else in Minnesota. What about me? I don't like scotch though, beer's my limit, that leaves me out I guess. A little recognition is all I need, an award maybe. Yeah, that's it, I'll win an award!"

He called John Oscarson, chairman of the T. S. Roberts Award committee.

"Yes, this is John. Who's this?"

"Never mind. Can't I make an anonymous nomination for the T. S. Roberts Award? I'm someone who — I mean I know someone who really deserves it."

"Yeah, I guess so. But before you tell me who it is, let me tell you the sort of person we're looking for. The award's given to someone who contributed most to the purposes of the M.O.U. Like last year's winner Elvira

Mentalist for all her work in environmental causes, or Dr. Arne Thologist who won two years ago for his years of ornithological service at the Bull Museum of Natural History. In other words, we don't give the award to someone who just goes birding a lot and has the longest list. So who did you have in mind? . . . Hello? . . . Hello?"

After Bert hung up, he sighed and sank back into his chair. He picked up the magazine again and looked at the ad. Then he closed his eyes and tried to picture how it would look . . .

DEWAR'S PROFILES

(photo of Bert proudly standing beside his file cabinet of bird lists)

BERT LYSTOR

Home: Kanaranzi, Minnesota

Age: 47

Profession: High school bookkeeping and accounting teacher

Hobby: Bird listing

Most Memorable Book: "Confessions of a Birdwatcher" by Roger Barton

Last Accomplishment: Listed the Common Crow in all 87 Minnesota counties

Quote: "The secret to successful bird listing is to have so many lists that every single bird you see can be checked off somewhere."

Profile: Good peripheral vision. Ambidextrous. Able to drive a car while watching for hawks and traffic while checking off birds with either hand on two checklists simultaneously while steering with his elbows.

Scotch: Butter . . .

. . . Since Bert couldn't bring himself to like scotch whiskey, even in his fantasy, he had to settle for doing an ad for a pudding company.

IVORY GULL AT GRAND MARAIS

by Dick and Gloria Wachtler

On Saturday, December 18, 1976, we entered Grand Marais on Highway 61 from the south. As soon as the harbor was on our right, we pulled over to the side of the road to scan the flock of approximately thirty gulls swimming in the open water. Swimming halfway between us and the near stone breakwater was a very small all-white gull with a black bill and a "dirty face." The gull flew nearer the stone breakwater showing us his black legs



Photos by Steve Blanich, Grand Marais — Dec. 19, 1976

and black webbed feet. It then spent some time bathing. The primary feathers each had a small black spot very near the tip. The tail feathers also had larger black spots nearly at the end of each feather. The upper tail coverts had a few small black specks. The gull flew onto a rock and stood there for some time. The black on its face extended from the bill around the eye. Its bill was slaty gray shading darker towards the tip except at the very tip where there appeared to be a slight amount of yellow. By now we had checked both Robbins' **Birds of North America** and Peterson's **A Field Guide to the Birds**. In addition to comparing the illustrations and field marks, we read in Peterson that the Ivory Gull is the "only all-white Gull with black legs." This was about 1:30 on a cloudy bright afternoon. We drove to a phone and notified Dean Schneider of Duluth of our opinion that there was an Ivory Gull in the Grand Marais harbor. We then drove back to the same spot just beyond the fishermen's buildings up on the main road. The Ivory Gull was now standing on the roof of a porch on the end building. It seemed only about half the size of the Herring Gull standing next to it. There were about one hundred Herring Gulls crowded on the decks of the boats and a few others on the stone breakwater. We also spotted three Glaucous Gulls. The Ivory Gull would periodically fly out around the flock of swimming gulls and return either to its perch on the roof or flutter down to the tracks to the south of that first building. On Sunday morning at about 8:30 the Ivory Gull was again on the shed roof but it soon flew down to the tracks. There were only about thirty-five Herring Gulls swimming in the harbor at this time — the fishing boats were still out. There were also two Glaucous Gulls in adult gray mantled plumage, one second winter white immature Glaucous and two first winter buffy immature Glaucous Gulls. **17 Oakridge Drive, Birchwood, Minnesota 55110.**

Editor's Note: On December 23, 1976, Janet Green, Kim Eckert, Don Bolduc, Elizabeth Campbell, Ray Glassel and I went to Grand Marais to see if we could find the Ivory Gull. Unfortunately, the gull was not in the area. We talked to several of the local fishermen who had noticed the unusual small gull among the other "sea-gulls" as they called the Herring Gulls. They told us that the Ivory Gull was first seen about December 1, when they started their herring fishing, and the bird was seen almost daily until about Dec. 21, we thus missed the bird by just two days! **Robert B. Janssen.**

AN EARLY GREAT HORNED OWL NESTING — While going through my notes I came across the following record. On March 21, 1940, Jerry Paul, my brother, Jim, and I, while birding at Spring Lake north of Hastings, Dakota County, came upon a young Great Horned Owl that had obviously been out of the nest for some time. Bent, in **LIFE HISTORIES OF NORTH AMERICAN BIRDS OF PREY**, Part 2, in referring to the New England and New York areas, said (page 298): "The period of incubation is about 28 days, the young remain in the nest about six or seven weeks, and are unable to fly until they are 10 or twelve weeks old; this means that if the eggs are laid about the first of March, as they usually are in this latitude, it will be the middle or last of June before the young are able even partially to shift for themselves." This information would indicate that the egg from which this bird hatched had been laid in December, and the bird was probably at least two or three weeks out of the nest. **Dana R. Struthers, 1655 Bohns Point Road, Wayzata, Minnesota 55391.**

SOME NOTES OF BIRDING INTEREST FROM WESTERN MINNESOTA

by Daniel J. Orr

I spent the spring and summer of 1976 engaged in a research project on the pelican colony at Marsh Lake Reservoir in Big Stone County, Minn. One of my objectives was to locate feeding areas away from the reservoir. This entailed spending many hours driving in that part of the state. In doing this I had the opportunity to visit many excellent birding areas and I made some rather unusual observations.

The pelican-cormorant colony on the island and a Great Blue Heron colony on one shore offer many opportunities for observing bird behavior. There is also a substantial population of nesting waterfowl and a few upland gamebirds including introduced "wild" turkeys.

The weather conditions during much of 1976 were somewhat unusual: wind, high temperatures, and drought. The heron colony was particularly hard hit by several days of high winds in mid-April. The colony was not large to begin with and probably one-third of the nests were either destroyed or abandoned during this time. At the beginning of the season there were approximately 100 nests. In June when the young were banded we found evidence of heavy nestling mortality. We banded about 100 young, about 95% of the juvenal population, but only about 30-40% of the nests were occupied. Much of the mortality I am certain was due to this period of high winds in April. A couple of weeks after we banded, the colony was hit by another storm. We returned to the colony and found about 25 dead young birds.

One morning on my way to the lake I saw a raptor that I did not immediately recognize. On closer examination I realized the bird was a Swainson's

Hawk, an uncommon buteo in our area. As I watched the bird it flew towards a wooded area where it was met by another hawk, also a Swainson's. The birds went through a series of aerial acrobatics, landed, copulated, then repeated the process several times. When the birds were finished, and after several minutes of preening, they began to collect and carry nest materials. I watched the birds working on their nest for approximately one-half hour. When I returned several days later the birds were still in the area but they no longer seemed occupied with nest building. The birds remained in the area throughout the summer and were often seen together. No immature birds were ever observed so it is doubtful that the birds were successful.

Shortly after I began close observation of the island colony in late May I noticed a pair of Black-crowned Night Herons that were active in one area of the island. I was certain the birds were nesting but I never saw them leaving or returning to the island and I wondered about their food source. The herons were nesting on the ground in the shelter of some large rocks in the midst of several cormorant nests. Eventually I realized that the herons were stealing their food from the cormorant nests. The adult herons would not attack the young cormorants, rather they would pilfer food left by the adults or regurgitated by the young. The herons raised a brood of three young, which were banded. After they left the island the family was seen several times feeding along the shore of the lake.

On 10 July while I was sitting in my boat watching the pelicans I happened to look up and discovered three white

birds flying over the lake. Although white birds were not unusual in this area these birds looked different. They were much too small to be pelicans and were too short and stocky to be Great Egrets. The birds had light bills and legs so I am certain they were Cattle Egrets. This species had been seen in this area previously and was suspected to have been nesting, perhaps in the heron colony on the lake. The birds were flying in the direction of the heron colony at Big Stone National Wildlife Refuge but I failed to see them again.

On 18 July I was again in my boat when I heard a hoarse, guttural call that was unfamiliar to me. When I looked up I saw a white, gull-sized bird with a forked tail and a large red bill. I recognized the bird as a Caspian Tern. I watched it fly over the lake and finally out of sight. I saw the same or a similar bird appear again a few days later.

During my search for feeding areas one of my favorite places to check was the Big Stone National Wildlife Refuge at Odessa, Minn. In the spring the area abounds with shorebirds and waterfowl. The numerous flooded dead trees attract several species of wading birds and cormorants for nesting. I had wanted to get a better look at the colony so on 23 July I decided to walk back into a large marshy area opposite the colony. As I moved along several small herons flew ahead of me. There were Black-crowned Night Herons, Green Herons, and a smaller more darker Little Blue Heron. Shortly two more of these birds jumped up and with them was a nearly white bird with greyish legs. They remained

together and flew to a tree, where they landed and sat for several minutes. I am sure the bird was an immature Little Blue Heron. I was able to see the adults on several other occasions but failed to see the light bird again.

As the summer progressed Marsh Lake began drying up. Eventually the northern half of the lake was a large mud flat. From about the middle of August the concentration of shorebirds began to build. A peak population was reached near the end of August that consisted of many thousands of individuals and a wide variety of species. Many birds remained well into September allowing numerous chances to observe and study the birds.

I am looking forward to continuing my study this year and I anticipate another excellent year for birding in this fascinating area of the state. Hopefully I will have other observations worth writing about. **Biology Dept., St. Cloud State Univ., St. Cloud, Minnesota. 56301.**

Editor's Note: The possible nesting of the Little Blue Heron mentioned above by Mr. Orr is a most interesting record. The Little Blue Heron has previously nested at Lake Johanna, Pope County in 1971, 1972 and 1973 (*The Loon* 44:36-43 and 107; 46:17). Nesting has also been suspected at Pelican Lake, Grant County (*The Loon* 45:21-22). The presence of an immature bird with two adults strongly suggests nesting on the Big Stone National Wildlife Refuge. This species should be watched for in the heron colonies found in the state.

BIRDS OF RICE COUNTY, MINNESOTA (Part II)

By Orwin A. Rustad

See *The Loon* (48:136-149) for Part I

TYRANT FLYCATCHERS

Eastern Kingbird (*Tyrannus tyrannus*)

Regular summer resident, nesting throughout the county. Earliest spring arrival date: April 29, 1952 Northfield; latest: May 23, 1967 and 1969, both at General Shields Lake. Average of 15 dates: May 13. Nesting: July 19, 1951 young seen on nest at Northfield.

Western Kingbird (*Tyrannus verticalis*)

Considered rare in the area. Two were seen in the fall of 1950 in Northfield.

Great Crested Flycatcher (*Myiarchus crinitus*)

Regular summer resident. Earliest spring arrival date: May 3, 1975 Fall Creek Park, east of Faribault; latest: May 20, 1966 Nerstrand Woods State Park. Average of 17 dates: May 14. Latest fall date: Sept. 16, 1952 Northfield. Nesting: on June 3, 1951 Nerstrand Woods State Park; nesting at Falls Creek Park on June 2, 1974. Two specimens have been collected (Pettingill) a male May 11, 1939, and a male May 29, 1943.

Eastern Phoebe (*Sayornis phoebe*)

Regular summer resident. Earliest spring arrival date: March 22, 1971 Nerstrand Woods State Park; latest: April 30, 1934 and 1935, both at Faribault. Average of 26 dates: April 15. Records have been kept for this species by the writer since 1933, when the earliest spring arrival date was April 24 seen at Faribault. A female specimen was collected (Pettingill) on May 1, 1943. Nesting: April 21, 1961, June 23, 1961 with four young and April 20, 1974.

Yellow-bellied Flycatcher (*Empidonax flaviventris*)

Occasional transient. Rarely seen in the county. Very few records for the

county and these mostly banding records. In 1964 one was banded on May 24 and one on Sept. 5. In 1972 one was banded on May 23 and in 1973 one was banded on June 21.

Willow Flycatcher, Traill's Flycatcher (*Empidonax traillii*)

Has been identified by its 'fitz-bew' call in the area. Not common in the area, with only two records: May 19, 1964, and May 14, 1967.

Least Flycatcher (*Empidonax minimus*)

Regular summer resident. Earliest spring arrival date: May 7, 1963 in Faribault; latest: May 19, 1964 in Faribault. Average of 12 dates: May 14. Numerous banding records for the months of May through September. Nesting: a nest with five eggs was found in Nerstrand Woods State Park on June 4, 1951. Two specimens were collected (Pettingill), a male May 16, 1937 near Northfield, and a male May 14, 1938 near Nerstrand.

Eastern Wood Pewee (*Contopus virens*)

Regular summer resident. Earliest spring arrival date: April 6, 1905; latest: May 20, 1952 Northfield. Average of 16 dates: April 27. Nesting was observed on July 7, 1951 in Northfield. A male specimen was collected (Pettingill) May 29, 1943 in Northfield.

LARKS

Horned Lark (*Eremophila alpestris*)

Regular summer resident. Earliest spring arrival date determined when a decided increase of population occurs over wintering birds. Earliest: Jan. 24, 1976 Nerstrand; latest: March 15, 1930 at Faribault. Average of 35 dates: Feb. 24. Has been recorded 14 out of 25 years of the Christmas Bird Count. A female specimen was collected (Pettingill) Sept. 27, 1940 in Northfield.

SWALLOWS

Tree Swallow (*Iridoprocne bicolor*)

Regular summer resident. Earliest spring arrival date: April 2, 1968 General Shields Lake; latest: April 29, 1952 Northfield. Average of 15 dates: April 17. In the Survey of the Birds of Rice County, Minnesota in 1957 it was reported at that time that this species was a summer resident in limited numbers nesting at Paulson's Marsh. Since that date there has been a population increase for this species, it is now nesting in all parts of the county.

Bank Swallow (*Riparia riparia*)

Regular summer resident. Earliest spring arrival date: April 15, 1937 Northfield; latest: May 21, 1951 Northfield. Average of 19 dates: May 5. A nest with six eggs was recorded on June 1, 1951 in Northfield. Banding record: one was banded on June 10, 1964, with a recovery on March 29, 1965 at Puerto Narino, Colombia. A male specimen was collected (Pettingill) May 15, 1951 in Northfield.

Rough-winged Swallow (*Stelgidopteryx ruficollis*)

Regular summer resident. Earliest spring arrival date: April 24, 1956 Northfield; latest: May 14, 1966 Cannon Lake. Average of six dates: May 7. Nesting on June 1, 1951 and on June 1, 1952 both in Northfield. A male was collected (Pettingill) May 22, 1937 near Northfield.

Barn Swallow (*Hirundo rustica*)

A regular summer resident. Earliest spring arrival date: April 13, 1969 Wells Lake; latest: May 30, 1951 Northfield. Average of 18 dates: May 1. Nesting very commonly at local farms and at General Shields Lake.

Cliff Swallow (*Petrochelidon pyrrhonota*)

Regular summer resident. Earliest spring arrival date: April 27, 1953 General Shields Lake; latest: May 14,

1966 Cannon Lake. Earlier records did not mention this species in the county. The 1957 Survey of the Birds of Rice County, Minnesota indicated no nesting records known for the area. Since 1957 nesting has been recorded at several locations. A nesting colony of about six nests under a barn roof near Roberds Lake on July 10, 1969. Two colonies on July 20, 1976, one colony of 15 nests at the Donovan Daws farm near Roberds Lake, the other, a colony of 10 nests on the A. C. Esterline farm also near Roberds Lake.

Purple Martin (*Progne subis*)

Regular summer resident throughout the county. Earliest spring arrival date: April 2, 1940 Northfield; latest: April 22, 1951. Average of 36 dates: April 9. Fall flocking of local colonies occurs at the Rice County Fair Grounds. Earliest fall flocking: August 3, 1971 and 1975. Latest flocking on Sept. 2, 1968. On Aug. 9, 1970 well over 10,000 birds were estimated in the flocks gathered on the various power lines in the evening and early morning hours. The latest fall date is Sept. 21, 1952 in the Northfield area. A male specimen was collected (Pettingill) May 1, 1950 in the Northfield area.

JAYS, MAGPIES and CROWS

Blue Jay (*Cyanocitta cristata*)

Regular permanent resident. Nest built with first egg layed on May 4, 1949 in Northfield. Young out of nest on May 10, 1951 in Northfield. Blue Jays have been recorded each year on the Christmas Bird Count. Three male specimens were collected (Pettingill) in the Nerstrand area; Oct. 5, 1937, Oct. 10, 1937 and another on Jan. 4, 1943.

Black-billed Magpie (*Picea pica*)

The only known record of this species being found in Rice County is a single reference made in **The Birds of Minnesota** by T. S. Roberts, Volume II, p. 66.

The Loon

Common Crow (*Corvus brachyrhynchos*)

Regular summer resident, with many wintering in the area. Spring arrival date is determined when there is a decided increase in numbers over the wintering population. Earliest spring arrival date: Feb. 12, 1968; latest: March 22, 1970 Faribault. Average of 14 dates: March 13. Nesting: nest with young in Northfield area June 5, 1952; nest with young May 25, 1963 in Faribault area. The Crow has been recorded on each of the 25 Christmas Bird Counts in the area. A juvenile was collected (Pettingill) May 29, 1938 in the Northfield area.

TITMICE

Black-capped Chickadee (*Parus atricapillus*)

Regular permanent resident, nesting regularly in area. Feeding of young has been recorded on the following dates: July 21, 1951, June 21, 1952 and May 25, 1968. The chickadee has been recorded on each of the 25 Christmas Bird Counts. Specimens have been collected (Pettingill), female Nov. 14, 1936, male Nov. 29, 1948 in the Northfield area and a male Sept. 21, 1944 near Nerstrand.

Boreal Chickadee (*Parus hudsonicus*)

An immature female was collected (Pettingill) on October 9, 1943 in the Northfield area. This is the only known record for this species in the county.

Tufted Titmouse (*Parus bicolor*)

Rarely seen in the area but nests here. Early observations of Prof. J. W. Hornbeck in the Northfield area show in his records that the Tufted Titmouse was seen occasionally between Dec. 30, 1920 and Feb. 28, 1921 and was referred to as a very rare winter visitant. The following observations are all from the Northfield area. In 1951, one was seen Nov. 21, and another seen Nov. 22; in 1952 one was seen March 5, one March 7, three Nov. 27 and one Dec. 14. In 1953, one was recorded Feb. 7, and two March 17. In 1954, one was seen Feb. 27, one

May 1 and two May 9. It has been recorded on 10 out of 25 Christmas Bird Counts.

NUTHATCHES

White-breasted Nuthatch (*Sitta carolinensis*)

Regular permanent resident, nesting throughout the county, having been recorded on each of the 25 Christmas Bird Counts. Specimens have been collected during the following years by Pettingill in the Northfield area: a male Oct. 23, 1936, a female Nov. 4, 1937, female Oct. 30, 1939, female Oct. 2, 1942, and a female Oct. 31, 1950. In the Nerstrand area a male was collected Oct. 15, 1943, and a female Sept. 21, 1944.

Red-breasted Nuthatch (*Sitta canadensis*)

Occasional winter visitant, also spring and fall migrant. Earliest spring arrival: March 10, 1952; latest: May 17, 1954 in Northfield. Average of four dates: about April 23. Fall migration: earliest: Sept. 15, 1963 Faribault and Sept. 18, 1963 Northfield; latest: Nov. 4, 1969 Faribault. Average fall dates of six dates: Oct. 6. Has been recorded on 4 of 25 Christmas Bird Counts.

CREEPERS

Brown Creeper (*Certhia familiaris*)

Irregular transient, with a few wintering in the county. Has been recorded on 12 out of 25 Christmas Bird Counts. Earliest spring arrival date: March 10, 1952 Northfield; latest: May 14, 1963 Faribault. Average of 13 dates: April 3. Fall dates: Oct. 16, 1971 earliest, and Nov. 27, 1952 the latest. The largest number recorded as wintering was on Feb. 27, 1954 when ten were seen in the Arboretum at Northfield.

WRENS

House Wren (*Troglodytes aedon*)

Regular summer resident, nesting commonly throughout the county. Earliest spring arrival: April 19, 1965

Faribault; latest: May 9, 1967 Faribault. Average of 35 dates: May 1. The latest fall date is Oct. 12, 1933 Faribault. Earliest nesting: May 3, 1963 Faribault; latest: June 3, 1965 for the first nesting. Average for the first nesting of 13 dates: May 14.

A male specimen was collected (Pettingill) on each of the following dates, all in Northfield: May 7, 1937, May 26, 1943, May 7, 1943, and May 26, 1945.

Winter Wren (*Troglodytes troglodytes*)

Only one record for the county. One was seen April 4, 1951 at Northfield (Audubon Field Notes, Vol. 5, No. 4, Aug. 1951). A male specimen was collected (Pettingill) Oct. 23, 1936 in the Northfield area, and a female taken in the Nerstrand area Sept. 23, 1939.

Bewick's Wren (*Thryomanes bewickii*)

A rare visitant to the county, with only three records all for one year. In 1951 two were seen on April 30, two on May 20 and one on June 1, all in the Northfield area.

Long-billed Marsh Wren (*Telmato-dytes palustris*)

Regular summer resident. Earliest spring arrival: May 1, 1952 when one was seen at General Shields Lake. Nest with young was found on June 21, 1952 Northfield. A female specimen was collected (Pettingill) Oct. 4, 1943 in the Northfield area.

Short-billed Marsh Wren (*Cistothorus platensis*)

Regular summer resident. Earliest spring arrival: May 8, 1970 General Shields Lake; latest: May 27, 1966 and 1967. Specimens have been collected (Pettingill) on the following dates in the Nerstrand area: a female May 16, 1937, a female Sept. 25, 1938 and a male Sept. 26, 1943.

MOCKINGBIRD and THRASHERS

Mockingbird (*Mimus polyglottos*)

Only two known records for the county. A Mockingbird was seen by Mr. and Mrs. Charles MacKenzie, Jr.

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at their bird feeder in Faribault during the week of Dec. 22, 1949 (**The Flicker**, 22:20). The next record was on Nov. 24, 1965 when Dr. George Rysgaard saw one in Northfield.

Gray Catbird, Catbird (*Dumetella carolinensis*)

Regular summer resident, nesting throughout the county. Earliest spring arrival: April 27, 1974 Faribault; latest: May 17, 1973 Falls Creek Park east of Faribault. Average of 30 dates: May 8-9. The latest fall date is Nov. 26, 1933 Faribault.

Nesting: 1951, nesting May 29; nest with two young July 7; 1952, nest with four eggs May 30; 1953, nest with one egg was found by Robert Hanlon May 28 in Faribault (**The Flicker**, 26:70); 1964, nest with young on May 23; 1968, nest with young found on July 4.

Brown Thrasher (*Toxostroma rufum*)

Regular summer resident, nesting throughout the county. Earliest spring arrival: March 2, 1931 Faribault; latest: May 15, 1937 Northfield, and 1938 Faribault. The average of 34 dates: April 28. Fall records: latest fall record is Oct. 10, 1933 when one was seen in Faribault. One record for a Christmas Bird Count at a bird feeder from Feb. 9-March 1975 Faribault. Specimens were collected (Pettingill) in the Northfield area on the following dates: a female May 7, 1937, a female May 17, 1945 and a male May 12, 1949.

A nest with four eggs was recorded May 10, 1951 and a nest with four eggs June 1, 1951 in the Northfield area. In 1952, a nest with young was found June 11. In 1968, a nest with eggs was found on July 4, and in 1974 a nest was being built on April 29.

THRUSHES, SOLITARES and BLUE-BIRDS

American Robin, Robin (*Turdus migratorius*)

Regular summer resident, nesting throughout the county. Earliest spring arrival: March 2, 1939 Faribault; latest: April 3, 1935 Faribault. Average of 36 dates: March 13. Robins have

been recorded on 7 out of 25 Christmas Bird Counts. Earliest first nesting: April 7, 1969 Faribault; latest: April 24, 1941 and 1950 Faribault. Average of 18 nesting dates: April 15.

Specimens have been collected (Pettingill) in the Northfield area on the following dates: male Oct. 23, 1936, male May 2, 1939, female Sept. 23, 1944, female April 25, 1949 and a male April 24, 1951.

Varied Thrush (*Ixoreus naevius*)

Only one record for the county. One was seen by Dr. George Rysgaard in Northfield on Dec. 2, 1966 and again on Dec. 21, 1966 on the Christmas Bird Count.

Wood Thrush (*Hylocichla mustelina*)

Regular summer resident nesting in the woodland areas of the county. The earliest spring arrival: April 14, 1936 Faribault; latest: May 18, 1973 Falls Creek Park east of Faribault. Average of 18 dates: May 10.

The latest fall date is Oct. 15, 1933 in the Faribault area. Nesting record: incubation on June 7, 1951 in the county was observed by Wm. Longley (**The Flicker**, 24:23).

Specimens have been collected (Pettingill) in the Nerstrand area on the following dates: male May 26, 1938 and a female on May 31, 1943.

Hermit Thrush (*Catharus guttatus*)

Regular spring and fall transient. Earliest spring arrival: April 8, 1952 Northfield; latest: May 12, 1966 Faribault. Average of 12 dates: April 23.

Three specimens have been collected (Pettingill) on the following dates near Northfield: female May 7, 1937, male Oct. 14, 1937 and a female April 18, 1949.

Swainson's Thrush (*Catharus usulatus*)

A regular spring and fall transient. Earliest spring arrival: April 9, 1972 Falls Creek Nature east of Faribault; latest: May 15, 1952 and 1963 Northfield. Average of 11 dates: May 9.

Eight specimens have been collected (Pettingill) in the Northfield area on

the following dates: male May 18, 1937, female May 25, 1938, male May 8, 1943, male May 24, 1943 male May 26, 1943, male May 22, 1945, and a female on May 1, 1950.

Gray-cheeked Thrush (*Catharus minimus*)

A regular spring and fall transient. Earliest spring arrival: May 5, 1953 Northfield, and 1972 Falls Creek Park east of Faribault; latest: May 18, 1973 Falls Creek Nature Trail.

Three specimens have been collected (Pettingill) in the Northfield area on the following dates: female May 27, 1937, male May 8, 1943 and a female on May 15, 1945.

Veery (*Catharus fuscescens*)

A regular summer resident, especially common in the Nerstrand Woods State Park during the nesting season. Earliest spring arrival: May 7, 1950 Northfield; latest: May 18, 1973 Falls Creek Park, Faribault.

A female collected (Pettingill) May 15, 1940, male May 22, 1945 in the Northfield area.

Eastern Bluebird (*Sialia sialis*)

Regular summer resident, nesting in the area. Earliest spring arrival: March 6, 1933 in Faribault, and 1974 at Hunts Lake; latest: April 28, 1937 at Faribault. Average of 37 dates: March 20. Latest fall record is Nov. 15, 1933. One male was recorded on a Christmas Bird Count on Dec. 21, 1953 in Northfield (Audubon Field Notes, Vol. 8, No. 2, Apr. 1954). October 23, 1951 is another record of a late remaining Bluebird in the Northfield area (Audubon Field Notes, Vol. 6, No. 3, June 1952).

A five year nesting survey of the Eastern Bluebird was conducted in Rice County and appears in **An Eastern Bluebird Nesting Study in South Central Minnesota (The Loon 44:80-84)**.

A juvenile was collected (Pettingill) May 28, 1938 and a male May 2, 1939 in the Northfield area.

Mountain Bluebird (*Sialia currucoides*)

Only one known record for the county. One was recorded on March 6, 1974 at Hunts Lake (**The Loon**, 46:118).

Townsend's Solitaire (*Myadestes townsendi*)

Only one record of this species for Rice County. One was recorded by Dr. George Rysgaard on Nov. 24, 1965 in Northfield (**The Loon**, 37:152).

GNATCATCHERS and KINGLETS

Blue-gray Gnatcatcher (*Poliophtila caerulea*)

As far as is known, there is only one record of this species in the county. One was seen in Northfield on May 1, 1954 by Lewis Barrett (**The Flicker**, 26:76).

Golden-crowned Kinglet (*Regulus satrapa*)

Regular spring and fall migrant. Earliest spring arrival: March 16, 1953 Northfield; latest: April 22, 1942 Faribault, 1951 Northfield and 1963 Scotts Mill. Average of 16 dates: April 5-6. Recorded on 15 out of 25 Christmas Bird Counts. Fall migration: earliest: Sept. 30, 1964 Northfield; latest: Oct. 18, 1953 Northfield. Three specimens have been collected (Pettingill) in the Northfield area on the following dates: female Oct. 8, 1937, female Sept. 26, 1944 and a male on Oct. 2, 1950.

Ruby-crowned Kinglet (*Regulus calendula*)

A regular spring and fall transient. Earliest spring arrival: March 21, 1933 Faribault; latest: May 14, 1967 Faribault. Average of 18 dates: April 14. Fall: earliest: Sept. 2, 1972 Faribault; latest: Nov. 10, 1933.

Three specimens have been collected (Pettingill) in the Northfield area on the following dates: male April 17, 1943, female April 24, 1943, and a female on May 10, 1943.

PIPITS

Water Pipit (*Anthus spinoletta*)

Only three records for this species

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in the county. Spring migration: March 29, 1951 and March 23, 1953 Northfield, and March 26, 1966 General Shields Lake.

WAXWINGS

Bohemian Waxwing (*Bombycilla garrulus*)

Only two spring dates for the county: five were seen on April 8, 1934 and another record for May 12, 1966 in Faribault (**The Loon**, 38:91). Seen on two out of 25 Christmas Bird Counts.

Cedar Waxwing (*Bombycilla cedrorum*)

Regular summer resident. Earliest spring arrival: March 7, 1951 Northfield; latest: April 28, 1941 Northfield. Average of 17 dates: March 30. Has been recorded on 5 out of 25 Christmas Bird Counts. Nesting: nest with three eggs found Aug. 6, 1975. A female was collected (Pettingill) May 24, 1950 Northfield.

SHRIKES

Northern Shrike (*Lanius excubitor*)

A casual winter visitant. Seen on 5 out of 25 Christmas Bird Counts. In addition, there are three other records: one has been seen on each of the following dates: Jan. 1, 1954, Feb. 4, 1971 and Feb. 25, 1974 in the Nerstrand and Dennison areas.

Loggerhead Shrike (*Lanius ludovicianus*)

Regular summer resident. Earliest spring arrival: March 17, 1968 near Cedar Lake; latest: April 23, 1951 near Wells Lake. Average of 12 dates: April 2. Nesting: nest with eggs found on June 1, 1951, and young out of the nest recorded on June 21, 1952.

A male and female specimen were collected on April 4, 1940 in the Northfield area (Pettingill).

STARLINGS

Starling (*Sturnus vulgaris*)

A flock of 50 was seen near Faribault on Feb. 23, 1941. I have no rec-

ords for this species in the county before that date, however, it can be assumed that the Starling was in the area before that date. It was first reported in southeastern Minnesota about 1931. It has been recorded on each of the 25 Christmas Bird Counts.

VIREOS

Yellow-throated Vireo (*Vireo flavifrons*)

An occasional transient. Earliest spring arrival: May 8, 1941 Northfield; latest: May 18, 1925 Northfield and in 1973 Falls Creek Park east of Faribault. Average of six dates: May 10.

A male was collected (Pettingill) May 9, 1937 Northfield.

Solitary Vireo (*Vireo solitarius*)

Occasional transient. Earliest spring arrival: May 7, 1953 in Northfield; latest: April 30, 1975 (**The Loon**, 47:171). Average of six dates: May 10-11. Three specimens were collected (Pettingill) from the Northfield area. A female was taken May 22, 1937, another female was collected May 22, 1945 and a male May 12, 1950.

Red-eyed Vireo (*Vireo olivaceus*)

A regular summer resident. Earliest spring arrival: April 15, 1937 Northfield; latest: May 28, 1967 Nerstrand Woods State Park. Average of 16 dates: May 16. An immature female was collected (Pettingill) Sept. 27, 1937 and a male was taken May 17, 1950 in the Northfield area.

Philadelphia Vireo (*Vireo philadelphicus*)

Only two records for this species in the county, both of which are in Northfield: one recorded Sept. 19, 1963, and one was banded Sept. 4, 1964. Three specimens have been collected (Pettingill) in the Northfield area as follows: male May 9, 1937, male May 13, 1937 and a female May 14, 1940.

Warbling Vireo (*Vireo gilvus*)

A regular summer resident. Earliest spring arrival: May 5, 1949 Northfield; latest: May 29, 1974 Falls Creek Park,

Faribault. Average of 12 dates: May 10-11. Three specimens have been collected (Pettingill) in the Northfield area as follows: male May 9, 1937, male May 13, 1937 and a female May 14, 1940.

WOOD WARBLERS

Black-and-white Warbler (*Mniotilta varia*)

Irregular transient. Earliest spring arrival: April 10, 1932 Faribault; latest: May 28, 1968 Nerstrand Woods State Park. Average of 17 dates: May 7. Four specimens have been collected (Pettingill) in the Northfield area on the following dates: female May 20, 1937, female May 19, 1938, male May 22, 1938 and a male May 10, 1945.

Prothonotary Warbler (*Protonotaria critrea*)

Only three records for this transient. One was seen on May 14, 1935 and another on May 15, 1963 Northfield. One was reported as seen in Rice County on May 22, 1975 (**The Loon** 47:172).

Golden-winged Warbler (*Vermivora chrysoptera*)

Only four records for this transient. One was seen on Sept. 4, 1964 Northfield. One was reported to have been seen in Rice County on May 11, 1965 (**The Loon**, 37:141). One was seen on May 14, 1967 in Faribault. One was reported as seen in the county May 6, 1975 (**The Loon**, 47:172).

Blue-winged Warbler (*Vermivora pinus*)

Only two records of this transient for the county. Four were seen on June 1, 1951 in Northfield. One was seen and banded May 23, 1972 Faribault.

Tennessee Warbler (*Vermivora peregrina*)

Regular transient. Earliest spring arrival: May 7, 1964 Faribault and 1969 also in Faribault. Latest: May 18, 1952 Northfield and 1966 Faribault. Average of 15 dates: May 10. Ten

specimens have been collected (Pettingill) in the Northfield area as follows: male was collected May 22, 1937, two males and one female were collected May 22, 1943, two females and one male May 24, 1937, two males and one male May 24, 1943, one male May 19, 1950, one female May 20, 1950 and one male May 19, 1951.

Orange-crowned Warbler (*Vermivora celata*)

Occasional transient. Earliest spring arrival: May 8, 1954 Northfield; latest: May 15, 1963 Northfield. Average of 4 dates: May 14. Two fall dates: Sept. 19, 1963, Sept. 30, 1964. The following were collected in Northfield (Pettingill) as follows: in 1937 a male was collected May 5, male May 8 and a female May 23. In the fall of 1937, a male was collected Oct. 7. In 1942, a male was collected Oct. 2 and in 1943 a female was collected May 15.

Nashville Warbler (*Vermivora ruficapilla*)

Occasional transient. Earliest spring arrival: May 1, 1965 (**The Loon**, 37:141); latest: May 15, 1963 Northfield and 1971 Faribault. Average of eight dates: May 10. Two fall dates: Sept. 28, 1935 and Oct. 8, 1952.

The following were collected (Pettingill) in the Northfield area: one male May 16, 1937, one male Oct. 2, 1941, one male May 5, 1943, immature female Sept. 25, 1943, male Sept. 25, 1944 and a male May 15, 1950.

Northern Parula, *Parula Warbler* (*Parula americana*)

Only two records for this transient. One April 29, 1952 near Northfield. One was reported as seen in the county May 9, 1975 (**The Loon**, 47:172). A male specimen was collected (Pettingill) in the Northfield area May 8, 1937.

Yellow Warbler (*Dendroica petechia*)

A regular summer resident. Earliest spring arrival: May 1, 1952 at Heron Island, General Shields Lake; latest: May 22, 1938 Nerstrand Woods State

Park. Average of 17 dates: May 13-14. Latest fall: Sept. 21, 1952. Nesting: In 1952 feeding young on June 29; in 1953 nest with one egg reported for Rice County (**The Flicker**, 26:71); in 1954 nest with one egg on May 25; and in 1968 nesting on Heron Island at General Shields Lake June 15. Four specimens were collected (Pettingill) in the Northfield area: male May 8, 1937, male and female June 2, 1943 and a female May 24, 1945.

Magnolia Warbler (*Dendroica magnolia*)

Irregular transient. Earliest spring arrival: May 1, 1949 Northfield and 1965 (**The Loon** 37:141); latest: May 23, 1972 Faribault. Average of 13 dates: May 10-11. Latest fall: Sept. 19, 1963, Sept. 10, 1964. Five specimens (Pettingill) in the Northfield area: male May 22, 1937, female May 19, 1938, female May 24, 1943 and a male and female May 5, 1945.

Cape May Warbler (*Dendroica tigrina*)

Sporadic transient with only two records. One was recorded May 12, 1953 and the other May 15, 1936, both at Northfield. Two skin specimens were collected (Pettingill), male May 13, 1937 and another male May 24, 1943 in the Northfield area.

Black-throated Blue Warbler (*Dendroica caerulescens*)

There are only two records for this transient. One was seen Sept. 15, 1951 in Northfield and another seen May 11, 1974 Falls Creek Park in Faribault.

Yellow-rumped Warbler, *Myrtle Warbler* (*Dendroica coronata*)

Regular transient, common spring and fall migrant. Earliest spring arrival: April 1, 1974 Wells Lake; latest: May 5, 1971 Faribault. Average of 22 dates: April 24. Latest fall: Oct. 30, 1933 in the Faribault area. Eight specimens have been collected (Pettingill) in the Northfield area on the following dates: female April 23, 1937, male Oct. 8, 1940, female Sept. 23, 1943, immature female Sept. 28, 1943,

immature (sex unknown) Oct. 9, 1943, female Sept. 23, 1944 and a male May 12, 1950.

Black-throated Green Warbler (*Dendroica virens*)

Only two records for this transient. One was recorded for the county on April 29, 1965 (*The Loon*, 37:141), and one was seen May 11, 1974 at Falls Creek Park east of Faribault. One was seen by Prof. J. W. Hornbeck in the Northfield area May 17, 1921. He considered the species a rare transient for this area at that time.

Cerulean Warbler (*Dendroica cerulea*)

Only one record for this transient in this area when one was seen on May 17, 1967 near Faribault. Four specimens of this species have been collected (Pettingill) in the county as follows: male May 24, 1945 in the Northfield area and in the Nerstrand area a male and female May 25, 1938 and a male May 30, 1943.

Blackburnian Warbler (*Dendroica fusca*)

Irregular transient. Earliest spring arrival: May 10, 1967 Faribault and 1975 Falls Creek Park near Faribault; latest: May 22, 1921 Northfield. Pettingill collected the following: one female May 28, 1943, one male on May 17, 1945 and a male and female May 24, 1945 Northfield.

Chestnut-sided Warbler (*Dendroica pensylvanica*)

Irregular transient. Earliest spring arrival: May 9, 1953 Northfield; latest: May 19, 1974 Falls Creek Park east of Faribault. Latest fall: Sept. 20, 1952. A male was collected (Pettingill) May 30, 1938 Northfield.

Bay-breasted Warbler (*Dendroica castanea*)

Only two records for this transient. One on Sept. 18, 1963 Northfield. One was reported as seen in the county on May 10, 1975 (*The Loon*, 47:173). A female was collected (Pettingill) May 29, 1943 Northfield.

Blackpoll Warbler (*Dendroica striata*)

Irregular transient. Earliest spring arrival: April 15, 1937 Cedar Lake; latest: May 18, 1973 Falls Creek Park east of Faribault. Seven specimens have been collected in the Northfield area on the following dates: male May 25, 1938, male May 24, 1943, female May 25, 1943, female May 28, 1943, female May 30, 1943, female May 15, 1945 and a male May 18, 1951.

Pine Warbler (*Dendroica pinus*)

Only two records for this transient. One May 10, 1951 and one May 1, 1952 in Northfield. Prof. J. W. Hornbeck recorded the Pine Warbler April 20, 1921 as the earliest spring arrival date when one was seen in the Arboretum in Northfield.

Palm Warbler (*Dendroica palmarum*)

Irregular transient. Earliest spring arrival: April 29, 1952; latest: May 15, 1963 Northfield. Average of 8 dates: May 7. One fall date: Sept. 19, 1963. A male was collected (Pettingill) April 23, 1937, a female May 16, 1943, male Sept. 25, 1944 and a male May 11, 1950.

Ovenbird (*Seiurus aurocapillus*)

Regular summer resident. Earliest spring arrival: May 4, 1968 Faribault and 1969 Nerstrand Woods State Park; latest: May 27, 1952 Northfield. Average of 17 dates: May 10-11. Commonly nests at Nerstrand Woods State Park. A specimen was collected (Pettingill) May 19, 1938 in the Northfield area.

Northern Waterthrush (*Seiurus noveboracensis*)

Irregular transient. Earliest spring arrival: May 5, 1953 Northfield; latest: May 18, 1972 Falls Creek Park east of Faribault. Average of 10 dates: May 11. Three females were collected (Pettingill) on the following dates near Northfield: April 16, 1943, Sept. 18, 1943 and May 9, 1950.

Connecticut Warbler (*Oporornis agilis*)

Only one record for this transient. One was seen on May 10, 1951 in

Northfield. A male was collected (Pettingill) on May 30, 1943 near Nerstrand.

Mourning Warbler (*Oporornis philadelphia*)

Irregular transient. Earliest spring arrival: May 14, 1953 and 1966 in the Northfield area; latest: May 27, 1952 Northfield. One fall record: Sept. 15, 1952. Three specimens have been collected in the Northfield area (Pettingill) on the following dates: female May 30, 1943, male May 29, 1949 and a male May 24, 1950.

Common Yellowthroat, Yellowthroat (*Geothlypis trichas*)

Regular summer resident. Earliest spring arrival: May 3, 1975 Falls Creek Park; latest: May 19, 1973 Falls Creek Park east of Faribault. Average of 17 dates: May 13-14. Five specimens have been collected (Pettingill) in the Northfield area: immature male Sept. 30, 1937, female May 21, 1938, male May 21, 1941, female May 26, 1943, female May 28, 1943 and a male Sept. 18, 1943.

Yellow-breasted Chat (*Icteria virens*)

Only one record of this species in the county. One was recorded as seen on May 8, 1965 (**The Loon**, 37:142).

Wilson's Warbler (*Wilsonia pusilla*)

Irregular transient, usually in limited numbers. Earliest spring arrival: May 5; latest: May 15. Fall: Sept. 2, earliest; Sept. 19, latest. A female was collected (Pettingill) in the Northfield area May 24, 1938.

Canada Warbler (*Wilsonia canadensis*)

Irregular transient. Earliest spring arrival: May 6; latest: May 27. Fall: Sept. 4, earliest; Sept. 19, latest. A male was collected (Pettingill) May 22, 1950 in the Arboretum at Northfield.

American Redstart (*Setophaga ruticilla*)

Regular permanent resident. No spring arrival: May 7; latest: May 22. Average of 17 dates: May 15. Latest fall date: Oct. 12, 1933. Nesting rec-

ords: at General Shields Lake a female was flushed from a nest June 4, 1951, no eggs were found; a nest with young was found at General Shields Lake July 21, 1951. A nest with four eggs (2 Cowbird eggs and 2 Redstart eggs) was found June 7, 1951 by William Longley (**The Flicker**, 24:24).

Two males were collected (Pettingill) on the following dates: May 29, 1943 near Northfield and another May 14, 1938 at Nerstrand.

WEAVER FINCHES

House Sparrow (*Passer domesticus*)

Regular permanent resident. No record has been found as to when it was first seen in Rice County, but it can be assumed that this species entered the county about 1881.

Four specimens have been collected (Pettingill) in the Northfield area: female Jan. 10, 1937, male Jan. 14, 1937, two females Jan. 25, 1949 and a male Feb. 28, 1949.

The House Sparrow has been recorded on each of the 25 Christmas Bird Counts.

MEADOW LARKS, BLACKBIRDS and ORIOLES

Bobolink (*Dolichonyx oryzivorus*)

Regular summer resident. Earliest spring arrival: May 1, 1965 (**The Loon**, 37:142); latest: May 19, 1938 Faribault. Average of 20 dates: May 13. Very commonly seen in the General Shields Lake area. Three specimens have been collected (Pettingill) in the Nerstrand area on the following dates: male May 16, 1937, and a male and female May 23, 1937.

Eastern Meadowlark (*Sturnella magna*)

Regular summer resident. Identification of the species is by song, therefore the following dates of spring arrival may be somewhat late, as meadowlarks, sp. are seen in the area somewhat earlier. Earliest spring arrival: March 13, 1972 near Cannon Lake; latest: March 24, 1963 Faribault. In the 1957 **Survey of the Birds of Rice County, Minn.** it was in-

licated that this species was very rare in the area. A specimen was collected (Pettingill) of a female Eastern Meadowlark Oct. 23, 1936 near Northfield. This was at that time the only known record for the county. As far as is known none were nesting in the area. Several unconfirmed reports had been received of hearing this bird along the extreme edge of the county near the Goodhue County line. In 1957, the only place in the county that the Eastern Meadowlark could be found was in the Nerstrand area and in an area near the Cannon River south of Dundas. Since that date, the Eastern Meadowlark has increased in great numbers and can now be found in all townships of the county being heard about as frequently as the Western Meadowlark. A notation in the field notes of the writer indicates a definite increase of the Eastern Meadowlark in the spring of 1969, which has continued since then.

Western Meadowlark (*Sturnella neglecta*)

Regular summer resident. Earliest spring arrival: March 7, 1965 (*The Loon*, 37:142); latest: March 31, 1931, 1937 and 1951 Faribault. Nesting in Northfield: nest with five eggs May 29, 1951, nest with five eggs June 1, 1951, adult carrying food May 21, 1953 (*The Flicker*, 26:72).

Five specimens have been collected (Pettingill) on the following dates: in the Northfield area a male May 17, 1937, female April 6, 1940 and a male April 17, 1940; in the Nerstrand area a female Oct. 4, 1938 and an immature female Sept. 28, 1943.

Winter records: all winter records are being reported as meadowlarks, rather than either the eastern or western forms until an accurate identification is made either by its song or by specimens. Meadowlarks, sp. have been recorded on six out of the 25 Christmas Bird Counts.

Meadowlark, sp.

Spring arrival dates of meadowlarks

before song identification in the spring is possible are as follows: earliest spring arrival date is March 3, 1974 Faribault and the latest is March 17, 1975 near Morristown.

Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)

Regular summer resident. Earliest spring arrival: March 21, 1953 Wells Lake; latest: May 16, 1937 Cedar Lake. Average of 28 dates: April 26. A steady increase in population numbers since the summer of 1968. They are now commonly found in most marsh areas throughout the county. Especially common along the N.W. shore of General Shields Lake. An extremely low population was recorded for the summer of 1964. Nesting: nest with young found July 16, 1951 at Cedar Lake. Another nest with young found June 15, 1968 at General Shields Lake.

Red-winged Blackbird (*Agelaius phoeniceus*)

Regular summer resident. Earliest spring arrival: Feb. 27, 1976 a large flock of males arrived; latest: April 1, 1965 (males). Earliest for females to arrive: March 11, 1972; latest: April 10, 1976 with a flock of 1000 arriving. Average of 38 dates: March 19. Nesting: Nest building May 10, 1951; nest with three eggs (including one cowbird egg) May 29, 1951; nest with four eggs May 30, 1951. Recorded on one Christmas Bird Count. Nine specimens have been collected (Pettingill) on the following dates: in Northfield area a male May 8, 1937, female Oct. 7, 1937, male on Oct. 28, 1937, female Oct. 8, 1940, two females and an immature female Oct. 7, 1943, in the Nerstrand area a male and a female were collected May 16, 1937.

Orchard Oriole (*Icterus spurius*)

The only known record for the county is that of Prof. J. W. Hornbeck. His records show that two were seen on May 24, 1921 in Northfield and again on May 27 of that same year. Nesting in the area was also recorded at that time. However, the species was

considered rare for the area at that time as they are now.

Northern Oriole, Baltimore Oriole (*Icterus galbula*)

Regular summer resident. Earliest spring arrival: April 27, 1941, 1942 and 1948 Northfield; latest: May 11, 1950 and 1974. Average of 27 dates: May 6. Nest building on May 10, 1952 and June 1, 1951. Young out of nest (banded) July 7, 1965. Three male specimens have been collected (Pettingill) on the following dates: May 17, 1937, May 25, 1937, and May 21, 1948.

Rusty Blackbird (*Euphagus carolinus*)

Regular transient. Earliest spring arrival: March 13, 1971 Faribault; latest: April 11, 1951 Northfield. Average of 15 dates: March 23. Have been recorded on 6 out of 25 Christmas Bird Counts. Several specimens were collected (Pettingill) in the Northfield area: a male and a female Oct. 23, 1936 and a male and female April 16, 1940.

Brewer's Blackbird (*Euphagus cyanocephalus*)

Irregular transient. Earliest spring arrival: March 13, 1966 Cedar Lake; latest: April 27, 1974 Wells Lake. Three fall records: Sept. 21, Nov. 3 and Nov. 9, 1952 Northfield.

Common Grackle (*Quiscalus quiscula*)

Regular summer resident. Earliest spring arrival: March 1, 1970 Morristown; latest: April 10, 1937 Faribault. Average of 34 dates: March 21. Have been recorded on 5 out of 25 Christmas Bird Counts. Nesting starts very early; earliest April 7, 1969, and 1974. June 1, 1951, one young out of nest; June 10, 1951 one young out of nest.

Four specimens have been collected by Pettingill in the Northfield area on the following dates: male and a female April 18, 1940, male April 30, 1940, and a female May 3, 1943.

Brown-headed Cowbird (*Molothrus ater*)

Regular summer resident. Earliest spring arrival: March 7, 1969 Faribault; latest: April 27, 1941 Northfield. Average of 30 dates: April 11.

On June 26, 1951 a young was seen being fed by a Song Sparrow, on May 18, 1952 one cowbird egg was found in the nest of a Song Sparrow, and on May 22, 1968 one egg was found in the nest of a Chipping Sparrow.

TANAGERS

Scarlet Tanager (*Piranga olivacea*)

Regular summer resident, especially at Nerstrand Woods State Park. Earliest spring arrival: April 30, 1975 (**The Loon**, 47:174). A female was collected (Pettingill) in the Nerstrand area May 31, 1938.

GROSBEAKS, FINCHES, SPARROWS and BUNTINGS

Cardinal (*Cardinalis cardinalis*)

Regular permanent resident. The Cardinal extended its range northward by way of the Mississippi bottomlands and was first recorded in the state at Minneapolis when a male was taken on October 23, 1875. No records are available for its earliest occurrence in Rice County but from the nesting records in adjoining counties it can be assumed that the Cardinal entered the county between the years 1919 to 1925. Nesting was reported from the east at Wacouta, Goodhue County June 29, 1919 and from the south at Owatonna, Steele County May 1, 1925.

The Cardinal has been recorded on each of the 25 Christmas Bird Counts. Nesting records: nests with eggs have been found July 5, 1951; May 13, 1963 and May 15, 1974. A female specimen was collected (Pettingill) in Northfield April 11, 1940 and a male May 24, 1943.

Rose-breasted Grosbeak (*Pheucticus ludovicianus*)

Regular summer resident. Earliest spring arrival: April 14, 1936 Faribault; latest: May 15, 1967 and 1971 Faribault. Average of 30 dates: May 9. Nesting records: nest with young on June 24, 1951 Northfield; nest with

eggs June 7, 1952 Faribault and seen building nest on May 12, 1976 Faribault. Seven specimens have been collected (Pettingill) on the following dates: in the Northfield area a female May 12, 1937, male May 17, 1937, female May 24, 1938, male May 17, 1945, and a male and female May 20, 1950; in the Nerstrand area a male Sept. 21, 1944.

Indigo Bunting (*Passerina cyanea*)

Regular summer resident. Earliest spring arrival: May 4, 1976 Faribault; latest: May 25, 1933 Faribault. Average of 15 dates: May 15. An immature female was collected (Pettingill) Sept. 26, 1937 and another Sept. 28, 1944 in the Northfield area. A male was taken June 1, 1936 and a female May 31, 1943 in the Nerstrand area.

Dickcissel (*Spiza americana*)

Regular summer resident, especially common on the N.W. area of General Shields Lake. Earliest spring arrival: May 8, 1970 General Shields Lake; latest: June 8, 1968 Cannon Lake. Average of 14 dates: May 25. High and low population years recorded: summers of 1950 and 1951 were "Dickcissel summers" with a very high population recorded for the county, 1964 was another "Dickcissel summer"; Summer of 1974 was an extremely low population season with very few seen all summer.

The earliest spring arrival date is May 5, 1898 (*Birds of Minnesota*, Roberts) in Faribault. The latest fall date is Sept. 27, 1938 when a female was collected near Nerstrand (Pettingill). Other specimens were collected near Northfield, a male May 30, 1943 and an immature female Sept. 26, 1943.

Evening Grosbeak (*Hesperiphona vespertina*)

Occasional transient, very erratic. Spring dates: March 1, 12, 19; May 21. Fall and winter dates: Nov. 2, 15, 25; Dec. 21 and 25; Feb. 16. A female specimen was collected (Pettingill) in the Northfield area May 9, 1950. Recorded 4 out of 25 years on Christmas

Bird Counts.

Purple Finch (*Carpodacus purpureus*)

Irregular transient. Earliest spring arrival: Feb. 25, 1937 Faribault; latest: May 16, 1966 Faribault. Average of 14 dates: March 27. Fall dates: Sept. 20, Oct. 6, 7, 18. Wintering: seen on 7 out of 25 Christmas Bird Counts.

Pine Grosbeak (*Pinicola enucleator*)

Winter visitant from the north, with two records for the county. On the Christmas Bird Count in 1954 two were seen Dec. 26 Northfield. Another was seen Nov. 27, 1965 Northfield.

Hoary Redpoll (*Acanthis hornemanni*)

Only one record of this winter visitant from the north. One was seen by Dr. George Rysgaard in Northfield March 31, 1970.

Common Redpoll (*Acanthis flammea*)

Regular transient and winter visitant. Earliest spring arrival: Feb. 1, 1971 Cannon City; latest: Feb. 25, 1973. Even though there was a population build-up at this date, it is possible that these are wintering birds. Wintering: The Common Redpoll has been seen on 10 out of 25 years on the Christmas Bird Count.

A male and female specimen were collected (Pettingill) in the Northfield area.

Pine Siskin (*Spinus pinus*)

An irregular transient, and winter visitant; but with one possible nesting record reported for the area. Seen on 7 out of 25 years on Christmas Bird Counts. Summer, Faribault: Feb. 17 to June 19 (1-8 birds); June 20 to 22 (2 adults feeding 2 young at feeder); June 23 to July 4 (1-2 birds). Mrs. Paul H. Weaver (*The Loon*, 43:27).

Wintering: Feb. 25, 1973: this was certainly a "Pine Siskin Winter" as this species was very common in the area all winter. Pettingill collected three male Pine Siskins Feb. 11, 1943 and one female Oct. 9, 1942.

American Goldfinch (*Spinus tristis*)

Regular summer resident. Earliest spring arrival: April 12, 1947 and 1949

in Faribault and Northfield; latest: May 15, 1972 Faribault. Seen on 20 out of 25 of Christmas Bird Counts. Nesting: a nest with 5 eggs was found July 27, 1964 and also in 1966. A nest with young was found in the Faribault area Aug. 22, 1946.

Six specimens have been collected (Pettingill) in the Northfield area: two females Oct. 23, 1936, male May 8, 1937, male May 25, 1938, male Oct. 2, 1942 and a male on May 8, 1945. In the Nerstrand area a female was collected May 24, 1938 and another female Sept. 27, 1938.

Red Crossbill (*Loxia curvirostra*)

Winter visitant. A large flock of Red Crossbills was seen near Northfield April 5, 1923 by Prof. J. W. Hornbeck. In 1973 there were three additional records all from Faribault; six were seen Jan. 21, three on Feb. 25 and three on Feb. 15. Also six were reported as seen on May 21 in 1973.

White-winged Crossbill (*Loxia leucop- tera*)

Seven were seen in Northfield by Prof. J. W. Hornbeck on Nov. 14, 1920 (*The American Midland Naturalist*, Vol. VII, No. 3, May 1921). Additional records: a flock of 40 was seen Dec. 21, 1957 Northfield, a small flock was seen by Dr. George Rysgaard in Northfield Nov. 24, 1965 and he also reported seeing 10 birds March 30, 1970 in Northfield.

Rufous-sided Towhee (*Pipilo ery- throphthalmus*)

Irregular summer resident. Earliest spring arrival: April 23, 1932 Faribault; latest: May 18, 1953 Northfield. Not as commonly seen in recent years as earlier. A male was collected (Pettingill) May 8, 1937 and another male April 29, 1939 in the Northfield area, a female was collected near Nerstrand Sept. 22, 1939.

Lark Bunting (*Calamospiza melano- corys*)

Only one record for this species in the county. One was seen on April 22, 1951 near Cannon Lake (*The Flicker*,

23:52).

Savannah Sparrow (*Passerculus sand- wichensis*)

Regular summer resident. Earliest spring arrival: April 13, 1965 (*The Loon*, 37:143); latest: May 18, 1953 Northfield. Summer records: June 17, 1952, Aug. 3, 1976. Two specimens were collected (Pettingill) a juvenile female Sept. 27, 1938 and another female Sept. 26, 1939 in the Nerstrand area.

Grasshopper Sparrow (*Ammodramus savannarum*)

Regular summer resident. Earliest spring arrival: April 24, 1965 Northfield; latest: May 28, 1967 Nerstrand area. Average of 11 dates: May 9. Four male specimens have been collected (Pettingill) one on each of the following dates: May 16, 1937 and May 23, 1937 in the Nerstrand area and in the Northfield area May 30, 1943 and June 17, 1943.

Le Conte's Sparrow (*Ammodramus lecon- teii*)

Only one spring record known for the area, six were seen June 6, 1951 east of Northfield. Eighteen specimens have been collected by Pettingill in the county. In the Nerstrand area, one female was collected Sept. 26, 1938, male Sept. 23, 1939, male and female Sept. 27, 1943, male Oct. 2, 1943, three immature females Oct. 3, 1943 and a male and female Oct. 10, 1943. In the Northfield area the following were collected in 1941: a male Oct. 1, male and female Oct. 2, two females Oct. 3, a male and two females Oct. 5. The species probably nests in the area.

Vesper Sparrow (*Pooecetes gramineus*)

Regular summer resident. Earliest spring arrival: March 12, 1933 Faribault; latest: May 20, 1968 General Shields Lake. Average of 19 dates: April 20. Latest fall: Oct. 27, 1933. Nesting: carrying food to nest was observed on June 24, 1951.

A female was collected by Pettingill April 29, 1939 and a male Sept. 24, 1943 in the Northfield area. In the

Nerstrand area a male was taken May 26, 1943, a female May 31, 1943 and a male Sept. 22, 1939.

Dark-eyed Junco, Slate-colored Junco (*Junco hyemalis*)

Regular spring and fall transient. Earliest spring arrival (decided increase in numbers of wintering population): March 1, 1964 Faribault; latest: March 31, 1941 Northfield, also 1965 and 1970 Faribault. Several May and June dates have been recorded but no nesting record is known for the area. The latest nesting season record is June 29, 1952 when one was seen on Heron Island at General Shields Lake. The earliest fall date is Sept. 27, 1951 with the apparent peak in fall migration between Oct. 7 to Oct. 18. The Dark-eyed Junco has been recorded on each of the 25 Christmas Bird Counts in the area.

Five specimens have been collected in the Northfield area by Pettingill, a female Oct. 28, 1936, immature female Oct. 5, 1937, female April 11, 1940, male May 29, 1945 and a male Oct. 31, 1950. In the Nerstrand area a male was taken April 13, 1940 and a female Oct. 15, 1943.

Tree Sparrow (*Spizella arborea*)

A regular winter visitant. Earliest fall arrival: Sept. 15, 1952 Northfield; latest: Nov. 23, 1933 Northfield. Average of 7 dates: Nov. 4. Latest date seen in the spring: May 2, 1936 Northfield. Has been recorded on 23 out of 25 Christmas Bird Counts.

Five specimens have been collected in the Northfield area by Pettingill. A female Nov. 19, 1936, in 1937 female April 10, female April 12, 1940 and in 1943 female April 24.

Chipping Sparrow (*Spizella passerina*)

Regular summer resident. Earliest spring arrival: March 19, 1939 Faribault; latest: May 4, 1936 Faribault. Average of 28 dates: April 17. Latest fall date: Nov. 10, 1933 Faribault. Nesting: young in the nest seen June 1, 1951 in Northfield and May 19, 1953 the adult was seen feeding the

young (**The Flicker**, 26:73). A nest with 1 egg May 22, 1968 and a nest with 4 eggs June 11, 1973 Faribault. A male was collected (Pettingill) in Northfield May 26, 1943.

Clay-colored Sparrow (*Spizella pallida*)

One seen on April 24, 1966 in the Northfield area. Ten specimens have been collected in the Northfield area (Pettingill). A female was taken May 12, 1937, male Sept. 27, 1938, male May 11 and another male Sept. 23, 1943, in 1944 a male was collected Sept. 22 and a male Sept. 26 and in 1945 a male was taken April 28 and a male May 8. The Clay-colored Sparrow no doubt nests in the area.

Field Sparrow (*Spizella pusilla*)

Regular summer resident. Earliest spring arrival: March 30, 1963 Faribault; latest: May 15, 1952 Northfield. Average of 18 dates: April 16. Three specimens have been collected (Pettingill) in the Northfield area: male May 4, 1940, female Oct. 2, 1942 and a male May 1, 1945.

Harris' Sparrow (*Zonotrichia querula*)

Irregular spring and fall migrant. Earliest spring arrival: May 10, 1951 Northfield; latest: May 18, 1950 Northfield and 1968 Faribault. Average of 9 dates: May 14. Earliest fall date is Sept. 13, 1935 and the latest Oct. 16, 1968. The Harris' Sparrow has been seen only once on the Christmas Bird Count. A total of 12 specimens have been collected in the area by Pettingill. Two females were taken Oct. 23, 1936, male May 12, 1937, male Oct. 11, 1940, two males and a female Oct. 9, 1943 and a male May 12, 1945 in Northfield area. In the Nerstrand area a male was collected Oct. 3, 1943 and an immature male Oct. 15, 1943.

White-crowned Sparrow (*Zonotrichia leucophrys*)

An irregular spring and fall migrant. Earliest spring arrival: May 4, 1965 Faribault; latest: May 16, 1963 Northfield. Average of 5 dates: May 11. Three specimens have been col-

lected in Northfield area (Pettingill): a male May 22, 1937, male Oct. 11, 1940 and a male Oct. 15, 1943. In the Nerstrand area a female was taken Sept. 23, 1939.

White-throated Sparrow (*Zonotrichia albicollis*)

Regular spring and fall transient. Earliest spring arrival: April 12, 1964 Faribault and 1967 Faribault; latest: May 15, 1974 Faribault. Average of 24 dates: April 24. The earliest fall arrival is Sept. 13, 1952 Northfield. Has been seen on 2 out of 25 Christmas Bird Counts in the area. Seven specimens have been collected (Pettingill) in the area: in the Northfield area a male was taken April 23, 1937, a female April 29, 1940, and a female May 17, 1948. In the Nerstrand area a male was taken Oct. 1, 1938 and a female Sept. 23, 1939.

Fox Sparrow (*Passerella iliaca*)

Regular spring and fall transient. Earliest spring arrival: March 13, 1973 General Shields Lake; latest: May 9, 1954 Northfield. Average of 22 dates: April 2. The earliest fall arrival is Sept. 13, 1952 and the latest date is Oct. 25, 1951. Seven specimens have been collected (Pettingill) in the area. In the Northfield area a male was taken April 23, 1937, a female April 29, 1940, and a female May 17, 1948. In the Nerstrand area a male was taken Oct. 1, 1938 and a female Sept. 23, 1939.

Lincoln's Sparrow (*Melospiza lincolni*)

Irregular transient. Earliest spring arrival: May 1, 1965 Faribault; latest: May 14, 1967 Faribault. Average of 5 dates: May 10. Three specimens have been collected (Pettingill) in the Northfield area: male May 9, 1937, male May 16, 1943 and a male Sept. 27, 1944. Three were taken in the Nerstrand area: female Sept. 27, 1943, female Sept. 27, 1938, immature female Sept. 27, 1943 and a male Oct. 15, 1943.

Swamp Sparrow (*Melospiza georgiana*)

An irregular resident. Earliest

spring arrival: April 20, 1975 Faribault; latest: May 16, 1953 Northfield. Average of 7 dates: April 24. Nesting: a nest was found July 14, 1951.

A total of 12 specimens have been collected in the area by Pettingill. In the Northfield area a female was taken May 19, 1937, male April 29, 1939, female April 13, male Oct. 11, 1940, female Oct. 9, 1942, female April 17, female May 16, female Sept. 24, 1943, in 1944 an immature female Sept. 28. In the Nerstrand area a juvenile female was collected Sept. 27, 1938, male Sept. 26, 1938 and a female Oct. 2, 1941.

Song Sparrow (*Melospiza melodia*)

A regular summer resident, common throughout the county. Earliest spring arrival: March 3, 1934 Faribault; latest: April 13, 1975 Faribault. Average of 38 dates: March 27. Winter records: the Song Sparrow has been recorded on 5 out of 25 years of Christmas Bird Counts. Nesting: adults carrying food on July 4, 1953 (**The Flicker**, 26:37).

Seven specimens have been collected in the area by Pettingill. A female was collected Oct. 28, 1936, male April 10, 1937, male May 19, 1937, male April 24, 1943, female Oct. 28, 1944 and a male May 10, 1945. In the Nerstrand area a female was taken Sept. 28, 1939 and a male May 31, 1943.

Lapland Longspur (*Calcarius lapponicus*)

Three male specimens were collected by Pettingill Nov. 7, 1936 in the Northfield area. Also, they have been recorded on 3 out of 25 years on the Christmas Bird Counts. These are the only known records for this winter visitant in the county.

Snow Bunting (*Plectrophenax nivalis*)

Irregular winter visitant. Earliest fall: Nov. 7, 1975 when a flock of 200 were seen in the Cannon City area. They have been recorded on 6 out of the 25 years on the Christmas Bird Counts. A female was collected in the Northfield area by Pettingill Nov. 7, 1936.

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WOOD DUCK NEST BOX UTILIZATION IN MINNESOTA

by

Paulette J. Henson & Douglas C. Keran

INTRODUCTION

Many Wood Duck boxes have been put out by concerned individuals along with sportsmen's clubs, school groups, state and federal agencies, and other organizations. The primary aim of these people is to increase the breeding Wood Duck population in an area by providing more nest sites. This is very important to Wood Ducks and other cavity nesting ducks, especially in areas where there are no longer mature forest types with natural cavities available. These boxes, however, are not just of value to ducks. Taking a broader perspective of the ecosystem, one sees that many other species of wildlife also benefit from the boxes.

The objective of this study was to evaluate the use of Wood Duck nest boxes by wildlife and to show how the height and number of holes per box can affect that use. Also a note is made on how the time of the box check can distort the data found. The data used came from the sources indicated in Table 1.

We would like to thank the following for providing data from the indicated areas: John Mathisen — Chipewewa National Forest, Don Fiedler — Pierz, Minnesota Area, Brainerd Senior High, Conservation Class — Crow Wing Memorial Forest, Brainerd Area

Vocational Technical Institute, Natural Resources Class — Crow Wing Natural History Area, Paulette Henson & Ole Thornbloom — Rice Lake National Wildlife Refuge, Mike T. Loss — Various areas in Crow Wing, Cass, Wadena, & Itasca counties.

METHODS AND MATERIALS

All boxes were checked once or more each year to determine use. Winter checks indicated the use at that time and the duck use from the previous nesting season. Duck or other bird use was defined as a box having eggs laid in it, not just a downy depression. Squirrel and mouse use was either a nest for raising young or a nest for shelter rather than just acorn shells in the box. Raccoon use consisted of dead or live animals found. The case of the goldfinch use reported is believed to be a dead bird. These definitions were followed whenever possible although some of the data contributors may have had different methods.

The boxes on the Crow Wing Natural History Area were checked three times a year, in March, early May, and late May.

Two special sections of the project were conducted on this same area. The influence of height was studied by placing three boxes on each of 20 trees. The boxes were located at 10,

20, and 30 foot heights above water level. Another variable studied was the use of one compared to three-holed boxes. The three-holed boxes were constructed with one hole on the front and one on each side. These boxes were spaced alternately around ponds to get an even distribution of types.

RESULTS

Of all boxes studied, the average use by wildlife was found to be 49%. Duck use was 27% and squirrel use 23%. Table 2 gives the breakdown for each area of study.

More than just ducks and squirrels used the boxes. Several other cavity nesting birds, mammals, and insects also benefitted. Table 3 shows the variety and extent of wildlife use.

In the study of the influence of height on use, boxes at the 30 foot level received the most use both by squirrels and ducks. Table 4 compares the use at various heights. Fifty-nine percent of the boxes used by wildlife were 30 feet high. Looking at just ducks for a longer span of time, 59% of the boxes used were at the 30 foot height.

Table 5 summarizes the data from the study on use of one versus three-holed boxes. Of the boxes used by ducks 88% were one-holed. Of those used by squirrels 59% were three-holed.

DISCUSSION

To view Wood Duck boxes from the standpoint of ducks alone is to overlook an almost equal amount of other wildlife use (Table 2). The largest share of this is squirrels, but other species can also be important. For instance, Tree Swallow use appears insignificant when only 10 out of 1563 boxes were used. However, all 10 were on Rice Lake National Wildlife Refuge where only 42 boxes were checked. In this case Tree Swallow use surpassed both duck and squirrel.

The time of year that boxes are checked has a definite influence on the type and amount of use found. When 271 boxes were checked on the

Crow Wing Natural History Area in March, 67 boxes had squirrel use. By May, most young had left the nest and only 18 boxes were in use. Keeping this in mind, possibly squirrel use is much higher than Table 2 shows since the three areas reporting low squirrel use all conducted nesting season checks. Perhaps winter checks would have raised their squirrel use to near that of the Crow Wing Natural History Area and the Crow Wing Memorial Forest.

Winter checks also have disadvantages. In three years of nesting season checks followed by March checks, 62.5% of the previous year's nests were missed in the March checks. Predators can remove and eat eggs. Also the bits of egg shells can be gnawed and eaten by squirrels and mice or buried in their nests.

Height influenced both duck and squirrel use. It may be that 30 feet is the preferred height. Another explanation might be that when given a choice, the highest box is chosen. In that case if the top boxes were removed, there could still be as much use but concentrated in the lower boxes.

Ducks showed an obvious preference for one-holed boxes. The two cases of use in three-holed boxes was the same box used two consecutive years, possibly by the same female. Number of holes did not significantly influence squirrel use.

Several other variables not studied in this project may also affect use of boxes. These include species of tree the box is on, distance from water, whether the box is cleaned out or not, deterioration of the boxes, and habitat types. Boxes could also be checked in late summer and fall to get a more complete picture of use. The important idea is that when boxes are not in use by ducks, they are not wasted since other wildlife make use of a substantial number of them. **Route 1, Box 346, Buffalo, Minnesota 55313 and Brainerd Technical Institute, Brainerd, Minnesota 56401.**

Table 1. Wood Duck nest boxes checked in Minnesota 1964 - 1976.

Location	Years Studied	Number of Boxes*	Time of Box Checks
Chippewa National Forest	1968-1974	8627	winter
Pierz Area	1964-1975	668	nesting season
Crow Wing Memorial Forest	1969-1975	513	winter
Crow Wing Natural History Area	1970-1976	275	winter and nesting season
Rice Lake National Wildlife Refuge	1975	42	nesting season
Various areas in Crow Wing, Cass, Wadena, and Itasca counties	1974-1975	65	nesting season

*The accumulated number of boxes checked over the years of study. This includes rechecks of the same boxes in subsequent years.

Table 2. Wood Duck nest box use by study areas in Minnesota 1964-1976.

Location	Number of Boxes	Number used by Wildlife (%)	Number used by Ducks (%)	Number used by Squirrel (%)
Chippewa National Forest	8,627	3,988 (46)	2,209 (26)	
Pierz Area	668	472 (71)	292 (44)	68 (10)
Crow Wing Memorial Forest	513	340 (66)	161 (31)	193 (37)
Crow Wing Natural History Area	275	120 (44)	39 (14)	82 (30)
Rice Lake National Wildlife Refuge	42	23 (54)	7 (16)	5 (11)
Various areas in Crow Wing, Cass, Wadena, and Itasca counties	65	26 (40)	19 (29)	6 (9)
Total	10,190	4,969 (49)	2,727 (27)	354 (23)*

*Excluding data from Chippewa National Forest where only duck and total wildlife use was recorded.

Table 3. Wood duck nest box use by wildlife in Minnesota 1964-1976*

Type of Use	Number of Boxes	% of Boxes	Type of Use	Number of Boxes	% of Boxes
Duck (Wood Duck, Common Goldeneye, Hooded Merganser)	518	33.14	Saw-whet Owl	3	.19
Squirrel (gray, red, fox, flying)	345	22.65	Raccoon	3	.19
Starling	57	3.65	Great Crested Flycatcher	1	.06
American Kestrel	45	2.88	American Goldfinch	1	.06
Mouse	11	.74	Chipmunk	1	.06
Tree Swallow	10	.64	Hornet	1	.06
Honeybees	7	.45	Total wildlife use	981	62.76
Common Flicker	6	.38	No use	582	37.24
Screech Owl	4	.26	Number of boxes available	1,563	100.00

*Excluding data from Chippewa National Forest where only duck and total wildlife use was recorded.

Table 4. Influence of height on Wood Duck box use on the Crow Wing Natural History Area, 1970-1976.

Use	1974-1976		
	10 feet	20 feet	30 feet
Total wildlife	9	14	33
Duck	4	4	15
Squirrel	3	9	21
Number of boxes available	57	57	57

Use	1970-1976		
	10 feet	20 feet	30 feet
Duck	5	12	24
Number of boxes available	137	137	137

Table 5. Wildlife use of one versus three-holed boxes on the Crow Wing Natural History Area, 1973-1976.

Use	One-holed Boxes	Three-holed Boxes
Duck	14	2
Squirrel	20	29
Total wildlife	32	32
Number of boxes available	50	50

THE SUMMER SEASON (June 1 - July 31, 1976)

by Kim Eckert

Summer 1976 was not only hot and dry, but by some measures it was also the driest summer of the driest year of this century. Only the northwest and southeast corners of the state had adequate moisture, while conditions elsewhere, especially in the southwestern prairies and the northeastern coniferous forests, were a disaster. Prairie wetlands, even some good sized lakes, dried up, while northern bogs and woodlands became potential forest fires. While longer term effects of the drought are still in the news, immediate effects on summer birds seem limited. Water birds were not as scarce as some might expect, and several species seemed more common. Shorebirds, for example, certainly had plenty of habitat along receding shorelines. One victim of the drought, however, had to be the Yellow Rail population in Aitkin Co. whose marshes not only dried up, but also were being mowed for hay and plowed up. Another victim may have been the Short-eared Owl — not one was reported all summer.

Forty-five contributors filled out report forms this summer, as compared to 42 last year and 47 two summers ago. The 240 species recorded compared to 241 and 249 the last two summers, but an excellent total of 156 species nested (compared to only 133 last year). There was also a good total of noteworthy finds. The best of them all was easily the Arctic Loon at Lake Harriet, an observation that certainly defies explanation and that ranks with some of the best sightings ever in Minnesota. Another casual bird, the Snowy Egret, was recorded twice, and one of these was way up at Agassiz Refuge. Great Egrets and Yellow-crowned Night Herons also showed up north of their normal range. Whistling Swans lingered well into the summer, while Black Duck and Green-winged Teal nested in the

southeast. A Rough-legged Hawk in June was very late, and the casual Ferruginous Hawk made an appearance. King Rails, also casual, even nested; a Yellow Rail in Ramsey Co. tried to make up for the lack of rails in Aitkin Co.; and Common Gallinules north of La Crescent were interesting. Lesser Yellowlegs and Pectoral Sandpiper set new records for late spring departure. Several gulls were noteworthy: a very late Glaucous, Herring and Ring-billed summered almost everywhere, Franklins were up at Duluth and Mille Lacs but down at Agassiz, and Bonapartes were at Mille Lacs in flocks; also the Caspian Tern was around in unusual numbers. The drought drove two Screech Owls to a birdbath in Cottonwood Co., and Great Grays again nested in Roseau Co. The casual Scissor-tailed Flycatcher was seen in Rock Co., the Yellow-bellied Flycatcher, much sought after by out of state birders, was almost abundant in Lake Co., and Acadian Flycatchers continued to expand its range. Also apparently expanding, this time to the south, was the Winter Wren. The Loggerhead Shrike, while declining in recent years, did fairly well this summer. Vireos and warblers of note: no less than five Bell's Vireos in Wabasha Co., Black-throated Blues again made a good showing, the casual Yellow-breasted Chat (no less than **five** casual species seen this summer) was recorded twice including a most unusual nesting, and Blackpoll and Wilson's Warblers turned up in mid-summer. A Rusty Blackbird showed up again in Cook Co., suggesting possible nesting; Blue Grosbeaks positively nested for the first time in the state and also spread north into Pipestone Co., only one Lark Bunting turned up and continued to be scarce in spite of dry recent summers. Finally, sparrows of interest: good numbers of Henslow's, "numerous" Sharp-taileds at Agassiz,

a very late Harris,' and a hard to find Lincoln's nest in Roseau Co.

One final note. If you're looking for an interesting area to explore next summer, try Franconia in Chisago Co. Here last summer, North met South with Louisiana Waterthrush and Acadian Flycatcher along side of Winter Wren and Mourning Warbler (also Pine Warblers at nearby Sunrise). Perhaps next summer an even more curious mix will occur.

Common Loon: nested in Cass, Itasca, St. Louis, Lake, Stearns, Wright and Anoka; also reported from 22 other counties west and south to Marshall, Mahnomen, Ottertail, Big Stone (KE), Lyon (KE), Sibley (JG) and Steele (L. Sowden); more widespread than usual.

ARCTIC LOON: first seen on 6-13 on L. Harriet in Minneapolis by E. Batchelor, with positive identification first made on 6-20 (DB); from then on seen and photographed by many, and last seen on 8-1 (KG); all previous Minnesota records from L. Superior in fall.

Red-necked Grebe: nested in Roseau, Marshall, Todd, Pope (BSH) and Hennepin (OJ); also reported from Clearwater, Ottertail, St. Louis (6-27, BJ) and Wright.

Horned Grebe: reported only from Marshall (SV) and Cook (7-31, KE and BJ).

Eared Grebe: nested in Marshall (SV); also seen 6-1 Lyon (GO).

Western Grebe: nested in Marshall, Todd (25 pair, NH), Wright and Kandiyohi; also reported from Ottertail, Grant (peak of 200, J. Fitzpatrick), Big Stone, Lac Qui Parle, Lincoln, Lyon, Jackson, Stearns (6-2, St. Cloud, NH) and Hennepin (French L., OJ); more reports than usual.

Pied-billed Grebe: nested in Marshall, Kandiyohi, Anoka, Hennepin and Washington; also reported from 17 other counties northeast to St.

Louis and Cook.

White Pelican: nested in Big Stone; also reported from Marshall (100's by mid-July, SV), Swift, Lac Qui Parle, Pope (BSH), Swift, Lincoln (KE), Benton (MC) and Jackson (peak of 400, LR).

Double-crested Cormorant: nested in Becker, Big Stone, Pope, Meeker and Wright; also reported from Marshall, Clay, Ottertail, Douglas, Lac Qui Parle, Swift, Lincoln and Kandiyohi.

Great Blue Heron: nested in Beltrami, Hubbard, Pope, Meeker, Wright, Anoka and Wabasha; also reported from 39 other counties.

Green Heron: nested in Pope, Wright, Anoka, Rice and Olmstead; also reported from 26 other counties north and west to Duluth (4 reports), Cass, Marshall (SV), Becker, Big Stone, Lac Qui Parle, Yellow Medicine, Lyon, Murray and Rock; again more widespread than in former years.

Great Egret: nested in Big Stone and Pope; also reported from 16 other counties north to Marshall (4, SV) and Lake (6-12, Finland, DGW).

SNOWY EGRET: 2 reports: 6-20, L. Shakotan, Lincoln Co. (H. Kyllingstad); from 6-28 on, Agassiz N. W. R., Marshall Co. (SV).

Black-crowned Night Heron: nested in Pope and Nobles; also reported from 18 other counties north to Marshall, Mahnomen and Stearns.

Yellow-crowned Night Heron: nested at La Crescent, Houston Co.; also seen 7-15 and 7-24 at Rochester, Olmsted Co. (JF) and on 6-14 in **Crow Wing Co.** (L. and H. Bennetson).

Least Bittern: more reports than usual; reported from Marshall, Ottertail, Duluth (7-14, TD), Stearns, Kandiyohi, Wright, Hennepin, Washington, Rice, Houston and Cottonwood.

American Bittern: reported from 16 counties; fewer reports than usual.

WHISTLING SWAN: 3 reports: until 6-15 at Rice Lake N. W. R., Aitkin Co. (T. Savaloja); 6-27 Duluth (JG); 1 ad. and 1 imm. at Agassiz N. W. R., Marshall Co. all summer (SV).

Canada Goose: nested in Marshall, Aitkin, Lac Qui Parle, Anoka, Hennepin and Winona; also reported from 16 other counties northeast to Duluth (3 reports) and Cook.

Mallard: nested in Marshall, Hubbard, Itasca, St. Louis, Morrison, Wright, Anoka, Hennepin, Ramsey, Rice, Pope, Cottonwood and Yellow Medicine; also reported from 18 other counties.

Black Duck: nested in Marshall (SV), Lake, Cook, Hennepin (French L., OJ) and **Wabasha** (brood seen on 6-17, G. Lint); also reported from St. Louis.

Gadwall: nested in Marshall and Yellow Medicine; also reported from Clay and Nobles.

Pintail: nested in Marshall and Yellow Medicine; also reported from Mahanomen, Lyon and Nobles; fewer reports than normal.

Green-winged Teal: nested in **Winona** (pair with brood of 6 on 7-2 at Whitewater W. M. A., BDC); also reported from Marshall, St. Louis, Yellow Medicine, Lyon, Wright, Anoka and Olmsted.

Blue-winged Teal: nested in Marshall, Cass, Douglas, Morrison, Itasca, Carlton, St. Louis, Benton, Pope, Lac Qui Parle, Yellow Medicine, Rock, Nicollet, Anoka, Rise and Houston; also reported from 17 other counties.

American Wigeon: nested in Marshall and Itasca; also reported from St. Louis, Lyon and Nobles.

Northern Shoveler: nested in Marshall; also reported from St. Louis, Hennepin and Nobles.

Wood Duck: nested in Marshall, Clay, Douglas, St. Louis, Lake, Big Stone, Lac Qui Parle, Yellow Medicine, Lyon, Rock, Cottonwood, Pope,

Wright, Anoka, Hennepin, Ramsey, Goodhue, Wabasha, Winona, Houston, Olmsted and Mower; also reported from 12 other counties; continues to increase in the western counties.

Redhead: nested in Marshall and Hennepin; also reported from Mahanomen, Clearwater, Lake, Yellow Medicine, Lyon, Nobles and Pope.

Ring-necked Duck: nested in Marshall, St. Louis and Anoka; also reported from Mahanomen, Clearwater, Cass, Yellow Medicine, Pope, Stearns and Hennepin.

Canvasback: nested in Marshall, Wright and Hennepin; also reported from Mahanomen, Todd, Cook and Yellow Medicine.

Lesser Scaup: non-breeding wanderers noted in Clearwater, Duluth, Hennepin, Pope, Yellow Medicine and Lyon.

Common Goldeneye: nested in Itasca, St. Louis and Lake; also reported from Clearwater, Hubbard and Cook.

Bufflehead: a late migrant on 6-2 in Marshall Co. (SV).

White-winged Scoter: late migrant on 6-5 in Lake Co. (GO).

Ruddy Duck: nested in Marshall; also reported from Clearwater, Clay, Grant, Cook, Pope, Yellow Medicine, Lyon, Nobles, Murray and Hennepin.

Hooded Merganser: nested in St. Louis, Hennepin and Houston; also reported from Marshall, Clearwater, Mahanomen and Wright.

Common Merganser: nested in Lake; also reported from St. Louis and Cook.

Red-breasted Merganser: nested in Lake; also reported from St. Louis and Cook.

Turkey Vulture: nested in Clearwater (Itasca St. Pk.); also reported from Cass, Mahanomen, Crow Wing, Itasca, St. Louis, Cook, Goodhue, Olmsted, Winona and Houston.

Goshawk: 6-21 Ely, St. Louis Co. (GN); only report.

Sharp-shinned Hawk: reported from Roseau, Hubbard, Itasca, Aitkin, Carlton, St. Louis, Lake, Cook and Houston.

Cooper's Hawk: nested in Aitkin; also reported from Koochiching, Crow Wing, St. Louis and Olmsted.

Red-tailed Hawk: nested in Swift, Sherburne, Olmsted, Houston and Mower; also reported from 31 other counties.

Red-shouldered Hawk: nested in Crow Wing (T. Savaloja); also reported from Anoka, Ramsey, Washington and Winona.

Broad-winged Hawk: nested in Lake, Anoka and Olmsted; also reported from 19 other counties; more reports than usual.

Swainson's Hawk: nested in Rock (Hardwick; pair at nest on 7-16, JG; 2 fledged young on 7-24, KE), Mower (7-14, RK) and Dakota (until 7-21 at Hastings, 2 adults and 2 young, JD); also reported from Clay (J. Fitzpatrick), Swift (KE), Lac Qui Parle (KE), Pipestone (JG, DGW) and Olmsted (JF).

ROUGH-LEGGED HAWK: very late migrant on 6-11, Agassiz N. W. R., Marshall Co. (SV).

FERRUGINOUS HAWK: reported with good details on 6-15 at Chandler, Murray Co. (J. Fitzpatrick).

Bald Eagle: nested in Clearwater, Crow Wing, Aitkin, Pine, St. Louis, Chippewa National Forest (67 nests, 48 successful) and Superior National Forest (26 of 52 nests active, 20 successful, 29 young raised); also reported from Beltrami, Cass and Itasca.

Marsh Hawk: reported from 22 counties.

Osprey: nested in Chippewa National Forest (50 nests, 24 successful), St. Louis, Lake and Superior National Forest (21 of 34 nests active, 21 suc-

cessful, 32 young raised); also reported from Hubbard, Mahnomen, Cass, Itasca and Crow Wing.

Merlin: only reported from Itasca (all summer, MS).

American Kestrel: nested in Todd, St. Louis, Anoka, Hennepin, Ramsey and Dakota; also reported from 38 other counties.

Spruce Grouse: nested in St. Louis (several broods near Babbitt, PD); also reported from Lake of the Woods (M. Taylor).

Ruffed Grouse: nested in Hubbard, Cass, Itasca, Pine, Carlton, St. Louis, Lake, Marshall, Anoka, Hennepin (Elm Creek Co. Pk.) and Houston; also reported from Aitkin, Crow Wing, Cook, Ramsey, Washington and Olmsted.

Sharp-tailed Grouse: nested in Marshall (SV); no other reports.

Bobwhite: 3 reports: 6-8 Wabasha (D. Mahle); 7-31 Spring Grove, Houston Co. (T. Tucker); in July at Lanesboro, Fillmore Co. (B. Solberg); western Houston and Fillmore Co.'s seem to be the best place to look for this scarce bird.

Ring-necked Pheasant: nested in Lac Qui Parle, Anoka, Hennepin, Ramsey and Dakota; also reported from 20 other counties north to Clay and Duluth.

Gray Partridge: nested in Lincoln, Lyon and Jackson; also reported from Lac Qui Parle, Yellow Medicine, Pipestone, Rock, Murray, Nobles, Le Sueur, Rice and Mower.

Sandhill Crane: 2 reports: Agassiz N. W. R. (SV) and Mahnomen Co. (3, J. Fitzpatrick).

KING RAIL: first actual nesting report in several years: 2 young found with 2 adults in July at La Crescent, Houston Co. (F. Leshner); it is possible that this casual species is regular in these marshes.

Virginia Rail: nested in St. Louis (Duluth), Kandiyohi, Anoka, Hennepin and Houston; also reported from Marshall, Wright and Ramsey.

Sora: nested in St. Louis, Kandiyohi and Anoka; also reported from Marshall, Clay, Ottertail, Itasca, Pope, Hennepin, Ramsey, Washington and Dakota.

Yellow Rail: present early in the summer in the Aitkin Co. marshes (T. Savaloja), but later on the drought dried up these marshes and some were being hayed and plowed! — also no report for the third summer in a row from the Waubun marsh; the only bright spot for this species was a stray found on 6-10 at North Oaks, **Ramsey Co.** (good details, J. Fitzpatrick).

Common Gallinule: nested in Houston (La Crescent); also seen by many for the second year in a row at Wood L., Richfield, Hennepin Co.; also seen in **Kandiyohi** (7-17, Sunburg, OJ) and **Stearns** (Linneman L., 6-10, NH); there have been very few reports in recent years away from La Crescent.

American Coot: nested in Marshall, Anoka, Hennepin, Ramsey, Rice and Murray; also reported from 12 other counties.

Piping Plover: only report was of the usual nesting birds at Duluth.

Killdeer: nested in Marshall, Roseau, Cass, Itasca, St. Louis, Lake, Swift, Benton, Anoka, Hennepin, Ramsey, Washington and Lincoln; also reported from 27 other counties.

Black-bellied Plover: late migrant 6-1 Anoka (KL).

American Woodcock: nested in Wabasha; also reported from 13 other counties west to Marshall (Agassiz N. W. R., SV) and Blue Earth.

Common Snipe: reported from 15 counties: fewer reports than usual.

Upland Sandpiper: nested in Mahnomen, Becker, Clay and Sherburne;

also reported from Swift, Lyon, Pipestone, Rock, Nobles, Sibley, Chisago and Mower.

Spotted Sandpiper: nested in Marshall, St. Louis, Lake, Hennepin and Winona; also reported from 19 other counties.

Lesser Yellowlegs: late migrants 6-2 Marshall (SV), 6-17 Washington (WL) and 6-18 Lyon (WKE); two latest dates on record.

Pectoral Sandpiper: late migrants 6-2 Marshall (SV) and 6-18 Lyon (WKE).

White-rumped Sandpiper: late migrant 6-16 St. Louis (GN).

Semipalmated Sandpiper: late migrants 6-2 Marshall (SV), 6-5 Goodhue (DGW) and 6-16 St. Louis (GN).

Sanderling: late migrant 6-12 Duluth (DGW).

Marbled Godwit: nested in Marshall and Mahnomen; also reported from Roseau, Pennington, Clay and **Duluth** (6-20, T. Garvey).

Wilson's Phalarope: reported from Marshall, Mahnomen, Clay, Lincoln, Cottonwood, Rock, Hennepin and Houston.

GLAUCOUS GULL: very late migrant on 6-5 at Knife River, Lake Co. (GO).

Herring Gull: nesting in St. Louis and Lake; also reported from Cook, Cass, Mille Lacs, Itasca, **Pope** (late migrants at Glenwood, BSH), **Washington** (WL) and **Lyon** (7-15, 2nd year imm., JG).

Ring-billed Gull: nested at Duluth and Mille Lacs; non-breeding and migrant birds also reported from 15 other counties; again more reports than usual, and with so many Herring and Ring-billed Gulls reported, one wonders how many of them may have been California Gulls.

Franklin's Gull: apparently nested at **Duluth** (details?) and Marshall

(though the main colony at Agassiz N. W. R. was abandoned by mid-June); also reported from 12 other counties including Aitkin (up to 10 on Mille Lacs L. in late July, T. Savaloja).

Bonaparte's Gull: 3 reports: 7-19 Mille Lacs L. (100 plus) (NH); **200-300** in late July at Mille Lacs L. (T. Savaloja); up to 8 at Duluth, 7-25 and 7-28 (KE).

Forster's Tern: nested in Hennepin and Todd; also reported from Marshall, Clearwater, Ottertail, Pope, Lyon, Murray, Wright and Ramsey.

Common Tern: nested in Itasca, St. Louis and Mille Lacs; also reported from Clearwater, Aitkin, Lac Qui Parle (7-4, BE, details?) and Washington (WL, details?).

Caspian Tern: no less than **6** reports: 6-16 Lake (GO); 6-14 (5) and **7-24** (1) Duluth (DGW); 6-30 Grant (R. Nellerhoe); **7-15** and **7-23** Aitkin (JB); the July dates are most unusual.

Black Tern: nested in Marshall and Hennepin; also reported from 26 other counties.

Rock Dove: good news! — only reported from 5 counties.

Mourning Dove: nested in Marshall, Clay, Ottertail, St. Louis, Benton, Lac Qui Parle and Blue Earth; also reported from 31 other counties including Lake.

Yellow-billed Cuckoo: reported from 15 counties north to Cass (7-2, AS) and Pine (6-28, DA).

Black-billed Cuckoo: nested in Cass, Itasca and Lincoln; also reported from 30 other counties; more reports than usual.

Screech Owl: reported from Lac Qui Parle, Cottonwood (2 coming to a birdbath! — LF), Rice and Olmsted.

Great Horned Owl: nested in Kittson, Clay, St. Louis, Pope, Swift, Olmsted and Mower; also reported from 17 other counties; more reports than usual.

Barred Owl: nested in Olmsted; also reported from Cass, Crow Wing, Itasca, St. Louis, Pine, Wright, Ramsey, Washington, Houston and Mower.

Great Gray Owl: nesting again reported from the bog country of northern Roseau Co.; 4 eggs were laid in an artificial nest in April but no young hatched due to suspected human disturbance; 3 young were successfully raised at another nest and were seen into July (R. Nero); another Great Gray was reported on 7-5 in Aitkin Co. (JB) where nesting was suspected but not confirmed.

Long-eared Owl: only report was one found dead on a road on 6-26 at Grand Portage, Cook Co. (BJ); very few recent summer reports.

Saw-whet Owl: 3 reports: seen in June at Clearwater L., Beltrami Co. (M. Mason); heard daily in June at Bear Island L., St. Louis Co. (PD); 6-27 Ely, St. Louis Co. (GN).

Whip-poor-will: reported from Crow Wing, Lake (6-26, Isabella, JG), Wright, Anoka, Hennepin, Olmsted and Winona.

Common Nighthawk: nested in Rock; also reported from 25 other counties.

Chimney Swift: nested in Stearns; also reported from 30 other counties.

Ruby-throated Hummingbird: nested in Olmsted; also reported from 29 other counties.

Belted Kingfisher: nested in Mille Lacs, Itasca and Houston; also reported from 31 other counties.

Common Flicker: nested in Clay, Cook, Lac Qui Parle, Cottonwood, Wright, Anoka, Hennepin, Olmsted and Blue Earth; also reported from 32 other counties.

Pileated Woodpecker: nested in Pine; also reported from 16 other counties west to Ottertail and Mower.

Red-bellied Woodpecker: reported from 11 counties north and west to

Chisago, Wright, Le Sueur and Mower.

Red-headed Woodpecker: nested in Cass, Stearns, Lincoln and Rock; also reported from 38 other counties.

Yellow-bellied Sapsucker: nested in Cass, St. Louis, Cook, Chisago, Olmsted and Cottonwood (R. Wagner); also reported from 16 other counties including Clay.

Hairy Woodpecker: nested in Cass, Hubbard, Itasca, Blue Earth and Hennepin; also reported from 27 other counties.

Downy Woodpecker: nested in Hubbard, St. Louis, Lake, Cottonwood, Blue Earth, Hennepin and Houston; also reported from 22 other counties.

Black-backed Three-toed Woodpecker: nested in Lake (7-4 and 7-6, Beaver Bay, female feeding young, M. Eide); also reported from St. Louis (6-23 to 6-30, Ely, GN; and 7-14, Hoyt Lakes, GN).

Eastern Kingbird: nested in Marshall, Clay, St. Louis and Anoka; also reported from 36 other counties.

Western Kingbird: nested in Clay, Pipestone, Rock and Hennepin (Brooklyn Park, OJ); also reported from 16 other counties east to Wadena, Morrison and Sherburne.

SCISSOR-TAILED FLYCATCHER: a reliable report of this casual bird by the park staff at Blue Mounds St. Pk., Rock Co. on 6-28.

Great Crested Flycatcher: nested in Clay, Hubbard, Pine and Stearns; also reported from 28 other counties including Lake and Cook.

Eastern Phoebe: nested in Hubbard, Cass, Pine, Anoka and Houston; also reported from 20 other counties.

Yellow-bellied Flycatcher: reported from St. Louis, Lake (18 seen on 6-21, JG) and Cook; late migrants seen 6-4 Clay (LCF) and 6-5 Lac Qui Parle (AFE).

Acadian Flycatcher: continues to ex-

pand its range: nested again at Beaver Creek Valley St. Pk. (2 adults and 1 young at nest, F. Leshner); also seen on 6-12 at Whitewater W. M. A., Winona Co. (JF); on 6-27 at Forestville St. Pk., Fillmore Co. (JF); and from 6-8 to 6-29 at Franconia, Chisago Co. (BB, JG).

Willow Flycatcher: reported from 12 counties north to Anoka and Isanti.

Alder Flycatcher: nested in Cook; also reported from Marshall, Cass, Mille Lacs, Pine, St. Louis and Lake; late migrants also seen up to 6-5 in Yellow Medicine, Hennepin, Ramsey and Rice; a possible early fall migrant seen on 7-24 in Pope Co. (B. Zink).

Least Flycatcher: nested in Itasca, St. Louis, Morrison and Goodhue; also reported from 21 other counties.

Eastern Wood Pewee: nested in Steele and Houston; also reported from 32 other counties.

Olive-sided Flycatcher: reported from Roseau, Cass, Itasca, Pine, St. Louis, Lake and Cook; fewer reports than usual for the second summer in a row.

Horned Lark: nested in Olmsted; also reported from 31 other counties.

Tree Swallow: nested in Beltrami, Hubbard, Cass, St. Louis, Pine, Pope, Stearns, Wright, Anoka, Hennepin, Washington, Dakota; also reported from 26 other counties including Rock (6-27, DGW).

Bank Swallow: nested in Mille Lacs, Anoka and Hennepin; also reported from 20 other counties.

Rough-winged Swallow: nested in St. Louis and Chisago; also reported from 20 other counties including Lake and Cook.

Barn Swallow: nested in Marshall, Cass, Aitkin, Crow Wing, Lake, Sherburne, Wright, Anoka, Hennepin, Washington, Lac Qui Parle, Swift, Pipestone, Cottonwood, Rock and Le Sueur; also reported from 26 other

counties.

Cliff Swallow: nested in Marshall, Hubbard, Beltrami, Cass, Cook, Sherburne, Hennepin and Winona; also reported from 27 other counties; more reports than usual.

Purple Martin: nested in Becker, Hubbard, Cass, Itasca, Pope, Lac Qui Parle, Lincoln, Cottonwood and Wright; also reported from 30 other counties.

Gray Jay: nested in Itasca; also reported from Roseau, Clearwater, St. Louis, Lake and Cook.

Blue Jay: nested in Clay, Hubbard, Lac Qui Parle, Cottonwood, Stearns, Anoka, Hennepin, Le Sueur and Blue Earth; also reported from 32 other counties.

Black-billed Magpie: again reported from Agassiz N. W. R., Marshall Co. (SV).

Common Raven: reported from Roseau, Cass, Itasca, Aitkin, St. Louis, Lake, Cook and Marshall (SV); more reports than usual.

Common Crow: nested in Hubbard, Cass, Stearns and Lac Qui Parle; also reported from 39 other counties.

Black-capped Chickadee: nested in Clay and Anoka; also reported from 37 other counties.

Boreal Chickadee: nested in Lake (found on 6-24 along National Forest Road 424, GN); also reported from Itasca, St. Louis and Cook (peak of 7 on 7-30, KE).

Tufted Titmouse: 4 reports from only 2 counties: Washington (J. Fitzpatrick) and Houston (RK, BJ, KE).

White-breasted Nuthatch: nested in Marshall, Hubbard, Cass and St. Louis; also reported from 28 other counties.

Red-breasted Nuthatch: nested in Hubbard, St. Louis and Hennepin (from 7-20 to 7-27, 1 young seen being fed by adult, ES); also reported from Marshall, Cass, Itasca, Lake and Cook.

Brown Creeper: reported from Itasca, St. Louis, Lake, Stearns (6-25, JB), Pope (7-31, BSH), Goodhue (7-24, BJ), Winona and Houston (5 seen on 7-10, JB); more reports than usual, especially from the south.

House Wren: nested in Marshall, Becker, Clay, Hubbard, Cass, Itasca, Pine, Lake, Lac Qui Parle, Lincoln, Cottonwood, Wright, Anoka, Chisago, Hennepin and Blue Earth; also reported from 24 other counties.

Winter Wren: nested in St. Louis and Chisago (6-16, Franconia, BB); also reported from Roseau, Marshall, Itasca, Lake, Cook, Washington (J. Fitzpatrick), Olmsted (7-25, JF) and Houston (6-9 and 6-26, Beaver Creek Valley St. Pk., F. Leshner, KE); unusual reports from the south for the second summer in a row.

Long-billed Marsh Wren: reported from 28 counties including St. Louis and Itasca; more reports than usual.

Short-billed Marsh Wren: nested in Washington; also reported from 22 other counties.

Gray Catbird: nested in Cass, Blue Earth and Houston; also reported from 37 other counties.

Brown Thrasher: nested in Clay, St. Louis, Stearns, Lincoln, Hennepin and Blue Earth; also reported from 30 other counties.

American Robin: nested in Beltrami, Becker, Clay, Hubbard, Cass, St. Louis, Lac Qui Parle, Rock, Wright, Dakota and Ramsey; also reported from 34 other counties.

Wood Thrush: nested in Jackson (6-21 to 6-29, nest and 2 young at Kilen Woods St. Pk., LR, R. Wagner) and Nicollet; also reported from 14 other counties including Itasca, St. Louis (6-30, Hoyt Lakes, GN), Lake, Cook and Lac Qui Parle (7-4, BE).

Hermit Thrush: nested in St. Louis; also reported from Roseau, Itasca, Lake and Cook.

Swainson's Thrush: reported from Roseau, St. Louis, Lake and Cook; late migrants also seen 6-1 Hennepin (BE) and 6-11 Olmsted (V. Herring).

Veery: nested in Cook; also reported from 22 other counties west to Kittson, Mahnomen and Olmsted.

Eastern Bluebird: nested in Ottertail, Cass, Itasca, Pine, Sherburne, Anoka and Rock; also reported from 27 other counties.

Blue-gray Gnatcatcher: reported from Washington, Goodhue, Wabasha, Winona, Houston and Fillmore.

Golden-crowned Kinglet: reported from Marshall, St. Louis, Lake and Cook.

Ruby-crowned Kinglet: reported from Aitkin, St. Louis, Lake and Cook.

Cedar Waxwing: nested in Cass and Ottertail; also reported from 29 other counties.

Loggerhead Shrike: nested in Clay (Buffalo River St. Pk.) and Dakota (R. Erickson); also reported from Marshall, Duluth (6-8, DA), Lac Qui Parle, Pipestone, Wright, Olmsted, Mower and Stearns; an encouraging number of reports.

Starling: nested in Hubbard, Lac Qui Parle and Anoka; also reported from 30 other counties.

Bell's Vireo: up to 5 reported from Kellogg, Wabasha Co. from 6-13 (F. Leshner) to 7-31 (JB).

Yellow-throated Vireo: nested in Goodhue; also reported from 18 other counties including St. Louis.

Solitary Vireo: reported from Itasca, Pine, St. Louis, Lake and Cook.

Red-eyed Vireo: nested in Cass, Morrison and Pine; also reported from 29 other counties.

Philadelphia Vireo: 3 reports: from 6-13 to 7-11, Ely, St. Louis Co. (GN); late June in Cook Co. (J. Hart); 6-26 Cook Co. (BJ).

Warbling Vireo: nested in Olmsted; also reported from 28 other counties including Marshall, Itasca, St. Louis and Lake.

Black-and-white Warbler: nested in Cass; also reported from Kittson, Itasca, Mille Lacs, Carlton, St. Louis, Lake and Cook.

Prothonotary Warbler: nested in Houston (JB) where there were also 3 other reports, including a peak of 5 at Reno (KE).

Golden-winged Warbler: reported from Cass, Crow Wing and St. Louis (7-9 Duluth, DA; 6-2 Babbitt, PD; Ely, GN).

Blue-winged Warbler: nested in Winona; also reported from Goodhue, Wabasha, Olmsted, Fillmore and Houston.

Tennessee Warbler: reported only from St. Louis and Lake.

Orange-crowned Warbler: early fall migrant at Duluth on 7-31 (JG).

Nashville Warbler: nested in Cass; also reported from Roseau, Marshall, Crow Wing, Aitkin, Pine, Itasca, St. Louis, Lake and Cook.

Northern Parula: reported from Cass, Itasca, St. Louis and Cook.

Yellow Warbler: nested in Cass; also reported from 29 other counties.

Magnolia Warbler: reported from St. Louis, Lake and Cook.

Cape May Warbler: reported from St. Louis (PD, GN) and Cook (BJ).

Black-throated Blue Warbler: 3 reports: one male on 6-11 at Onamia, Mille Lacs Co. (NH); 6-21 and 7-27 in Lake Co. (JG).

Yellow-rumped Warbler: nested in St. Louis; also reported from Roseau, Marshall, Cass, Wadena (BJ), Morrison (OJ), Aitkin, Pine (KE), Itasca, Lake and Cook; more reports than usual.

Black-throated Green Warbler: reported from Itasca, Pine, St. Louis, Lake and Cook.

Cerulean Warbler: reported from Chisago, Washington, Goodhue, Winona, Houston and Fillmore.

Blackburnian Warbler: reported from Cass, Mahnomen, Pine, Itasca, St. Louis, Lake and Cook.

Chestnut-sided Warbler: nested in Cass; also reported from Roseau, Aitkin, Crow Wing, Mille Lacs, Carlton, Itasca, St. Louis, Lake and Cook.

Bay-breasted Warbler: reported only from St. Louis and Cook.

BLACKPOLL WARBLER: a bird difficult to explain was seen on 7-3 near Duluth (DÄ); early July is not the time for a migrant.

Pine Warbler: reported from Mahnomen, Cass, Crow Wing, Mille Lacs, Pine, Itasca, St. Louis, Lake, Cook and Chisago (3 reports from Sunrise); more reports than usual.

Ovenbird: nested in Cass; also reported from 25 other counties west to Kittson, Mahnomen, Lac Qui Parle and Rice.

Northern Waterthrush: reported from St. Louis, Lake and Cook.

Louisiana Waterthrush: reported from Chisago (5 reports from Franconia), Washington (J. Fitzpatrick) and Houston (6-26, Beaver Creek Valley St. Pk., KE).

Connecticut Warbler: nested in Roseau (7-3, adult carrying food, WKE) and Lake (6-19, 4 young, R. Huber); also reported from Marshall, Cass, Itasca and a late migrant on 6-1 in Hennepin (DB).

Mourning Warbler: reported from 13 counties south to Chisago (BB, JG), Washington and Ramsey (J. Fitzpatrick); late migrants seen 6-1 Hennepin (DB) and 6-3 Houston (RK).

Common Yellowthroat: nested in St. Louis, Le Sueur and Lincoln; also

reported from 40 other counties.

YELLOW-BREASTED CHAT: first nesting report in many years at White-water W. M. A., Winona Co.; adults seen by many, nest and eggs found by RK; also reported with good details from Le Sueur on 6-27 (fide HC).

WILSON'S WARBLER: reported in late June in Cook Co. by J. Hart; a very late migrant or possible breeder?

Canada Warbler: reported from Clearwater, Cass, St. Louis, Lake and Cook.

American Redstart: nested in St. Louis, Pine, Kanabec and Houston; also reported from 21 other counties.

House Sparrow: nested in Clay, Lac Qui Parle and Anoka; also reported from 31 other counties.

Bobolink: nested in Dakota; also reported from 36 other counties.

Eastern Meadowlark: nested in Dakota; also reported from 16 other counties west to Cass, Rice and Mower.

Western Meadowlark: nested in Le Sueur; also reported from 34 other counties.

Yellow-headed Blackbird: nested in Lac Qui Parle, Stearns, Wright, Anoka and Hennepin; also reported from 22 other counties including Itasca and St. Louis (Hoyt Lakes and Duluth).

Red-winged Blackbird: nested in Cass, Mille Lacs, Pine, Lake, Lac Qui Parle, Stearns, Wright, Anoka, Washington and Blue Earth; also reported from 34 other counties.

Orchard Oriole: nested in Lincoln; also reported from Big Stone, Lac Qui Parle, Yellow Medicine, Lyon, Pipestone, Rock, Nobles, Cottonwood, Wabasha and Houston.

Northern Oriole: nested in Clay, Cass, Morrison, Lac Qui Parle, Wright, Anoka, Hennepin, Ramsey, Cottonwood and Blue Earth; also reported from 30 other counties.

RUSTY BLACKBIRD: reported

from Cook Co. for the second summer in a row (7-3, Grand Portage, W. Pieper).

Brewer's Blackbird: nested in St. Louis; also reported from 16 other counties including Lake, Cook and Lyon.

Common Grackle: nested in Clay, Hubbard, Beltrami, Cass, Lac Qui Parle, Pope, Wright and Anoka; also reported from 28 other counties.

Brown-headed Cowbird: nested in Marshall (parasitized *Empidonax*, sp.), Hubbard (warbler, sp.) and Rock (Blue Grosbeak; see below); also reported from 35 other counties.

Scarlet Tanager: reported from 17 counties including Mahnomen and Jackson.

Cardinal: nested in Hennepin, Wabasha and Blue Earth; also reported from 16 other counties north and west to Lake (6-16, GO), St. Louis (7-3 Duluth, JG) and Yellow Medicine.

Rose-breasted Grosbeak: nested in Clay, Olmsted and Blue Earth; also reported from 31 other counties.

Blue Grosbeak: first definite nesting record for the state: on 7-16 at Blue Mounds St. Pk., Rock Co., a pair was found at their nest which had 1 newly hatched young, 1 egg and 1 cowbird egg (KE, JG); the nest, placed 18 inches high in a burdock, was collected for the Bell Museum; 4 other reports from KE: 5 singing males in e. Rock Co. on 6-5 (migrants); 6-8, near Chandler, Murray Co. (singing male); 3 singing males on 7-15 in sw. Rock Co.; one male all summer near Cazenovia, Pipestone Co. (first county record).

Indigo Bunting: nested in St. Louis and Stearns; also reported from 36 other counties north to Roseau, Lake and Cook.

Dickcissel: nested in Murray; also reported from 30 other counties north to Kittson, 7-2, WKE), Aitkin (6-15 to

7-15, T. Savaloja) and Morrison (7-4, KL); more reports than usual.

Evening Grosbeak: nested in Becker and St. Louis; also reported from Itasca, Crow Wing, Lake and Cook.

Purple Finch: reported from 11 counties plus 2 possible fall migrants on 7-31 in Winona Co. (JB).

Pine Siskin: reported from Marshall, Crow Wing, St. Louis, Lake, Cook and Hennepin (all summer, VL).

American Goldfinch: nested in Lincoln; also reported from 43 other counties.

Red Crossbill: nested in Duluth (6-23 to 6-26, 2 young, B. Hojnacki); also reported from Lake (6-26, JG) and Washington (J. Fitzpatrick).

White-winged Crossbill: 2 reports: 6-18 and 6-19, Cass, 17 (AS); 6-19, Lake, 1 (GO).

Rufous-sided Towhee: nested in Sherburne; also reported from Mahnomen, Cass, Crow Wing, Lake (7-12, Silver Bay, JG), Anoka, Chisago, Ramsey, Wabasha (peak 10 on 7-24, BJ) and Houston.

Lark Bunting: one male seen on 6-13 near Lake Benton, Lincoln Co., (LK); probably a late migrant; continues to be scarce in summer.

Savannah Sparrow: nested in Polk; also reported from 30 other counties.

Grasshopper Sparrow: reported from 23 counties northeast to Aitkin.

Henslow's Sparrow: 5 reports: 7-12, Elm Creek Co. Pk., Hennepin Co. (OJ); 6-9 and 6-19, Dakota, Winona Co., 3 (F. Leshar, BJ); 7-2 and 7-23, La Crescent, Houston Co., 2 (F. Leshar, DGW).

Le Conte's Sparrow: reported from Marshall, Mahnomen, Clay, Clearwater, Wadena (BJ) and St. Louis (6-26, Duluth, DA).

Sharp-tailed Sparrow: nested in Marshall (7-21, Agassiz N. W. R., adult carrying food, SV; she also reported this species to be "numerous" here); also reported from Waubun, Mahno-

men Co. (J. Fitzpatrick) and in late July in Aitkin Co. for the third summer in a row (T. Savaloja).

Vesper Sparrow: nested in Pope; also reported from 35 other counties including Lake.

Lark Sparrow: reported from Marshall (6-26, BB), Sherburne (5 on 7-31, DGW), Anoka (3 locations on 6-18, KL) and Wabasha (7-13 and 7-24, up to 7, F. Leshner and BJ).

Dark-eyed Junco: reported from Itasca, St. Louis, Lake and Cook.

Chipping Sparrow: nested in Clay, Hubbard, Itasca, St. Louis, Lac Qui Parle, Cottonwood, Lincoln, Le Sueur, Anoka and Ramsey; also reported from 29 other counties.

Clay-colored Sparrow: nested in Olmsted (JF); also reported from 20 other counties.

Field Sparrow: nested in Pope; also reported from 20 other counties north to Lac Qui Parle, Stearns and Pine (6-28, Northwoods, DA).

HARRIS' SPARROW: a very late migrant on 6-16 in Murray Co. (Mrs. A. DeKam).

White-throated Sparrow: reported from 12 counties including Roseau, Marshall and Pine; more reports than usual.

Lincoln's Sparrow: nested in **Roseau** (7-3, adult on nest with 2 eggs, R. Nero); also reported from St. Louis (Babbitt area, PD), Lake (6-14, Isabella, DGW) and Cook (late June, J. Hart); very few nesting reports on record.

Swamp Sparrow: nested in St. Louis; also reported from 24 other counties.

Song Sparrow: nested in Marshall, St. Louis, Lac Qui Parle. Pope and Goodhue; also reported from 37 other counties.

Chestnut-collared Longspur: reported only from the Felton prairie, Clay Co.

CONTRIBUTORS:

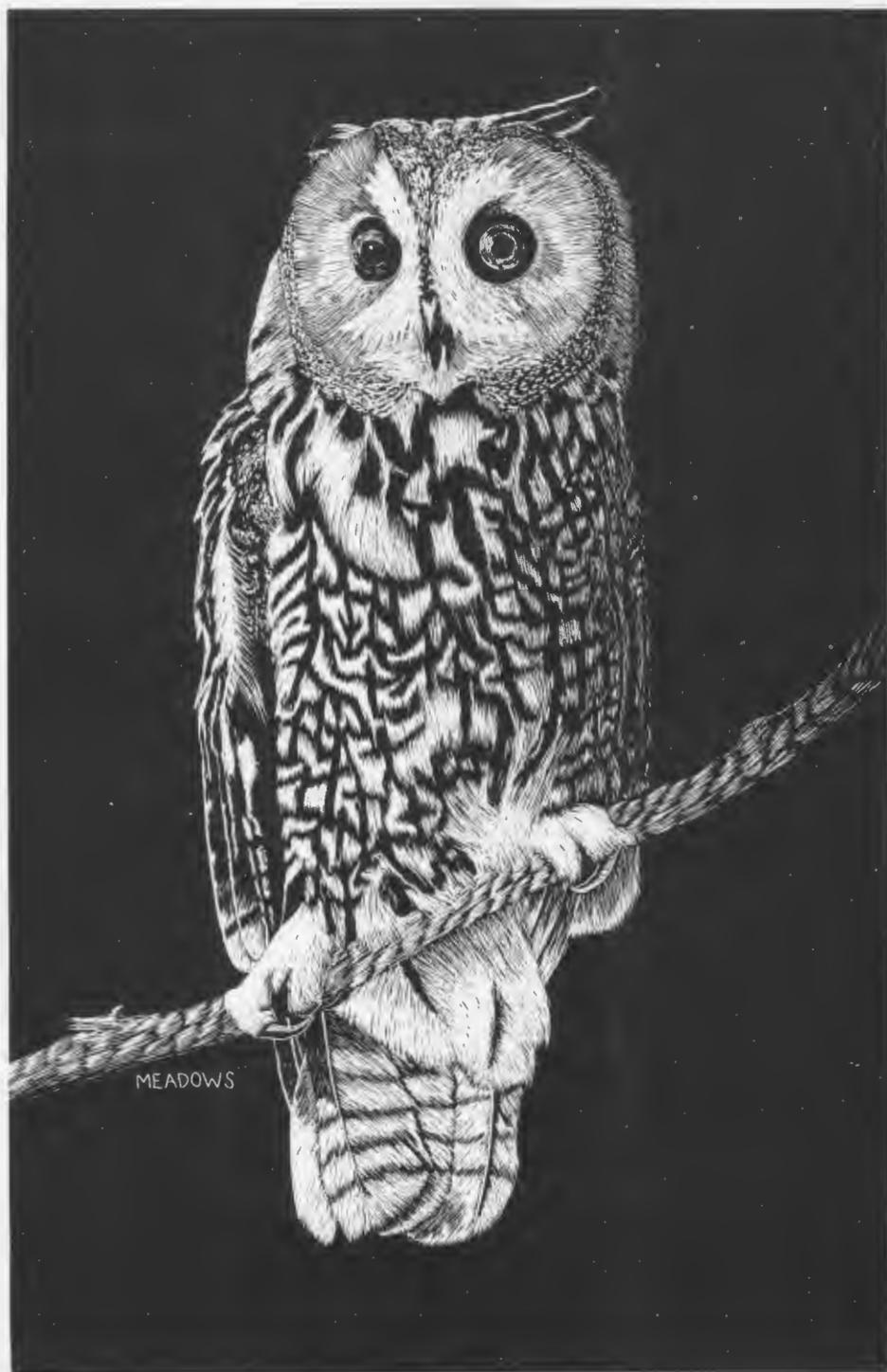
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Corrigenda: An addition should be made to the Spring seasonal report as published in the last issue of "The Loon." Under Blue Grosbeak (p. 170) add the date 5-16 Rock Co. One bird was seen by Richard Duerksen of Mountain Lake. This represents the second earliest spring date on record for the state.



Long-eared Owl by Allan W. Meadows, International Falls, Minn.

OBSERVATIONS OF THREE LONG EARED OWLS

by Gary L. Otnes

On August 16, 1976, my family and I relocated from rural Clarkfield in southwestern Minnesota to rural Fergus Falls, Ottertail County. The hilly, wooded area was alive with birds, including Great Horned Owls which called very constantly during the nighttime hours; our slough teemed with various "peeps."

Then, quite announced, three owls, which would be later identified as Long-eareds, abruptly swooped into the grove a few hundred feet south of our house. The date was August 20, the time: 8:30 P.M. . . . approximately 15 minutes after sunset. Unbelievably awkward, the trio flopped about among the branches, attempting to gain a satisfactory perch. They called continually, each bird allowing 7-12 seconds to elapse between vocalizations. Their calls could best be described as similar to a Common Snipe's, only harsher, raspier, and with a slightly rising inflection at the end.

The birds fumbled about in the thick grove for several minutes before striking out for the adjacent meadow with it's more easily perchable fence posts. Unfortunately fence post alighting proved equally trying for the owls, and two out of three overshot their mark, landing heavily on the ground instead. Thereafter, at about 10 minute intervals the trio, calling incessantly, would lumber from post to post about the farm. Occasionally one, then another, would attempt what appeared to be an effort to pounce upon something on the ground. The results bordered on the ludicrous: invariably the owl would end up a dishevelment of feathers and wings in the meadow grass.

For about one half hour the birds flopped and glided about the farm, all deliberately remaining within a few hundred feet of one another. Then, at about 9:00 P.M., as if on cue,

they retreated to a hilltop grove of oak trees, approximately one fourth mile south of the homesite, where they remained for close to an hour. Interestingly, their raucous calling frequently widened; instead of the usual 7-12 second interlude, they settled upon a 22-28 second frequency. Of further interest was the timbre of the calls. While making their rounds of the farmsite, a note of excitement seemed evident, the calls sharp, with a hurried rising inflection at the end. After settling into the distant oak grove, the calls smoothed out, the inflection much less evident. For all practical purposes it seemed they were secure, anthropomorphically "at home" if you will, and were now calling only to keep track of one another.

After an hour or so the three owls again returned to the farm and, as far as could be ascertained, remained until just before sunrise the following day, changing perches about every ten minutes and belting out their peculiar calls at the original 7-12 second interval.

From August 20 through August 29 the trio religiously repeated their nocturnal schedule with a routine that one's watch could practically be set by. The timetable called for the owls to begin random, unevenly spaced vocalizations about 8:10 - 8:15 P.M. from the home base. Then, at approximately 8:30 P.M. they'd glide to the farm, carry on with their fumbling, noisy wanderings of the area until 9:00 P.M., at which time they'd return to home base, calm down vocally for an hour or so, then raucously return to the farm for the remainder of the night.

By this time we had grown quite accustomed to the three visitors, and became quite concerned when, from August 30 through September 1, they completely disappeared. Finally, to

our relief, all three owls reappeared at 8:20 P.M., September 2, noisy as usual. What they were doing during their three day absence remains a mystery.

Being a drought year, a rather violent thunderstorm the nighttime hours of September 12 afforded an additional interesting facet of the owl's behavior: Even though rain poured and lightning crackled, the trio showed up on schedule and maintained their routine. Of memorable content, one of the owls perched atop our silo, his eared silhouette repeatedly outlined by flashes of lightning.

The turning point in the owl's routine abruptly began the evening of September 14. Arriving at about 8:30 P.M. the owls called less frequently, averaging 20-25 seconds between utterances. Additionally, the birds began to range considerably further apart; perhaps, at times, one half mile would separate them.

On September 16, fearing that the trio might soon disappear again, this time for good, my wife, Marion, and I positioned ourselves in our orchard and, armed with binoculars and a sound collector-tape recorder unit, awaited their arrival. Obliging the owls swooped upon us at 8:15 P.M. perching triangular fashion about us a scant fifty feet away. Obviously curious of us, the owls called excitedly, rotating their heads vigorously to focus on us. We were privileged to record almost ten minutes of their close range calls.

At that time we were also able to confirm the bird's identities as Long-eared Owls. Previously the owls general size, coloration, and presence of "ear" tufts were observable as they moved about the farmsite; but it was

not until this particular evening that the lengthwise breast and belly markings, concentrically shaped facial discs, and position of the tufts near the apex of the head became evident. While too dark to make these observations by the naked eye, the aforementioned characteristics were quite evident through 8x50 and 10x35 binoculars due to the greater concentration of light through them.

The recording was then compared with various commercial albums containing Long-eared Owl calls. While vaguely similar, there was enough dissimilarity to conclude that: 1) Long-eared Owls, as with most other birds, have geographic dialects; 2) the owls recorded were most probably adolescents. Additionally, and the recording bears this out, each of the three owls had a characteristic pitch to its voice, a factor which greatly aided in determining movements of the individual owls through the nighttime blackness.

From September 16 until October 8 the owls ranged further from the farm; concurrently, both their schedule of arrival and interval between calls fluctuated widely. Between October 8 and 12 only one owl casually appeared, the bird with the highest, thinnest pitched voice. On October 13 this owl, too, disappeared. As of the date of the writing of this report, (November 30) the trio has never returned. The sudden arrival, unique behavior, and equally sudden departure raises many speculations about these unusual owls, such as: were they indeed juveniles; did they arrive due to territorial dispersal; did they leave the area for migration purposes?
Route 1, Box 181, Fergus Falls, Minnesota 56537.

notes of interest

MINNESOTA'S SECOND RED PHALAROPE — On the morning of October 29, 1976, Paulette Henson and I were birding Mille Lacs Lake and we had stopped at the wayside rest area a quarter mile south of Garrison at about 9:00 A.M. We drove to a boat landing area and saw a light-colored shorebird, which I thought was a Northern Phalarope, floating and spinning a few inches off the shore. We watched the bird for a few minutes before we noticed the gray unmarked back, and when we finally got closer and used the 20 to 60 power scope, we could see the small light areas at the base of the bill, I called Jo Blanich after watching the phalarope for about 45 minutes and she called Lloyd Paynter. Lloyd got there shortly and started taking pictures of the bird and agreed with us that it was not a Wilson's or Northern Phalarope. Paulette and I continued on around the lake and when we came back about 3:00 P.M. the bird was still in the same spot. Steve and Jo Blanich had been there earlier and had seen and photographed the phalarope. The next day we checked but could not find the

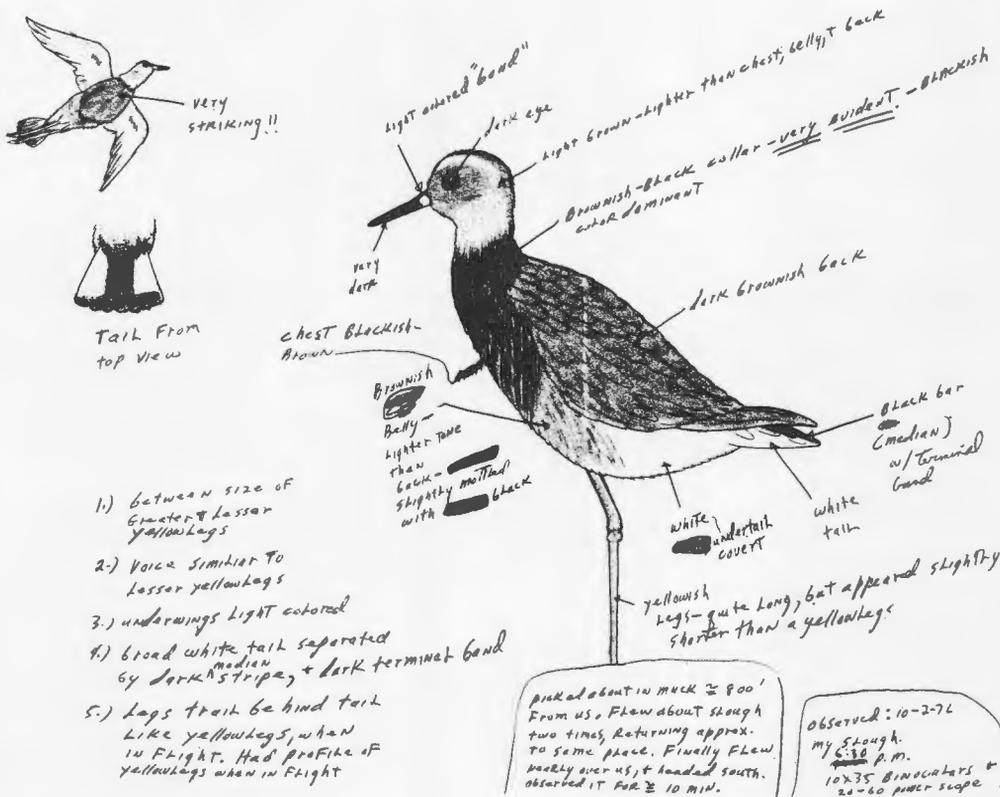


RED PHALAROPE 10-29-76 — Photo by Steve Blanich

phalarope, but we did find a Black-legged Kittiwake in the same general area. We were able to walk almost as close to the phalarope as we wanted to, and to get it to fly, we had to throw rocks at it. The bird stayed in the same 20 feet of shoreline almost the entire time we observed it. A boat came into the boat landing and the phalarope just moved over. When we did flush the bird, it would fly out over the bay and come right back to the same area. The bird had a gray back with no streaking, and the legs, which we waited for a half hour to see, were light colored. The bill was dark with two light colored spots near the base, nothing like the yellow shown in the field guides. The bill was unlike that of other phalaropes in that it was stout, short and broad based. Overall the bird appeared larger, thicker-necked and stockier than a Northern Phalarope, also it was the color of a winter plumaged Sanderling. I have seen Red Phalaropes before in Alaska.
Terry Savaloja, Box 244, Deerwood, Minnesota 56444.

WORM-EATING WARBLER AT HAWK RIDGE — On November 11, 1976, I took a drive up the North Shore as far as Two Harbors, and was returning via Skyline Parkway. It had been a fruitful day, there was an adult Glaucous Gull at Stoney Point, a Harlequin Duck at the Talmadge River, a Winter Wren at the main overlook on Hawk Ridge, and a male Hoary Redpoll in a small flock of Common Redpolls also. I was more than pleased with the trip, and could not expect more. About a half mile west of the overlook on Hawk Ridge, a small bird flew up from the side of the road into the alders. I waited a full five minutes for a good view. The black stripes on the head of this small, buffy brown bird, with its habit of walking along the low branches of the alders, made identification of a Worm-eating Warbler a lot easier. There was a second bird on the south side of the road, just as small, and very shy. I wanted to be sure of my identification of the first bird, and in doing so, let the second one get away. The size could indicate another warbler, but that is only speculation. The Worm-eating Warbler was in view for five minutes, as close as ten feet, and also about thirty feet. At the latter distance, 8x40 binoculars were used. **Marjorie M. Carr, 1834 Vermillion Road, Duluth, Minnesota 55803.**

RUFF SIGHTED IN OTTERTAIL COUNTY — On 10/2/76, at 6:30 p.m., my wife and I were birding along the west shore of the slough located on our property. A large number of shorebirds, primarily Killdeers, Pectoral Sandpipers and Common Snipes were present. My wife, Marion, was the first to notice an unusual shorebird approximately 800 feet away, feeding among a group of Pectoral Sandpipers. Together, we closely observed the bird, using 10x35 and 8x50 binoculars, and a 45X spotting scope, for a period of approximately 10 minutes. During that time, the bird twice took to the wing, described an arc before us, then returned to its point of takeoff. Finally, it left the slough and headed south. During the period of observation, Marion and I took detailed notes, which are as follows: overall size: midway between a Lesser and Greater Yellowlegs; bill: approximately the size of a Lesser Yellowlegs, dark colored, with a whitish-yellow band at the base; eye: very dark; head color: very light buff; upper neck: very light buff; lower neck, shoulders, chest & upper belly: black; lower belly: brown with black mottling; undertail coverts: white; underwings: whitish; back and upper wings: dark brown; legs: yellowish-white, perhaps slightly shorter than a Yellowlegs; tail: white with a wide black median stripe and dark terminal band; flight profile: similar to Yellowlegs, including legs which extended somewhat behind the tail. After consulting Peterson's



Field Guide to the Birds, Golden's Birds of North America and Heinzel's Birds of Britain and Europe, we must conclude that the bird was a Ruff, most probably in partial nuptial plumage. Mr. Henry Kyllingstad, Marshall, was also consulted by telephone, as he has gained expertise in Ruff identification from experience in Europe. Henry felt that, based upon the aforementioned details, that the bird was a Ruff. Gary L. Otnes, Route 1, Fergus Falls, Minnesota 56537

MOUNTAIN BLUEBIRD AT DULUTH — About 11 a.m. on October 24, 1976, Janice Smith, Diana Downes and I were birding along the North Shore out of Duluth and had just stopped at a roadside parking area on U.S. 61 in front of 9801 North Shore Drive. The parking area provided a view of rocks along the shore of Lake Superior and I had stopped here in order to check for Harlequin Ducks. Just as the car came to a halt, Diana noticed a brilliantly colored bird fly in and light on a post next to the car. I immediately saw it to be a bluebird, but it had a grey, rather than a red breast. Only the tail and back were the azure blue of the Mountain Bluebird, with the rest of the plumage various shades of dark gray. These colors, plus a distinct eyering, made it clearly a female. Our observation is only the third fall record for this species in Minnesota, and only the third time a Mountain Bluebird has been seen along the North Shore or northeastern Minnesota. After watching the bird catching insects for about 15 minutes, we drove back the hundred yards to Jan Green's house, picked her up and brought her down to see the bird. It was seen during the afternoon by numbers of

other birders alerted by the Duluth Hot Line, and it eventually paid a visit to Jan's yard later that day. **Dean G. Schneider, 4722 Cooke St., Duluth, Minnesota 55804.**

ADDITIONAL PRAIRIE FALCON REPORTS FOR MINNESOTA — The status of the Prairie Falcon (*Falco mexicanus*) in Minnesota has been described as rare (Roberts, 1936), casual (A.O.U. Checklist, 1957), and accidental (Green and Janssen, 1975). Several factors contribute to this lack of agreement: (1) the terms used by each authority to describe a species occurrence are inconsistent, (2) few qualified observers have resided in western Minnesota, where reports of the species have been both more frequent and numerous, and (3) natural fluctuations or "invasions", possibly related to drought periods, have apparently occurred in the past (Roberts, 1936). Since further data are required to clarify the status of this species in Minnesota, it is of interest to report several new records. A male was live-trapped by a falconer 3.2 km north of Glenwood, Pope County, on 16 December 1975 and was donated to the J. F. Bell Museum of Natural History by the University of Minnesota Raptor Research Center. It died during surgery that was to correct a leg deformity. It was prepared as a study specimen and trunk skeleton (MNH 30340) and represents the seventh Minnesota specimen in the research collection of the J. F. Bell Museum of Natural History. The falconer reported several other Prairie Falcons near Glenwood during the same season (Pat Redig, pers. comm.).

About 10:00 A.M. on 3 September 1976, we were hunting in Wadena County along the shores of Blueberry River which drains south-eastward from Blueberry Lake (SW $\frac{1}{4}$, sec. 2, T. 138 N, R. 35W). The day was hot and clear with persistent, strongly gusting northwest winds. While proceeding through marsh habitat along the river, we sighted a crow-sized falcon approaching from the direction of the lake. We initially suspected the bird was a Peregrine Falcon, but we quickly realized it was a Prairie Falcon. The bird circled along a narrow path on a southeastward course, which at times carried it about 100 m directly overhead. We noted the following characters: a sandy colored dorsal surface, a rather white ventral surface with dark spots, obscure tail bars, blackish facial markings, and black axillars. In addition, the bird showed black underwing coverts that extended outwards from the axillars midway to the bend of the wing. The black on the underwing linings was visible without binoculars and was more extensive than on other Prairie Falcons noted previously by Oehlschlager in Minnesota and Texas. The elapsed viewing time was about two minutes. These records, plus recent published reports in the *Loon* (six from 1973 to mid 1976) and at least seven unpublished presumably valid records known to Oehlschlager, suggest that the Prairie Falcon is for regular and numerous in Minnesota than either the A.O.U. Checklist (1957) or Green and Janssen (1975) indicate. This species is expanding its breeding range in Saskatchewan (Oliphant *et al.*, 1976) and this may partially account for the increase in recent Minnesota sightings. Further observations are needed to evaluate the status of this species in Minnesota, and to determine possible factors that contribute to fluctuations in its occurrence.

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Richard J. Oehlenschlaeger and Robert M. Zink, J. F. Bell Museum of Natural History, University of Minnesota, Minneapolis, Minnesota 55455.

LATE CASPIAN TERN IN CROW WING COUNTY — On November 5, 1976, my husband and I had just arrived at our cabin at Platte Lake in southern Crow Wing County. It was a cold and windy but sunny day, about 35 degrees. The bay in front of the cabin was frozen for about fifty feet out from the shore. As I was looking out over the lake, I saw a Caspian Tern flying along the shore over the edge of the ice. I knew it was a late date for my seeing a Caspian but didn't realize how late until I checked Green & Janssen's book. The latest date north was October 18.

LATE DATE FOR WILSON'S PHALAROPE IN ANOKA COUNTY — Alice Johnson had called me on October 19, 1976 to tell me there were many shorebirds at Centerville Lake in Anoka County. I went to the lake on the morning of the 20th. It was cold, 32 degrees, with "snow showers." There were various species of the shorebirds including: Common Snipe, Killdeer, Greater and Lesser Yellowlegs, Pectoral, Bairds, Semipalmated Sandpiper, Dunlins, Sanderlings, Long-billed Dowitcher and Black-bellied Plover. Among them was a Wilson's Phalarope. I flushed the bird to be sure it was a Wilson's. Bob Janssen saw the bird on October 21 and Ray Glassel saw it the morning of the 22nd. There were also several Tree Swallows and three Yellow-rumped Warblers there on the 20th. Oct. 9 is the latest date listed in Green and Janssen's book. The last time I saw any shorebirds at Centerville Lake was Nov. 5. There was ice along the shore that day but there were a few Pectorals and one Black-bellied Plover. **Mrs. Elizabeth Campbell, 5267 W. Bald Eagle Blvd., White Bear Lake, Minnesota 55110.**

LITTLE BLUE HERONS IN LAC QUI PARLE COUNTY — On June 6, 1976 as it was nearing sundown we were observing Common Egrets, Black-crowned Night Herons, and Great Blue Herons returning to probable rookery sites within the Whetstone National Wildlife Refuge, Yellowbank township, Lac qui Parle County. The Great Blue Herons were flying over us in good size numbers in a westerly direction. The Common Egrets and Night Herons were landing in a wet bottom that bordered the Minnesota River, south of Odessa, Agassiz township. The area bordered by trees was interspersed with tall meadow grasses and cottonwood saplings. Two white birds and two dark slate-blue egret looking birds were observed flying towards us in a westerly direction and a more wooded area of the refuge. It seemed odd for the slate-blue birds looked very much like dwarf Great Blue Herons with an egret shape similarity, yet were approximately the same size as the two white egret like birds flying alongside. We observed them with 10 x 50 binoculars as they flew over us (approximately 75' distance) for further field identification as to whether these birds could be possibly Little Blue Herons of which they were very similar. I noted in my field notes the dark bill, blackish legs extending the body, a dark slate-blue (bluish-gray) neck and body, body shape similarity to the Common Egret and slightly smaller size to this latter species. Making a special note that the two birds flying with the dark slate-blue herons were about the

same size. Also noted that their body size and shape, dark legs extending the body, shallow yet rapid wingbeats, and deep curvature of the neck concludes the possibility of Green Herons very doubtful. When referring to **Minnesota Birds** (1975) we made note that only 7 of the records on Little Blue Herons were spring migrants occurring south of a line between Lac qui Parle and Goodhue counties and that spring migration was April 18 to May 21. Hence we again returned 1 week later, on June 13 to the same location noting the good size number of Common Egrets (13) in the bottom-land site when 4 dark slate-blue herons again flew over the bottom area in the same westerly direction as before. Being about telephone pole height above us (approximately 60') we focused on them with our 10 x 50 binoculars and again I noted field markings identical with those of our first observation. We were now certain that both observations were of Little Blue Herons, a casual species for Minnesota. The last observation we had of the Little Blue Herons was on July 3 at the same location when seven flew over us again in a westerly direction as before, thus confirming that the possibility of these birds being spring migrants was doubtful. Speculating a rookery site possibly existing within the wooded area the herons always directed themselves towards, we attempted to locate it but were unsuccessful. The sunlight was sufficient during all three observations to distinguish coloration and field markings accurately without silhouettes being cast. **Chuck and Micki Buer, Route 3, Box 146, Banby, Minnesota 56220.**

CAROLINA WREN SIGHTING — On November 26, 1976 about midday, my father and I observed a Carolina Wren at our feeding station. We have both seen this species many times in the southern states and the white eye stripe and rufous brown back were familiar to us. Any chance of a Bewick's Wren was eliminated by the quite obvious buffy underparts, and a careful observation of the cocked tail which lacked any white fringing. We observed the wren from our kitchen window, about 20 feet from the feeder. He moved about nervously until he positioned himself in the center of our open sided feeder. The feeder contained only sunflower seed and although we did not actually see the bird cracking the seed, he appeared to be eating. After a few minutes, he flew from this feeder to the ground directly below a tubular feeder, about six feet from our view. We now got a good look at the curved bill and fully confirmed our sighting of a Carolina Wren. The bird reappeared two more times during the day but we feel the subzero temperatures that night directed the wren south-bound, for we did not see him again. **William R. Evans, 810 8th St. S.W., Rochester, Minnesota 55901.**

CAROLINA WRENS IN ROCHESTER — November 1, 1976 was the first day I saw the Carolina Wren on my bird feeder. He was hungrily pecking at the suet and he stayed for approximately three minutes. The feeder is located twelve feet from my window and as I watched he obligingly turned so that he could be viewed from all sides. This little bird is unmistakably wren with his turned up tail. The back is a rusty brown and the underparts are clear without any stripes and buff color. The tail is white on the underside with short horizontal stripes. Although I did not see three wrens at one time on my feeder I am certain there were three. The first to come is described above, another had the characteristic strong white line over the eye but the under parts and back were not as brightly colored. Perhaps a female or an immature? The third bird was very bright with his back about the color of a Brown Thrasher and the underparts buff but with a distinctly rosy hue — a very handsome little bird. The Carolina Wren is

noticeably bigger than our House Wren — actually a half inch — and the bill is a bit longer and turns down slightly. Checking with neighbors, I found he had visited across the street and had been seen by a friend at the top of the valley about two blocks southwest. Another observer reported the wren and this sighting was northeast of my home about two blocks. The dates the Carolina Wren was observed on my feeder were November 1, November 2 (this was the duller colored bird), November 6, November 18, November 25, December 3, December 6, December 8, December 12 (the brightly colored bird), and December 22. The first day he came he returned two or three times with very short intervals between his visits. He never came when there were other birds on the feeder, usually left when the regulars appeared and he always seemed desperately hungry. Mrs. Nelson Barker, 920 10th Street S.W., Rochester, Minnesota 55901.

MAY BIG DAY BIRD COUNT IN HENNEPIN COUNTY — On May 13, 1976 Dave Weaver, Jack Stewart, Frank Gillette, and I undertook a Big Day bird count for Hennepin County. Since three of us were employees of the Hennepin County Park Reserve District, we decided to include James W. Wilkie Regional Park and Carver Park Reserves even though they are just beyond the county line. Most of our birding was confined to the Park Reserves. Only three stops were made at other locations. A total of 142 species was recorded following the ABA guidelines for Big Day counts (*Birding*, 1976. (8(1):41). The entire group identified 138 species. We hope that publication of this report will make birders in the Twin Cities area more aware of the opportunities which are available for bird watching close to home. The group assembled at Park Reserve District headquarters, Morris T. Baker Park Reserve, at 5:10 a.m. The headquarters' area was alive with Common Snipe, American Woodcock and American Bitterns, but all three species were recorded again at other locations. We left for Crow-Hassan Park Reserve after listening for calls in the night. Serious birding started at sunrise with a 2-hour walk along the western edge of Crow-Hassan. We located 79 species, including nine species of sparrows, Ruffed Grouse, Wood Thrush, Blue-gray Gnatcatcher and a Mourning Warbler. The next stop was French Lake. Enroute we spotted a Horned Lark. Surprisingly, this was the only species added to our list while driving between preselected locations. This is in sharp contrast to other Big Day counts which have added substantial numbers of species while on the road. French Lake was a bonanza for waterfowl, as usual. We added 11 species of ducks plus Hooded Mergansers, a Marsh Hawk, Soras and Virginia Rails. A quick stop at the Mississippi River in Champlin added a Purple Martin and a Chipping Sparrow. We arrived at Elm Creek Park Reserve at 10:00 a.m. with our list at 97. Hayden Lake produced a Green-winged Teal, American Wigeons and a Pileated Woodpecker. A Veery and a Winter Wren were heard at the Pineview Lane bridge across Elm Creek. After a leisurely lunch we drove to Eloise Butler Wildflower Garden and Bird Sanctuary. It turned out to be the highlight of the day. Between 3:00 and 5:00 p.m. we saw 61 species of birds, including 18 warblers, an Indigo Bunting, a Purple Finch and a Rufous-sided Towhee. The list now totaled 123 species. Time was getting short, so we decided to pass up a reported Mockingbird at Hyland Lake Park Reserve. We went to Rice Lake along the Minnesota River instead, because the spring drought had reduced the lake to a mud flat, and it had been loaded with shorebirds all week. Unfortunately, most of the birds were gone, and those that remained were on the far side of the lake. We did manage to see a Dunlin, Wilson's Phala-

ropes, Semipalmated Plovers and Semipalmated Sandpipers for a total of 134 species before leaving for Carver Park Reserve shortly before 7:00 p.m. The first stop at Carver was the south side of Lunsten Lake located in the southwestern portion of the park. To our amazement we found three Great Egrets, a Hudsonian Godwit and a Willet. A White-crowned Sparrow was located at the Lowry Nature Center before we moved to the eastern end of Lunsten Lake. Here we found a Common Nighthawk, a Spotted Sandpiper and Common Loons. The sun had set, and the light was fading, but we decided to check one additional marsh in the northwest corner of the park. A Long-billed Marsh Wren was heard singing, and a Solitary Sandpiper was flushed from the flooded grass. The total of 142 species exceeded our expectations for the day. We had birded for 13½ hours (not counting time out for lunch), driven 125 miles and walked 4 miles. Our only regret was not concentrating more on raptors. We did not attempt to call owls or use prelocated nests. As a result, the Great Horned Owl, Red-tailed Hawk, American Kestrel, and Marsh Hawk were the only raptors we saw. Considering the species we missed, I think 150 species could be seen in one day in and around Hennepin County. **L. N. Gillette, Hennepin County Park Reserve District, Route 1, Box 32, Maple Plain, Minnesota 55359.**

IBIS IN BIG STONE COUNTY — On September 14, 1976, I was birding in western Big Stone County and had stopped at a wayside rest area along Highway #7 overlooking Big Stone Lake south of Beardsley. I noticed two dark birds coming across the lake from South Dakota and at first thought they were Double-crested Cormorants, but as I watched them I could tell by their flight that they were not. As they flew closer I could see they were White-faced Ibis by their decurved bills, rapid wing-beats and alternate flapping and gliding. I observed the birds for about ten minutes with 9 x 36 binoculars. I have seen White-faced Ibis in South Dakota, Florida and Texas. **Terry Savaloja, Box 244, Deerwood, Minnesota 56444.**

Editor's Note: Because the White-faced Ibis is a casual occurring species in Minnesota, the above record was submitted to the Minnesota Ornithological Records Committee (MORC) for confirmation. Based on the above write-up the committee felt that the species could not be determined and that the observation be recorded as Ibis (species ?).

WINTER RECORD FOR A CHIPPING SPARROW — The bird was observed by myself and Joan Johnson at the feeder of Phil Kochendorfer, 179 County Road F, Ramsey County between Sucker and Vadnais Lakes. It was seen at a distance of three feet or less and was usually among a flock of Tree Sparrows. It was smaller than the Tree Sparrows, it had a clear gray breast but lacked the center breast spot, had a streaked and rather rusty crown, inconspicuous wing bars, forked tail, and a light line over the eye. Mr. Kockendorfer was able to photograph the bird through his window. We saw the bird several times on December 12, 18 and 26, 1976, and on January 2, 1977. It was seen daily by Mr. Kockendorfer during this period. The bird was last seen on January 4, 1977 by Mr. Kockendorfer and Bob Janssen. **Alice Johnson, 1300 Galtier Street, St. Paul, Minnesota 55117.**



Wintering Chipping Sparrow (see previous page)



Photos by Phil Kochendorfer

SECOND MAY BIG DAY IN SOUTHERN ST. LOUIS COUNTY — On May 21, 1976 the second May Big Day count was held and restricted to the area previously described by Niemi (Loon 47:156-59). The total number of species recorded was 120 which is 19 short of last year's count. Following last year's initial run, I felt, perhaps naively, that 150 species could be sighted on one day in this area. Following this year's count, I feel that one must work hard, encounter a variety of uncommon, seasonally uncommon, or rarities, and have a well planned day, a good migration season, and a great deal of luck to attain that count level. This season, the fact that relatively common species such as the Black-billed Cuckoo, Great Crested Flycatcher, Eastern Wood Pewee, Short-billed Marsh Wren, Hermit Thrush, Cedar Waxwing, Canada Warbler, Scarlet Tanager, and Vesper Sparrow were missed indicates that the 1976 spring migration was unusual for this area. Very few truly uncommon birds to this area were sighted. Among the highlights, however, were the Green Heron, Piping Plover, Saw-whet Owl, and Long-billed Marsh Wren. A quick comparison to last year's count indicates that most of the species decreases were uniform among the bird faunal spectrum except a notable decrease in shorebirds from last year's 18 to this year's 11 species. A count of 120 species in one day for a restricted area of St. Louis County is certainly not a disgrace, but I am convinced those additional 30 species were there somewhere. I guess you could say they "outbirded" us this year. Well, maybe next year we will see 150, or the year after, or the year after

Participants in this year's count were Joann Hanowski, Brad Henspeter, Dr. Pershing Hofslund, and myself. Information related to May 21, 1976 Big Day count in southern St. Louis County — WEATHER: Temperature range 52° - 70° F., Wind - light and variable, Precipitation - threatening rain at 3:30 a.m. but clearing and no precipitation, Cloud cover - average of 30% for the day; MAN-HOURS: 51; MILES BY CAR: 119; MILES WALKED: 4.

FAMILIES	TOTAL SPECIES	TOTAL INDIVIDUALS
Loons, grebes	3	9
Herons, etc.	3	19
Ducks	10	63
Hawks	4	6
Gallinaceous birds, rails, coot	2	9
Shorebirds	11	82
Gulls, terns	7	686
Owls	3	7
Goatsuckers, swifts, hummingbird, kingfisher	4	9
Woodpeckers	5	17
Flycatchers	4	24
Horned Lark, swallows	7	134
Jays, crows, chickadee, nuthatch	5	38
Wrens	3	10
Mimic thrushes, thrushes	7	59
Kinglets, pipit, waxwing, Starling	2	54
Vireos, warblers	17	105
House Sparrow, icterids	9	175
Tanager, finches	6	115
Sparrows	6	73
TOTAL:	120	1,739

Gerald Niemi, Biology Department, University of Minnesota, Duluth, Duluth, Minnesota 55812.

SCISSOR-TAILED FLYCATCHER AND PRAIRIE FALCON IN MORRISON COUNTY — Two unusual observations were made recently by St. Cloud State University ornithology classes. On July 2, 1975 a Scissor-tailed Flycatcher was sighted about five miles east of Royalton, in Morrison County. The wind was so strong that the flycatcher had difficulty remaining perched on a barbed wire fence. He left the fence several times to make short flights but returned to the same general spot. At one point we approached in a car as close as about 15 yards. We watched the bird for over an hour.



SCISSOR-TAILED FLYCATCHER 7-2-75 — Photo by Robert Bohm

Lighting conditions were good, and we used 7 and 10 power binoculars. On September 29, 1976 a Prairie Falcon was observed approximately four miles west and one mile north of Buckman, Morrison County. When first spotted, the falcon was sitting in a plowed field, perhaps 50 yards from our vehicle. He did not appear to be feeding or mantling prey. We watched him for about 30 minutes before he flew a little farther from us and perched on a brush pile. He remained on the brush pile for another half hour before leaving and flying southward. We observed the falcon in good sunlight with 7 and 10 power binoculars and a 15-30 power spotting scope. His overall coloration was grayish and quite light. His facial markings were distinct, but narrow. The axillary feathers did appear to be dark. His behavior seemed characteristic of a Prairie Falcon. Field guides by Peterson and Robbins were used during both observations. **Robert Bohm, 520 7th Avenue N., Sauk Rapids, Minnesota 56379.**

NORTHERN SHRIKE-CHICKADEE INTERACTION — My home is situated on a heavily wooded four acre lot on the North Shore of Lake Superior about a mile and a half inland and just outside the Duluth city limits. Here I feed birds every winter and use a natural looking feeder made up of small, dead aspens placed in the normal upright position. The sunflower seeds and suet are put inside half a cedar log that was naturally hollowed by time and the elements. The log is in a horizontal position with the overhanging top tilted to keep snow from collecting on the feed. For the past three years I've watched the regulars; exactly six chickadees. Never more or less . . . until one recent memorable morning. My desk is next to a window that overlooks the feeder and I've often used my stopwatch to find out how long these tiny bundles of energy stay in one place. The shortest time is one second and the longest 55 seconds. Even during the longer stops in the same place the bird constantly looks up as it breaks away the seed cover or pulls at the suet. With its normal heart rate of 520 beats per minute and the maximum of 1000 beats per minute (Odum, 1941) and the high rate of metabolism, the intense activity of this member of the Paridae family is understandable. Never before had I seen such a total change from their normal behavior as happened on the morning of November 30, 1976. I kept a running log of the incident:

- 8:19 am Looked out of the kitchen window and saw a Northern Shrike
Temp: -6 moving about in a lone black spruce about thirty feet from feeder. Went to living room to see reaction of chickadees. Three were sitting "frozen" to branches of dead tree. All had pressed bodies down to cover feet and to make a smaller profile. Shrike's behavior strikes me as odd. It moves from tree to tree across the lawn from feeder . . . all the time it flutters wings and dips head as it might do while taking a bath.
- 8:21 No response from chickadees. None moves so much as an eyeball or feather.
- 8:23 Shrike at last makes its move toward the feeder . . . flies about two feet above perching prey. Two chickadees flee in panic. One makes a flight just above the ground and into dense underbrush. Second bird races to lone spruce with shrike in close pursuit. Chickadee dodges in and out of thick branches, shrike follows but doesn't do as well . . . does manage to keep its prey on the move.
- 8:25;15 Harassed chickadee tries another tactic. It flies over the house but shrike follows about a yard behind. They disappear from my view. Third chickadee remains unmoving on branch at feeder.
- 8:26 Daughter goes outside to try to spot prey and predator and sees drama continuing in aspens to the south of the house.
- 8:29 Daughter returns to report both birds flew deeper into the woods . . . she reports hearing chickadee call and says the sound gets weaker and weaker and then stops abruptly.
- 8:37;20 Chickadee at feeder suddenly calls, flies about two feet, takes a sunflower seed and goes to spruce tree. Total time in absolute immobility: 18;20!
- 9:03 Remaining five chickadees return over next several minutes. Normal activity and feeding resumes . . . minus the sixth member.

Glenn Maxham, 409 Lakewood Road, Duluth, Minnesota 55804.

RUFFS AT MARSHALL SEWAGE LAGOONS — At about 10:30 A.M. on Sunday, September 5, 1976, I drove with Randy and Jean Replinger to the Marshall sewage lagoons. Immediately upon driving up to the nearest corner, approaching from North Seventh Street, we saw a small group of Killdeer, Least, and Pectoral Sandpipers. One Pectoral-like bird, very much like that species and not nearly so much like the yellowlegs with which most field guides compare it, appeared much larger than the rest. Its scapular and back feathers were buffy-edged. We studied this bird at 20 feet in very good light noting that the "bib" extended farther down the breast and was not as dark nor as sharply separated from the white belly as in the Pectoral. The base of the bill was yellow, not merely yellowish, and the tip darker. The legs were a grayed yellow-orange color, much yellower than extremes in Pectorals. I called Randy and Jean's attention to these marks by asking them to name the bill and leg colors. Their replies agreed with my description. We then checked both Robbins and Peterson's guides to confirm that our bird was indeed a Ruff, quite surely a male because of its size. When the bird flew, the white ovals at the sides of the "stern" were very evident, almost as if there were tail lights. At the next corner of the pond, nearer to the railroad tracks, another large Ruff and a Reeve (female) were feeding with Killdeer, Pectoral, Semipalmated, and Western Sandpipers and a Sanderling. Again we noted the field marks, especially the "tail lights" when the birds flew. I telephoned Kim Eckert in the afternoon. He arrived about 5:15, and we went directly to the ponds where we found one bird with the unmistakable field marks and later saw another similarly marked bird which gave the grunting two-syllable call I had heard in May, 1975. The following morning, September 6, two Ruffs and a Reeve were at the same pond. On Sept. 7, I found only one male bird. I saw no more of these birds until September 24 when there was another male feeding with White-rumped and Pectoral Sandpipers. The bib of this bird was lighter in color than in any of the other birds. Most of these Ruffs appeared to me to have a less tapered posterior, a slightly heavier profile than the Pectorals. All of them look very much like Pectorals rather than yellowlegs. Their relative leg-length should separate them from yellowlegs in the spring when they are more like that species than in the fall. Fall birds can hardly be confused with yellowlegs. **Henry Kyllingstad, 205 Sixth Street South, Marshall, Minnesota 56258.**

CALIFORNIA GULL IN AITKIN COUNTY — On September 9, 1976, I was birding the north shore of Mille Lacs Lake near Wealthwood when I saw an adult California Gull. The bird was in a mixed flock of Ring-billed and Herring Gulls. I passed over the bird during the first check of the flock, thinking it was a large Ring-billed Gull. Checking the gulls closer, I noticed the leg color and the bill spots. I observed the gull for at least half an hour and the bird was still there when I left. Light conditions were good and 9 x 36 binoculars and a 20 to 60 power scope were used. The gull was smaller than a Herring Gull and slightly larger than a Ring-billed Gull. It was almost identical to an adult Herring Gull except that the legs were greenish and not pink, and the bill had a black spot on the lower mandible in addition to the red spot. I have seen California Gulls before in the Dakotas. **Terry Savaloja, Box 244, Deerwood, Minnesota 56444.**

THE 1974 AND 1975 CHRISTMAS BIRD COUNTS

by Kim Eckert

With this article, **The Loon** is at long last finally caught up on the Minnesota Christmas counts. With a little bit of luck, the Summer 1977 issue will follow with the report on the 1976 counts, so that we will remain on a reasonable schedule.

Since this report is anything but a timely one, this introduction will be brief with only the most superficial analysis. I would refer readers to the Fall 1975 and Fall 1976 issues of **The Loon** and their respective seasonal reports for more in-depth analysis of these counts. However, a few statistics and comments are in order here. In 1974 there were 32 counts of one sort or another reporting a grand total of 113 species. There was only one new count taken that year (Rock Co.), and there were several counts from 1973 that did not report in '74. The 113 total was one of the highest ever, with the most outstanding species being the Prairie Falcon, Pectoral Sandpiper and Lewis' Woodpecker — not only species new to the all-time Christmas Count list in Minnesota, but also most unusual species in their own right: an accidental, a first winter record and a first state record respectively. 1975 saw better coverage (37 counts), but fewer species (108). Brand new counts came from Austin, East Grand Forks (the Minnesota portion of the established Grand Forks, N.D. count), Lac Qui Parle and New Prague. The 108 species counted was probably about average, with the only species new to the all-time list being the Osprey — also a first winter record.

So who had the highest counts? That's a loaded question. The last few years Afton and Hastings have had the

highest totals by a wide margin, but their count circles include Wisconsin. How these two counts manage to record 70 plus species when no one else is above the low 50's has a lot of us wondering. It would be nice to hear how they do it. For strictly Minnesota counts, St. Paul (53) and Bloomington (51) were the best in 1974, while St. Paul Northeast (51) and Rochester (50) had the highest in 1975.

A final comment. Compilers and observers will find some species deleted from their counts and some adjusted count totals. If documentation is lacking on unusual species, or if there is reason to believe that a bird on a "border" count may not have been on the Minnesota side, I deleted it. In some cases there are species that were accepted in the **American Birds** Christmas Count issue that should not have been, and are thus omitted here. And on the other hand, I have included some birds that were unjustly questioned in **American Birds**. In any case, it would be very helpful if all compilers in the future not only continue to carefully document all unusual species, but also to submit results to both **American Birds** and **The Loon**. Such "double coverage" helps eliminate and correct errors, and also is essential in sorting out Minnesota birds on two-state counts.

Explanation of footnotes next to count names: 1) count includes both Minnesota and Wisconsin birds; 2) "border" count which includes only Minnesota birds; 3) count submitted only to **American Birds** and not to the M. O. U.; and 4) count not submitted to **American Birds**.

1974
CHRISTMAS
BIRD
COUNT

	Alton ^{1,3}	Albert Lea	Big Stone NWR	Bloomington	Cedar Creek ³	Clatsop ³	Crookston	Crosby	Duluth	Excelsior	Feribault	Fergus Falls	Grand Marais	Hastings ^{1,3}	Wibbing
Red-necked Grebe				1					2			1		1	
Pied-billed Grebe															
Great Blue Heron															
Whistling Swan			1									1			
Canada Goose		18	90	51						410		1658			9
Snow Goose					1										
Mallard	1098	188	353	7956					2	3538	52	331	123	750	
Black Duck	23		1	5									12	10	
Gadwall															
Pintail			3												2
Green-winged Teal															
Blue-winged Teal															
American Wigeon			1												
Wood Duck	2									2					2
Redhead															
Ring-necked Duck	1			2											1
Canvasback	1														
Lesser Scaup	1			1								1	2	1	
Common Goldeneye	425			211					17				6	658	
Bufflehead	1		1						2						
Hooded Merganser	1														
Common Merganser	10		1	7					1						3
Red-breasted Merganser	4		2												
Goshawk	3				1										
Sharp-shinned Hawk	1								4	1					3
Cooper's Hawk	1														
Red-tailed Hawk	9			3					1	2					5
Red-shouldered Hawk	1														1
Rough-legged Hawk	1			4	6				1	4	3				6
Golden Eagle															
Bald Eagle	16								2	11				76,81	
Marsh Hawk	1			1	1					1					1
Prairie Falcon						1									
American Kestrel	4			5	1					6	3	1			5
Ruffed Grouse	20				1							2	1		9
Greater Prairie Chicken							17								
Sharp-tailed Grouse															
Ring-necked Pheasant	63	7	81	74	14				9	85	22	3		13	
Gray Partridge						17	8				8			10	
American Coot	1		1	1								4			2
Killdeer															
Common Snipe										1					5
Pectoral Sandpiper							1								
Glaucous Gull									1						
Herring Gull	2			315					136				87	66	
Ring-billed Gull					6										
Rock Dove	659	40	79	206	52	96	20	3	7534	185	763	264		572	
Mourning Dove	17		1	76		3	1		4	81	2	1		102	
Great Horned Owl	4		2	4		4	1	1	1	2	4	7		1	
Snowy Owl	1								5			1			1
Screech Owl	3		1	1		3					1			2	
Barred Owl	2				1				1					3	
Great Gray Owl															1
Long-eared Owl			1			1									
Short-eared Owl						1									1
Belted Kingfisher	3			1							1			5	
Common Flicker	2	2	2	1		3				1		1		1	
Pileated Woodpecker	7			4	1		1		1	8	2	3		7	
Red-bellied Woodpecker	32		1	8						11	1			62	
Red-headed Woodpecker	1			1	1									1	
Lewis' Woodpecker															
Yellow-bellied Sapsucker															
Hairy Woodpecker	84	2	21	40	12	9	1	5	18	54	20	36	7	89	17
Downy Woodpecker	115	15	23	97	24	23	6	5	110	77	27	37	18	163	15
B-b. Scaled Woodpecker															
Horned Lark	5	3	27	2		94	1					3		8	
Gray Jay														9	11
Blue Jay	233	22	10	193	189	12	5	37	39	161	22	26	28	357	88
Black-billed Magpie						1	3								
Common Raven									13					23	13
Common Crow	959	4	15	156	278	4			11	172	218	2	8	908	7
Black-capped Chickadee	503	46	84	391	110	69	15	40	424	293	99	111	74	276	160
Boreal Chickadee												2	4		
Tufted Titmouse	1	1		6										5	
White-breasted Nuthatch	209	19	20	236	32	29	17	5	29	126	84	73		185	14
Red-breasted Nuthatch	7		2	5					30	4	2		17	3	8
Brown Creeper	8	1	1	10	1			1	3	4	1	1		8	
Brown Thrasher	1														
American Robin	1							3	1				28	3	2
Winter Wren															
Varied Thrush															1
Golden-crowned Kinglet	1							3		2	12			2	
Bohemian Waxwing															
Cedar Waxwing	93								165	6				22	
Northern Shrike	3		2	9	1				1	5		86		1	1
Starling	854	52	170	1932	25	481	50	23	1142	416	66	101	84	1448	47
House Sparrow	2046	385	874	1492	490	2759	325	271	433	1937	212	1019		1752	282
Meadowlark, sp.														3	
Red-winged Blackbird	5		4	335	1	61				2		1		112	
Rusty Blackbird			200			5				2		4		10	
Brewer's Blackbird						4	1								
Common Grackle	1	8	4	53	1	1			5	7			1	3	12
Brown-headed Cowbird	1		8						2						
Cardinal	147	13	8	46	2	6			2	123	9			107	
Evening Grosbeak	18				123			1	114	170	5		79	10	144
Purple Finch	138		2	43	6		3		5	44		8		5	
Pine Grosbeak									30						29
Hoary Redpoll									2						
Common Redpoll	7		6		1	1	30		332	8		1	9		34
Pine Siskin	8		2	1					91				58	6	
American Goldfinch	545	4	30	121	4					192	6			124	
Red Crossbill	2								9						1
White-winged Crossbill									30						
Dark-eyed Junco	353	35	15	239	88	7		2	37	269	23	1	1	172	
Tree Sparrow	420	13	368	397	120	36		16		189	100	58		144	
Harris' Sparrow				1											
White-crowned Sparrow															
White-throated Sparrow	1				1			1	6						1
Fox Sparrow															
Swamp Sparrow														5	
Song Sparrow	1		1	2											8
Lapland Longspur	3														17
Snow Bunting	1				1	15									14
TOTAL SPECIES (113)	68	21	44	51	31	29	19	18	48	40	26	34	24	66	22
TOTAL INDIVIDUALS	8975	878	2506	14772	1558	3756	506	530	10885	8432	1743	3928	740	8315	884

Itasca St. Pk. ³	La Crescent ²	Minneapolis	Moonhead ²	Mt. Lake-Windo	Northwood ³	Owatonna	Rochester	Rock Co.	St. Paul	St. Paul NE	Sherburne NWR	Wabasha ²	Walker	Wien	Wilmot	Winona ²	TOTAL COUNTS	TOTAL INDIVIDUALS
																	1	2
																	3	3
																	1	1
																	3	304
																	11	26423
	10					50	24000			33		302					20	7
												104					12	26841
1	1900					376	814	1	2728	263		6006			8	56	2	143
	5						4		14	7		52				6	1	1
										2						1	4	8
										1							1	1
										1	1					1	5	3
										10							1	19
										1							1	1
																	4	5
																	1	2
																	8	10
																	10	1920
																	9	4
																	2	2
																	3	26
2	4											2					7	10
																	3	13
																	3	5
																	3	2
																	13	64
																	13	3
																	13	37
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																	11	355
31	26	40	21	23	15	35	42	32	53	48	34	38	18	20	32	44		
1440	1394	6144	1238	3558	164	3124	29129	6639	11807	8013	1822	10319	348	919	558	3486		

BOOK REVIEWS

Another Penguin Summer by Olin Sewall Pettingill, Jr., color and black and white photos, 87 pages, Charles Scribners & Sons, 597 Fifth Avenue, New York, New York 10017. 1975. \$10.00.

In this book Olin Pettingill recounts his second visit to the Falkland Islands east of Argentina to observe and study penguins. Penguins have a universal appeal, and to the expert and amateur ornithologist alike this book is irresistible! Not only does it clearly evince Pettingill's appreciation and delight in these birds, but it offers the reader vivid, colorful descriptions of the five species of penguins to be found in the Falklands.

We become well acquainted with the distinguishing features of the Gentoo, Rockhopper, Magellanic (or Jack-ass), King and Macaroni penguins. We marvel at their courting, nesting, feeding and social habits, their swimming, "porpoising," their raucous calls from trumpeting to braying and their laborious maneuvering up and down the steep island cliffs. Pettingill's description of the "Teddy Bear" stage of the young King penguins is enough to tempt one to travel the long way to the Falklands just to see this!

Excellent photographs of the penguins "in action" are a rare instructive bonus to this altogether charming and "lighthearted" book.

Betty Campbell

The Bluebird — How You Can Help Its Fight For Survival, by Lawrence Zeleny — An Audubon Naturalist Library Book, Indiana University Press, 1976, 170 Pages, \$7.95.

Upon reading "The Bluebird," by Lawrence Zeleny, the reader's interest and concern for the survival of this lovely song bird is certainly stimulated. It should interest not only bird lovers, but also environmentalists, ecologists and anyone interested in our wildlife heritage.

It is reasonable to estimate that the population of the bluebird has dropped by as much as ninety per-

cent, during the past forty years. The cause of this decline in population is due to lack of winter food supply, adverse weather, insecticides and destruction of bluebirds habitat due to the steady expansion of civilization and land use in North America. Because the cause for the decline of the bluebird population is fairly well understood, the author believes that by combined efforts of individuals and organized groups, this decline can be halted. The food, habits, lifestyle, courtship, nesting and migration of the birds are explained in detail, early in the book. With this knowledge the reader has some understanding of the bluebird and its behavior.

Since lack of natural cavities as nesting sights for the bluebirds are rapidly dwindling, they must be supplemented. Mr. Zeleny devotes a chapter of his book to the construction of bluebird houses. The material that the houses should be constructed out of, the entrance to the houses, the ventilation for the houses and the exact measurements of the houses are all explained in detail. Where, and how to mount these houses, is also made very clear to the reader. Bluebirds have many enemies, including birds, racoons and insects, without mentioning sometimes man. Detailed protection for the bluebird, against all these enemies, is described in the book.

To the delight of the reader, Mr. Zeleny tells of his experience in adopting a brood of orphaned bluebirds and hand raising them to maturity. In relating this experience to you he shows great respect for their strong instinct, because he is not saddened by seeing them leave and return to their wild natural habitat.

I have not seen a bluebird in many years but after reading this book, I feel almost compelled to place many bluebird houses at suitable sites and to care for them. The book was easy and enjoyable to read. The colored

cover picture of a mature bluebird feeding its young and several other colored pictures inside the book, add to the pleasure of reading the book. These pictures are taken by a number of different photographers. The book convinced me that the birds need help if they are to survive, so that we can once again delight in hearing their song.

Rosemary Alberg

A Guide to Bird Watching in Europe, Edited by James Ferguson-Lees, Quentin Hockliffe, and Ko Zweeres. Charles Scribner's Sons, New York, 1975, 25 maps, 25 pen and ink drawings, 335 pages, \$9.95.

Going to Europe this summer? By all means take along your Peterson's guide or Heinzel, Parslow, and Fitter. If your luggage allowance permits carrying another book of somewhat greater bulk, you might consider the present volume.

It would be quite impossible to provide a Kim Eckert type of coverage of all Europe in 335 pages; hence the publisher's claim that "There is a comprehensive chapter on each country" is extravagant. Russia, for fairly obvious reasons, is omitted entirely, and material on Albania, European Turkey, Sicily, and Sardinia is allotted but one to four paragraphs. (One whole signature of 16 pages covering The Netherlands was missing from the review copy.) One third of the book is devoted to the British Isles and Scandinavia.

Prepared by nineteen well-known

experts on the ornithology of the countries covered, the information, though brief, consists of accurate summaries of the birding high spots. Maps prepared by Edgar Holloway relate closely to the text. Attractive pen and ink drawings by H. J. Slijper head the chapters. The Glossy Ibis drawing for the chapter on Yugoslavia is especially lifelike.

A thirty-six page table at the back of the book indicates the status of 432 species in the countries covered. Information is given on the status of bird protection (almost non-existent in some countries), organizations and agencies concerned with study and protection of birds, journals available and where to send rings (bands) one might possibly find. An index would be welcome.

That the editors hope to update this publication is indicated by this quotation: "The contributors have indicated where information about the bird life in some parts of Europe is still restricted: frequently the amateur bird watcher can contribute to our knowledge of the distribution of both the common and rarer species in these areas, and it is hoped that our readers will, by their reports, help toward this end." When you go, then, do keep careful records and get them to the agencies indicated so that the next publication may be more nearly "comprehensive."

Paper, print, and binding are good and there are very few typos. For these days the price is reasonable. Recommended.

Henry C. Kyllingstad

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 quoted 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 Robert Janssen. See inside front cover.

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MEMBERSHIPS AND SUBSCRIPTIONS: Gary and Linda Ash, 5638 Trading Post Trail, Afton, Minnesota 55001. To join the MOU and receive both MOU publications, send \$5 for a regular yearly subscription. Or other classes of membership that you may choose are: Family \$6 yearly; Sustaining \$25 yearly; Life \$100. 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, 14321 Prince Place, Minnetonka, Minnesota 55343. (phone 612-938-7464). 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...

As a transplanted North Dakotan I was happy to have an opportunity on June fourth and fifth to visit my old home state. The occasion was the spring meeting of the North Dakota Natural Science Society at Lisbon in the Sheyenne River Valley near the shores of glacial Lake Agassiz.

Saturday featured a geological field trip led by Dr. John Bluemle of the North Dakota Geological Survey who pointed out the salient features of the landscape together with an interesting explanation of how the features came to be. Sunday was given over to a bird trip led by Robert Stewart, author of the splendid recent book, "Breeding Birds of North Dakota."

Within a relatively small area are unusually varied terrain, vegetation and wildlife. It was a pleasant surprise to see many of the sand dunes I tramped in the twenties now stabilized and covered with prairie plants, willow, plum and chokecherry thickets and larger trees. Seventy-one thousand acres now comprise the Sheyenne National Grassland which is managed for grazing and upland game. Ninety thousand additional acres of privately-owned land are also under the same management program. Prairie Chickens are actually on the increase, 197 males having been counted on the several booming grounds this spring. An extensive oak-basswood forest with a generous admixture of ash, maple, cottonwood, and ironwood, and even a small plot of jack pine (found nowhere else in the state) harbors raptors, thrushes, orioles, and breeding warblers of several varieties.

Most of us, myself included, have a lot of birding yet to do in Minnesota, but if you are interested in experiencing a new area not too far from home, I can recommend the Sheyenne National Grasslands in Ransom and Richland counties, North Dakota. At the same time, I think our neighbor state's naturalists are to be congratulated for an active, though small, organization which conducts interesting meetings and publishes an attractive journal, **The Prairie Naturalist**.

For more information about The North Dakota Natural Science Society, or to send \$3 for adult or \$4 for family membership, write to the Society at Box 1672, Jamestown, ND 58401. I am sure they will welcome more Minnesota members. Have a lively summer for birding, and I hope to see many of you at Thunder Bay over the fourth.

Henry Kyllingstad

WARNING: THE SURGEON GENERAL HAS DETERMINED THAT BERT LYSTOR IS DANGEROUS TO YOUR HEALTH

It wasn't that Little Dickie Birdlover liked watching the news all that much (he much preferred watching chickadees at his mommy's feeder), but he sort of had this crush on Barbara Walters. Dickie was quite relieved when she left NBC's Today show because it was interfering with his morning bird watching. Anyway, he could hardly believe what he heard on the June 7 broadcast of the ABC news: medical reports had been issued warning that some gravel roads were health hazards! It seems that the gravel from some quarries was laced with asbestos, and when used for roads could produce cancer-causing dust. Even Dickie knew what that meant — even he knew that the best roads for birding were gravel. He flipped off the set when Harry Reasoner tried to say something, and called his idol in a panic.

"... Now slow down, Dickie," said Bert. "What's this all about?"

"It's true, Bert My mommy won't let me go bird watching any more unless we stay on paved roads. They said you can get lung cancer from those gravel roads "

"Cancer? " thought Bert. No way did he want any part of that. He just couldn't bear to think of all those unfinished lists . . .

"Bert, what are we gonna do? First it was cigarette commercials. Then it was that red food coloring and saccharin so that I couldn't have my Diet Frankenberry cereal any more. Then they recalled my Mickey Mouse jam-

mies with that fireproof stuff on it. And now this!"

"Now, now, Dickie. Calm down." Bert tried to sound reassuring but he was starting to panic too. No more gravel roads! Might as well hang up the old Trinovids for good. Forget about ever getting that Baird's Sparrow at Felton. He had only been there 183 times looking for that dumb bird.

"You know, Dickie, that just goes to show you. Now you know why I never got along with Elvira Mentalist and her ilk. Close down the dumps on the North Shore so you can't find any gulls any more. Close down the Marshall sewage ponds so you can't watch shorebirds any more. Close down the power plants and clean up the water pollution so you can't find any open water for Barrow's Goldeneyes. And now they'll keep us off the gravel roads!"

"But what can we do, Bert? What if we write a letter to the M.O.U. president, maybe he can do something . . . I forget, what's his name?"

"Don't ask me, how should I know? Oh yeah, I think it's Bill Bryson. But you can forget about him. He won't help."

"Why not?"

"Are you kidding? Don't you remember about him and that road?"

"So what?"

"So what?! If it wasn't for him there would have been a nice safe paved road past his marsh!"

OBITUARY

Michael Ivanovs — 1897-1976

Among the millions of us in these United States who came or are here as a result of immigration, directly or indirectly, Mike Ivanovs was rather special. Mike was born in Riga, Latvia on January 25, 1897, graduated from the Alexander Gymnasium in 1914 and from the University of Moscow in 1918, specializing in ornithology. He was of the nobility, with the title of Count, and a distinguished cavalry man; and he was curator of the Museum of Natural History in Riga from 1932-44. This unusual, quiet man survived those long years of turmoil and the ravages of wars, finally escaping to Germany in 1944. From 1946 to 1950 he had curatorial responsibilities in the Zoological Institute of the University of Tubingen. In 1951 he came to Minneapolis where he joined the University Museum of Natural History (now the Bell Museum) staff as a preparator. From 1952 until retirement in 1962 he was the museum guard. Upon leaving the museum he lived in Onamia to be near his special forests and swamps.

So this man was to live his remaining working years in a capacity far removed from his social and professional level of earlier years. He reminisced — rather sadly on occasion — but always concluded with a strongly accented, "It is so!" accepting humbly and philosophically all that life brought.

In his new country happiness and pleasures were steadily achieved. On November 9, 1955, with Harvey Gunderson and John Jarosz as witnesses, Mike became a citizen in the old Metropolitan Building; and he was especially delighted the day he passed the driver test for Mike could then buy a

used car and get to his special haunts.

As a fine sportsman of aristocratic European caliber Mike was an avid hunter and naturalist. He purchased a custom made shotgun from Belgium and loaded his own shells. Ruffed grouse and woodcock were his favorite birds — discussed and studied between hunting seasons and in fall to be further studied, methodically pursued and thoughtfully appreciated. He had John Jarosz mount his special trophies. For those of us who hunted with him there was added to the days and evenings his special blend of philosophy — never to be forgotten. Here was a man of many talents — ornithologist, astronomer, linguistic in five languages, scholarly in Latin, a lover of music of the opera, possessing many albums — a man who preferred a pipe and carefully mixed his own blends of tobacco. And he never forgot to drink a toast to his hunting dogs of yesteryear.

Mike was one who thoroughly enjoyed life and friends and Nature. In doing so he took so much from the natural world, used it to live by and gave it to others. But he never left a scar on the land. His daily diary and maps of his hunting forays record in meticulous detail each incident in places with names known to only a few of us: Ghost School Trail, Woods of Tall Pines, Woods of Grief, Wood Tick Pasture and Immortal Grouse Woods — and a hundred more. Though Mike Ivanovs is gone, all of these special places still remain; because as Mike always said, "It is so."

—John A. Jarosz and
Dwain W. Warner

MINNAMAX - AVIAN UPDATE FOR 1976

Pete Doran¹, Jeff Todd²,
and Tom Hargy¹

Exploration for Copper and Nickel by AMAX Exploration, Inc. (The MINNAMAX Project) continued in 1976 near Babbitt, Minnesota. As mineral exploration progressed, so did the environmental baseline and monitoring program which was initiated in 1974. A component of this program concerns wildlife and habitat relationships on and around the site. A comprehensive avian survey of this area began late in 1974 and has been ongoing since that time. Description of the MINNAMAX site and the results of the work for 1975 were reported in the Spring 1976 issue of *The Loon* (Doran and Todd 1976; Todd and Doran 1976). The reader is referred to this issue for background. This paper presents the avian work done in 1976; a project update.

Again, the authors wish to thank Mr. Jack B. Malcolm and his staff at the MINNAMAX site for their cooperation and awareness of matters pertaining to the natural environment. The entire MINNAMAX Project has been "an opportunity to learn," and even on a mineral exploration of this magnitude, the birds have not been forgotten.

The Winter Season; 1975-1976

Censusing of winter resident bird populations was initiated at MINNAMAX during February and March of 1976. Winter resident populations were emphasized for several reasons. First, owing to the nature of the north-eastern Minnesota winter, birds inhabiting the region during the winter months are subjected to an extraordinary amount of stress. Therefore, preferential use and avoidance of specific

plant associations should relate directly to the capability of that habitat for sustaining bird life under stressed conditions. This correlation in turn provides an additional factor for the assessment of the quality of a specific habitat in terms of supporting wildlife populations. In addition, delineation of habitats characterized by high bird use during winter months enhances the ability of an impact assessment to accurately predict the effects on local bird populations of habitat degradation related to human disturbance. Thus, an association receiving heavy bird usage under stressed conditions can be considered as wildlife sensitive, and should be treated as such during the formulation of development plans.

Winter bird censuses were conducted in five different habitat types on the MINNAMAX property during February and early March 1976. The habitats selected were: upland deciduous complex; mixed white birch-balsam fir complex; a 15-20 year old jack pine plantation; an 8-12 year old aspen-birch complex; and a virgin black spruce-tamarack bog. Vegetative characteristics of these stands have been discussed previously by Doran and Todd (1976). Within each vegetation type, plots were chosen from ground surveys and aerial photographs. Each plot was visited once prior to censusing at which time parallel snowshoe transects were established through the plot. These paths allowed for adequate plot coverage and also made walking easier during the actual censusing.

The actual census technique in-

¹ MINNAMAX - Box C, Babbitt, Minnesota 55706

² AMAX Environmental Services Group, 4704 Harlan, Denver, Colorado 80212

volved starting at one edge of the plot and slowly snowshoeing along the transects, with intermittent 2-5 minute stops along the way. The census period was terminated when the opposite boundary was reached. Census periods ranged from 1 to 1.5 hours/census. Plots were kept small enough to allow for adequate coverage during a one hour period. Each plot was visited 4 times during the period January 29 - March 4. Censuses were conducted during mornings and afternoons since resident birds appear to forage throughout daylight hours in winter.

It was felt that a technique of this nature would best facilitate the observer in accurately censusing selected habitats. Although much intra-flock communication is displayed, winter resident songbirds of course do not typically sing, the form of behavior which lends itself so well to breeding censuses. Thus, single note calls were useful only in locating flocks. It is known that songbirds in winter do not display the degree of territoriality typical of resident breeding birds. Within preferred habitats, flocks and individuals appear to be highly mobile in their search for food. With this in

mind, it was believed that slowly and methodically covering the plots on foot, with frequent stops, would ultimately expose the majority of birds utilizing the plot during the census period. Therefore, bird numbers have not been tabulated per acreage of habitat, but instead, per unit of time within the selected habitat. For consistency, a five hour time unit was selected for tabulation. For example, during four separate one hour visits to the birch-fir plot, 20 Common Redpolls were counted. This number was converted to 25 individuals per five hours of observation within that plot.

Results of the winter census are presented in Table 1. Diversity indexes were calculated from the standard Shannon-Weaver formula (Shannon and Weaver 1963, Todd and Doran 1976). As expected, diversity indexes from all five plots were low. Nine different species, with 76 individuals/5 hours of observation were encountered in the birch-fir stand, making this the most diverse of the habitats. Although the diversity index is an excellent tool for habitat comparisons, it fails to fully assess the habitat relationships of such infrequent species as the Goshawk (birch-

Table 1. 1976 MINNAMAX Winter Bird Census.
Totals represent birds encountered per 5 hours observation time.

Species	Lowland Conifer	Birch- Fir	Upland Deciduous	Aspen Sapling	Young Jack Pine
Goshawk		1			
Common Raven		1	1		1
Blue Jay		3	1	1	
Gray Jay		1	1		
Pileated Woodpecker	1		1		
Hairy Woodpecker				1	
Downy Woodpecker		11	6		
Red-breasted Nuthatch		5			
Black-capped Chickadee	3	21	9		3
Boreal Chickadee					3
Pine Grosbeak	6	8			6
Common Redpoll	12	25	22	4	7
TOTAL INDIVIDUALS	22	76	41	6	20
Diversity Index	1.0972	1.7154	1.3104	.8676	1.4476

fir) and the Pileated Woodpecker (spruce-tamarack bog). In an excellent review of bird populations and habitat relationships, Balda (1975) notes that "Rare species are given little weight in diversity measures . . . yet these very species may be intrinsically valuable to the maintenance of the community." Thus, when examining this winter data, one should be cognizant of the individual species breakdown along with the cumulative diversity index in each habitat.

Whenever birds were encountered during a census, the plant species on/in which they were observed foraging was recorded whenever possible. Of 41 different foraging observations, 18 were in paper birch. This finding would appear to indicate a preferential use of birch. The high diversity encountered in the birch-fir stand would then appear to relate to the presence of a desirable forage species (birch), interspersed with adequate cover (balsam fir). The lack of adequate coniferous cover may be a critical factor limiting bird usage of an area. A comparison of diversity (Table 1) between the young aspen and young jack pine stands shows this possibility. These stands are essentially the same age, but the jack pine stand contains more coniferous cover. The relatively high diversity exhibited in the deciduous complex possibly refutes this hypothesis, but the abundance of birch and green alder provides excellent forage, and the plot is bordered by conifers on two sides. The low diversity encountered in the spruce bog was probably a function of low forage plant diversity.

Winter species at MINNAMAX are typical of the region (**American Birds**, 1976). Common Redpolls, encountered in all the census plots, were the most common and ubiquitous of all the resident birds during the 1975-1976 winter. This finch was observed foraging almost exclusively on birch and alder catkins during the census. Flocks of redpolls were observed in good numbers on the MINNAMAX

property during previous winters. Black-capped Chickadees were encountered with the second highest frequency, usually in flocks of from 3-5 birds. Chickadees were censused in all but the young aspen plot and were seen foraging at least once in nearly all the recorded food-plant species.

The Summer Season; 1976

In addition to the winter census, summer resident populations were censused in selected habitats on the MINNAMAX site in 1976. Utilizing techniques identical to those described by Doran and Todd (1976) and Todd and Doran (1976), a breeding census and banding program were conducted.

Breeding Census

Breeding birds were censused in the same habitat plots established in 1975 (Doran and Todd 1976) with several alterations. First, the one year clear-cut censused in 1975 was eliminated in 1976 because the plot area was opened up as a surface gravel pit by a taconite mining company. Also dropped from the 1976 census was the 8-12 year old stand of trembling aspens. Efforts were made to consolidate monitoring activity in the vicinity of the MINNAMAX exploration shaft in 1976, and this stand was considered to be beyond the potential range of immediate impacts. Two new plots not censused in 1975 were incorporated into the 1976 program: a 25-35 year old mixed jack pine - deciduous forest, and the black spruce bog immediately adjacent to the exploration shaft.

Results of the breeding bird census are listed in Table 2. Forty-seven species were detected breeding on the MINNAMAX site (compared to 46 species in 1975). Species found breeding in 1976 which were not noted in the 1975 census included: Common Snipe, Great Crested Flycatcher, Boreal Chickadee, Black-throated Blue Warbler, Yellow Warbler, and Scarlet Tanager. The Yellow-bellied Flycatcher, House Wren, Evening Grosbeak, and

Table 2. 1976 Breeding Birds on the MINNAMAX Site near Babbitt, Minnesota

Species	Lowland Conifer	Upland Deciduous	Young Jack Pine	Mature Jack Pine	Spruce Bog Shaft Site
Common Snipe			5		
Black-billed Cuckoo				5	
Downy Woodpecker		5		5	
Yellow-bellied Sapsucker		16			
Common Flicker		5			
Olive-sided Flycatcher	5		11		
Alder Flycatcher			33		
Least Flycatcher	5	22			22
Blue Jay	11	5	5	5	
Great Crested Flycatcher				5	
Boreal Chickadee	11				
Red-breasted Nuthatch		5		5	
Winter Wren	5			5	
Gray Catbird		5			
American Robin	11	11	5	16	
Hermit Thrush	5	11	22	11	22
Swainson's Thrush	11				22
Veery		33	16	22	
Brown Thrasher		5	11		
Golden-crowned Kinglet	27			5	55
Ruby-crowned Kinglet	11		5		11
Red-eyed Vireo		55	5	27	11
Black-and-white Warbler	11	16	16	11	
Nashville Warbler	38	5	49	27	98
Tennessee Warbler	11				
Black-throated Green Warbler		5			
Cape May Warbler	11				
Black-throated Blue Warbler		5			
Yellow-rumped Warbler	5			5	33
Magnolia Warbler	5	5	11	11	11
Chestnut-sided Warbler		38	22	44	
Blackburnian Warbler	22			11	55
Yellow Warbler			5		
Ovenbird	11	33		33	11
Connecticut Warbler	11				
Mourning Warbler		5		16	
Common Yellowthroat			44		
Canada Warbler		49		11	
American Redstart		11			
Brown-headed Cowbird		5			
Scarlet Tanager		5			
Rose-breasted Grosbeak		11		11	
Purple Finch				5	
American Goldfinch			11		
Chipping Sparrow	16		16	5	33
White-throated Sparrow	22		22	16	22
Song Sparrow			5		
TOTALS	265	371	319	317	406
No. Species					
(47 Total)	21	25	20	24	13
Diversity Index	2.86	2.82	2.72	2.92	2.38

Killdeer were not found breeding in stands censused in 1976 as they were in 1975. Breeding bird diversity in stands censused in 1975 (Doran and Todd 1976) varied little in 1976. The index decreased slightly in the upland deciduous complex and increased in the lowland conifer and young jack pine areas. Changes do not appear to be significant enough to detect trends. Species composition generally did not vary between years. There was a slight overall increase in number of species and number of breeding pairs in 1976. Two interesting birds were recorded in the 1976 census which were not found in 1975 — Scarlet Tanager and Black-throated Blue Warbler, both in the upland deciduous plot. In addition, although not detected during a census, Golden-winged Warblers were heard singing from an alder-bog birch thicket adjacent to Langley Creek on June 2 (see Doran and Todd 1975).

Diversity indexes are based on breeding pairs/100 acres. These indexes should be viewed relative to each other (Doran and Todd 1976). Interestingly, the newly established mature jack pine plot yielded the highest diversity index. This stand, a complex mixture of jackpine, black spruce, birch, aspen and deciduous shrubs, represents the greatest degree of vertical foliage development of all the census plots. The high diversity is more than likely related to this fact (Todd and Doran (1976). Another influence on diversity is the mixed coniferous-deciduous nature of this stand, making it an ecotone between the birch-aspen complex and the pure jack pine forest. The Canada and Chestnut sided Warblers, occurring with high frequencies in the upland deciduous stand, were also found in the mature jack pine. At the same time, the Blackburnian Warbler and the Golden-crowned Kinglet, inhabitants of the black spruce bog, also appeared in the jack pine stand. Since this association represents plant species typical of pure coniferous and deciduous stands, plant species diversity is high, which

in turn influences breeding bird diversity (Balda 1975).

Banding Results

The 1976 bird-banding program at MINNAMAX was reduced in effort compared to 1975. In addition, 1975 banding sites were abandoned in favor of sites closer to the exploration shaft area. In selecting 1976 sites, an attempt was made to maintain consistency with the structural and floral characteristics of the 1975 sites. Thus, although the potential for return data at specific banding sites was limited in 1976, comparisons between 1975 and 1976 data should still be meaningful within the similar habitat plots. Capture and banding methods were similar to those employed in 1975 (Todd and Doran 1976).

Habitats selected in 1976 included an upland deciduous complex, 15-20 and 25-35 year old stands of jack pine, and a virgin black spruce bog. In addition, stations were established in two distinct alder water tracks within the bog. These tracks, through which surface waters exit the bog, will probably show the first overt pollutant impacts (should any occur) from the exploration shaft. It was suspected that these tracks within the bog might support species not found in other parts of the bog.

Floral and structural characteristics of the 1976 banding stations have been discussed previously (Doran and Todd 1976) with the exception of the two water track stations. As is typical, vegetative characteristics within the tracks varied from those of the major portion of the bog. Speckled alder and red-osier dogwood comprise the major woody components of black spruce water tracks on the MINNAMAX site. The shrub cover on the Langley Creek track (designated alder track-west) was generally younger and more dispersed than that of the Dunka River track (designated alder track-east). In the latter track, cover was considerably more closed than in the former, presenting an ideal mist netting situation.

**Table 3. Birds Captured and Banded on the MINNAMAX Site near Babbitt, MN (1976).
Banding Station**

Species	Lowland Conifer	Upland Birch- Aspen	Alder Track East	Alder Track West	Mature Jack Pine	Young Jack Pine	Offsite
Hairy Woodpecker							4
Downy Woodpecker		1			1		
Yellow-bellied Sapsucker			2			4	
Ruby-throated Hummingbird					2		
Yellow-bellied Flycatcher		1					
Alder Flycatcher					1		
Least Flycatcher		5	4		2		
Blue Jay					1		2
Black-capped Chickadee		6	3		4	4	32
White-breasted Nuthatch							1
Brown Creeper			1		2		
Gray Catbird						1	
American Robin		2	1		4		
Hermit Thrush		1	1		2		
Swainson's Thrush	1		1			1	
Veery		12	2		3	1	
Gray-cheeked Thrush			2				
Golden-crowned Kinglet	2	2	6		3	2	
Ruby-crowned Kinglet		1	13	2	1	6	
Philadelphia Vireo			1				
Red-eyed Vireo		12	9		7	1	
Black-and-white Warbler		3	3	1			
Nashville Warbler		5	26	3		6	
Tennessee Warbler		1	3			1	
Yellow-rumped Warbler	3	3	6		1	5	
Magnolia Warbler			2		3	4	
Chestnut-sided Warbler		6	3		4	3	
Bay-breasted Warbler			1				
Blackpoll Warbler		1			2		
Palm Warbler						1	
Ovenbird		5	5		3		
Northern Waterthrush						1	
Mourning Warbler			1		3	1	
Common Yellowthroat		1	3	1			
Wilson's Warbler		1					
Canada Warbler		8			2	1	
Rose-breasted Grosbeak		3				1	
Indigo Bunting			1				
Purple Finch			2		2	2	
Common Redpoll							22
Clay-colored Sparrow					1		
Chipping Sparrow	1			2		3	
White-throated Sparrow			5		1	5	
Dark-eyed Junco	2	2			1		
Swamp Sparrow					1		
Lincoln Sparrow					1		
Song Sparrow			1				
Totals	9	83	115	9	55	57	61
Catch/100 hours	22.5	37.9	62.0	18.0	28.5	45.5	
Diversity Index (based on total captures)	1.51	2.78	2.87	1.52	3.01	2.90	

Comprehensive banding results from the 1976 season are shown in Table 3. Diversity indexes, based on captures through four seasons, are calculated for each of the six banding stations and should be looked at relative to each other. Total birds captured and captures per 100 hours have also been tabulated.

As in the breeding census, the mature jack pine association yielded the highest bird diversity. Again, the degree of vertical foliage development in combination with the horizontal development of a coniferous-deciduous "edge" have apparently created a diversity of niches suitable for occupation by a variety of birds. Of the 24 species captured in the mature jack pine stand, no two in combination account for any more than one fifth of the total 55 captures. On the other hand, 13 Ruby-crowned Kinglets and 26 Nashville Warblers accounted for more than one-third of the total captures at the alder track-east net station.

Banding at the alder track-east station produced the highest total species (29), most total captures (115),

highest capture rate (62/100 hours), and the only return from 1975 (a Chipping Sparrow). Although the banding effort in the adjoining black spruce bog was less, a comparison of results between the two stations indicates that the alder track supports a more abundant and diverse population of songbirds. It should be noted, however, that the net rigs used on this project may not account for some of the arboreal species which inhabit the black spruce canopy.

A breakdown of summer Parulid captures is presented in Table 4. Warblers form one of the larger families of birds breeding in the boreal forest of Minnesota. This family has been emphasized on the MINNAMAX site for reasons described by Todd and Doran (1976). Although such an emphasis provides a small sample size, it should again be stressed that the goal of the MINNAMAX terrestrial program is to define and monitor biological trends associated with mining development. In this light it is felt that year to year monitoring of breeding warblers will help facilitate the realization of that goal.

Table 4. Warblers (Parulidae) captured and banded between June 1 and September 1, 1976, on the MINNAMAX site. Juveniles shown in parenthesis.

Species	Lowland Conifer	Upland Birch-Aspen	Alder Track East	Alder Track West	Mature Jack Pine	Young Jack Pine
Black-and-white		1	1			
Nashville		2(1)	17(2)	1		2(2)
Tennessee		1	3(2)			
Northern Parula			1			
Cape May			6(4)			
Black-throated Blue		1				
Yellow-rumped	3		2			1(1)
Magnolia			2(1)		2(1)	4(1)
Chestnut-sided		4(1)	3(1)		3(1)	2
Bay-breasted			1			
Ovenbird		5	4(1)		3	
Mourning			1		3	1
Common Yellowthroat		1	3	1		
Canada		4			2(1)	1
TOTAL	3	19(2)	44(11)	2	13(3)	11(4)
Diversity Index (based on total captures)	0.00	1.86	2.03	0.69	1.59	1.64

The 1976 findings indicate that the east alder track supports the most abundant and diverse population of warblers of the six vegetation types sampled. This alder-red-osier complex is a highly productive bird habitat. The scarcity of captures in the black spruce bog is testimony to the arboreal nature of most Parulids in this habitat. The Blackburnian, Cape May, and Tennessee Warblers simply do not frequent the sparse understory in the spruce bog.

Warbler diversity in the birch-aspen uplands, mature jack pine, and young jack pine habitats was strikingly similar to that encountered in these same types in 1975 (Todd and Doran 1976). Species composition over all the habitats remained relatively consistent with several exceptions. Yellow Warbler, American Redstart, Connecticut Warbler and Blackburnian Warbler were captured in 1975 and not 1976. Northern Parula Warbler, Black-throated Blue Warbler and Bay-breasted Warbler were captured for the first time in 1976. Three understory dwellers, the Nashville and Chestnut-sided Warblers and the Ovenbird, were captured with greatest abundance in 1976. These later findings are consistent with the degree of disturbance and subsequent understory development evident on the MINNAX site (Todd and Doran 1976). The most apparent decline in numbers was displayed by the Mourning Warbler. Where 20 individuals were captured in 1975, only five were banded in 1976. Results from the 1976 breeding census (Table 2) also indicate Mourn-

ing Warbler decline from 1975 findings (Doran and Todd 1976). All other species were captured with similar frequency in 1976 as compared to 1975.

Of the 92 total warblers banded during the 1976 breeding season, 20 (22%) were young of the year (Table 4). Eight of the 14 species banded had individuals represented in this sample. Both of these findings are consistent with 1975 data (Todd and Doran 1976). As with total captures, the Nashville Warbler had the largest representation among juvenile captures.

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NESTING AND FORAGING ACTIVITY OF THE BROWN CREEPER IN NORTHEASTERN MINNESOTA

Steven Apfelbaum and Alan Haney

Relatively little is known about the Brown Creeper (*Certhia familiaris*) in northeastern Minnesota. During an intensive study of breeding bird populations in northern Lake and Cook Counties and adjacent Canada in June 1976, we had occasion to observe many pairs of Brown Creepers in a series of upland habitats with vegetation originating from burns of 1974, 1961, 1903, 1864, 1801, and 1610 and before. In this area the creeper is an early spring migrant and summer resident. It has been reported nesting in Cook County, but not in Lake County (Green and Janssen, 1975).

At each site, we employed a plot census based on the spot-map method reviewed by Kendeigh (1944) modified to include flush-plot techniques to more accurately determine territories. Data for the Brown Creeper are summarized in the following table.

On 8 June 1976 a pair of creepers were observed engaged in nest-building activities in a recently burned (1974) upland jack pine forest on the north shore of Swamp Lake (48° 11' 30" N and 91° 2' 30" E) in Quetico Provincial Park 200 m north of the Lake County, Minnesota line. The nest was being constructed under a slab of slipped bark 2 m above the ground on the north side of 25 cm D.B.H. jack pine. The nest-building pair occupied a territory on a dry, open, upland site with large, standing, dead jack pines, most with only patches of attached bark on the lower trunk and upper branches. Scattered large red

pinus aged 300-350 years, were present, all of which had survived the intensive burn. Regeneration on the burn was dominated by *Epilobium angustifolium*, *Vaccinium* spp., *Geranium bicknelli*, *Corydalis aurea*, seedling jack and red pines, and root sprouts of aspen and birch. Two nearby mesic draws, dominated by old-growth aspen with scattered balsam fir and a dense understory of red maple and mountain maple, had escaped the burn. Insectivorous birds were abundant in the area, the most frequent of which was the Chestnut-sided Warbler with 119 breeding pairs per 100 acres.

Data summarized in the table indicate that the Brown Creeper is ubiquitously distributed in northern Lake and Cook Counties in upland forests of all age classes except where regeneration after fire is less than 8-10 cm D.B.H. This may be in contrast to the abundance of creepers in other areas of Superior National Forest. Green (1971) reported the Brown Creeper to be a rare summer resident in the Superior Forest. Bergstedt and Niemi (1974) reported no Brown Creepers in their study sites on the Little Sioux Fire site two years after the burn although in that instance the lack of creepers may be related to the absence of sufficiently large trees for foraging and nesting.

The distribution of creepers in the study area appears to be determined primarily by the availability of trees of appropriate size to support suffi-

**Numbers, territory size and average foraging heights for the Brown Creeper
on upland sites in northeastern Minnesota and adjacent Canada, June 1976.**

Year of fire from which community developed	Community age	Description of vegetation	No. of breeding pairs/100 acres	Average territory size (No. of territories observed)	Average Vertical foraging range
1974	2	Old growth, dead jack pine with scattered red pine and aspen draws	28	250m ² (2)	1-3m
1961	15	Dense regrowth jack pine not exceeding 10 cm D.B.H. with scattered aspen draws	3	* (1)	*
1903	73	Mature jack pine and spruce with little understory development	21	125m ² (3)	1-10m
1864	112	Mature spruce-fir with scattered old-growth jack pin and aspen.	38	250m ² (4)	1-5m
1801	175	Old-growth spruce-fir with dense understory and uneven age classes.	19	* (1)	1-5m
1610 and before	367 and older	Mature red and white pine with old-growth understory of spruce-fir and uneven age classes of regeneration.	42	* (1)	1-15m

cient populations of bark-inhabiting insects and nesting sites. Bent (1948) reported the creeper to nest in natural cavities and under bark slips in wet or humid sites in the Northeast. Our data indicate that the Brown Creeper in northeastern Minnesota also inhabits upland sites when larger trees are present. Recently burned sites continue to support Brown Creeper populations as long as timber remains standing. Parmelee (1975) and Braaten (1975) reported observations on nesting Brown Creepers beneath bark slips and in fire scars of trees in Itasca State Park. Bock and Lynch (1970) also reported breeding Brown Creepers six to eight years after a fire in the Sierras of southern California.

Although our data are limited, it appears that the abundance of larger course-barked trees and the vertical foraging heights determined the terri-

tory size of Brown Creepers in the study area. In the most recently burned site, trees were scattered and bark was present only on the lower trunks. Similarly, in the 1864 site, jack pines and spruces were scattered and interspersed with firs and aspens; creepers were never observed on fir and aspens. Territory size on these sites was about double that found in the 1903 mature jack pine and spruce forest where there was an abundance of proper sized trees and a greater vertical foraging opportunity.

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**ANNOTATED CHECKLIST
OF THE BIRDS OF ITASCA STATE PARK
AND SURROUNDING AREAS**

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Field Biology Program

MINNESOTA ORNITHOLOGISTS' UNION

Introduction

Since many observations of birds have been made within or near Itasca State Park following publication of Donald K. Lewis' "Birds of Itasca State Park" in 1955, numerous requests for an updated revision have been received by the Field Biology Program which manages the Lake Itasca Forestry and Biological Station for the University of Minnesota. Difficulties in writing revisions of this sort soon became apparent. Most conspicuous is the fact that fall and winter records for many common Itasca birds are still lacking, and the revised checklist reflects this lack of records. One should not under any circumstance interpret this gap in our knowledge as evidence that these birds are absent in the region during those seasons. However, any sighting that contributes to the improvement of the checklist should be reported regardless of season. Sightings should be reported preferably in writing to the Resident Biologist at the Forestry and Biological Station. Include name of observer, date, locality and any note of interest.

Inasmuch as Itasca State Park has few open fields, which nevertheless are extensive just outside the park, the checklist includes records taken up to two kilometers beyond all park boundaries. Through such inclusions the number of habitats and associated bird species greatly increases, providing a more realistic assessment of the region's avifauna. Maps of Itasca State Park may be obtained from Park Headquarters. State road maps available at most service stations are useful in locating certain birding areas outside the confines of the checklist. These special places, such as Upper Rice Lake with its many birds uncommon to Itasca, are mentioned in the annotated section of this report.

Persons too numerous to mention contributed to the revised Itasca checklist which was written with the needs of the park visitor in mind. Those offering valuable suggestions include D. M. Bosanko, J. H. Miller, R. J. Oehlenschlager, L. W. Oring, D. W. Warner and R. M. Zink. B. Thoma, Itasca State Park Naturalist, did much to promote the revision. R. B. Janssen, Editor of **The Loon**, was largely responsible for its publication.

Bird nomenclature follows closely the "Daily Field Check List of Birds" published in 1976 by the Minnesota Ornithologists Union. Although spring arrives late at Itasca with ice remaining on its waters until mid-to late April as a rule, the months of March, April and May are here designated as the spring period for the sake of convenience. A few spring migrants arrive in March, a few more in April, but the movement of most birds through the region does not peak much before mid-May when one often experiences at Itasca a mass migration of wood warblers and other small passerines. Egg laying by a few species may begin in March and April. More species commence laying in May and still more in June, but by mid-July it mostly ceases. Very few Itasca birds are still nesting by late August, here considered the end of the summer period.

Fall migration may start as early as mid-July with certain shorebirds appearing at Itasca after completing nesting on more northern breeding grounds. Nevertheless, fall is here considered the period September through late November, by which time the waters freeze and the ground usually is covered by a continuous layer of snow. Winter includes the remaining months, December through February.

Abundance by season and breeding are coded as follows:

Sp — March-May
 S — June-August
 F — September-November
 W — December-February
 C — Common or abundant
 U — Uncommon
 R — Rare, casual or accidental
 * — Nesting confirmed
 + — Nesting probable but not confirmed

	Sp	S	F	W		Sp	S	F	W
*Common Loon	C	C	C		Ruddy Duck		R		
Red-necked Grebe	R	R	R		*Hooded Merganser	C	C	C	
Horned Grebe	R		R		Common Merganser	U			
Western Grebe			R		Red-breasted Merganser	C			
*Pied-billed Grebe	U	U	U		Turkey Vulture	U	U		
Double-crested Cormorant	R				Swallow-tailed Kite	R			
*Great Blue Heron	C	C	C		Goshawk	U	U	U	
*Green Heron	U	U			Sharp-shinned Hawk	U	U	U	
Cattle Egret			R		Cooper's Hawk	U	U	U	
Great Egret	R				Red-tailed Hawk	C	C	C	
Black-crowned Night Heron	R				Red-shouldered Hawk	R			
*American Bittern	U	U	U		Broad-winged Hawk	C	C	C	
Whistling Swan	R				Rough-legged Hawk	U			U
+Canada Goose	U	R	U		Bald Eagle	U	U	U	
Snow Goose	U		U		Marsh Hawk	U	U	U	
*Mallard	C	C	C		Osprey	C	C	C	
+Green-winged Teal	U	U	U		American Kestrel	C	C	C	
*Blue-winged Teal	C	U	U		Spruce Grouse	R	R	R	R
American Wigeon	R				Ruffed Grouse	C	C	C	C
Northern Shoveler	R		R		Sandhill Crane				R
*Wood Duck	C	C	C		Virginia Rail	U	U		
Redhead	R				Sora	C	C		
*Ring-necked Duck	C	C	C		Yellow Rail	R			
Lesser Scaup	U				American Coot	U	U	U	
+Common Goldeneye	U	U			Killdeer	C	C	C	
+Bufflehead	C	U	U		American Woodcock	U	U	U	

	Sp	S	F	W		Sp	S	F	W
Common Snipe	U	U	U		+Common Nighthawk	U	C	C	
*Spotted Sandpiper	C	C	C		*Chimney Swift	U	U		
Solitary Sandpiper	C	C			*Ruby-throated Hummingbird	C	C	C	
Greater Yellowlegs	U				*Belted Kingfisher	C	C	C	R
Lesser Yellowlegs	U				*Common Flicker	C	C	C	
Pectoral Sandpiper	U				*Pileated Woodpecker	C	C	C	C
White-rumped Sandpiper	R				+Red-headed Woodpecker	U	U		
Baird's Sandpiper	R				*Yellow-bellied Sapsucker	C	C	C	
Least Sandpiper	U				*Hairy Woodpecker	C	C	C	C
Dunlin	R				+Downy Woodpecker	U	U	U	U
Semipalmated Sandpiper	U				*Black-backed Three-toed Woodpecker	U	U	U	U
Short-billed Dowitcher	R				Northern Three-toed Woodpecker	R	R	R	
Stilt Sandpiper	U				*Eastern Kingbird	C	C	C	
Herring Gull	U	U	U		Western Kingbird	R	R		
Ring-billed Gull	U	U	U		*Great Crested Flycatcher	C	C	C	
Franklin's Gull	R		R		*Eastern Phoebe	C	C	C	
Bonaparte's Gull	U	U			+Yellow-bellied Flycatcher	R	R		
Forster's Tern	U	R	R		*Alder Flycatcher	C	C		
Common Tern	U	U			*Least Flycatcher	C	C		
Caspian Tern			R		*Eastern Wood Pewee	C	C		
*Black Tern	U	U			*Olive-sided Flycatcher	U	U		
+Rock Dove	U	U	U	U	Horned Lark	R	R	R	
+Mourning Dove	U	U	U		*Tree Swallow	C	C	C	
+Yellow-billed Cuckoo		U			*Bank Swallow	C	C	C	
*Black-billed Cuckoo	C	C	C		*Rough-winged Swallow	C	C	C	
Screech Owl	R				*Barn Swallow	C	C	C	
*Great Horned Owl	C	C	C	C	*Cliff Swallow	C	C	C	
Snowy Owl				R	*Purple Martin	U	U	U	
+Barred Owl	C	C	C	C	+Gray Jay	U	U	U	U
Long-eared Owl		R			*Blue Jay	C	C	C	C
*Short-eared Owl	U	U	U		Black-billed Magpie			R	R
+Saw-whet Owl	U	U	U		Common Raven				C
+Whip-poor-will	U	U							

	Sp	S	F	W		Sp	S	F	W
*Common Crow	C	C	C		Orange-crowned Warbler	C			
*Black-capped Chickadee	C	C	C	C	*Nashville Warbler	C	C		
*Boreal Chickadee	R	R	R	U	*Northern Parula	C	C		
*White-breasted Nuthatch	C	C	C	C	*Yellow Warbler	C	U	C	
*Red-breasted Nuthatch	C	C	C	C	*Magnolia Warbler	U	U		
*Brown Creeper	C	C	C	U	*Cape May Warbler	U	R		
*House Wren	C	C	C		Black-throated Blue Warbler	R	R		
*Winter Wren	C	C	C		*Yellow-rumped Warbler	C	C	C	
*Long-billed Marsh Wren			R		*Black-throated Green Warbler	C	C		
+Short-billed Marsh Wren	C	C	C		*Blackburnian Warbler	C	C		
*Gray Catbird	C	C	C		*Chestnut-sided Warbler	C	C		
+Brown Thrasher	U	U	U		+Bay-breasted Warbler	U	R		
*American Robin	C	C	C	U	Blackpoll Warbler	C	R		
+Wood Thrush	R	R			*Pine Warbler	C	C		
+Hermit Thrush	C	C			Palm Warbler	C	R		
+Swainson's Thrush	C	U			*Ovenbird	C	C		
Gray-cheeked Thrush	C				Northern Waterthrush	U	R		
*Veery	C	C	C		*Connecticut Warbler	U	U		
*Eastern Bluebird	U	U	U		*Mourning Warbler	C	C		
*Blue-gray Gnatcatcher			R		Hooded Warbler	R	R		
*Golden-crowned Kinglet	C	C	C		*Common Yellowthroat	C	C		
Ruby-crowned Kinglet	C	U	C		Wilson's Warbler	C	R		
*Cedar Waxwing	C	C	C		*Canada Warbler	U	U		
Northern Shrike				U	*American Redstart	C	C	C	
*Starling	U	U	U		+House Sparrow	U	U	U	U
*Yellow-throated Vireo	U	U			*Bobolink	C	C		
*Solitary Vireo	C	C			+Eastern Meadowlark	U	U		
*Red-eyed Vireo	C	C	C		+Western Meadowlark	U	U	U	
Philadelphia Vireo	U		U		+Yellow-headed Blackbird	U	U		
*Warbling Vireo	U	U			*Red-winged Blackbird	C	C	C	
*Black-and-white Warbler	C	C			*Northern Oriole	C	C	C	
*Golden-winged Warbler	C	C			Rusty Blackbird	U	U		
+Tennessee Warbler	C	R			+Brewer's Blackbird	U	U		

	Sp	S	F	W		Sp	S	F	W
Common Grackle	U	R			+Savannah Sparrow	C	C		
*Brown-headed Cowbird	C	C	C		+LeConte's Sparrow	C	U		
*Scarlet Tanager	C	C			*Vesper Sparrow	C	C	C	
Cardinal	R	R			*Dark-eyed Junco	C	R	C	
*Rose-breasted Grosbeak	C	C	C		Tree Sparrow	U		U	
*Indigo Bunting	C	C	C		*Chipping Sparrow	C	C	C	
*Evening Grosbeak	C	C	C	C	+Clay-colored Sparrow	C	C		
*Purple Finch	C	C	C	C	Harris' Sparrow	U			
Pine Grosbeak				U	White-crowned Sparrow	C			
Common Redpoll				C	*White-throated Sparrow	C	C	C	
+Pine Siskin	U	U			Fox Sparrow	C		C	
*American Goldfinch	C	C	C		Lincoln's Sparrow	R			
*Red Crossbill	C	C	C	C	*Swamp Sparrow	C	C		
+White-winged Crossbill	U	U	U	U	*Song Sparrow	C	C	C	
*Rufous-sided Towhee	C	C			Snow Bunting				U U
Lark Bunting		R							

Loons (Family Gaviidae)

The **Common Loon** is conspicuous on Lake Itasca and other lakes within and bordering the park. Its calls occur most frequently at the start of the breeding season in May but also can be heard sporadically throughout summer and fall. Several pairs of loons may occupy lakes the size of Lake Itasca, but the smaller ones usually accommodate only one pair. The Wilderness Drive beside Mary Lake is a good place to observe loons from an automobile, especially during those years when the pair of adults there succeeds in hatching one or two chicks. Flocks ranging from three to a half dozen or more birds are not unusual following the breeding season. Other species of loons have not been recorded for the area and would be considered extremely rare.

Grebes (Family Podicipedidae)

Transient grebes occur irregularly on Lake Itasca and other lakes of the park. A few **Pied-billed Grebes** breed at some of the ponds. Far better places to observe grebes are the marshy lakes and ponds beyond the park, especially at Upper Rice Lake where considerable numbers of **Red-necked Grebes** and **Pied-billed Grebes** court and nest each year. Any grebe found nesting within the park should be reported.

Cormorants (Family Phalacrocoracidae)

In recent years **Double-crested Cormorants** have been observed at Itasca lakes only in spring.

Hérons and Bitterns (Family Ardeidae)

Great Blue Herons are common summer residents and can be seen daily at Lake Itasca where they readily alight on the water even far from shore when fed dead minnows by fishermen. A large breeding colony of several hundred pairs exists in a remote, not very accessible section of the park. **American Bitterns** are more often heard than seen at marshy places around Lake Itasca and elsewhere. The uncommon **Green Herons** appear to be on the increase; a pair produced young on the banks of Lake Itasca as recently as 1975. **Great Egrets** and, surprisingly, **Black-crowned Night Herons** are rare park birds at any time. So far as is known, there is no park record for the **Least Bittern**, known to breed fairly close by at Upper Rice Lake.

Swans, Geese and Ducks (Family Anatidae)

Itasca State Park lies close enough to the western prairie that one might expect to see a large variety of waterfowl most any time when there is open water. This has not been our experience, however, and one has to look hard to find more than the half dozen or so commonly encountered species. Ducks breeding in many places within the park are **Mallards**, **Wood Ducks** and **Hooded Mergansers**. They not only occur regularly on Lake Itasca but also on the smaller lakes, marshy and woodland ponds. Another is the **Ring-necked Duck**, but it is confined during nesting mostly to the small to medium-sized ponds, not infrequently those near roads and highways. **Blue-winged Teal** known to breed at La Salle Lagoon and **Green-winged Teal** suspected of breeding there and elsewhere have park distributions that are spotty and unpredictable. Breeding records are lacking for **Common Goldeneyes** known to nest regularly at Upper Rice Lake north of Itasca State Park. Transients to be looked for in spring are **Snow** and **Blue Geese** that are occasionally seen flying over the park and **Buffleheads** and **Red-breasted Mergansers** that at times commonly frequent Lake Itasca in spring after the ice goes out usually in late April. An interesting transient and possible breeder is the **Giant Canada Goose** believed to have nested unsuccessfully near Whipple Lake in the south-central section of the park in 1973. All late spring and summer sightings of this bird should be reported. Persons particularly interested in waterfowl should not fail to visit the prairie potholes near Waubun, about an hour's drive west of Itasca State Park.

American Vultures (Family Cathartidae)

Only the **Turkey Vulture** of this small American family occurs at Itasca where the birds are not abundant. A few sightings are reported each year, usually in spring in the western section of the park. There are vague breeding records for the area (Becker County) near the turn of the century, but the finding of a nest with two nearly fledged young in the Wilderness Sanctuary in 1976 supports a belief that the species for many years has been an uncommon breeder at Itasca State Park.

Hawks and Eagles (Family Accipitridae)

The **Bald Eagle** is a main attraction at Lake Itasca, and a pair often raises its young in one of several huge nests near the lake each year. Since this eagle is an endangered species, it is against the law to approach nests

or birds on land. Good observations can be made, however, from boats which do not disturb young or old. Hawks are abundant but not often seen at Itasca because of the dense vegetation. All three accipiters, **Goshawk**, **Cooper's Hawk** and **Sharp-shinned Hawk**, breed within the park. These birds may be seen most anywhere, but Goshawks seem to favor the big pine forests west of Lake Itasca where nesting has been confirmed in recent years. Probably the most abundant hawk at Itasca is the **Broad-winged Hawk** which is easily overlooked in trees at roadsides. **Red-tailed Hawks** and **Marsh Hawks** have a spotty distribution, the latter having nested in recent years in the marsh south of Hill Point by Lake Itasca. **Rough-legged Hawks** can be expected only during the colder months when they migrate south from Arctic breeding grounds. A most interesting visitor to Itasca in recent time (April and May, 1976) is the rare **Swallow-tailed Kite**, a species reported as breeding in northeastern Becker County (possibly in an area now occupied by the park) in 1886, and observed at Elk Lake in 1902.

Ospreys (Family Pandionidae)

Usually two or three pairs of **Ospreys** nest annually at Itasca where the birds can be seen daily from boats in Lake Itasca or Elk Lake. Easily observed nests are those near the small Twin Lakes (close to Park Drive) and at Lake Itasca. These birds rotate nesting sites and, like the eagles, do not occupy every nest in the area each year.

Falcons (Family Falconidae)

Although we have no recent records of large falcons for the park, these birds conceivably occur there as transients from time to time. The small **American Kestrel** is abundant throughout the region, but is most often seen along the roads and highways outside the park in more open country.

Grouse (Family Tetraonidae)

The resident **Ruffed Grouse** is found in many places in the Itasca region where its numbers are cyclic, the birds being very abundant some years and scarce in others. The bird's drumming invariably can be heard coming from aspen groves and spruce bogs in spring, and its broods often can be encountered near the park roads and trails throughout summer. The much rarer **Spruce Grouse** is seldom seen within the park. Most observations of these resident birds are made at Lake Alice Bog — a large, complex series of spruce bogs one to two kilometers east of Itasca. But even there the birds are highly elusive. One bent on seeing them should be prepared to spend long hours under very trying conditions.

Cranes (Family Gruidae)

The only crane of the region, the **Sandhill Crane**, is rarely reported for the Itasca area, and there is no evidence for nesting.

Rails and Coots (Family Rallidae)

The **Sora** appears to be a fairly common species in marshy places within and outside the park, whereas the **Virginia Rail** evidently is less common. Both have been recorded at La Salle Lagoon. There is no evidence that **Yellow Rails** are more than rare transients in spring at any of the park or surrounding marshes, although this sought after species is common some years when water conditions are favorable in the prairie marshes

west of Waubun in Mahnomen County. The **American Coot** that breeds abundantly at Upper Rice Lake is uncommon at any season in the Itasca area only a few kilometers to the south.

Plovers (Family Charadriidae)

Although the **Killdeer** breeds within Itasca State Park, notably at La Salle Lagoon, it is most abundant in the open areas outside park boundaries. All other members of this family would have to be considered uncommon transients. At the proper season one has a fairly good chance of encountering migrating **Semipalmated**, **American Golden** and **Black-bellied Plovers** in the prairies of Mahnomen County to the west.

Sandpipers (Family Scolopacidae)

The **American Woodcock** appears to be increasing its numbers at Itasca State Park where displaying males often can be heard and seen in spring along the north boundary road just east of Bert's cabins and also in the northeast corner of the park in the La Salle Creek area. Although **Common Snipes** occur rather infrequently in the more open marshy places of the park, they are very abundant in the vicinity of Upper Rice Lake. **Spotted Sandpipers** are fairly common park birds along the shores of Lake Itasca and other large lakes; a number of them have bred at La Salle Lagoon. One fairly common and regular transient of the park is the **Solitary Sandpiper** which migrates south from its northern breeding grounds in mid-summer. All other scolopacids of the park and immediate adjacent areas are strictly unpredictable transients that depend on water conditions. Far better places for observing transient shorebirds are the prairies to the west in Mahnomen County. There one can find several interesting breeding species as well, notably **Upland Sandpiper**, **Marbled Godwit**, and the closely related **Wilson's Phalarope** of the Family Phalaropodidae.

Gulls and Terns (Family Laridae)

Although several species of gulls and terns visit Lake Itasca and other park lakes at various times, the birds do not remain to breed. Outside the park large numbers of **Forster's** and **Black Terns** breed at Upper Rice Lake to the north. At Leech Lake to the east, numerous **Common Terns** and a fair number of **Ring-billed Gulls** occupy an island colony in the large lake that also accommodates summering, but non-breeding, **Herring** and **Bona-partre Gulls**. Summering **Caspian Terns** breed there on rare occasions. **Franklin's Gulls** that migrate through Minnesota in fair numbers seemingly avoid the Itasca area. The closest known breeding ground for these gulls is at the marshes of Agassiz National Wildlife Refuge in Marshall County a long way from the park.

Pigeons and Doves (Family Columbidae)

Rock Doves and **Mourning Doves** are rare park birds but may be encountered at times in open areas adjacent to the park. Both are abundant species in many areas of the state outside the Itasca region.

Cuckoos (Family Cuculidae)

Black-billed Cuckoos are common park birds some years and uncommon to rare in others. Nesting has been confirmed for the La Salle Creek area in the extreme northeastern section, but no doubt the species breeds in many areas of the park and surrounding country. The status of **Yellow-**

billed Cuckoos within or near Itasca State Park is uncertain. At least one reliable observer believed it to be a fairly common bird of the area, but most observers consider it rare or uncommon. Its numbers probably fluctuate greatly over the years.

Owls (Family Strigidae)

Owls are heard commonly but seldom seen at Itasca State Park where the dense forests provide excellent cover. **Great Horned, Barred** and **Saw-whet Owls** appear to be the most abundant residents. No doubt these birds breed within the park, although nesting has been confirmed only for the horned owls. **Screech Owls** have been recorded only on rare occasions at Itasca. **Short-eared Owls** are uncommon breeders in the more open areas surrounding the park. **Snowy Owls** are rare winter visitors, and nothing is known of other transients from the north, notably **Hawk** and **Boreal Owls**.

Whip-poor-wills and Nighthawks (Family Caprimulgidae)

The **Whip-poor-will** is uncommon at Itasca State Park where one rarely hears its familiar calls. More reliable localities are the woods east of the park entrance just beyond the junction of highways 71 and 200, and the woods north of the park and east of La Salle Creek basin. **Common Nighthawks** are observed from time to time at various places within the park, but especially in late summer or fall when migrating flocks move through the region. Although nesting records are lacking, it seems likely that both species breed close to, if not within, the park boundaries.

Swifts (Family Apodidae)

Only the **Chimney Swift** represents this family at Itasca where it is uncommon at best. In recent years a pair nested in an abandoned farm house just outside the southern park boundary in Becker County.

Hummingbirds (Family Trochilidae)

The **Ruby-throated Hummingbird** is the only hummer at Itasca where it is a common summer resident throughout the area. At times one can see this bird following the **Yellow-bellied Sapsucker** through the woods to feeding trees, often paper birches, where sap is made available by the sapsuckers.

Kingfishers (Family Alcedinidae)

The **Belted Kingfisher** is a common summer resident and has its nesting holes in banks at Lake Itasca and other lakes within the park, and also at places where ground has been disturbed at gravel pits, etc. On rare occasions one is seen even in dead of winter, usually at the open headwaters of the Mississippi.

Woodpeckers (Family Picidae)

The most abundant and widespread woodpecker at Itasca is the **Yellow-bellied Sapsucker**. **Common Flickers** are not nearly so abundant and the **Red-headed Woodpecker** is rare within the park but less so in surrounding open areas. All three species migrate south for the winter. Species observed commonly the year around are the **Pileated Woodpecker**, **Hairy Woodpecker**, and **Black-backed Three-toed Woodpecker**. The **Northern Three-toed Woodpecker** is seen occasionally but whether it nests within or near the park

is uncertain. Surprisingly, the **Downy Woodpecker** is scarce at all seasons, but may be locally conspicuous at feeders. Of all the Itasca woodpeckers, the **Black-backed Three-toed Woodpecker** is most sought after by park visitors. Its distribution in the park is spotty and somewhat unpredictable. Mature stands of red or jack pines are among the park habitats favored by this species. At times the birds excavate conspicuous nesting holes in live pines within view of the park roads, but more often than not the casual visitor to Itasca has to work hard at finding this woodpecker.

Tyrant Flycatchers (Family Tyrannidae)

Eastern Kingbirds are common summer residents of Itasca, but the rare occurrences of **Western Kingbirds** are unpredictable. **Great Crested Flycatchers** can be seen and heard in many places along the park roads and trails. **Eastern Phoebes** nest commonly on park buildings or beneath culverts such as the one at Chamber's Creek. The **Empidonax** flycatchers pose a problem mostly unresolved. Little is known about the status of **Willow** and **Alder Flycatchers**, although the latter species definitely nests in alders or other trees or shrubs in the Itasca region. The **Yellow-bellied Flycatcher** has been recorded in summer from deep within the La Salle Creek spruce bog at the north boundary road, but nesting remains unconfirmed. The **Least Flycatcher**, however, is definitely a common summer resident of upland birch and aspen woodlands. **Eastern Wood Pewees** and **Olive-sided Flycatchers** have spotty breeding distributions in the park. The songs of the former are often heard along the park trails while those of the latter usually come from spruce and tamarack bogs, such as the one bisected by the park road leading to the east public campground.

Larks (Family Alaudidae)

Horned Larks can be found in open country surrounding the park, but even there the status of these birds is poorly known. Nesting is assumed but not confirmed.

Swallows (Family Hirundinidae)

Tree Swallows are abundant summer residents at Itasca where they frequent the shores of lakes and ponds, but they also readily occupy nesting boxes put up almost anywhere for their use. Scattered pairs of **Rough-winged Swallows** occupy natural or artificial banks in many parts of the park, whereas scattered pairs or small colonies of **Barn Swallows** occupy man-made buildings or other structures wherever they can find suitable ones. All three species are common park birds that can be encountered daily at the proper season. **Bank** and **Cliff Swallows** breed in larger, locally confined colonies that are more obvious outside than within the park boundaries. The former species commonly occupies gravel pits and often digs its numerous nesting burrows in great piles of gravel near highways; the latter occupies the eaves of buildings in the Itasca region rather than bridges that provide thousands of nesting sites in more western and northern parts of the state. **Purple Martins** are less common than the other swallows. They appear to be attached these days to artificial nesting houses put up for their use by the local residents.

Jays, Magpies, Ravens and Crows (Family Corvidae)

Of two species of jays that occur throughout the year at Itasca, the **Blue Jay** is common and widespread while the **Gray Jay** is uncommon and

seen mostly along the north boundary Park Drive, or in or near the Wilderness Area. Nesting by the latter within or near the park is presumed because of the fledged young seen traveling with adults on occasion. **Black-billed Magpies** known to breed in counties west and north of Itasca in recent years visit the park sporadically at unpredictable times while **Common Ravens** definitely are seen most often in winter. **Common Crows** on the other hand are abundant summer residents.

Titmice (Family Paridae)

Black-capped Chickadees are common park birds at all seasons, but one really has to look hard for the **Boreal Chickadee** of the deep spruce bogs. Chances of seeing one at Itasca are best in winter.

Nuthatches (Family Sittidae)

Although the **Red-breasted Nuthatch** is the more abundant species, both it and the **White-breasted Nuthatch** can be found in many places throughout the year at Itasca, including roadsides and areas frequented by visitors.

Creepers (Family Certhiidae)

The **Brown Creeper** breeds commonly at Itasca State Park where nests have been found in mixed stands of deciduous and coniferous trees, as well as in the nearly pure stands of red or jack pines. Although the Wilderness Area is an excellent place to look for these birds, they also can be observed in such places as Douglas Lodge where young creepers have been raised for many years. The birds can be seen in the park most any time, but their numbers drop off appreciably in winter.

Wrens (Family Troglodytidae)

Winter Wrens are fairly common summer residents whose songs can be heard coming from deep within the spruce bogs along many park roads and trails. The more familiar **House Wren** appears to be decidedly uncommon within park boundaries but occurs here and there in the more open, inhabited sections outside. Status of marsh wrens within the park is also not well understood. **Short-billed Marsh Wrens** are abundant birds all around the park, and both it and **Long-billed Marsh Wrens** breed commonly at Upper Rice Lake north of Itasca State Park.

Mimic Thrushes (Mimidae)

Catbirds are common park birds. **Brown Thrashers** on the other hand are not often observed in the park; they are somewhat more abundant in the outlying areas, but even there they are not common at any season.

Thrushes (Family Turdidae)

Robins are abundant and widespread nesters at Itasca as are **Veeries**, though the latter are more often heard than seen at the edge of the forest or within the low spruce bogs. **Hermit Thrushes** are not nearly as common within the park but are conspicuous spring and summer songsters of surrounding upland forests of jack pine. **Swainson's** and **Gray-cheeked Thrushes** are common transients. A few Swainson Thrushes probably remain to breed within or near the Itasca spruce bogs where singing individuals are noted occasionally in summer. The rarer Wood Thrush is also heard there on occasion and probably breeds within the park, though nesting records are

lacking. **Eastern Bluebirds** are fairly common in open country beyond the park; a few breed within the park, seemingly most often in disturbed, burned over areas where reforestation practices are carried on by the foresters.

Gnatcatchers and Kinglets (Family Sylviidae)

The common Itasca representative of this family is the **Golden-crowned Kinglet** which sings and nests high up, usually in tall white spruces along park roads and trails, or in black spruces of the wet bogs, such as those bordering La Salle Creek. **Ruby-crowned Kinglets** so common in spring and fall mostly leave the Itasca area for the summer. Rare park visitors are the **Blue-gray Gnatcatchers** — a pair actually nested near the Forestry and Biological Station in 1955.

Waxwings (Family Bombycillidae)

Cedar Waxwings can be very abundant park birds some years and still be uncommon to rare at other times. Any winter sighting of the **Bohemian Waxwing** should be reported, since records are lacking.

Shrikes (Family Laniidae)

Sightings of shrikes within or near the park should be reported, since there are no recent records of **Loggerhead Shrikes** and very few of **Northern Shrikes**.

Starlings (Family Sturnidae)

The **Starling** remains uncommon in the park but will occupy Purple Martin houses there as well as outside park boundaries where one encounters it most often near farms.

Vireos (Family Vireonidae)

Red-eyed Vireos are very abundant and widespread and can be found along most any trail or drive within the park. Much less abundant and more locally distributed are **Solitary Vireos**, which have an affinity for balsam firs during nesting, and **Yellow-throated Vireos** which occur in the upland woods of Itasca, often near trails or forest openings. The uncommon **Warbling Vireos** that seemingly prefer the roads and trails of the park are noticeably more abundant in the open country surrounding Itasca. Much less is known about the **Philadelphia Vireo** which has to be considered strictly a transient at Itasca until proven otherwise.

American Wood Warblers (Family Parulidae)

Although many wood warblers migrate through the Itasca region in spring when numbers peak from mid-to late May, fair numbers remain as summer residents. With notable exceptions, Itasca State Park is an unusually good place for these summering birds. Very common tree inhabiting species include the **Northern Parula**, usually associated with the lichen usnea or old man's beard during nesting; **Yellow-rumped**, **Black-throated Green**, **Blackburnian** and **Pine Warblers** of the tall pines, spruces and firs. **Yellow** and **Chestnut-sided Warblers** and the **American Redstart** commonly inhabit lower levels, especially shrubby edges of swamp or forest. One has to look harder for **Magnolia Warblers** known to breed at Itasca and **Cape May** and **Bay-breasted Warblers** thought to breed at Itasca, at least some years. The former frequents dense stands of small to medium-size firs,

the latter two species, spruce bogs as a rule.

Common ground inhabiting summer residents of both bogs and uplands are **Black-and-white**, **Golden-winged**, **Nashville** and **Mourning Warblers**, and the very abundant **Ovenbirds** and **Common Yellowthroats**. In these places one has to look much harder for the **Tennessee**, **Canada** and **Connecticut Warblers**. The latter species, sought by so many birders from around the country, is unpredictable in that it may appear in almost any area of the park one season but often not the next. In recent years its nest was found in the Lake Alice Bog area just east of the park. Why the **Northern Waterthrush** remains an uncommon bird at Itasca during any season is a puzzling question still unanswered.

Common warblers that appear to be strictly transient at Itasca are **Orange-crowned**, **Blackpoll**, **Palm** and **Wilson's Warblers**. Rare park visitors at any time are the **Black-throated Blue** and **Hooded Warblers**.

Weaver Finches (Family Ploceidae)

Like the Starlings, the **House Sparrow** is uncommon within the park but common at farms on the outside.

Bobolinks, Meadowlarks, Blackbirds and Orioles (Family Icteridae)

Bobolinks and both **Eastern** and **Western Meadowlarks** are summer residents of open fields surrounding Itasca State Park, although the abundance of each species of meadowlark has not been carefully studied. **Red-winged Blackbirds** are conspicuous within and outside the park while one has to search for **Brewer's Blackbirds** beyond park boundaries, the best places being country roadsides and pastures. **Rusty Blackbirds** are strictly spring and fall transients. Although the **Common Grackle** appears to be an abundant breeding species in many places in Minnesota, it is rather scarce throughout the Itasca area. On the other hand, the **Northern Oriole**, formerly called Baltimore Oriole, and the **Brown-headed Cowbird** are very common summer residents of park and surrounding country. The latter species parasitises many song birds of the region.

Tanagers (Family Thraupidae)

Only the **Scarlet Tanager** of this family inhabits the Itasca region. It can be seen and heard commonly along most of the park roads and trails throughout spring and summer.

Buntings, Finches, Sparrows, etc. (Family Fringillidae)

This large, complex family is well represented at Itasca either within the park proper or in the immediate surrounding country. The familiar **Cardinal** of more southern areas is a rare visitor at any time whereas **Rose-breasted Grosbeaks** and **Indigo Buntings** are abundant summer residents throughout the entire region. A special park bird, the **Evening Grosbeak**, can be found commonly throughout the year, although it may be inconspicuous during nesting; it builds its nest near the top of the tallest pines, at times overlooking park roads and trails. Another familiar park bird that can be seen most any time is the **Purple Finch** that nests high up in the tall spruces or balsam firs. Unfamiliar and unpredictable at Itasca is the **Pine Grosbeak**. Chances of seeing it are best in winter, for it appears to be strictly a transient species.

An abundant winter visitor is the **Common Redpoll**. Likely **Hoary**

Redpolls occur in winter at Itasca also, though records are lacking. **Pine Siskins** are so erratic in their appearances that one hardly knows how to classify them. No doubt they breed in the region some years at least, though the only evidence to date is a recent sighting of an individual carrying nesting material. **American Goldfinches** on the other hand are common birds during spring, summer and fall. Winter occurrences need confirmation.

Both **Red** and **White-winged Crossbills** can be found in the spruces and pines throughout the year at Itasca where the flocks come and go at various times. Of the two, the White-winged species is much the rarer; the only evidence of nesting is the fairly recent sighting of a stub-tailed, fledged chick. **Rufous-sided Towhees** are rare summer residents within the park but appear to be more abundant in the surrounding country, especially in deciduous woodlands bordering fields or marsh.

Summering sparrows of park and surrounding country in order of abundance are **Chipping Sparrows**, found most anywhere; **White-throated Sparrows**, confined mostly to the spruce and tamarack bogs; **Song Sparrows** that inhabit the shores of lakes or ponds, or edges of swamps; **Swamp Sparrows** of the marshes and floating bogs; and **Le Conte's Sparrows** of open fields or marsh. Mostly outside park boundaries in open fields, edge habitats, or disturbed places are **Clay-colored**, **Vesper** and **Savannah Sparrows**, all common summer residents of the region. Whether inside or outside the park the status of **Grasshopper** and **Lincoln's Sparrows** is at best uncertain. Why so few of the very abundant **Dark-eyed Juncos** remain in summer to nest at Itasca is a very vexing question.

Common transients are **White-crowned** and **Fox Sparrows**, uncommon ones, **Harris' Sparrows** and **Snow Buntings**. Status of **Tree Sparrows** and **Lapland Longspurs** remains poorly known. Perhaps the most unusual fringillid record is the recent sighting of a male **Lark Bunting** at the University of Minnesota Forestry and Biological Station on the shores of Lake Itasca.

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THE COMMON LOON: PART II

Identification of Potential Predators on Common Loon Nests

Judy McIntyre

Common Loon nesting failures are caused by factors such as flooding, desertion, predation, and human disturbance. During loon research in north central Minnesota from 1970 to 1973 I found that more than 75 percent of all unsuccessful nest attempts were the result of predation.

This appeared to be caused by raccoons and Common Crows as determined by methods given by Rearden (1951) and Sows (1955). Other authors have suggested that the most common potential loon predators are Herring Gulls, ravens, beaver, muskrat, raccoon, mink, and otter (Olson and Marshall 1952, Price and Keith 1975, Ridgely 1975, Ream 1976). Neither my observations nor those of others, however, presented direct evidence for predator identification.

Therefore experiments utilizing simulated loon nests were run to assay what species compromise the primary potential mammalian predators in north central Minnesota. Tests identified "predators" by tracks left in soft material surrounding the nests, referred to in this paper as "track traps."

STUDY AREA AND METHODS

Tests were run on two lakes. Webster Lake, a 28 hectare lake in the Blackduck Ranger District of the Chippewa National Forest (47°40'N, 94°30'W) was used for a 30-day testing period in 1970 and utilized three test sites. Lost Lake, 122 hectares, on the boundary of Itasca Park (47°10'N, 94°50'W) was the location of four sites monitored for seven days in 1972.

On Webster Lake track traps were located at the sites of former loon nests, spaced approximately equidistant around the shore. Those on Lost

Lake were constructed around man-made loon lests; two were on opposite sides of the lake, and two on artificial islands (McIntyre 1977) also on opposite ends of the lake.

A mixture of wet sand and clay was packed around the nest and double-yolked turkey eggs were placed in the center (Figure 1A), chosen because they are the same size and shape as loon eggs. Eggs were dyed to resemble loon eggs by immersing them in cold coffee. Blotches of black were applied with a water-proof marking pen, after which eggs were again placed in coffee for a few minutes.

All sites on Webster Lake were checked daily (24 hour trap period) and replacements of destroyed eggs were made at that time. Test sites on Lost Lake were checked daily at dawn and dusk (12 hour trap period) to determine nocturnal versus diurnal predation. After the initial preparation, nests were left with no egg for several days, and both preparations and egg placements were made from a boat to minimize chance of human scent being left at or near the test sites.

RESULTS

Table 1 gives the results of the track trap tests and indicates that most losses (80 percent) were from raccoons. Except for a single occurrence of mink tracks with no egg loss, tracks with no destruction did not occur.

At one shore site on Lost Lake all predations occurred at night for the first four days, and were equally divided between day and night for the last three days. All loss occurred at night for the first six days, on the other shore site except for destruction caused when a deer stepped on the



A



B

Figure 1. Predator track traps. A. Wet mixture of sand and clay was flattened around a former or simulated loon nest. B. Tracks identify predator shown here by raccoon footprint.

egg. On the last day eggs were eaten both during the day and at night. Frequency of both nocturnal and diurnal predation increased during the testing period.

No losses occurred on the island nests; in fact, two weeks after the completion of testing, eggs on islands were still intact.

DISCUSSION

It is well known that predators have food memories and return to the site of a successful predation. Increase in number of nest destructions with time may have been the result of learning by raccoons, and led to successive returns to the location of a known food source. On the other hand, scents left by the initial predator may have drawn other predators to the site. Either would provide selection pressure toward re-nesting by loons in a different location following a nest failure. Most Common Loons I monitored during this same period did choose a different location for re-nesting following a failure (87.5 percent, N = 32; McIntyre 1975).

Predation did occur on island nests in the study areas, but there was none on island test sites. Common Crows perched near loon nests and were commonly seen flying to a lower branch or to the ground if an incubating loon left a nearby nest. They were seen eating loon eggs, and the type of egg destruction found frequently implicated avian predators. Common Ravens are not present in north central Minnesota during the summer, and there are no gull colonies in the study area; therefore, all avian predators were assumed to be crows. It would appear that loon activity associated with nest relief and not the nest and egg per se may draw attention to the nest and alert avian predators. Human activity thus has the potential for increasing avian predation if it causes incubating birds to leave and return to their nests with more than normal frequency.

I have seen loons successfully de-

fend their nests against both crows and raccoons. Males and females share incubation duties and nest attentiveness is 99.1 percent (McIntyre 1975). Nest attendance thus provides the major form of protection to eggs. When incubating loons are disturbed and leave their nests their eggs are exposed to predation. The ability of raccoons to find nests has been shown in many studies, and their role as the primary potential mammalian predator in this region has been shown from this one.

When human disturbance causes loons to leave their nests it thus has a double detrimental effect by alerting avian predators when loon activity around the nest is increased and by increasing the chance of mammalian predation on unattended nests.

Table 1. RESULTS OF PREDATOR TRACK TRAP TESTS FROM 90 TRIALS ON WEBSTER LAKE AND 28 TRIALS ON LOST LAKE.

Predator	Total Predations Percent Number Webster Lake	
	Raccoon	13.3
Skunk	3.3	3
Unknown(a)	2.2	2
Total	18.9	17
	Lost Lake	
	Day	
Raccoon	14.3	4
Deer	3.6	1
	Night	
Raccoon	42.9	12
Skunk	3.6	1
Total	64.3	18

(a) The rumpled nest and condition of eggshells suggested raccoon predation.

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NOTES OF INTEREST

ANOTHER WINTERING CAROLINA WREN — Although there have been a number of records of Carolina Wrens attempting to winter in Minnesota, a bird that appeared this past winter in Brooklyn Park was perhaps the hardiest of all these wandering pioneers to have visited our North Country. On October 16, 1976, Dorothy first spotted the bird picking on some suet we had placed on the stump of a recently removed Dutch Elm victim near the Mississippi River bank at our home on the West River Road. We assumed that it was a lost migrant that would soon move on but it remained about our premises for the two weeks before we left Minneapolis for a month's Audubon Wildlife Lecture tour. The bird fed mainly among the dead leaves on the ground where we assumed it was finding insect larvae or pupae, spiders, sowbugs or other small animal forms although it did visit our sunflower seed feeders as well as the suet feeder once in a while. During our month's absence a helpful neighbor filled our feeders only occasionally and we did not expect the wren would still be around on our return on November 26, but there it was, alive and well. As we all remember, the weather worsened rapidly after that date and we had little hope for the bird's survival. When it remained with us even after the snow had covered most of its feeding areas, we attempted to aid it in its fight for survival by putting out finely chopped hamburger and canned dog food on the wooden step by our porch door. The wren soon came to pick at this food in a somewhat disinterested manner perhaps two or three times a day — definitely not depending on this food source for its livelihood. When the -30°F weather came, we watched with great anticipation each morning to see if the wren had survived the previous night — and nearly every morning it would reappear. Thinking to help it still further, we plugged in a small electric heating tile covered with a towel and almost immediately the bird accepted our offering and fed on the meat bits that were kept from freezing on the heated tile. Occasionally it would take bits of food and hop under the heater to feed. Again, however, we found it spent only a few minutes on or near the heater on each visit, obviously not requiring or appreciating the heat we were providing. We were not able to find where the bird spent the nights although it frequented several woodpiles near the house and often it would fly down over the east-facing river bank where the bushes and wind-blown leaves gave it a good deal of protection. All seemed to be going well with the bird as it appeared very much alive and active when we saw it at the doorstep on the morning of January 28, 1977 after that fearful night when the windchill reached -71°F , but this was the last we saw of our hardy visitor from the South. Since it was apparently in good health that last morning, it might be

reasonable to suspect that some predator — a weasel, shrew, Sharp-shinned Hawk or Northern Shrike may have taken the bird. But again we could take the optimistic view that it might have moved on to where it found a situation better suited to its needs. However, it would appear most probable that the bird had put up an unbelievably strong fight against this "coldest winter of the century" but had finally lost its three-month-long battle with the elements. **Dorothy and Walter Breckenride, 8840 West River Road North, Brooklyn Park, Minnesota 55444.**

WINTER OBSERVATIONS OF COMMON LOON — A wintering loon was observed at Silver Lake, Virginia, St. Louis County, Minnesota on January 20, February 5, 26 and March 29, 1976. All observations were made from the parking lot north of the bank building on the east side of the lake. The bird was viewed with 7 x 50 binoculars. On January 20, about 11 A.M., Steve Koenes and I first observed the bird. The temperature was well below zero and fog over the lake obscured vision. As the cloud over the lake shifted around, we could discern a large, dark water bird slowly moving around in the center of the open water area. The bird appeared to be a Common Loon in winter plumage but the weather prohibited positive identification. On February 5, in the late morning, Brian Krogseng and I again observed a loon at the same location. The bird was again in the center of the open water area but was resting with its head turned back on its wing. Three photographs were taken this date with a 35 mm SLR with a 200 mm lens. Through the binoculars, it was possible to see the white breast and throat. Size comparison was possible with the Mallards in the south end of the lake and it was noted that the resting loon was substantially larger than the ducks. On February 26, my wife Pat and I again observed the bird at the same location. Again, the bird was resting and was not active. On March 29, Pat and I again passed through Virginia and our notes read as follows: "Common Loon at Silver Lake — same bird as in Jan. and Feb.?" Inasmuch as **The Loon**, 48:107, reported a Common Loon at Virginia on 2-16, I believe that the above observations most probably are of the same bird. On all dates, the bird was not particularly active but did apparently survive January and February and, possibly, well into the end of March. All of the sightings were made on business trips and time did not permit more than a few minutes of observation each day. **Kenneth J. La Fond, 11008 Jefferson Street N.E., Blaine, Minnesota 55434**

RECORDS OF GREAT GRAY OWLS IN OTTERTAIL COUNTY — On or about Feb. 1, 1976, a Great Gray Owl was found dead along County Road 1 about three miles west of Otter Tail Lake, Otter Tail County. Mr. John Rose, a bus driver for the Underwood school system, found the bird about 4:00 P.M., approximately 40 feet from the Otter Tail River which runs parallel to the highway in the area where the owl was found. It was lying face-down under a power line with its wings partially spread, and was still warm when Mr. Rose picked it up. There were human tracks leading up to the bird, as though someone may have shot it and walked up to it to look at it. This possibility was later discounted by the taxidermist who mounted the bird. Quite probably the owl was struck by a passing vehicle — at any rate, one can only speculate as to the cause of death. The bird is now on display at the Fergus Falls Senior High School. In early 1976 I talked to a local resident who had a Great Gray Owl in her back yard seven or eight years ago in early winter. The local newspaper carried a photograph and front-page story on that bird. I checked the microfilm at

the Fergus Falls Daily Journal office, but was unable to find the article due to the lack of a specific month and year. The above two records of Great Gray Owls are the only ones I know of for the Fergus Falls area. **Steve Millard, 304 N. Vine, Fergus Falls, Minnesota 56537.**



BAIRD'S SPARROW SINGING AT ROTHSAY — While returning from the spring MOU fieldtrip at Crookston on May 31, 1976, my wife and I visited the Prairie Chicken area at Rothsay in Wilkin County. We drove about 1¼ miles north along the highway just east of the wildlife area. As we neared the farmyard through which we used to drive to the booming ground, a small bird flew up which I thought to be a late Water Pipit. I followed it out onto the grassy area, lost sight of it, but found many small yellow lady's slippers which I proceeded to photograph. While thus engaged I heard a Baird's Sparrow sing from the south end of the prairie plot. Though the bird repeated its song of clicks and the unmistakable musical trill several times, I was unable to get my glasses on it. I am thoroughly familiar with this bird's song from North Dakota where I have found several singing birds and nests. **Henry Kyllingstad, 205 6th St., Marshall, Minnesota 65258.**

SNOWY EGRET IN LINCOLN COUNTY — While cruising Lincoln County backroads on the afternoon of June 20, 1976, in search of Baird's Sparrows, Burrowing Owls, or similar goodies, I noted a small white heron feeding

at the extreme western end of Lake Shaokatan. Two Forster's Terns flying near the heron let me know that it was smaller than a Great Egret. I walked to the lake shore and observed the bird for several minutes with 8 x 40 binoculars. It was all white, very slender with a long, slender, black beak and with a yellow spot extending from the beak to the eye. The bird finally flew to the northwest shore, flying into the sunlight so that I could not see the color of the feet. It alighted near a Black-crowned Night Heron and was distinctly smaller than the latter bird. I know the Snowy Egret from the Bear River in Utah' and, though I missed the yellow feet, all the other marks were well-noted. **Henry Kyllingstad, 205 6th St., Marshall, Minnesota 65258.**

LITTLE BLUE HERONS AT PELICAN LAKE — On July 10, 1976, Gene Wells and Tom Smith of Fergus Falls and West Central Bird Club Members, visited Heron Island, located on Pelican Lake near Ashby, Grant County. The island, estimated to comprise some 8 to 10 acres of trees and brush, was found to contain large numbers of roosting and/or nesting Great Blue Herons, Black-crowned Night Herons, Great Egrets, and Double-crested Cormorants. While observing the island's bird life, three Little Blue Herons were discovered atop a thick stand of brush. Using a 35mm camera and a 400 mm lens, three pictures were taken. As the Little Blues moved about the brush, it is impossible to say if the pictures taken were of the three separate birds, or the same bird each time. The Little Blues remained on the island during the three hour tour. No nesting by the birds was noted. **Gary Otnes, Route 1, Box 181, Fergus Falls, Minnesota 56537.**



Little Blue Heron — 7-10-76, Pelican Lake, Grant County. — Photo by Gene Wells

SHORT-EARED OWLS IN WILKIN COUNTY — The northeast corner of Wilkin County has a fine birding area in what is locally known as the Rothsay Prairie. In the late fall and early winter of 1976-77, I had twelve Short-eared Owl sightings in the above area. In each case, the birds were hunting and/or consuming prey, rather than just "passing through" in a migratory manner. The first birds, a pair seen on November 1, 1976, were hunting together and harassing a male Marsh Hawk that had moved into their area. This sighting was made about 3:15 P.M. on a partly sunny, 50-degree day. On December 31, Kim Eckert, my brother Jim and I found two Short-eareds at 11:30 A.M. on a cold (-5), calm, sunny day. The following day, Diane Hastings and I were birding the south edge of the Rothsay Prairie about 2:30 P.M. The weather was mostly cloudy, 10 degrees, light N breeze. We observed four Short-eared Owls hunting over a large open field. One owl uttered a descending, rasping screech similar to the first call on the Peterson record. We watched these birds for 15 minutes, then drove N about five miles and saw two more, then east 1½ miles and found another. Finding seven of these beautiful, well-marked owls in one hour was quite a pleasant surprise, and a bit unusual. The final observation was made on January 11, 1977, a cold (-10 degrees), calm, sunny day.



This was a single bird sitting in a small shrub, consuming a vole or mouse.
Steve Millard, 304 N. Vine, Fergus Falls, Minnesota 56537.

AN UNUSUAL VISITOR AT OUR FEEDER — On November 12, 1976, we noticed an unusual bird at our feeder among the many House Sparrows. The first thought was, "What a funny looking female purple finch" and thought it must have had a color mutation, but it had so many differences. It was just a little larger than the sparrows: no stripe over the eyes, a blackish chin which seemed to match the frontal part of the head, and white feather edging on the wings! Besides all of the breast stripes, it had a very prominent dark spot in mid-breast which made one think of the Tree Sparrows and sometimes when feeding it scratched around just a little, like a Tree Sparrow. The legs were dark and the tail was rounded with a little bit of white edging. Surely it couldn't be a Purple Finch with that many differences — it was very hungry, ate hurriedly and wasn't bashful about chasing the sparrows that crowded it off the feeder — but what was it? It didn't look like anything in the bird books — then something told us to look in the Bunting family and the mystery started to unfold. Could it be a Lark Bunting which was way out of range and surely out of season? Phone calls to Mrs. Harvey Gordon and Mrs. Franklin Fitch led to the feeling that it could be. Mrs. Gordon came down the following afternoon (Saturday) about three o'clock but it had finished feeding for the day and didn't put in an appearance. The following Sunday morning, Mr. and Mrs. Bill Draskowski and Mrs. Gordon came down and it came



to feed so they got to see it. The following day, Barry Drazkowski saw it right after lunch. Tuesday, Dr. and Mrs. Mahle came about mid-afternoon, but after being active all day, it didn't put in an appearance for them. Bob Bilder set up a blind in the yard and got quite a few pictures and Bill Drazkowski got some too. As of November 29, quite a few people have seen it and we're hoping it will survive the cold and the cats that are getting bolder by the day. It sometimes likes to search for food on the ground which is worrisome because of the cats. When Bob Bilder watched it from the blind the first week, he noticed that it came to feed about every 25 minutes or so until 3:00 P.M. It enjoyed going to the bird bath for water and is puzzled by the frozen ice now. It fed on some baked squash pieces that had been put out for the squirrels. It spends a lot of time after feeding cleaning its bill on the tree limb. The bird remained throughout December, coming to our feeder on a daily basis. As January approached and the weather got colder, we did not think it would survive but it made it through the -30° readings in late January. It continued to come every day during February and it was about this time that we began to notice that he was getting darker. The bird got darker as spring and warmer weather came in March. We last saw the bird on April 22, 1977 and at that time he was totally black except for his wings and a small spot on the back of the neck. We were fortunate to have the bird at our feeder for over five months and watch this gradual change in coloration. **Will and Betty Snyder, 502 E. 2nd Street, Winona, Minnesota 55987.**

Editor's Note: The above represents the first winter record for the Lark Bunting in Minnesota and one of the few records for the eastern part of the state.

PRAIRIE FALCON AT BLUE MOUNDS PARK — The day, Oct. 17, 1976, was clear with a steady wind blowing from the east. Between 9:30 and 10:00 A.M. Chris and I were heading toward the cliffs, having just crossed steps going over the fence. I saw a large bird coming up over the tips of the trees by the cliffs which were barely visible on the horizon. I saw the sharpness of the wings as it slowly circled about 30 - 40 feet above the ground. The bird appeared to be a large falcon even though it was soaring on the wind. The sun was far enough to our right for us to observe the bird with our 10 x 50 binoculars. I told Chris to watch for the black "armpits" of the bird. As it came slowly toward us I could see by its shape that it was indeed a falcon. We watched as it came toward us floating on the wind. It made a slow circle directly above us and the dark armpits contrasted sharply with the wings and belly of the bird. I then tried to view the facial pattern, but only could confirm that it did not have the striking facial pattern of the adult Peregrine Falcon. It circled once more after it was about twenty yards beyond us giving two flips of its wings and fanning its tail a little which had been straight and narrow until this time. The tail was brown and barred. The flips of its wings reaffirmed my belief that it was a falcon and the black armpits assured me that I had seen a Prairie Falcon. I discussed the bird with Chris who also had noted the black armpits and lack of any distinct facial pattern. She questioned the fact that the bird had been soaring nearly the whole time and I attributed this to the strong east wind on which it was sailing. **Lyle Herzog, 1522 Portland, Apt. 111, St. Paul, Minnesota 55104.**

A WINTER LOGGERHEAD SHRIKE — On December 18, 1976 Joann and I were birding with Henry Kyllingstad on the Marshall Christmas count. In

the morning we had enjoyed counting many species. However, to cover the entire area we separated in the afternoon. Joann and I covered an area around Lake Marshall in Lyon County. While we were walking around the east end of the lake a bird flew into a boxelder tree about 25-30 yards in front of us. It was seen in good light with 10 x 50 Bushnell binoculars for about 5 minutes. The first observations of black tail, wings, and eye mask and hooked bill suggested a shrike. Further observations were dark gray crown and back with white breast and belly. There was no barring on the breast. The eye mask went over the top of the bill and the bill appeared to be dark in color. After consulting "Birds of North America" by Robbins et al, we concluded that it could only be a Loggerhead Shrike. According to "Minnesota Birds When, Where, and How Many" by Green and Janssen, this would be the third winter record for Minnesota. **Lee and Joann French, 1355 Eustis, #8, St. Paul, Minnesota 55108.**

TOWNSEND'S SOLITAIRE IN MINNETONKA — At about 11:30 on Saturday, December 15, 1976, on the Excelsior Christmas Bird Count, I stopped at Jane Highum's house at 15811 Boulder Creek Drive, Minnetonka to get her list of birds that had visited her feeder that morning. We looked out her window and Jane said, "Is that a Cedar Waxwing that just landed in the tree?" I looked, and there, very clearly visible about 15 feet away was a slim gray oriole-sized bird with an eye ring, a fairly long tail, and the look of a thrush. It was a Townsend's Solitaire. Jane had a good look. Then the bird flew into the next yard. We went outside and looked again. We could see its white outer tail feathers as it flew away. **Pepper Fuller, 14505 McGinty Road, Wayzata, Minnesota 55391.**

TOWNSEND'S SOLITAIRE IN OTTER TAIL COUNTY — On December 18, 1976, Mark Otnes and I began birding at 8:30 A.M. at Orwell Refuge, seven miles southwest of Fergus Falls, on our Christmas Count. On the east side of this refuge is a large stand of junipers containing several hundred trees. Many of these junipers are loaded with berries, and it's a good area for waxwings. This stand of trees is about 800 feet long and 25-30 yards wide. Just after entering the south end of the junipers, I spotted a bird perched approximately 100 yards away in the top of a juniper. At that distance it appeared the size of a Bohemian Waxwing. Before I could get the binoculars on it, it flew towards us and landed about 25 yards away. We both had a brief but excellent look at the bird through our binoculars, noting a strong white eye-ring, buffy lower wingbar, long, slightly notched tail, and over-all olive-grey color. It gave six to eight short, piping whistles at this time, the only vocalizations that we could definitely attribute to this species during its stay in the area. Its flight was swift and erratic, like that of a flycatcher. During the many subsequent observations, the white outer tail feathers could only be seen in good light from certain angles. The weather was sunny, low 40's, with a light south wind. Mark and I both immediately agreed that the bird was a Townsend's Solitaire. Both of us had previously seen the species in western states. About 1:00 P.M. the same day, the bird was seen by Gary and Marion Otnes, Gerry Winkelman, Art and Kathy Barber. The bird stayed in the area for several weeks and was seen by many other birders including Steve and Jo Blanich, Terry Savaloja, and Kim Eckert. It was always in the junipers and could be found with equal ease any time of the day. The last positive sighting was made by me January 22, 1977. On or about December 3, 1976 I was birding the

area alone and had two brief glimpses of what I'm sure was the same bird. If so, it remained in the area for seven weeks. **Steve Millard, 304 N. Vine, Fergus Falls, Minnesota 56537.**

ANOTHER TOWNSEND'S SOLITAIRE — On the morning of March 18, 1977 I was walking through broken woodland and meadow in Morris T. Baker Park Reserve near Maple Plain, looking for early arriving Eastern Bluebirds. A bird which I was unfamiliar with immediately, landed in a small Red Cedar tree near me and began what apparently was a search for food. As I tried to get closer for a better look, the bird flew to a larger Red Cedar and began eating cedar berries. I was then able to sit about 15 to 20 meters away from the bird and watch it with my 7 x 35 binoculars for nearly 10 minutes before it flew away, over a marsh. The bird was slender, about 15 centimeters long, its color was a brownish gray with the back slightly darker than the breast, the tail was dark with white outer feathers, the wings moderately dark with indistinct barring and a small amount of cream color showing, and, the most distinctive characteristic; a white eye ring. Every few minutes the bird would stop eating and sing a soft warbling song, which sounded somewhat like that of a Rose-breasted Grosbeak. As I watched the bird the only one I could think of which matched its coloring and size was the Townsend's Solitaire, although I was initially skeptical. However, checking Robbin's **Birds of North America** I realized that the bird was indeed a Townsend's, even though the bird I saw was not as brown as that pictured. When I got home I checked the photos of the Townsend's Solitaire in Eliot Porter's **Birds of North America** and the National Geographic's **Song and Garden Birds** and the birds pictured were much more gray than the one I saw. I am quite certain the bird I saw was a Townsend's Solitaire but I am somewhat puzzled about the color differences noted. **Jerry A Sivets, 468 Virginia Ave., Long Lake, Minnesota 55356.**

WINTER OBSERVATION OF A MERLIN IN POLK COUNTY — On February 14, 1977, Jerry Tri and John Griswold (natural resources students at the University) brought an injured female Merlin to my office. They had been hunting pigeons on February 12 near an abandoned barn two miles east of the campus, when they noticed the Merlin flopping on the ground. They assumed that it had been shot as some dried blood was on the breast feathers. On calling Dr. Pat Redig at the School of Veterinary Medicine (U of M, St. Paul), he suggested that I provide the bird with water to prevent dehydration. The bird drank well from a dish of water that evening and the next morning it was transported via North Central Airlines to St. Paul. According to Dr. Redig the bird has sustained a "soft tissue bruise" in the wrist joint but was eating well and seemed to be recuperating in good order. He indicated that he receives more injured Peregrines than Merlins and that Merlins are quite uncommon — particularly in the winter. Green and Janssen (**Minnesota Birds, 1975, U of Minn Press**) reported Merlins as "casual in winter" and note two February records in Stearns County (February 5 and February 25, 1966). They suggest some of the extreme migration dates may represent wintering birds. It is possible that this Merlin was at least "lingering" in the general area as a large pigeon flock frequents the barn where it was found and many pigeons, Starlings and sparrows occur around the barns at the Northwest Agricultural Experiment Station, which was only two miles away. Dr. Redig identified the subspecies of the bird as **Falco columbarius richardsoni Ridgeway.**

W. Daniel Svedarsky, Natural Resources Department, University of Minnesota Technical College, Crookston, Minnesota 56716.

LATE GYRFALCON — OTTER TAIL CO. — At 10:30 a.m., on April 3, 1977, I was scanning the slough on my property, observing Ring-billed Gulls, when a large falcon was noted approaching me from the north at an elevation estimated somewhere around 200 feet. It was considerably larger than the two Ring-billed Gulls below and to one side of it; the wings were of swept back design and "pointed," as opposed to the wide wing tips of the buteos; the wings were flapped very slowly, nearly analgous to the wing beats of a Herring Gull; the bird did not glide; the tail was long and slimmer than a buteo's; the semblance of a dark terminal band, indistinct but present, was noted on the grayish brown tail; the underbody and underwings were brownish-gray and well marked overall with dark blotches. As the bird moved away into the south it appeared that the back and upper wings were a very dark brown, perhaps mottled with very dark blotches. The bird passed nearly overhead, but at just enough of an angle to ascertain a dark "moustache" or blotch below and posterior to the low mandible; the side of the head appeared quite brown. The falcon was observed for approximately 12-14 seconds through 10 x 35 binoculars. Immediately thereafter field notes were written of the bird's characteristics. The light was excellent, the sky clear. The bird did not become obscured by the sun until it had moved to the south of me. Referring to the appropriate field guides, I have no reservations about identifying the bird as a Gyrfalcon. **Gary L. Otnes, Route 1, Fergus Falls, Minnesota 56537.**



BOOK REVIEWS

A.B.A. CHECKLIST: Birds of Continental United States and Canada, prepared by the Checklist Committee of the American Birding Association, P.O. Box 4335, Austin, Texas 78765. 64 pages. 1975. \$3.50

There have been a number of checklists published recently, two in particular on birds of the world (**The Loon** 48:41-42 and 191-192) and the new A.B.A. Checklist of Birds of the U.S. and Canada. This latter publication is by far the most useful for the bird lister.

This volume provides an up-to-date listing of 794 species in the 49 Continental States and Canada. The listing follows essentially that of the 1957 "AOU Checklist of North American Birds" (5th edition) and its 32nd supplement. Thus, all the recent "lumps" and "splits" and name changes that bird listers are concerned with are included. The geographical area covered in this volume does not include Greenland, Baja California or Bermuda.

Each species listed has a symbol following the name, indicating the present status. These categories are: Accidental, Extinct, Introduced, Native Breeding Species and Visitor, Non-breeding. There is space provided after each species, presumably for date and locality seen. Also provided is space in the back of the book for Notes and Supplements to the checklist, which will be printed in **Birding** magazine.

Several new innovations are included in this checklist; first, the order of the shorebirds follows that proposed by Jehl in 1968. Also included are a number of name changes such as American White Pelican, American Black Duck, Sedge Wren (short-billed Marsh Wren) and Marsh Wren (Long-billed Marsh Wren). These changes are anticipated to be included in future A.O.U. checklists.

My only criticism of this checklist is these name changes. Why change a few names in anticipation of what the A.O.U. may or may not do in the future. Also, in changing the order of the shorebirds, why not follow the new order for waterfowl being used by Johnsgard in **Waterfowl of North America** and Palmer in **Handbook of North American Birds** (Vol. 2 and 3)?

It is relatively easy to overlook these criticisms because any list will be in a state of flux. The A.B.A. has done a great job in providing us with a convenient, inexpensive way to keep our lists and to know what species occur in the Continental U.S. and Canada.

Robert B. Janssen

Ducks, Geese & Swans of North America by Frank C. Bellrose, color plates, maps, graphs, 544 pp, Stackpole Books, P.O. Box 1831, Harrisburg, PA 17105. 1976. \$12.95.

This book is a new and expanded version of the classic "Ducks, Geese and Swans of North America" by Francis Kortright, first released in 1942. Kortright's book was the standard reference work on waterfowl until recently. In the past year, three major new works on waterfowl have been published. This book, Johnsgard's "Waterfowl of North America" (1975) and Palmer's 2-volume "Handbook."

A tremendous expansion in our knowledge of waterfowl has occurred over the past 30+ years as researchers have studied each species in depth. As the author states, this period represents the "golden age" in fact finding on waterfowl. This volume brings us up-to-date on this research.

The book begins with chapters on Classification, Molts and Plumages of Waterfowl, Migration, Conservation of Waterfowl, the Role of Hunting Regulations, Mortality and Disease and

Identification.

Following these chapters are the species accounts covering 55 species. The color plates, of which there are 36, are the same as those contained in the original Kortright volume.

The species accounts which are the "meat" of the book are broken down into sections on Vital Statistics, Identification, Population Status, Distribution, Migration Behavior, Breeding, Postbreeding Season and Food Habits. Each of these sections is broken down in sub-sections, for example; under Distribution, there are sections on Breeding Range, Migration Corridors and Winter areas. Under each species, there is a full page map of North America, showing breeding and wintering ranges, plus migration corridors across the continent. The map also indicates populations in the migration and breeding areas.

In a book such as this — so full of statistics and data, it is difficult to make general criticisms. In a few instances, I would challenge some of the data as it concerns Minnesota. One example would be on the wintering range of several species. Under Shovler it is stated occasionally small numbers have been found as far north as Iowa and Minnesota. This is misleading, as only two individuals have ever been recorded as overwintering. The Pintail is not included as wintering in Minnesota, however, the above statement on occasionally wintering would fit the Pintail much better.

These are minor criticisms when you consider the scope of this volume and the amount of data included. There is just about everything the general birder would want to know about waterfowl. I would highly recommend this volume to be part of your library.

Robert B. Janssen

BIRDS. Their Life. Their Ways. Their World. Text by Dr. Christopher Perrins with over 500 Illustrations in full color by Ad Cameron. 160 pages. Har-

ry N. Abrams, Inc., 110 E. 59th Street, New York, N.Y. 10022. 1976. \$19.95.

When I first sat down and thumbed through the pages of this book, I anxiously went from page to page, gazing at the illustrations of both common European and American Species, plus exotic forms found in Africa, Australia, South America, and Asia. The illustrations are impressive — showing not only the species but various types of wings, feet, eggs, nests, how birds adapt to various environments and how they act and react to each other and to other creatures.

The author discusses birds evolution, anatomy, feeding habits, social behavior, breeding and migration. As I got further into the book and examined the illustrations more critically, I became less enthused about the book. Many of the American species with which I am familiar were much too gaudy. A few examples will suffice: On page 27, the Ruby-crowned Kinglet is shown as an emerald green, the House Sparrow and Curlew Sandpiper on the same page are way overdone as far as color is concerned. The Chimney Swifts on page 47 do not resemble the color of the swifts I know. The illustration of the White-winged Crossbill on page 50 is captioned as a Pine Grosbeak. In spite of these criticisms, I found the illustrations a joy to look at, but kept hoping I was seeing what the birds really looked like.

As I read through the book and covered the chapters on anatomy, feeding, habitats, social behavior, breeding, migration and bird population, I continually felt that the author was over-generalizing. This seems to be one of the main drawbacks of books such as this, where the author is trying to cover a "world of birds" in only 160 pages. Terms which the general reader is probably not familiar with (lek, bolusses, for example) are not defined. The many general statements lead to what I believe are just plain incorrect statements such as, "all wrens build domed nests," "no

bird nests on water;" in the illustration of the Peregrine taking prey, a Peregrine is shown attacking an American Bittern and the caption states, "although the Peregrine does not often take prey as large as that figured here, from time to time it takes very large prey such as geese." The species of geese is not mentioned, but this seems totally misleading, as the normal prey of the Peregrine would be in the Common Flicker, Rock Dove to smaller size birds.

Again, in spite of all this, I enjoyed reading the book from the challenging standpoint of trying to interpret the author's generalizations.

Robert B. Janssen

Owls of the World, Edited by John A. Burton. Illustrated by John Regnall, 90 color photographs, diagrams and range maps and 80 paintings, 209 pages. E. P. Dutton & Co., NY, 1973 \$17.95 hard cover, \$10.95 soft cover.

This large handsomely illustrated book seems to have been written with several purposes in view; first to illustrate (with either color photographs or color paintings) all of the known species of owls together with descriptive text of habits, ecological settings and brief life histories. Another purpose seems to be to dispell many old myths and promote conservation of a valuable but misunderstood group of birds.

The main section deals with species accounts and some of the other chapters are on physiology and anatomy of owls, fossil species and conservation. A chapter on owl pellets and how to analyze them for food content is included. Another chapter on owl voices attempts to set down all known vocalizations in words or syllables.

The text is a joint effort of a group of contributing experts from Europe. The text is non-technical, easy and interesting reading. The color photographs are very good and well reproduced. Most are from natural settings

but some are of obvious captive birds. The paintings are of fine quality and show many species probably never photographed.

I would say the book well serves its purpose, and should be welcomed by anyone interested in this fascinating group of birds.

Raymond A. Glassel

A Guide to the Birds of Panama by Robert S. Ridgely, Illustrated by John A. Gwynne, Jr. Princeton University Press, Princeton, N.J., 1976. 394 pp. illustrated (32 colored plates, 54 black & white drawings) \$15.00.

Bird watchers first exposed to tropical avifaunas are often afflicted with delusions of myriads of hopelessly unidentifiable, lifers indiscriminately festooning every habitat in sight. Recent Christmas counts published annually in **American Birds** for the region of Catemaco, Veracruz in southern Mexico (one of which I participated in as an "outside observer very familiar with the area") have convinced me that they are, at least in part, a comedy of errors resulting from such "creative viewing." I must confess, however, to having had similar experiences upon initial, albeit brief, contacts with Panama and several tropical South American countries. For such circumstances: I would prescribe as preventative medicine, **A Guide to the Birds of Panama** for those fortunate enough to actually plan a visit to Panama or its neighboring countries.

Among the recent field guides covering the birds of Middle America (**Birds of Guatemala** (1970) by Hugh C. Land and **A Field Guide to Mexican Birds and Adjacent Central America** (1973) by Roger Tory Peterson and Edward L. Chalif to name the best) and South America (**A Guide to the Birds of South America** (1970) by Rudolph Meyer de Schauensee), **The Birds of Panama** stands out like a glowing comet. Its outstanding merits, I believe, are the comprehensive detailed

data, concisely and compactly packaged, that summarize the description, status, distribution (in Panama), range (beyond Panama) special notes and similar species for each of the 883 species recorded in Panama. The sections dealing with habits, status and distribution (as well as the other sections) that are clearly outlined in the "Plan of the Book" (pp. 16-25) serve admirably to aid in identifying the often narrow ecological niches of tropical birds. Therefore, the reader is provided with some degree of predictability as to where most of the species can be found among 15 habitat types or plant communities, (five additional strata within the forest habitat are not considered separate habitats but each has its distinct group of birds) recognized by Ridgely.

The colored plates, although somewhat variable in quality even within a single plate, are certainly superior to those in the aforementioned guides save for the possible exception of **Peterson's Field Guide to the Mexican Birds**. Most of the birds figured, excepting the Gray-necked Wood Rail and some herons in plate 1, are accurately presented in pleasing, natural styles. Birds on a plate are not singly posed ranks except for the large tyrant flycatchers in plate 19 and hummingbirds in plates 7 and 8. Regimentation of the hummers is forgivable since they are all shown, with some crowding, in two plates thereby sparing an observer rampant frustrations and sore thumbs from turning pages for constant comparison. Color tones are slightly off for many species particularly when brown-greens, green-yellows and red-brown hues are to be discriminated, examples of which are provided respectively by the Ochre-bellied and Yellowish Flycatchers, female manakins and Chestnut-capped Warbler, and the ant-tanagers. Also, a vague impression is conveyed of obscurity and feather disturbance on the backs of a number of birds. However, a few plates, notably the woodpeckers

and toucans, are superior in accuracy and clarity.

For a book presenting the wealth of details this one contains, it appears remarkably free of errors. I found only one among those species about which I possess some knowledge, that being the distribution of the Solitary Eagle which includes southern, not northern, Mexico as is stated in the text. This book is indispensable for anyone involved with neotropical birds studies, and provides information far beyond the single role of facilitating bird identification in the field. The discussion on climatology, migration and local bird movements in Panama are highly relevant to the interests of ecologists and biogeographers while the topic of conservation, a stimulating yet depressing picture of the Latin Americans economic philosophy — consume all resources and conserve none — should concern everyone. The book is certainly well worth adding to one's reference collection.

Richard Oehlenschlager

The Web of Adaptation by David W. Snow. Demeter Press Quadrangle/The New York Times Book Co., N.Y., N.Y. 1976. 176 pages, 15 illustrations in black & white. \$8.95.

Of the rather small but growing genre of specialists in neotropical ornithology, few individuals have rivaled in scope or style the masterful and prodigious life history studies of Alexander Skutch. The elite husband and wife team of David and Barbara Snow, however, have achieved such distinction, and the copious flow of ink resulting from their joint efforts in the tropical Americas is enjoyed by a wide range of readers, be they serious ornithologists, ecologists, or amateur bird enthusiasts. In **The Web of Adaptation**, David Snow perhaps mimicking some of the characteristics of certain cotingas and manakins he discusses in several chapters of the book, looks upon his mate from a lek posi-

tion as a sole author. The reader gains the impression that such a move on his part is merely a lapsus since Barbara is referred to seemingly as often as are certain of the birds about which the book is concerned. Seriously, the book has many merits to commend it and no major demerits to detract from it. Snow's lucid and pleasant but somewhat flowery narrative style relates effectively the frequently difficult circumstances under which data are tediously obtained for the tropical forest species. Fundamental differences between the neotropical and temperate zone avifaunas are well emphasized, especially the importance of frugivory as a feeding strategy that has exerted great selective influence in the development of strikingly distinct plumage dimorphism between the sexes, mating and social systems, and nesting habits of tropical birds.

My chief criticism of the book concerns its format more than its content. For maximum organizational effect, chapters 5, 6, 8 and 10 which are respectively, "Some Consequences of Eating Fruit," "Sexual Selection," "Nests" and "The Web of Adaptation" should precede chapters 1, 2, 3, 4, 5 and 9 which are all accounts of individual species. The final chapter (11) which examines the process of deforestation and its potential role as an agent of extinction does seem properly placed and is a must for anyone concerned with conservation movements aimed at preserving rain forest areas.

Unfortunately, colored plates of the birds discussed in the text or photographs of their habitats are excluded from the book. Although adding to the cost, they could certainly have enhanced the presentation more than the small but sometimes well executed black and white line drawings which are composed of male cotinga heads already described adequately in the text. Whether or not one has had field experience in the American tropics, **The Web of Adaptation** is nevertheless an immensely

enjoyable "Snow" job worthwhile to anyone interested in interactions among neotropical floras and avifaunas.

Richard Oehlenschläger

Crows of the World, by Derek Goodwin. Illustrations by Robert Gillmoor. Cornell University Press, Ithaca, New York 14850. 3 color plates, 114 line drawings, 360 p. 1976. \$28.50.

This book is not the kind of book you'd likely want to carry on a field trip. It better serves as a reference to explain those things which you observe in the field. The book is a very detailed organization of literature on Crows, combined with Goodwin's own observations. The first chapters focus on the Corvid family and common behavior, followed by individual species descriptions.

Goodwin emphasizes the behavior of Crows, but he doesn't neglect their history in myth or their physical description. He sees Crows as functioning members of an ecosystem.

His language flows in a natural, precise, and readable fashion. His descriptions of individual species are cryptic, but packed full of detailed information. He defines most of the terms he uses in context, but a glossary would be useful if this book is to be used as a reference. The book has an index of common and scientific names of species, which seems to me a compromise between no index at all, and a more expanded one including subjects. I am most impressed by the bibliographies following each chapter. His frequent references to other scientists add strength to his text and indicate a broad knowledge of his field, although he cannot resist an occasional poke at his colleagues. Konrad Lorenz seems to be his favorite target: "Lorenz states that if no other material is available the Raven will cover its booty with some totally inadequate object such as a tiny bit of paper that makes it more, not less

conspicuous. I have, however, never seen this or any other corvid fail to cover completely the food it was hiding when it had the opportunity of doing so."

It is clear that his own observations of Crows are extensive. He skillfully blends his personal experiences with that quoted from other sources. He tends to make generalizations; some may find his conclusions too anthropomorphic and his assumptions too broad because of this. Yet he seems familiar with Crows in an intimate way. Unlike many authors I have read, he readily recognizes individual differences between birds of the same species, and he tries to distinguish those behaviors which may be individual from those which may be attributed to a species as a whole.

Goodwin encourages personal discovery, as when he says: "Little appears to be known about how and why a particular site is first 'chosen' as a communal roost. Once such a roost is established it is easy to see how new members may be recruited, through the tendency of young or insecure individuals to follow those older or more decisive in manner. New communal roosts are, however, quite often formed. Anyone able to study the formation of such a roost from its earliest stages would almost certainly be able to make new and interesting observations."

And he chides those birders who don't share their knowledge when he writes: "Further information on this inhibition (fighting near the nest) is badly needed and it is hoped that any readers who make observations on it will publish their notes."

The illustrations by Robert Gillmor

are accurate and useful for refreshing your memory, but I found a need to refer to the larger and more familiar illustrations in Robbin's **Birds of North America**. Goodwin's replete verbal descriptions fill gaps left by the illustrations.

My hope is that I can learn from the clarity in Goodwin's notes, so that my observations can become as full of information and as interesting to read as Goodwin's are.

Diana Downes

British Birds of Prey by Leslie Brown; Taplinger Publishing Co., 200 Park Ave. S., New York, N.Y. 10003; 1976; 40 photos plus several maps, charts and line drawings; 400 p.; \$17.50.

Many readers may not be aware of this, but writing book reviews for **The Loon** is not without its rewards: you normally get for free the books you write about. About the only drawback is when some misguided publisher presents us with some obscure bird book of little or no interest to Minnesota readers, expecting a kind review in return. Such is the case here. **British Birds of Prey** certainly appears to be an excellent study by a known authority telling everything you always wanted to know about British raptors. The only problem is I never really wanted to know all that much about them — not enough certainly to spend 17 dollars plus on a book. But again, I got it for free. Anyway, if by some remote chance you are interested in the hawks of England, you should either buy a copy of this book or borrow mine. I'll probably let you keep it.

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 Robert Janssen. See inside front cover.



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Drawings by Jacque Rosenau



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: Gary and Linda Ash, 5638 Trading Post Trail, Afton, Minnesota 55001. To join the MOU and receive both MOU publications, send \$5 for a regular yearly subscription. Or other classes of membership that you may choose are: Family \$6 yearly; Sustaining \$25 yearly; Life \$100. 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, 14321 Prince Place, Minnetonka, Minnesota 55343. (phone 612-938-7464). 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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Rochester, Minn. 55901

the President Writes...

A few years ago the MOU sent a resolution to the Department of Natural Resources asking extension of wildlife management practices to non-game species. Before his departure to assume new duties in Washington, former Commissioner Rober Herbst appointed a non-game biologist to the DNR staff. For this important post he chose Carrol Henderson, formerly assistant manager of the Lac Qui Parle Refuge. We owe Mr. Herbst hearty thanks for this action.

Young knowledgeable, dedicated, enthusiastic and full of ideas, Mr. Henderson attended the MOU board meeting at Fort Ridgely State Park on July thirtieth. He told of studies he has started, utilizing input from all DNR field personnel, concerning species and habitat priorities, colonial nesting birds, raptors, prairie species, wetland species, forest wildlife, urban wildlife, other vertebrates, and endangered species, to name some of his concerns. He indicated a strong desire to work together with the members of our organization in data collection and other activities about which I am sure we will be hearing from him. This could be the beginning of great things.

Now some less inspiring news: the Marshall sewage lagoons have been dried up and the land leased to an agricultural chemical firm for a five year period for use as demonstration plots. This action is not necessarily final or irrevocable, but for the present we have lost the best shore bird observation site in southwestern Minnesota. The DNR has expressed to the city council an interest in buying one or more of the lagoons to serve as a refuge for shore birds and waterfowl. I believe that the council is ready to listen to alternatives. Restoration of one or more of these ponds would be an important victory for wildlife, the DNR, MOU and bird lovers everywhere, for it would be the first time, probably, that a man made water area of significance had such treatment.

Your letters could help to make this a reality. If you have birded the lagoons, or if you would like the opportunity to do so in the future, please write to Mr. James Heller, City Administrator, Municipal Building, Marshall, Mn. 56258. You might mention the abundance of game and non-game species that have used this area as well as the numbers of people who have traveled considerable distances to study them.

Happy birding,
Henry C. Kyllingstad

Analytical Data Utilization, Phylogenetic-sequential Nomenclature, and Statistical Diversity Ratios of Avian Taxonomic Densities

by Bert Lystor, Ph.D.*

INTRODUCTION

Folks, I'd like to introduce you to my bird listing research associates, Perry Pothole and Dickie Birdlover. Say hello to the folks, Perry . . . No Dickie, they don't want to meet your pet goldfish . . . And me, though of course I need no introduction, I'm Bert Lystor.

METHODS AND MATERIALS

When typing up my birds lists at home I use the hunt-and-peck method. When marking off birds on a checklist, we use the hunt-and-check method. As far as materials go, our checklists are made out of paper, and I use wooden pencils. Some listers, like Perry, prefer mechanical pencils that are made out of some kind of metal. Others, like Dickie, like plastic ball-point pens. If you use pencil, make sure you use one without an eraser. That way when you make a mistake and check off the wrong bird, you won't be able to erase it, in which case you might as well count it.

RESULTS

Oh yeah, I almost forgot, a scientific article is supposed to have some figures or charts or tables or something:

Table A (not shown): It's in my dining room. That's where I copy down all the birds we saw for my files.

Table B (not shown): That's in Dickie's room. He keeps his bird books on it next to his aquarium.

Figure 1: 58 (the number of different lists I have)

Figure 2: 6 (my February Koochiching County list)

DISCUSSION AND SUMMARY

Perry, Dickie and I like to have discussions all the time about birds and listing. Summary weather is all right for bird listing, but I prefer the spring or fall.

ACKNOWLEDGEMENTS

I'd like to thank Dr. Arnie Thologist of the Bull Museum of Natural History, without whom this scientific paper could not have been written. He dared us to prove that listing has even a tiny bit of scientific value and that listing is not just a game for childish minds. After he said that, Perry kicked him in the shins, Dickie said, "I'm gonna tell my mommy on you," and when I said, "Oh yeah? Darers go first!", he double-dared me so that I had no choice. But we showed him, the big bully!

LITERATURE CITED

Perry sighted some literature books in the Tofte dump when he was on a birding trip a couple years ago, but some kind of a big white falcon flew off with them before he could see what they were.

*Phony Doctorate

WINTERING WATERFOWL IN THE TWIN CITIES

James A. Cooper and Michael A. Johnson

The winter ecology of North American waterfowl is poorly understood in comparison with breeding ecology. Some species, for example, the Blue-winged Teal (*Anas discors*; scientific names of other waterfowl are given in Table 1), winter in distant southern marshes, while others such as the Common Goldeneye remain on "the edge of the ice." Some waterfowl, particularly the Mallard and the Giant subspecies of the Canada Goose, have been affected by man's modification of the environment, and many are wintering further north than they formerly did (Bellrose 1976: 149, 235).

This paper describes the winter waterfowl population of the seven-county Twin Cities Metropolitan Area from 1974 to 1977. Roberts' (1938) historical records are reviewed and aspects of the ecology and management of wintering Twin Cities waterfowl are discussed. Portions of the data included here were collected by members of the 1974, 1975 and 1976 Wildlife Populations Management/Ecology class at the University of Minnesota, by Rod Sayler, Department of Entomology, Fisheries and Wildlife, University of Minnesota, by personnel of the Hennepin County Park Reserve District and by Lawrence Thomforde, Kennedy High School, Bloomington, Minnesota. Robert Jensen, Minnesota Division of Fish and Wildlife, assisted with color marking permits. We thank all who cooperated with the investigation.

METHODS

The study was initiated in 1973 by interviewing individuals with a knowledge of winter waterfowl concentrations in the Metropolitan Area. A survey route was then established and a census conducted by car in the third week of January, 1974. When additional concentrations were discovered or reported to us by others, these were

added to the third week of January surveys in 1975, 1976 and 1977.

Data gathered at each concentration area included (1) the species composition, (2) an estimate of the number of each species present, (3) the sex ratio of the species, where this could be ascertained, and (4) an estimate of the number of domestic waterfowl in the concentration based on Delacour's (1964: 145-166) descriptions. The area and source of open water, and the readily apparent foods available to the birds were recorded at each site.

The broad survey was supplemented by several more intensive studies. Mallards were bait-trapped at Black Dog Lake in Burnsville by Lawrence Thomforde in early January 1973 and 1974. One hundred of these birds were marked by painting their tail feathers with orange paint each year. The movements of the marked birds were monitored from January to March by weekly visits to concentration areas. Michael Johnson conducted the study in 1973 and the Wildlife Populations Management/Ecology Class in 1974. The 1975 Wildlife Populations Class carried out a study of the Common Goldeneye. Weekly counts were made of goldeneye concentrations from mid-January to March and their movements recorded by observations from selected points along the Mississippi River from Fort Snelling to the Coon Rapids Dam in Brooklyn Park.

RESULTS

Winter Populations

Waterfowl were found at 39 sites within the Metropolitan Area during the surveys (Fig. 1). The populations totaled more than 14,000 in 1974, near 18,000 in 1975 and 1976, and 22,000 in 1977 (Table 1). Major concentrations were located along the Minnesota River, in Shakopee, Savage and Burnsville, on the Mississippi River in Minneapolis and on Lake Minnetonka.

Black Dog Lake population in Burnsville was consistently the largest.

The Mallard was the predominate species, making up about 95 percent of the total population each winter. The Canada Goose, Common Goldeneye, Black Duck and Common Merganser, respectively, were the next most common. Ten other species were recorded in the surveys (Table 2). Variations in species composition and total population were relatively slight between years.

Winter Waterfowl Habitat

Waterfowl were found at every permanently open water area larger than 0.1 hectare (1 hectare = 2.5 acres) surveyed. Open water at the 39 sites ranged from none at Carlos Avery to about 100 hectares at Black Dog Lake (Table 4). The expanse of open water varied with air temperature and the circumstances producing the ice free conditions. Four causes of open water were encountered during the four winter surveys; these were pumps (39%), heated water (32%), natural water flow (18%), and springs (11%). Pumps, either water or air "bubblers," kept water open in 15 locales. Because this method prevents surface ice from forming by circulating warmer but still relatively cold water from the depths of the water body, the surface area free of ice was the smallest at these sites. Twelve of the pumps were used primarily to keep water open for waterfowl, while three, all on Lake Minnetonka, were used to prevent ice damage to marina docks. Twelve of the wintering areas resulted from heated water discharged by electric generating plants, factories, waste treatment plants, or by shipping centers. The open water at these sites was consistently greater and less affected by periods of low air temperatures. Natural water flow, primarily over dams, maintained open water in seven locales and these, like the pumped areas, were relatively small because of the near freezing water temperatures. Natural springs created ice free water at four locations, the

extent of the open water depending on the temperature of and rate of flow of the spring water and air temperatures. Only the springs were considered natural, that is, not a result of human modification of the environment.

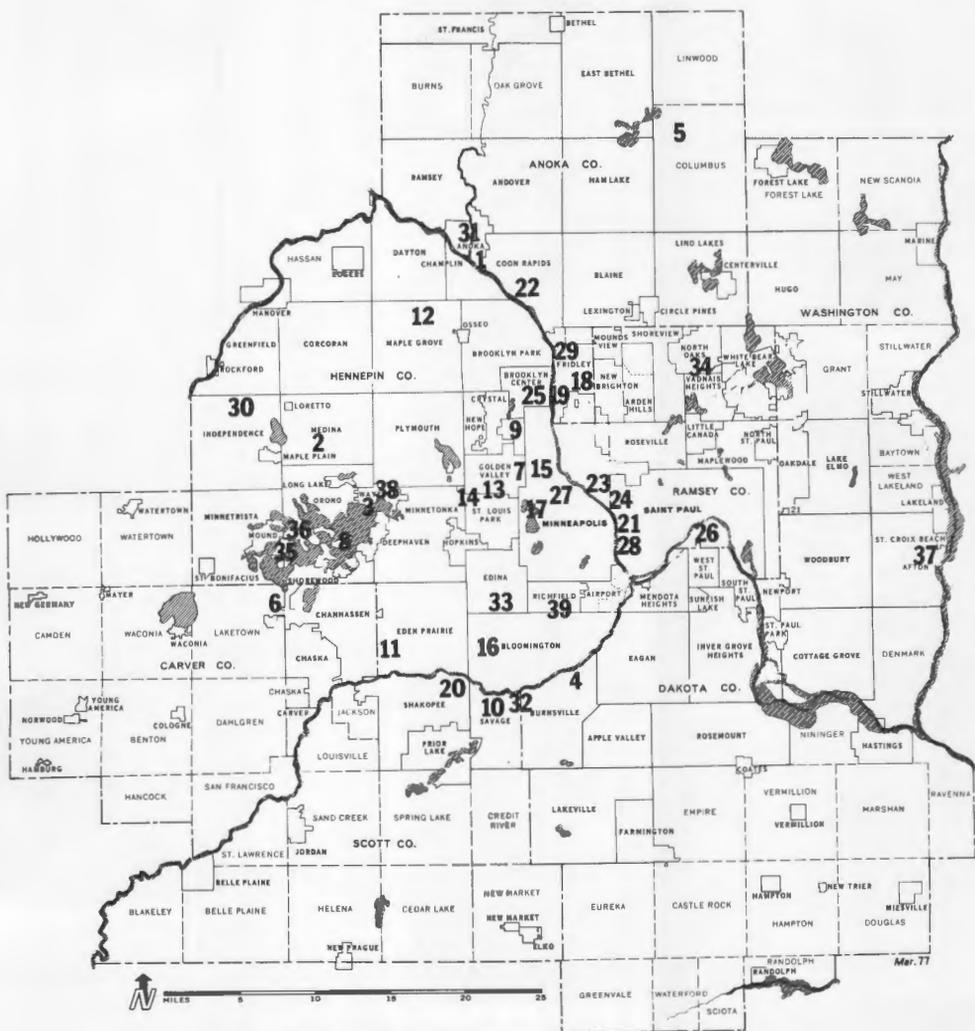
The waterfowl foods at the sites varied from virtually none except "handouts" provided by the public to an abundance of both natural and agricultural foods. While no intensive food habits studies were done, observations of feeding waterfowl revealed that most cold water areas contained few aquatic foods. Birds at these sites were provided grain by nature center personnel or by private individuals, or they were flying to other sites to feed. In contrast, waterfowl at the heated water discharge and the spring areas were frequently observed feeding on aquatic foods.

Mallard Winter Ecology

The Mallard was ubiquitous at wintering sites with open water but most abundant in the Minnesota River Valley, particularly on Black Dog Lake where the Northern States Power Company maintains an electric generating plant. Birds marked with orange paint in 1973 and 1974 were sighted within 16 kilometers of Black Dog (Fig. 2) with most observed near the trap site.

The number of Mallards at a particular cold water site was partially related to the surface area of open water (Fig. 3). This relationship, we believe, was primarily a result of the birds' roosting behavior. Night observations with a nightvision scope, made during the last week of January, 1977 at Black Dog Lake, Southdale, and Lake of the Isles, revealed that all waterfowl at these sites spent the night in the water. Presumably, the smaller populations result from the limited space for roosting, and the use of open water for roosting is a behavior reducing heat loss and/or vulnerability to predators.

Daily flights to and from Black Dog were recorded in 1973 and 1974. The



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Figure 1. Winter waterfowl concentrations in the Twin Cities Metropolitan Area, 1974-77. For place names of locations see Table 1.

majority of these movements were to and from the south and west and most frequently between 0800 and 1000 hours and again from 1500 and 1700 hours. The number of birds leaving Black Dog peaked when temperatures were above freezing and ebbed during extended subzero periods. Flights from most wintering areas appeared to be feeding sojourns. On several occasions we or members of the 1974 Wildlife Class followed flights of Mallards leaving Black Dog. These ducks joined others feeding in standing corn in northern Dakota and Scott Counties. Other birds were frequently observed feeding on spilled grain along the railroad tracks bordering the Minnesota River and near the grain terminals in Savage.

Grain, however, was not the sole food of the Mallard. During and immediately following extended cold periods in 1973 and 1975, major fish kills occurred at Black Dog (Fig 4). The majority of the dead or dying fish were Gizzard Shad ranging in length from 8 to 20 cm. Other dead fish included Carp, Bullhead, Northern Pike and other species. Dead Shad were eaten by Mallards, Black Ducks, Common Goldeneyes and, in 1975, Canada Geese. Smaller individuals were consumed whole, whereas, only the head, gills or abdominal tissues of the larger fish were eaten (Fig. 5).

Each year, except in 1977, the Mallard sex ratio was determined at five locations (Table 5). These data show a consistent imbalance with males being more abundant than females.

The occurrence of domestic Mallard strains in the winter populations was recorded at selected locations in 1974 and 1975 (Table 6). These data are minimum estimates because some game farm Mallards cannot be distinguished from wild Mallards on appearance alone. Based on examination of birds trapped at Black Dog for toe clips (Federal law requires the captive-reared waterfowl be marked by removal of the right, hind toe) at least four percent of the Mallards wintering

at that site were of game farm origin (Thomforde 1976).

Common Goldeneye Winter Ecology

The Common Goldeneye, unlike the Mallard, was found to have a restricted distribution in the Metropolitan Area (Table 1). The species was observed at nine locations in the general surveys but in substantial numbers at only the Black Dog, High Bridge and Broadway Bridge areas. Minimum 1975 population estimates based on counts of birds leaving the three major concentrations points were 400, 250, and 150, respectively. Breckenridge (1953) reported 600 Common Goldeneyes at the Broadway Bridge in 1950.

The daily activities of these ducks were quite predictable and, again in contrast with Mallards, less affected by cold weather. The general pattern was one of rafting in small compact groups in midstream at night, departing the raft site at or just after sunrise and returning at or near dusk. Because no birds were individually identifiable, it is not known whether individual Common Goldeneyes consistently use the same raft area.

The departure of Common Goldeneyes from the Broadway Bridge location was observed on six mornings between 26 January and 15 February, 1975. Most birds flew from the area between 0640 and 0820 hours. Departures were unevenly spaced with the initial movements beginning within one-half hour after sunrise. Flights during this period typically involved two to five birds. Next came a flurry of activity with flocks of 50 to 100 birds leaving almost simultaneously. For example, on 8 February 1975, 61% of all birds leaving the Broadway Bridge site left at 0740 hours and again on 15 February, 57% took to the wing at 0755 hours. After the peak of flight, the remaining ducks departed at irregular intervals and a few goldeneye stayed at the raft site during the day.

The evening return to the raft sites involved groups of one to 70 indi-

viduals. Arrivals were observed most frequently between 1630 and 1745 hours with the peak just at dusk. Only a few individuals joined rafting flocks after dark. Returning flights came from the directions of the morning departure. For example, of 106 birds joining a raft at Broadway on 1 February, 100 came from the north and 6 from the south. Similarly, at Black Dog on 26 January, 30 flocks returned from the northeast, none from any other direction.

Male Common Goldeneyes were more abundant than females in the 1975 winter populations and the sex ratio for 1975 indicated a major movement of goldeneyes into the area took place. The sex ratio at Black Dog Lake, High Bridge and Broadway Bridge combined was 6.1, 4.3, 2.2, 1.4 and 1.2 on 26 January and 1, 8, 15, and 22 February, respectively. Because immature Common Goldeneyes in winter plumage cannot be easily distinguished from females, the true sex ratio was probably greater. For the proportion of adult males to change as it did, either females and/or immature males immigrated into the Twin Cities area or adult males left. A doubling of the population during the period suggests the former happened.

In an attempt to determine the destinations and flight lines of the goldeneye, the 1975 wildlife students posted themselves at observation points along the Mississippi River from Fort Snelling to the Coon Rapids Dam on several mornings, and recorded the direction, time, and size of each flight. These data revealed that a majority of the birds were leaving the Twin Cities Metropolitan Area and following the Mississippi River north to unknown destinations. Mid-day surveys of open water on the Minnesota and Mississippi Rivers confirmed the egress. Counts of loafing and feeding goldeneyes on the two rivers never exceeded 15 percent of the rafting population.

Notes were made on Common Gold-

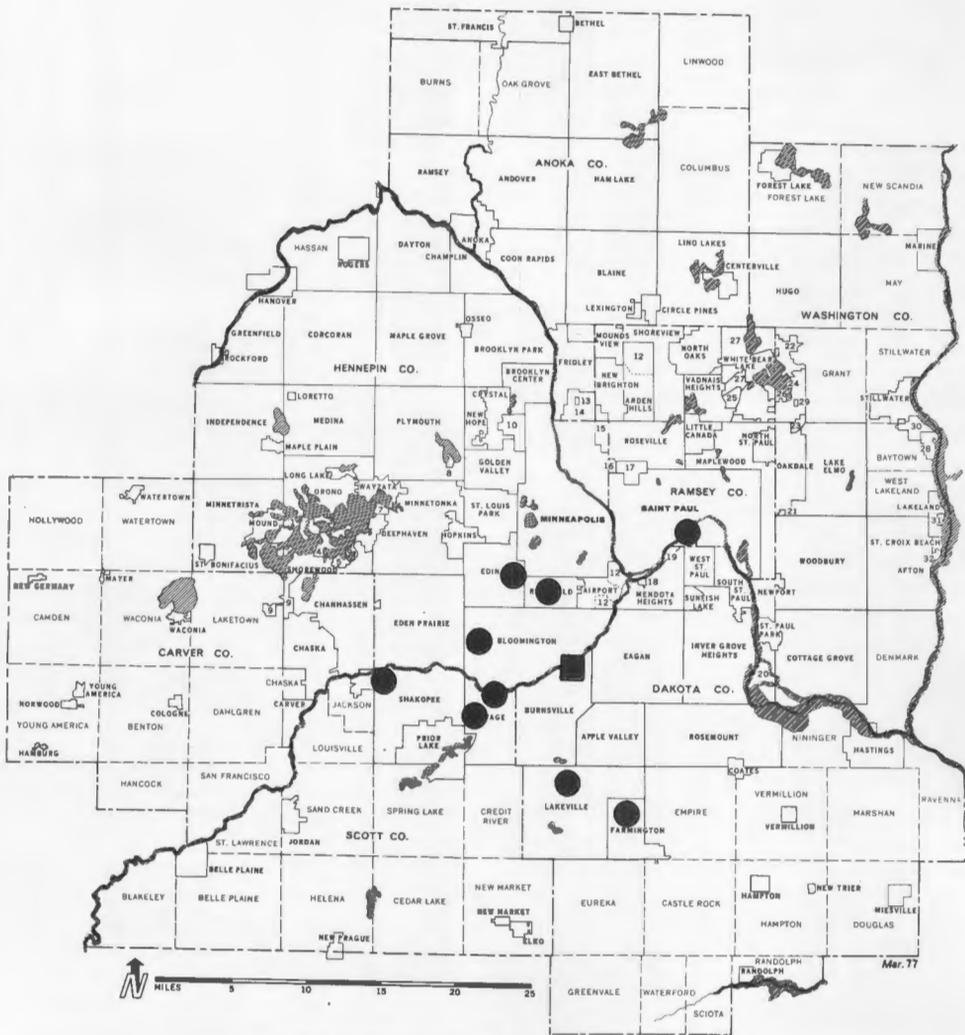
eneys feeding whenever encountered. Because the species feeds by diving, specific food items could not be identified. However, the frequency of feeding observed near sources of grain, suggest that grain may be important. For example, Common Goldeneyes were found daily on the Mississippi River at the Chicago and North Western Railroad Bridge just downstream from a grain barge loading facility. Feeding at the Broadway Bridge location was also near where a brewery unloads grain. Further research will be necessary to ascertain the winter diet of the Common Goldeneye and significance of man's activities to the wintering birds.

DISCUSSION

A comparison of the species found in the Metropolitan Area during the 1974-1977 surveys (Table 2) with those reported for the 1917-1937 period by Roberts (1938) (Table 3), reveals several striking differences. Wintering Mallards have increased from a total of 10 birds observed from 1917 to 1937 to 15,000 or more annually. The Canada Goose, Redhead, Black Duck, Wood Duck and Gadwall were absent from Roberts' winter data, whereas, they were observed consistently in the 1974-1977 surveys. Only the Common Goldeneye and the Common Merganser appear to have been as abundant in the past as they are now.

Some of the major factors affecting the abundance and distribution of wintering birds such as the Mallard, Common Goldeneye and Canada Goose can be hypothesized. However, one must keep in mind that the data presented here are from limited observations and that hypotheses must be tested in more rigorous studies.

Open water and food availability are undoubtedly the most significant factors contributing to the increase in waterfowl wintering in the Twin Cities. And man's activities have been paramount in improving winter habitat. Power plants, factories, and dams have multiplied the surface area of open water many times since Roberts'



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■ MARKING LOCATION ● SIGHTING LOCATION

Figure 2. Winter home range of marked Black Dog Lake Mallards, 1973-74.

observations. Adding to the ice free sites are areas where pumps are used to protect docks or to purposely provide open water for waterfowl. Similarly, the intensification of agriculture and the transportation of grain in the Metropolitan Area has provided an expanding food resource. The sensitivity of fish, particularly Gizzard Shad, to cold temperatures and the resulting fish kills have provided additional food. The inability of Gizzard Shad to withstand rapid changes in water temperature has been well established (Jester and Jensen 1972: 46), and the significance of dead Shad to waterfowl suggested by Trautman (1940:110). Heating of the water also must increase the production of and extend the growing season for some aquatic organisms. Waterfowl capable of exploiting these changes have undoubtedly done so.

The Mallard may well be the most common winter bird in the Twin Cities. Its success in this rigorous climate is undoubtedly tied to its ability to withstand cold and use a wide variety of food. Differential migration by sex and interbreeding with domestic strains may also be important.

The winter Mallard populations we surveyed were composed of nearly twice as many males as females (Table 5). While sex ratios favoring males are common in many duck populations, particularly diving ducks (Aldrich 1973), Mallard populations are normally balanced (Bellrose 1976: 230). Two plausible explanations of the predominance of male Mallards in winter are: (1) a higher proportion of females are killed during the hunting season and (2) drake Mallards can withstand low temperatures better than hens, and thus winter further north. Direct band recoveries for 1280 Mallards banded in August and September, 1974 in Hennepin County by personnel of the Hennepin County Park Reserve supports the latter supposition. A greater proportion of the females were recovered south of Minnesota and, yet the band recovery

rates were similar for both sexes (Tim Dyhr, Hennepin County Park Reserve, pers. comm.)

Drake Mallards are larger than females, weighing an average of 130 g more in winter at Black Dog Lake (Table 7). Using the logic developed by LeFebvre and Raveling (1967) for heat loss relative to body size in Canada Geese, it is conceivable that males lose significantly less heat than females and, therefore, are more adapted to Minnesota winters.

The release of domestic Mallard ducks is common in the Metropolitan Area. These birds are of two origins, game farms and private individuals. Game farm birds are escapees from shooting preserves and propagation flocks while many of the others are what we call "Easter" ducks. Many Metropolitan Area residents purchase ducklings, particularly at Easter, and rear them. When they are grown and no longer cute or easy to maintain, these birds, primarily domestic strains of the Mallard, are often released on the city lakes and marshes. Undoubtedly, many of these birds perish, especially the strains which cannot fly, when placed on isolated water areas. Those that are released on an area with open water in winter often survive and, we believe, may be better adapted to winter situations where food is provided than wild Mallards. The reasons for higher survival appear to be (1) domestic strains are invariably larger than wild birds and, therefore, have a proportionately lower rate of heat loss and (2) domestic Mallards tend to be more aggressive and less wary of humans, thus, have a competitive advantage over the wild birds. Indeed, the increase in wintering Mallards in the Twin Cities may be partially a result of inter-breeding of wild birds with domestic strains, producing birds less inclined to migrate and more adapted to cold and situations where artificial feeding is done.

Canada Geese are wintering in the Metropolitan Area because local breed-

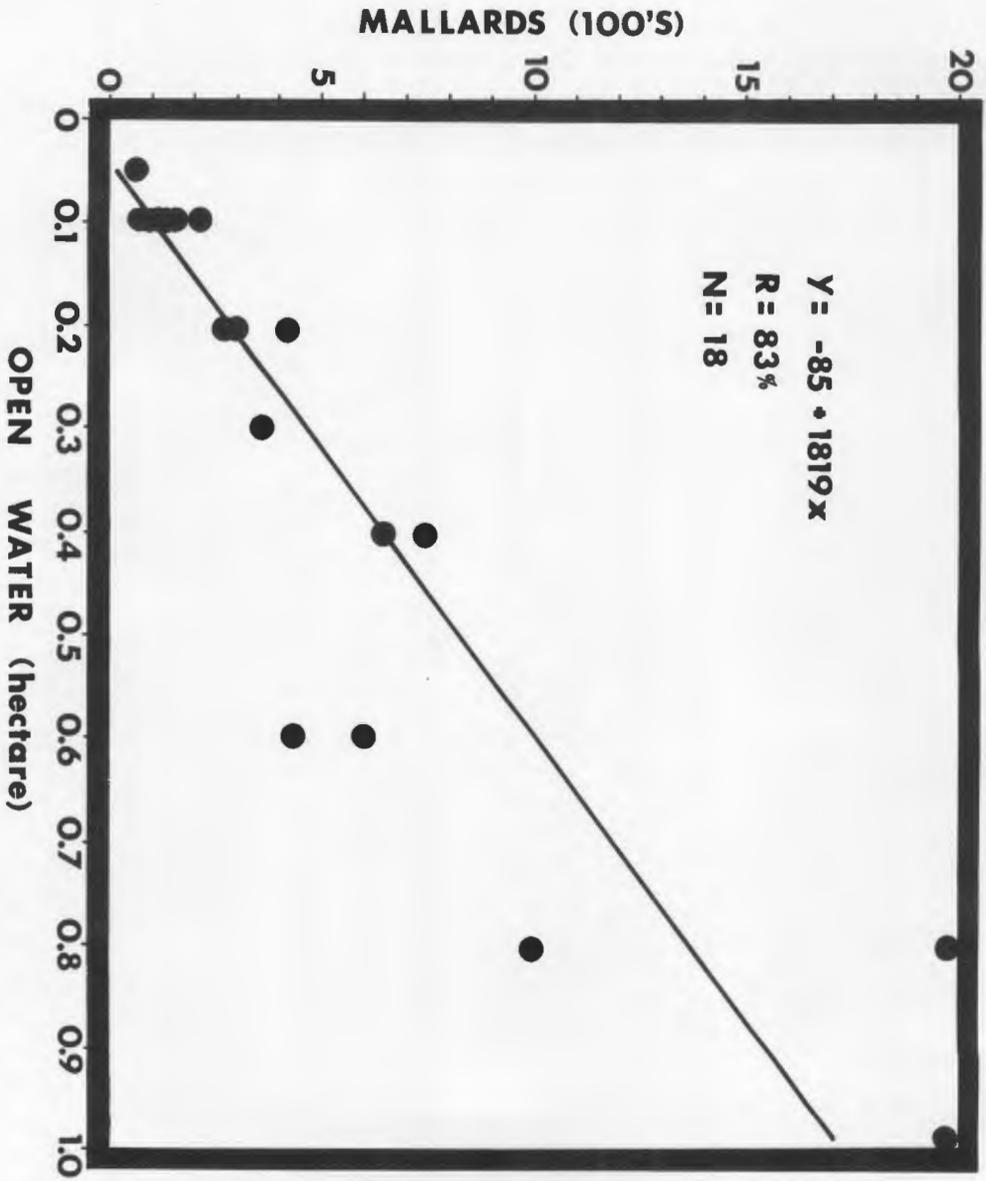


Figure 3. Relationship between the number of Mallards wintering at 18 cold water sites and the area of open water, third week of January, 1977.

ing flocks have been established in recent years. Only brief comment will be made here because the species has been and still is the subject of intensive research (Cooper and Saylor 1974) and the results of this investigation will be published later.

Based on observations of neckbanded and legbanded Canada Geese wintering in the Twin Cities, all but a few individuals are locally reared birds. The absence of the species from 1917 to 1937 was probably due to the absence of breeding birds in the Metropolitan Area. Moreover, the major changes in wintering geese during our surveys were primarily a result of forced migration experiments.

Common Goldeneye show only one major change from Roberts' observation period. They are now concentrated at heated water sites on the rivers instead of the rapids, which have disappeared due to damming of the streams. They too show a male dominated sex ratio. And, like drake Mal-

lards, male Common Goldeneyes are larger than females (Bellrose 1976: 427) and probably are more capable of surviving cold.

A continuing debate over wintering waterfowl in the Metropolitan Area has been whether additional areas should be kept open specifically for the birds and should artificial feeding be encouraged or discouraged. There is no question that winter waterfowl concentrations, for example General Mills, provide recreational opportunities for the Twin Cities residents. Notes made during our surveys indicated as many as 200 visitors may stop to view, feed or photograph the birds on a pleasant winter weekend. Most come with young children and, when asked, they stated that their primary reason for visiting was to allow the youngsters to see and appreciate wildlife. The significance of these activities, particularly feeding, to the survival of the birds is probably small; the significance of the early contact



Figure 4. Mallards feeding on dead and dying fish at Black Dog Lake in Burnsville, Minnesota, 12 January, 1975.



Figure 5. Remains of Gizzard Shad after being fed on by waterfowl at Black Dog Lake.



Figure 6. Wintering waterfowl at Long Lake in Fridley, Minnesota; a cold water site.

of young people, particularly urban and suburban-reared children, with wildlife may be great. However, the concentration of large numbers of birds in small areas, for example Southdale, must affect water quality.

It is our opinion that the creation of new open water areas with the objective of wintering waterfowl should not be encouraged. There are presently sufficient concentrations in the Metropolitan Area to provide ample opportunities to view and photograph the birds. Similarly, artificial feeding of wild birds should be discouraged. Feeding most likely encourages more birds to spend the winter in the area than would otherwise do so, and wildlife tends to lose its uniqueness whenever it must be or appears to be artificially maintained.

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(See following pages for Tables 1-7)

Table 1. Species Composition of wintering waterfowl in the Twin Cities Metropolitan Area, third week of January, 1974-77.

Species ¹	Number and Percent of Total			
	1974	1975	1976	1977
Mallard (<i>Anas platyrhynchos</i>)	13,890 (94.7)	17,862 (95.6)	17,874 (97.1)	21,095 (95.2)
Canada Goose (<i>Branta canadensis maxima</i>)	556 (3.8)	698 (3.7)	133 (0.7)	256 (1.2)
Common Goldeneye (<i>Bucephala clangula</i>)	156 (1.1)	53 (2.8)	136 (0.7)	486 (2.2)
Black Duck (<i>Anas rubripes</i>)	44 (0.3)	16 (0.1)	147 (0.8)	294 (1.3)
Common Merganser (<i>Mergus merganser</i>)	0 (0.0)	20 (1.1)	90 (0.5)	9 (tr.)
Gadwall (<i>Anas strepera</i>)	4 (tr.)	6 (tr.)	14 (0.1)	8 (tr.)
Wood Duck (<i>Aix sponsa</i>)	4 (tr.)	3 (tr.)	4 (tr.)	3 (tr.)
Pintail (<i>Anas acuta</i>)	0 (0.0)	6 (tr.)	2 (tr.)	0 (0.0)
Redhead (<i>Aythya americana</i>)	1 (tr.)	3 (tr.)	2 (tr.)	1 (tr.)
Lesser Scaup (<i>Aythya affinis</i>)	1 (tr.)	2 (tr.)	0 (0.0)	0 (0.0)
Ring-necked Duck (<i>Aythya collaris</i>)	0 (0.0)	1 (tr.)	1 (tr.)	0 (0.0)
Canvasback (<i>Aythya valisineria</i>)	1 (tr.)	0 (0.0)	0 (0.0)	0 (0.0)
American Wigeon (<i>Anas americana</i>)	2 (tr.)	0 (0.0)	0 (0.0)	0 (0.0)
Whistling Swan (<i>Cygnus columbianus</i>)	0 (0.0)	1 (tr.)	0 (0.0)	1 (tr.)
Blue Goose (<i>Anser caerulescens</i>)	0 (0.0)	1 (tr.)	0 (0.0)	0 (0.0)
American Coot ² (<i>Fulica americana</i>)	4 (tr.)	3 (tr.)	4 (tr.)	1 (tr.)
Totals	14,633 (100.0)	18,675 (100.0)	18,407 (100.0)	22,154 (100.0)

¹Excluding captive birds. ²Not a waterfowl species but included in the survey.

Table 2. Wintering waterfowl populations in the Twin Cities Metropolitan Area, third week of January, 1974-1977.

Location	Population By Year And Species
Anoka Waste Treatment Plant, Anoka (1)	1974-1976 — Not surveyed; 1977 — 400 Mallards.
Baker Park Reserve, Medina (2)	1974 — 100 Mallards, 43 Canada Geese; 1975 — 75 Mallards, 36 Canada Geese; 1976 — 50 Mallards, 16 Canada Geese; 1977 — 125 Mallards, 10 Canada Geese, 5 Black Ducks.
Belford Ponds, Wayzata (3)	1974 — 78 Canada Geese, 50 Mallards; 1975 — 95 Canada Geese, 75 Mallards, 1976-1977 — None.
Black Dog Lake, Burnsville (4)	1974 — 5,000 Mallards, 150 Common Goldeneyes, 1 Lesser Scaup, 1 Coot; 1975 — 10,000 Mallards, 50 Common Goldeneyes, 25 Canada Geese, 20 Common Mergansers, 1 Pintail, 1 Whistling Swan; 1976 — 6,500 Mallards, 100 Black Ducks, 90 Common Mergansers, 78 Common Goldeneyes; 1977 — 4,000 Mallards, 250 Black Ducks, 230 Common Goldeneyes, 9 Common Mergansers.
Carlos Avery Game Farm, Forest Lake (5)	1974 — 100 Canada Geese; 1975 — 96 Canada Geese; 1976 — 40 Canada Geese; 1977 — 50 Canada Geese.
Carver Park Reserve, Laketown (6)	1974 — 425 Mallards, 130 Canada Geese; 1975 — 281 Canada Geese, 100 Mallards; 1976 — 5 Canada Geese; 1977 — 150 Mallards, 48 Canada Geese, 15 Black Ducks, 1 Whistling Swan.
Colonial Courts, Golden Valley (7)	1974 — 600 Mallards, 1 Coot; 1975 — 300 Mallards, 1 Redhead; 1976 — 350 Mallards, 1 Black Duck, 1 Redhead; 1977 — 400 Mallards, 1 Black Duck.
Crystal Bay, Mound (8)	1974 — 500 Mallards, 1 Redhead; 1975 — Not Surveyed; 1976 — 500 Mallards, 5 Black Ducks; 1977 — 600 Mallards.
Crystal Lakes, Robbinsdale (9)	1974-1976—Not surveyed; 1977—600 Mallards, 1 Wood Duck.
Eagle Creek, Savage (10)	1974 — 25 Mallards; 1975 — 1,000 Mallards, 3 Black Ducks; 1976 — 250 Mallards; 1977 — None.
Eaton Factory, Eden Prairie (11)	1974 — 10 Mallards; 1975 — None; 1976 — Not surveyed; 1977 — None.
Elm Creek Park Reserve, Maple Grove (12)	1974 — 55 Mallards; 1975 — Not surveyed; 1976-1977 — None.
General Mills, Inc., Golden Valley (13)	1974 — 450 Mallards, 37 Canada Geese, 1 Black Duck, 1 Wood Duck; 1975 — 300 Mallards, 63 Canada Geese; 1976 — 350 Mallards, 13 Canada Geese, 3 Black Ducks; 1977 — 1,000 Mallards, 26 Canada Geese, 2 Black Ducks.
Hannan Lake, St. Louis Park (14)	1974-1975 — Not surveyed; 1976 — 50 Mallards; 1977 — None.

Location	Population By Year And Species
Honeywell Plant, Golden Valley (15)	1974-1975 — Not surveyed; 1976 — 300 Mallards; 1977 — 2,000 Mallards, 1 Wood Duck.
Hyland Park Reserve, Bloomington (16)	1974 — 140 Mallards, 44 Canada Geese, 6 Black Ducks; 1975-1977 — None.
Lake Of The Isles, Minneapolis (17)	1974 — 30 Canada Geese; 1975 — 30 Canada Geese; 1976 — 400 Mallards, 31 Canada Geese, 1 Pintail, 1 Coot; 1977 — 250 Mallards, 24 Canada Geese, 1 Black Duck.
Long Lake, Fridley (18)	1974 — 300 Mallards; 1975 — 500 Mallards; 1976 — 700 Mallards, 1 Wood Duck; 1977 — 700 Mallards.
Locke Lake, Fridley (19)	1974 — 100 Mallards; 1975 — 2 Mallards; 1976 — 55 Mallards; 1977 — 29 Mallards.
Mill Pond, Shakopee (20)	1974 — 850 Mallards, 20 Black Ducks, 4 Gadwalls, 2 Coots, 1 Canada Goose; 1975 — 700 Mallards, 5 Gadwalls, 5 Pintails, 4 Black Ducks, 2 Redheads, 3 Coots; 1976 — 2,225 Mallards, 20 Black Ducks, 14 Gadwalls, 1 Wood Duck, 1 Coot; 1977 — 1,150 Mallards, 8 Gadwalls.
Mississippi River- Broadway Bridge, Minneapolis (21)	1974 — 100 Mallards; 1975 — 130 Mallards; 1976 — None; 1977 — 4 Mallards.
Mississippi River- Coon Rapids Dam, Coon Rapids (22)	1974-1975 — None; 1976 — 38 Mallards, 31 Common Goldeneyes; 1977 — None.
Mississippi River- Eagles Club, Minneapolis (23)	1974 — Not surveyed; 1975 — 100 Mallards; 2 Common Goldeneyes; 1976 — 200 Mallards; 1977 — 1 Common Goldeneye.
Mississippi River- Edgewater, Minneapolis (24)	1974 — 350 Mallards, 4 Common Goldeneyes; 1975 — 200 Mallards; 1976 — 17 Common Goldeneyes, 2 Mallards; 1977 — 2,500 Mallards.
Mississippi River- FMC Plant, Fridley (25)	1974 — 1,000 Mallards, 5 Black Ducks; 1975 — 30 Mallards; 1976 — 600 Mallards, 3 Common Goldeneyes; 1977 — 600 Mallards.
Mississippi River- High Bridge, St. Paul (26)	1974 — 50 Mallards; 1975 — 75 Mallards; 1976 — 75 Mallards, 4 Common Goldeneyes; 1977 — 350 Mallards, 250 Common Goldeneyes.
Mississippi River- Nicollet Island Minneapolis (27)	1974 — 275 Mallards, 2 Wood Ducks, 1 Common Goldeneye; 1975 — None; 1976 — 4 Mallards; 1977 — 50 Mallards, 1 Common Goldeneye.

Location	Population By Year And Species
Mississippi River-St. Anthony Falls, Minneapolis (28)	1974 — Not surveyed; 1975 — 500 Mallards; 1976 — 250 Mallards; 1977 — 2,000 Mallards, 1 Common Goldeneye.
Moore Lake, Fridley (29)	1974-1976 — Not surveyed; 1977 — 200 Mallards.
Rebecca Park Reserve, Independence (30)	1974 — 67 Canada Geese, 45 Mallards; 1975 — 50 Mallards, 48 Canada Geese; 1976 — 50 Mallards, 8 Canada Geese; 1977 — 25 Mallards, 8 Canada Geese.
Rum River, Anoka (31)	1974 — 275 Mallards, 19 Canada Geese, 1 Common Goldeneye, 1 Wood Duck; 1975 — 450 Mallards, 1 Common Goldeneye; 1976 — 700 Mallards, 3 Common Goldeneyes; 1977 — 200 Mallards, 4 Black Ducks, 3 Common Goldeneyes.
Sewage Plant, Savage (32)	1974 — Not surveyed; 1975 — 75 Mallards, 2 Lesser Scaup, 1 Wood Duck, 1 Gadwall; 1976 — 150 Mallards; 1977 — 100 Mallards.
Southdale, Edina (33)	1974 — 1,300 Mallards, 5 Canada Geese, 2 Black Ducks, 2 American Wigeon, 1 Canvasback; 1975 — 1,000 Mallards, 17 Canada Geese, 1 Blue Goose; 1976 — 2,000 Mallards, 7 Black Ducks, 1 Coot; 1977 — 2,000 Mallards, 30 Canada Geese, 1 Wood Duck.
Sucker Creek, Vadnais Heights (34)	1974 — 300 Mallards, 2 Black Ducks; 1975 — 250 Mallards, 1 Black Duck, 1 Wood Duck; 1976 — 300 Mallards, 3 Canada Geese, 1 Wood Duck; 1977 — 350 Mallards, 2 Black Ducks.
Surfside Inn, Mound (35)	1974 — 800 Mallards, 5 Black Ducks; 1975-1976 — None; 1977 — 150 Mallards.
Tonka Toys Plant, Mound (36)	1974 — Not surveyed; 1975 — 1,000 Mallards, 1 Black Duck; 1976 — 850 Mallards, 1 Wood Duck; 1977 — 50 Mallards.
Valley Creek, Afton (37)	1974 — 200 Mallards; 1975 — 125 Mallards; 1976 — 75 Mallards; 1977 — 100 Mallards.
Wayzata Bay, Wayzata (38)	1974 — 350 Mallards; 1975 — 500 Mallards, 2 Black Ducks; 1976 — 600 Mallards, 10 Black Ducks, 1 Pintail, 1 Coot; 1977 — 225 Mallards, 2 Black Ducks.
Wood Lake Nature Center, Richfield (39)	1974 — 240 Mallards, 3 Black Ducks, 2 Canada Geese; 1975 — 325 Mallards, 7 Canada Geese, 5 Black Ducks, 1 Ring-neck Duck; 1976 — 250 Mallards, 17 Canada Geese, 1 Wood Duck, 1 Black Duck, 1 Coot; 1977 — 800 Mallards, 60 Canada Geese, 1 Redhead, 1 Coot.

Years in bold-face type, e.g. **1975**, means no open water when surveyed.

Table 3. Winter observations of waterfowl in the Twin Cities Metropolitan Area, 1917-37¹.

Species	Date	Number	Location
Mallard	Winter 1930	8	Near St. Paul (Miss River?)
	Winter 1935	1	Minneapolis Area
	Winter 1936	1	Vicinity of Minneapolis
Common Goldeneye	5 February 1928	19	Fort Snelling
	Winter 1929	100	Miss. River at Hastings
	22 December 1930	2	Hastings
	30 December 1930	100	Prescott
	19 January 1931	1	Miss. River at University Campus
	Winter 1934	100's	Miss. River below Hastings
Bufflehead	2 January 1932	1	Hastings
Red-breasted Merganser	22 December 1930	2	Hastings
Common Merganser	Winter 1929	25	Miss. River at Hastings
	30 December 1930	50	Prescott
	Winter 1934	100's	Hastings
Ring-necked Duck	December 1930	1	Prescott
	Winter 1933	1	Rum River Anoka
American Wigeon	8 January 1937	1	White Bear Lake
Lesser Scaup	22 December 1930	6	Hastings

¹From Roberts (1938).

Table 4. Characteristics of winter waterfowl concentration sites in the Twin Cities Metropolitan Area, Minnesota.

Location	Area of Open water (Hectares)	Source of Open water ¹	Available Foods ²
Anoka Waste Treatment Plant	0.1	H	N, H
Baker Park Reserve	0.1	PB	FP
Belford Ponds	0.1	P	FP
Black Dog Lake	100.0	H	N
Carlos Avery Game Farm	0.0	None	FP
Carver Park Reserve	0.2	PB	FP
Colonial Courts	0.6	S	N, H
Crystal Bay	0.2	PD	N
Crystal Lake	0.4	PB	N, H
Eagle Creek	1.5	S	N
Eaton Factory	0.1	PB	FP
Elm Creek Park Reserve	0.2	PB	FP
General Mills	0.8	H	FP, H
Hannan Lake	0.1	PB	N, H
Honeywell Plant	1.0	H	N, H
Hyland Park Reserve	0.4	PB	FP
Lake of Isles	0.2	PB	FP, H
Long Lake	0.6	ND	N, H
Locke House	0.2	ND	N, H
Mill Pond	0.8	S	N, FP, H
Miss. River — Broadway	4.8	H	N
Miss. River — Coon Rapids	10.8	ND	N
Miss. River — Eagles Club	2.0	H	FP
Miss. River — Edgewater Inn	6.1	H	N, H
Miss. River — FMC	1.1	H	N, H
Miss. River — High Bridge	1.0	H	N, H
Miss. River — Nicollet Island	6.1	NG	N
Miss. River — St. Anthony Falls	4.2	ND	N
Moore Lake	0.1	PB	N, H
Rebecca Park Reserve	0.1	PB	FP
Rum River	0.5	ND	N, H
Savage Waste Treatment Plant	12.0	H	N
Southdale	0.8	H	N, H
Sucker Creek	0.3	ND	N, H
Surfside Inn	0.2	PD	N, H
Tonka Toys	0.2	H	N, H
Valley Creek	1.6	S	N
Wayzata Bay	0.2	PD	N, H
Wood Lake	0.4	PB	N, FP

¹PB = pump-kept open for birds, PD = pump-protection of docks, H = industrial heated, NG = natural flow-stream gradient, ND = natural flow-over dam, S = spring.

²FP = Food provided on a regular basis, H = irregular "handouts" by public, N = natural.

Table 5. Sex ratio of Mallards at five locations in the Metropolitan Twin Cities Area, third week of January.

Area	Sex Ratio (Males/Female)		
	1974	1975	1976
Black Dog Lake	2.1	1.7	2.0
Wood Lake	1.0	1.2	1.5
Eagle Creek	2.3	1.5	1.9
Mill Pond	1.7	1.5	1.8
Southdale	3.0	1.4	2.1

Table 6. Estimates of the proportion of domestic and semidomestic Mallards in several Twin Cities wintering waterfowl populations, 1974-1975.

Location	1974	1975
Wood Lake	15%	10%
Mill Pond	25%	30%
Southdale	25%	30%
General Mills	30%	20%

Table 7. Weights (g) of Mallards captured in a bait trap at Black Dog Lake in January and February

Year	Males				Females			
	N	Mean	S.D	Range	N	Mean	S.D	Range
1973	488	1233	150.2	890-1665	250	1103	147.0	840-1365
1974	353	1262	133.9	890-1740	210	1105	114.6	865-1490

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FALL SEASON – Aug. 1 to Nov. 30, 1976

Paul Egeland
and
Kim Eckert

The fall of 1976 was a record breaker in many categories. The number of species reported, 290, was five greater than the record of 285 in 1975. 72 observers submitted reports plus many others sent in miscellaneous notes on unusual sightings. This is contrasted with 48 reports in 1974 and 63 reports in 1975.

The weather, as usual, deserves comment. The dry weather of summer continued into the fall. Most marshes of the western part of the state were dry by August. Many small lakes also went dry and most other lakes throughout the state saw their levels down many feet. There were many forest fires which resulted in large areas being closed to hunting, fishing and camping. September and October were colder than normal. Why, with this type of weather, were there so many record late dates and so many reports of rare birds? I cannot answer my own question.

There were reports of no less than 15 casual or accidental birds. Duluth again was the leader with reports of a Gyrfalcon, Pomarine Jaeger, Great Black-backed Gull, Mountain Bluebird, another November record for northern Minnesota of the Worm-eating Warbler, and a Summer Tanager. In addition, many Parasitic Jaegers were seen, a number of observers saw the Harlequin Ducks that stayed around in late October and early November, and a Lark Bunting was seen. Hawk Ridge saw the banding of four Boreal Owls, a record number of Sharp-shinned Hawks (over 20,000), and an increase in Peregrine Falcon sightings (25). Further up the shore of Lake Superior there was an unusual fall sighting of the Whimbrel.

Not to be out done, Mille Lacs Lake provided the second state record for three birds: California Gull, Red Phal-

arope, and the Black-legged Kittiwake.

The western counties did not take a back seat to either Duluth or Mille Lacs. The first state record of the Curve-billed Thrasher came from Rock County. There were Ruff records from both Lyon and Otter Tail Counties. Wilkin County provided the first record of the White-tailed Kite. In addition there were two White-faced Ibis in Big Stone County, a Ferruginous Hawk in Chippewa County, and a Snowy Egret in Marshall County. Lark Buntings were seen in Cottonwood County. The Agassiz National Wildlife Refuge reported large peaks of almost all species of ducks.

Another unusual record was the King Eider shot in Todd County. (See Notes of Interest).

The dry conditions in northern Minnesota apparently precipitated the unprecedented invasion of Gray Jays into both the southern and western parts of the state. These same conditions probably explains the lack of winter finches. There were no White-winged Crossbill reports and only two Red Crossbill reports.

The format of this report is basically the same as in past years with one exception. Initials of observers have only been used with boldface dates and where all reports are listed. The dates in boldface are those dates that, according to Green and Janssen's book, are outside the unitalized record late or early dates given. You will note more boldface dates than ever which I think reflects more birders out in the field and reporting what they see.

Because the job of compiling this report is getting much more time consuming, we would appreciate two things: (1) because we are not using county numbers anymore please write

the county name; and (2) if at all possible those observers reporting from both north and south data should try to use a different color pen or pencil for each area.

Although I was responsible for this report, without the help of Kim Eckert in compiling and typing this report I would not have been able to wade through all the data.

Common Loon

Late north 11-14 Crow Wing, 11-16 Duluth; late south 11-15 Wabasha, 11-20 Hennepin, 11-20 Ramsey.

Red-necked Grebe

Late north 10-20 Duluth, 10-24 Otter Tail, 11-20 St. Louis; only report south 11-7 Hennepin ES.

Horned Grebe

Early south 9-4 Lyon; late north 10-30 Crow Wing, 11-25 Duluth; late south 10-24 Ramsey and Anoka, 11-20 Hennepin.

Eared Grebe

3 reports: 9-4, 9-25, 9-26 Lyon KE, RJ, DGW, 9-21 Cook (2) and 10-8 Lake KE.

Western Grebe

Late north 9-23 Grant, 10-18 Marshall; late south 9-26 Lac Qui Parle, 10-23 Ramsey EC.

Pied-billed Grebe

Late north 11-7 Otter Tail, 11-6 St. Louis.

White Pelican

Late north 10-25 Marshall; late south 10-31 Hennepin, Lac Qui Parle, 11-28 Big Stone CMB; peak 8-14 Cottonwood (2000).

Double-crested Cormorant

Late north 10-14 Marshall and Duluth; late south 10-16 Houston, 10-23 Lincoln, 11-11 Big Stone KE.

Great Blue Heron

Late north 11-6 Crow Wing, 11-26 Duluth PKL; late south 10-31 Washington, 11-4 Rock, 11-16 Olmsted.

Green Heron

Late north 9-18 Marshal, 11-6 Crow

Wing EC; late south 9-19 Chisago, 9-26 Lac Qui Parle, 10-30 Anoka.

Great Egret

Late north 9-11 Marshall, 9-23 Otter Tail; late south 10-2 Goodhue and Ramsey, 10-9 Dakota; peak 8-19 Anoka (201) PKL.

SNOWY EGRET

Only report: one bird seen until 9-9 Marshall SV.

Black-crowned Night Heron

Late north 9-18 Pine, 10-20 Marshall; late south 9-21 Cottonwood, 10-24 Hennepin, 10-31 Lac Qui Parle.

Yellow-crowned Night Heron

8-2, 8-3 Houston DB, DGW; only reports.

Least Bittern

Late north 7-14 Duluth, 9-26 Otter Tail GO; late south 9-12 Hennepin, 9-14 Grant.

American Bittern

Late north 10-14 Duluth, 10-29 Marshall; late south 9-7 Anoka, 9-14 Wabasha, 9-25 Le Sueur.

WHITE-FACED IBIS

9-14 Big Stone (2) TS.

Whistling Swan

Early north 10-3 Mille Lacs, 10-23 Marshall and Otter Tail; early south 9-12 Wabasha WDM, 9-25 Dakota JD; late north 11-22 Becker, 11-25 Duluth KE; late south 11-24 Chippewa, 11-27 Houston, 11-28 Big Stone.

Canada Goose

Peak 11-1 Chippewa (65000) CH.

White-fronted Goose

10-25 Chippewa (30) CH, 11-5 Otter Tail (5) SM.

Snow Goose

Early north 9-9 Marshall SV, 9-18 Duluth; early south 8-27 Olmsted JF, 9-13 Chippewa; late north 11-6 Roseau, 11-22 Becker JL; late south 11-20 Washington, 11-21 Big Stone, 11-25 Hennepin.

Mallard

Peak 9-10 Marshall (48,000) ANWR.

Black Duck

Late north 11-24 Duluth.

Gadwall

Late north 11-1 Otter Tail, 11-11 Duluth; late south 11-11 Big Stone, 11-25 Olmsted; peak 10-14 Marshall (42,600) ANWR.

Pintail

Late north 10-30 Duluth and Marshall, 11-5 Otter Tail DGW; late south 10-31 Rock, 11-11 Big Stone.

Green-winged Teal

Late north 10-30 Hubbard, 11-20 Duluth RJ; late south 10-31 Big Stone, 11-6 Hennepin, 11-27 Ramsey; peak 10-14 Marshall (10,000).

Blue-winged Teal

Late north 11-7 Otter Tail, 11-15 Duluth GN; late south 11-1 Wabasha, 11-3 Cottonwood; peak 9-10 Marshall (20,000) ANWR.

American Wigeon

Late north 10-28 Marshall, 11-28 Duluth KE, 10-28 Roseau; late south 11-8 Hennepin, 11-11 Big Stone, 11-25 Ramsey, 11-26 Anoka; peak 9-30 Marshall (10,800) ANWR.

Northern Shoveler

Late north 10-19 Becker, 10-28 Marshall; late south 10-24 Winona, 11-25 Hennepin, 11-27 Olmsted; peak 8-1 Marshall (9150) ANWR.

Wood Duck

Late north 10-15 Marshall and Itasca; late south 11-20 Washington, 11-25 Hennepin, 11-30 Ramsey.

Redhead

Late north 11-24 Duluth, 11-28 Cook PKL; late south 11-25 Hennepin and Big Stone, 11-27 Ramsey; peak 9-16 Becker (7200) GO.

Ring-necked Duck

Late north 11-16 Duluth, 11-22 Becker; late south 11-25 Hennepin and Wright; peak 10-19 Becker (8000) JL.

Canvasback

Late north 11-5 Otter Tail, 11-28 Duluth KE; late south 11-25 Hennepin, Ramsey, 11-28 Big Stone.

Greater Scaup

6 reports 10-23 Cook DGW, 10-30 Mille Lacs OJ, 10-23 Otter Tail GO, 10-31 Rock KE, 11-13 Wright ES, 11-25 Duluth KE.

Lesser Scaup

Late north 11-27 Cook, 11-28 Duluth; late south 11-27 Ramsey, 11-28 Big Stone; peak 10-14 Marshall (8600) ANWR.

Common Goldeneye

Late north interior 11-4 Marshall, 11-14 Mille Lacs; early south 10-28 Ramsey.

Bufflehead

Early south 10-12 Hennepin and Ramsey; early north 8-18 Aitkin VL, 8-24 Duluth GN, 9-5 Marshall SV; late north 11-14 Mille Lacs, 11-28 Duluth, 11-28 Cook; late south 11-25 Hennepin, 11-26 Washington; peak 10-14 Marshall (1460) ANWR.

Oldsquaw

4 reports: 10-24 Cook DGW, 10-30 Cook SM, 11-10 Duluth DS, 11-16 Duluth GN.

Harlequin Duck

All reports 10-31 Duluth (1 imm.) and 11-5 Duluth (1 sub-adult male) JG, GN, 11-11 to 11-27 (2 imm.) seen by many observers, 11-27 Cook (1 imm. male) KE.

KING EIDER

One shot on Lake Osakis, Todd Co. on 11-3.

White-winged Scoter

7 reports from Lake Superior, early 9-26 Duluth GN, late 10-31 Cook; interior reports from 10-14 Marshall (2) ANWR, 10-23 Otter Tail (2) SM, 10-30 Lyon KE, 10-31 Aitkin SM.

Surf Scoter

4 reports from 10-22 to 11-7 Mille Lacs L., Crow Wing Co., 4 reports from Lake Superior, also 10-28 Lyon (1 shot) CH.

Black Scoter

8 reports from Duluth, early 9-27 GN, late 11-25, 5 reports from Cook

Co., early 10-7, late 11-27 KE; 10-29, 30 Mille Lacs L. many observers; peak 10-8 Cook (16) KE.

Ruddy Duck

Late north 10-29 Mille Lacs, 10-30 Marshall; late south 11-1 Wabasha, 11-20 Washington, 11-28 Ramsey.

Hooded Merganser

Late north 10-24 Marshall, 11-28 Duluth KE; late south 11-21 Hennepin and Ramsey, 11-26 Washington; peak 10-14 Marshall (640) ANWR.

Common Merganser

Late north 11-2 Hubbard, 11-14 Mille Lacs, 11-20 Otter Tail.

Red-breasted Merganser

Late north 10-23 Otter Tail, 11-14 Mille Lacs; late south 10-31 Big Stone, 11-6 Hennepin, 11-25 Wright.

Turkey Vulture

Late north 10-3 Kanabec, 10-22 St. Louis, 10-25 Duluth; late south 10-4 Anoka, 10-11 Dakota, 10-24 Wabasha; peak 10-5 Duluth (72).

WHITE-TAILED KITE

First state record 10-11 Rothsay W.M.A., Wilkin GO and GW.

Goshawk

Early south 9-9 Anoka PKL and 9-22 Ramsey EC; both are very early dates.

Sharp-shinned Hawk

Late north 11-22 Duluth MK and 11-26 Itasca MS; late south 11-24 Olmsted and 11-29 Anoka; peak 10-9 Duluth (1463).

Cooper's Hawk

5 reports away from Duluth: 10-10 Le Sueur, 10-11 Stearns, 10-15 Olmsted, 10-19 Hubbard, 11-7 Anoka.

Red-tailed Hawk

Late north 11-22 Duluth; peak 10-13 Duluth (1068).

Red-shouldered Hawk

North reports on 8-23 Morrison and 8-28 Otter Tail MM; 7 reports south from Stearns, Hennepin, Winona, and Anoka Counties.

The Loon

Broad-winged Hawk

Late north 10-6 Duluth; late south 10-2 Anoka and Le Sueur, 10-13 Olmsted, 10-24 Wabasha EW; peak 9-20 Duluth (19,561).

Swainson's Hawk

Only report north 9-9 Duluth MK; late south 9-23 Nicollet, 9-25 Hennepin, and 9-26 Pipestone (70) PE, RJ.

Rough-legged Hawk

Early north 9-18 St. Louis and 9-22 Duluth; early south 9-10 Anoka, 10-14 Hennepin, and 10-16 Houston.

FERRUGINOUS HAWK

1 seen on 9-8 Chippewa GO.

Golden Eagle

3 reports: 10-17, 22, 28 Marshall SV, 10-29 Becker JL, and from 10-12 to 11-13 Duluth (19) reported from Hawk Ridge.

Bald Eagle

Late north 11-11 Beltrami, 11-24 Hubbard, and 11-26 Duluth; early south 9-20 Chippewa, 9-27 Washington, and 10-2 Houston.

Marsh Hawk

Late north 11-5 Mille Lacs and 11-6 Koochiching; late south 10-31 Wabasha, 11-7 Cottonwood, and 11-12 Olmsted.

Osprey

Late north 9-25 Crow Wing and 11-7 Duluth MK; early south 8-7 Anoka and 9-9 Rock; late south 10-2 Houston and Wabasha, 10-3 Washington, and 10-10 Hennepin.

GYRFALCON

9-19 Duluth MK.

Peregrine Falcon

5 reports: from 9-12 to 10-10 Duluth (25) MK, 9-25 Hennepin OJ, 10-22 St. Louis ES, 10-23 Aitkin N. Jackson, 11-13 Duluth P. Hofslund.

Merlin

Late north 10-8 Cook, 10-28 Roseau, 11-2 Duluth GN; only report south 8-13 Le Sueur HC.

American Kestrel

Late north 10-8 Beltrami, 10-22 Duluth and 11-5 Mille Lacs EC.

Spruce Grouse

Only one report 9-20 Cook ES.

Ruffed Grouse

Reported from 18 counties.

Greater Prairie Chicken

10-9 Wilkin (27) and 11-1 Wilkin (60) SM, GO.

Sharp-tailed Grouse

4 reports: 10-20 Aitkin JB, 11-19 Aitkin (16) PH, 9-7 Aitkin (20) RJ, no date Marshall SV.

Ring-necked Pheasant

Reported from 19 counties.

Chukar

11-12 Ely, St. Louis Co. TS.

Gray Partridge

Reported from 16 counties.

Sandhill Crane

6 reports: 8-20 Aitkin PH, 9-17 Aitkin RJ, 9-19 to 10-7 Duluth (13) MK, 10-1 to 10-14 Marshall (500) SV, 10-9 Wilkin GO, GW, 10-23 Marshall (200) SV.

KING RAIL

8-3 La Crescent, Houston (3 imm.) DGW and 8-7 RJ.

Virginia Rail

Late north 9-11 Marshall; late south 9-12 Anoka, 10-20 Hennepin.

Sora

Late north 10-7 Cook, 11-2 Duluth GN; late south 10-2 Goodhue, 10-29 Hennepin, 11-11 Houston.

Common Gallinule

3 reports: 8-7 Houston RJ, 9-8, 9-10 Anoka PKL, 9-12, 10-3 Hennepin MM.

American Coot

Late north 11-16 Duluth and 11-25 Otter Tail; late south 11-22 Washington, 11-30 Ramsey and Hennepin.

Semipalmated Plover

Early north 7-25 Duluth, 8-18 Aitkin; early south 7-24 Yellow Medicine, 7-28 Olmsted; late north 11-1 Duluth

RJ, PE; late south 9-9 Rock, 9-14 Lyon.

Piping Plover

2 reports: 8-10 Anoka B. Bratlie and 8-20 Duluth RJ, KE.

Killdeer

Late north 10-29 Mille Lacs and 10-30 Crow Wing; late south 11-2 Murray, 11-5 Anoka, 11-8 Lac Qui Parle.

American Golden Plover

Early north 7-12 Duluth TD; early south 7-6 Lac Qui Parle KE, 7-17 Jackson; late north 10-22 St. Louis, 10-30 Mille Lacs; late south 10-18 Traverse, 10-30 Lyon, 10-31 Swift.

Black-bellied Plover

Early south 8-10 Yellow Medicine KE, 8-11 Anoka PKL; late north 10-30 Crow Wing, 10-31 Duluth, 11-6 Mille Lacs; late south 10-30 Lyon and Dakota, 10-31 Swift, 11-5 Anoka.

Ruddy Turnstone

Early north 8-9 Duluth; late north 9-27 St. Louis GN, 10-8 Cook KE.

American Woodcock

Late north 10-8 Otter Tail and 10-22 Marshall; late south 10-16 Hennepin, 10-17 Mower, 10-23 Anoka.

Common Snipe

Late north 11-5 Otter Tail, 11-6 Mille Lacs, 11-20 Duluth RJ.

WHIMBREL

9-17 Big Bay, Cook Co., T. Dyke.

Upland Sandpiper

4 reports: 8-2 Yellow Medicine GO, 8-4 Clay PKL, 8-10 Lyon RJ, 8-21 Stearns PKL.

Spotted Sandpiper

Late north 9-25 Crow Wing and 10-11 Duluth; late south 9-26 Rock, 9-29 Washington, 10-2 Goodhue.

Solitary Sandpiper

Early north 6-27 St. Louis, 7-29 Marshall; early south 7-3 Yellow Medicine and 7-6 Lac Qui Parle; late north 9-16 Clay and 9-20 Itasca; late south 9-19 Washington, 9-15 Pipestone, 9-26 Lyon.

Greater Yellowlegs

Early north 7-2 Kittson and 7-4 Marshall; early south 6-27 Jackson and 7-3 Yellow Medicine; late north 11-4 Marshall and 11-5 Otter Tail; late south 10-29 Anoka and Olmsted, 10-30 Pipestone, 11-5 Anoka.

Lesser Yellowlegs

Early north 7-2 Kittson and Marshall; early south 7-3 Lyon and 7-4 Jackson; late north 10-23 Aitkin and 10-29 Mille Lacs WL; late south 10-24 Anoka, 10-29 Hennepin, and 10-31 Lac Qui Parle.

Willet

4 reports: 6-27 Jackson DGW, 7-15 Rock KE, 7-20 Duluth TD, 8-19, 21 Anoka PKL, 8-20 Lyon KE.

Red Knot

8-29, 9-3 Duluth GN, 9-28 Duluth G. Bauer.

Pectoral Sandpiper

Early north 7-2 Marshall SV and 7-12 Duluth; early south 7-12 Cottonwood and 7-15 Rock; late north 11-2 Duluth and 11-6 Crow Wing JB; late south 10-31 Rock and Swift, 11-1 Hennepin, and 11-7 Anoka.

White-rumped Sandpiper

3 reports: 8-12 Lyon GO, 9-21 Duluth GN, 10-17 Duluth (2) TS.

Baird's Sandpiper

Late north 9-19 Duluth and 9-21 Aitkin; early south 7-24 Lyon and 7-26 Wright; early north 7-20 Duluth; late north 9-19 Duluth and 9-21 Aitkin; late south 10-23 Lincoln, 10-31 Rock and 11-2 Anoka.

Least Sandpiper

Early north 7-2 Otter Tail and 7-4 Marshall; early south 7-3 Lyon KE and 7-4 Lac Qui Parle; late north 9-4 Otter Tail and 9-12 Duluth; late south 9-22 Hennepin, 9-26 Lac Qui Parle and 10-24 Anoka PKL.

Dunlin

Early north 8-19 Duluth; late north 10-21 Aitkin and 10-31 Duluth; late south 10-31 Swift and 11-1 Anoka.

The Loon

Stilt Sandpiper

Early north 7-4 Marshall SV; early south 7-6 Lac Qui Parle, 7-12 Cottonwood; late north 9-30 Duluth; late south 9-26 Lyon, 9-28 Anoka.

Western Sandpiper

8-16 and 8-20 Duluth KE, RJ; only reports.

Sanderling

Early north 7-24 Duluth, 8-16 Aitkin; early south 7-28 Yellow Medicine GO, 8-12 Lyon; late north 10-26 Duluth, 11-7 Mille Lacs DGW; late south 10-27 Anoka.

Short-billed Dowitcher

Early north 7-25 Duluth; early south 7-6 Lac Qui Parle, 7-15 Rock; late north 9-6 Duluth; late south 9-12 Hennepin, 10-16 Lyon.

Long-billed Dowitcher

Early north 8-8 Duluth; early south 8-8 Olmsted; late north 9-26 Otter Tail; late south 10-16 Rock, 10-21 Anoka.

Semipalmated Sandpiper

Early north 7-2 Marshall, 7-24 Duluth; early south 7-7 Lyon, 7-15 Rock; late north 9-26 Duluth; late south 9-25 Lincoln, 10-16 Lyon, 10-30 Anoka PKL.

Buff-breasted Sandpiper

Early Duluth 8-20, late Duluth 9-19; 3 other reports: 9-11 Ramsey MM, 9-11 Aitkin RJ, 9-18 Otter Tail GO.

Hudsonian Godwit

2 reports: 9-11 Ramsey MM, 9-25 Lincoln KE, PE, RJ.

RUFF

2 reports: 10-2 Fergus Falls, Otter Tail Co. (1 breeding plumaged male) GO; 9-12, 13, 14 and 24 Marshall, Lyon Co. (3) H. Kyllingstad.

RED PHALAROPE

Second state record on 10-29 Garrison, Crow Wing Co. TS, JB.

Wilson's Phalarope

Late north 8-27 Hubbard; late south 10-22 Anoka EC.

Northern Phalarope

Only report north 7-25 Duluth KE; early south 8-10 Lincoln; late south 9-9 Rock, 9-25 Lincoln.

POMARINE JAEGER

8-17 Stoney Point, St. Louis Co. (1 ad. dark phase) KE.

Parasitic Jaeger

Major invasion at Duluth from 8-5 to 9-25, many observers (fide DS).

Glaucous Gull

4 reports: 11-1 Lake JG, RJ; 11-12 Duluth M. Carr; 11-24 and 11-28 Duluth JG, KE; 11-26 Lake KE.

GREAT BLACK-BACKED GULL

Immature at Duluth from 9-3 to 10-2, many observers (fide JG); third state record.

Herring Gull

Late north 11-7 Otter Tail, 11-14 Crow Wing; late south 11-26 Washington, 11-28 Big Stone, 11-30 Ramsey.

CALIFORNIA GULL

9-9 Mille Lacs L., Aitkin Co. (1 adult) TS; second state record.

Ring-billed Gull

Late north 11-6 Crow Wing, 11-20 Hubbard, 11-24 Duluth; late south 11-26 Washington, 11-27 Dakota, 11-30 Ramsey.

Franklin's Gull

Late north 9-19 Duluth, 10-9 Beltrami, 10-29 Mahnomen; late south 10-10 Sibley, 10-11 Murray, 10-30 Wright.

Bonaparte's Gull

Early north 8-6 Marshall, 8-9 Duluth; early south 9-12 Stearns; late north 11-7 Aitkin, 11-14 Mille Lacs; late south 10-31 Swift, 11-1 Anoka.

BLACK-LEGGED KITTIWAKE

10-30 Garrison, Crow Wing Co. (1 imm.) TS, JG, PE; second state record.

Forster's Tern

Late north 9-1 Duluth, 9-11 Otter Tail; late south 9-6 Stearns, 9-12 Pipestone, 9-14 Blue Earth.

Common Tern

Late north 9-19 Duluth, 9-21 Mille Lacs; no south reports.

Caspian Tern

Early south 9-6 Anoka, 9-12 Stearns; late north 10-2 Otter Tail GW, 10-8 Beltrami BDC, 11-5 Crow Wing EC; late south 10-1 Hennepin, 10-2 Goodhue, 10-3 Dakota.

Black Tern

Late north 8-29 Marshall, 9-6 Duluth; no late south reports.

Rock Dove

Permanent resident.

Mourning Dove

Late north 10-30 Kanabec, 11-16 Duluth, 11-21 Itasca.

Yellow-billed Cuckoo

4 reports: 8-19 Murray AD, 9-1 Olmsted WE, 9-11 Winona JF, 9-26 Rock KE, PE, RJ.

Black-billed Cuckoo

Late north 9-14 Clay, 9-19 Cook; late south 9-9 Mower, 9-26 Rock, 10-3 Anoka.

Screech Owl

Reported only from Hennepin, Ramsey and Olmsted.

Great Horned Owl

Permanent resident.

Snowy Owl

Early north 10-26 Duluth, 10-28 Roseau; early south 11-11 Chippewa, 11-16 Anoka, 11-17 Washington.

HAWK OWL

10-17 Duluth, L. Shannon; only report.

Barred Owl

Reported only from Clay and Anoka.

Great Gray Owl

2 reports: mid-Oct. Itasca, D. Wirt; 11-27 Roseau (2) PH.

Long-eared Owl

Several Duluth reports from 9-30 to 11-10; also reported from 8-16 Otter Tail GO, 10-19 Washington DMB, 10-

20 Ramsey RJ, 11-23 Ramsey P. Leacock.

Short-eared Owl

reported from 8-24 to 11-7 from Duluth, Wilkin, Otter Tail, Lac Qui Parle and Rock.

BOREAL OWL

Banded for the first time ever at Hawk Ridge in Duluth; total of 8 on 10-22, 26 and 30 (2), 11-6, 8, 10 and 14, D. Evans.

Saw-whet Owl

4 reports: 9-22 Washington DMB, 10-9 Lyon N. Holm, 10-22 Kanabec OJ, 11-5 Crow Wing EC.

Whip-poor-will

8-31 Marshall SV; only report.

Common Nighthawk

Late north 9-28 Otter Tail GW, 10-12 Duluth MK; late south 9-29 Stearns and Blue Earth, 10-1 Ramsey.

Chimney Swift

Late north 9-8 Duluth, 9-17 Otter Tail; late south 9-8 Washington, 9-30 Blue Earth, 10-1 Hennepin.

Ruby-throated Hummingbird

Late north 9-21 Otter Tail and Hubbard; late south 9-26 Dakota and Cottonwood, 9-29 Hennepin, 10-7 Olmsted.

Belted Kingfisher

Late north 10-22 Itasca, 11-5 Otter Tail, 11-25 Duluth KE.

Common Flicker

Late north 10-12 Marshall, 10-24 Lake, 11-2 Duluth.

Pileated Woodpecker

Reported from 26 counties.

Red-bellied Woodpecker

Reported from 15 counties north to Crow Wing (11-6 JB) and Aitkin (10-30 EC).

Red-headed Woodpecker

Late north 9-19 Duluth, 9-26 Crow Wing; late west 9-26 Rock, 10-10 Murray and Cottonwood.

Yellow-bellied Sapsucker

Late north 10-1 Marshall, 10-18 Dul-

uth; late south 10-22 Chisago, 10-25 Olmsted, 10-30 Hennepin.

Hairy Woodpecker

Permanent resident.

Downy Woodpecker

Permanent resident.

Black-backed Three-toed Woodpecker

2 reports: 8-1 Ely, St. Louis Co. GN; 10-23 Dixon L., Itasca Co. MS.

Eastern Kingbird

Late north 9-13 Duluth, 9-17 Aitkin; late south 9-10 Lac Qui Parle, 9-11 Ramsey, 10-8 Swift HH.

Western Kingbird

Late north 8-20 Tofte, Cook Co. RJ, 8-21 Clay; late south 8-15 Traverse, 9-5 Lac Qui Parle.

Great Crested Flycatcher

Late north 9-11 Aitkin, 9-14 Duluth; late south 9-9 Hennepin, 9-13 Washington, 9-16 Murray.

Eastern Phoebe

Late north 9-29 Itasca, 9-30 Marshall; late south 10-15 Olmsted, 10-16 Blue Earth, 10-27 Hennepin.

Yellow-bellied Flycatcher

Late north 9-14 Duluth; late south 9-5 Washington.

Acadian Flycatcher

8-7, 1 ad. feeding 3 y. at Beaver Creek Valley St. Pk., Houston Co., RJ.

Willow/Alder/Least Flycatchers

Late north 8-28 Marshall, 9-20 Duluth; late south 9-24 Stearns, 9-28 Washington, 10-13 Anoka JBB; only report with call note data was an early south Alder 8-10 Redwood KE, RJ.

Eastern Wood Pewee

Late north 9-6 Duluth; late south 9-12 Anoka, 9-27 Washington, 10-3 Murray.

Olive-sided Flycatcher

Early south 8-13 Wright, 8-15 Hennepin; late north 8-11 St. Louis, 8-29 Duluth; late south 9-11 Anoka, 9-18 Stearns.

The Loon

Horned Lark

Permanent resident south, no late dates north.

Tree Swallow

Late north 9-29 Duluth; late south 10-11 Dakota, 10-24 Anoka, 10-31 Swift.

Bank Swallow

Late north 9-2 Clay, 9-4 Marshall; late south 9-11 Rock, 9-12 Stearns, 10-11 Dakota BE.

Rough-winged Swallow

Late north 8-28 Duluth, 9-18 Otter Tail GO; late south 9-11 Rock, 10-2 Goodhue, 10-11 Hennepin.

Barn Swallow

Late north 9-21 Marshall, 9-23 Otter Tail; late south 10-11 Dakota, 10-22 Anoka, 10-24 Swift.

Cliff Swallow

Late north 9-10 Duluth, 9-11 Aitkin; late south 9-12 Stearns, 9-26 Lac Qui Parle.

Purple Martin

late north 9-5 Duluth, 9-12 Clay; late south 9-10 Lac Qui Parle, 9-12 Hennepin.

GRAY JAY

A major invasion year: reported south and west to Marshall, Pennington, Becker, Kanabec (3 reports), Mille Lacs, Stearns, Lac Qui Parle, Swift, Isanti (2 reports), Anoka, Hennepin (3 reports), Ramsey, Washington, and Olmsted; first south reports on 10-17 and 10-12.

Blue Jay

Permanent resident.

Black-billed Magpie

Early north 9-10 Marshall, 9-12 Lake, 9-19 Lake of the Woods; south reports on 11-7 Lac Qui Parle CMB and 11-20 Chippewa CH.

Common Raven

Reported from 13 counties north.

Common Crow

Permanent resident.

Black-capped Chickadee

Permanent resident.

Boreal Chickadee

North reports from Marshall, Becker, St. Louis and Cook; unusual south report 11-15 to 11-25 Minneapolis, Hennepin Co. EW.

Tufted Titmouse

3 reports: 8-24 Olmsted JF, 10-10 Olmsted VH, 11-19 Ramsey EC.

White-breasted Nuthatch

Permanent resident.

Red-breasted Nuthatch

Late north 11-20 Duluth, 11-25 Hubbard; early south 8-31 Hennepin, 9-8 Wabasha, 9-26 Olmsted.

Brown Creeper

Late north 10-30 Aitkin, 11-19 Hubbard; early south 8-26 Lac Qui Parle, 9-20 Swift, 9-21 Washington.

House Wren

Late north 9-21 Cook, 10-3 Clay; late south 10-3 Wright, 10-5 Swift, 10-18 Murray.

Winter Wren

Late north 10-8 Cook, 10-25 Otter Tail BE; early south 9-16 Washington DMB, 9-23 Rock; late south 10-14 Cottonwood, 10-23 Anoka, 10-31 Rock.

CAROLINA WREN

At feeders in Rochester, Olmsted Co. from 11-1 on JF, WE and in Brooklyn Park, Hennepin Co. from 10-16 on, W. Breckenridge.

Short-billed Marsh Wren

Late north 9-15 Marshall, 9-19 St. Louis; late south 9-20 Hennepin, 10-17 Sherburne EW.

Long-billed Marsh Wren

Late north 10-6 Marshall, 10-24 Otter Tail GW; late south 10-2 Goodhue, 10-17 Hennepin, 10-31 Rock KE.

Mockingbird

2 reports: 9-20 Two Harbors, Lake Co., J. Perkins; 10-9 Duluth EC, BL, KE.

Gray Catbird

Late north 9-28 Hubbard, 11-1 Otter Tail GW; late south 10-12 Mower, 10-24 Wright, 10-30 Swift HH.

Brown Thrasher

Late north 9-19 Duluth and Pine; late south 10-16 Rock and Ramsey, 10-27 Lac Qui Parle, 11-2 Hennepin.

CURVE-BILLED THRASHER

First state record on 9-9 at Blue Mounds St. Pk., Rock Co. KE.

American Robin

Late north 11-7 Koochiching, 11-18 Otter Tail, 11-24 Duluth.

Varied Thrush

3 reports: 10-30 and 11-7 Duluth, P. Hofslund and J. Hayes; late Nov., Newport, Washington Co., I. Goldberg.

Wood Thrush

Late south 9-20 Lac Qui Parle, 10-7 Swift, 10-17 Washington JD.

Hermit Thrush

Early south 9-1 Olmsted WE; late north 10-23 Koochiching, 10-27 Otter Tail; late south 10-24 Goodhue and Winona, 10-27 Hennepin.

Swainson's Thrush

Early south 8-29 Mower and Washington, 8-30 Hennepin; late north 9-20 Cook, 10-1 Duluth; late south 10-2 Mower and Goodhue, 10-16 Hennepin.

Gray-cheeked Thrush

Early north 8-28 St. Louis; early south 9-15 Washington; late north 9-29 Duluth; late south 9-26 Hennepin and Houston.

Veery

Late north 9-24 Itasca MS, 10-1 Clay LCF; late south 9-11 Washington, 9-26 Hennepin MM, 10-2 Goodhue RJ.

Eastern Bluebird

Late north 10-19 Otter Tail and Itasca; late south 10-27 Hennepin, 10-28 Mower, 11-5 Washington.

MOUNTAIN BLUEBIRD

10-24 Duluth DS, JG; very few fall reports on record.

The Loon**Blue-gray Gnatcatcher**

3 reports: 8-12 Houston FL, 8-31 Anoka PKL, 9-11 Winona JF.

Golden-crowned Kinglet

Early south 9-19 Lac Qui Parle, 9-21 Washington; late north 10-23 Cook and Otter Tail, 11-1 Duluth; late south 11-9 Hennepin, 11-16 Wabasha, 11-25 Olmsted.

Ruby-crowned Kinglet

Early south 8-30 Lac Qui Parle and Murray; late north 10-26 Clay, 11-20 Duluth RJ; late south 10-30 Ramsey, 10-31 Rock, 11-17 Lac Qui Parle.

Water Pipit

Early north 9-3 Duluth GN, 9-15 Itasca; early south 9-25 Lyon and Lincoln; late north 10-22 Aitkin, 11-20 Duluth RJ; late south 10-16 Rock, 10-23 Lincoln, 10-28 Hennepin.

Bohemian Waxwing

3 reports: 10-21 and 10-23 Duluth DS, MK; 11-12 St. Louis TS; 11-25 Otter Tail GO.

Cedar Waxwing

Late north 11-9 Marshall, 11-24 Duluth.

Northern Shrike

Early north 10-10 Marshall, 10-22 Duluth; early south 10-16 Rock, 10-17 Hennepin, 10-24 Lac Qui Parle.

Loggerhead Shrike

Late north 10-23 Otter Tail BE, 10-30 Wilkin GW, 11-6 Becker GW; late south 10-24 Wabasha, 11-6 Dakota.

Starling

Permanent resident.

Yellow-throated Vireo

Late north 9-4 Marshall, 9-8 Otter Tail; late south 8-29 Houston, 9-11 Winona, 9-17 Hennepin.

Solitary Vireo

Early south 8-31 Washington, 9-4 Ramsey; late north 9-17 Marshall, 9-20 Duluth; late south 9-26 Rock and Mower, 9-30 Washington, 10-10 Hennepin.

Red-eyed Vireo

Late north 9-19 Cook, 9-23 Duluth; late south 9-26 Mower, 10-1 Hennepin, 10-20 Blue Earth VR.

Philadelphia Vireo

Early south 8-22 Cottonwood, 8-31 Washington; late north 9-10 Duluth, 9-16 Clay; late south 9-17 Anoka, 9-20 Washington and Hennepin.

Warbling Vireo

Late north 8-31 Marshall; late south 9-4 Washington, 9-15 Anoka, 9-20 Swift HH.

Black-and-white Warbler

Late north 9-25 Crow Wing, 9-26 Duluth; late south 9-23 Hennepin, 9-25 Olmsted, 9-26 Mower.

Golden-winged Warbler

Late north 8-23 Morrison, 8-28 Duluth; late south 9-24 Hennepin.

WORM-EATING WARBLER

11-12 Duluth, M. Carr; another north November record!

Blue-winged Warbler

8-29 Olmsted JF; only report.

Tennessee Warbler

Early south 8-13 Hennepin, 8-23 Olmsted; late north 9-25 Crow Wing, 10-7 Duluth; late south 10-1 Anoka and Washington, 10-10 Olmsted.

Orange-crowned Warbler

Early south 8-15 Hennepin WKE, 8-22 Cottonwood LF; late north 10-7 Duluth, 10-8 Cook; late south 10-4 Washington, 10-14 Goodhue, 10-17 Hennepin.

Nashville Warbler

Early south 8-14 Hennepin, 8-22 Cottonwood; late north 10-7 Duluth, 10-23 Cook DGW; late south 10-15 Cottonwood, 10-23 Ramsey, 10-30 Hennepin.

Northern Parula

Early south 8-29 Hennepin, 9-1 Olmsted; late north 9-13 Itasca, 9-20 Duluth; late south 10-1 Hennepin.

Yellow Warbler

Late north 9-8 Marshall and Otter

Tail, 9-18 Duluth; late south 9-16 Hennepin, 9-18 Stearns.

Magnolia Warbler

Early south 8-15 Washington and Ramsey, 8-23 Olmsted; late north 9-20 Cook, 9-23 Duluth; late south 9-28 Washington, 9-30 Murray, 10-3 Blue Earth.

Cape May Warbler

Early south 8-29 Olmsted, 9-7 Dakota; late north 9-19 Duluth; late south 12-1 Wabasha (road kill, had been dead a couple days) WDM.

Black-throated Blue Warbler

4 reports: 8-21 Cook RJ, 8-29 Olmsted WE and Hennepin DB, 9-1 Hennepin PF.

Yellow-rumped Warbler

Early south 8-29 Ramsey, 9-1 Hennepin and Washington; late north 10-14 Itasca, 11-7 Duluth; late south 10-30 Pipestone, Wright and Ramsey, 11-2 Wabasha.

Black-throated Green Warbler

Early south 8-24 Washington, 8-25 Olmsted; late north 9-16 Crow Wing and Itasca, 9-18 Duluth; late south 9-19 Murray, 9-26 Houston, 10-17 Hennepin MM.

Blackburnian Warbler

Early south 8-19 Murray, 8-22 Olmsted; late north 9-17 Aitkin, 9-26 Duluth GN; late south 9-20 Hennepin, 9-25 Le Sueur, 9-29 Anoka.

Chestnut-sided Warbler

Early south 8-15 Ramsey, 8-19 Hennepin; late north 9-20 Cook and Duluth; late south 9-15 Washington, 9-20 Hennepin, 9-25 Blue Earth.

Bay-breasted Warbler

Early south 8-23 Carver DB, 8-25 Olmsted; late north 9-20 Cook, 9-29 Duluth; late south 9-21 Washington, 9-26 Hennepin, 9-29 Cottonwood.

Blackpoll Warbler

Early north 8-23 Marshall; early south 8-29 Houston, 9-1 Olmsted; late north 9-21 St. Louis, 10-10 Otter Tail

GO; late south 9-23 Ramsey, 9-26 Olmsted.

Pine Warbler

Early south 8-23 Carver, 8-30 Olmsted; late north 9-18 St. Louis, 10-4 Hubbard; late south 9-17 Hennepin, 9-27 Dakota, 10-3 Cottonwood.

Palm Warbler

Early south 8-30 Olmsted, 9-1 Washington; late north 10-8 Otter Tail, 10-9 Duluth; late south 10-3 Washington, Anoka and Cottonwood, 10-4 Mower, 11-16 Wabasha WDM.

Ovenbird

Late north 9-13 Itasca, 9-27 Duluth; late south 9-21 Ramsey, 9-25 Washington, 10-18 Hennepin DB.

Northern Waterthrush

Early south 8-17 Hennepin, 8-22 Olmsted; late north 9-24 Marshall, 10-8 Cook KE; late south 10-2 Goodhue, 10-6 Hennepin, 10-9 Washington.

Connecticut Warbler

Early south 8-25 Hennepin, 9-1 Cottonwood; late north 8-21 Cook, 9-12 Duluth; late south 9-9 Rock and Washington, 9-26 Cottonwood, 10-27 Olmsted, M. Snyder.

Mourning Warbler

Early south 8-21 Olmsted, 8-22 Cottonwood; late north 9-16 Duluth; late south 9-24 Washington.

Common Yellowthroat

Late north 10-6 Marshall, 10-11 Wilkin; late south 10-3 Wright, 10-16 Rock, 10-31 Hennepin MM.

Wilson's Warbler

Early north 8-8 Lake, 8-13 Marshall; early south 8-13 Wright, 8-15 Murray; late north 9-15 Duluth, 10-1 Clay; late south 9-21 Washington, 9-23 Rock, 9-26 Lyon.

Canada Warbler

Early south 8-12 Houston, 8-15 Ramsey; late north 8-28 Duluth; late south 9-15 Hennepin, 9-16 Dakota, 9-18 Olmsted.

The Loon

American Redstart

Late north 9-20 Cook and Duluth; late south 9-23 Washington, 10-1 Hennepin.

House Sparrow

Permanent resident.

Bobolink

4 reports: 8-8 Washington DGW, 8-29 Otter Tail GO, 9-4 Marshall SV, 9-25 Hennepin OJ.

Eastern Meadowlark

9-26 Anoka PKL; only report.

Western Meadowlark

Late north 10-12 Clay, 10-29 Polk, 10-30 Marshall.

Yellow-headed Blackbird

Late north 9-4 Marshall; late south 9-25 Lincoln, 9-26 Lac Qui Parle and Hennepin.

Red-winged Blackbird

Late north 11-8 Duluth, 11-16 Otter Tail, 11-18 Hubbard.

Orchard Oriole

2 reports: 8-5 Rock KE, 8-10 Pipestone and Redwood KE, RJ.

Northern Oriole

Late north 9-6 Duluth, 9-7 Otter Tail; late south 9-11 Wabasha and Cottonwood, 9-17 Swift, 9-30 Washington.

Rusty Blackbird

Early north 8-21 St. Louis, 9-15 Itasca; early south 9-9 Stearns, 9-26 Houston; late north 11-6 Koochiching, 11-11 Duluth.

Brewer's Blackbird

Late north 10-7 Clearwater, 10-16 Crow Wing; late south 10-29 Hennepin, 11-11 Big Stone, 11-28 Lac Qui Parle.

Common Grackle

Late north 11-12 St. Louis, 11-13 Clay, 11-15 Otter Tail.

Brown-headed Cowbird

Late north 10-25 Otter Tail; late south 10-21 Hennepin, 11-27 Washington, 12-9 Lincoln.

Scarlet Tanager

Late north 8-30 Duluth; late south 9-17 Washington, 9-26 Mower, 10-26 Hennepin GSS.

SUMMER TANAGER

Reported from 10-11 to 10-21 in Duluth at the Seeligs feeder; second fall report on record.

Cardinal

North report on 11-22 Fergus Falls, Otter Tail Co. GO.

Rose-breasted Grosbeak

Late north 9-17 Marshall, 9-19 Duluth RJ; late south 10-14 Hennepin and Murray, 10-19 Ramsey.

Blue Grosbeak

3 reports: seen into Aug. near Cazenovia, Pipestone Co., D. Long; 9-2 Murray AD; last seen at Blue Mounds St. Pk. on 9-26 KE, PE, RJ.

Indigo Bunting

Late north 9-26 Crow Wing, 10-5 Duluth JG; late south 9-26 Mower, 9-27 Washington.

Dickcissel

3 reports: 8-1 Cottonwood LF, 8-7 Rock KE and Winona RJ.

Evening Grosbeak

Early south 8-20 Ramsey, 8-30 Washington, 9-4 Mower.

Purple Finch

Early south 8-7 Olmsted JF, 8-8 Anoka PKL, 8-29 Washington JD.

Pine Grosbeak

Early north 10-20 Duluth, 10-23 Cook and Itasca; early south 11-6 Anoka, 11-17 Hennepin.

Common Redpoll

Early north 10-7 Duluth, 10-18 Crow Wing; early south 10-17 Sherburne EW, 11-4 Wright.

Pine Siskin

Early south 10-12 Hennepin, 10-16 Rock and Anoka.

American Goldfinch

Late north 10-7 Marshall, 10-13 Itasca.

Red Crossbill

Only 2 reports: 8-18 Duluth KE, 9-11 Aitkin RJ; no reports of White-winged Crossbill!

Rufous-sided Towhee

Late north 9-20 Duluth; late south 10-8 Lac Qui Parle, 11-15 Olmsted; also 4 reports of "spotted" towhees: 9-25 Pipestone KE, 9-23 and 10-3 Rock (5) KE, 10-1 and 10-4 Murray (2) AD, into Dec. at a feeder in Hennepin Co., OJ.

LARK BUNTING

From 9-26 to 9-30 in Duluth DS, JG; at the W. Snyder feeder in Winona from 11-11 through the winter; 10-2 Cottonwood (6) CMB.

Savannah Sparrow

Late north 10-9 Wilkin, 10-29 Duluth; late south 10-10 Olmsted, 10-16 Rock, 10-17 Hennepin.

Grasshopper Sparrow

3 reports: 8-10 Redwood KE, RJ, 8-29 Otter Tail GO, 9-11 Crow Wing RJ.

Le Conte's Sparrow

Late north 9-19 Duluth, 10-16 Wilkin; late south 9-25 Lyon, 10-10 Olmsted, 10-31 Hennepin.

Sharp-tailed Sparrow

3 reports: 9-19 Duluth JG, EC, 10-9 Wilkin GO, GW, 10-26 Otter Tail GO.

Vesper Sparrow

Late north 9-11 Aitkin; late south 10-10 Olmsted, 10-11 Dakota, 10-20 Swift.

Lark Sparrow

9-11 Otter Tail GO, GW; only report.

Dark-eyed Junco

Early south 9-16 Washington and Olmsted, 9-17 Hennepin.

Tree Sparrow

Early north 9-13 Duluth GN, 10-1 Marshall and Otter Tail; early south 9-26 Lac Qui Parle, 10-5 Washington, 10-8 Murray.

Chipping Sparrow

Late north 9-26 Duluth, 10-4 Hub-

bard; late south 10-26 Hennepin, 10-27
Lac Qui Parle, 10-30 Anoka PKL.

Clay-colored Sparrow

Late north 9-20 Duluth, 10-23 Aitkin, Mrs. N. Jackson; late south 9-25 Lyon and Anoka, 9-30 Cottonwood, 10-2 Washington.

Field Sparrow

Late north 10-9 Otter Tail GO; late south 10-13 Washington, 10-24 Goodhue, 11-16 Hennepin.

Harris' Sparrow

Early north 9-14 Marshall, 9-20 Cook and Duluth; early south 9-20 Murray and Lac Qui Parle; late north 10-28 Marshall, 11-16 Aitkin; late south 11-19 Swift, 11-20 Murray, 11-27 Lac Qui Parle.

White-crowned Sparrow

Early north 9-11 Duluth, 9-25 Crow Wing; early south 9-11 Ramsey, 9-23 Hennepin and Wright; late north 10-23 Cook, 10-24 Crow Wing; late south 11-1 Lac Qui Parle, 11-15 Hennepin.

White-throated Sparrow

Early south 9-4 Cottonwood, 9-7 Olmsted; late north 11-14 Otter Tail, 11-26 Cook; late south 11-13 Houston, 11-14 Olmsted, 11-30 Mower.

Fox Sparrow

Early north 9-4 Otter Tail GO, 9-20 Duluth; early south 9-18 Swift, 9-20 Washington and Olmsted; late north 11-2 Crow Wing, 11-16 Duluth; late south 11-2 Anoka, 11-6 Olmsted, 11-15 Hennepin.

Lincoln's Sparrow

Early south 8-26 Rock, 9-1 Wabasha; late north 10-7 Clearwater, 10-9 Duluth; late south 10-20 Wright, 10-23 Washington, 10-27 Hennepin.

Swamp Sparrow

Late north 10-24 Marshall and St. Louis, 10-29 Duluth RJ; late south 10-17 Pipestone, 10-24 Washington, 10-27 Hennepin.

Song Sparrow

Late north 11-14 Otter Tail, 11-16 Duluth.

The Loon

Lapland Longspur

Early south 9-16 Hennepin, 9-26 Rock; early north 9-4 Duluth, 9-14 Marshall and Itasca; late north 10-24 Cook, 10-26 Duluth.

Smith's Longspur

3 reports: 9-25 Duluth DS, 9-27 Aitkin L. Paynter, 10-9 Wilkin (7) GO, GW.

Chestnut-collared Longspur

10-11 Wilkin GO; only report.

Snow Bunting

Early north 10-4 Mille Lacs, 10-7 Cook; early south 10-14 Dakota, 10-17 Scott and Rock.

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THE 1976 CHRISTMAS COUNT

Kim Eckert

As no one has to be reminded, Winter 1976-77 was an extremely trying one for men and birds. For the most part the results below attest to that. Only 101 species were recorded (as compared to 113 and 108 the last two years), and most of the 37 counts had

disappointing totals (only 17 counts managed 30 species or more). Unless a count was taken on the very pleasant opening date of December 18 when some temperatures hit the 50's, birders faced very unpleasant weather. A new count from the Voyageurs Na-

	Alton	Albert Lea	Austin	Big Stone NWR	Bloomington	Cedar Creek	Chicago Lakes	Cottonwood	Crookston	Crosby	Detroit Lakes	Duluth	Ely	Excelsior	Fargo-Moorhead	Fairbault	Fergus Falls	Grand Marais
Pied-billed Grebe				3														
Whistling Swan				170	82													
Canada Goose	15													153			1068	
Snow Goose	14																	
Mallard	820	213	199	946	6967				58					1532		28	474	136
Black Duck	16	3		1													1	13
Gadwall																		
Pintail				1														
Wood Duck	2				4													
Redhead					1													
Ring-necked Duck				3														
Canvasback				2														
Lesser Scaup	1																	
Common Goldeneye	185			4	78		6					54	58				15	7
Ruddy Duck				4														
Common Merganser	3			9	5								7					
Red-breasted Merganser													2					
Goshawk										1								
Sharp-shinned Hawk	1				1													
Cooper's Hawk	1													1				
Red-tailed Hawk	4	1	4		6	1								7			1	1
Red-shouldered Hawk	2																	
Rough-legged Hawk	1				2													
Bald Eagle	4a,11													1			2	1
large falcon, sp.																		
American Kestrel	1		1		7		1							8			4	
Ruffed Grouse	14					2	19		2	15								6
Greater Prairie Chicken											23	4	2					
Sharp-tailed Grouse									1									
Ring-necked Pheasant	108	12	14	58	181	4	16					20		133	4	9	4	
Gray Partridge			8	24				7	17									
American Coot				2	1													1
Killdeer																		
Common Snipe	1			1										3				
Herring Gull												286						103
Rock Dove	441	333	363	119	147	78	464	126	34	36		7688		330	19	144	224	10
Mourning Dove	128		5	1	19							8		4		1		
Screech Owl	3		1	1										1				
Great Horned Owl	6		2	1	5			2	1	1			1	2	2	3	5	1
Snowy Owl				1	2					1		5			1			
Barn Owl	1		2		1	1				3								
Long-eared Owl														3				
Short-eared Owl					1										1			
Belted Kingfisher	3		3	1	4									1		1	4	
Common Flicker	1	8	2		6													
Pileated Woodpecker	17				4	2	5			3		2	2	7	2	2	4	1
Red-bellied Woodpecker	30	2	6		5	4	8							12		4		
Red-headed Woodpecker	6	6	3		1		2									5		
Hairy Woodpecker	61	2	8	27	86	10	33	14	7	24		11	4	54	33	5	25	16
Dowry Woodpecker	103	6	23	51	91	16	37	25	12	18		62	6	54	16	10	28	24
Black-backed 3-t. Woodpecker														1				
Horned Lark	30	1	33	1		3	11	103	16		10					1	55	
Gray Jay									3	3		10	12					32
Blue Jay	427	17	80	16	243	205	211	2	5	161		27	1	262	6	34	30	31
Black-billed Magpie								4						47				
Common Raven	941	60	84	2	192	250	110	14	2			71	47	188	16	65	9	55
Common Crow														4				10
Black-capped Chickadee	558	23	70	88	462	111	292	80	16	163		380	83	412	189	34	181	149
Boreal Chickadee												1	1					5
Tufted Titmouse	1																	
White-breasted Nuthatch	182	14	30	20	143	28	95	20	6	59		17	3	132	41	12	47	2
Red-breasted Nuthatch	3			1		2				1		5						3
Brown Creeper	4		2	2	12				2					7	9	1	1	
Carolina Wren																		
Brown Thrasher																		
American Robin	1				6							14		7				
Varied Thrush																		
Townsend's Solitaire	6													1				1
Golden-crowned Kinglet	26																	
Bohemian Waxwing										1		207			12			1
Cedar Waxwing	21				13									28	3		2	
Northern Shrike	5			4	7	4	6		1	2		2		4			3	1
Loggerhead Shrike																		
Starling	391	20	212	147	856	67	329	399	10	33		2415		339	7	189	267	7
House Sparrow	1445	184	1167	272	1520	181	282	856	405	355		177		716	341	208	1082	
meadowlark, sp.																		
Yellow-headed Blackbird								1										
Red-winged Blackbird	4				5										801		1	17
Rusty Blackbird	2	5	8		1			12		8		1		3		100	6	
Brewer's Blackbird				1	2		1							3				
Common Grackle	3		7	4	14	1		1		1		2		15		1	4	1
Brown-headed Cowbird																		
Cardinal	169	5	9	1	52	2	18	3						68		8	4	
Evening Grosbeak	4					3	25							1			2	70
Purple Finch	67	7	2		8		5							15		10	59	
Pine Grosbeak	6						25			4		80						14
Common Redpoll	2	150		3			175		506	96		69		8	79		319	
Pine Siskin	2			1	73	3	3					1		31				
American Goldfinch	296		21	15	165	57	111	9						199	39	16	17	
Red Crossbill				1														
White-winged Crossbill	1									4								
Lark Bunting																		
Dark-eyed Junco	739	105	228	24	570	238	181	15		1		10	5	324	56	188	61	5
Tree Sparrow	427	228	144	40	925	270	196	82		8				315		336	28	
Chipping Sparrow																		
Harris' Sparrow				4						1					2			
White-throated Sparrow				2										1				
Fox Sparrow																		
Song Sparrow					7									4	1	3	1	
Lapland Longspur	6		15					61	304									
Snow Bunting	4	135	40	8	225	50	198	3	450	85	15	90		275	12			276
TOTAL SPECIES (101)	60	24	34	44	48	26	29	22	22	29	3	36	14	44	23	31	39	24
TOTAL INDIVIDUALS	7767	1540	2808	2073	3214	1693	2865	1763	1875	1265	48	11785	228	6416	871	1422	4330	701

tional Park taken on Dec. 30 had a frigid debut with a high temperature of -20° and a low of -40° , and only 10 individuals of 4 species could be found! Other new counts came from Chisago Lakes, Detroit Lakes, Ely and Reads Landing (though the extremely low counts at Detroit Lakes and Reads Landing suggest less than all-day counts). Five counts again had circles spilling over into other states (Afton, Big Stone N.W.R., Fargo-Moorhead, La Crosse-La Crescent and Winona), but four of them cooperated by sending in totals only for the Minnesota portions of their counts (the Afton count once again has Wisconsin birds in its list, though three known or suspected Wisconsin rarities — Barrow's Goldeneye, Black Scoter and Fox Sparrow — have been deleted). Compilers will again find some totals different than what they submitted. Some differences were the result of some miscounting, but some were unfortunately the result of unusual species deleted for lack of documentation.

Highest Minnesota counts this year came from St. Paul N.E. (54) and Bloomington (48) — how many of Afton's 60 were in Minnesota is unknown. In spite of the uncooperative weather, there were some highlights. Marshall had an excellent count with a large falcon, sp. (probably a a Prairie), a Red-headed Woodpecker (unheard of in winter on the prairie) and a well-described Loggerhead Shrike. A Carolina Wren at the Walter J. Breckenridge feeder was in the Minneapolis circle, while another feeder in the St. Paul N.E. circle had a now-regular Varied Thrush. No less than two Townsend's Solitaires were seen: the one at Excelsior was present for only a few minutes, while the one at Fergus Falls was present for several weeks. A Yellow-headed Blackbird at Cottonwood was very late, as was a Chipping Sparrow at St. Paul — the

latter was the first ever for a Minnesota Christmas count, lingering through Jan. 4. But the best bird of them all had to be the most unprecedented Lark Bunting at the Winona feeder which survived the entire winter (it even managed to survive several below zero nights that killed some House Sparrows!). There were also several unusually high or low totals for individual species. Those much more common than usual were Ruffed Grouse (the Itasca count alone had 60!), Barred Owl, Pileated Woodpecker, Gray Jay (an obvious invasion year with 108 birds on 14 counts west to the prairies and south to the Cities; also interesting was one on the Decorah, Iowa count for a first state record!), Bohemian Waxwing, Northern Shrike, Red-winged Blackbird (the 5481 counted this year was ten times last year's total; La Crescent alone had 3212!), Rusty Blackbird, Common Grackle (1000 on the La Crescent count alone), Dark-eyed Junco, Tree Sparrow and Lapland Longspur. Those clearly down in numbers were Common Goldeneye, Rough-legged Hawk, Mourning Dove, Downy Woodpecker (the Hairy population was the same), Common Crow, Tufted Titmouse, Red-breasted Nuthatch, Golden-crowned Kinglet (only 6 this year as compared to 97 two years ago), Cedar Waxwing, both Starling and House Sparrow (!), both Evening and Pine Grosbeaks, and both crossbills (almost 500 crossbills counted last year, only 7 this year). Finally, a few species' populations fluctuated widely the past few years, but were not clearly higher or lower: Red-headed Woodpecker (from 16 to 112 to 57 the past three years), Brown-headed Cowbird (from 16 to 297 to 19), Common Redpoll (from 510 to 12,050 to 1571; also interesting that no Hoary's were seen), Pine Siskin (from 247 to 1114 to 206) and Snow Bunting (from 355 to 14,500 to 5400).

WINTER SEASON – Dec. 1, 1976 to Feb. 28, 1977

Kim Eckert

No one needs to be (or wants to be) reminded of that coldest winter of the century, of the -50°F temperatures and -90°F windchills in the northern areas. What we do need to remember, however, is that October and November were also colder than normal, driving most migrants from the state before December had a chance to finish them off. And we mustn't forget the drought of 1976 which reduced river levels and currents to the point where it didn't take that cold winter long to freeze up normally open water areas. But don't overlook the positive side: it was too cold to snow very much, so that we missed the drifts that buried the East; December 18 with its 50°F plus temperatures produced some very pleasant Christmas Counts; and February turned out warmer than average and pushed in a few early spring migrants.

There was certainly some effect on the birds throughout this unusual weather, but not as much as might be expected. Fifty-nine report forms were submitted, compiling data on a total of 128 species (plus four questionable ones). It is no surprise that this is a below average total for recent winters considering the weather, but it is surprising that so many species were more common than normal. Species less in evidence than usual were: Oldsquaw, Goshawk, Rough-legged Hawk, Glaucous and Herring Gulls (most of Lake Superior froze up early), Red-breasted Nuthatch, Golden-crowned Kinglet (no reports!), Evening Grosbeak, both crossbills (poor cone crop due to the drought?), Pine Siskin, and Swamp Sparrow (no reports). On the other hand, Black Duck, Cooper's Hawk, Golden Eagle, Common Snipe, Barred Owl, Horned Lark, Gray Jay (perhaps the greatest invasion ever), Black-billed Magpie, Bohemian Waxwing, Northern Shrike, Fox Sparrow, Lapland Longspur and Snow Bunting

were seen more often than in most winters. If anyone can explain why in 25 words or less, you win a free entry blank for the "Guess How Many Pigeons in Duluth" contest.

In spite of the strange weather (or perhaps because of it) several exciting things turned up. Probably the most-observed Harlequin Ducks in Minnesota history stayed along the North Shore until December. A large falcon (probably a Prairie) was spotted on the Marshall Christmas Count, and a Merlin was accidentally shot way up near Crookston. For the second winter in a row the exotic Ivory Gull showed up, but drove Twin Cities birders crazy by not telling anyone it was around for three weeks. Just as elusive is the rare Boreal Owl: the good news is that there were four records, the bad news is that three of the four were dead. An unprecedented Red-headed Woodpecker was seen in the southwest part of the state, a natural result of the increasing numbers of this bird wintering in southeastern counties. Intensive studies in an area near Babbitt slated for future mining turned up good numbers of several uncommon or rare species, most notably Northern Three-toed Woodpeckers. Two Carolina Wrens lingered at bird feeders and two Townsend's Solitaires were seen; one for just a few minutes but the other uncharacteristically lingered for over a month. A Loggerhead Shrike rounded out a most successful Marshall Christmas Count, and another was reported from Duluth. Also unusual from Duluth was a Yellow-rumped Warbler at a feeder until Christmas Day, and also unusual in Lyon Co. was a Yellow-headed Blackbird. Other unusual feeder birds in the Twin Cities were a "spotted" Rufous-sided Towhee, a Field Sparrow that lasted all winter, and a most unusual Chipping Sparrow. Finally, and even stranger (and more

cooperative) than the Ivory Gull, was the most unprecedented Lark Bunting which managed to survive House Sparrow-killing cold in Winona.

Common Loon

A late migrant was seen at Duluth on 12-19 (JB, TS).

Pied-billed Grebe

4 reports: St. Paul Christmas Count; 1-1 Hennepin (BJ); 1-23 and 2-11 Dakota (DGW, KG); 12-12, 2-20, and 2-21 Otter Tail (SM, GO).

White Pelican

A late migrant lingered until 12-11 at Ortonville, Big Stone Co. when it was found dead (CMB).

Great Blue Heron

Lingered until 12-24 Redwood (LJF); another seen 2-17 Crow Wing (TS; overwintered or a very early migrant?).

Whistling Swan

4 reports: Big Stone Christmas Count (last seen 12-26, CMB); Winona Christmas Count; 2-22 Sauk Rapids, Stearns Co. (NMH); overwintered at Brainerd, Crow Wing Co. (TS).

Canada Goose

Reported from 14 counties north to Big Stone (until 12-26, CMB), Lac Qui Parle (into January, FME), Otter Tail (overwintered) and Crow Wing Co's.

Snow Goose

5 reports: Afton and St. Paul Christmas Counts; 12-3 and 12-4 Otter Tail (SM, GO); 2-20 Stearns (TS); overwintered at Carlos Avery W.M.A. in Anoka Co. (FS).

Mallard

Reported from 29 counties north to Polk, Otter Tail, St. Louis and Cook Co's.

Black Duck

Reported from 15 counties north to Otter Tail, Lake and Cook Co's; more reports than usual in spite of the weather.

The Loon

Gadwall

Reported on the Winona Christmas Count and in Scott Co. on 1-1 and 2-26 (BJ, OJ).

Pintail

5 reports: Big Stone Christmas Count; 12-24 Hennepin (KE); 1-1 Scott (BJ); 2-19 Goodhue (BDC); 2-26 Winona (BE).

Blue-winged Teal

(One may have been seen by AJ in Richfield, Hennepin Co. on 12-14).

American Wigeon

2 reports: 12-23 Anoka (KL); 2-11 Dakota (KG).

Wood Duck

7 reports: Afton, St. Paul N.E. and Bloomington Christmas Counts; 1-1 and 1-2 Hennepin (BJ, VL); 1-1 Anoka (OJ); 1-22 Winona (BJ); 2-26 Scott (OJ).

Redhead

Reported on the Bloomington Christmas Count.

Ring-necked Duck

4 reports: Big Stone, Minneapolis and Winona Christmas Counts; 12-19 to 1-1 Wood L., Hennepin Co. (BE; injured bird).

Canvasback

Reported on the Big Stone and Winona Christmas Counts.

Lesser Scaup

Reported on the Big Stone (also 12-27, KE) and Afton Christmas Counts; also 12-4 Olmsted (KL).

Common Goldeneye

Reported from 17 counties north to Otter Tail, Crow Wing, L. Superior and inland St. Louis Co.

Bufflehead

3 reports: 12-18 Cook (DGW); 12-19 Duluth (JB); 1-22 Dakota (ES).

Oldsquaw

Reported only from Cook Co. on L. Superior (third winter in a row of low numbers); 2 unusual inland reports: 1-1 and 1-3 Ramsey (BJ, DGW); 2-27 Dakota (ES).

Harlequin Duck

The 2 females or immatures seen by many at Duluth were last seen on 12-6 (BDC).

Ruddy Duck

4 reported on the Big Stone Christmas Count.

Hooded Merganser

Reported from Black Dog L. Dakota Co. on 12-27, 1-23 and 2-13 (KG, DGW, ES).

Common Merganser

Reported from Big Stone, Stearns, Duluth, Lake, Cook, Ramsey, Dakota, Washington, Wabasha and Olmsted Co's.

Red-breasted Merganser

5 reports: Duluth and Minneapolis Christmas Counts; 1-1 Hennepin (OJ); 1-22 Cook (TS); 2-20 Stearns (TS; very early migrant?).

Goshawk

Reported only from Crow Wing, Aitkin, St. Louis, Lake, Anoka (Cedar Creek Christmas Count and on 1-27 by DS) and Carver (2-20, DGW) Co's; fewer reports than usual.

Sharp-shinned Hawk

Reported from Otter Tail (1-11, SM), Duluth (Christmas Count), Cook (1-1, L. Sherer), Sherburne, Hennepin, Ramsey, Washington, Dakota, Olmsted and Houston Co's.

Cooper's Hawk

Reported from Otter Tail (1-4, GO), Stearns, Sherburne, Hennepin, Washington and Olmsted Co's; more reports than usual.

Red-tailed Hawk

Reported from 18 counties north to Otter Tail and Cook.

Red-shouldered Hawk

6 reports: Afton Christmas Count; 1-2 Dakota (DGW); 2-5 Wabasha (DWM) and Winona (JF); 2-22 Le Sueur (HC); 2-26 Winona (FL).

Rough-legged Hawk

Reported from 14 counties, north

to Lake of the Woods and south to Houston; fewer reports than usual.

Golden Eagle

More reports than usual: up to 3 birds (including 1 adult) wintered again at Whitewater W.M.A. in Wabasha-Winona Co's; 12-19 and 1-1 Houston (EMF; li); 2-21 Reads Landing, Wabasha Co. (FKS); 1-4 Fort Snelling St. Pk., Ramsey Co. (SH; li); 12-7 Olmsted (VH; li); 1-22 Yellow Medicine (GO); 12-20, 2-20 and 2-28 Rothsay W.M.A. Wilkin Co. (SM; la).

Bald Eagle

Reported from Becker (1), Itasca (1a), Carlton (2a), Pine (4a), Cook (1), Lake (li), Big Stone (1), Sherburne (1), Wright (1), Hennepin (li), Washington (6a, li), Dakota (5a, li), Goodhue (2a), Rice (1a), Wabasha (10a), 5i, 10 unknown), Winona (2a), Houston (li, 4 unknown) and Freeborn (2).

Marsh Hawk

6 reports: 12-20 Wilkin (SM); 1-1 Otter Tail (NJ); 1-30 Washington (JD); 2-5 Goodhue (BJ); 2-13 to 2-21 Anoka (KL); 2-27 Dakota (ES).

Gyr Falcon

(A possible sighting on 12-5 at Orwell W.M.A., Otter Tail Co. by J. Hill.)

Large falcon, sp.

Either a Prairie or Peregrine Falcon was seen on the Marshall Christmas Count on 12-18 (LJF).

MERLIN

One was shot on 2-12 near Crookston, Polk Co. (J. Tri and J. Griswold).

American Kestrel

Reported from 25 counties, north to Pennington (2 in Feb., fide SV) and Wilkin (until 1-7, SM).

Spruce Grouse

4 reports: 12-28 L. Alice, Hubbard Co. (KE); 12-30 Roseau Co. (2; SM); 1-27 Ely area, St. Louis Co. (LP); 2-7 and 2-8 Hwy. 1, Lake Co. (6; LP).

Ruffed Grouse

Reported from 23 counties west to Marshall, Polk, Otter Tail and Kandiyohi Co's.

Greater Prairie Chicken

Reported on the Crookston and Detroit Lakes Christmas Counts; also several reports from Rothsay W.M.A., Wilkin Co. with a peak of 25 on 12-19 (SM, GO).

Sharp-tailed Grouse

4 reports: Crookston Christmas Count; 12-29 Beltrami and Lake of the Woods (11; KE, SM); all winter in Marshall Co. (11; SV).

Bobwhite

A covey of 20 reported from the Wiscoy Valley, Winona Co. in Jan.; 2 flushed on 1-22 near Spring Grove, Houston Co. (KE, BJ).

Ring-necked Pheasant

Reported from 30 counties north to Marshall Co. and Duluth.

Chukar

Still hanging on at Ely with 1 seen on 1-23 (TS).

Gray Partridge

Reported from 18 counties from Marshall to Fillmore Co's.

Turkey

One of the wild Houston Co. flock was seen near Eitzen on 2-11 (EMF); a flock of 25 was flushed at White-water W.M.A. on 1-22 (KE, BJ).

American Coot

Reported on the Fergus Falls, Big Stone, Bloomington and Winona Christmas Counts; 1-1 and 2-26 Scott Co. (OJ, BJ); all winter at Wood L., Hennepin Co.

Killdeer

Reported on the St. Paul N.E. (5 seen) and Winona Christmas Counts; a very early spring migrant on 2-25 in Becker Co. (JL).

Common Snipe

Reported from 13 counties north Otter Tail (12-1, SM); more reports than usual.

Glaucous Gull

Several reports from Cook Co. (peak of 5 at Grand Marais) and one report

from Lake Co. (2 on 1-22; TS); none reported from Duluth!

Herring Gull

Down again in all 3 L. Superior counties; late migrants 12-26 Big Stone (CMB) and 12-13 Hennepin (SH).

IVORY GULL

Easily the most exciting and most frustrating bird of the season was an immature at Grand Marais discovered on 12-18 by DGW and photographed on 12-19 by S. Blanich (first Minn. photo record; there are still no specimens); unfortunately the bird had been present since about 12-1 according to local fishermen, leaving about 12-20, with none of the Twin Cities listers able to get there in time.

Rock Dove

Reported from 34 counties with a new record peak of 7688 at Duluth

Mourning Dove

Reported from 20 counties north to Wilkin, Otter Tail, Clearwater, Mille Lacs and Duluth.

Bar Owl

(A brief but probable sighting on 12-15 by members of the AD family at Leota, Nobles Co.)

Screech Owl

Reported from Otter Tail, Big Stone, Lyon, Cottonwood, Kandiyohi, Hennepin, Ramsey, Washington, Olmsted and Mower Co's.

Great Horned Owl

Reported from 33 counties throughout the state.

Snowy Owl

Reported from 16 counties south to Murray, Cottonwood and Dodge Co's.

Barred Owl

Reported from 19 counties west to Otter Tail and Big Stone Co's; more reports than usual.

Great Gray Owl

Reported in the bogs north of Rosseau (12-3; SM) and Aitkin 1-2 and 1-24 (A. Orjala, DB).

The Loon

Long-eared Owl

Reported from Otter Tail (2-16 and 2-20; GO, BE), Hennepin (Excelsior Christmas Count and on 12-5 by JB) and Washington (St. Paul N.E. Christmas Count and from 12-23 to 2-5 at Afton, DMB) Co's.

Short-eared Owl

Reported on the Fargo-Moorhead, Marshall and Bloomington Christmas Counts; also seen 12-20 Otter Tail (GO); from 12-31 to 1-11 Wilkin (up to 7; SM); 1-18 and 1-20 Clay (LCF); 1-25 Lyon (NH); 2-5 Hennepin (BE); 2-8 Marshall (SV); more reports than usual.

BOREAL OWL

The most elusive of all owls was recorded 6 times: dead birds were found on 2-15 at Duluth (B. Rutke); 2-23 on the Sawbill Tr., Cook Co. (fide M. Carr); 3-7 at Two Harbors, Lake Co. (M. Carr); 3-10 Agassiz NWR (SV) and one injured bird 3-20 in Duluth; a **live** bird was seen at Silver Bay, Lake Co. on 2-16 (T. Martinson).

Saw-whet Owl

Reported on 12-11 and 2-19 in Crow Wing Co. (TS) and on 2-27 at Ely, St. Louis Co. (calling; LP).

Belted Kingfisher

Reported from 15 counties north to Otter Tail (Fergus Falls Christmas Count).

Common Flicker

Reported from 17 counties north to Wilkin (1-25; GO) and Otter Tail (all winter; SM).

Pileated Woodpecker

Reported from 29 counties west to Clay and Lyon.

Red-bellied Woodpecker

Reported from 25 counties west to Lyon, Cottonwood, Kandiyohi and Big Stone (Christmas Count) Co's.

Red-headed Woodpecker

Reported from 16 counties west to Lyon (12-18; LJF).

Yellow-bellied Sapsucker

Lingered until 1-19 in Hennepin Co. (ES).

Hairy Woodpecker

Reported from 43 counties throughout the state.

Downy Woodpecker

Reported from 43 counties throughout the state.

Black-backed Three-toed Woodpecker

Several reports from the Babbitt-Ely-Isabella area of St. Louis and Lake Co's. all winter (TH, SH, LP); also 1 on 12-29 Lake of the Woods Co. (KE, SM), and 1 in Crow Wing Co. on 1-31 (TS).

NORTHERN THREE-TOED WOODPECKER

Almost common around Babbitt and Ely in St. Louis and Lake Co.; seen on 1-13 (TH); 2-15 (LP); all winter at 4 Lake Co. spots (LP); and from 1-10 to 1-17, 2 at S. Olson's feeder.

Horned Lark

Reported from 35 counties north to Polk and Becker; first migrants on 2-3 Washington (GA) and 2-9 Anoka (KL) in the South, and on 2-11 Marshall (SV) and 2-19 Crow Wing (TS) in the North; more reports than usual.

GRAY JAY

A major invasion year; northeast reports from Lake of the Woods, Beltrami, Clearwater, Roseau, Hubbard, Crow Wing, Becker, Pine, St. Louis, Lake, Itasca and Cook Co's; wandering birds went west and south to Marshall and Polk (Warren and Crookston Christmas Counts), Otter Tail (until 1-23; NJ and on 2-16; W. Breckenridge), Kanabec (12-5; DS), Stearns (1-3 to 2-25; J. Voth), and on the Sherburne, Minneapolis, St. Paul and St. Paul N.E. (4 seen) Christmas Counts.

Blue Jay

Reported from 44 counties throughout the state.

Black-billed Magpie

Reported from Roseau, Marshall, Polk, Clearwater, Beltrami, Wilkin, Otter Tail, Aitkin, Crow Wing, Douglas (2-26; NJ), St. Louis (several reports from Duluth, Sax, Ely and Babbitt; J. Parks, L. Campbell, LP) and Cook (2-19 Tofte; J. Peterson); more reports than usual.

Common Raven

Reported from 13 counties west to Roseau and Marshall, south to Crow Wing and Pine.

Common Crow

Reported from 37 counties north to Marshall, Hubbard, St. Louis and Cook.

Black-capped Chickadee

Reported from 42 counties throughout the state.

Boreal Chickadee

Reported from Roseau, Hubbard, Koochiching, Clearwater, St. Louis, Lake and Cook Co's.

Tufted Titmouse

Reported on the Afton and St. Paul N.E. Christmas Counts; also wintered in Wabasha (WDM) and Houston (EMF) Co's.

White-breasted Nuthatch

Reported from 42 counties throughout the state.

Red-breasted Nuthatch

Reported from 16 counties; fewer reports than usual.

Brown Creeper

Reported from 21 counties north to Clearwater and Polk.

CAROLINA WREN

Reported from feeders in Rochester, Olmsted Co. (until 12-22; N. Barker) and Brooklyn Park, Hennepin Co. (until 1-28; W. Breckenridge).

Brown Thrasher

Reported from the Minneapolis Christmas Count.

American Robin

Reported from 18 counties north to Cass and Duluth.

Varied Thrush

Reported at feeders in Hennepin (12-3, Golden Valley), Ramsey (until 1-27, Roseville; T. Nicholls), Washington (1-9, Stillwater; DGW and mid-Dec., N. St. Paul) and Duluth (3 feeders in December).

TOWNSEND'S SOLITAIRE

Seen on 12-18 only in Minnetonka,

Hennepin Co. (PF) and from 12-18 to 1-22 at Orwell W.M.A., Otter Tail Co. (SM, GO).

Golden-crowned Kinglet

(The only report was from the Afton Christmas Count, which may have been on the Wisconsin side of the river.)

Bohemian Waxwing

Reported from 17 counties south to Stearns, Anoka, Hennepin, Washington and Olmsted Co's; more reports than usual.

Cedar Waxwing

Reported from 21 counties north to Marshall, Becker and Crow Wing Co's.

Northern Shrike

Reported from 38 counties throughout the state; more reports than usual.

LOGGERHEAD SHRIKE

One reported with good details on 12-18 in Lyon Co. (LJF), and another was in the Duluth Christmas Count Period (details needed).

Starling

Reported from 27 counties.

YELLOW-RUMPED WARBLER

One survived at JG's feeder in Duluth from 12-11 to 12-25.

House Sparrow

Reported from 33 counties.

Eastern Meadowlark

One was identified at close range on 1-22 in Fillmore Co. (KE, BJ); unidentified meadowlarks were also seen in Wabasha, Olmsted, Dodge and Freeborn Co's.

Western Meadowlark

Reported on the Warren Christmas Count.

YELLOW-HEADED BLACKBIRD

Lingered until 12-19 for the Cottonwood (Lyon Co.) Christmas Count; good details by P. Egeland.

Red-winged Blackbird

Reported from 19 counties north to Otter Tail, Crow Wing and Duluth.

The Loon

Rusty Blackbird

Reported from 15 counties north to Wilkin, Otter Tail, Grant, Todd and Crow Wing.

Brewer's Blackbird

Reported on the Big Stone, Excelsior, Minneapolis, Bloomington and Chisago Lakes Christmas Counts; while all of these reports may be valid, no one submitted completely convincing details.

Common Grackle

Reported from 28 counties north to Wilkin, Marshall, Crow Wing, Duluth and Cook.

Brown-headed Cowbird

Reported on the Marshall, Mt. Lake-Windom, St. Paul N.E., Rochester and La Crosse-La Crescent Christmas Counts; also seen 12-2 Winona (BJ) and 12-19 Wilkin (SM).

Cardinal

Reported from 27 counties west and north to Redwood, Lyon, Big Stone (Christmas Count), Otter Tail (4 on Fergus Falls Christmas Count) and Duluth (Christmas Count Period).

Evening Grosbeak

Reported from 17 counties south only to the Twin Cities area; fewer reports than usual.

Purple Finch

Reported from 23 counties north to Otter Tail and Duluth.

Pine Grosbeak

Reported from 14 counties south to Sherburne, Anoka, Chisago and Washington.

Hoary Redpoll

5 reports: 12-31 and 2-5 Wilkin (KE, SM); 1-18 Beltrami (TS); 2-4 to 2-19 Otter Tail (GO, SM); 2-13 Lake (DGW); 2-15 Marshall (SV).

Common Redpoll

Reported from 25 counties throughout the state.

Pine Siskin

Reported from 17 counties north to Hubbard and St. Louis; fewer reports

than usual.

American Goldfinch

Reported from 29 counties north to Clay and Marshall (Warren Christmas Count).

Red Crossbill

Only 3 reports: Itasca and Big Stone Christmas Counts; 12-8 Hubbard (HF); far fewer reports than normal.

White-winged Crossbill

Also down: reported only on the Crosby and Afton (which state?) Christmas Counts.

RUFOUS-SIDED TOWHEE

Wintered at feeders in Rochester, Olmsted Co. (until 2-15; JF) and Brooklyn Park, Hennepin Co. ("spotted" race; until 2-19; OJ).

LARK BUNTING

Even more amazing than the Ivory Gull was this male Lark Bunting wintering at the W. Snyder feeder in Winona from November into April; not only was it Minnesota's first winter record, but perhaps the first winter report ever from the North Central U.S.; it managed to survive January temperatures in the -30°F range which some House Sparrows in the yard did not survive!

Dark-eyed Junco

Reported from 37 counties north to Marshall, Clearwater, Hubbard, St. Louis, Lake and Cook.

Tree Sparrow

Reported from 32 counties north to Otter Tail, Crow Wing, Pine and St. Louis (until 2-10 at Ely; LP).

CHIPPING SPARROW

Remained until 1-4 at the P. Kochendorfer feeder in Vadnais Heights, Ramsey Co.; only the second Minnesota winter record ever and the latest by a month.

FIELD SPARROW

Seen all winter at the EW feeder in Minneapolis; only the 4th Minnesota February record.

Harris' Sparrow

Reported on the Big Stone, Fargo-Moorhead, **Crosby** and Excelsior Christmas Counts; also seen all winter in Lac Qui Parle Co. (FME); 3 in Rock Co. on 12-19 (fide KE); until 1-14 in Olmsted Co. (JF); 2-6 Hennepin (EW).

White-crowned Sparrow

Late migrant 12-3 Hennepin (ES).

White-throated Sparrow

Reported from Mower, Anoka, Hennepin (all winter on the Nicollet Mall, downtown Minneapolis), Ramsey, Houston, Washington, Otter Tail (1-1; NJ), Beltrami (L. Elwell) and Cook (1-22; TS).

Fox Sparrow

No less than 5 reports; St. Paul N.E. and Rochester Christmas Counts; 12-5 Anoka (KL); 1-1 and 1-2 **Duluth** (E. Fox); 1-2 Otter Tail (GO).

Song Sparrow

Reported from 15 counties north to Clay, Otter Tail and Duluth 1-9; B. Bergstedt).

Lapland Longspur

Reported from 14 counties north to Wilkin, Roseau (1-21; PH) and Polk (Crookston Christmas Count); more reports than usual.

Snow Bunting

Reported from 44 counties throughout the state; also more reports than usual.

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FALL MIGRATION OF BOREAL OWLS

David L. Evans¹ and Robert N. Rosenfield²

Irruptions of the Boreal Owl (*Aegolius funereus*), a resident of the northern boreal forest, have occurred irregularly in Minnesota. The three most recent irruptions involved primarily late winter to early spring observations (Green 1963, 1966, 1969). In 1963, nine reports of Boreal Owls occurred from February 15 to March 21 along the North Shore of Lake Superior. Two of these birds were found dead and four were at bird feeding stations. There were 15 reports in 1966. Again, most (14) were on the North Shore and ranged from January 16 to April 6. About half of these reports were of birds found dead and several more were at feeding stations. In the winter of 1968-69 there were 11 reports scattered throughout the central and northern parts of eastern Minnesota. Of these, four were found dead and one died soon after it was discovered. A larger invasion occurred in the winter of 1922-23, with observations centered in Roseau County (Roberts 1936).

Starvation appeared to be the primary cause of death of Boreal Owls observed in Minnesota irruptions. Roberts (1936) stated that many of the observations of Boreal Owls in the northern United States were of birds suffering from extreme starvation and that deep snows and resulting prey shortages forced the birds south. However, snowfall does not appear to have been a common factor in the recent irruptions. Only in 1968-69 could it have been considered heavy, when it was 155% of normal. Seasonal snowfall was 62% and 111% of normal in the winters 1962-63 and 1965-66. Indeed, even in the winter of 1922-23, snowfall was only 87% of normal (Local Climatological Data - Duluth, Minnesota).

A contrast to the recent late winter observations was the migration of Bor-

eal Owls observed during the fall of 1976 at the Hawk Ridge Research Station, Duluth, Minnesota (see Evans 1975 for capture and banding techniques). Eight Boreal Owls, six immatures and two adults, were captured, processed, and released from October 22 to November 14 (Table 1). All birds captured appeared to be in very good condition and showed no evidence of the food shortages associated with past irruptions. Earhart and Johnson (1970) examined nine Boreal Owl specimens and found that all owls with wing chord greater than 168 mm and weight greater than 121 gm were females. All the Boreal Owls caught at Duluth could be classified as females by these criteria (Table 1). However, comparison with measurements of 34 Boreal Owls caught at Whitefish Point, Michigan (W. A. Lamb, personal communication) indicate that the two smallest owls (11/08 and 11/14) may, in fact, have been males.

The capture of eight Boreal Owls represents the first major observation of fall migration in Minnesota. Previously, individual fall sightings have occurred on October 20, 1895; November 4, 1969; November 9, 1972; November 18, 21, and 27, 1933; and December 9, 1950 (Eckert 1973, Green and Janssen 1975, MOU files, Urness 1970). It now appears that Boreal Owl migration of varying proportions occurs fairly regularly in this region. Boreal Owls have been captured every year except 1968 during spring netting operations begun in 1966 at Whitefish Point, Michigan (Kelley and Roberts 1971, W. A. Lamb, personal communication). During most years Boreal Owls probably do not come into this region until very late fall. Although netting continued until November 14, 29, and 25 in 1973 to 1975, respectively, Boreal Owls were not observed at Hawk Ridge. Weather

and/or food factors may have been responsible for the early flight observed in 1976. Prey populations may have been substantially reduced by the severe drought which affected the northeastern Minnesota - Ontario region during the latter part of 1976. Also, October and November were considerably colder than normal. The daily mean of maximum and minimum temperatures averaged 8.2 and 6.3°F below normal for those months (Local Climatological Data - Duluth, Minnesota). Migration of Saw-whet Owls (*Aegolius acadicus*) was also considerably earlier than normal in 1976. In 1974 and 1975, 90% of the Saw-whets had passed through by November 3 and October 31, respectively, while in 1976, 90% had passed through by October 19, some two weeks earlier (Evans, unpublished data). The first Boreal Owl was netted on October 22.

Similar to the pattern of recent ir-

ruptions, Boreal Owls were observed in the late winter and early spring of 1977 (Table 2). Again, starvation was common and observations were concentrated on the North Shore of Lake Superior. Snowfall, 40% of normal during the winter of 1976-77, did not appear to be a contributing factor in these reports. The coincidence of Boreal Owls netted on Hawk Ridge during the fall of 1976 and the subsequent reports during the spring of 1977 suggests that the spring observations were not the result of a late winter irruption but were of owls that migrated south in the fall and wintered in northern Minnesota. The reason for the paucity of fall (apart from Hawk Ridge) and winter observations in 1976-77 and in previous irruptions is unclear. A possible explanation for the late observations may involve reduced prey populations at winter's end coupled with the beginning of spring

Table 1. Boreal Owls captured at Hawk Ridge — Fall 1976.

Date	Age	Tail (mm)	Wing chord (mm)	Weight (gm)
10-22	Immature	109	183	149.0
10-26	Immature	104	177	151.0
10-30	Immature	102	176	146.5
10-30	Adult	106	177	146.5
11-06	Immature	107	177	155.5
11-08	Adult	102	172	146.5
11-10	Immature	107	178	155.0
11-14	Immature	101	169	139.5

Table 2. Boreal Owl Records — Spring 1977

Date	Area observed	Outcome	Wing chord (mm)	Weight (gm)	Sex†
02-15, 16	Silver Bay — Tom Martinson	Sight record	—	—	—
02-15	Duluth — Bob Rutke	Dead: starved	171	99.5	Female
02-23	Hovland — fide Marj Carr	Dead: starved	164	90.5	Male
03-07	Silver Bay — Marj Carr	Dead: Roadkill	172	144.0	Female
03-10	Agassiz Refuge — Sarah Vasse	Dead: unknown	169	88.2	Male
03-20	Duluth — Unknown*	Alive: injured*	174	164.5*	—

*This bird was turned over to the Duluth Zoo — it had a spinal injury and was sent to Dr. Patrick T. Redig, Univ. of Minnesota for rehabilitation. At last report it was improving slowly. Weighed on 03-28 after eight days in captivity.

†Sexed internally during autopsy by Dr. Patrick T. Redig; the bird from Agassiz Refuge was processed by Diane Morris, Bemidji State University.

migration which may result in movement of Boreal Owls to areas of relative prey abundance such as farms or bird feeding stations and thus render observation more likely.

We wish to thank Dr. Patrick T. Redig, D.V.M. for performing the post mortem examination of dead owls, the Hawk Ridge Nature Reserve for assistance and all those who contributed to the research program.

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REQUEST FOR INFORMATION

An effort is being made to determine the movement, migration patterns, and wintering area of Giant Canada Geese that have been established in northwestern Iowa. Geese have been fitted with blue neck-collars that are coded with two letters followed by two numbers and have been banded with Fish and Wildlife Service leg bands. If you see any Canada Geese with these neck-collars, please record the color code (when possible), the location, the number of geese sighted, nearest city, county, and state. Information sent to me will be reported to the Bird Banding Laboratory, U.S. Fish and Wildlife Service. Please send information on your sightings to:

Thomas A. Nigus
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Your help in this project will be very much appreciated.

THE M.O.U. "300 CLUB"

The numbers keep growing as "300 Club" members add more Minnesota lifers. Everyone added at least one lifer in the past year. Terry Savaloja added a fantastic 14 and Jo Blanich increased her list by 9! Ray Glassel with three new birds and Bob Janssen with four are now tied for the lead. Welcome to Evelyn Stanley as our newest member.

Here are the standings as of September 1, 1977:

1.	Ray Glassel	337
1.	Bob Janssen	337
3.	Harding Huber	334
4.	Bill Pieper	333
5.	Ron Huber	332
6.	Kim Eckert	325
6.	Paul Egeland	325
8.	Jan Green	322
9.	Elizabeth Campbell	321
10.	Terry Savaloja	320
10.	Don Bolduc	320
12.	Dick Ruhme	316
13.	Jo Blanich	311
14.	Bill Litkey	310
15.	Evelyn Stanley	308
16.	Henry Kyllingstad	302



NOTES OF INTEREST

LOUISIANA HERONS — On our way back to Minneapolis from the Felton Prairie, on June 20, 1977, Pam and I decided to stop by Ashby and Pelican Lake to look for Little Blue Herons. We drove around the west side of the lake on Trunk Highway 78 and County Road 10, checking the lake shore and the small ponds, but finding nothing noteworthy. At Ashby we turned right (east) on County Road 82. About two blocks along this road, on the right, is a private drive with a large sign that reads, in green letters, "Peterson: Private." This drive skirts two intriguing bays, too attractive to ignore. We drove up. I immediately noticed, in the first bay, a smaller heron with a dark neck and bluish and black bill. At first I thought this was a Little Blue, but as it flew, I noticed its bright, white belly, an unmistakable feature of a Louisiana Heron. Taking out my Swift 15-60X spotting scope, Pam and I examined the bird very carefully when it landed about 100 yards away. We could see its red eye, the white trailing feather behind the head, the prominent white throat directly under the head, the spotted light path down the underside of the throat (which was indistinct for a large part of the middle of the throat), and the pinkish, wispy feathers on the back. We spent quite some time being sure, since we knew this would be the third record for the state. And as if one Louisiana Heron did not challenge our credulity enough, we found another one in the same sheltered bay, and a third in the second bay as the drive curves to the right. All three Louisiana Herons were clearly visible in the bright morning sun. **Charles A. Bergman, 2100 S. 112th St., Vista Oaks Apts. L-2, Tacoma, WA 98444.**

LOUISIANA HERON SIGHTINGS, GRANT COUNTY — After a telephone call from Bob Janssen the evening of Monday, June 20, 1977, my wife, Marion, and I drove to Pelican Lake, near the city of Ashby, Grant Co. Bob had reported to us the possible sighting of three Louisiana Herons earlier in the day, along Pelican Lake, by a friend passing through the area. About 9:00 p.m., we finally located not three, but four Louisiana Herons feeding in a bay of the lake located on the southeast side. Also present were several Great Egrets, a couple of Little Blue Herons, Black-crowned Night Herons, several Cattle Egrets, and about a dozen Great Blue Herons. The light was dwindling, but the size and color markings of the Louisianas' especially when compared with the other egrets and herons present, was unmistakable. On the following Saturday, June 25, several MOU members also sighted Louisiana Herons around and about Pelican Lake. **Gary L. Otnes, Route 1, Box 181, Fergus Falls, Minnesota 56537.**

WESTERN WOOD PEWEE, ROSEAU COUNTY — Location: Roseau Co., Pelan Park Campground, 9.5 miles west of Greenbush on Highway 11. Date: May 29, 1977. At about 11:00 A.M. I heard a call that sounded like one of the buzzy whistles of this species — impossible to transliterate but different than any other bird I know. I quickly found a Wood Pewee in an oak about 30' up. I watched it for about five minutes in varying light (at times excellent) as it foraged from 20-35' up in the oaks. I suspect I was already biased, but I was struck by the very smokey gray cast of the bird, with no trace of greenish and not very much brown in it; the sides especially were dark with the "unbuttoned vest" look of this species. The wing bars were much less distinct than those of a nearby Least Flycatcher, and there was no hint of an eyering. The wings came about halfway down the tail, a good way to distinguish pewees from *Empidonax* which have shorter wings. The bill was slender, again longer than in the Least (the bird was longer, of course) with a lower mandible dull yellowish at the base. The bird gave the one-syllable burry call for a while, and then, as if in answer to my constant hope, started in with a typical Western Wood Pewee song — the downward-slurred, burry whistle which I describe as "bijou" or "beeur." I have lived with this species for the last nine years in Washington, and I could detect no difference from what I am used to hearing in the West. Earlier that morning, in Kittson Co., Bronson Lake State Park, we had heard Eastern Wood Pewees several times, and my wife, Susan Hills agreed with me that (1) they sounded very different and (2) this bird sounded just like what she was used to in Washington. She is an intermediate-level birder with 1½ years fairly concentrated experience. I lived in the East for years and became familiar with all the calls of the Eastern species and never heard any calls in the East like the ones under discussion here. I used to collect birds for the University of Miami, and I have collected



Western Wood Pewee on nest - June 18, 1977 - Pelan Park, Roseau Co.

Photo by Steve Blanich

quite a few individuals of both species, and become familiar with their color differences. I am familiar with all of the U.S. *Empidonax* as well and am sure this bird was a *Contopus*. It had long wings and fed by long flights over and under the canopy. Photographs were taken, but not very close; probably won't be definitive. **Dennis Paulson, 3833 Meridian Ave. N., Seattle, Washington 98103.**

EDITOR'S NOTE: The Western Wood Pewee was seen and heard by many observers including Terry Savaloja, Evelyn Stanley, Jo and Steve Blanich, Kim Eckert, Dick and Gloria Wachtler, Ron Huber, Liz Campbell, Ray Glasel, myself and many others. By mid-June a pair of birds had constructed a nest (see photo). The Wachtlers were fortunate to see the young birds. Here is their report: "On Friday, July 8, 1977, about 4:45 p.m., we entered the park on Minnesota 11 at Pelan, Roseau County. Three young dark pewees were perched side by side about a foot away from the lichen covered nest. An adult Western Wood Pewee was perched and calling nearby. The adult flitted from tree to tree calling and occasionally catching insects. It fed the young birds twice before one of the young flew-fluttered up to another branch about two feet away. In less than five minutes another young had moved about nine inches from his original perch. The adult continued to call for about ten minutes and the young birds occasionally changed perches until they were out of sight of the nest tree."

FIRST MINNESOTA SPECIMEN RECORDS OF THE CATTLE EGRET AND LITTLE BLUE HERON — The status of the Cattle Egret (*Bubulcus ibis*) and the Little Blue Heron (*Hydranassa caerulea*) in Minnesota has been described as regular and casual by Green and Janssen (Minnesota Birds, University of Minnesota Press, Minneapolis, 1975). Both species have bred in the state within the last five years. This paper reports what we believe are the first specimen records for Minnesota; these specimens have been deposited as study skins in the J. F. Bell Museum of Natural History. A Cattle Egret (BMNH 30358, female, ovary 17x6 mm, ova less than 1 mm, 200.9 g-partly emaciated) was found by Howard Krosch on 7 November 1975 at the base of an oak tree in a forest in Faribault County (T. 101 N, R. 27 W, sec. 18?). This is the latest fall date on record for Cattle Egrets in Minnesota although the bird was injured and may have been in the area for some time. The bird was kept in captivity for about two months and died on 28 December 1975. The bird had an extensive skull fracture that spanned the width of the skull between the orbits. The lesion had undergone considerable healing, however observation of the bird during the three days prior to its death indicated it had apparently sustained damage to its neuro-motor center. It was nonetheless a remarkable feat that the bird survived for nearly two months. An immature Little Blue Heron (BMNH 26282, female, ovary 4x2 mm, 270.2 g) was found on the ground at the Lake Johanna (Pope County) herony on 1 August 1972 by R. M. Zink. **Robert M. Zink, Susan L. Frye, J. F. Bell Museum of Natural History, 10 Church St. S.E., University of Minnesota, Minneapolis, Minnesota 55455.**

WHITE PELICANS IN NORTHERN COOK COUNTY, MINNESOTA — Although common in southwestern and west central Minnesota, the White Pelican (*Pelecanus erythrorhynchos*) is rare in the northeastern portions of the state (Green and Janssen, 1975). Consequently, we were startled on the morning of 24 May 1977 to observe a flock of 15 of these large, graceful birds approaching our camp on Red Rock Bay in the southwest corner of

Saganaga Lake (90° 57' 30" longitude; 48° 10' 30" latitude). The birds approached our camp from the north flying at about 75 m over the lake. When first spotted they were moving in a fairly tight "V" formation that soon became disorganized with individuals moving off in several directions. After a few minutes, the flock reunited and left the area in a southwesterly direction. No vocalizations were heard. Only minutes before the birds were sighted, a heavy fog had dissipated, and the sun had become clearly visible in the east. Although Roberts (1932) suggested that the White Pelican was formerly a common summer resident throughout Minnesota, this certainly is no longer the case. We did, however, note that three individuals in the flock had the plate-like culmen structures found characteristically on breeding individuals (Robbins et al. 1966). **Steven I. Apfelbaum and Alan W. Haney, School of Life Sciences, University of Illinois, Urbana, Illinois 61801.**

MOUNTAIN BLUEBIRD — Saw one male Mountain Bluebird on March 28, 1977 eight miles N. of Williams, Minnesota in Lake of the Woods Co. I was with Dr. Robert Nero at the time. He saw it first and identified it. We watched it for about 15 minutes at 30 feet with 7x35 binoculars. The sun was behind us providing excellent lighting. The bird was small, typically bluebird size and shape. It was bright blue all across the head, neck, back, upper wing surfaces, and tail. The underparts, belly, breast and throat were more of a washed out light blue-gray. The bird was feeding along a fence-line. He would often fly off after some bug in the grass and then return to the fence thus giving us a good look at him from all angles. **Paulette Henson, 124½ N. Montana, Dillon, Montana 59725.**

FIELD SPARROWS IN DULUTH — On April 21, 1977 while leading a portion of my general ornithology class on a field trip in the Morgan Park area of Duluth, we observed two Field Sparrows. These were the first Field Sparrows that I have seen in Duluth and Green and Janssen do not record them from northeastern Minnesota. We were attracted to the birds by their song and were able to see them close up in excellent light so that all the field marks and in particular the pink bill, were easily observed. Both birds were together and on this spit of land which apparently is an old railroad spur perhaps associated with the steel plant, there were a number of Tree, Fox, and Song Sparrows and Dark-eyed Juncos. It was assumed that the birds were migrating, but there was no return to the area to search for them during the breeding season. **P. B. Hofslund, Biology Department, University of Minnesota, Duluth, Minnesota 55812.**

GOLDEN-WINGED, BLUE-WINGED, AND BREWSTER'S WARBLERS IN ANOKA COUNTY — On May 19, 1977, while doing field work on a chickadee research project at the Cedar Creek Natural History Area in northern Anoka County, I heard a two-part, buzzy song, "buzz-bee," which I took to be that of a Blue-winged Warbler. I investigated, as Bluewings had never been reported at Cedar Creek. The bird was singing in a swampy area of small birches and alders with an understory largely of ferns, and proved to be a Brewster's Warbler. The cap was yellow, there were two yellow wing-bars, the breast appeared white, and there was no black mask nor bib. The phenotypically "pure" Goldenwing has a black cap and bib, one solid yellow wing-bar, a pure white breast, and a blue-gray back. The "pure" Bluewing has a black eye stripe, yellow breast, no black bib, two white wing-bars, and a yellow-green back. The term "Brewster's Warbler" is generally used for hybrid birds which lack the Goldenwing's black bib

and mask and also lack the Bluewing's solid yellow underparts. "Lawrence's Warbler" refers to birds with the Bluewing's solid yellow underparts and the Goldenwing's black mask and bib. (Parkes, Kenneth C. 1951. The genetics of the Golden-winged X Blue-winged Warbler complex. *Wilson Bulletin* 63:5-15.) Within a few yards of this first sighting, a Brewster's Warbler, probably the same bird, was seen on May 27 by Jeff Burns and myself with the additional details of a blue-gray back with some yellow on the back of the neck, a white breast, but with a diffuse yellow band across it. On June 11, 500 yards south southeast of these sightings, in a tamarac swamp. I saw a Brewster's Warbler with an apparently pure white breast foraging a few feet from the ground, while a male Goldenwing sang nearby. Presumably, this was a second Brewster's and a female. On May 23, I saw a male Blue-winged Warbler in an alder swamp, ½ mile west of this last Brewster's sighting. He was singing a typical Bluewing song, and later, when I returned with Jeff Burns, a male and a female Goldenwing were in the same tree. On June 21, about 300 yards to the northwest, I heard and saw a male Golden-winged Warbler, and then found him accompanied by a Blue-winged Warbler, presumably a female, as they foraged. On May 20, I saw 300 yards to the south a female Goldenwing carrying nest materials with a male Goldenwing close by, and on June 19, I found a female Goldenwing feeding a tailless, fuzzy young one with another buzzing nearby, and perhaps 100 feet further away yet a third young bird being fed by a male Golden-winged Warbler. Throughout the last half of May and June I encountered many singing male Golden-winged Warblers at Cedar Creek, at least 20 males on territory. The above observations constitute the first summer records for any of these warblers at the Cedar Creek Natural History Area. Thus it seems evident that Golden-winged Warblers breed commonly in northern Anoka County, and that they hybridize with the occasional Blue-winged Warblers there. As Blue-winged Warblers have in the past few decades spread north into Golden-winged Warbler range, (Short, Lester L., Jr. 1963. Hybridization in the wood warblers *Vermivora pinus* and *V. chrysoptera*. *Proceedings XIIIth International Ornithological Congress: 147-160.*), it is quite possible that this is also happening in Minnesota. **James L. Howitz, 1700 Silver Lake Road, New Brighton, Minnesota 55112.** (See Ron Huber article on page 178)

RED PHALAROPE AT MOORHEAD

High winds and heavy rain had forced us off the dikes at the east sewage lagoons at Moorhead (Welder Nature Preserve) on Thursday evening so Friday morning, May 27, 1977, we returned to the southeast lagoon to check further. Swimming immediately in front of us in the northeast corner of this low pond was a Red Phalarope. The white cheek patch, red neck and body, and phalarope shape were obvious. The dark of the crown continued down the nape and onto the back where it was flecked with orange and some gray. Its bill was yellow with a black tip and was not as thin as the black bills of the other two phalaropes. We observed it through 7 x 50 binoculars and a 15-60x spotting scope and checked its field marks against Robbins' *Birds of North America* and Peterson's *Field Guide to the Birds*. We stayed on the dike from 6:45 a.m. to 7:45 a.m. and the phalarope fed close to shore up and down the north edge and halfway along the west edge of the pond sometimes as close as 20 feet away from us. Wilson's and Northern Phalaropes were also in the same pond but the Red Phalarope moved independently. **Dick and Gloria Wachtler, 17 Oakridge Drive, Birchwood, Minnesota 55110.**



Red Phalarope — 5-28-77, Moorhead — Photo by Dr. James Coffey

On Friday, May 27, 1977 I received a call from Mrs. Martha Curry of Colorado Springs, Colorado, who said there was a Red Phalarope at the Moorhead Beet Sugar Lagoons (now named the Welter Nature Preserve), and she wondered if we knew about it. She was just driving through here and had been using Kim Eckert's book to find this spot. Ron Neller-moe had been at the lagoons a few days before and had seen nothing unusual. Mary Wyatt and I dashed out, and there was the bird in the exact spot Mrs. Curry had told us to find her. There was no question about her identification, with the rusty body underneath and the white cheek patch, and with a Wilson's Phalarope and a Northern Phalarope right next to her. She was a plumper bird than the other phalaropes, in between them in size. Her bill was yellow with a black tip, and it was heavier and shorter than the others. Her back was streaked with rusty brown and darker stripes. We watched her for about 20 minutes, while she was walking around, swimming in the characteristic phalarope way, and when flying her white wing patches showed up. She was as close as 25 feet most of the time, the lighting was good — it was a sunny, clear, windy day. We used 8 x 32 and 7 x 50 binoculars, and Robbins' Guide and Peterson's Field Guides. Many others watched her on the 28th and 29th but she was gone on the 30th. Jim Coffey was there for three hours and took many pictures. Other experienced birders seeing her were Ron Neller-moe, Oscar Johnson, Larry Falk, Elsie Wetler and Carol Spurbeck. Wish we could have gotten her to come to the Fargo lagoon! **Elizabeth Anderson, 1458 S. River Road, Fargo, North Dakota 58102.**

WHITE-EYED VIREO CONFIRMED FOR MINNESOTA — It was a beautiful spring day (May 3, 1977) for our first all-day session at the Lee & Rose Warner Nature Center, Washington Co. In this program, one class of about 30 spends the whole day in nature study in small groups of four or five to a guide, including the use of canoes to get to the N.E. part of Terrapin Lake. One of the highlights of the day is a demonstration of bird banding for each group. Jo Hondlik, Bonite Heck and myself had hiked to the area early in the morning, set our mist nets in different types of habitat, hoping to catch a variety of birds for the demonstrations. It was now about 10:30 a.m. and still no birds — but the kids weren't there yet, so no need to panic. Just as I was coming back from checking the nets in the field, I met Bonite coming up the hill. She said, "I've got a bird and I don't know what it is — but it has a white eye!" The night before I had been paging through my bird book and happened to look at the White-eyed Vireo. Checking its range, I thought, "That's one I'll never see here!" As Bonite came toward me, I asked, "Not the White-eyed Vireo?" As I took it from the bag, I couldn't believe the white eyes! One of the guides said later, it looked like the artificial eyes you buy in the dime store for stuffed toys. Checking out the identification, it definitely had the vireo bill, a white iris, yellow "spectacles," whitish throat, bright yellow sides, white wing bars. The only thing that confused us was the length of 6" given in "Birds of North America." It was **not** that big! Checking Peterson gave us the length as 4½" - 5½" which was correct. It seemed to be the size of the Least Flycatcher, about 5". A very feisty bird, not at all happy about his new found notoriety. If it was possible to sex by bright plumage, I would say it definitely was a male. It was beautiful! After we had made the identification, three guides came to tell us that the class for the day didn't show up and Bernie Fashingbauer (our leader) wouldn't be coming up. This was a great disappointment because we wanted him to see the White-eyed Vireo and also be able to get a picture of it. Wouldn't you know, none of us had a camera and we felt it was too great a distance on a warm day to take the bird back with us. I banded the White-eyed Vireo with Band No. 1420-90564 and released it in the same area, hoping it would be recaptured on a day when there was a camera handy. Not until I got home and one of the guides called me, did I know just how rare it was to get a White-eyed Vireo in Minnesota. All the more frustrating not to have a picture, but I was glad that there were five witnesses to it. The mist net where the White-eyed Vireo was caught was on the edge of an almost dry pond, willows on one side and blackberries on the other. A very exciting bird-banding day!
Barbara Wojahn, 3999 Birch Knoll Drive, White Bear Lake, Minnesota 55110.

WHITE-EYED VIREO IN WAYZATA — We had a White-eyed Vireo in our yard on Wednesday, May 25, 1977. I might have missed it had we not just spent a week in Arkansas where they were singing everywhere. As I was upstairs making a bed I heard the song out the window. It was strong and unmistakably, "Chick-purreeoo-chick!" I roared down the hill pouring on the Off, for that area is mosquitosville. After 10 minutes of craning, bending and pushing, he came up onto an exposed branch. There he was with his white iris, wingbars, and yellow sides. He sang all morning. About 10 people saw him before afternoon when he left. **Pepper Fuller, 14505 McGinty Road, Wayzata, Minnesota 55391.**

EDITOR'S NOTE: The White-eyed Vireo at the Fuller residence was seen by a number of other observers as Pepper mentions. Paul Egeland heard

and observed the bird from 7:30 to 8:00 A.M. His written details of the observation are on file. Don Bolduc saw the bird at 9:30 A.M. and wrote an excellent description of the plumage and song. The last to report the bird was Ron Huber who saw and heard the White-eyed Vireo at 7:15 P.M. He caught a brief glimpse of the bird at the tennis court and heard it sing softly several times. The bird was not seen nor heard after that.

BAIRD'S SPARROWS AT FELTON — The area around Felton, Clay County is one of the few areas, if not the only area, in Minnesota where the Baird's Sparrow has occurred in recent years with some regularity. On May 29, 1977, I received a call from Terry Savaloja informing me that he had seen and heard Baird's Sparrows that day near Felton. On May 30, Dick Ruhme and I visited the area where Terry had seen the birds. The area of occurrence is known as the Blazing Star Prairie which is owned and maintained by The Nature Conservancy. This area, located approximately 1 mile south and two miles east of Felton is a virgin prairie. When we arrived at about 9:30 A.M., we immediately heard a Baird's Sparrow sing from approximately 75 yards away. We attempted to track the bird down but were unsuccessful for about 20 minutes. During this time, we heard the song come from at least two different locations on the prairie, indicating that more than one bird was present. We then spotted a single bird approximately 40 yards away perched on the top of a dead weed stalk about a foot off the ground. The bird began to sing and then we knew we had a Baird's Sparrow. We approached to within 20 yards of the bird, noting the rather striking yellow-brown head, the clear breast with a light "necklace" of stripes. The yellowish crown stripe was present but not very evident. Size was similar to that of a Savannah Sparrow. The most obvious field character of the bird was the song. The "construction" of the song is very similar to that of a Grasshopper Sparrow: two beginning notes which are almost inaudible followed by a series of notes. While the main part of the Grasshopper Sparrow is an insect like buzz, the Baird's Sparrow is a beautiful musical trill, quite distinctive from any other grassland sparrow. While we were watching this bird, we heard another and possibly a third Baird's sing. The song does not carry a great distance and it is quite difficult to judge exactly where it is coming from. In the immediate area Grasshopper and Savannah Sparrows were common plus a number of Chestnut-collared Longspurs. A pair of Upland Sandpipers were present in the area and a Greater Prairie Chicken flew by while we were watching the Baird's Sparrow sing. **Robert B. Janssen, 14321 Prince Place, Minnetonka, Minnesota 55343.**

YELLOW-CROWNED NIGHT HERON AT CEDAR CREEK — On May 8, 1976, while collecting phantom craneflies and other insects at Cedar Bog Lake in Anoka County, I was startled to see an adult Yellow-crowned Night Heron perched in the White Cedars! I had just arrived at the small boat dock on the south end of the lake when the bird and I apparently saw each other simultaneously. The bird flushed from its very uncharacteristic perch (how often does one see such a southern bird in such a northern tree?) with a characteristic squawk (higher-pitched and more nasal than the guttural squawk of the Black-crowned Night Heron). The overall gray coloration with a bright yellow crown-plume and black face stripes were clearly seen with the mid-afternoon sun behind my left shoulder. I had no binoculars with me, but the naked eye was sufficient at a distance of roughly 150 feet. The bird flew off into the cedars and was not seen again although

I continued working in the area for another hour pursuing insects. **Ronald L. Huber, 2896 Simpson St., St. Paul, Minnesota 55113.**

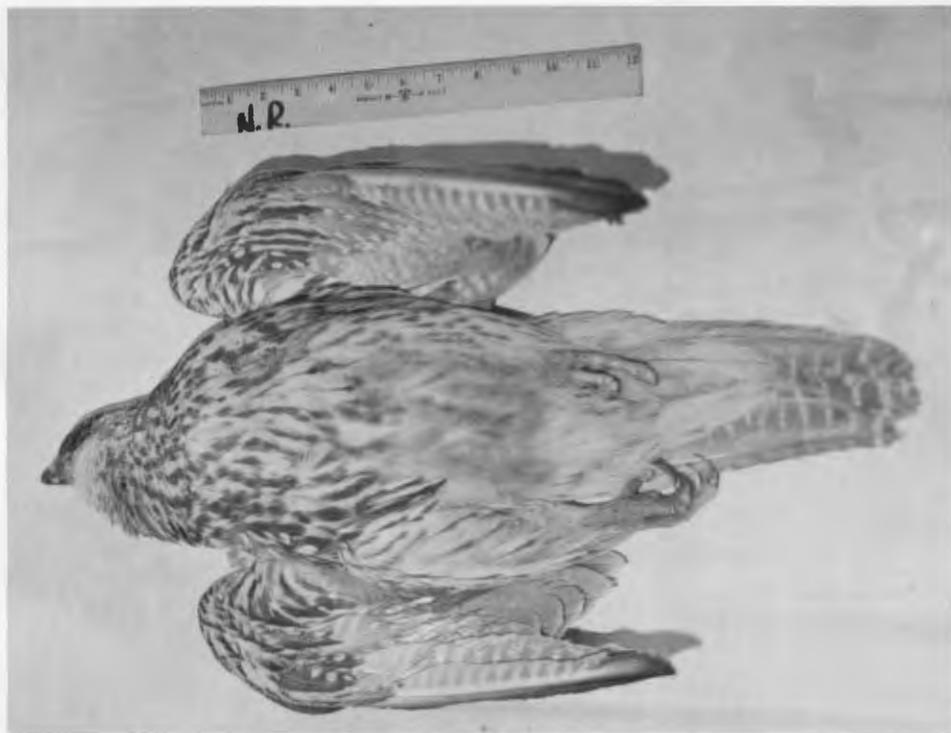
EARLY LITTLE BLUE HERON IN MEEKER COUNTY — On 10 April 1977 while driving a country road about two miles south of Grove City, I observed a small dark heron. Its sleek and slender appearance suggested that it was not a Green Heron. After stopping the car, I observed the bird for 15 minutes with 7x35 binoculars at a range of 40-50 feet. Viewing conditions were excellent, it being 9:30 A.M. on a clear and sunny day. The field marks I identified were its small size; the uniform dark grey body, excepting the brownish neck; a dark bill; and dark legs. The Little Blue Heron was actively feeding in a small shallow wetland, surrounded by light woods and a gravel road. The observation is a bit earlier than the spring records (earliest — 18 April) cited by Green and Janssen (1975. **Minnesota Birds**. University of Minnesota Press), but consistent with the warm spell the region had been having that spring. **Douglas H. Johnson, Northern Prairie Wildlife Research Center, Jamestown, North Dakota 58401.**

PROBABLE FERRUGINOUS HAWK IN LYON COUNTY — On 5 September 1976, Bob Bartelt and I were entering Tracy, Minnesota at about 8:00 A.M. CDT. It was a clear, sunny morning. We noticed a large buteo with snow-white underparts, holding its wings in a slight dihedral (like a Swainson's Hawk but less than that of a Marsh Hawk). As it circled, showing its dorsum, the head appeared whiter than the back and wings, which were brownish. Large, white "windows" were present at the bases of the primaries, and the tail was all white with a dusky terminal band. The bird was seen with strong sunlight at our backs, at about 100 yards with the naked eye. It appeared to be as large or larger than a Red-tailed Hawk. The large size and closeness of the bird allowed us to see all the aforementioned characters very clearly. I had never seen a whiter buteo, and the lack of red "flags" led us to speculate that it was an immature Ferruginous Hawk. The tail pattern, "wing-windows," dihedral wing-posture and lack of a "belly-band" seemed to rule out the pale Krider's phase of the Red-tailed Hawk. **Ronald L. Huber, 2896 Simpson St., St. Paul, Minnesota 55113.**

IMMATURE FERRUGINOUS HAWK IN ROCK COUNTY — On June 8, 1977 I was birding along a gravel road that leads to the west side of Blue Mounds State Park, Rock Co., when I spotted a buteo in flight about a quarter mile away. I watched it through 8.5 X binoculars for about five minutes as it worked its way toward me, circled directly overhead and eventually drifted away. The most striking thing about the hawk was an obvious white patch visible on the upper surface of the wings near the wing tips. It was not merely a diffuse "window" as mentioned in some field guides and as I have seen in some Red-tailed Hawks, but a rectangular shaped white area somewhat similar to a nighthawk. The rest of the buteo's dorsal side was dark brown with just a hint of some rufous color, except that the upper surface of the tail was white with some light tannish flecks towards the tip. The entire underside of the hawk was whitish with no dark areas or streaks of consequence except for the black-tipped primaries. The underside of the tail was pure white. I had no clear impression of size or shape except that it was at least Red-tailed size if not larger, and the wings seemed longer and less rounded than a Red-tailed. After taking notes on the bird, I returned home and consulted the field guides. In spite of the white wing patch and white tail, I was still not sure that I had seen a Ferruginous

since the legs were light colored, the head was on the dark side, and there was little rufous color in the upperparts. But my doubts were gone after reading that I had undoubtedly seen an immature Ferruginous — younger birds lack the dark V of the legs, the whitish head and the reddish color of the back and upper wings. The possibility of Krider's Red-tailed Hawk crossed my mind, however the upperparts were too dark. I have seen Ferruginous Hawks several times including two previously in Minnesota: an adult last year in Lincoln Co. and another immature several years ago in Morrison Co. **Kim Eckert, 12 E. 67th St., Minneapolis, Minnesota 55423.**

GYRFALCON SPECIMEN — A Gyrfalcon was found shot alongside a county road two miles north of the Prairie Chicken booming ground at the Rothsay Wildlife Area, Wilkin County. The bird was found slightly decayed on April 13, 1976. Measurements from the specimen are as follows: total length 57½ cm, tail length 25½ cm, wing span 98 cm, wrist length 39 cm. The specimen was mounted for our collection. **Douglas Keran, Brainerd Area Vocational Technical Institute, 300 Quince Street, Brainerd, Minnesota 56401.**



Gyrfalcon specimen — 4-13-76 — Photo by Doug Keran

CINNAMON TEAL IN GRANT COUNTY — On May 7, 1977, the West Central Bird Club of Fergus Falls held its first field trip. The early morning hours were spent at the Rothsay Prairie twenty miles NW of Fergus Falls. A pair of nesting Swainson's Hawks made that portion of the trip very worthwhile. The next stop was Ash Lake, located approximately two miles

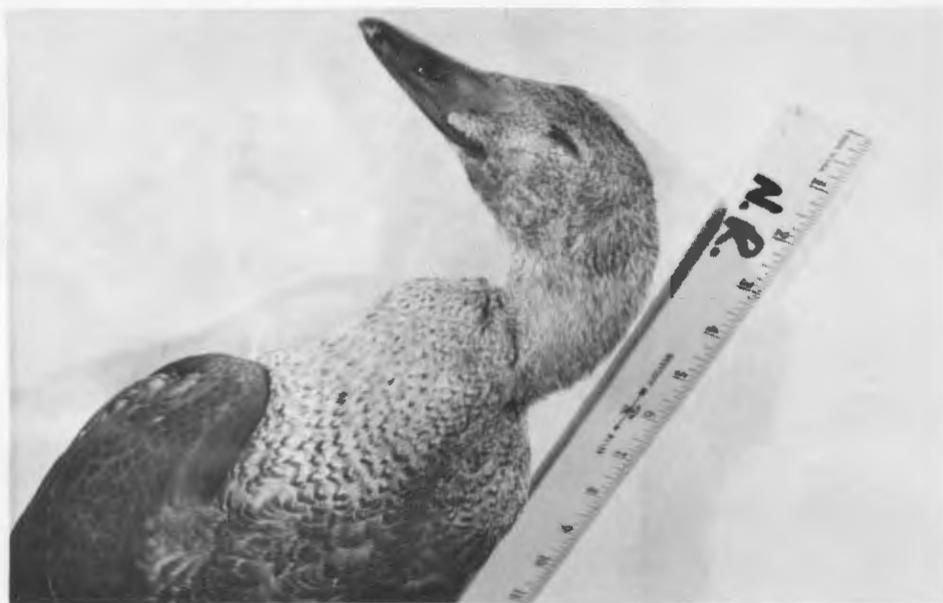
NW of Wendell, Grant County. This shallow prairie lake draws large numbers of migrant shorebirds and waterfowl. Our group arrived about 10:15 A.M. and began checking the many birds present. With the sun behind us, the sky clear, temperature in the high 60's, and a light SE breeze, observation conditions were excellent. There were hundreds of ducks on the lake, most of them Northern Shovelers and Blue-winged Teal. Club member Daryl Jorud, who is also a member of M.O.U., was the first to spot the Cinnamon Teal actively feeding about 250 yards from shore. It was a darker, more iridescent reddish-brown than the many Ruddy Ducks nearby. A female teal, which we assumed to be the mate to the colorful male, stayed close to the drake at all times. We had two spotting scopes and everyone had a good look at the birds. At 2:30 P.M. the same day, Diane Hastings and I returned to the lake and found the Cinnamon Teal and its mate(?) only forty to fifty yards off shore. Although we were exposed to the birds, they seemed as tame and unconcerned as the many Blue-winged Teal feeding with them. The following day I returned once more to try and find the birds, but they apparently had moved out, as had many of the other ducks. **Steve Millard, 304 N. Vine, Fergus Falls, Minnesota 56537.**

LITTLE GULL AT DULUTH — While conducting the annual "Big Day Count" in Minnesota on May 21, 1977, we had the opportunity to observe a Little Gull at the Port Terminal area in Duluth. People who saw the bird were Jim Tucker from Austin, Texas who first spotted the bird, Kim Eckert, Paul Egeland, Henry Kyllingstad, Terry Savaloja and myself. We saw the bird, which was an adult for only approximately 15-20 seconds. The bird flew over the area, where a mixed flock of Herring, Ring-billed and Bonapartes Gulls and Common Terns were milling about, at a height of approximately 40 feet. Skies were clear and observation conditions were perfect. We noted the small size, small all black head and most obvious were the dark (black) under wing linings and the almost triangular shaped tail. The flight of the bird was "soft" and almost moth-like. The bird passed overhead, coming from Minnesota Point, passing directly over the Port Terminal and the Superior High Bridge and passed out of sight as it flew up the St. Louis River. **Robert B. Janssen, 14321 Prince Place, Minnetonka, Minnesota 55343.**

BLUE-WINGED WARBLER HEARD AT CEDAR CREEK — On 15 May 1976, while seeking further specimens of a rare southern jumping spider that I had taken the previous weekend, I heard the distinctive call ("song" if you will) of the Blue-winged Warbler. In bygone years I have heard the Golden-winged Warbler in this area (sandy field surrounded by hardwoods, immediately south of Cedar Bog Lake in Anoka County), including the two-syllable ("bee-buzz") variant of its song. The quality of the second syllable, however, is completely different in both species (admittedly, I have never heard any of the hybrids). The second syllable of the Blue-winged Warbler is a deep, throaty "raspberry," while the second (and all subsequent in the longer call) syllable of the Golden-winged Warbler is a thin, wiry, high-pitched buzz. The Blue-winged Warbler (or could it have been a hybrid?) sang occasionally for several hours as I collected insects in the area. I had seen a Yellow-crowned Night Heron here the previous weekend, and with the presence of the southern jumping spider, one must ponder the occurrence of these southern species in such a northerly habitat. **Ronald L. Huber, 2896 Simpson St., St. Paul, Minnesota 55113.**

BURROWING OWL, WILKIN COUNTY — As the traditional Easter dinner was not to be consumed until the evening of April 10, 1977, my wife, 17 year-old son and I decided to stop by the prairie west of Lawndale, Wilkin County earlier in the day and eyeball the Sandhill Cranes and Marbled Godwits hanging around the area. So we did just that. In the process, at 11:30 a.m., about 300-400 feet into a short grass field, we ran across a Burrowing Owl, and viewed it at our leisure with binoculars and 20-60 power spotting scope. Considering the good quality of light, close proximity to the bird, and the species of bird itself, it seems ornithologically cuckoo to go into a long winded description of it; it was your standard spindly legged, "genuflecting," small, Burrowing Owl. The following morning Steve Milard and I made a concerted attempt to relocate the little owl, but apparently it skipped the county overnight. **Gary L. Otnes, Route 1, Fergus Falls, Minnesota 56537.**

KING EIDER SHOT AT LAKE OSAKIS — On November 3, 1976 a female King Eider was shot at Battle Point, Lake Osakis, Todd County. The specimen was brought to me by four of my students (Louie Henneck, Brad Koenen, Kevin Peterson and Dale Anderson). At first we thought the specimen was a Common Eider but after bill measurements were taken and the clear throat were noted, it was confirmed as a King Eider. **Douglas Keran, Brainerd Area Vo-Tech. Institute, 300 Quince St., Brainerd, Minnesota 56401.**



King Eider specimen — 11-3-76 — Photo by Doug Keran

EDITOR'S NOTE: This represents the sixth record in Minnesota for the King Eider. There are two previous fall records, October 16, 1973, Mille Lacs Lake, (Loon 46:34), and October 29, 1964, Lost Lake, St. Louis Co., (Loon 36:136).

BIRD FEEDING SURVEY IN BRAINERD, MINNESOTA — In 1973, a governmental questionnaire revealed that 43% of the families in Amherst, Massachusetts, and nearly 25% of the families in Boston, had a regular habit of putting out winter feed for birds. Statewide in Massachusetts, the people spend 3.5 million dollars annually to keep birds coming to yards and windowsills. In Maine there is an estimated annual use of 6 million pounds of assorted seed spread for birds each winter. It is estimated that Americans invest 50 million dollars a year for feeding wild birds. Since 1975, second-year students in the Natural Resources Technology program at the Brainerd Area Vocational Technical Institute have conducted a survey of Brainerd residents to see how many people feed birds. This is part of an investigation on the urban wildlife resource of Brainerd being done as part of course work in the natural resources program at the institute. We found from the city engineer and auditors office that there are approximately 3,000 living units in the city of which 2,700 are private homes. A 10% random sample of the private units was conducted each year. Houses were visited with a personal interview of the residents taking place. A total of 814 interviews were conducted for the three year period. Of the 814 homes surveyed, 499 or 61%, fed birds at some time of the year. Of those feeding, 66% used commercial bird feed with the remaining feeding bread, suet, and assorted table scraps. When asked what type of feeder was used, 35% responded with a hanging type and 44% used a pole mounted feeder with the remaining feeding on the ground. Another aspect looked at, was the season of the year that people provided food for birds. It was originally felt that winter was the primary time when people fed birds but this was not the case. Forty-nine percent of the people feeding, feed year round with 12% feeding in summer only and 35% in winter only. The following table gives some of the other data of interest collected during these interviews. It is felt that the sampling is reliable in that the unemployed figure from our survey corresponds very closely with the figure used by the state employment office for Brainerd.

TABLE 1

Optional data collected during Bird Feeding Survey in Brainerd, Minnesota 1975-1977

Do you feed Hummingbirds? (Based on total houses interviewed)	18% said "Yes."
Do you feed Orioles? (Based on total houses interviewed)	22% said "Yes."
Do you put out nesting boxes?	25% said "Yes."

Employment of householders	Total sample	Feeding birds
Retired	32%	37%
Blue collar worker	36%	34%
Professional	14%	16%
Unemployed	5%	3%
Non-response	12%	7%

If anyone is interested in conducting a similar survey in their community, please feel free to contact me for copies of our interview sheet, or ideas.
Douglas C. Keran, Instructor Fisheries and Wildlife, Brainerd Area Vocational Technical Institute, Brainerd, Minnesota 56401.

RECENT SIGHTINGS OF THE SWALLOW-TAILED KITE AT ITASCA STATE PARK

Swallow-tailed Kites at one time nested within or close to Itasca State Park. J. W. Preston (**Ornithologist and Oologist**, Vol XI, No. 12, 1886:181-183) found one of their nests with two eggs incubated about a week on 7 June 1886 "in a virgin wilderness of mingled lake and forest in northeastern Becker County, conceivably in an area now occupied by the park. At Elk Lake, well within the park, Roberts (in Alvin H. Wilcox, "A pioneer history of Becker County, Minnesota," Pioneer Press, St. Paul, 1907) reported seeing a Swallow-tailed Kite in July 1902. So far as is known, no other sightings of this rare Minnesota bird were reported for the park until 1976. That year Paul Rundell of the Department of Natural Resources saw one just east of Twin Lakes near the Park Road in Hubbard County on 22 April, and one just outside the west edge of the park in Clearwater County (Township 143N, Range 37W, Section 13) on 15 May. He, of course, had no idea whether he saw the same individual on both dates. The following is an account of Mr. Rundell's observations: "The first sighting was April 22, 1976 east of East Twin Lake in Itasca State Park. I did not get a real good look at it as I was in a truck heading back to the office. The bird was about the size of an Osprey but more slender. The wings were pointed and white with black trailing edges. The body was white and it had a long black tail. It did not show the wide spread normally associated with Swallow-tailed Kites. After checking in bird books I felt sure this was correct as it did not fit any other bird. The second sighting was May 15, 1976 near Anchor Hill Tower west of the park. The bird was in sight for several minutes so I got a good look at it with binoculars. It was soaring with its tail extended forming a broad "V." The tail was black and it contrasted with the white lower body. When it wheeled it showed a dark upper body and a white head. The lower view of the wing showed a white wing with dark primaries and secondaries. The top view was dark wings and a dark body with a light head. The wings appeared to be lighter than the body. The flight pattern was more erratic than most raptors but quite graceful. It reminded me of the flight of a Black Tern, not of a large raptor." Interestingly enough, one of two other reported observations for Minnesota (see **Loon**, Vol. 48(4): 1976:182-183) occurred at the site of our other field station, Cedar Creek Natural History Area, in Anoka County, by my former graduate student, Stephen J. Maxson, in July 1974. **David F. Parmelee, Field Biology Program, 349 Bell Museum, University of Minnesota, Minneapolis, Minnesota 55455.**

IBIS SIGHTING IN MAHNOMEN COUNTY — On 25 May 1977 John R. Tester, Bruce A. Fall, and I saw three ibis about two miles south and two miles west of Waubun while conducting class field trips from the Forestry and Biological Station at Lake Itasca. The birds were standing close together in a nearly dry natural prairie pothole. They flew off towards the west within a minute or so after our vehicles came to a stop on a country road nearby. I am reasonably certain that the birds were White-faced Ibis (**Plegadis chihi**), judging by the amount of white at the eye and chin of one of the birds. According to Robert B. Janssen (personal communication), this record is the second for northern Minnesota, although Tester claims to have seen ibis on at least one occasion in Mahnommen County some years ago. **David Parmelee, Field Biology Program, University of Minnesota, Minneapolis, Minnesota 55455.**

EDITOR'S NOTE: There is one other record of an ibis in northern Minnesota, a single bird was seen by James Howard on May 8, 1975 in Clearwater Co. (*The Loon* 48:179).

AMERICAN AVOCETS AT ROCHESTER — Sunday morning, May 1, 1977 was in the low 70's and sunny. About 10:30, as I was making my fairly regular weekend check of the ponds on some privately held land on the near north side of the city of Rochester, I came upon 35 American Avocets feeding in a bass pond with a fairly good mudflat. Also, there were at the time yellowlegs, Killdeer, Spotted and Pectoral Sandpipers, and Semipalmated Plover. Though startled to see the avocets in this area, I immediately recognized them as I had saturated my viewing of them at Laguna del Garza near Manzanillo, Colima, Mexico in March of 1975. I had my 200 mm Nikkor with me and took a roll including the group shot enclosed. I called many local birders and was able to get Vince Herring and Joan Fowler over to see them. Between 3:30 and 5:00 p.m., Hersch Hodge and I took many shots with a 500 mm Nikkor and a 1000 mm Nikkor mirror lens including the photo with this article. A check at 8:00 p.m. offered



no sight of them — nor did a check at 7:00 a.m. the next morning. While visiting Rochester they proved remarkably unwary. Some of our photos show fishermen in the background and while we were working on photographing them, Hersch's three small children played close by. The ponds are on land that is worked for sand and gravel and is very private. This is the same area that yielded an Osprey on the 1976 Christmas count, and the Hudsonian Godwits and Wilson's Phalaropes in April of 1976. **Anne Marie Plunkett, Rochester, Minnesota 55901.**

HARLEQUIN DUCK NEAR HASTINGS — On the morning of March 30, 1977, Bette Jung and I were birding in the Prairie Island area of Goodhue County, about 10 miles southeast of Hastings. It was a cold and windy morning, and it had rained off and on. We drove down to Lock and Dam No. 3 on the Mississippi to turn around and go back home, and as we were heading back just past the turn-around area we stopped to check a small backwater of the Mississippi along the west side of the road. About 100 feet out in the water is a small narrow island and as I was scanning along the shore of this island I noticed a dark duck of some kind standing just at the edge. As I was viewing the duck head on, I could see some sort of white markings on the head and face and that it had a dark breast that lightened considerably at the belly. I called Bette's attention to it and as we watched it for about five minutes, it just stood in the same position. Because of the angle we were looking at it, it was very difficult to get any identification on it. Suddenly, it walked to the water and began swimming after a flock of American Coots that had just passed by it. Now we were able to see it from the side, and we could see very plainly three white facial patches — one over the eye on the forehead, one behind the eye in what could be called the "ear" area, and one larger patch extending from the bill to under the eye. The bill was small and the neck wasn't particularly long. The duck began swimming after the coots although it never joined them, but stayed several feet behind them. We noted at that time that the duck was just about the same size as the coots. Of course, by this time we were positive neither of us had ever seen a duck that looked like this one. As Bette searched her field guides (Peterson's **Eastern and Western Guides** and Robbins, **Birds of North America**) I kept the bird in my binoculars and made further notes on it. As he swam, his body appeared very dark, and the rump was even darker. As I watched it, it flipped its tail straight up several times and I mentioned this to Bette. The only duck she could find in her guides that looked like the one we were viewing and that flipped its tail was the female Harlequin Duck. We both watched it swimming along behind the coots for about 10 minutes. It suddenly took off and as it flew I could see that the belly was light and that the wings were completely dark. I particularly watched the wings as it banked to fly around to the other side of the island and there were no wing markings of any kind that I could see. Although the day was cloudy and the only viewing equipment we had along that day were 7x50 binoculars, we were close enough to the duck (about 100 feet) to see it very clearly and we had ample time to take fairly detailed notes of its markings. After we returned home, we checked in further field guides (the National Geographic **Water Birds of North America**, Alexander Sprunt's **Gamebirds** and John McKane's **Ducks of the Mississippi Flyway**) and there is no question in our minds that we had seen a female Harlequin Duck. **Joanne T. Dempsey, 1017 West 14th St., Hastings, Minnesota 55033.**

A TREE NESTING MALLARD — A Mallard hen was discovered nesting in a tree cavity formed by a limb that had broken off at a height of about 15 feet above the ground. The tree, a willow, is located on the northwest shore of Lake Alice, a small lake in the center of Fergus Falls, Minnesota. Lake Alice has a population of ducks that nest around it and on two islands each year. The hen was discovered sitting on the nest about the last week in April but had been seen standing on the edge of the nest several times before. On Sunday morning, May 15, 1977 while walking around the lake about 7:30 a.m., I noticed a hen with two ducklings which

appeared to have just been taken to the water. About noon the same day I was notified that at least three ducklings could be seen in the nest up in the tree. I knew this was not a normal situation for Mallards and didn't think that the young would be able to get out on their own or that the hen would call them out as a female Wood Duck does with her young. I felt that I should be of assistance and so I got a ladder and discovered six ducklings and three unhatched eggs. I brought the ducklings down and put them on the shore near a hen that had four ducklings with her. She quacked and came to them and they went to her, following down to the lake. This was the only hen I saw with ducklings that day or the next two days so I assume it was the one nesting in the tree. A check of the nest later indicated no more hatching and the eggs were now cold. The nest lacked the materials normally found in a Mallard's nest such as leaves or grass. Used instead was the material that was a natural part of the cavity with the addition of a bit of down supplied by the hen. **Loren Woolson, West Central Bird Club, Fergus Falls, Minnesota.**

BARROW'S GOLDENEYE SHOT IN SHERBURNE COUNTY — On December 8, 1976 I shot an adult male Barrow's Goldeneye one mile south of Elk River, Sherburne Co., on the Mississippi River. The bird was taken from a flock of approximately 20 other goldeneyes. Our party shot 10 goldeneyes this day including three adult Common Goldeneyes. We compared the Common species with the Barrow's, the Barrow's was larger in size but the bill was much smaller than that of the Common Goldeneyes. The head had a combination of green and purple cast to it. We noted the



“comma”-like mark on the shoulder, the split in the white of the wing and the crescent shape of the spot in front of the eye. A number of photos were taken of the specimen and the bird was eventually mounted for me by a taxidermist. Out of the ten Goldeneyes shot, one of the female birds had an all yellow small bill, a possible female Barrow's Goldeneye. Unfortunately, this specimen was not preserved. **Gary Moss, 5439 Camden Ave., Brooklyn Center, Minnesota 55430.**

SNOWY EGRET ON BIG STONE NATIONAL WILDLIFE REFUGE — On May 12, 1977, I was driving along the main dike of the Big Stone National Wildlife Refuge on a routine waterfowl census. A small, white egret was observed at the water's edge below me and about 50 feet away. I then observed the bird again through a spotting scope at 20X as it landed on the shore about 100 yards away. The yellow feet, black legs, and yellowish between the eye and base of the bill were unmistakable — a Snowy Egret. It is the first record for this two-year-old refuge. **Bradley D. Ehlers, 625 Stephens Ave., Ortonville, Minnesota 56278.**

ROOKERY SURVEY ON BIG STONE NATIONAL WILDLIFE REFUGE — On June 24, 1977, DNR area game manager John Schladweiler and I set out by canoe to make an annual count of nests in the rookery on Big Stone Refuge. We entered by canoe and saw hundreds of Double-crested Cormorant nests with most young at or near flight stage on the east and south sides of the rookery. As we came to the southwestern corner, Great Egrets and Great Blue Herons came into view. I had observed Cattle Egrets, a Snowy Egret, and a Little Blue Heron earlier in the year and hoped to see them nesting here. We then observed Cattle Egrets and paddled towards them into the rookery. Cattle Egrets and Snowy Egrets were then observed. Black-crowned Night Herons were also present by the hundreds. Great Egret, Great Blue Heron, and Black-crowned Night Heron young were observed in their nests. Cattle Egrets and Snowy Egrets were observed on nests. Most nests were from ten feet to thirty feet off the water in flooded, dead ash trees. The Snowy Egret nests were just under the canopy and the Cattle Egrets were located closer to the water up to twenty feet high. The following estimates of nests were made. An actual count was impossible after the adults left their nests. The egret nest numbers are an estimate based on the number of adults present.

Species	No. of Nests	Species	No. of Nests
Double-crested Cormorant	500+	Great Blue Heron	30
Black-crowned Night Heron	200-300	Cattle Egret	10
Great Egret	50-60	Snowy Egret	10





Snowy Egrets — Big Stone NWR, June 24, 1977 — Photo by Brad Ehlers

Little Blue Herons were not observed. We both took many color slides to document our findings. Permission must be obtained from the refuge manager in Ortonville to enter the rookery. Last year Great Egrets, Cormorants, and Great Blue Herons occupied the rookery in roughly 150 nests total. **Bradley D. Ehlers, 625 Stephens Ave., Ortonville, Minnesota 56278.**

EDITOR'S NOTE: The above record for nesting Snowy Egrets is the first positive breeding evidence for the state. See **The Loon** 44:36-43 for possible nesting at Lake Johanna in 1971.

ROSS' GOOSE, WATONWAN COUNTY — On the afternoon of April 6, 1977, I was birding at Sulheim's Slough which is located approximately five miles southeast of Mountain Lake. It was here on this particular afternoon, that I saw perhaps the greatest display of waterfowl I've ever seen in my short-lived life. The birds included numerous male American Wigeons, at least 25 of them, hundreds of Snow Geese and at least 30+ Whistling Swans plus many other species of ducks. It was a partly cloudy day, with the wind blowing from the north, northwest, and a temperature of about 50+°F. After studying the group of birds carefully through my Tasco 10x50 binoculars, I noticed that near the Snow Geese, and about 10 yards from them, was a small white goose the same size as the Mallards on either side of it. (The geese and Mallards were on the muddy shore, which used to be part of the slough, and about 20 or more yards from the water, and about 40 yards from me. I was crouched in a natural cattail 'blind'). The goose was similar in many ways to the nearby Snow Geese. After observing it closely and realizing that it was a separate species of goose, it moved to my right and into the Snow Geese. Although a number of bird books note the Ross' Goose length as three inches shorter than the Snow Goose's, it appeared at least 2/3 as small as the Snows. Both the Robbins, Brunn, and Zim book and "How to Know the Water Birds" by Jacques and Ollivier list the Ross' Goose as exactly the length of a Mallard, which it certainly appeared to me to be. It resembled the Ross' Goose pictured on page 26 of "A Field Guide to the Western Birds" by Peterson, which I

consulted later. Its bill appeared light and shorter than the Snows, although I then didn't realize that this was one of the distinguishing characteristics. The neck was definitely shorter, and its head appeared smaller and more rounded than the other geese, also in conjunction with Peterson's description. This is the first time I have ever had the opportunity to identify a Ross' Goose and although I could hardly believe my own eyes, yet I'm very sure of my identification. **Edward Duerksen, 1316 Fourth Ave., Mountain Lake, Minnesota 56159.**

ARCTIC HORNED OWL OBSERVATION — On March 6, 1977 I heard Common Crows and Blue Jays scolding in a tree near our house. I saw a very pale Barred Owl, I thought, until he turned around. There were yellow eyes and ear-tufts. He was the arctic race of the Horned Owl. There was no color on him anywhere at all except his eyes. He flew off after a few minutes and I saw him no more. There is a good picture of him in "Owls of North America" however, this Horned Owl had even less color than the book's illustration. **Pepper Fuller, 14505 McGinty Road, Wayzata, Minnesota 55391.**



MARTIN DATA NEEDED

A comprehensive bibliography of the North and South American martins (*Progne* spp.) is currently in preparation. It will include all papers dealing solely or partly with martins, except local annotated checklists. Authors wishing to have material included should send an abstract or reprint to Charles R. Brown, Box 1309, Austin College, Sherman, Texas 75090.

WANTED: DATA ON THE SEASONAL DISTRIBUTION OF NORTH AMERICAN GULLS

We are developing a procedure whereby the U.S. Air Force can predict the potential seasonal hazard to aircraft represented by gulls in parts of North America. This knowledge will be used to schedule missions around high risk areas thereby reducing the likelihood of bird/aircraft collisions.

Supplemental data on local gull populations are needed from all parts of the continent. The assistance of field workers is solicited to aid us in this task. Please submit reports of your gull observations to Dr. William E. Southern, Department of Biological Sciences, Northern Illinois University, DeKalb, IL 60115. Data will be gathered for a two-year period beginning September 1, 1977.

For each observation, please provide the following information: list of species present, approximate number of each species, precise locality description, dates observed, any information about causes for concentrations (e.g. sanitary landfill operation), and any details about the frequency of such concentrations in the respective areas. Information is sought from inland as well as coastal localities.

Thank you for your cooperation.

BOOK REVIEWS

Roger Tory Peterson's Dozen Birding Hot Spots by George H. Harrison; Simon and Schuster, 630 Fifth Ave., New York, N.Y. 10020; 1976; 12 maps, many photos (12 in color); 288 pp.; \$9.95.

There is certainly some good stuff in this book that a lot of reviewers will get excited about. Twelve chapters tell all about 12 pretty good birding areas visited by the author and his wife in one year. Each area is well mapped, and there are scores of excellent photographs that attest to Harrison's skill as photographer and editor for **National Wildlife**.

But you don't have to look very far to find faults with this book that are both serious and just plain silly. The title alone was enough to turn me off — just what a "hot spot" is defined as, why these 12 were chosen, and why such a childish term is repeated throughout the book is never explained. The most serious faults, however, have to be the initial selection of the 12 particular areas and the initial assumption that visiting all of them in a year would be interesting to read about. While there could be little argument about the inclusion of most of these areas (it takes little imagination to come up with the Everglades, South Texas, Southeastern Arizona, Point Pelee, Hawk Mountain and Cape May), I have serious reservations about a few of them. When limited to only 12 areas, there seems no justification for including both Bonaventure Island and the nearby and similar islands of coastal Maine; no justification for one chapter on Bear River Refuge in Utah and another on the similar refuges at Tule, Klamath and Malheur; and no justification for a chapter on Horicon, a nice place only if you've never seen a Canada Goose before and only if you like crowds of tourists (sure, the numbers are impressive but the species isn't, and the refuge isn't really that exceptional

except for attracting up to 30,000 people on a weekend crammed onto a two-mile road). A book such as this would have been much better if those dubious "luke-warm" spots had been replaced with places like Southern California (pelagic and coastal birds, condors, Salton Sea) or Big Bend National Park or Alaska (Pribilofs and Aleutians) or Gulf coast migration traps (like Galveston or Dauphin Island) or even Duluth (no \$1 admission fee like at Hawk Mountain, more hawks — the Broad-winged daily record is only half of Duluth's, and many more non-raptor migrants and rarities than at Hawk Mountain).

The book also makes a big deal about visiting all these areas within one year. Harrison almost brags about their year list of 402 (not a bad total but certainly not a good one) and their 26,000 miles driven (far below a serious birder's average for a year). And Roger Tory Peterson goes out on a limb (and falls off) when he writes in his introduction: "I am sure that Joe Taylor — 'The Champ' — has been to all of the hot spots described by George Harrison in this book. But I doubt whether anyone, other than George and his bride, has done it in one year. Now that the trail has been blazed, however, I suspect that others will try it." Well Roger, your middle statement is undoubtedly true — there's absolutely no reason why anyone would have wanted to. But your last statement is probably wrong — there's still no reason why anyone would want to in spite of this book. And I'll bet there's a pretty good chance Joe Taylor managed to list Canada Goose and Sandhill Crane among his 700 lifers without ever visiting Horicon or the Platte River.

Finally, the author writes a lot of things scattered throughout the book that convince me he should trade his typewriter in for another camera. Some of my "favorites": his account

of South Texas omits the Falcon Dam area and recommends winter over spring as the time to visit . . . he claims his stay at Cape May was ruined by a mild hurricane that in reality should have blown in some interesting birds . . . he recommends use of Peterson's Eastern field guide with no mention of Robbin's more popular guide and with no mention of Peterson's Western guide (no wonder Harrison saw so few birds out west) . . . he recommends membership in something called the Brooks Bird Club as much as the A.B.A. or the A.O.U. . . . two of his high points in his visit to the Everglades were a flock of crows at Nine Mile Pond and 500 Red-winged Blackbirds at Flamingo . . . he got more than a little carried away when seeing his first trogon ("My God . . . it's a . . . it's a . . . my God, Kit, it's a copper-tailed trogon!") . . . at Point Pelee: "That bird up there looks like a red-eyed vireo . . . I'll put the scope on him for you. Oops, forget it. He's gone" . . . his list of rarities at Hawk Mountain stops at two — a tawny eagle (with jesses) and a Kermadec petrel (no U.S. record mentioned in any of the literature) . . . he reports seeing a flock of 10,000 ducks as "one of the highlights of my birding career" . . . he describes the interesting Townsend's Solitaire as only an "unimpressive gray bird" . . . One last example: "We do not recommend doing it (visiting all 12 areas) in a single year. As I said, it's crazy." Right you are, George! But so was your editor at Simon and Schuster for publishing this book.

Kim Eckert

Birds of the Antarctic and Sub-Antarctic by George E. Watson; American Geophysical Union, 1909 K St. N.W., Washington, D.C. 20006; 11 color plates, 50 range maps plus many line drawings and charts; 350 p.

Before you embark on your next voyage to the Antarctic with Eric Lindblad, be sure to pick up a copy of this book. In it you will find com-

plete and readable accounts of all species known to occur in the Antarctic region south of 55° South latitude: their identification, flight and habits, voice and display, food, reproduction, arrival, eggs, hatching, fledging and departure, molt, predation and mortality, habitat, distribution and/or map, and even a list of parasites found on specimens! But as complete as all this sounds, there's a lot more. A long and interesting introduction explains the format of the guide, describes the Antarctic continent and surrounding waters, and suggests techniques of recording observations. And the book concludes with geographic accounts of the Antarctic continent, peninsula and surrounding islands.

The only drawback is that some of the color plates by Bob Hines are too crowded and drawn on too small a scale. For example, the two albatross plates don't do justice to these magnificent giants with up to 13 foot wingspans: a dozen flight pictures are crammed onto each page, telescoping each wingspan into a mere 1½ to 2 inches. The scale of a few plates is also inconsistent: an 18" moorhen on one plate is no larger than some ten inch long passerines next to it. But otherwise, these paintings colorfully and accurately depict the birds' plumages, and do not really detract from this recommended guide. If you never make it aboard the Lindblad Explorer, it is worth exploring these pages with their range maps from a unique point of view, with their ocean-going species that just may come in handy on a West Coast pelagic trip, and with those just plain exotic species that literally come from the other end of the world (what could be more remote than an Inaccessible Island Flightless Rail?).

Kim Eckert

Birdland, The Story of a World Famous Bird Sanctuary, by Len Hill and Emma Wood; 144 pp., 71 plates (29 in color) and 25 line drawings; 1976; Taplinger Publishing Co., N.Y.; \$9.95.

In fairness to this book and its author, I'll admit at the outset of this review to a healthy prejudice against most privately-owned aviaries and zoos. **Birdland** did not change that opinion. In reading the book, I found it to be less a history and description of the place and more of an autobiography of its founder and owner, M. Len Hill. A warm glow of self-satisfaction colored most of the story, and heavy-handed attempts at humor did little to relieve it. Both sins might possibly be charged to the apparent ghost writer, Emma Wood.

A good share of the book details the care, feeding and housing of Birdland's 1,200 exotic inhabitants — an impressive and costly feat. But more of it relates the adventures, mishaps and inevitable triumphs of Mr. Hill. He has, indeed, shown remarkable ingenuity and persistence in securing wild bird species, transporting them thousands of miles from their native habitat and turning them into clever pets. With names such as "Cocky," "Juno" and — so help me — "Flight Lieutenant Frederick."

To give Len Hill his due, he is sincerely dedicated to his birds and knowledgeable and scrupulous in caring for them. He is a strong supporter of the World Wildlife Fund, and his Birdland gardens have done much to create public interest and awareness of rare and endangered bird species. At his own expense, he has purchased two islands in the Falklands Group and maintains them as a refuge for several southern bird species including penguins, albatrosses, geese, and the rare steamer duck as well as elephant seals and sea lions. (He also saw fit to print a private "postage stamp" bearing his picture, to commemorate this good deed.)

The format and typography of the book is good and illustrations plentiful. However, color photographs range from striking to terrible and line drawings are only adequate.

Sorry, but this Briton's **Birdland**

just isn't my cup of tea.

Dick Ruhme

A Critical Book Review of J. M. Harrison's **BIRD TAXIDERMY**.

James M. Harrison composed an excellent and interesting book on the art of bird taxidermy, both from the novice and professional view point. From its crude infancy to the present high standard of the arts, in both bird mounts and scientific study skins, Harrison presents, I feel, a comprehensive outline for the history of taxidermy.

The self-instructed and motivated author, an expert of over 250 ornithological papers particularly of systematics, physiology, and hybridation, presents a quite concise and detailed explanation on the preparation, mounting, and maintenance of a collection.

However, in the addendum to the 2nd edition, on the cleaning of bird skins before mounting, I find in error to a major degree. His statement of soaking a fresh cleaned bird skin, with detergent for eight (8) hours, I feel is frightening. This long period is a sure way to lose a specimen. A shorter time of less than thirty (30) minutes, I find, is the safest way to go.

Additionally, he comments on the drying feathers and skins with heavy magnesium carbonate powder in an inflated shaker bag, I know that this is not only bad for health reasons, but also impossible to remove totally the powder residue for a mount. I find compressed air from an air gun quicker, better, and safer.

Another antiquated method for mounting birds, still held by the author, of running a neck wire through the skull and head feathers in the mount, no longer is desirable as it distorts crest patterns and limits positioning of the head. A much better technique is to anchor the neck wire in the brain box with a plaster/tow mixture. This technique does not disturb the positioning of head feathers

and solidly connects the neck to skull as naturally as possible.

Harrison's method of attaching the wings to the body, only with straight pins, from outside the body does not solve a good accurate positioning of the wing on the final mount. Better to wire all wing bones from within before sewing the skin over the body mankin. This procedure gives complete control to positioning and posing the wing feathers in a natural manner, regardless if it is a closed wing mount.

In summary, this is a good book with a few exceptions that I have mentioned. I therefore would recommend its place among the books of knowledge in the field of taxidermy.

John Jarosz

Watching Birds: An Introduction to Ornithology by Roger F. Pasquier. Illustrations by Margaret LaFarge, 301 pp, Houghton Mifflin Co., 2 Park St., Boston, Mass. 02107. 1977. \$9.95.

I found this to be a most enjoyable book in many aspects but disturbing from a number of points. First I would recommend this book to all serious birders who want to know more about birds than is contained in the standard Field Guides and who are not quite up to tackling a college textbook on Ornithology. This book fills a definite niche between these two extremes.

The author, an Ornithologist at the American Museum of Natural History, has written this book to give simple answers to questions most frequently asked in his field courses on birds and ecology. There are 15 chapters covering a wide range of topics on Origin, Feathers and Flight, Food, Anatomy, Voice, The Breeding Cycle, Migration, Winter Habits, Distribution, etc. I found the early chapters most interesting and full of facts that will make

our hobby more interesting and enhance our recognition skills. The line illustrations are excellent and add much to the text.

There are two things that really bothered me about the book, the first is the author's use of the words "always" and "never." In many areas throughout the text the author's use of these words seemed inappropriate. It would seem to me that the usage of these words should be minimal especially when dealing with such dynamic creatures as birds.

What really bothered me about the book was the Foreword by Roger Tory Peterson. After reading it I almost threw the book aside but instead forced myself to continue. Usually I don't pay too much attention to Forewords but this one really got to me. RTP states that "identifying birds is not all there is to bird watching." To this I agree but then he goes on to imply that those who don't go beyond Step One (Identification) are really of little worth. And then he goes on that we must bridge this gap and become a Roger Pasquier or Joseph Hickey and write a book on how birds act to really gain any enjoyment from bird watching. I take issue with this as one who has written a book on distribution which resulted from bird listing. My point may seem picky but it seems RTP should be the last one to point out levels of birding. Hasn't he seen that most, if not all listers, enjoy the birds from all aspects, not just "ticking" them off on a card. Hey Roger, you should go "Birding" with some of us in Minnesota.

One last comment about the Foreword, RTP states "although birds do not change, bird watchers do." This needs explanation.

Enough said, skip the Foreword and read the rest of the book and expand your interest in birds.

Bob Janssen

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 quote 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 Robert Janssen. See inside front cover.

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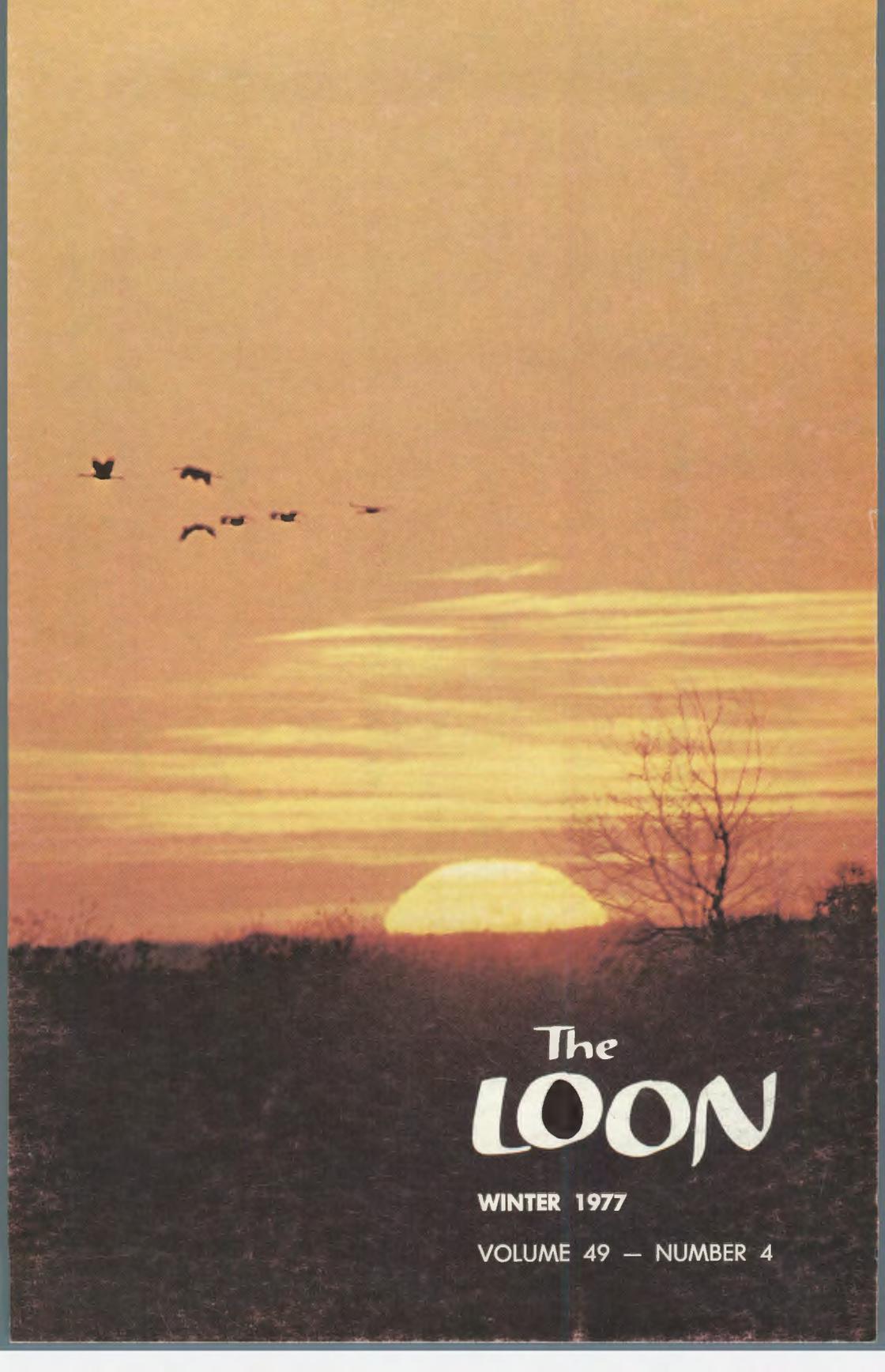
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The
LOON

WINTER 1977

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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 state-wide 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; 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, 14321 Prince Place, Minnetonka, Minnesota 55343. (phone 612-938-7464). 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).**

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the President Writes...

The trouble with writing a president's page is it's so quarterly. You can't just sit down at your typewriter, as one comic writer is said to have done, boldly write "The" at the top of the page, repair to the corner bar, return some hours later and add "hell with it!" and go home. I will refrain from remarking on the tyranny of editors and plunge ahead.

Early snow and cold, hopefully, carry some good for birders. Northern finches come down in numbers so that many are enjoying busy feeders, and there should be interesting figures on Christmas Counts. We haven't seen many of these finches yet in southwestern counties, but we are still hoping. We have seen unusual numbers and kinds of raptors: Merlins, Ferruginous Hawks, dark-phased Rough-legged Hawks, and Bald Eagles, to mention a few. This reminds me that a letter from Ron Kneeskern suggested that everyone should make the weekend of the Hawk Ridge count a hawk observation time statewide. This sounds like such a good idea, that I'm going to suggest that we make the month of September a month of concentrated hawk watching. Where do the hawks that pass over the ridge go from there?

The most cheering aspect of the heavy snow forecasts, to me, is that the spring thaw may raise water levels in our sloughs and lakes. I fear that unless we can do a better job of conserving water, holding it back in lakes, sloughs, potholes and marshes instead of speeding it on its way back to the oceans by draining, channelizing streams and so forth, our water shortages are going to make the energy shortage seem like a minor annoyance. I hope that as many MOU members as can possibly attend the water hearings being held around the state will make their ideas known and concerted pressures felt where we can do some good.

Come what may, we can take heart from the certain knowledge that birds will continue to provide inspiration, challenge, and healthful outdoor pleasures. I wish everyone a full measure of this pleasure during the coming year.

Henry C. Kyllingstad



INTRODUCING A. L. P. O.

(Or what to do when your birding trip has gone to the dogs)

by Bert Lystor

A new organization has been formed which should be of interest to all serious listers. It's called the American License Plating Organization (ALPO), and its purpose is to provide a diversion on those dull listing trips when check marks are few and far between. Simply stated, license plating is that activity in which a plater (please don't call us plate watchers or plate lovers — those names conjure up images of little old ladies in tennis shoes chasing around shopping center parking lots) tries to see as many license plates from the 50 states as possible. Just as there are rules, strategies and activities in bird listing, so also are there in plate listing:

EQUIPMENT — There are no field guides on plate identification; however, there are few identification problems since all plates have the state's name on them (a possible exception are those mysterious red and white plates with either MD or MO on them — I still haven't been able to identify them in the field; photos have been inconclusive, a specimen would be highly desirable). Telescopes and binoculars are generally not necessary; neither are tape recorders or "pishing" to attract plates (call notes or songs of license plates are so far unknown to platethologists).

RULES — These are few and simple: 1) only plates from the 50 states count, though there is a proposal before the ALPO Rules Committee to count Mexican and Canadian plates (other foreign plates would not be countable because of the probability of their being escapes from ocean-going ships); 2) a plate must be alive (no fair going to junkyards), wild and unrestrained (no fair counting a plate

on a car caught in a speed trap), and, if a plate from an introduced state, the state must first be established in the Union for ten years (for example, if Puerto Rico were admitted to the Union its plates would not be countable until 1988); 3) license plates must be seen to be counted (heard plates do not count).

ACTIVITIES — Besides the usual life, year, trip and state lists (some of the more dedicated platers also keep month and county lists), most ALPO members also get involved with Christmas Counts (the all-time record census is 38 states on the 1974 Miami Beach Christmas count) and Big Days (this record is 41 states on July 4, 1976 in the Mt. Rushmore vicinity). Other activities borrowed from birding have met with little popularity (pelagic plate trips, breeding plate censuses and watching for kettles of plates in thermals about Hawk Ridge have not worked out for some reason).

LUMPING/SPLITTING — Just as with birding, the lumpers and splitters are causing controversy among ALPO members. There is talk that some day North and South Dakota will be lumped into one state, thus eliminating one species from our lists. On the other hand, there is also talk of splitting Michigan into two separate states, thus adding one to our lists. On a related note, the problem of the District of Columbia is still unresolved. Some think it should be counted as a full species, others think it merely a well-marked sub-species, and still others consider it a hybrid between Maryland and Virginia.

WHEN AND WHERE TO FIND PLATES — In most areas, summer weekends are the best times to look

for migrating license plates, though in the South it seems that winter is the best time to go plating. As to where to look, there is little challenge in visiting all the states to see all the plates, but it is much more exciting to find Eastern vagrants along the California coast, Western strays along the North Shore of Lake Superior, and, if allowed by the ALPO Rules Committee, Canadian plates wandering south in winter to the northern U.S. and Mexican strays in Texas and Arizona. ALPO members generally agree that the most-wanted plates are from Alaska and Hawaii. It is said that Alaska plates are rare but regular along the Seattle waterfront which is the terminus of the ferries from Alaska. Sightings of Hawaii plates in the ALPO area (Hawaii itself is outside this area so plates seen there do

not count) are, like the Ivory-billed Woodpecker, extremely rare and open to suspicion. Tim Jucker, the founder of ALPO, claims to have seen only one Hawaii plate in his life, and that was on the London Bridge at Lake Havasu City in Arizona, a natural spot for exotic strays that bears watching in the future.

One final thought. A few years ago a noted birder, bored with the usual birding activities, set out to break the record for the most species seen in one year. Having limited funds, he subsisted mainly on cat food to save money. Our belief is that the bored birder need not resort to cat food — not when you can have ALPO instead. For further information on ALPO write to Tim Jucker, P.O. Box 4335, Austin, Minnesota.

THE M.O.U. "300 CLUB"

Minnesota Life Lists are growing so fast in the "300 Club" that I thought it would be of interest to our readers to see the standings as of December 31, 1977. Welcome to new members Karol Gresser and Gary Otnes.

Ray Glassel	339	Terry Savaloja	323
Bob Janssen	339	Don Bolduc	320
Harding Huber	335	Dick Ruhme	318
Bill Pieper	335	Karol Gresser	317
Ron Huber	333	Jo Blanich	314
Kim Eckert	330	Bill Litkey	312
Paul Egeland	328	Evelyn Stanley	309
Jan Green	324	Gary Otnes	308
Liz Campbell	323	Henry Kyllingstad	302

It will be interesting to see what happens in 1978.

Bob Janssen, Editor

EARLY SUMMER WARBLER RECORDS AND BOREAL CHICKADEE NEST NEAR ITASCA PARK

Bruce A. Fall

During three summers of intensive mist-netting and banding birds near Itasca State Park as part of a project concerning surplus or "floater" populations of some passerines, I captured or observed several species which are rare or whose status during this season is poorly known (Parmelee 1977; Green and Janssen 1975; Hickey et al. 1965). This paper is a report of the more noteworthy of these records. The netting area was part of a 10-ha second-growth willow-alder community, which resulted from the clear-cutting of a mature black spruce-tamarack bog in the mid-1960's. This bog is in the LaSalle Creek Valley, about 500 m north of the northeast corner of Itasca Park, Hubbard Co. Extensive spruce bog exists for more than one km south of the study area, and a small lake with willow-alder margins borders it on the north. To the immediate east and west of the cut area is mature upland forest of red pine, aspen and deciduous hardwoods. Suitable habitat for most of these bird species within several km of the study area is restricted to the creek valley. A total of over 11,000 mist-net hours was accumulated during the three summers (one net-hour = one 12-m mist-net open for one hour), from mid-June to mid-August, 1975 and 1976, and mid-May to mid-July, 1977. Netting was done on the average of four days per week, with about equal effort during each week in this period. Nearly all of the approximately 1,900 individuals netted were banded and released, but a few were preserved as museum specimens and are in the Bell Museum of Natural History (BMNH) ornithology collection.

Tennessee Warbler (*Vermivora peregrina*) — This species is considered a rare summer resident; there are only a few records, including a 1956 report of a "nesting pair" (Hickey et al. 1965). For this reason, I am including an annotated list of all individuals netted or seen from mid-June to mid-July:

- 8 July, 1976: 1) adult female (specimen, BMNH 30573), not molting, fresh incubation patch, and a somewhat enlarged ovary (4 x 3 mm, with largest follicles less than 1 mm); 2) adult male (specimen, BMNH 30574), not molting and testes enlarged (5 x 4 mm).
- 12 July, 1976: adult male (banded), not molting.
- 14 and 29 June, 1977: an unbanded male was heard (less than 10 songs each) and seen in an open stand of spruce and tamarack.
- 5 July, 1977: 1) adult male (banded), with light body molt and primaries 1 and 2 missing; 2) adult male (banded), with light body molt but flight feathers not molting.
- 6 July, 1977: 1) adult male (banded), with moderate body molt and primaries 1 and 2 barely erupted; 2) adult male (banded), with heavy body molt, and primaries 1-3 barely erupted; recaptured on 13 and 14 July; 3) adult female (banded), not molting, and with a fresh incubation patch.

Seven additional adults (4 females and 3 males) were captured from 21 to 29 July, 1975 and 1976. Two had not yet begun molt while the other five were in some stage of pre-basic molt including flight feathers. No

young were captured during this period.

Although the nine records from mid-June to mid-July suggest that this species is a regular breeder in the LaSalle Creek valley, I was in the field almost daily during this time and I have no positive evidence of nesting. Only two sightings were made and all those netted were adults. The pattern of capture (none netted until early July, then a steady influx the remainder of that month; and only one individual recaptured) might indicate either very early migration or post-breeding wandering from some other nesting area. However, these birds had either not yet initiated molt or were in its early stages, which probably means they were not migrants. It is thought that adult warblers in general undergo their pre-basic molt after their young are independent, on or near the breeding territory, and do not migrate until the molt is near completion. On the other hand, we know surprisingly little about individuals whose nesting attempts fail. They may begin molting considerably earlier than successful birds (Payne 1972); in some species, these individuals may abandon their territories, even rather early in the nesting season, and disappear from the area (e.g., Thompson and Nolan 1973). Since the possibility of post-breeding wandering exists, the above records do not constitute proof of a local breeding population. However, I believe that future intensive field work in this valley will result in the discovery of a small number of nesting Tennessee warblers.

Magnolia Warbler (*Dendroica magnolia*) — This warbler is considered a rare summer resident, although there is at least one nesting record (Hickey et al. 1965). In June, 1977, there were three territories in the study area; the species was present in 1975 and 1976 also but the exact number of territories is not known. The birds were restricted to the western half of the study area where young

balsam fir and spruce (mostly 1 to 3 m) were common and interspersed among the alders. A nest containing four eggs was discovered in a low spruce by Dr. Parmelee on 7 June, 1977. Three of the eggs hatched later that day (one egg disappeared), and one young fledged on 16 or 17 June. Nests of the other two pairs could not be located despite intensive searching although I did observe the fledged young of one of these during late June.

Black-throated Blue Warbler (*D. caerulescens*) — This species is rare even in migration, and there are no Itasca breeding records although there have been a few scattered summer sightings. On 17 May, 1977, I first discovered a male singing on territory on the steep upland deciduous slope forming the west edge of the creek valley. Dominant trees within the territory were mature paper birch, aspen, bur oak and scattered red pine. The warbler was heard (but less often seen) almost daily through 5 June, although his rate of singing gradually diminished. He then ceased singing and was not recorded again until 23 June, when he resumed singing for several more days. Unfortunately, his territory was difficult to reach and traverse, and most of my records are of his songs only; I never observed a female.

Bay-breasted Warbler (*D. castanea*) — An adult female with an incubation patch, ovary measuring 2 x 2 mm (slightly enlarged), and molting primaries 1 and 2 (but no body molt) was netted 14 July, 1976 (specimen, BMNH 30534). No others were seen or netted during the three summers, but an adult male was banded in early summer 1974 at the same location (Rappole et al. 1977). There are no nesting records from this region.

Northern Waterthrush (*Seiurus noveboracensis*) — An adult female with a fresh incubation patch was banded on 18 June, 1976. This is the only record during this study, and one of the few summer records at Itasca. There are no nesting records.

Wilson's Warbler (*Wilsonia pusilla*) — This species is not known to breed in the state and is listed as an accidental summer visitant (Green and Janssen 1975). On 13 July, 1975, I captured an adult male (specimen, BMNH 28987) with somewhat enlarged testes (2.5 mm) and moderate body molt but not flight feather molt. I have no other records until mid-August when a small wave of presumably migrant warblers passed through.

Canada Warbler (*Wilsonia canadensis*) — Lasalle Creek valley is probably the best place in the Itasca area to find this otherwise scarce bird. In June, 1977, there were at least seven different territories from the north end of the park into my study area. On 6 July, 1977, after many days of searching, I finally discovered the nest of one of these pairs, near a small spring surrounded by a rather open forest of spruce, alder and birch. The nest was extremely well hidden at the base of a small sedge tussock beneath the overhanging dead leaves, and contained four young which fledged on 8 July. The parents were still on the territory and feeding the young a week later. This is only the second nest reported at Itasca (the first was found in 1974 by Dr. Parmelee) although young birds out of the nest have been seen several times.

Boreal Chickadee (*Parus hudsonicus*) — During July and August, 1976, I occasionally heard and saw several individuals in the alders near the spruce forest. In 1977, I captured and banded a male on 5 June, and a female on 6 June which had an egg in her abdomen and presumably was in the process of laying a clutch. These were a mated pair, and although I regularly heard and saw them in the same area during the next two weeks, neither Dr. Parmelee nor I could find the nest with eggs. However, on 24 June, shortly after the young hatched, I discovered the nest near the edge of an open spruce bog in the same area we had spent many hours searching. It was in a partly natural and partly ex-

cavated cavity in a 50-cm-high rotting spruce snag. The cavity entrance opened from above, and was only 25 cm above the ground; the bottom of the nest was less than 5 cm off the ground. There were five young which both parents fed as I sat less than 5 m away. The young disappeared on 5 and 6 July; we never determined if they fledged or were removed by some predator. This is apparently the fourth nesting record for the park region.

I wish to thank Gloria and Dwain Warner, David Parmelee, Jim So-gaard, Roger Eliason, and Jeff Bryan for their help in manning the mist-nets, banding, nest-hunting and general advice, as well as several other Itasca students who participated at various times during this study. The project was conducted while I was a student at the University of Minnesota Forestry and Biology Station, and was partly financed in 1977 by a grant from the Department of Ecology and Behavioral Biology Research Fund, University of Minnesota. I gratefully appreciate the use of Station facilities and equipment and the support of the staff, particularly Dr. Parmelee and David Bosanko.

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REPRODUCTIVE SUCCESS OF MOURNING DOVES NEAR A NUCLEAR GENERATING PLANT

Craig A. Faanes

As part of the Environmental Monitoring and Ecological Studies program at the Northern States Power Company, Prairie Island Nuclear Generating Plant, a study was conducted on the reproductive success of Mourning Doves (*Zenaida macroura*).

The objectives of this study were to: 1) determine the reproductive success of doves nesting near the generating plant, and 2) determine if any changes occurred in the reproductive success which may have been influenced by the proximity of the nuclear plant.

STUDY AREA AND METHODS

The 4.8 hectare study area was located 1 km north of the Prairie Island Nuclear Generating Plant, Goodhue County, Minnesota. A description of the study area and most methods used, was published earlier (Faanes, 1976).

Field observations were conducted between 25 April and 3 September in 1974 and between 3 May and 4 September in 1975. Nest searches were conducted between 09.00 and 18.00.

Population estimates for nesting adults were determined by multiplying the number of active nests by 2 adults per nest. Fall population estimates were determined by adding the adult population estimate and the

number of young produced, then subtracting the known number of losses which occurred during the nesting season.

RESULTS AND DISCUSSION

Nesting Phenology

Except for occasional small flocks, Mourning Doves are absent from this part of Minnesota in winter (Harris, et al. 1963). In 1974 the first doves were observed on 9 April, with nesting activity first noted on 25 April. The number of active nests per week increased steadily, with a peak of 135 during the week of 4 June. After this week, the number of active nests decreased rapidly to the end of the season. The last fledgling was observed leaving the nest on 3 September.

In 1975, the first doves were observed on 15 April, with nesting first noted on 3 May. Nesting activity increased to a peak of 104 active nests during the week of 10 June. After this period, nesting activity decreased at a slower rate than in 1974. A two-fold increase in the number of active nests occurred during the week of 16 August. After this period, nesting activity decreased until the last fledgling was observed leaving the nest on 4 September.

Selection of Nest Trees and Nest Height

Doves are well known for their adaptability in the selection of nest sites, ranging from ground sites to all types of above ground sites (Harris, et al. 1963).

In this study, jack pine (*Pinus banksiana*) was most commonly used for nest placement, with 74 percent of all nests located in this tree species (Table 1). Jack pine was the most abundant tree in the study area (Table 2).

Table 1. Mourning Dove Nest Tree Selection

Species	Number of Nests			Percent
	1974	1975	Total	Total
Jack Pine	176	178	354	74.5
White Pine	26	22	48	10.1
Red Pine	30	15	45	9.5
Scotch Pine	8	18	26	5.5
Red Cedar	0	2	2	0.4
Totals	240	235	475	

Table 2. Relative Abundance of Nest Trees in the Two Study Plots

Plot 1			
Species	Relative Density	Relative Frequency	Relative Dominance
Jack Pine	67.0	71.2	52.3
Red Pine	30.0	24.8	43.2
Scotch Pine	3.0	4.0	4.5

Plot 2			
Species	Relative Density	Relative Frequency	Relative Dominance
Red Pine	61.0	71.4	44.0
Scotch Pine	20.0	18.4	24.0
Red Cedar	2.0	0.7	4.0
White Spruce	2.0	1.0	4.0
Others (Deciduous Trees)	15.0	8.5	28.0

McClure (1943), Harris et al (1963), Schmidt (1973) and Jackson (1976) found similar instances where doves were selective for the species of tree

most common in the area. Conversely, Caldwell (1955) found no selection for tree species.

Eighty-eight percent of all nest sites were three meters or less above the ground in trees ranging in height from 4.6 m to 5.5 m. Nests were placed at 59 percent of total tree height.

This part of the tree, especially the jack pines, had a greater availability of horizontal crotches, and provided a higher degree of protective cover for both adults and nestlings. Schmidt (1973) found doves nesting at 43 percent of tree height, and nearly 50 percent were directly adjacent to the tree trunk.

Nesting Success and Productivity Estimates

There were 945 eggs laid in 524 active nests for an average clutch size of 1.8. Five nests were found to contain three eggs. One nest found in 1975 with a female dove incubating, contained two dove eggs and two American Robin eggs (Faanes, 1975).

Young were hatched from 459 of the 945 eggs laid, giving a hatching success of 48.6 percent. Young fledged from 259 of the 524 active nests for a nesting success of 49.4 percent. This is considerably lower than the 64.8 percent nesting success reported by Harris et al. (1963).

An average of 1.8 young per successful nest (one that fledged at least one young) found in this study is comparable to or greater than figures of 1.5 per successful nest reported by Frates (1963) and 1.8 per successful nest found by Boldt (1950) and Schmidt (1973).

The 1974 breeding season population was estimated at 480 adult doves. The fall population was estimated at 721 doves. The 1975 breeding season population was estimated at 470 doves. The fall population was estimated at 696 doves. This represented a 5.6 percent decrease in the population when compared to the 1974 population estimate (Table 3).

Table 3. Comparison of Mourning Dove Nesting Success Between 1974 and 1975

	1974	1975	Percent Change
Spring Population	480	470	-1.4
Active Nests	253	251	-1.0
Successful Nests	128	130	-1.6
Eggs Laid	490	455	-8.2
Clutch Size	1.9	1.7	-4.2
Total Fledglings	257	242	-6.0
Fledglings per Successful Nest	2.0	1.9	-5.2
Fall Population	737	696	-5.6

Production per Study Plot

About 3.2 ha of the study area was in Plot 1, and 1.6 ha in Plot 2. In 1974, 181 young were produced in Plot 1 and 76 in Plot 2. In 1975, 193 young were produced in Plot 1 and 49 in Plot 2. This was an average production of 52 young per ha (Table 4).

Table 4. Mourning Dove Production per Hectare in the two Study Plots

Plot	Year	Hectares	Doves Produced	Doves per Hectare
1	1974	3.2	181	56.6
1	1975	3.2	193	60.3
2	1974	1.6	76	47.5
2	1975	1.6	49	30.6

Though there was a 35.6 percent reduction in the dove production in Plot 2 in 1975, there was no statistical difference between the nesting populations ($X^2=0.39$, $P=0.05$).

Dove production in this study was comparable to figures 59.7 per ha found by Schmidt (1973). Harris et al (1963) reported a much higher rate of 92.3 per ha. Their study had a greater density of nesting doves than was found at Prairie Island.

Causes of Nest Failure and Mortality Factors

Losses of eggs and young were due to weather, nest abandonment and predation. About 45 percent of the eggs laid did not hatch. This is somewhat higher than egg losses of 33 percent reported by McClure (1943) and

Fitcher (1959), and 35 percent reported by Davis and Sintz (1973). Closer to my figures were the results of Nice (1923) who reported nesting losses of 43 percent over a three year period. She attributed total nest losses to weather and young falling from the nest. McClure (1943) found weather to be the largest single cause of nest failure in his Iowa study.

Another factor which contributed to general nest failure was human interference, particularly by the investigator. Caldwell (1955) considered human interference to be a factor in nesting losses during his Michigan study.

Observed predation as a mortality factor was recorded at a three percent rate. Red squirrels and house cats were the main predators in this study. McClure (1943), Hanson and Kossack (1963) and Schmidt (1973) considered these animals to be important predators on Mourning Doves.

In conclusion, it appeared that the Mourning Dove population at Prairie Island was stable. This was indicated by essentially identical nesting success data collected each year. Factors which would indicate something other than normal yearly fluctuations in reproductive success were not apparent. In coming years, if the nuclear power plant causes any adverse effects on the surrounding area, this stable population may prove to be an important index used to demonstrate these effects.

SUMMARY

During the 1974 and 1975 nesting seasons, the reproductive success of Mourning Doves was studied in a 4.8 hectare pine plantation near a nuclear generating plant in Goodhue County, Minnesota. Nesting activity extended from 25 April to 3 September in 1974 and 3 May to 4 September in 1975. Doves chose jack pine for 74 percent of the nest sites. An average clutch size of 1.8 eggs per nest was found. Nesting success was 49.4 percent. Average annual production was 52

young per hectare, with nest failures due to nest abandonment, weather and predation. A 5.6 percent decrease in the population was determined between the two years.

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FACTORS CONTRIBUTING TO THE INCREASE OF THE GRAY PARTRIDGE IN MINNESOTA

Bonnie J. Mettler

Two of Minnesota's exotic upland game species have been adjusting to diminishing habitat since their introductions in the state since the 1920's. One species, the Ring-necked Pheasant (*Phasianus colahicus*), has dominated the scene not only because of its reputation as the most important upland game bird in North America, but because of its adaptability to the spread of agriculture in the state. The lesser known Gray Partridge (*Perdix perdix*) or Hungarian Partridge (Hun) has received little attention by sportsmen because of its low numbers, small size, and explosive flushing characteristics that make it a difficult target for all but the experienced partridge hunter. Now the pheasant is becoming an uncommon species in all but the urban areas of its present range in Minnesota (fig. 1). With this present decline in pheasant populations (fig. 3) has come a steady increase in Gray Partridge populations (figs. 2 & 4) which are now reaching numbers that were common in the 1940's (e.g. In 1941 the statewide average was 18.1 birds/100 miles.). But the period of the early 1950's to the early 1970's saw a general decline in Hun populations, while during this time pheasants were prospering, peaking in 1958 to 438 birds/100 miles compared to a Hun population of 8.7/100 miles. Is there a connection between consistently low Hun populations and consistently high pheasant populations of the past, and the sudden turnabout in the 1970's? Speculation on an explanation lies in comparing general habits of these two species.

The Ring-necked Pheasant was first introduced in Minnesota in 1916 by the Department of Conservation and increased enough to be hunted in the

early 20's. Habitat requirements are met with agricultural lands that supply water in the form of marshes and sloughs and also supply adequate winter cover such as hedgerows and broad shelter belts. The detrimental effects of mowing nesting sites during the nesting season and the habit of early nesting of pheasants in poor new vegetative cover are diminished by the high reproductive potential of the species. Males are polygamous and a high percent of hens appear with broods each year, though relative nesting success may be low. Clutch size averages about 12.3 and the hen will probably renest if the first nesting is unsuccessful. Winter protection is often sought within woodlots adjacent to an adequate food source of corn, legumes, or small grains.

The Gray Partridge was introduced in Minnesota by the Hennepin County Sportsman Club and later by the Department of Conservation in the 1920's. Among wildlife biologists the Hun is known as a "dry land bird" and a "bird of open country." It nests later than the pheasant, when vegetative cover is better, and has a higher rate of nesting success. The Huns form pairs that remain together throughout the breeding, nesting, and brooding season. On the negative side, when nesting is disturbed the hen is less likely to renest than the pheasant hen. Clutch size is larger than the pheasant, averaging about 17 eggs. Winter protection is found by forming close coveys or by burrowing in the snow (Ordal 1952) which they will also do to find food (McCabe & Hawkins 1946).

By comparing a few more facts known about these two species we can speculate on why population



Figure 1 Ring-necked Pheasant Range in Minnesota

————— Limit of Range
 // // // // Area of major occurrence

changes may be interrelated and how changes in land use and decreasing habitat have influenced the populations.

High intensity and clean agricultural practices, draining of marshes and sloughs, along with a decline in "soil bank" type land use have dealt a blow to prime pheasant habitat. What remains is roadside or strip cover, a favorite haunt of the Hun. Two-thirds of the Huns prefer nesting in roadside cover (pers. comm., 1977, A. Berner, Group Leader, Farmland Wildlife Populations & Research Unit, Madelia, MN) and there is stiff competition between the Hun and the pheasant for this remaining habitat.

With the drain on prime pheasant

habitat a high population of pheasants in the smaller area leads to a decrease in nesting cover per hen; with this, nest abandonment increases and summer production is down (Linder, et al 1960). Once the pheasant decreases in density, in this case through intraspecific competition, the Hun has relief from the pheasant's interspecific pressures such as aggressiveness, earlier and longer nesting period and re-nesting in the face of unsuccessful nesting.

The Hun is very intolerant of its own species when defending nesting territory. As with the pheasant this leads to intense intraspecific competition in areas with limited nesting cover. The Hun is much more tolerant

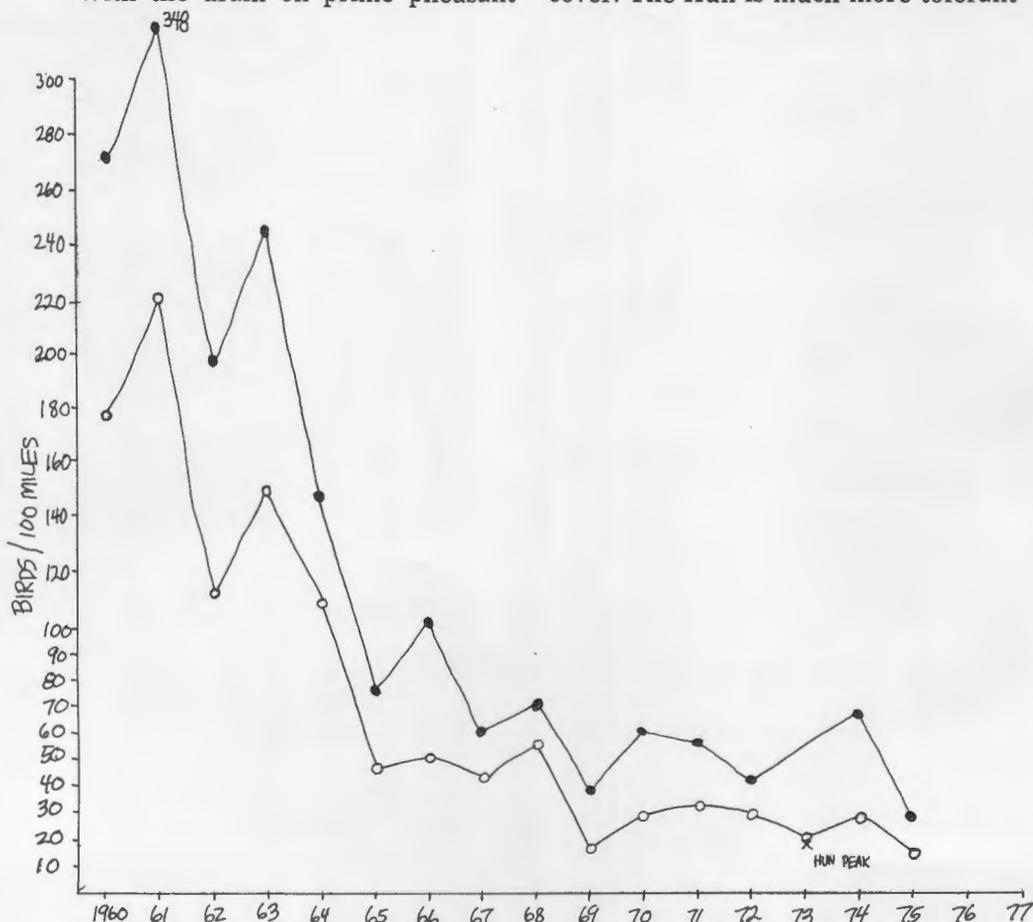


Figure 3 Populations of the Ring-necked Pheasant. o May Census • August Census

of pheasants and with less defense by Huns of their nesting territory the pheasants will nest in close proximity to Hun nests. Favorable Hun nesting areas with heavy concentrations of pheasants and scarce cover show greater nest parasitism, where the hen pheasant lays eggs in a Hun nest. This may cause the loss of 60% of the Hun nests (Carlson & Rollings 1942).

The Hun does not face the same stringent winter cover requirements that the pheasant does and is known to be more hardy in severe winter weather. Severe winter losses of pheasants are partially due to long term habitat losses brought about through changing agricultural practices, and immediate losses that reduce available food and cover such as snow drifting over forage and roosting cover.

Weather becomes an especially important factor during the nesting season. Cold wet springs delay egg laying in both the pheasant and the Hun. The pheasant has a longer nesting period, but both pheasant and Hun produce fewer broods when nesting is delayed. Unlike the adult Hun, the

young Huns are not so immune to adverse weather conditions especially during the early summer. Wet summers cause brood losses in Huns through "mud-balling" where mud collects on the legs of the young and hampers their movements. Wet years tend not to be as detrimental to the pheasant but Huns show a decrease in years of heavy prolonged rains (Carlson & Rollings 1942). On the other hand, dry conditions in summer seem to favor the Hun. Pheasants nest earlier in short cover where direct sun can raise nest temperatures to 112°F and increase egg water losses so that summer productivity drops. The Hun is more particular about the height of cover it will nest in. Nesting cover of at least 18" is preferred (McCabe & Hawkins 1946). As a result exposure to the direct sun is reduced and higher nest humidity is maintained, resulting in higher nest success in the Hun.

Most nesting losses in both species are caused by mowing roadsides, and hay and alfalfa fields, thus exposing nests to the elements or causing direct mortality of eggs, young, and adults

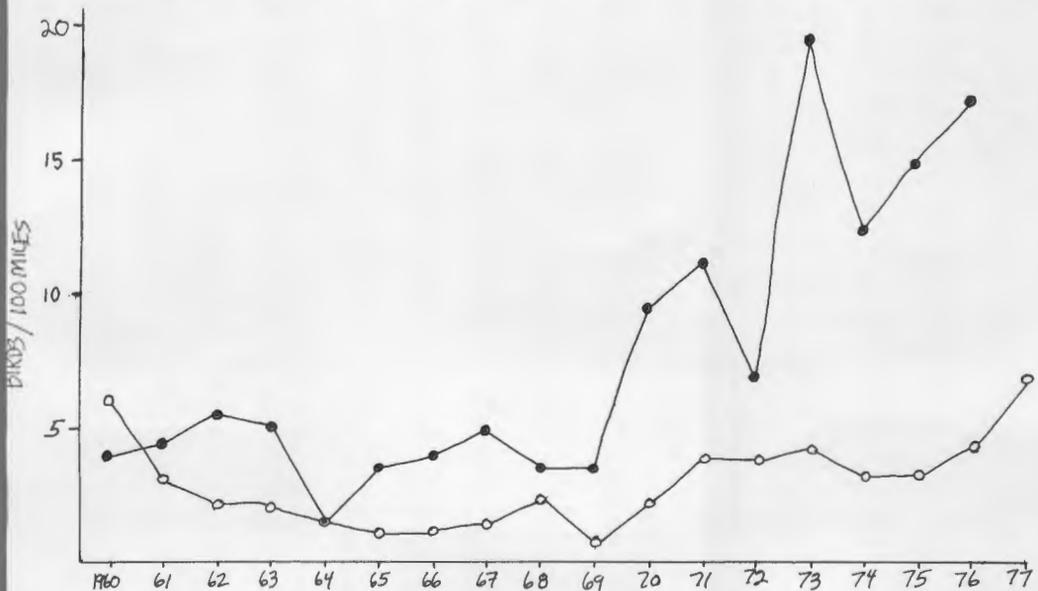


Figure 4 Gray Partridge Populations. ○ May Census ● August Census

by farm machinery.

Hunting pressure on the Hun is generally believed to be incidental to pheasant hunting. With the decrease in pheasants and the subsequent decrease in pheasant hunting, it is unlikely that pheasant hunters will shift their efforts to the Hun because its size and flushing behavior make it a difficult quarry. Therefore, relief from hunting may add to the success of the Hun.

There is no single reason for the decrease in pheasant populations or the increase in Hun populations. A combination of many factors has led to current population trends (table 1). However, there are certain interrelationships between these two species that may have contributed to the recent increase in the Gray Partridge in Minnesota.

Table 1 Characteristics Affecting Success. Species with "X" has the advantage.

	Gray Partridge	Ring-necked Pheasant
Dry Summer	X	
Wet Year		X
Winter Hardiness	X	
% Population Breeding		X
Nesting Competition:		
Intraspecific		X
Interspecific		X*
Clutch Size	X	
Length of Breeding Season		X
Renesting		X
Nest Parasitism		X*
Hunting Pressure	X*	
Availability of Preferred Habitat	X	

*Affects on Huns reduced with a decrease in pheasant populations.

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THE SPRING SEASON – March 1 to May 31, 1977

Terry Savaloja

The weather this spring was for the most part warm, wet and beautiful. March was warm enough to open many of the lakes and rivers early and April was one nice, clear, warm day after another. May was hot enough to set records all across the state. Most of the state received normal or above normal precipitation, improving the water levels of the lakes and marshes. Summary: A total of 295 species were recorded by 98 observers.

There were about 30 new early dates set this spring, but very few peak or even good migration days. In the large wading birds Little Blue Herons were reported twice, Snowy Egrets once, Yellow-crowned Night Herons nine times, from various parts of the state, and one report of an Ibis sp?. American Bitterns may be in trouble and should be watched. In geese and ducks, White-fronted Geese showed up in good numbers, a Ross' Goose was reported from Cottonwood Co. and Cinnamon Teal were reported three times. The European Wigeon reported from Hennepin Co. could be an escapee but is still interesting as are the two Harlequin Ducks reported from the SE. Swainson's Hawks appear to be doing well and Red-shoulders are still expanding. A Gyrfalcon in Otter Tail Co. set a new late date. Sandhill Cranes were reported in good numbers and Yellow Rails were again reported in Aitkin Co. Shorebirds were in good numbers and provided a few new early dates. Hudsonian Godwits and American Avocets appeared in the SE. A Red Phalarope in spring plumage at the Moorhead sugar beet lagoons was a beautiful sight and also a third state record. Glaucous Gulls were reported five times all from St. Louis Co., the single record of a Little Gull also came from St. Louis Co. Another bird which is possibly in trouble

and should be watched is the Franklin's Gull. The owls made a good showing with one Hawk Owl, three Burrowing Owls, four Great Grays and one Boreal Owl. The report of 12 singing Acadian Flycatchers is interesting but the Western Wood Pewee took the glamour in the flycatcher group and may have been the best bird of the spring. The Mountain Bluebird from Lake of the Woods Co. is evidence that it is a rare but regular spring migrant in western counties. Water Pipits were reported in good numbers for spring, Sprague's Pipits were reported twice. Loggerhead Shrikes showed up in the best numbers in several years. White-eyed Vireos were reported twice and were also confirmed for the state list. The best and possibly only warbler waves were on May 20 and 22. May 22 was probably the best with hundreds of Magnolia, Bay-breasted, Cape May, Blackpoll and Blackburnian Warblers in Duluth. There was one report of a Yellow-breasted Chat. A Scarlet Tanager was very early and Cardinals are still expanding to the SW. Four reports of Blue Grosbeaks were encouraging as were three reports of Lark Bunting. Baird's Sparrows have "returned" to Felton and both Henslow's and Sharp-tailed Sparrows were reported in good numbers.

Common Loon

Early south 3-28 Hennepin HCP; 3 reports on 4-2; early north 3-21 Crow Wing DK; 3-25 Otter Tail GO new early dates north; 4-10 Crow Wing TS; 4-11 Marshall SVA and Crow Wing JB.

Red-necked Grebe

Early south 4-9 Stearns NH; early north 4-5 St. Louis GN; 4-16 Otter Tail SM; GO.

Horned Grebe

Early south 3-4 Dakota Donn S. Mattsson earliest date on record; 3-12 Freeborn RK; 3-26 Olmsted JF; early north 3-26 Crow Wing DK earliest date north; 4-12 St. Louis GN and Clay JB; 4-16 Grant SM.

Eared Grebe

Early south 4-5 Hennepin VL; 4-8 Lyon BL; 4-9 Pipestone KE; Early north 4-15 Morrison PM; 4-24 Otter Tail GO; 4-26 Marshall SVA; 1 report NE, 5-3 St. Louis GN.

Western Grebe

Early south 4-22 Meeker RJ; 7 reports on 4-23; 1 report from the eastern part of the state, 4-26 Hennepin VL; early north 4 reports on 4-24.

Pied-billed Grebe

Early south 3-11 Wright PH and Anoka HCP; 2 reports 3-12; early north 3-10 Crow Wing DK; 3-11 Otter Tail SM; 3-13 Crow Wing TS.

White Pelican

Early south 3-30 Cottonwood ED; LAF; 4-3 Murray HK; 4-8 Lac Qui Parle BL; early north 4-9 Marshall SVA; 4-13 Otter Tail GO; 4-14 Otter Tail SM; 5-25 Cook, See **Loon** 49:170-171.

Double-crested Cormorant

Early south 3-26 Lac Qui Parle RJ, DGW; 4-4 Big Stone KE; 4-8 Lyon BL; early north 4-3 Otter Tail TS; 4-8 Cook Norman Denis; 4-10 Marshall SVA.

Great Blue Heron

Early south 3-8 Hennepin HCP; 3-13 Murray HK; 3-14 Mower RK; early north 3-25 St. Louis HPD; 3 reports on 3-26.

Green Heron

Early south 4-7 Hennepin ES; 4-10 Washington DGW; 4-11 Hennepin VH; early north 5-5 Marshall SVA; 5-6 Otter Tail GO, SM.

Little Blue Heron

2 reports: 4-10 Meeker (1) Douglas K. Johnson earliest date on record, see **Loon** 49:176; 5-29 Grant (Pelican Lake) 4 SM, GO.

Cattle Egret

3 reports: 4-25 Washington (1) DGW; 5-20 Grant Elizabeth G. Anderson; 5-26 Grant (6) KLF.

Great Egret

Early south 3 reports on 4-9; early north 3-9 Otter Tail SM new early north date by about a month; 4-18 Marshall SVA; 2 reports on 4-24.

SNOWY EGRET

1 report: 5-12 Big Stone Co. Big Stone NWR (1) Bradley D. Ehlers, see **Loon** 49:185.

Black-crowned Night Heron

Early south 4-2 Hennepin ES; 4-5 Hennepin VL; 4-7 Washington DS; early north Stearns (1) Al Grewe (details) 3-8 earliest date for state; 4-10 Marshall SVA; 4-19 Otter Tail; 4-25 Otter Tail SM.

Yellow-crowned Night Heron

9 reports: 4-13 Hennepin (Elm Creek) HCP, OJ; 4-24 Otter Tail (Orwell Wildlife Area) 1 Bee-Nay-She Council; 4-29 Mower (1) RK; 4-30 Houston (1) DGW; 5-5 Cottonwood (1) ED; 5-10 Crow Wing (1) Dennis Hanson; 5-14 Ramsey (2) RH; 5-22 Houston JG; 5-29 Houston (2) KE.

Least Bittern

5-7 Anoka DAS; 5-25 Polk RJ.

American Bittern

Early south 4-14 Rock KE; 4-16 Carver DGW; 4-17 Anoka KLF; early north 4-21 Marshall SVA; 4-24 Marshall MS and Otter Tail GO; 4-25 Otter Tail SM.

IBIS SP?

1 report: 5-25 (3) Mahnomen John R. Tester, Bruce A. Fall, David F. Par-melee, see **Loon** 49:181.

Whistling Swan

Early south 3-13 Murray HK; 3-16 Wabasha RL; 3 reports on 3-19; early north 3-26 Otter Tail GO, SM; late 5-29 Anoka (120) KLF late date south.

Canada Goose

Early north 3-11 Marshall SVA; 3-24 Crow Wing DK; 3-25 Clay LCF.

White-fronted Goose

22 reports of 400+ individuals; early 3-8 Otter Tail (2) GO; 3-25 Lyon (8) HK; peak 4-17 Lincoln (80) KE; late 5-8 Big Stone (8) GSP.

Snow/Blue Goose

Early south 3-1 Hennepin GSP; 3-11 Stearns NH; 3-15 Lac Qui Parle CB; early north 3-15 Wilkin GO; 3-24 Otter Tail SM; peak 3-27 Murray (4,000) KE; late 5-25 St. Louis GN.

ROSS' GOOSE

1 report: 4-6 Cottonwood (11) ED, See Loon 49:186-187.

Mallard

Peak 4-15 Marshall (13,850) SVA.

Black Duck

Early south 3-1 Hennepin GSP; 3-6 Hennepin DGW, BE; 3-8 Wabasha RL; early north 3-11 Otter Tail SM; 3-28 St. Louis DA; 3-29 St. Louis GN.

Gadwall

Early south 3-1 Hennepin GSP; 3 reports on 3-12; early north 3-22 Otter Tail GO; 3-25 Otter Tail SM; 3-27 Crow Wing DK; peak 5-6 Marshall (6,800) SVA.

Pintail

Early south 3-1 Hennepin GSP; 2 reports on 3-9; early north 3-14 Otter Tail SM; 3-19 Otter Tail GO, GEW and Crow Wing DK; peak 4-15 Marshall (1,400) SVA.

Green-winged Teal

Early south 3-10 Olmsted JF; 3-13 Cottonwood ED; 3-14 Olmsted VH; early north 3-11 Otter Tail SM new early date; 3-26 Crow Wing DK; 3-28 Otter Tail GO; peak 4-22 Marshall (7,000) SVA.

Blue-winged Teal

Early south 3-18 Carver JRG, HCP; 3-20 Rice BE; early north 3-25 Crow Wing TS; 3-26 Crow Wing DK; 3-28 Otter Tail GO; peak 5-6 Marshall (9,000) SVA.

CINNAMON TEAL

3 reports: 5-7 Grant (2) SM, GO, see

Loon 49:177-178; 5-23 Clay (1) Ron Nelleremoe; 5-22 Clay Virginia Sheel.

American Wigeon

Early south 3-1 Hennepin GSP; 3-9 Goodhue JD new early dates; 3-10 Wabasha DM; early north 3-22 Douglas GO and St. Louis GN new early date; 3-25, 4-2 Otter Tail SM, GEW; peak 5-6 Marshall (2,200) SVA.

EUROPEAN WIGEON

1 report: 4-3 Carver Park Hennepin Co., James and Mark Schultz. A probable escape.

Northern Shoveler

Early south 3-12 Houston JG; 3-13 Murray HK; 3-14 Hennepin HCP; early north 3-26 to 4-2 Otter Tail SM, GO, GEW; peak 5-6 Marshall (1,300) SVA.

Wood Duck

Early south 3-9 Wabasha DM; 3-10 Hennepin HCP; 3-11 Carver JRG and Wright PH; early north 3-11 Otter Tail SM; 3-22 Crow Wing DK; 3-25 Crow Wing TS; 3-28 Morrison PM.

Redhead

Early south 3 reports on 3-9; early north 3-24 Otter Tail SM new early date; 3-27 Crow Wing DK; 3-29 St. Louis GN; peak 4-28 Marshall (1,000) SVA.

Ring-necked Duck

Early south 3-9 Wabasha DM; 2 reports on 3-10; early north 3-11 Otter Tail SM; 3-25 Crow Wing DK; 3-27 Marshall SVA; peak 4-15 Marshall (10,000) SVA.

Canvasback

Early south 3-9 Wabasha DM; 3-10 Olmsted JF; 3-12 Freeborn RK and Wabasha DGW; early north 3-26 Otter Tail SM and Crow Wing DK; 4-12 St. Louis GN; peak 5-19 Marshall (500) SVA.

Greater Scaup

25 reports: early south 3-20 Dakota GSP; 4-1 Ramsey RH; 4-2 Houston RJ; early north 3-28 Otter Tail GO; 4-6 St. Louis KE; 4-24 St. Louis PM; peak 4-24 Crow Wing (600?) LF.

Lesser Scaup

Early south 3-6 Dakota DGW; 3 reports on 3-9; early north 3-7 Hubbard HF; 3-11 Otter Tail SM; 3-25 Crow Wing DK; 3-26 Otter Tail GO; peak 4-15 Marshall (25,000) SVA.

Common Goldeneye

Late south 4-26 Lac Qui Parle CB.

Bufflehead

Early south 3-9 Wabasha RL; 3-12 Dakota RJ, OJ; 3-15 Pipestone AD; early north 3-10 St. Louis DA; 3-19 Crow Wing DK; 3-24 Otter Tail SM; 3-25 Morrison PM; peak 4-22 Marshall (900) SVA.

Oldsquaw

3 reports: 3-6 Dakota (1) ES (details?); 4-7 St. Louis (1) KE; 4-11 to 4-16 Cook HC.

Harlequin Duck

2 reports 3-30 Goodhue (1 female) JD, Bette Jung, see **Loon** 49: 183; 4-25 Goodhue (1) Harlan Fierstine, Jeff Diltrich.

White-winged Scoter

4 reports: 4-7 St. Louis (1) KE; 5-6 St. Louis (1) DGW; 5-7 Crow Wing, Mille Lacs Lake (1) TS; 5-20 St. Louis (1) GN.

Surf Scoter

2 reports: 5-11 & 5-20 St. Louis (1) GN; 5-16 St. Louis (3) DA.

Black Scoter

2 reports: 4-26 St. Louis (1) GN; 5-7 Lake (2) KE.

Ruddy Duck

Early south 3-19 Wabasha DM; 3-11 Anoka HCP; 5 reports on 3-12; early north 3-26 Otter Tail SM; 3-28 Otter Tail GO.

Hooded Merganser

Early south 3-9 Wabasha DM and Dakota RJ; 3-11 Hennepin SH, OJ; early north 3-4 St. Louis GN; 3-25 Otter Tail SM; 2 reports 3-26.

Common Merganser

Early north 3-1 St. Louis GN; 3-11 Otter Tail SM and St. Louis DA; late

south 4-30 Washington DS; peak 3-20 Dakota (500+) DGW.

Red-breasted Merganser

Early south 3-9 Nobles GO; 3 reports on 3-12; early north 3-9 St. Louis GN; 3-21 St. Louis DA; late south 2 reports on 5-1.

Turkey Vulture

Early south 3-26 & 3-31 Goodhue BL, RJ; early north 3-29 St. Louis HPD; 4-8 Crow Wing JB; 4-9 Cass AES.

Goshawk

5 reports: 3-10 Anoka KLF; 3-31 Itasca MS; 4-25 St. Louis CNS; 5-9 St. Louis MH; 5-23 St. Louis BE.

Sharp-shinned Hawk

Early south 3-2 Wabasha DM; 3-5 Winona FL; 3-12 Carver OJ, RJ; early north 3-16 Crow Wing DK; 3-17 Otter Tail GO; 3-25 Aitkin TS.

Cooper's Hawk

Early south 3-31 Scott HCP; early north 3-27 Becker SM; 4-4 Aitkin TS, JB; 4-6 Otter Tail GO; very few reports.

Red-tailed Hawk

Early north 3-18 Otter Tail SM and Crow Wing DK; 3-19 Becker GO, GEW; 3-25 St. Louis HPD.

Red-shouldered Hawk

Early south 3-6 Winona SM, BE, and Wabasha DM; 3-11 Hennepin HCP; 3-12 Anoka KLF; reports north 3-16 Aitkin TS; 3-16 Otter Tail and 3-20 Becker SM, GO; still increasing north and west.

Broad-winged Hawk

Early south 3-24 Dakota GSP (details?); 3-25 Lyon HK (details?); 4-10 Stearns LH; early north 4-21 Crow Wing TS; 4-22 Aitkin GN; 4-23 Lake CNS.

Swainson's Hawk

23 reports of 34 individuals: early 3-27 Murray KE; 4-11 Fillmore, Mower RK; other reports from 4-17 to 5-28 from Lac Qui Parle, Wilkin, Clay, Lyon, Big Stone, Dakota and Rock.

The Loon

Rough-legged Hawk

Early north 3-15 Otter Tail GO and Crow Wing DK; 3-20 Becker SM; 3-25 Aitkin TS; late 5-21 Olmsted (details?) VH; 5-28 Murray (details?) LAF; new late dates south.

Golden Eagle

9 reports of 12 individuals: 3-5 Winona (1 ad, 1 imm.) FL; 3-6 Wabasha (1) DM; 3-9 Houston (1) EF; 3-13 Murray (1) HK; 3-20 Lac Qui Parle (2) RJ; 3-22 Hennepin (1) AJ; 3-23 St. Louis (1) PH; 4-7 Marshall (1) SVA; 5-28 Itasca (2) PM (details?).

Bald Eagle

44 reports from 3-5 to 5-28 for a total of 154 individuals (32 adults, 47 imm., 75 no age): reported from Houston (3), Winona (1), Wabasha (43), Dakota (3), Big Stone (12), Lac Qui Parle (1), Mahnomen (1), Hennepin (2), Carver (1), Lake (1), Clearwater (1), Crow Wing (6), St. Louis (45), Traverse (7), Grant (1), Olmsted (1), Morrison (1), Itasca (5), Marshall (5), Wilkin (1), Hubbard (4), Becker (4), Cass (3), Anoka (2).

Marsh Hawk

Early south 3-1 Anoka KLF; 3-5 Wabasha RJ; 3-9 Dakota JD; early north 3-10 Wilkin, Otter Tail SM; 3-15 Crow Wing DK; 3-16 Morrison PM.

Osprey

Early south 4-9 Dakota SH; 4-10 Hennepin HCP; 4-17 Hennepin GSP; early north 3-25 Crow Wing JB; 4-11 Morrison PM; 4-13 Crow Wing TS; earlier in the north again this year, very few reports.

GYRFALCON

1 report: 4-3 Otter Tail (1) GO, latest date for the state.

Peregrine Falcon

5 reports: 4-23 Lac Qui Parle CB, LH; 5-5 Marshall SVA; 5-6 Goodhue DB and Dakota JG; 5-28 Mahnomen BE.

Merlin

7 reports: 3-22 Hennepin HCP; 3-23 Cottonwood ED; 4-9 Dakota, 4-16 Hen-

nepin ES; 4-19 Chisago RJ; 5-8 Lac Qui Parle CB; 5-19 Cook NH.

American Kestrel

Early north 3-2 Pine KLF; 3-9 Marshall SVA and Otter Tail GO.

Turkey

3-5 (3) FL; 3-6 (6) SM; both in White-water State Park, Winona Co.

Spruce Grouse

2 reports: 3-22 St. Louis (2) HPD; 5-19 Cook (1) NH.

Ruffed Grouse

Reported from 19 counties.

Greater Prairie Chicken

14 reports from 3-2 to 5-30 in Wilkin (peak 71), Clay (peak 30), Polk (1) and Red Lake (11).

Sharp-tailed Grouse

8 reports: 3-22 Roseau, 3-27 Lake of the Woods PH; 4-2 Aitkin (5) TS; 4-23 Itasca (25) LF; 4-26 Aitkin (12) JB; 5-25 Polk (3) RJ; 5-30 Roseau DGW; also reported from Marshall.

Bobwhite

4 reports all from Houston Co.: 3-5 (11) and 4-2 (2) RJ; 3-5 (11) SM; 5-1 (2) DGW.

Ring-necked Pheasant

Reported from 24 counties.

Gray Partridge

Reported from Wilkin, Otter Tail, Clay, Pipestone, Rock, Lincoln, Murray, Yellow Medicine, Morrison, Lac Qui Parle, Cottonwood, Pope, Kandiyohi, Olmsted, Chippewa, Steele, Lyon, Dakota, Nicollet, Meeker and Redwood.

Sandhill Crane

17 reports, more than usual: 3-19 Anoka KLF earliest date on record; 4-8, 4-15 (200), 5-29 Marshall SVA, DGW; 4-8 Yellow Medicine; 4-10 Wilkin (22) GO; 4-10 Itasca (50) MS; 4-11 (4), 4-13 (9) Wilkin SM; 4-11 Freeborn (1) HK; 4-27 Sherburne (2) NH; 4-30 Mille Lacs (1) PH; 5-15 Morrison (3) DF; 5-25 Polk (2) RJ; 5-25 Morrison (3) PM; 5-28 Aitkin (2) TS; 5-30 Beltrami (2) DGW.

Virginia Rail

Early south 4-16 Hennepin HCP; 4-17 Goodhue DGW; 4-23 Hennepin OJ; early north 4-17 St. Louis DA; 5-5 St. Louis GN; 5-7 Wilkin GO.

Sora

Early south 4-14 Freeborn ED; 4-20 Ramsey RH; 4-21 Carver JRG; early north 4-17 Otter Tail SM; 5-2 St. Louis DA; 5-3 Marshall SVA.

Yellow Rail

5-18 Aitkin (1) TS; 5-21 Aitkin, Rice Lake NWR (2 heard) RJ, KE, TS.

Common Gallinule

9 reports: 5-3 Hennepin AJ, VL; 5-15 Houston TS; 5-21, 5-24 Washington DGW and Anoka (1) KLF; 5-29 Houston KE; 5-29 Houston FL; 5-31 Washington RJ.

American Coot

Early south 3-5 Winona RJ; 3-9 Dakota JD; 3-10 Wabasha DM; early north 3-26 Otter Tail GO; 3 reports on 4-10.

Semipalmated Plover

Early south 4-17 Scott ES; 4-22 Lyon DGW; 5 reports on 4-23; early north 4-16 St. Louis DA; 5-5 Otter Tail SM; 5-7 Otter Tail GEW; late 5-28 Olmsted JF; 5-29 St. Louis ES; peak 5-14 Steele (200+) RJ.

Piping Plover

9 reports: 4-10 Nobles KE earliest date on record; 4-17 Anoka (1) KLF; 4-23 Lyon (4) DGW; 5-7 to 5-25 St. Louis up to 19.

Killdeer

Early south 3-3 Stearns NH; 3-7 Ramsey SH; 3-8 Washington DGW, Hennepin HCP; early north 3-11 Otter Tail SM; 3-14 Crow Wing DK; 3-21 Otter Tail GEW.

American Golden Plover

Early south 3-27 Lyon HK; 4-17 Lincoln KE, Goodhue RJ; 4-18 Watonwan ED; early north 4-24 Otter Tail TS, JB; 4-25 Otter Tail SM; late 5-30 St. Louis DA.

The Loon

Black-bellied Plover

Early south 5-1 Chippewa HK; 5-10 Lyon GO; 5-14 Steele ES; early north 5-9 Aitkin TS; 5-15 St. Louis DA; 5-17 Otter Tail SM; late 5-30 St. Louis, Clay, and Lincoln.

Ruddy Turnstone

Early south 5-7 and 5-8 Lyon HK, KE; 5-10 Lyon GO; early north 5-15 St. Louis DA; 5-17 Otter Tail SM; 5-18 St. Louis GN; late 5-30 St. Louis DA.

American Woodcock

Early south 3-13 Carver JRG, HCP earliest date on record; 3-18 Redwood KE; 3-20 Benton PH; early north 3-25 Beltrami KLF; 3-27 Crow Wing TS, DK; 3-29 Crow Wing JB; also reported from Pipestone and Clay (4-30, nest).

Common Snipe

Early south 3-17 Carver JRG; 3-25 Mower RK; 5 reports on 3-26; early north 3-26 Otter Tail SM, GO; 4-9 Crow Wing DK; 4-10 Marshall SVA, Itasca MS.

Whimbrel

1 report: 5-30 St. Louis DA.

Upland Sandpiper

Early south 4-15 Cottonwood ED; 4-22 Lyon, Murray DGW; 4-23 Lac Qui Parle RJ, KE; early north 5-7 Wilkin SM, GEW; 5-8 Wilkin LCF.

Spotted Sandpiper

Early south 4-23 Lac Qui Parle LH; 4-27 Hennepin ES, Lyon HK; early north 4-9 St. Louis DA; 4-11 Itasca MS; 4-14 Morrison PM.

Solitary Sandpiper

Early south 4-16 Pope BSH; 4-18 Mower RK; 4-22 Sibley, Lyon DGW; early north 4-26 Otter Tail GO; 4-29 Otter Tail SM; 5-5 St. Louis GN; late 5-22 St. Louis DA.

Willet

Early south 4-2 Anoka (1) DGW earliest date on record; 3 reports on 4-23; 1 report north 5-7 Mille Lacs (1) TS; late 5-22 Lyon ED.

Greater Yellowlegs

Early south 3-19 Wabasha DGW earliest date on record; 3-21 Lyon HK; 3-26 Chippewa RJ; early north 3-26 Otter Tail SM, GO; 4-5 St. Louis GN; 4-10 Marshall SVA; late 5-17 Marshall SVA.

Lesser Yellowlegs

Early south 3-19 Lac Qui Parle CB; 3-23 Lyon HK; 4 reports on 3-26; early north 3-29 Crow Wing TS; 4-4 Otter Tail SM; late 5-19 Hennepin VL.

Red Knot

5 reports all from St. Louis Co.: 5-16 (1), 5-29 (5), 5-30 (2) DA; 5-28 (8) JG; 5-29 (1) ES.

Pectoral Sandpiper

Early south 3-21 Lyon HK earliest date on record; 4 reports on 3-26; early north 3-25 Otter Tail SM earliest date north; 4-10 St. Louis TS; late 5-30 Clay RJ.

White-rumped Sandpiper

Early south 4-23 Lac Qui Parle CB; 5-7 Lyon GSP; 5-8 Lyon KE and Hennepin OJ; early north 5-15 Otter Tail SM, GO; 5-18 St. Louis GN; 5-21 Otter Tail GEW; late 5-30 Lincoln KE and Clay RJ.

Baird's Sandpiper

Early south 3-25 Hennepin JG; 3-26 Lac Qui Parle RJ; 4-4 Big Stone KE; early north 4-8 Grant SM; 5-7 Grant GEW; late 5-25 St. Louis GN.

Least Sandpiper

Early south 3-21 Lyon HK earliest date on record; 4-8 Lyon GO; 3 reports on 4-23; early north 5-7 Grant GEW; 5-9 Aitkin TS and Marshall SVA; late 5-23 Winona VH.

Dunlin

Early south 4-24 Hennepin HCP; 5-7 Lyon GSP and Goodhue JF; 5-8 Lyon KE; early north 4-28 Otter Tail SM; 5-7 Grant GEW and Otter Tail GO; late 5-30 St. Louis DA.

Long-billed Dowitcher

4-23 Lac Qui Parle (1) RJ only report with call note data.

Short-billed Dowitcher

5-11 Aitkin TS; 5-14 Steele (25+), St. Louis RJ, only ones with call note data.

Dowitcher SP?

36 reports from 4-22 to 5-25 from Lincoln, Big Stone, St. Louis, Goodhue, Lac Qui Parle, Lyon, Steele, Hennepin, Pope, Cottonwood, Scott, Otter Tail, Marshall and Grant.

Stilt Sandpiper

Early south 4-24 Lyon KE, SM; 5-7 Lyon GSP; early north 5-21 Otter Tail GEW; late 5-30 Clay RJ.

Semipalmated Sandpiper

Early south 4-3 Lyon HK; 4-8 Lyon GO; 4-22 Lyon DGW; early north 5-7 Otter Tail GEW; 5-11 St. Louis GN; 5-14 Marshall SVA; late 5-30 Lincoln KE.

Western Sandpiper

4 reports: 4-3 (6) HK earliest date by almost 3 weeks; 4-8 (2) GO; 4-22 (2) DGW; 4-24 (1) KE, SM, all reports were from Lyon Co.

Marbled Godwit

Early south 4-21 Anoka KLF; 4-22 Lincoln KE; 5 reports on 4-23; early north 3-26 Otter Tail GO earliest date on record, first March record; 4-9 Wilkin DF; 1 report in SE 5-14 Goodhue (1) TS.

Hudsonian Godwit

Early south 4-10 Lyon LF; 4-14 Lyon HK; early north 5-10 Otter Tail SM; 5-11 Aitkin TS and St. Louis GN; late 5-28 Clay SM; several reports from the eastern part of the state; 5-14 Goodhue (3) TS; 5-15 Ramsey (1) LH; 5-21 to 5-24 St. Louis DA, RJ, KE, JB.

Sanderling

Early south 5-2 Washington DS; 5-10 Lyon GO; 5-12 Lyon HK; early north 5-11 St. Louis GN; 5-15 St. Louis DA; late 5-30 St. Louis DA.

American Avocet

14 reports from 4-23 to 5-29 from Lac Qui Parle, Olmsted (5-1, 36) see Loon 49:182, Clay, Otter Tail, Grant, Lyon, Big Stone and Marshall.

RED PHALAROPE

1 report 5-27 to 5-29 Moorhead Beet Sugar Lagoons Clay Co. (1) Martha Curry, Mary Wyatt, Elizabeth Anderson, DGW, OJ, TS and many others. See **Loon** 49:172 & 173.

Wilson's Phalarope

Early south 4-22 Lincoln KE; 7 reports on 4-23; early north 4-29 Otter Tail SM, GO; 5-2 Marshall SVA.

Northern Phalarope

Only 4 reports: south 5-20 Freeborn ERW; 5-22 Lyon RJ, HK, ED; reports north 5-17 Otter Tail SM, GO; 5-21 Wilkin GEW; 5-27 to 5-29 Clay DGW, LCF, TS.

Glaucous Gull

5 reports all from St. Louis Co.: 3-16 (1), 3-22 (3), 5-3 (1) GN; 4-3 (1), 4-11 (2) DA.

Herring Gull

Early south 3-5 Dakota SH; 3-6 Dakota DGW; 3-12 Freeborn RK and Washington LF; early north 3-22 St. Louis KLF; 3-24 St. Louis HPD; 3-25 St. Louis MH and Crow Wing DK.

Ring-billed Gull

Early south 3-13 Dakota BE; 3-15 Wabasha DM and Dakota RJ; early north 3-10 Otter Tail SM earliest date north; 3-16 St. Louis GN; 3-21 Otter Tail GO.

Franklin's Gull

Early south 3-26 Chippewa RJ; 3-27 Cottonwood ED; 4-3 Murray HK; early north 3-25 Otter Tail SM; 4-10 Marshall SVA; 4-11 Otter Tail GO; also reported from the SE 4-2 Houston RJ; very few reports.

Bonaparte's Gull

Early south 4-9 Dakota BE; 4-11 Cottonwood ED; 4-16 Dakota ES, DGW; early north 4-4 Traverse KE earliest date on record; 4-13 Wilkin SM; 4-15 Marshall SVA; peak 5-11 St. Louis (1,478) GN; late 5-30 St. Louis DA.

LITTLE GULL

1 report: 5-21 St. Louis (1 ad) RJ, TS, KE, see **Loon** 49:178.

Forster's Tern

Early south 4-9 Hennepin BE; 4-10 Hennepin ES; 4-12 Ramsey SH; early north 4-14 Otter Tail SM; 4-17 Otter Tail GO; 4-21 Mille Lacs TS.

Common Tern

Early south 4-13 Ramsey SH; 4-19 Hennepin VL; 3 reports on 4-23; early north 4-23 Big Stone SM; 5-1 Hubbard HF; 5-2 Otter Tail GO.

Caspian Tern

Early south 5-1 Goodhue GSP; 5-14 Goodhue TS; 5-20 Freeborn ERW; early north 5-3 & 5-11 St. Louis GN; 5-12 St. Louis DA; late 5-30 Itasca LH.

Black Tern

Early south 5-1 Carver ES; 5-2 Cottonwood LAF; 5-3 Washington DS; early north 5-7 Otter Tail GEW and Grant SM; 5-9 Crow Wing TS; 5-14 Marshall SVA.

Mourning Dove

Early north 3-6 Morrison PM; 3-14 Otter Tail SM.

Yellow-billed Cuckoo

5-9 Hennepin ES; 5-11 Washington RJ; 5-16 Ramsey SH; also reported from Houston, Clay, Wabasha, Mower, Lac Qui Parle, Houston, Murray, Winona and St. Louis (5-22 and 5-28 DA details?).

Black-billed Cuckoo

Early south 5-9 Hennepin ES; 5-14 Freeborn HK; early north 5-13 Crow Wing TS; 5-14 Otter Tail BE, GO; 5-17 Marshall SVA and Crow Wing JB.

Screech Owl

Reported from Hennepin and Lac Qui Parle.

Great Horned Owl

Reported from 24 counties.

Snowy Owl

11 reports: 3-2, 3-6 St. Louis DA; 3-13 Olmsted JF; 3-16, 3-22, 4-5 St. Louis GN; 3-20 Lac Qui Parle CB; 3-31 Ramsey BSH; 4-2 Marshall SVA; 4-24 Lake PM and Becker John Schadweiller.

Hawk Owl

1 report: 3-11 and 3-13 St. Louis (1) HPO.

Burrowing Owl

3 reports: 4-10 Wilkin GO, see **Loon** 49:179; 4-15 Lincoln (1) Bob Meyer; 4-16 Jackson (1) Ross Wagner.

Barred Owl

Reported from 12 counties.

Great Gray Owl

4 reports: 3-21 Roseau (4) PH; 4-24 Aitkin (1) TS; 5-9 Aitkin Jim Breyen, Fred Thunhorst; 5-29 Roseau (1) DGW.

Long-eared Owl

2 reports: 3-16 Crow Wing (1 dead) Rick Marsh; 5-9 Aitkin (1) TS.

Short-eared Owl

6 reports: 4-10 Rock KE; 4-16 Anoka KLF; 4-20 Lyon HK; 4-23 Lac Qui Parle LH; 4-26 Aitkin JB; 5-9 Aitkin TS.

Boreal Owl

1 report: 3-10 Marshall (1 dead) SVA.

Saw-whet Owl

8 reports: Crow Wing 3-28 (1 dead), 3-31 (1 dead); 4-21 Aitkin (1) TS; 4-7 St. Louis HPD; 5-11 Koochiching DB; 5-21 St. Louis GN; 5-21 Aitkin KE, RJ, TS; also Lake Co.

Whip-poor-will

Early south 4-15 Washington DS; 4-20 Houston EF; 4-25 Houston FL; early north 5-2 St. Louis HPD; 5-13 Roseau SVA; 5-14 Crow Wing JB.

Common Nighthawk

Early south 4-9 Dakota MW (details?); 4-20 Olmsted Ms. Snyder; 5-6 Wabasha DM; 5-7 Cottonwood LAF; early north 4-30 St. Louis DA earliest date on record; 5-11 Otter Tail GO and Crow Wing DK; 5-16 Cass AES and Crow Wing JB.

Chimney Swift

Early south 4-29 Cottonwood LR; 4-30 Houston DGW and Stearns NH; 3 reports on 5-1; early north 4-26 St. Louis DA; 5-3 Otter Tail SM; 5-5 St. Louis GN.

Ruby-throated Hummingbird

Early south 5-6 Blue Earth VR; 5-7 Hennepin JRG; 3 reports on 5-8; early north 5-8 Otter Tail GO; 5-9 Cass AES and Itasca MS; 5-10 Morrison PM.

Belted Kingfisher

Early south 3-1 Hennepin SH; 3-11 Ramsey RH; 4 reports on 3-12; early north 3-19 Otter Tail SM, GEW, GO; 3-25 Crow Wing DK; 4-3 St. Louis DA; 4-9 Marshall SVA.

Common Flicker

Early north 3-22 Otter Tail GO; 3-25 Otter Tail SM and Crow Wing DK; 4-3 Otter Tail (1 red-shafted) TS.

Pileated Woodpecker

Reported from 26 counties.

Red-bellied Woodpecker

Reported from 20 counties.

Red-headed Woodpecker

Early north 3-1 Morrison PM; 3-26 Crow Wing DK; 4-24 Aitkin TS.

Yellow-bellied Sapsucker

Early south 3-24 Olmsted JF; 4-7 Mower RK; 3 reports on 4-9; early north 4-3 Marshall SVA; 4-7 Otter Tail GO; 4-8 & 4-9 Crow Wing TS, DK.

Hairy Woodpecker

Reported from 34 counties.

Downy Woodpecker

Reported from 33 counties.

Black-backed Three-toed Woodpecker

5 reports: 4-11 Lake (1), 4-28 St. Louis (1) CNS; 5-8 St. Louis (2) GN; 5-20 Cook NH; 5-21 Becker (1) GO.

Northern Three-toed Woodpecker

2 reports: 4-11 Lake CNS; 5-10 Lake D. Olson.

Eastern Kingbird

Early south 4-16 Blue Earth VR; 4-22 Stearns MC; 5-5 Washington WL; early north 4-14 Morrison (2) PM earliest date on record; 5-1 St. Louis DA; 5-7 Cass MS and Morrison DF.

Western Kingbird

Early south 5-10 Dakota BSH; 5-12 Stearns NH; 5-13 Stearns BE; early north 4 reports on 5-7.

Great Crested Flycatcher

Early south 5-7 Wabasha DM; 5-9 Carver JRG; 5-10 Ramsey SH and Houston FL; early north 5-10, 11 JB, TS; 5-13 Itasca MS and Clay LCF.

Eastern Phoebe

Early south 3-25 Houston EF and Hennepin ES; 6 reports on 3-26; early north 4-3 Cass TS; 4-6 Morrison DF; 4-7 Otter Tail GO.

Yellow-bellied Flycatcher

Early south 5-3 Lyon HK; 5-6 Hennepin ES; 5-9 Lac Qui Parle FE; early north 5-8 Otter Tail GO; 5-10 Crow Wing JB; 5-21 Carlton TS.

Acadian Flycatcher

1 report: 5-28 Beaver Creek Valley State Park Houston Co. (12 singing) KE.

Alder Flycatcher

Early south 5-5 Lyon HK; 5-15 Hennepin ES; 5-22 Lyon RJ, KE; early north 5-14 Otter Tail GO; 5-20 St. Louis CHS, DA; 5-21 St. Louis TS.

Willow Flycatcher

1 report: 5-30 Winona JF.

"Traill's" Flycatcher

Birds not reported as Willow or Alder: Early south 5-2 Lac Qui Parle CB; 5-3 Lyon HK; 5-12 Houston EF; 2 reports north 5-22 Aitkin JB; 5-23 Morrison PM.

Least Flycatcher

Early south 5-2 Wabasha DM; 4 reports on 5-5; early north 4-24 Lake PM (details?); 5-4, 5-5 Otter Tail SM, GO; 5-6 Pine SH.

Eastern Wood Pewee

Early south 5-1 Houston DGW; 5-10 Washington JD; 5-11 Carver JRG; early north 5-9 St. Louis DA; 5-16 Cass AES; 5-18 St. Louis CNS.

WESTERN WOOD PEWEE

5-29 Roseau Co., Pelan Park (1 singing) Dennis Paulson, TS; see Note of Interest Loon 49:169-170.

Olive-sided Flycatcher

Early south 5-13 Ramsey BC and

Hennepin RJ; 3 reports on 5-14; early north 5-10 Koochiching DB; 5-12 Mille Lacs PH; 5-17 Lake CNS.

Horned Lark

3 reports on 3-1.

Tree Swallow

Early south 3-26 Hennepin BE; 3-27 Dakota JD; 3-31 Wabasha DM; early north 4-8 Crow Wing TS; 4-9 Otter Tail DF and Crow Wing DK; 4-10 Cass AES and St. Louis DA.

Bank Swallow

Early south 4-9 Jackson LR; 4-17 Carver ES; 4-22 Ramsey RH; early north 4-11 St. Louis DA earliest date on record; 4-22 Otter Tail GO; 5-3 Morrison PM.

Rough-winged Swallow

Early south 4-9 Houston FL; 4-12 Dakota JD; 4-13 Houston EF; early north 4-18 St. Louis MH earliest date on record; 4-23 St. Louis DA; 4-29 Otter Tail GO.

Barn Swallow

Early south 4-11 Hennepin ES and Carver JRG; 4-12 Lac Qui Parle FE; 4-14 Lyon HK; early north 4-24 Wilkin TS; 4-27 Marshall SVA.

Cliff Swallow

Early south 4 reports on 4-23, 24; early north 4-24 Marshall SVA; 5-1 Lake ME and St. Louis DA; 5-3 St. Louis GN.

Purple Martin

Early south 3-31 Hennepin PF, OJ; 4-2 Houston RJ; 4-3 Cottonwood RG; early north 4-9 Crow Wing TS and Otter Tail GO; 4-10, 4-16 Otter Tail SM, BE.

Gray Jay

Reported from Otter Tail (3-11 (1) SM), St. Louis, Crow Wing, Aitkin, Hubbard, Itasca, Lake, Marshall, Hennepin (3-10 (1) HCP); Stearns (3-10 to 4-3 (1) NH).

Blue Jay

Reported from 32 counties.

Black-billed Magpie

2 reports: 3-14 Wilkin (1) SM; 3-20 Becker (1) GO, SM.

Common Raven

Reported from Cook, Itasca, Crow Wing, Washington, Lake, Marshall, Hubbard, Cass and St. Louis.

Common Crow

Reported from 36 counties.

Black-capped Chickadee

Reported from 30 counties.

Boreal Chickadee

3 reports: 3-31 St. Louis (2) HPD; 4-21 Lake (3) CNS; 5-23 St. Louis (1) DA.

Tufted Titmouse

3 reports: 3-12 Hennepin (1) Rob and Dana Rinicker, Frank Berdan; 4-3 Hennepin (1) PF; 5-28, 5-29 Houston KE.

White-breasted Nuthatch

Reported from 32 counties.

Red-breasted Nuthatch

14 reports from St. Louis, Crow Wing, Otter Tail, Hubbard, Murray, Hennepin, Olmsted, Freeborn, Wabasha and Carlton Co's.

Brown Creeper

Early south 3-3 Wabasha DM; 3-13 Hennepin DGW; 3-21 Stearns MC; early north 3-27 Crow Wing TS; 4-5 St. Louis GN; 4-9 St. Louis DA and Marshall SVA.

House Wren

Early south 4-13 Olmsted VH; 4-15 Olmsted JF; 4-18 Wabasha DM and Scott SH; early north 5-1 Otter Tail SM, GO; 5-6 Crow Wing TS and Cass AES; 5-7 Marshall SVA.

Winter Wren

Early south 3-27 Jackson LR; 3 reports on 4-9; early north 4-13 St. Louis HPD; 4-18 Lake and St. Louis CNS; 4-27 Itasca MS.

Long-billed Marsh Wren

Early south 5-5 Hennepin ES and Carver JRG; 5-7 Lac Qui Parle GSP;

5-8 Cottonwood LR; early north 5-9 Marshall SVA; 5-10 St. Louis KLF; 5-11 Clay LCF.

Short-billed Marsh Wren

Early south 5-1 Mower RK; 5-4 Hennepin HCP; 5-6 Olmsted JF; early north 5-2 Marshall SVA and St. Louis DA; 5-11 Aitkin TS.

Mockingbird

3 reports: 5-21 Anoka (1) KLF; 5-26 Wadena RJ; 5-27 and 5-28 Clay LCF.

Gray Catbird

Early south 4-19 Yellow Medicine GO; 4-22 Washington DMB; 4-25 Lac Qui Parle FE; early north 5-9 Clay LCF; 3 reports on 5-11.

Brown Thrasher

Early south 4-13 Houston EF; 5 reports on 4-15; early north 4-20 Clay LCF; 4-25 Otter Tail GO and Aitkin JB; 4-26 Otter Tail GN.

American Robin

Early north 3-8 Otter Tail GEW; 3-11 Lake CNS; 3-14 Otter Tail GO and Crow Wing DK.

Wood Thrush

Early south 5-3 Hennepin VL; 5-5 Lac Qui Parle CB; 5-7 Washington BL; early north 5-8 Cass AES; 5-14 Itasca SH; 5-16 Crow Wing JB.

Hermit Thrush

Early south 4-2 Stearns MC; 3 reports on 4-9; early north 4-9 St. Louis DA; 3 reports on 4-14.

Swainson's Thrush

Early south 4-24 Stearns NH; 3 reports on 5-1; early north 4-30 Clay LCF; 5-3 Otter Tail GO; 5-5 Otter Tail SM.

Gray-cheeked Thrush

Early south 4-21 Cottonwood ED; 5-1 Hennepin ES, DB; 5-5 Lac Qui Parle CB and Hennepin GSP; early north 5-5 Otter Tail SM; 5-10 Otter Tail GO; 5-12 Clay LCF.

Veery

Early south 5-3 Fillmore RK and Hennepin VL; 5-5 Olmsted JF and

Lyon HK; early north 4-22 St. Louis HPD earliest date on record; 4-25 Lake CNS; 5-8 Crow Wing JB.

Eastern Bluebird

Early south 3-8 Houston EF; 3-9 Cottonwood LAF; 3-10 Carver HCP, JRG; early north 3-15 Crow Wing DK; 3-19 Morrison DF; 3-27 Marshall SVA and Becker SM.

Mountain Bluebird

1 report: 3-28 (1) Lake of the Woods PH, Robert Nero. See **Loon** 49:171.

Blue-gray Gnatcatcher

Early south 4-20 Houston FL; 4-23 Houston EF; 4-30 Houston DGW; also reported from Stearns Co.

Golden-crowned Kinglet

Early south 3-3 Wabasha DM; 3-26 Hennepin BE; 3-27 Murray KE and Jackson LR; early north 3-26 St. Louis GN; 4-2 Crow Wing DK; 4-10 St. Louis HPD.

Ruby-crowned Kinglet

Early south 3-25 Hennepin VL; 3-26 Hennepin GSP; 3-27 Olmsted JF; early north 4-9 Otter Tail DF; 4-10 LCF and Cass AES; 3 reports on 4-11.

Water Pipit

6 reports: 3-14 Otter Tail (2) SM earliest date on record for the state; 3-26 Cottonwood (1) LAF, ED; 4-17 Scott (1) ES; 5-5 St. Louis (1) GN; 5-10 St. Louis (2) DA; 5-23 St. Louis (1) LF.

Sprague's Pipit

2 reports: 5-25 Polk (1) RJ; 5-27 Clay (2) DGW.

Bohemian Waxwing

23 reports from 3-2 to 4-13 from Clay, Stearns, St. Louis, Hennepin, Washington, Cottonwood, Otter Tail, Crow Wing and Marshall; peak of 250.

Cedar Waxwing

Early south 3-1 Hennepin VL; 3-2, 3-4 Cottonwood LAF, RG; early north 3-11 Otter Tail SM, GO; 3-27 Clay LCF.

Northern Shrike

Late south 3-23 Dakota JD; 4-3 Cottonwood LAF; late north 4-6 Aitkin JB; 4-24 St. Louis LH (details?).

The Loon

Loggerhead Shrike

28 reports from 3-19 to 5-21 from Goodhue, Wilkin, Mille Lacs, St. Louis, Lac Qui Parle, Stearns, Olmsted, Hennepin, Murray, Scott, Swift and Blue Earth.

WHITE-EYED VIREO

2 reports of this former hypothetical species: 5-3 (1) Washington Co., Lee & Rose Warner Nature Center, Bonite Heck, Jo Hondlik and Barbara Wojahn (banded & released). See **Loon** 49:174; 5-25 Wayzata Hennepin Co. PF, DB and many others; see **Loon** 49:174.

Bell's Vireo

2 reports: 5-10 Hennepin (2) SH; 5-29 Winona (1) FL.

Yellow-throated Vireo

Early south 5-5 Hennepin DB; 5-6 Houston FL; 5-7 Olmsted JF; early north 5-6 Crow Wing TS early date north; 5-9 Crow Wing JB; 5-12 Otter Tail GO.

Solitary Vireo

Early south 5-1 Washington DMB; 5-5 Olmsted JF and Blue Earth VR; 5-6 Hennepin ES; Early north 5-8 St. Louis GN; 5-10 Marshall SVA; 5-18 Lake CNS; early south 5-23 Blue Earth VR.

Red-eyed Vireo

Early south 4-18 Hennepin LH earliest date on record; 5-5 Hennepin DB; 5-6 Hennepin ES; early north 5-9 Crow Wing TS; 5-11 Otter Tail SM; 5-12 Otter Tail GO and Crow Wing JB.

Philadelphia Vireo

Early south 5-7 Hennepin BE; 5-8 Lac Qui Parle FE; 5-11 Hennepin ES; early north 5-1 St. Louis GN; 5-12 Otter Tail GO; late south 5-22 Pipestone KE, TS.

Warbling Vireo

Early south 4-30 Murray KE; 5-3 Houston FL; 5-4 Isanti OJ; early north 5-5 Clay LCF and Otter Tail GEW; 3 reports on 5-8.

Black-and-white Warbler

Early south 4-29 Hennepin GSP;

5-1 Cottonwood ED, LAF; 3 reports on 5-4; early north 5-1 Marshall SVA; 3 reports on 5-5.

Prothonotary Warbler

5 reports: 5-3 Houston (1) FL; 5-12 Hennepin ES, WE; 5-14 Goodhue TS; 5-17 Hennepin DB, WE, ES, GSP, VL; 5-29 Houston (7) KE.

Golden-winged Warbler

Early south 5-5 Blue Earth VR and Hennepin OJ; 5-6 Goodhue DB and Hennepin ES; 5-8 Mower RK; early north 5-8 Crow Wing JB; 5-9 Crow Wing TS; 5-11 St. Louis HPD.

Blue-winged Warbler

18 reports: 5-3 Fillmore RK; 5-6 to 5-29 Goodhue many observers; also reported from Washington, Houston, Hennepin and Rice Co's.

Tennessee Warbler

Early south 3 reports on 4-30; early north 5-5 Otter Tail GO; 5-8 Crow Wing TS; late south 5-30 Cottonwood RG.

Orange-crowned Warbler

Early south 4-18 Hennepin ES; 4 reports on 4-24; early north 5-5 St. Louis GN and Marshall SVA; 5-6 Clay LCF; 5-8 Crow Wing JB; late 5-23 Hennepin WE.

Nashville Warbler

Early south 4-29 Washington DGW and Hennepin OJ; 5-1 Cottonwood ED; early north 4-28 St. Louis CNS; 5-1 St. Louis DA; 5-5 Otter Tail SM, GO; late south 5-23 Olmsted JF.

Northern Parula

Early south 5-5 Hennepin DB; 5-7 Mower RK; 5-9 Hennepin ES; early north 4-11 Clay LCF earliest date for the state (details?); 5-7 & 5-8 Lake GN, DGW; 5-10 Lake CNS; late south 5-14 Freeborn BB, OJ.

Yellow Warbler

Early south 4 reports on 5-1; early north 5-5 Crow Wing TS; 5-6 Otter Tail SM and Hubbard HF; 3 reports on 5-9.

Magnolia Warbler

Early south 4-22 Cottonwood LAF; 5-1 Cottonwood ED; 5-5 Hennepin OJ; early north 4-23 Hubbard HF earliest date for the state; 5-6 Clay LCF; 5-9 Otter Tail GO; late south 5-30 Hennepin ES.

Cape May Warbler

2 reports south: 5-8 Lac Qui Parle CB; 5-16 Blue Earth VR; early north 5-7 Lake GN; 5-9 Crow Wing TS; 5-10 Marshall SVA.

Black-throated Blue Warbler

3 reports: 5-20 Lyon (Marshall, 1) HK; 5-23 St. Louis (1) HPD; 5-30 St. Louis (1) BC.

Yellow-rumped Warbler

Early south 3-26 Rock KE earliest date on record; 3-30 Hennepin RJ; 3-31 Wabasha DM; early north 4-7 Aitkin TS; 4-9 Itasca MS; 4-14 Marshall SVA and St. Louis HPD; late south 5-30 Stearns NH.

Black-throated Green Warbler

Early south 4-28 Blue Earth VR; 5-3 Houston FL; 5-4 Houston EF; early north 5-7 and 5-9 Lake DGW, GN; late south 5-23 Hennepin DB.

Cerulean Warbler

Early south 5-6 Houston FL and Goodhue DB, LH; also reported from Hennepin, Carver, Stearns and Winona Co's.

Blackburnian Warbler

Early south 5-7 Hennepin DB; 5-8 Jackson ED and Lac Qui Parle FE; 5-14 Mower RJ; early north 5-1 Lake GN; 5-8 Pine SH; 3 reports on 5-10; late south 5-20 Hennepin ES.

Chestnut-sided Warbler

Early south 5-5 Hennepin ES and Olmsted JF; 5-6 Blue Earth VR and Washington DGW; early north 4-25 Lake CNS; 3 reports on 5-10.

Bay-breasted Warbler

Early south 5-8 Hennepin JG and Cottonwood LR; 5-10 Hennepin ES, VL; 5-13 Blue Earth VR; early north 5-20 St. Louis GN and Crow Wing JB; late south 5-23 Ramsey WL.

Blackpoll Warbler

Early south 5-1 Olmsted JF; 5-2 Hennepin DB; 5-5 Hennepin OJ; early north 5-5 Otter Tail SM; 5-8 Otter Tail GO; 5-9 Clay LCF; late south 5-30 Pipestone KE.

Pine Warbler

Early south 4-17 Goodhue DGW and Hennepin GSP; 5-6 Hennepin OJ; early north 4-18 to 4-25 Hubbard HF; 4-23, 24 Crow Wing JB, TS; 4-27 Itasca MS.

Palm Warbler

Early south 4-16 Hennepin ES; 4-19 Hennepin VL, AJ; 4-20 Washington DMB; early north 4-24 Crow Wing TS; 4-28 St. Louis GN; 4-29 St. Louis MH; late south 5-14 Freeborn BB, OJ; 6-4 Fillmore JF.

Ovenbird

Early south 5-4 Hennepin DB; 5-5 Olmsted JF; 3 reports on 5-6; early north 5-5 Otter Tail SM; 5-7 Itasca MS; 5-8 Cass AES.

Northern Waterthrush

Early south 3 reports on 5-1; early north 5-5 Otter Tail SM; 3 reports on 5-7; late south 5-29 Hennepin VL.

Louisiana Waterthrush

12 reports: 4-22 Houston EF; 5-6 Ramsey WL; 5-8 Hennepin DB, VL, Dodge VH and Carver ES; 5-10 Washington JD; 5-11 Hennepin ES; 5-22 Winona JF; 5-28 Hennepin WE; 5-28, 29 Houston KE.

Connecticut Warbler

19 reports from 5-10 to 5-30 from Hennepin (2), St. Louis (8), Roseau (2), Pipestone (1), Pine (1), Lake (2), Otter Tail (1), Aitkin (2).

Mourning Warbler

Early south 5-13 Hennepin ES; 5-14 Hennepin GSP and Mower RJ; early north 5-10 St. Louis MH; 5-16 Itasca MS and St. Louis DA; 5-17 Lake CNS; late south 5-29 Lac Qui Parle FE.

Common Yellowthroat

Early south 5-5 Ramsey WL; 4 reports on 5-6; early north 5-6 Crow Wing TS and Otter Tail SM; 5-7 Wilkin GO, GEW.

The Loon**YELLOW-BREASTED CHAT**

1 report: 5-15 Anoka Carlos Avery (1) KLF.

Wilson's Warbler

Early south 3 reports on 5-6; early north 5-8 Otter Tail GO; 5-9 Clay LCF; 5-10 Marshall SVA; late south 5-30 Lac Qui Parle CB.

Canada Warbler

Early south 5-14 Mower RJ; 5-15 Hennepin TS; 5-16 Hennepin ES; early north 5-23 Lake CNS; 5-25 St. Louis CNS; late south 5-30 Hennepin ES.

American Redstart

Early south 5-3 Houston FL; 5-6 Hennepin HCP, ES; 3 reports on 5-7; early north 5-6 Crow Wing TS; 5-9 Otter Tail GO; 5-10 Marshall SVA.

House Sparrow

Reported from most counties.

Bobolink

Early south 4-24 Watonwan ED; 5-2 Carver HCP, JRG; 5-4 Hennepin RJ; early north 4-24 Aitkin JB; 5-7 Wilkin GO, GEW; 5-9 St. Louis DA.

Eastern Meadowlark

Early south 3-10 Houston EF; 3-12 Wabasha DGW; 3-13 Houston FL; early north 3-25 Morrison PM and Crow Wing DK; 3-31 Aitkin TS.

Western Meadowlark

Early south 3-8 Cottonwood ED and Lyon HK; 3-9 Cottonwood LAF; 3 reports on 3-12; early north 3-10 Wilkin, Otter Tail SM, GEW; 3-24 Clay LCF.

Yellow-headed Blackbird

Early south 3-14 Blue Earth (1) VR (wintering?); 4-7 Hennepin BE; 4-10 Hennepin HCP; early north 4-7 Cass MS; 4-9 Otter Tail GO; 4-15 Otter Tail SM and Wilkin GEW.

Red-winged Blackbird

Early north 3-11, 14 Otter Tail SM; 3-15 Hubbard HF; 3-16 Morrison PM and Crow Wing JB.

Orchard Oriole

12 reports from 4-30 to 5-29 from

Winona, Goodhue, Freeborn, Lac Qui Parle, Cottonwood, Rock, Murray and Pipestone.

Northern Oriole

Early south 4-30 Hennepin ES; 5-1 Hennepin JRG, HCP; 3 reports on 5-4; early north 5-6 Otter Tail SM and Crow Wing TS; 5-8 Otter Tail GO; 5-9 Crow Wing JB and Cass AES.

Rusty Blackbird

Early south 3-10 Lyon HK; 3-12 Pipestone KE; 3-15 Dakota VL; early north 3-6 St. Louis DA; 3-8 Otter Tail GO; 3-19 Wilkin GEW, SM; late south 4-15 Lyon HK; late north 5-7 Lake KE.

Brewer's Blackbird

Early south 3-9 Murray AD; 3-10 Houston EF; 3-12 Sibley RJ. OJ; early north 3-27 Lake ME; 4-3 Wilkin TS; 4-9 Mahnomens MS.

Common Grackle

Early south 3-6 Wabasha DM; 3-8 Lac Qui Parle FE; 4 reports on 3-9; early north 3-13 Otter Tail GEW; 3-14 Wilkin SM.

Brown-headed Cowbird

Early south 3-25 Lyon HK; 3-26 Pipestone KE; 3-27 Rice BE; early north 3-31 Aitkin TS; 4-10 Wilkin GO and Cass AES.

Scarlet Tanager

Early south 4-12 Wabasha Clifford & Helda Braatz earliest date on record; 5-7 Goodhue WE; 5-11 Washington RJ; 5-12 Hennepin DB; early north 5-11 Mille Lacs TS; 5-14 Itasca MS; 5-16 Otter Tail GO and St. Louis MH.

Cardinal

3 reports out of the usual range: 4-24 Crow Wing (1) JB; 5-22 Pipestone (1); 5-30 Lincoln (1) KE.

Rose-breasted Grosbeak

Early south 4 reports on 5-1; early north 5-6 Crow Wing TS and Otter Tail SM; 5-7 Clay LCF; 5-8 Crow Wing JB.

Blue Grosbeak

4 reports: 5-18 Rock KE; 5-27, 5-30 Murray, 5-30 Nobles AD.

Indigo Bunting

Early south 5-3 Fillmore RK; 5-9 Goodhue LH; 5-10 Olmsted JF and Cottonwood LAF; early north 5-15 Wilkin SM; 5-21 Carlton TS and Becker GO; 5-23 St. Louis DA.

Dickcissel

Early 5-5 Cottonwood LAF; 5-12 Fillmore JF; 5-15 Freeborn HK and Winona TS; also reported from Carver, LeSueur, Goodhue, Wabasha, Murray, Mower and Otter Tail Co's.

Evening Grosbeak

Late south 4-17 Stearns NH.

Purple Finch

Late south 5-22 Olmsted JF; early north 3-19 Crow Wing DK; 3-23 Otter Tail SM; 3-25 Crow Wing JB.

Pine Grosbeak

4 reports: 3-1 St. Louis MH; 3-2, 3-10 St. Louis AE; 3-28 Olmsted JF.

Hoary Redpoll

5 reports: 3-1 Crow Wing (1) JB; 3-4, 3-10 Marshall SVA; 3-5 Otter Tail (2) GO; 3-11 Otter Tail (2) SM.

Common Redpoll

2 reports south: 3-10 Hennepin AJ and Washington DGW; late north 4-24 Clay Elizabeth G. Anderson.

Pine Siskin

Late south 5-31 Olmsted JF; early north 3-1, 3-30 Hubbard HF; 4-11 Itasca MS.

American Goldfinch

Early north 4-1 Crow Wing DK; 4-3 Otter Tail SM; 4-8 Clay MS.

Rufous-sided Towhee

Early south 3-30 Houston EF; 4-11 Hennepin Brad Johnson; 4-17 LeSueur HC; early north 5-7 Clay LCF; 5-21 Becker GO.

Lark Bunting

3 reports 3-5 to 4-22 Winona (1) SM, RJ, TS, JB; 5-17 Nobles (1) AD; 5-21, 5-22 (2) 5-30 (1) Lac Qui Parle CB.

Savannah Sparrow

Early south 3-26 Lac Qui Parle RJ; 4-8 Lyon HK; 4-10 Nobles KE; early north 4-10 Wilkin GO; 4-11 Wilkin SM; 4-16 Aitkin JB.

Grasshopper Sparrow

Early south 4-14 Lyon HK (ties early date); 5-1 Rock KE; 5-2 Lac Qui Parle CB; early north 5-8 Clay LCF and Crow Wing DK; 3 reports on 5-21.

Baird's Sparrow

3 reports: 5-11 Wilkin (1) LCF; 5-29 Clay (Felton, 2) TS; 5-30 Clay (Felton, 1 seen 3 heard) RJ. See **Loon** 49:175.

LeConte's Sparrow

8 reports: 4-23 Lac Qui Parle SM; 5-6 St. Louis CNS; 5-7 Otter Tail GEW, GO; 5-11 Wilkin LCF; 5-17 Marshall SVA; 5-18 Aitkin (10+) TS; 5-21 Aitkin KE; 5-29 Marshall DGW.

Henslow's Sparrow

4 reports: 5-4, 5-7 Hennepin HCP, BC, RJ; 5-29 Winona (3) FL.

Sharp-tailed Sparrow

7 reports: 4-23 Lac Qui Parle (2); 5-21 Aitkin; 5-20 Marshall (1) SVA; 5-22 Morrison (3 singing) TS; 5-23 Cook (1) LH; 5-28 Marshall (2) DGW; 5-30 Aitkin BB.

Vesper Sparrow

Early south 3-26 Cottonwood ED; 4-2 Swift BSH; 4-8 Murray HK, AD; early north 4-11 Wilkin GO, SM; 4-18 Crow Wing JB; 4-20 Clay LCF.

Lark Sparrow

Early south 4-15 Cottonwood ED; 4-24 Sherburne DGW; 5-8 Renville KE; no reports south.

Dark-eyed Junco

Late south 5-4 Hennepin ES; early north 3 reports on 3-1.

Tree Sparrow

Early north 3-8 St. Louis GN; 3-11, 3-12 Otter Tail SM, GEW, GO.

Chipping Sparrow

Early south 3-29 Hennepin HCP; 4-6 Lac Qui Parle FE; 4-7 Hennepin BE; early north 4-12 St. Louis GN; 4-14 St. Louis HPD; 4-16 Otter Tail SM.

The Loon**Clay-colored Sparrow**

Early south 4-29 Hennepin HCP; 4-30 Murray KE and Washington DGW; 5-1 Washington DMB; early north 4-29 Clay LCF; 5-1 Otter Tail GO; 5-3 Otter Tail GEW.

Field Sparrow

Early 4-9 Rock KE; 4-10 Watonwan ED; 3 reports on 4-11; also reported from St. Louis (4-21 GN) and Clay Co's.

Harris' Sparrow

Early south 3-10 Murray AD; 3-31 Cottonwood RG; 4-2 Mower RJ; early north 4-17 Otter Tail GO; 4-20 Clay LCF; 4-29 Otter Tail GEW; late 5-22 Hennepin ERW.

White-crowned Sparrow

Early south 4-24 Jackson LR; 4-25 Stearns MC; 4-26 Cottonwood LAF; early north 4-30 Hubbard HF; 3 reports on 5-1; late 5-15 Aitkin Lloyd Paynter.

White-throated Sparrow

Early north 4-12 St. Louis GN; 4-14 Itasca MS and Crow Wing DK; 4-16 Otter Tail GEW; late 3 reports 5-17.

Fox Sparrow

Early south 3-10 Hennepin Pat Koontz; 3-11 Ramsey RH; 3-12 Houston DGW; early north 3-28, 3-29 Crow Wing JB, TS; 4-1 Crow Wing DK; 4-4 Hubbard HF; late 4-26 Lac Qui Parle CB and Marshall SVA.

Lincoln's Sparrow

Early south 4-16 Cottonwood RG; 4-17 Mower RK; 4-18 Cottonwood LAF; early north 4-14 St. Louis HPD; 4-19 Otter Tail GO; 4-23 St. Louis DA; late south 5-22 Pipestone TS.

Swamp Sparrow

Early south 3-26 Lac Qui Parle RJ; 3-30 Houston EF; 4-6 Hennepin HCP; early north 4-9 Crow Wing DK; 4-10 Otter Tail GO; 4-16 Aitkin JB; 4-20 St. Louis GN.

Song Sparrow

Early south 3-1 Carver HCP; 3-8 Wabasha RL; 3-10 Ramsey SH and Murray AD; early north 3-26 Otter Tail GO; 3-27 Otter Tail SM; 3-28 Crow Wing DK.

Lapland Longspur

Early south 3-5 Fillmore RJ; 3-12 Hennepin OJ, RJ and Rock KE; early north 3-26 Clay LCF; 4-6 St. Louis DA; late 5-3 St. Louis GN.

Chestnut-collared Longspur

6 reports: 4-12 Clay (12) JB; 4-24 Clay (20) BC; 5-8 Wilkin (8) LCF; 5-27 to 5-30 Clay (Felton) DGW, TS, RJ.

Snow Bunting

Late south 3-7 Murray AD; late north 5-23 St. Louis LH.

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NOTES OF INTEREST

PRAIRIE CHICKEN INVENTORY, 1977

County	Number of Birds Observed (Number of Booming Grounds)			
	1974	1975	1976	1977
Becker	66 (5)	50 (5)	47 (4)	54 (5)
Cass	— (-)	— (-)	— (-)	13 (1)
Clay	263 (24)	277 (25)	248 (24)	197 (14)
Mahnomen	49 (6)	39 (5)	61 (4)	107 (8)
Norman	134 (11)	123 (10)	145 (10)	136 (11)
Ottertail	12 (2)	1 (1)	6 (1)	8 (2)
Polk	94 (14)	93 (11)	103 (13)	141 (13)
Red Lake	11 (2)	9 (2)	5 (1)	3 (1)
Wilkin	196 (18)	189 (17)	230 (19)	216 (12)
Total	825 (82)	781 (76)	825 (77)	875 (67)

Average Number of Prairie Chickens Observed Per Booming Ground

1974 — 11.46
 1975 — 10.55
 1976 — 10.71
 1977 — 13.06

Comments: The Prairie Chickens on 67 booming grounds were counted in the spring of 1977. This is a reduction from past years when 76-82 grounds were observed. Based on comments from those who participated in the count, we did not lose 10-12 booming grounds, but we did have manpower problems and just didn't get counts on all grounds. Despite the reduction in booming grounds observed the total number of birds counted was higher than in past years — 875 birds. The previous range had been 781-825 birds seen in a spring. The average number of birds per booming ground increased from a range of 10.55-11.46 in 1974-76 to 13.06 in 1977. Prairie Chickens were found in one new county this year. A booming ground with 13 birds was found in Cass county in central Minnesota. We also found a small booming ground about 30 miles north of our regular census area in Polk county. This was in the Goose Lake area southwest of Thief River Falls. Terry Wolfe, Wildlife Mgr., 706 Pine St., Crookston, Minnesota 56716.

SUMMER RECORD OF A LARK BUNTING IN STEARNS COUNTY — On July 12, 1977, as I drove along the northern frontage road to Interstate 94 on the property of St. John's Abbey, Collegeville, I noticed a bird fly to a stake south of the road. Upon closer examination I identified the bird as a male Lark Bunting in full breeding plumage. I saw no other individuals of this species during the initial observation period of approximately 15 minutes or during a subsequent visit to the area an hour later. Approximately 2 hours after the initial observation the bird was collected and prepared as a study skin by N. L. Ford. Further searches the week following the observation produced no additional sightings. The specimen is presently in the museum of St. John's University, Collegeville, Minnesota. No previous records for this species are listed for Stearns County by Green and Janssen (1975, **Minnesota Birds**, University of Minnesota Press). The only Stearns County record given by Roberts (1936, **The Birds of Minnesota**, University of Minnesota Press) is "1880. A number seen in eastern Stearns and western Pope counties (W. W. Eager)." **Steven C. Hansen, Route 2, St. Joseph, Minnesota 56374.**

ADDITIONAL RICE COUNTY RECORDS — I have several records to add to Orwin Rustad's article on the "Birds of Rice County" (**The Loon** 48:136-149 and 49:9-25). On September 10, 1977, I was birding around and in Nerstrand State Park, Rice County and noted a number of species for which Rustad lists few records, or as being irregular in Rice County. The following are the species observed: **Long-eared Owl** (48:147) one was flushed from the woods near the parking lot at Nerstrand State Park. **Red-breasted Nuthatch** (49:11) two were seen in the Park, Rustad lists September 15 as earliest fall migration date. **Swainson's Thrush** (49:13) no fall dates are listed by Rustad, a single bird was seen in the Park on the above date. **Blue-gray Gnatcatcher** (49:14) a single bird was seen at the entrance to the Park. This represents the latest fall date on record for the state. **Philadelphia Vireo** (49:15) four were seen near the entrance to the Park and an additional two were seen in the valley below the parking lot. **Black-and-white Warbler** (49:15) one was seen in the Park; probably a regular transient in the county. **Nashville Warbler** (49:16) one seen outside the park; probably a regular transient in the county. **Black-throated Green Warbler** (49:17) two were seen near the entrance to the Park. Probably regular transients in the county. **Chestnut-sided Warbler** (49:17) one seen in the Park; probably a regular transient in the county. **Bay-breasted Warbler** (49:17) at least six were seen near the parking lot area; probably an irregular transient in the county. **Palm Warbler** (49:17) one seen near Cannon City; probably a regular transient in the county. **Lincoln's Sparrow** (49:24) one seen south of the Park; probably a regular transient in the county. **Robert B. Janssen, 14321 Prince Place, Minnetonka, Minnesota 55343.**

SECOND MINNESOTA NESTING OF THE MOCKINGBIRD — During the summer of 1977 a pair of Mockingbirds was observed repeatedly and eventually nested at Blue Mounds State Park, Rock Co. Park Naturalist Bryce Anderson first observed a singing male on June 2 near the park entrance, and during the month of June this bird was seen repeatedly by myself and others in this same area. Also present in this period, but much less in evidence, was a second non-singing bird which was presumed to be a mated female. However, in spite of several searches, no evidence of nesting was found during June, and I moved away from this area on

July 1. But after a visit to the park in early July, Steve Herve and Terry Savaloja reported that a nest was being built within 100 yards to the north-east of the contact station, near the edge of the wooded stream. This nest apparently was a dummy or was abandoned since about a month later an active nest was finally found near the park road about ¼ mile to the south-east. Following is a note received from Bryce Anderson on this nest: "The nest was located in a Hawthorn (*Crataegus* sp.) 6½ feet high, the nest was 4 feet above the ground. The area around the Hawthorn is mixed prairie with no other large tree or shrub within 100 feet of the nest. Big Bluestem is one of the predominant grasses along with wolfberry, wildrose, and areas of exposed Sioux Quartzite. The nest was located 60 feet from the park road. The nest was constructed of small sticks and some dried leaves. August 6 — First observed the nest, two young, three inches long sprouting juvenile feathers, primaries just breaking through sheaths. Parents protective as usual. August 8 — Primary feathers out. August 13 — Young gone. August 15 — Nest destroyed." This represents the only Mockingbird nesting for Minnesota since the first reported nests from Morrison Co. in 1968. **Kim Eckert, 9735 North Shore Dr., Duluth, Minnesota 55804.**

YELLOW-CROWNED NIGHT HERON IN ANOKA COUNTY — At 11:30 A.M. on August 20, 1977, my son David and I were fishing the Rum River, Anoka County (Oak Grove Township, Section 19, Township 33, Range 24) when we flushed a medium sized heron from the shore. The bird flew away from us and diagonally across the river. It was apparent that it was too large and too bluish gray to be a Green Heron. I always carry binoculars when fishing the Rum and was able to observe it from distances of about eighty to fifty yards. The bird was easily identifiable as a Yellow-crowned Night Heron. During the next 30 minutes, we saw this heron several more times. Once I saw it in flight at a distance of about twenty yards. This sighting seems to be somewhat further north than is usual for the species. Green and Janssen, **Minnesota Birds** give only four equivalent sightings for this species in this area of Minnesota (Washington, Pine, Anoka, and Aitkin Counties). **Charles L. Horn, Jr., 5100 Juanita Ave., Edina, Minnesota 55424.**

CINNAMON TEAL IN LINCOLN COUNTY — On April 17, 1977, my wife and I were scouting western Lyon County and adjacent parts of Lincoln County looking for prairie goodies like Sprague's Pipits, Baird's Sparrows and the like when we found a small snow melt pond on a farm midway between Dead Coon Lake and the town of Tyler. On the pond were a small flock of teal, about twenty-five individuals, one of which drew our attention. We watched the birds for more than half an hour noting that the different individual was almost entirely reddish brown except for his white underwings in flight and the blue speculum. This bird seemed slightly larger than the other birds which were both Blue-winged and Green-winged Teal. We watched with 8x40 glasses in good light and took several pictures with a 300mm lens. The bird came no closer than about 75 feet, so that the image on the slide is rather small, but it is unmistakably a Cinnamon Teal. **Henry C. Kyllingstad, 205 6th St. S., Marshall, Minnesota 56258.**

ANOTHER ALBINO BARN SWALLOW — I have previously reported the sighting of an albino Barn Swallow in Sept. 1976 (**The Loon** 48:187) and an albino Rough-winged Swallow in Sept. 1973 (**The Loon** 45:136). On August 14, 1977 at Rice Lake NWR, Aitkin Co. I saw a gathering of approximately 100 Barn and Cliff Swallows perched on the wires near the entrance to the

refuge. In this group was an albino Barn Swallow. The bird was identified as a Barn Swallow and not a Cliff because of the deeply forked tail. The bird was nearly all white with the exception of a brownish smudge on the throat. It would appear that albinism in swallows is at least of casual occurrence in this region. **Robert B. Janssen, 14321 Prince Place, Minnetonka, Minnesota 55343.**

PRAIRIE FALCON, OTTERTAIL COUNTY — I was driving back to my office in Fergus Falls on August 5, 1977, after a noon lunch break at my rural home, when I chanced to notice a large falcon approaching from the south at about 50-75 feet maximum. The bird passed nearly overhead, and I was quite certain that the black axillars of a Prairie Falcon were evident. It then described a swift downward arch, alighting on the top of a pyramid of sand within a deserted sand pit. With all due haste I returned to my farmsite about ¼ mile distant, picked up my wife, Marion, and our binoculars and returned to the site. The falcon was still there. Using 10x50 and 10x35 binoculars, we viewed it for about two minutes at a distance estimated to be about 600-700 feet. The bird was decidedly larger than a Kestrel or Merlin. Its crown, nape, back, tail, and upper wings were a brownish-tan, the feathers edged with white, particularly on the back and upper wings; faint dark barring could be noted on the dorsal surface of the tail; the breast and belly was tan colored and generously dark spotted, the marks arranged in lengthwise (vertical) rows; a bold white eye stripe ran from the eye posteriorly to the back of the head; the side of the head and the throat was white; a substantial black line descended from the eye to the side of the throat; a dark marking best described as an inverted "U" was evident on the portion of the side of the head posterior to the eye, giving the sides of the head a broken brown and white pattern. Presently the falcon took to the wing and, to our delight, flew diagonally towards us, banking away a scarce 100 feet or so, displaying fine black axillars. It then proceeded diagonally away from us, rocking and banking in the strong northwest wind. Dark barring was also noted on the underside of the tail, as well as broken barring on the underside of the wing primaries and secondaries. While in flight the pale feather edgings on the brownish-tan back and upper wing feathers was very evident . . . and quite impressive! The time: 12:20 p.m.; sky conditions: dotted with small summer cumulus clouds; wind: northwest at 15 - 20 knots; visibility: excellent. Field notes were taken on the spot and later compared with **ROBBINS, Birds of North America**, and **PETERSON'S Field Guide to the Western Birds. Gary Otnes, Route 1, Box 181, Fergus Falls, Minnesota 56537.**

PRAIRIE FALCON IN AITKIN COUNTY — Reports of the Prairie Falcon have been increasing in Minnesota over the past few years (See **The Loon**, 48:38-39; 49:47-48 and 49:106) to the point where the species can be considered a regular spring and fall migrant. On August 14, 1977 I was fortunate to have the opportunity to observe this species at close range. I was traveling north on Highway 65 at the junction of County Road 4 in Aitkin Co. at about 8:00 A.M. when I spotted a medium sized hawk perched on the top of a telephone pole. I passed the bird at about 50 MPH but noted its light sandy color, facial markings similar to a Prairie Falcon, light chest streakings on the belly forming a band almost like a Red-tailed Hawk and light under belly. I stopped the car about 60 yards from the bird. Through my 20X scope I was able to observe the following field marks, medium sized hawk, the upright posture of a falcon, light sandy color on back and

the distinctive facial markings were very obvious. A dark line running directly down from the eye to the shoulder area, behind this a white area and then another wider dark line running down from the eyeline to the neck. This gave the head a white (throat) dark, white, dark, white appearance. The tail was light brown with fine dark transverse bars. From my vantage point I could not see the breast. The hawk seemed very nervous and in about two minutes the hawk left its perch and flew south (away from me). I immediately noted the falcon shape, narrow pointed wings and long tail. The bird circled twice but because of the light it was difficult to absolutely discern the black axillars but I did note some darkening as the bird quickly flashed its underside. In spite of this, I am positive the bird was a Prairie Falcon. **Robert B. Janssen, 14321 Prince Place, Minnetonka, Minnesota 55343.**

ANOTHER CLEARWATER COUNTY HOODED WARBLER — On the morning of 13 May, 1977, I was leading a group of University of Minnesota Biology Station students on a Field Ornithology class field trip near the Station, Itasca State Park, Clearwater County. This was an early spring at Itasca, and most of the warbler species that nest in the area had arrived sometime between 10 and 12 May (although Nashville, Pine, and Yellow-rumped Warblers were common prior to this). The day was hot and dry, as it had been for more than a week, with a high temperature in the low 90's. The class stopped 150 meters north of the Pine Ridge Campground registration station, along the campground road. This area is an upland mixed deciduous woodland of primarily mature aspen, sugar maple, northern red oak, and basswood, with an understory of sugar maple and ironwood. We were observing newly arrived deciduous forest species such as American Redstarts and Ovenbirds, when I heard an unfamiliar song which reminded me of a Chestnut-sided Warbler, or especially a Magnolia Warbler, both in quality and structure (the next-to-last note was strongly accented). Within a minute, I saw the bird, and immediately recognized it as a male Hooded Warbler; I have seen many of these birds in Texas and Mexico during migration and winter, but I previously had heard the song of only a few individuals. I had a cassette tape recorder and a tape of warbler songs, and I began playing pre-recorded Hooded Warbler songs. Soon the warbler responded to the tape vocally, and then by approach, until he was about 15 meters from the class, in full view. All 23 class members had an excellent view of this unmistakable bird for about 20 minutes. When we left the area after an hour, he was still singing at a rate of 6 to 8 songs per minute. He was delivering advertising songs mostly from the perimeter of a territory measuring about 100 x 50 meters, with the eastern boundary at the edge of the campground road. While we were there, he actively progressed throughout this territory while singing, except when defending against the tape-recorded "intruder." Most of his songs were given from heights of 4 to 10 m, but he also sang from lower perches. The following day, I returned alone to his territory and found him still singing persistently, but in a more restricted area (barely 50 x 25 m). He responded again to the tape recording but he approached no closer than 20 m. He remained on territory at least through 15 May, but was absent on 18 May and was not seen again. No female was ever observed, and I feel certain this male remained unmated and consequently abandoned his territory. This is about the thirteenth state record and the second record for Itasca Park: in June 1975, a male was singing on territory for over a week at the Biology Station (Loon 47:143). These two locations are less than 1 km apart, and the possi-

bility exists that both were the same individual. Itasca Park is the farthest north that this species has been reported in the state. It is 80 miles (193 km) northwest of the other two northernmost records (Otter Tail and Mille Lacs Counties, respectively). The remainder of the sightings are from the Twin Cities region south to Le Sueur Co. (J. C. Green and R. B. Janssen, 1975, Minnesota birds; where, when, and how many; *Loon*, vols. 47:135, 47:141, and 48:115; and George Barrowclough, pers. comm. 1977). Seven of the 13 records have been singing males, and all but one of 13 were from May or June. Prior to 1972 there were only three state records and the species was unknown before 1942; however, in the past six years there have been 10 sightings. It would seem logical to conclude that this bird is expanding its range northwestward into the state, but to date there has been no evidence of breeding (all records are of single individuals only). **Bruce A. Fall, James Ford Bell Museum of Natural History, University of Minnesota, Minneapolis, Minnesota 55455.**

BLUE-WINGED WARBLER IN LAKE COUNTY — On June 11, 1977, Pam and I were birding for warblers — particularly Black-throated Blue Warblers — along the North Shore. We had no luck at Ninemile Lake early in the morning, and decided to follow County Highway 7 toward Heartbreak Hill. We drove slowly, checking interesting places for interesting things. Between Echo Lake and Hare Lake, about $\frac{3}{4}$ of a mile before the turn onto Township Road 1, we stopped at a dried up marshy area. Dead, bare trees protruded conspicuously among occasional bushes and willow thickets. I watched a Song Sparrow flit onto one of the dead trees in the back of the clearing, and I noticed a bright yellow warbler. Through my 8x30 binoculars I could see the dark wings with the white wing bars and the conspicuous black line through the eye. Singing its delightful "Be-buzz" song over and over, it was a Blue-winged Warbler in Lake County, right beside the boundary of Cook County. Pam and I were able to approach closely several times as the beautiful bird flew about the clearing, from thickets to dead trees. **Charles A. Bergman, 2100 S. 112th St., Vista Oaks Apts. L-2, Tacoma, WA 98444.**

UNUSUAL FEEDING BEHAVIOR OF A GREAT BLUE HERON — On July 16, 1977, at 11:35 A.M., my wife, Marion, our son Mack, and I were observing shorebirds at a slough located about three miles north of Elbow Lake, Grant County, along highway #59. While scanning a large flock of feeding Lesser Yellowlegs some several hundred feet distant, a Great Blue Heron burst from the adjacent bullrushes, scattering the yellowlegs. In its beak it carried a very olive, decidedly annoyed, thirteen striped ground squirrel (Common Gopher). The heron hurried across the mudflat towards open water, apparently hoping to place the gopher at the disadvantage, should it chance to escape the heron's grip. Twice, before the heron reached water, the gopher did fall to the ground. Each time the heron, wings flapping and neck outstretched, outran the gopher, recapturing it. Finally the heron reached open water with its prey and, utilizing a combination of vigorous shaking and repeated dunking, dispatched it. Then it soaked the gopher for a couple of minutes, turning it over and over, before positioning it in its beak, throwing its head back and swallowing it. As the gopher is a dry land rodent, it is interesting to speculate how it came into contact with the Great Blue Heron. Also, the heron's determination to carry its prey into open water before killing and devouring it was unique. It's probably anthropomorphic to consider the heron possessing enough abstract thought to realize that the gopher would be out of its element in the water. Most

probably, the heron only wished to wet its food for easier swallowing. Yet, I have witnessed Green Herons snatching large Salamander larvae from out of water two - three inches deep, then running post-haste for the dry shore. They know, and I have witnessed the fact, that a Salamander larvae dropped back into the water is usually a lost larvae; one falling on dry land is guaranteed supper. If Green Herons know this, perhaps Great Blues know the opposite about non-aquatic prey. **Gary Otnes, Route 1, Box 181, Fergus Falls, Minnesota 56537.**

SUMMER OBSERVATION OF A PAIR OF FERRUGINOUS HAWKS — On July 9, 1977 Paul Egeland, Dick Ruhme and I were birding along the east shore of Lake Traverse via Highway 27. About two-thirds of the way up the lake we spotted a gull flying by that suggested a possible California. We chased up the shore after it, stopping at a point where we guessed it had headed. There was no sign of the gull, but as we headed back to the car I spotted a large raptor with a white tail to the north about a mile up the shore. It was circling in one spot, rather than moving on, but when I tried to point it out to Paul and Dick they could not locate it. Even at that distance I got such a clear impression of the large size and the white tail that it gave the impression of being a Bald Eagle. We immediately headed up the shore after it, and this time we were luckier. After a few minutes of scanning, Paul spotted the bird and pointed it out to us. It circled to the south of us in the sun, drifted almost directly overhead, and eventually rose out of sight to the north. After a few more minutes it seemed to reappear from out of nowhere, and to our surprise it was joined by another similar bird. We were able to watch one bird or the other for a total of 15 minutes or so, and during this time neither hawk flapped its wings, but circled overhead riding the thermals above the shore and hillside along the lake. Following is a description of the birds written while they were still in view before any field guides were consulted. Size and shape: conspicuously large buteos with very long and broad wings. Plumage of underparts: wings, breast, belly and tail whitish, except the wing tips were black-tipped, there were a few random dark flecks and smudges on the wings, the legs were reddish-brown, and the under tail had a slight reddish tinge to it. Plumage of upperparts (seen only twice, once at great distance, once in bad light): wings and back brownish, whitish patch at the base of the primaries (not as distinct as most Ferruginous Hawks I have seen), tail a clear white with no hint of rusty. Because of their size, white underparts and tail, and dark legs, we all identified them as light-phased adult Ferruginous Hawks. We noticed that one of the birds had a few more dark flecks on the underparts, but otherwise both birds looked essentially the same. The presence of a pair in July certainly suggests the possibility of nesting, especially considering that suitable nest sites are probably available on the hillsides along the shore of Lake Traverse, and also that this hawk is nesting in greater numbers than usual this summer in nearby eastern North Dakota. **Kim Eckert, 9735 North Shore Drive, Duluth, Minnesota 55804.**

TRUMPETER SWANS SEEN OVER LAKE TRAVERSE — A family of Trumpeter Swans (*Olor buccinator*) comprised of two adults and one cygnet was first heard and then seen over the open water of Lake Traverse on the South Dakota-Minnesota border on October 24, 1976. The observation was made by Mark Wilson and myself. The birds were flying southward toward the Bigstone NWR area. During the day, we also saw and heard two flocks of Whistling Swans (*O. columbianus*) totaling 15 individuals. A recognizable

distinction was made between the call notes of the Trumpeters and the Whistlers. I spent the summer of 1976 at Lacreek National Wildlife Refuge near Martin, South Dakota, working on my Master's research project. It involved a study of the behavior and movements of Trumpeter Swans. During the study, I became familiar with the various calls of the Trumpeter. Thus the difference between the voices of the Whistling and Trumpeter Swans over Lake Traverse was quite obvious to me. Trumpeter restoration projects in South Dakota (Lacreek NWR), Minnesota (Hennepin County Park Reserve District), and Manitoba (Delta Waterfowl Research Station) increase the possibilities of Trumpeter Swans utilizing the Mississippi Flyway. For the most part, they would pass unnoticed or would be mistaken for Whistling Swans. One other observation of a Trumpeter Swan has been made east of the Missouri River since the 1890's. In 1967, Cowardin and Bartonek (1968), while hunting on Alkaline Lake in Kidder County, North Dakota, identified the call of a Trumpeter from within a flock of 50 Whistling Swans. The extirpated status of the Trumpeter Swan in the eastern Dakotas and Minnesota may be changing. **Literature Cited:** Cowardin, Lewis M., and James C. Bartonek, 1968. Trumpeter Swan in Kidder County, North Dakota. *Prairie Nat.*, 1(1):15. James T. Leach, **Biology Department, University of South Dakota, Vermillion, South Dakota 57069.**

BALD EAGLE AND OSPREY REPORT - 1977 - SUPERIOR NATIONAL FOREST — Bald Eagle — Bald Eagle activity in number of territories and successful fledging of young was the highest of any reporting year on the Forest. The number of young, 43, was extremely encouraging. It is interesting to note that this increased activity was based on the same number of territories observed last year. Besides more active territories, two nests raised three (3) young and 16 nests raised two (2) young. The number of occupied territories; i.e., occupied by adults with unsuccessful raising of young, has fluctuated since 1974, although the trend has improved. The majority of eagle activity continues to be in the central and western portions of the Boundary Waters Canoe Area. Only nine (9) of the 52 known territories are outside the BWCA. Three new territories were found and three territories were dropped due to nest loss from natural causes. In 1976, we used a 206B Jet Ranger helicopter for the summer eagle census. Some sources in the literature document detrimental effects on the eagles with the use of helicopters for census. We documented the reaction of the adults to the approaching helicopter and also related the 1977 nesting activity at these same nests. Of the 13 active nests in 1976, the 1977 activity was: nine nests produced young, of which 2 nests produced 3 young each; 1 nest (territory) was occupied by adults and produced no young; 2 nests (territories) were inactive; and 1 nest was destroyed. In the 1976 summer census, most of the adults left the nest as the helicopter approached but returned when the helicopter left the area. The ratio of successful nests to those occupied and also abandoned following the helicopter flown census would indicate that this method of census had no effect on the eagles. In our census, we attempt to provide as little disturbance to the bird as possible. Once we observe what we need to, we immediately leave the area. We believe the manner, time of year, and duration of the disturbance are very important variables in evaluating census effects on eagles.

Osprey — Osprey activity and production of young was very strong this year. The number of successful territories has shown a good increase in the past two years. Seven new territories were found and four were

dropped due to nest destruction from natural causes. In June 1976, we inventoried four Osprey nests with the use of the helicopter. Two nests produced one young each in 1977, one territory was occupied and one nest was down. When the flight was made in 1976, the Osprey were incubating. None of the incubating Osprey left the nest as the helicopter approached although they were observed calling at the aircraft. We immediately veered from our approach to the nest when we observed the incubating Osprey (these were new territories which were reported to us as Bald Eagle territories). Use of the helicopter for the incubation census could be detrimental to the nesting birds if a close approach was made. Hovering with the helicopter near the nest could cause the adult to leave the nest and expose the eggs or immature bird to cold temperatures, rain or the hot sun.

SUPERIOR NATIONAL FOREST BALD EAGLE SURVEY

	Observed Territories	Active Territories	Successful Territories	Per Cent Successful	Total Number Of Young	Average Brood Size
1973	48	31	18	58%	23	1.3
1974	43	28	14	50%	18	1.3
1975	55	32	23	72%	35	1.5
1976	52	32	26	81%	29	1.1
1977	52	39	29	74%	43	1.5

OSPREY SURVEY

1973	29	15	6	40%	9	1.5
1974	36	24	12	50%	22	1.8
1975	34	25	10	40%	13	1.3
1976	34	21	21	100%	32	1.5
1977	36	23	18	78%	24	1.3

Karl Siderts, Wildlife Biologist, Superior National Forest, P.O. Box 338, Duluth, Minnesota 55801.

A POSSIBLE NESTING OF THE MOURNING WARBLER IN WASHINGTON COUNTY — As a summer staff member of the Lee and Rose Warner Nature Center, I band birds at the Wilder Foundation's Camp Wilder property which is immediately south and east of the Nature Center. On June 22, 1977, I was banding near Boot Lake at the junction of Washington County Highway #55 and Oldfield Road, a banding station that I have used consistently for seven years during June, July, and August. The area includes a small cattail swamp on the western edge, Boot Lake on the south and south-east, and a small marshy wet depression is directly to the east. In the middle of the banding site is a thick wooded area of mostly red oak of all ages, young paper birch, mature choke cherry, and some quaking aspen. The ground cover is dense raspberry, blackberry, large leaf aster, and extensive patches of tall grasses. The woods are on a gentle ridge, and three 12 meter mist nets are placed in a north-south direction at the eastern side of the ridge about 40 feet west of the marsh depression. About 120 feet of trapping area is available. On one of my net inspections at 11:45 a.m., I removed from one of the nets a After Hatching Year Male Mourning Warbler in full breeding plumage with a well developed cloacal protruberance. I placed band no. 840-25837 on his left tarsus, measured his wing and tail and promptly released him in the immediate vicinity.

He flew towards the marsh depression to the east. The net that caught him was about 75 feet south of Oldfield Road. At 12:15 p.m. I checked the three nets again and in the same net, I removed a After Hatching Year Female Mourning Warbler, and placed band no. 840-25838 on her left tarsus. After measuring her wing and tail, and noting that she had a fully developed brood patch, I released her too, in the immediate vicinity. She flew north-east across the Oldfield Road and disappeared into heavy grass near a visible (from the road) stand of small paper birch. Both individual birds had flown into the net from the east near the marshy depression. I talked to Dr. Harrison B. Tordoff, Director, Bell Museum, University of Minnesota, late in the afternoon of the same day of banding, and he stated that if these birds were a mated pair and if I could hear the male sing and could find the nest (both of which he described), then we would establish the southernmost nesting record for this species in Minnesota. In Green and Janssen's **Minnesota Birds — Where, When, and How Many**, University of Minnesota Press, 1975, there is an account of an inferred nesting recorded in Isanti County. June 29, 1977 was full of surprises at the same banding station near Boot Lake. The no. 2 net caught "my" banded male Mourning Warbler. While removing this bird I glanced at no. 1 net to the north and there was a "small yellow bird" caught in the bottom shelf and I could see the banded foot from where I was standing by no. 2 net. I recorded the repeat on "my" male that I had banded the previous week and noted that this time he was caught flying in from the west from the direction of the cattail swamp. Then I went to no. 1 net pondering that the bird there was probably the After Hatching Female that I had also banded the week before. Much to my total surprise it was another After Hatching Year Male Mourning Warbler wearing band no. 820-80845. The band was not one that I had used, but I had an idea whose it might be. I immediately checked with my boss, Bernard Fashingbauer, Director, Lee and Rose Warner Nature Center, and learned that he had banded this Mourning Warbler as an After Hatching Year Male **migrant** on May 23, 1974 at the Nature Center, and that it had returned and was re-caught again by "Bernie" at the Nature Center banding station on May 16, 1975. The third retrapping by me of no. 820-80845 on June 29, 1977 presents the possibility that Bernie's bird is also a nesting male Mourning Warbler in the same general area of the Nature Center and the western edge of Camp Wilder. The fact that "Bernie's bird" was recaptured by me gave us some vital information on no. 820-80845. He (the Mourning Warbler) had returned three times to the Nature Center-Camp Wilder area over a period of four spring-summer seasons, he was in full breeding condition with a well developed cloacal protuberance when I re-trapped him, and was at least 4 years old on June 29, 1977. On July 7, 1977 at the same Boot Lake banding station where the two male and one female Mourning Warblers were caught, I saw a male Mourning Warbler singing from a perch in a small birch. It was about six feet off the ground and about 25 feet to the west of no. 1 net. I could see the band on its foot but could not positively say any longer that it was my band. I did not catch it that day. On July 13, 1977, while working at Boot Lake banding station, I heard but did not see a singing male Mourning Warbler somewhere west of no. 1 net. I did not catch any of this species that day. On July 20, 1977, I found no further evidence at Boot Lake of the presence of any Mourning Warbler, either old or young, and unfortunately because of my schedule at Camp Wilder and lack of spare time on the job, I was unable to look for or to find a nest. **Jane C. Olyphant, 8609 Hidden Bay Trail North, Lake Elmo, Minnesota 55042.**

MONK PARAKEET IN BROOKLYN PARK — On Tuesday, July 5, 1977, my brother Tony and my sister Katy saw a beautiful green bird in a tree in our yard. My Dad didn't believe them when they said we had a parrot in our yard. Probably somebody's pet, we thought. When I noticed the start of a nest in a nearby tree we discovered it was being built by this same bird. Our neighbor, Mrs. Newell called the University and Bob Janssen to confirm that the bird was a Monk Parakeet. Meanwhile the nest had grown to over a foot across. It was interesting to watch the bird build the nest out of long twigs gathered in the area, some were nearly two feet long. Our house was full of excitement with professors, news cameras and bird watchers coming to see the bird. **Theresa Boerboon, 7500 W. River Road, Brooklyn Park, Minnesota 55444.**

Editors Note: Identification of the above bird was confirmed by me and several other people on July 8. The bird remained in the area for approximately two to three weeks, nest building continued sporadically through this period. Attempts by the Bureau of Sports Fisheries and Wildlife to capture the bird alive failed. The bird was not seen after the end of July.

DRAGONFLY ATTACKS AND KILLS A RUBY-THROATED HUMMINGBIRD — "In the third week of July, 1977, Richard and Catherine Butler observed, at Lake Vermilion, Minnesota, a Green Darner (Dragonfly, *Anax junius*) seize and kill an adult male Ruby-throated Hummingbird. The bird was grasped from below while in flight and the Darner buried its head and mandibles in the breast. Locked together, the two fell to the ground and after a few ineffective wing vibrations, the bird died either from the bite or from massive shock. The Darner then flew away with its prey." I received the above note from the Butlers, whom I consider as being careful and honest observers, and I have no doubt that this unusual report is factual. Bent (Bull 197 U.S. Nat'l Museum, p. 349 Dover Edition) reported on a similar attack by a dragonfly, although the hummer survived and Skutch (*The Life of the Hummingbird*, p. 86) repeats this observation and also tells of them being captured and killed by Preying Mantises, but I have never heard of the dragonfly actually flying away with the prey. **P. B. Hofslund, Biology Department, University of Minnesota, Duluth, MN 55812.**

RUFF AT MOORHEAD — On Saturday, June 4, 1977 Karol Gresser, Bill Litkey, Ron Huber, and myself were returning from Roseau County where we had seen the Western Wood Pewee working on her almost completed nest. We stopped at the Moorhead Sugar Beet Lagoons to look for shorebirds. There were many Wilson Phalaropes, a Pectoral Sandpiper and several "Peeps" along the edge of the far pond, about 50 yards from us. We noticed one large, brown shorebird with them. It was probing for food. At first glance the bird looked like a very large Pectoral. It was a nondescript, brown streaked bird with a much heavier bill than the phalaropes it was with. Legs seemed to be darkish. It had no eyeline or eye ring. We viewed it with a 25 power Spotting Scope and our binoculars. The light was at our backs. Karol said she thought it was a Reeve, she has seen the bird in Europe. We decided to flush the bird if we could in order to check the tail and wing patterns. Bill tried to walk toward the birds but it was too muddy. While we were trying to decide what to do, luckily, the birds flushed. We all saw the very distinctive tail pattern, dark central feathers

and a large white patch on each side. The wings were dark with no bars. The bird alighted on the far side of the pool. We saw it fly from there to a pool to the south. All of us were convinced that the bird was a Reeve. Elizabeth Campbell, 5267 W. Bald Eagle Blvd., White Bear Lake, MN 55110.

WESTERN Tanager — On Tuesday, August 9, 1977, following lunch in the Tea Room of the University of Minnesota Arboretum in Chaska, I took a walk with a friend along the Arboretum Green Heron Trail. We branched off to the right from the board walk onto a gress trail with tall oaks and other trees on the left and a lower area with a pond to the right of the trail. The day was cool and partly cloudy. After watching with 7x35 binoculars several Olive-sided Flycatchers and swallows in the area, I caught a glimpse of a good-sized yellowish bird with dark wings about ¾ of the way up a large oak making its way through the branches. It came into view a second time and I saw clearly bright scarlet color on the head, a yellow body and definite white bars on the black wings. It was smaller than a Robin, more like the size of a Northern Oriole. The bill was light in color, but not as fat as a grosbeak. Upon checking immediately the Robbins *Birds of North America* I carried, it was clear to me I had seen a Western Tanager. I alerted the Hot Line, but did not hear of any other sightings of the bird. Patricia Telfer, 5717 Hawke's Drive, Edina, MN 55436.

FALL ROBIN MIGRATION — In the Spring, 1972 *Loon* (44:24-26), I reported on a fall American Robin migration in 1971. I enjoyed this activity so much that I have been watching ever since. As I said in the first article, I watch in the early morning from first light to sun-up. This amounts to about a half-hour each day, or about 28 hours a season. The Robins appear to cease passing over the area by sunrise. The birds fly in loose small flocks. My view is about ¼ mile to the west, north and east. The days for which no numbers are listed mean that I did not watch on those days or, at either end of the period, that there were no birds. I do not know why there was such a meager migration in 1972. I thought possibly it was the year when so many Robins might have stayed up north because of a huge berry crop.

	1971	1972	1973	1974	1975	1976
Sept. 15			44			
16			45			
17				29		
18		10	51	75		
19			72	37		
20	8		36	16		
21	15		37			
22	150					16
23		33		6		69
24			107	27		8
25	80	70	162	28		
26		36		32		
27	50	30	34	27		
28		20	156			143
29		130	206			185
30	60	60	122	37		345
Oct. 1	216	39	90	118	59	702
2	60	95	190	160	175	

	1971	1972	1973	1974	1975	1976
3			333	199	142	
4	26	8	170	189	170	156
5		29	187	129	99	406
6	116	71	241	191	142	397
7		64	44	443	252	185
8	60	6	107	443	109	140
9	30	39	542	415	145	104
10		14	797	1,157	53	62
11	160	9	87	764		126
12	225	8	617	290	292	144
13	407	45		743	147	52
14	441	19		642	178	59
15	256	3	45	698	30	34
16	56	6	15	464	53	
17	131	6	5	233	51	55
18	907	1	1	557		21
19	512		8	106		
20	191		1	297	104	
21	277		2	302	12	
22	271		2	165	14	
23			2	42	23	
24	246	2	9	80		
25	822	7	2	6	6	4
26	453	10		9	31	
27	276			29	20	
28	56			70	1	
29	31	1			3	1
30	68	1		6		
31	142					
Nov. 1	42	1		9	4	7
2	16			2	3	
3			1	1		2
4					1	
5		1				

There was little or no migration this fall (1977). For every one or two seen flying south, there would be many flying north, this through October 12. Why this change in pattern I do not know. Anyhow, it is a lot of fun and I look forward to the time every year when I throw Andy's breakfast on the table, rush out to my chair on the hill with my blanket and my notebook and happily watch until it's time to take Andy to the bus. If anybody wants to watch with me next fall, give me a call, I have another chair. **Pepper Fuller, 14505 McGinty Road, Wayzata P.O., MN 55391.**

PELICAN KILL — On September 6, 1977 one of those unusual acts of attrition by Mother Nature occurred on Todd Lake, a small lake four miles north of Hutchinson in McLeod County. At 6:30 a.m. a brief, but deadly hailstorm struck the lake and surrounding area and the flock of some 400 White Pelicans on the lake. Reports of the hailstone size varied from golf ball to baseball size, but four hours later when the first DNR employees from the Hutchinson Fisheries Station arrived, hailstones one inch in diameter still lay on the ground. Paul Hoppe, Conservation Officer, Fisheries per-

sonnel and I picked up 87 dead pelicans from the lake that afternoon. Some 300 live birds were still on the lake, but many were incapable of flight. Although ducks of several species and various ages were seen alive on the lake, no dead or injured ones were located. The following day, eight pelican cripples were captured on Todd Lake, plus six cripples and three dead birds were taken from Belle Lake, a neighboring lake. Eight injured gulls were also picked up on Belle. Many other injured pelicans remained on Todd Lake, which could not be captured. The crippled birds were taken to the University of Minnesota Veterinary College, Raptor Rehab. facility where they were patched up. It is interesting that the most common injury was a fractured left ulna, which according to the veterinarian would most likely have healed successfully in the wild. If this held true for the remaining cripples on the lake, we can assume a good recovery rate among those cripples not captured. Two of the injured birds died at the U, but at last report the rest are doing fine. The 91 dead birds were turned over to the USFWS, which in turn distributed them to various agencies and institutions for study and research. They will add immeasurably to the present information of the bird as this kill more than equaled the number of known specimens heretofore in museum collections across the country. **Paul E. Bremer, Area Wildlife Manager, Box 137, Gaylord, MN 55307.**

A TUFTED TITMOUSE FAMILY — We live in a beautiful valley near Millville in Wabasha County, with birds all around. I lived here for years without knowing much about them. I suddenly became aware of them and with the encouragement of Dr. and Mrs. Mahle, my husband, Harvey, and my family, began to see, listen to, and study birds. We put up our first feeder on February 1, 1971 and have been feeding ever since. I have fed at least 27 different species. The first year a Harris' Sparrow came and stayed all winter — from Thanksgiving to Valentine's Day. I have had as many as 35 Cardinals on a snowy winter day, so I am always watching for something new. On November 24, 1975, I was thrilled to see our first Tufted Titmouse. I had hoped to see one, so I knew what it was, though I had never seen one before. On November 26, a second one came and stayed all winter. So, hoping they would stay and raise a family, I fed sunflower seeds to them all summer. They continued to come every day — but no family. They stayed the winter of 1976 to 1977, so again I continued to feed them into the summer to keep them coming. In June, they didn't come for about three weeks. On July 9, we heard a commotion in our cedar tree by the house. The titmice had brought a family of three! We were so excited! For a few days, the young sat in the tree and fussed until the parents shelled the seeds and fed them. By the 4th day, they sat on top of the feeder and begged until they were fed. By the end of the week, they were shelling their own! Now they are more quiet, but continue to come to the feeder every day. The last seen of the family was about September 20, 1977. The adult birds returned to the feeder on October 6, but the young were not with them. **Mrs. Harvey Nass, Route 3, Plainview, MN 55964.**

A SMITH'S LONGSPUR CONCENTRATION — The status of the Smith's Longspur has varied from casual to regular in Minnesota. Occasional birds are recorded in Duluth during the fall, and more regularly birds have been seen in the spring and fall in various parts of western Minnesota. Records predominate in the fall. In checking my own personal records, I have recorded the species on the following dates: October 24, 1964 — Near Elbow Lake, Grant County (25 in with Lapland Longspurs); September 16, 1973 —

Duluth (1); September 21, 1974 — Duluth (1); and May 10, 1975 — Near Jeffers, Cottonwood County (1 male, 4 females). During the past few years the species has been reported regularly in small numbers on the Rothsay Wildlife Area during October by Gary Otnes of Fergus Falls. On October 15, 1977, I was birding in this area with Gary Otnes and Jerry Winkelman. We arrived at the area which is nine miles west and approximately one mile north of Rothsay, Wilkin County. About a mile north of this area, we walked along the brushy edge of a large closely mowed field. A few small flocks of Lapland Longspurs were observed passing overhead. We observed a number of Tree Sparrows, several LeConte's Sparrows, many Savannah and a few Harris' Sparrows, and one Smith's Longspur flushed from an adjacent plowed field. As we walked out into the mowed field, which was approximately a quarter mile wide by one-half mile long, we began flushing more Smith's Longspurs. We began counting and by the time we had walked about 100 yards, we had seen approximately 35 Smith's Longspurs. As we walked further we began seeing more and we could do no more than estimate the number of birds present. They were flying up all over the field and milling about. We were then joined by Dick Ruhme, Elizabeth Campbell and Bill Litkey and walked the length of the field and made a conservative estimate of 300 Smith's Longspurs. There were no other kinds of longspurs present in this particular field. Dick, Liz and Bill had seen a number of Lapland Longspurs about a half mile to the west of us before they joined us. From my experience, it appears that the Smith's separates itself from the flocks of the more common migrating Lapland Longspur which are passing through the western part of the state at the same time. With the observation of this many birds, it certainly seems that the Smith's Longspur is a regular fall migrant through the western edge of the Minnesota. **Robert B. Janssen, 14321 Prince Place, Minnetonka, MN 55343.**

KENTUCKY WARBLER IN WASHINGTON COUNTY — On June 17, 1977 while birding in Afton State Park, I heard a bird song that I was almost sure was that of a Kentucky Warbler. I stopped and listened as it sang several more times and then I began "pishing." Almost immediately the bird popped out from the dense underbrush and my suspicion was confirmed. It was a beautiful male Kentucky Warbler. I was at a distance of about 25 feet and I was using 9x binoculars. After a brief look, the bird disappeared back into the brush and began singing again. Soon it flew across the path and higher up into some trees where it continued singing and I was able to obtain several more brief looks. Aside from the song with which I am familiar, the field marks leading to identification were as follows: large size warbler, yellow belly, olive green back, black face mask with bold yellow eye spectacles. The black mask with spectacles is the mark of the Kentucky Warbler, exclusively of all our warblers. The time of observation was about 3:30 P.M. and I remained in the area about one half hour during which the bird sang continuously. I returned home and started calling other birders. I returned at about 7:00 P.M. with Rex and Liz Campbell, Jerry and Karol Gresser, and Bob Janssen. Shortly after arriving at the spot, we heard the bird sing in the same spot I first heard it. We remained in the area about an hour and the bird only sang 3 or 4 times, and despite all efforts at pishing and looking, no one was able to see the bird. Other people tried the next day with the same results. As far as I know, the last time it was heard was two days later (June 19) by Bill Litkey, who heard it sing but could not see it. I assume it was a male establishing terri-

tory and left after failing to find a mate. There are no nesting records for the state, but it should be looked for as it is a common nester at Wyalusing State Park, Wisc. and Yellow River State Forest, Iowa, both areas not far south of the Minnesota line. **Raymond C. Glassel, 8219 Wentworth Ave. S., Bloomington, MN 55420.**

TWO HARLEQUIN DUCKS IN DULUTH — On November 28, 1977 while birding in Canal Park in Duluth, I found two female or immature Harlequin Ducks in the ship canal. The birds were actively diving along with a female Bufflehead right next to the breakwater about 100 feet from me. They were slightly larger than the Bufflehead and uniform dark brown all over except for three whitish head spots (the brightest was below and behind the eye, one was between the eye and the bill, and the faintest spot was above and in front of the eye). Their bills were relatively small, and when they dove their slightly spread wings showed no white wing patches. Harlequin Ducks in this plumage are similar to the female Surf Scoter, but that species is a large duck with a larger bill and with only two, not three, white head spots. — **Kim Eckert, 9735 North Shore Dr., Duluth, MN 55804.**

BARROW'S GOLDENEYE AT DULUTH — On October 15, 1977 Paul Ege-land and I were checking the usual birding spots in the Duluth harbor area. We have just looked over the 27th Ave. W. area, and decided to check the small bay between I-535 and the sewage plant construction area. The sun was directly in our eyes when we spotted a duck with a cocked tail that had us momentarily puzzled. The light was so bad all we could see was its shape, and we dismissed it as unidentified. We then got back on the freeway and headed for the Port Terminal, but at the last second Paul decided to pull off the freeway and recheck the bay with the sun at our backs. Again we spotted the duck with the cocked tail swimming about 50 yards away, and to our surprise we recognized it immediately as an immature male goldeneye. We naturally thought of the possibility of Barrow's Goldeneye as we studied it with 8X binoculars and 15-60X zoom scope, so we took notes on its plumage before consulting the field guides. Size: slightly smaller than Greater Scaup, same length as Lesser Scaup but chunkier (both scaup present for direct comparison). Plumage: body mostly white, with head, back, tail and flank stripe black (flank stripe about one inch wide extending from tail forward and stopping before chest; stripe midway between water line and top of back); chest grayish brown; face with a slightly lighter area at base of bill; white under tail with distinct black area in front of white area. Head: top of head "low" and evenly rounded; back of head with distinct "bulge"; forehead met bill at nearly 90° angle; head with distinct purple sheen (at the same time a nearby Greater Scaup was showing its green head sheen clearly). Bill: black and seemed small (though no other goldeneye were present that day for comparison). Eye: yellow. Legs: orange. Wings: when bird flapped on two occasions, its white wing patch seemed to be uninterrupted by any black line. On consulting the field guides in the car and when we returned home, we were convinced that we had seen an immature male Barrow's Goldeneye. The only thing that did not seem to fit was the solid white wing patch, though apparently the black line through the white is not always obvious (see photo on p. 184 of the Fall 1977 issue of **The Loon**) and might be overlooked when the bird only flapped twice briefly. It is also possible that an immature male such as ours might not yet have this black area, in the same way that other parts of its plumage were not yet completely developed. Most convincing to us that this was a

Barrow's rather than a Common Goldeneye were the purple head sheen seen in perfect sunlight conditions, the head and bill shape, the wide black flank stripe (or black margin of folded wing) positioned relatively low on the sides, and the white and black areas under the tail (several guides, including Robbins', Peterson's Western and Kortright's, show this as a difference between the two goldeneyes). — **Kim Eckert, 9735 North Shore Dr., Duluth, MN 55804.**

PRAIRIE FALCON SEEN AT ROTHSAY — On November 7, 1977 Jo Blanch, Janet Green, Terry Savaloja and I observed a Prairie Falcon at Rothsay Wildlife Management Area. We had just gotten out of the car when Jan spotted a large falcon flying towards us from the north. We all watched the bird as it flew almost directly overhead, and noted its light tannish back, wings and tail, and were able to clearly see its black axillars. All of us immediately recognized it as a Prairie Falcon, a Minnesota lifer for three of us (I had seen one previously in Rock County), though we had seen this species separately several times out West. The falcon scared up a flock of longspurs (all Laplands) as it flew steadily southward and eventually out of sight. — **Kim Eckert, 9735 North Shore Dr., Duluth, Minnesota. 55804.**

LOUISIANA WATERTHRUSH IN OTTER TAIL COUNTY — A Louisiana Waterthrush was seen on several occasions on August 7 and 8, 1977 in a willow thicket on the north side of Orwell Wildlife Reservoir. The willow thicket was flooded with backup water of the reservoir. The bird was noticeably larger than a Northern Waterthrush, with a "heavier" beak. The upperparts were a rich dark brown without a yellow or buff caste. The underparts were white with blotchy rows of streaking; the flanks were tinged with yellow; the undertail coverts were white; the throat was repeatedly identified as white and unmarked. The bird was active and curious and walked with a bobbing motion. With respect to size and coloration, it was a much more substantial bird than a Northern Waterthrush. — **Gary Otnes, Route 1, Box 181, Fergus Falls, MN 56537.**

Editor's Note: The occurrence of a Louisiana Waterthrush in Otter Tail County is a most interesting record for Minnesota. The species is known sparingly from the southeastern part of the state and has been recorded previously only as far north as St. Cloud, Stearns Co.



BOOK REVIEWS

Songbirds of the Eastern and Central States by Trudy L. Rising, paintings by Kathryn DeVos-Miller. About 100 pages. Charles Scribner's Sons, 597 Fifth Avenue, NY, NY 10017. 1977 \$3.95 (Paper)

I am not sure why a publisher would want to print a book such as this. In this day and age of sophisticated Field Guides at relatively inexpensive prices covering all of the birds of the United States, a book of this caliber is hardly needed.

The text covers only 43 common species of the eastern United States. Each one-page description is accompanied by a painting of each species.

The paintings are of amateurish quality, some inaccurate, most in stiff, unnatural poses. The book reminded me of the Chester A. Reed Field Guides that you and I used 30 to 40 years ago. They were good at that time, but publishing of bird books and bird art has come a long way since that time.

This book just doesn't measure up to 1977 standards. In spite of what the author says, there are innumerable books available that tell us how birds live and that contain far superior illustrations and are priced as competitively as this book.

Robert B. Janssen

A Field List of Birds of the Quad-City Region by Peter C. Petersen and Elton Fawks, Quad-City Audubon Society, 1977.

After Elton Fawk's disastrous collaboration with Paul Lobik on that Illinois bird-finding guide, he somewhat redeemed himself by teaming up with Pete Petersen and putting together a nice little booklet to the birds of the Rock Island-Davenport area. Like parents everywhere like to remind their kids, a lot depends on who you hang around with. And Pete Petersen is undoubtedly the one to hang around with when it comes to

Davenport and Iowa birding. This 26-page booklet annotates all of the recorded species in the region with bar graphs (indicating season and abundance) and habitat letter codes. Booklets of this type exist for many locations in the U.S. (many birders may not be aware that one was prepared for the Twin Cities about ten years ago: **Birds of the Minneapolis-St. Paul Region**), and this guide is probably better than most. It also includes a list and description of 31 birding areas which, though plotted on a regional map, have no accompanying directions to get you there. One might question whether 21 different habitats was really necessary, why there is no room for making trip or year lists, and why species such as Mute Swan, Ringed Turtle Dove and Monk Parakeet are included, but there is no doubt that this is a most useful guide for the resident or visiting birder.

Kim Eckert

The Birds of New Jersey by Charles Leck, Rutgers University Press, New Brunswick, N.J. 08903, 1975; 3 maps, 39 photos, 190 pages; \$12.50 cloth, \$3.25 paper.

Bert Lystor's mythical friend Dickie Birdlover would love this book. It's full of cute little pictures of cute little birds like goldfinch, coot, hummingbird, nuthatch, Mourning Dove, House Wren, and other uninspiring portraits of little-old-lady-at-the-bird-feeder crowd pleasers. It's full of uninspiring accounts of the habits and habitats of species in uninspiring places that claim to be the representative "Avian Communities of New Jersey." The first eight chapters, or two-thirds of the book, pretend to analyze the avifauna of New Jersey "by considering New Jersey's birdlife in habitat divisions — such as birds of the ocean, birds of the fields, and so forth. It is a natural organization and gives an integrated view of actual avian com-

munities. Another innovation is the emphasis . . . on the common or dominant species for each habitat." It may be nice for us then to get a verbal tour on interesting areas like the Pine Barrens, Brigantine and Great Swamp National Wildlife Refuges, but the problem is that at least half of these eight chapters cover quite ordinary locations that may be "representative" but still ordinary and dull nonetheless. The problem is that much more exciting areas like Tuckerton and Cape May are not covered at all — yes, you heard it right; Cape May, perhaps the finest migrant trap on the East Coast, is omitted! And the problem is that these eight chapters are full of tedious accounts of the habits and habitats of common birds which at best are uninformative, and at worst full of half-truths, over-generalizations and just plain silly statements: "the State has a greater density of bird watchers than any other state"; "nowhere is it (Myrtle Warbler) as abundant as in Island Beach State Park"; "Nesting swans are quite aggressive and should not be disturbed — a rapid blow from one of their wings can break a child's leg"; "The common Red-eyed Vireo differs from the Starling in its softer voice"; "In their (Scarlet Tanager) winter area they must compete with numerous other tanagers . . . With such competition it is not surprising that the Scarlet Tanager often loses considerable weight before spring."

At least the last third of the book is somewhat more useful. Chapter Nine lists arrival, departure and breeding times for all appropriate species, but it is not as useful as it could be since it gets no more specific than naming months. Chapter Ten is somewhat more promising by giving Christmas Count and Big Day data for the state, but it is debatable how useful all the facts and figures are. Appendix I follows with an annotated list of New Jersey's 410 species, certainly a useful item except for the fact that so many of the entries are so scanty

(e.g., "Canvasback — winter visitor," "Turkey Vulture — breeding resident," "Pectoral Sandpiper — migrant"). And for some reason, after ten chapters of using the "old" A.O.U. names like Sparrow Hawk and Upland Plover, a switch is made to all the "new" 1973 species names. Better late than never, I guess, but somehow the author can't even get some of the new names right; where he found the names "Northern Pintail," "Northern Shoveller" (why two l's?) and "Northern Screech Owl" I don't know; why he uses partly A.O.U. names and partly A.B.A. names I don't know; and why he still uses the old names "American Goldeneye," "American Merganser," "Heath Hen," "Robin" and "Harris's Sparrow" I'll never know.

I'm afraid the only really good and flawless parts of this guide come in the last 18 pages: appendices listing data on all New Jersey accidentals since 1960, and data on useful publications, clubs and museums. But the reader will probably never get close to these pages before deciding in the early going that both resident and visiting New Jersey birders can survive very well without this book.

Kim Eckert

Waterfowl of North America by Paul A. Johnsgard, 60 line drawings, 31 color photographs, 96 black and white photographs, 575 pages. Indiana University Press, Bloomington, Indiana, 1975. \$25.00.

This is a fantastic book and a definitive work on waterfowl. As the author explains, he decided "to provide an up-to-date series of accounts dealing with the ecology and reproductive biology of every waterfowl species presently known to breed on the North American continent." This book is not intended to duplicate or replace Bents "Life Histories of N.A. Wild Fowl" which summarizes early life history information, nor Kortrights "Ducks, Geese and Swans of N.A." which remains the standard reference for waterfowl illustrations and

plumage descriptions nor Delacours "The Waterfowl of the World" which is the authority on taxonomic questions.

All species of North American waterfowl are covered in detail in this book. Here is what you get under each species: other vernacular names, subspecies (including weights and measurements of each subspecies) identification (in the hand and in the field), age and sex criteria, distribution and habitat, general biology (including nest location, clutch size, incubation period, fledging period, mortality, etc.) and general ecology. As if this weren't enough, each species description is accompanied by an exceptionally good line drawing of the adult male and in some cases, a pair plus a full page map showing breeding and wintering distributions. The latter are most helpful, and include small line drawings of each species sitting and flying.

The introduction to the book also provides excellent information on the biology of waterfowl, waterfowl distributions and migrations in North America and a section on hunting and recreational values of waterfowl. Included with this information are interesting tables and maps on habitat preferences, winter population surveys, Mexican winter surveys, estimated average annual harvests in the U.S. and Canada and a summary of Audubon Christmas counts concerning waterfowl from 1954-1962. The latter summary seems a bit outdated and one wonders why the author didn't use more current dates — at least up to 1970.

In spite of a few minor criticisms, such as those mentioned above plus addition errors in the table on page 24 and the use of photographs of obvious game farm birds, this is still a fine book and one that any serious bird student will want to study in detail. The student is also introduced to the new systematic order of waterfowl starting with the Whistling Ducks, Swans, Geese, Perching Ducks

(Wood Duck) followed by the new order of Surface feeding ducks, Pochards (Canvasback Redhead, Scaup, etc.) and Sea Ducks.

Finally, in this day and age of high-priced books, this is one that is well worth the price.

Robert B. Janssen

A Guide to Bird Finding East of the Mississippi by Olin Sewall Pettingill, Jr., Oxford University Press, 200 Madison Ave., New York, N.Y. 10016, 1977; 3 maps, 80 line drawings by George M. Sutton, 689 pages; \$15.95.

Next to binoculars and field guides, probably no other birding aid is used more than a bird finding guide, a 1951 invention of Olin S. Pettingill, Jr. Since the appearance of his guides on the East and West sides of the Mississippi, many other state and local finding guides have appeared, but none is better known and none has attempted to cover as much geography as Pettingill's. But the unavoidable flaw in guides such as these is that with time they must eventually become obsolete. Thus, after 26 years we have the second edition of the Eastern guide (with the updated Western book soon to follow).

Readers familiar with Pettingill's originals will certainly find some changes here. In addition to many birding spots being deleted or added, a welcome change is the deletion of colleges, museums and zoos with ornithological collections and courses — mention of these in the first edition may have been appropriate, but guides today get along well without them. Also different is the addition of maps on the inside front and back covers. Three maps outline the 26 Eastern states with numbered dots in each indicating some of the spots covered in the text. At first glance this looks like a helpful addition, but a closer look reveals that only about half of the locations in the text are on the maps, and no where is it explained why only some of the spots are located

and what the basis was in choosing them.

But what is most interesting and perhaps disturbing about this guide is that so much that was in the first edition is still in the second. The parts I always liked best about the old book were the introductory descriptions about each state. They were well-written, to the point and made even the duller states sound like birding paradises. The problem is that almost all of these original introductions are reprinted here with only a few token changes. Sure they were good, but wouldn't 26 years of change indicate a need for a new set? And don't expect new drawings from Sutton to enliven these pages. Virtually all of the originals from the first edition reappear here — again, as good as they were and still are, why use 26 year old drawings when you're trying to modernize a book? Even more disturbing is that some of the "old" species names are still used. The author's explanations for retaining the names Yellow-shafted Flicker, Traill's Flycatcher, Myrtle Warbler, Baltimore Oriole and Slate-colored Junco are unconvincing. And when the author does choose to use new species names, he follows the A.B.A. rather than the 1973 A.O.U. changes — in my personal opinion an unfortunate choice.

But the real test of the quality of a finding guide comes only with its use in the field or with personal familiarity of the territory covered. Since I have not yet had an opportunity to use this book, I cannot comment on the accuracy of its directions other than to say that a very experienced birder from Texas told me recently he tried to use it in some of the Gulf states and ended up getting lost several times. And I can comment on two of the 26 states covered which I know from personal experience, Wisconsin and Illinois. All I can say is I hope the other 24 states are better done. The Illinois chapter mentions only one spot in the excellent Shawnees National Forest region in the southern part of

the state, the only region in Illinois in which to find many interesting southern birds; and the productive shoreline of Lake Michigan is represented by only one spot north of Chicago, when three or four is called for. The Wisconsin portion of Lake Michigan is also poorly represented: only two areas are covered, with no mention of the Green Bay area, the excellent harbor at Racine, or the hawk lookout at Cedar Grove. And, believe it or not, not a single Wisconsin area on Lake Superior or the Mississippi River is mentioned. Again, I hope and trust that the other states are better done, and that when the West guide appears in a few months, Minnesota will be written up with kinder tones than this review could muster.

Kim Eckert

Meet My Psychiatrist by Les Blacklock; Voyageur Press, 9337 Nesbitt Road, Bloomington, MN 55437; 54 color photographs, 94 pp. 1977; \$8.95.

My good friend Les Blacklock has done it again. First were his photographic records "The High West" with Andy Russell and "The Hidden Forest" with Sigurd F. Olson. Now he has written "Meet My Psychiatrist," a delightful distillation of his wanderer experiences and philosophy. Not only has Les done the evoking color photographs, his forte, he has written a charming text.

Meet my psychiatrist? Do not be misled into thinking this book is about a troubled person limp on a couch. No, this is about a man who finds his renewal in our native north woods on "Old Doc Log" listening to the WHIRRR of the Ruffed Grouse and the piercing cry of "Jay! Jay! Jay!"

Les has spent a lifetime photographing nature and wildlife, a natural enough career for a boy who grew up in Moose Lake enjoying the out-of-doors. His travels have taken him from the Boundary Waters Canoe Area to the Arctic Ocean of Alaska and all points inbetween.

Who has watched a coyote stalking

a muskrat, a Sandhill Crane catching mice, a Moccasin-flower growing in the Quetico-Superior? Les Blacklock has. He is the type of photographer who will see a Moccasin-flower one day and return to spend the whole following day photographing its soft beauty through the changing light.

Like his elegantly simple photographs, Les' words and thoughts are like a young country lass, simple, clean, joyful. Les has not lost the childlike quality that most of us valiantly seek to hide. Words like "WOW, GREAT," and "NOT SO" are sprinkled through the text like raindrops in the morning sun.

This is a book of 54 shimmering color photographs and 94 pages of personal experiences and nature observations. For anyone who would like to or has ventured beyond the end of the road, it will summon up vivid images of summer sun, fall leaves, exciting wildlife.

Perhaps you will finish the book in one reading, but it will remain at hand on the table or at your bedside to take you into the out-of-doors at a moment's notice when you need escape from the city.

Criticisms? It is difficult to criticize a man with whom you agree. The pictures could be larger and more numerous, but then the book would be more expensive. Some would say the text could be more sophisticated, but that would not be how Les wishes us to see our natural world.

No, I lack changes to suggest for "Meet My Psychiatrist." It is a book which all ages, all persuasions can enjoy now and again and again. It is a book which can be a treasured gift any season of the year. I eagerly await future books by Les.

Henry Roberts

Pigeons and Doves of the World by Derek Goodwin, illustrated by Robert Gillmor. 2 color plates, 311+ black and white outline sketches, distribution maps and figures; 446 pp.; Cornell University Press, 124 Roberts

Place, Ithaca, New York 14850; 1977; \$27.50.

The general topics of nomenclature, adaptive radiation and adaptive characters, colors of plumage and soft parts, clutch size, egg color and diverse behavioral and ecological aspects represented in the family **Columbidae** introduce this book. Thereafter, data concerning the description (including the source reference of the original technical diagnosis), subspecies, distribution and habitat, feeding and general habits, nesting, voice, display of and references for each of the **289** living and recently extinct species are summarized in individual species accounts. Outline range maps for each species and outline sketches of some species are provided; and several phylogenetic trees showing generic interrelationships as proposed by Goodwin are included.

Given the title and format, one would presume this book to be the definitive reference for the pigeons and doves. Never-the-less, certain features detract from its utility and attractiveness. First, the outline sketches are sometimes (ex. the Ruddy Quail Dove), so poor as to not justify their inclusion in the book. Secondly, the outline maps often fail to convey any sense of orientation to the viewer, especially for the island groups of the southwest Pacific. Thirdly, the restriction of colored plates to two in number definitely does great injustice to the treatment of this group of birds, some members of which are unusually beautiful. Fourth, most of the literature selected by Goodwin antedates 1964 with virtually none intervening between then and the current publication date (1977). Therefore, important papers that might either support or contradict the opinions expressed by Goodwin, as he has frankly stated, are unavailable for the reader (see, for example, Kendall C. Corbin, 1968. "The Taxonomic Relationships of some Columba Species." **The Condor** 70 (1): 1-13 in which the sophisticated techniques of electrophor-

etic and chromatographic patterns of ovalalbumin Tryptic peptides can be compared with the morphological approach to Pigeon Taxonomy as followed by Goodwin). Also, since the citations offered by Goodwin are mostly of European literature, the book is strongly British tone and certain terms in the British vernacular might occasionally frustrate an average American reader. A major language problem often capturing my attention is the failure of English (no matter whose) verbalization to render pigeon vocalizations meaningful. (There are perhaps more variations of coos, moans, hoots, hoos, whos, who-ooos, croos, cus, croo-wuks, etc., than

any bad modern rock group in London might produce). Could not the time be appropriate for including at least some sonograms in a third revision of this book?

Finally, there is a surprising redundancy of "no information available" for many species in this "definitive" volume. Goodwin forthrightly acknowledges this deficiency and hopes that it will stimulate further studies of this group. Whether aspiring to learn what is known, or to contribute new knowledge about doves and pigeons, one will certainly find this reference worthy of consultation.

Richard Oehlenschlager

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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.



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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

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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 Robert Janssen. See inside front cover.

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