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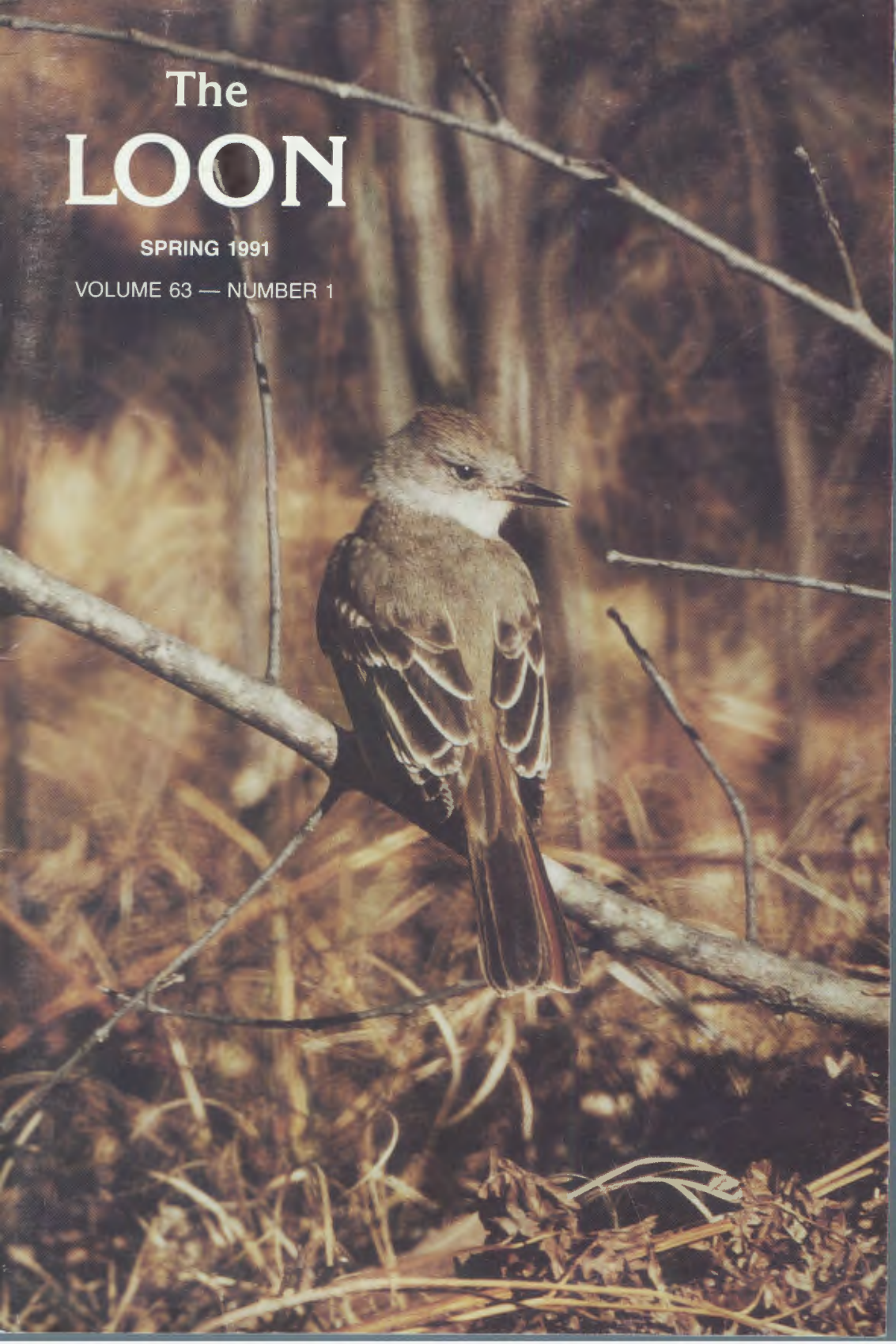

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First Minnesota Record of the Ash-throated Flycatcher Discovery

Robert B. Janssen and Raymond Glassel

On 3 November 1990 we decided to bird the lakes of Morrison County, since neither of us had ever seen a Ruddy Duck in the county. As it was getting light at Little Falls, we headed for Green Prairie Fish Lake after looking at the county map, but we saw nothing. Near Randall I noticed two lakes on the map, Three Finger and Round. I suggested to Ray that we check these two small lakes.

At Round Lake we saw two adult Bald Eagles perched in trees along the north end of the lake. Near the public access, at the south edge of the lake, we spotted a bird feeder in a nearby yard. I drove up the long driveway, but seeing nothing of interest, I turned the car around and headed back to the county road.

There were a few Dark-eyed Juncos in a hedge along the driveway, and we decided to investigate. Ray walked down the driveway and as I was getting out of the car, I noticed a bird flying toward us from the east. As the bird flew in between us, I noted its flycatcher-like flight, about phoebe-size, and a rufous color in the tail. I called out, "a phoebe" as the bird disappeared in a lilac hedge. My first thoughts were of a Say's Phoebe, but something didn't seem quite right. We relocated the bird in a few seconds, perched low to the ground in a small lilac bush. As we both focused our binoculars on the bird, we could see it was not a Say's Phoebe, it looked like a miniature Great Crested Flycatcher. We looked at each other and exclaimed, "a flycatcher, an Ash-throated Flycatcher."

About 10-15 seconds later, the bird flew to the west, out to the county road. We followed it by car, and relocated it along the shoulder of the road perched, once again, low to the ground on a weed stalk. The bird then flew in front of us and perched on a barbed wire fence about 15 yards from us. At this close range we had an excellent view of the rust color on the rectrices, the pale yellow undertail and lower belly. There was a rusty patch on the wing, the belly was gray, the breast was a dull gray, and the chin was white, fading to a dull white on the throat. There was a definite separation between the gray of the breast and the yellow on the belly. The top of the head, the cheek area and back were all a grayish-tan. There was a diffuse but noticeable eye ring, and two white narrow wing bars above the rust wing patch. The back of the head had a slight crested appearance. The bird perched on the fence for approximately 30 seconds; then it flew back to the area where we first saw it. We quickly wrote down a description of what we had seen.

We then tried to relocate the bird, covering the south and west shore of the lake but we failed to find the bird after an approximate 90-minute search. Because we could not relocate the bird, we did not notify Twin City or Duluth birders. When we returned home later in the day, I put the information on the Minnesota Bird Report phone line and we also called a number of local birders about the observation. The story of the events that took place the next day follows. By the way, we did find Ruddy Ducks in Morrison County later in the day on Lake Shamineau. **10521 S. Cedar Lake Road., #212, Minnetonka, MN 55343 (Janssen); 8219 Wentworth Ave. S., Bloomington, MN 55420 (Glassel).**

First Minnesota Record of the Ash-throated Flycatcher Identification

Peder Svingen and Kim Risen

A *Myiarchus* flycatcher was discovered by Raymond A. Glassel and Robert B. Janssen on the west shore of Round Lake, Morrison County, Minnesota at 8:40 A.M. on 3 November 1990. The bird was studied and identified as an Ash-throated Flycatcher (*M. cinerascens*) before it flew into a wooded area. It was relocated the following morning, when we studied the bird for ninety minutes from distances between 12 and 25 feet. The sun shining at our backs produced excellent lighting for observation and photography. Field notes were written (KR) and recorded on tape (PS) while the bird was under observation and no field guides were consulted until documentation was completed.

The bird loosely associated with Dark-eyed Juncos (*Junco hyemalis*) when first spotted on 4 November 1990. It was immediately recognized as a *Myiarchus* flycatcher by its body shape, pattern of the underparts, and rufous flash in the tail and primaries. Size was difficult to estimate, despite our experience with Great Crested Flycatcher (*M. crinitus*) in the upper Midwest, since juncos were the only birds present for direct comparison. The flycatcher favored perches from one to two feet above the ground in saplings, brush, or fallen tree branches. If flushed, it quickly returned to these low perches. It hunted successfully, eating a few wild grapes to supplement a diet of grasshoppers and other insects. After catching an insect on the ground, the bird usually returned to a low perch, beat the insect against a branch and "billed" it several times before swallowing. Actual flycatching behavior was not observed and no flying insects were apparent to the observers. The flycatcher foraged over a gentle slope between a gravel road and the woods lining the lake shore. The sparse vegetation on the slope included grasses, saplings, sumac, and wild grape. The woods included aspen, poplar, ash, and maple that were mostly undisturbed by development. Observers on 5 November also noted frequent use of perches within two feet of the ground but the bird occasionally perched higher in trees, generally remained near buildings on the west shore of the lake, and once perched on top of a chimney flue. The bird was last reported on 6 November 1990.

Description: The bill initially appeared all black. Closer study revealed a very minimal area of paleness on the side of the bill at the base of the lower mandible. This was more prominent on the left side of the bill. The bill was rounded with a sharp ridge on the culmen (cross sectional shape), sharp, and not dramatically wide. A few whisker-like feathers were noted near the base of the upper mandible. Head shape was rounded except when feathers were erected to produce a small peak at the rear of the crown. A brownish cap was noted that contrasted with the gray hue on the nape and side of the face. The gray wash from the lores through the eye appeared to form a gray or pale olive cheek patch when the light produced optimal contrast on the face. The almost imperceptibly light gray throat contrasted slightly with the side of the face along the border of the chin. Although the throat was the palest portion of the underparts, there was little contrast between the throat and the pale gray wash across the upper breast. This pale gray blended gradually into pale lemon yellow on the lower breast and belly, without a sharp demarcation. The undertail coverts were brighter lemon yellow but still not deep yellow as in Great Crested Flycatcher.

The gray tones of the nape became gradually more olive-gray on the back, then slightly darker and more brown on the rump, producing some contrast between the lower back and the rump. The upper tail coverts had a brown tinge and were slightly darker olive than the back. The upper tail coverts were not shaded as dark as the upper surface of the folded tail, which was brown. Seen from below, the folded tail appeared mostly rufous and also flashed rufous above, when spread.

The outermost rectrix had a dark shaft, a thin outer web compared to the inner web, a mostly dark brown outer web with pale edging, and a mostly rufous or rusty inner web with the dark brown spilling over from the outer web at the feather tip. Another tail feather (rectrix #5?) was studied from below when it briefly stuck out before the plumage was rearranged. It had a dark shaft and dark brown outer web but most of the feather was rufous, except at the tip where both inner and outer webs were darkened.

The scapulars were olive with a hint of buff edging and the lesser coverts were similarly marked. The median and greater wing coverts were dark green with buffy edging, especially on the tips, which formed two faint wingbars. A rufous flash in the outer wing was visible in flight. The wing at rest showed definite rufous edging on most of the primaries (innermost primary #1 was not well seen). The rufous edging was minimal (KR) or not visible (PS) on the outermost primary. The secondaries and tertials were dark green with pale olive or greenish-buff edging; it was specifically noted that rufous edging was not present on these feathers. The primary extension was relatively short, and the wingtip just reached the end of the undertail coverts. The wing linings were lemon yellow, observed during preening.

The legs and feet were dark. The iris was dark brown. The mouth briefly opened wide on one occasion and the gape (mouth lining) appeared orange. A call note was given several times. The single-syllable call note was a soft, melodic, mellow (PS) "whip" or "whit" that was not sharply delivered (KR).

IDENTIFICATION SUMMARY

Vocal Identification: The call given by the bird at Round Lake was distinctly different from the ascending, drawn out, "wheep" of Great Crested Flycatcher, the species with which we are most familiar. Previous field experience in Arizona with the calls of Ash-throated Flycatcher led one observer (PS) to remark that the expected rough quality of the call, as if "there were ashes in the bird's throat," was absent. A commercial recording of *cinerascens* calls (Keller and Bridges, 1988) was reviewed in the field after all documentation was complete. The call note delivered by the bird at Round Lake did not match the recording, although it vaguely resembled the introductory note of a two-syllable call on the recording. We did not playback calls to the bird because other observers were en route. Over the next few days, we listened to other commercial recordings (Peterson, 1961, Cornell, 1985, 1986). The call note heard at Round Lake most closely resembled one of the introductory notes on the Cornell tape. Published descriptions of *cinerascens* call notes include "pwit" (Peterson and Chalif, 1973) and "a soft 'prrt' call that closely resembles the introductory note of the longer version" (Dunn, 1978a). The soft voice of *cinerascens* is also emphasized by others (Phillips, 1964; Oberholser, 1974).

A written comparison of *Myiarchus* single-syllable call notes by one author (Zimmer, 1985) includes "a loud 'whit'" delivered by Brown-crested Flycatcher (*M. tyrannulus*); a "loud, uprising 'wheep'" by Great Crested Flycatcher; a "pyrrt" by Ash-throated Flycatcher; and "a mournful whistled 'peeur'" by Dusky-capped Flycatcher (*M. tuberculifer*). Another member of this genus, Nutting's Flycatcher (*M. nuttingi*), delivers "a smooth, rising, single-syllable 'wheep' or 'cheep'" (Bowers and Dunning, 1987). The call of *nuttingi* is also described as "a clear, penetrating, whistled 'peer'" (Peterson and Chalif, 1973) or "pee-r-r" (Edwards, 1989). The vocal repertoire of *nuttingi* includes "at least six recognizably different calls" which overlap with the calls of *cinerascens*, although sound spectograms by Lanyon also depict diagnostic "peer" calls (Lanyon, 1961; Bowers and Dunning, 1987).

Plumage and Molt: The plumage of the bird at Round Lake showed no evidence of wear or molt in progress. Crisp edges to the scapulars and coverts, uniform appearance of the greater coverts, uniform appearance of the outer primaries, and the length of the outermost rectrix informed us that prebasic molt had already occurred. The plumage was so neatly arranged that alula feathers and small primary coverts were distinctly seen. We were aware that the shape of the rectrix tip was useful for ageing but lacked comparative experience to interpret them accurately.

The absence of broad rufous edging on the secondaries, replacement of rufous by brown in the outer webs of the rectrices, and the brown upper tail coverts that were narrowly edged rufous-cinnamon, established non-juvenal plumage and confirmed that the Round

Figure 1. ***Myiarchus*** **flycatcher specimens from the Bell Museum of Natural History, University of Minnesota. Left: Ash-throated Flycatcher; middle: Great Crested Flycatcher; right: Brown-crested Flycatcher. Photo by Kim Risen.**

Figure 2. *Myiarchus* flycatcher specimens from the Bell Museum of Natural History, University of Minnesota. Top: Ash-throated Flycatcher; middle: Great Crested Flycatcher; bottom: Brown-crested Flycatcher. Photo by Kim Risen.

Lake bird was in basic plumage (Pyle et al., 1987). The first prebasic molt in *cinerascens* is complete, with ageing unreliable by plumage criteria alone once basic plumage is attained (Phillips and Lanyon, 1970; Pyle et al., 1987). Prebasic molt in *cinerascens* begins in August, usually on the winter grounds, and may extend into November for first-year birds (Lanyon, 1961; Bowers and Dunning, 1987; Pyle et al., 1987).

Comparison with Great Crested Flycatcher The plumage of the bird at Round Lake was at its brightest point in the cycle but the belly and crissum still seemed paler yellow than typical *crinitus* (Figure 1). The "mousy gray breast that sharply contrasts with a bright yellow belly" is among the best plumage criteria for separating Great Crested from Ash-throated Flycatchers (Dunn, 1978b). This results in a "highly contrasting line of demarcation" between the dark gray breast and bright yellow belly, instead of the gradual demarcation that characterizes both the Ash-throated and Brown-crested Flycatchers (Zimmer, 1985).

Great Crested Flycatcher is darker above and "strongly washed with olive-green" compared to the brownish-gray backs of both Brown-crested and Ash-throated Flycatchers (Dunn, 1978b). The rectrices of *crinitus* are entirely cinnamon-rufous on the inner webs except for a very narrow fuscous brown stripe on some individuals near the shaft (Phillips and Lanyon, 1970). Tail patterns among the *Myiarchus* species vary individually and led to taxonomic confusion in the past (Lanyon, 1978). Illustrations of *Myiarchus* tail patterns (Peterson and Chalif, 1973) compared with the description, sketches, and photographs of the bird at Round Lake suggest *cinerascens,* and the dark tips on the inner webs of the rectrices help rule out *crinitus.*

Bill characteristics are more useful with experience. Adult Great Crested Flycatcher has a larger bill than Ash-throated Flycatcher (Figure 2) and a distinct pale area on the entire base of the lower mandible. A few Ash-throated and Brown-crested Flycatchers show less extensive and duller paleness at the base of the lower mandible (Oberholser, 1974; Zimmer, 1985).

Comparison with Nutting's Flycatcher Experienced observers have used grayish backs in fresh plumage to help eliminate *nuttingi* since it has an olive-brown back (Bowers and Dunning, 1987). Auricular feathers and lores which are "conspicuously gray" and contrast with gray-brown on top of the head are characteristic of *cinerascens* (Figure 3), while *nuttingi* shows less contrast in fresh plumage between brown-olive on the head and lighter brown on the side of the face (Lanyon, 1961; Bowers and Dunning, 1987). The gray nape on the bird at Round Lake is visible in the photographs and helps identify (front cover) *cinerascens* in fresh plumage (Lanyon, 1961). A transitory, fresh plumage criterion that applies to the sighting at Round Lake is the white or grayish white edging on all secondaries and tertials of *cinerascens,* rather than deep rufous edging on the first secondary of *nuttingi* which then "fades to a pale rufous or brownish white on the remaining secondaries" (Lanyon, 1961). Mouth lining color in fresh specimens is cited as "the most reliable morphological criterion" for separation of *nuttingi* from *cinerascens* (Lanyon, 1961; Bowers and Dunning, 1987). Although at least three observers at Round Lake independently described an orange gape, we are not impressed with the usefulness of this character for field observations under usual conditions and suspect that extensive experience with *nuttingi* in the hand is necessary.

Plumage characters in the tail also provide important criteria for the separation of *cinerascens* from *nuttingi* (Dickerman and Phillips, 1953; Lanyon, 1961; Bowers and Dunning, 1987). The fuscous brown pattern on the inner web of the rectrices remains the most variable aspect of the plumage and must be used with caution, considering patterns on more than one rectrix as needed (Lanyon, 1960; Lanyon, 1961). With these caveats in mind, the sketches and photographs of the bird's tail at Round Lake suggest *cinerascens* but are consistent with either species.

Comparison with Brown-crested Flycatcher The large body size and relatively robust bill of typical *tyrannulus* (Figures 1 and 2) are not consistent with observations and photographs of the bird at Round Lake. However, one subspecies of *tyrannulus* from south Texas (*M. t. cooperi*) is smaller and approaches Great Crested Flycatcher in bill size (Oberholser, 1974; Zimmer, 1985). Differences between *tyrannulus* and *cinerascens* other than size are subtle. Plumages are similar, although the shade of yellow on the belly of *tyrannulus* is slightly brighter (Dunn,

Figure 3. Ash-throated Flycatcher, 4 November 1990, Round Lake, Morrison County. Photo by Kim Risen.

1978a). The shade of gray on the throat and breast of *tyrannulus* is slightly darker, but still lighter than on Great Crested Flycatcher (Zimmer, 1985). Rectrices #2 through #6 on *tyrannulus* show prominent fuscous stripes along the shafts which extend farther onto the inner web than on Great Crested Flycatcher (Phillips and Lanyon, 1970; Peterson and Chalif, 1973). The south Texas population of Brown-crested Flycatcher shows the same relatively prominent shaft stripe as the population breeding in the Southwest (Lanyon, 1960).

Ruling out Brown-crested Flycatcher is therefore difficult without reliance on size, which may be difficult to estimate. A combination of modest bill size, olive-gray rather than brownish back, tail pattern, behavior, call, and distribution factors are necessary to confirm the individual at Round Lake as an Ash-throated Flycatcher.

DISTRIBUTION SUMMARY

From a distribution perspective, *cinerascens* is the most likely of the *Myiarchus* flycatchers to occur as a fall vagrant to Minnesota since it is casual east of its range to Illinois, the northeastern Atlantic region, many of the Atlantic coastal states, and the Gulf Coast states (American Ornithologists' Union, 1983). One sight record at Point Pelee on 24 November 1962 led to its inclusion as a hypothetical species on the Ontario provincial list (James et al., 1976). There have been four additional records from Ontario cited in *American Birds* since Murphy's review of Ash-throated Flycatcher east of the Mississippi River (Murphy, 1982). One was photographed east of Toronto at Whitby on 29 October 1982 (Weir, 1983a) and what was considered a different bird was also along the north shore of Lake Ontario, at Prince Edward Point on 7 November 1982 (Weir, 1983a). One report from Ft. Erie on 6 June 1983 (Weir, 1983b) was published before an individual in a Toronto park on 20 May 1989 provided the fourth provincial record and first spring record (Weir, 1989).

The Ash-throated Flycatcher record at Springfield, Illinois from 2 through 9 November 1973 was documented by specimen as a female *M. c. cinerascens* (Bohlen, 1975; Bohlen and Zimmerman, 1989). The bird at Round Lake in Minnesota was west

of the Mississippi River by less than four miles; the Illinois and Ontario records are the only records from non-coastal states and provinces for the Ash-throated Flycatcher east of the Mississippi River.

The likelihood of other *Myiarchus* species appearing in Minnesota as accidental vagrants is much less. Different forms of Brown-crested Flycatcher comprise the *magister* group of subspecies. Among these are *M. t. cooperi* from south Texas and the Gulf slope of Mexico, as well as the large race *M. t. magister* which breeds from southeastern California, Arizona, and the "boot heel" of New Mexico throughout the Pacific slope of Mexico (Lanyon, 1960; Monson and Phillips, 1981; AOU, 1983). The *magister* group is accidental in British Columbia, casual in southern Louisiana, and winters from northern Mexico south through the breeding range and rarely in southern Florida (A.O.U., 1983). It is also casual in winter in the Lower Rio Grande Valley of Texas (Texas Ornithological Society, 1984). Brown-crested Flycatchers usually depart their Arizona breeding grounds by late August (Phillips et al., 1964) and records after September in Arizona are very rare (Monson and Phillips, 1981).

It is conceivable that the prevailing weather pattern just prior to 3 November 1990, an organized frontal system with strong southwesterly flow that was intensified by a tropical storm off the west coast of Mexico, might have produced favorable conditions for long-distance vagrancy. Nutting's Flycatcher has been well documented from the United States on at least two occasions. A specimen was collected in Gila County, Arizona on 8 January 1952 (Dickerman and Phillips, 1953), and a bird was netted at The Research Ranch in Santa Cruz County, Arizona on 15 July 1985 (Bowers and Dunning, 1987). One other sight record was carefully documented on 18 December 1976 and reported as a probable *nuttingi* in Grant County, New Mexico (Zimmerman, 1978).

Dusky-capped Flycatcher was easily dismissed as a possibility since it shows almost no rufous in the adult tail, shares the darker gray breast pattern sharply demarcated from yellow with Great Crested Flycatcher, occurs as a casual species to southern California and Texas, and gives such a distinctive call (Dunn, 1978b; A.O.U., 1983; Zimmer, 1985).

Among the fourteen species of *Myiarchus* currently listed in the A.O.U. Check-list, one other species, La Sagra's Flycatcher (*M. sagrae*), has been recorded in the United States (A.O.U., 1983). It has occurred as an accidental vagrant to Alabama and Florida from its range in the Bahamas, Cuba, and Grand Cayman.

REVIEW OF DOCUMENTATION

The detailed descriptions of plumage, call, and behavior contained in this article were submitted to three experts for independent review. Wesley E. Lanyon, Lamont Curator of Birds Emeritus, American Museum of Natural History, fully endorsed the identification as *M. cinerascens* and added that the only vocalization given by a *cinerascens* that he collected (5 December 1973) on Long Island, New York, was an occasional soft "pit." According to Dr. Lanyon, the description of the call notes given by the bird at Round Lake, Minnesota was typical for *cinerascens*, not *nuttingi*. He went on to cite three plumage criteria, in order of significance, which helped rule out Nutting's Flycatcher. These were: the gray auricular patch; the gradual rather than abrupt transition from coloration of the breast to the abdomen; and the whitish (rather than brownish) edging to the secondaries. Kimball Garrett and Kenn Kaufman also reviewed the documentation and photographs.

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LITERATURE CITED

American Ornithologists' Union. 1983. Check-list of North American Birds, 6th edition. Allen Press, Inc., Lawrence, Kansas.

Bohlen, H.D. 1975. Ash-throated Flycatcher in Illinois: summary of records east of the Mississippi River. Auk 92: 165-166.

———, and W. Zimmerman. 1989. The Birds of Illinois. Indiana University Press, Bloomington and Indianapolis.

Bowers, R.K., Jr. and J.B. Dunning, Jr. 1987. Nutting's Flycatcher (*Myiarchus nuttingi*) from Arizona. Am. Birds 41: 5-10.

Cornell Laboratory of Ornithology. 1985, 1986. Guide to Bird Sounds. Cornell Laboratory of Ornithology, Ithaca, New York.

Dickerman, R.W. and A.R. Phillips. 1953. First United States record of *Myiarchus nuttingi*. Condor 55: 101-102.

Dunn, J. 1978a. Field Notes: The *Myiarchus flycatchers*. Western Tanager 45 (3): 4-5.

———. 1978b. Field Notes: The Myiarchus Flycatchers. Western Tanager 45 (4): 5.

Edwards, E.P. 1989. A Field Guide to the Birds of Mexico. Ernest P. Edwards, Sweet Briar, Virginia.

James, R.D., P.D. McLaren, and J.C. Barlow. 1976. Annotated checklist of the birds of Ontario. Royal Ontario Museum, Toronto.

Keller, G.A. and J. Bridges. 1988. Bird Songs of Southeastern Arizona and Southern Texas. Sora Record Company, Coos Bay, Oregon.

Lanyon, W.E. 1960. The Middle American population of the Crested Flycatcher *Myiarchus tyranulus*. Condor 62: 341-350.

———. 1961. Specific limits and distribution of Ash-throated and Nutting's Flycatchers. Condor 63:421-449.

———. 1978. Revision of the *Myiarchus* flycatchers of South America. Bull. Amer. Mus. Nat. Hist. 161: 429-627.

Monson, G. and A.R. Phillips. 1981. Annotated Checklist of the Birds of Arizona, 2nd edition. University of Arizona Press.

Murphy, W.L. 1982. The Ash-throated Flycatcher in the East: an overview. Am. Birds 36: 241-247.

Oberholser, H.C. 1974. The Bird Life of Texas. University of Texas Press, Austin and London.

Peterson, R.T. 1961. A Field Guide to Western Bird Songs. Houghton Mifflin Co., New York.

———, and E.L. Chalif. 1973. A Field Guide to Mexican Birds. Houghton Mifflin Co., Boston.

Phillips, A.R. and W.E. Lanyon. 1970. Additional notes on the flycatchers of eastern North America. Bird-Banding 41: 190-197.

———, J.T. Marshall and G. Monson. 1964. The Birds of Arizona. The University of Arizona Press, Tucson.

Pyle, P., S.N.G. Howell, R.P. Yunick, and D.F. Desante. 1987. Identification Guide to North American Passerines. Slate Creek Press, Bolinas, California.

Texas Ornithological Society. 1984. Checklist of the Birds of Texas, 2nd edition. TOS Bird Records Committee, Austin.

Weir, R. D. 1983a Ontario Region. Am. Birds 37: 173-177.

———. 1983b. Ontario Region. Am. Birds 37:982-985.

———. 1989. Ontario Region. Am. Birds 43: 470-475.

Wormington, A. and R.D. James. 1984. Ontario Bird Records Committee checklist of the birds of Ontario. Ontario Birds 2: 13-23.

Zimmer, K. J. 1985. The Western Bird Watcher. Prentice-Hall, Inc., Englewood Cliffs, New Jersey.

Zimmerman, D. A. 1978. A probable Nutting's Flycatcher in southwestern New Mexico. Western Birds 9: 135-136.

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Common Terns at Minnesota's Largest Colony: Breeding Site Shift, Population Decline, and Reproductive Success

J. Michael Reed, Lewis W. Oring, and Julie A. R. Alberico

Common Terns (*Sterna hirundo*) are experiencing a long-term decline throughout the Great Lakes area (Kress et al. 1983, Shugart and Scharf 1983, Cuthbert et al. 1984). In Minnesota the Common Tern is a species of "special concern" (Coffin and Pfannmuller 1988); in 1984, only nine breeding colonies were found in four counties (Janssen and Simonson 1984, Guertin and Pfannmuller 1985, McKearnan and Cuthbert 1989). The largest colony in Minnesota in 1984 was on Gull Island, Leech Lake, with 489 breeding pairs, or 56% of the state's Common Tern population (McKearnan and Cuthbert 1989). Of six colonies studied by McKearnan and Cuthbert (1989), the Leech Lake colony had by far the greatest reproductive success. Maintainence of this colony is important for continued existence of Common Terns in Minnesota.

The Leech Lake tern colony abandoned its traditional breeding site on Gull Island in 1989 and moved to an adjacent island. This move was accompanied by a sharp decline in the number of breeding pairs. Here we report the results of our investigation of the number of breeding pairs and reproductive success of this colony at its new breeding site in 1990. We also discuss current threats at the new colony site and the security of this site for future Common Tern occupation.

COLONY SITE SHIFT

Gull Island (47° 07'N, 94° 21'W) was the location of the Leech Lake (Cass County) Common Tern colony from the 1920s (Miller 1987) through 1988. This island is the smallest of a three-island archipelago (0.16 ha), and is almost devoid of vegetation. In 1989 Common Terns shifted their breeding colony 300m to the next-larger island in the archipelago, Little Pelican Island (LPI), a 1.6 ha island with habitats ranging from open beach to patches of deciduous woods (shown in Oring and Maxson 1984). The terns reused this new site in 1990.

Morris and Hunter (1976) reviewed factors influencing desertion of Common Tern colony sites. They concluded that (1) reproductive failure, (2) predation, (3) availability of nesting substrate, (4) food supply, (5) exploitative competition by Ring-billed Gulls (*Larus delawarensis*), and (6) human disturbance, acted singly and in concert to cause colony site abandonment. Gull Island is home to a large population of Ring-billed Gulls. McKearnan and Cuthbert (1989) noted that evidence of nest site competition with gulls was apparent in 1984 on Gull Island. Since the reproductive success they observed was high, the nesting substrate did not change from 1984 to 1990, and as the island has little human disturbance, it appears that exploitative competition with Ring-billed Gulls was probably responsible for the colony site move. Data from Miller (1987) support this contention. Ring-billed Gulls were first noted on Gull Island in 1960, and numbers were still low ($\leq$10 pairs) in 1970 (Miller 1987). Miller (1987) found the gull population began increasing in the late 1970s, and in 1986 501 nests were found. Ring-billed Gulls began usurping Common Tern nesting space in the early 1980s (see Miller 1987 for details). In addition to Ring-billed Gulls, non-breeding Caspian Terns (*S. caspia*) might have contributed to the competitive displacement of Common Terns. Groups of up to 1,200 Caspian Terns were counted on or near Gull island during the 1990 Common Tern nesting season.

COLONY SIZE DECLINE AND 1990 NEST SUCCESS

In 1933 there were 1,000-1,500 breeding pairs of Common Terns on Gull Island (Miller 1987). Miller (1987) censused Common Terns from 1976 (676 pairs) to 1986 (242 pairs). The population declined to a low of over 150 pairs in 1981 and 1982, rose to 459 pairs in 1984, and declined the following two years. The 1977-1986 counts, however, were

single-day censuses, and are therefore underestimates. A detailed census in 1984 revealed 489 breeding pairs (McKearnan and Cuthbert 1989). During the peak laying period in June 1990, we censused the colony on LPI weekly. Between census days we regularly monitored egg and chick abundance, and adult nest and chick attendance. The maximum number of breeding pairs on any census day, as determined by the number of nests with <1 egg, was 126 pairs (Table 1). After the third week eggs began to hatch and the number of nests with eggs declined.

Incubation takes approximately 24 days (Terres 1982). Assuming no egg predation, the maximum number of egg-laying pairs possible on LPI was 140. This may be an overestimate because heavy predation caused many pairs to renest. It may also be an underestimate because we did not count pairs that laid and lost eggs between weekly censuses. We concluded that the maximum number of breeders on LPI was 150 pairs. This is a reduction of 69% from the 1984 estimate, and consistent with the 1985-86 decline (Miller 1987).

We do not know what caused the reduction in number of breeding pairs in the Leech Lake Common Tern colony. Since exploitative competition was probably responsible for the colony's move from Gull Island to LPI, many breeding pairs may have abandoned Leech Lake altogether. In addition, ten pairs were known to breed in 1990 on Little Pipe Island, and a small group has been nesting there for years. It is possible that a few birds moved to this island.

Common Terns began nesting in late May 1990, on a narrow sand spit north of LPI. Within a week all nests were lost when a storm caused waves to cover the spit. Terns first nested on LPI on the north beach on 30 May. Subsequently, the west and south beaches were colonized to a lesser extent (Table 1). Egg laying began on the north beach at the beginning of June, with the west and south beaches approximately five days behind.

LPI has, or has had in the past, avian and mammalian egg predators. In 1990 Ruddy Turnstones (*Arenaria interpres*), Ring-billed Gulls, Herring Gulls (*L. argentatus*), and mink (*Mustela vison*) were seen on the island. In previous years a suspected least weasel (*M. nivalis*) was also detected (Alberico et al. in press). Other potential egg predators were present, but they typically ate smaller eggs (Maxson and Oring 1978).

The first observed Common Tern egg loss to predators was 4 June, when we saw Ruddy Turnstones and Herring Gulls eating eggs. As has been reported for other colony sites (Parkes et al. 1971, Breary and Hildén 1985), turnstones punctured the eggs, cracked them open, and consumed their contents. We regularly saw turnstones consume the second and third egg from a clutch while the resident tern parents were occupied removing the broken shell fragments of the first egg from the nest. Only a few Herring Gulls were present, as has been true for the last ten years. (Miller 1987), but they are capable of substantial damage. Herring Gulls removed eggs from the colony and ate them whole, by tilting their head back and cracking eggs in their bills. We did not see Ring-billed Gulls take tern eggs. Terns did not attempt to defend their nests from turnstones or gulls. Ruddy Turnstones destroyed a minimum of 27 tern nests.

Common Tern egg depradation was estimated weekly by subtracting the number of three-egg nests observed from the number expected based on the previous week's count. This method underestimates egg loss from incomplete clutches and ignores whole-nest loss for nests started and depredated between censuses. Turnstone predation ended by 9 June, when the last turnstones migrated. Common Terns renested after these early losses.

Common Tern chicks began hatching on the north beach at the end of June; on 28 June we counted 22 chicks. However, only two chicks were found the next day. One dead chick had its head skinned, characteristic of mink predation. We saw one adult mink and four juveniles on LPI after June 1990. They probably traveled to LPI from Big Pelican Island, 200 m to the north. A minimum of 29 tern nests were destroyed in the first week mink were resident, and chick losses continued regularly through July.

Chicks that survived stayed mostly in tall vegetation, making chick censusing difficult. Based on number and positions of adults feeding young, we estimated a maximum of 50 living chicks for the entire colony. This is 0.33 fledglings per pair if all survived. Given the potential of 150 pairs of terns producing

Table 1. Number of Common Tern nests on Little Pelican Island, Leech Lake, Cass County, Minnesota, in 1990 with x eggs.

		Nests with x eggs				
Date	Beach	1	2	3	4	Totals
6 June	North	12	19	13	--	44
	West	2	--	--	--	2
	South	--	--	1	--	1
						47
12 June	North	9	21	17	--	47
	West	8	15	5	--	28
	South	7	10	4	--	21
						96
21 June	North	6	19	26	--	51
	West	4	13	22	--	39
	South	4	13	19	--	36
						126
28 June	North	19	13	16	--	48
	West	1	15	25	1	41
	South	4	9	16	--	29
						118[1]

[1]22 chicks also counted.

three fledglings per pair, 11% of the colony reproductive potential was realized. This estimated maximum reproductive success was 61% of that observed in 1984 (McKearnan and Cuthbert 1989), and only 15% of that observed in 1978 (Miller 1987). The actual number of fledglings produced was likely lower than our estimate.

POTENTIAL FOR LOSING THE LPI BREEDING SITE

Because of the declining numbers of breeding terns, the possible abandonment of the LPI site in the future is of concern. Below we address five of the six factors cited by Morris and Hunter (1976) that might cause colony site abandonment, with respect to the LPI colony. Food supply is omitted because we have no data regarding this potential problem.

Reproductive Failure and Predation — Common Tern reproductive failure on Gull Island due to storms was minimal because the beach on which nests were located was relatively elevated (Miller 1987), and the beach was partially protected by a jetty. This beach also faces LPI, so waves have little distance to enlarge. On LPI the west beach is particularly vulnerable to flooding.

Reproductive failure due to predation is of greater concern. Miller (1987) noted that mink occasionally visited Gull Island, but that their effect on population dynamics was minimal. On LPI in 1990, mink, Herring Gulls, and Ruddy Turnstones severely impacted reproductive success. Given the proximity of LPI to Big Pelican Island, and the available vegetative cover on LPI, mink probably will be a more serious problem on LPI than they were on Gull Island. We believe predation might be an important factor that could result in colony abandonment.

Available Nesting Substrate — One factor that can affect Common Tern colony site tenacity is habitat stability (McNicholl 1975, Morris and Hunter 1976). From 1977-1981 on Gull Island, dense vegetation interferred with Common Tern reproduction, and was probably responsible for the decline in breeder number (Miller 1987). Since 1982 vegetative cover on Gull Island has been minimal. LPI nesting substrate availability is greatly affected by vegetation and, to a lesser degree, by wind.

The perimeters of the south and west beaches of LPI vary in size daily with shifting winds. While Common Terns nested on relatively stable sand away from the shore on the south beach, the west beach was vulnerable to waves washing over most of the nesting area. In addition, most of the west and some of the north beaches' nesting areas were overgrown with cattail (*Typha latifolia*). We cleared vegetation in early June but had to cease maintainance activities when eggs began hatching so we would not hurt chicks, or separate them from their nest. It is possible that encroaching vegetation limits nesting habitat.

Exploitative Competition — In 1990 there was no indication that Ring-billed Gulls might usurp nesting space from Common Terns on LPI. Ring-billed Gulls rested but did not nest on LPI. The largest resting sites were on the sand spit north of LPI, and the edge of the south beach, neither of which interfered with Common Tern nesting. However, we noticed that our almost daily presence was a major factor in disrupting resting aggregations, and that without our regular presence, interference with Common Tern nesting might have been important. In addition, we found a Herring Gull nest on LPI. With so large a Ring-billed Gull resting area near a Common Tern breeding colony, concern about future exploitative competition is warranted.

Human Disturbance — Human disturbance can result in Common Tern colony site abandonment either by directly disturbing the birds (Nisbet 1973, Morris and Hunter 1976), or indirectly, by allowing predators access to nests (Bent 1929, Crossin and Huber 1970, Parkes et al. 1971). LPI is six km from the mainland, and Leech Lake is a summer resort area. Human disturbance is a common occurrence on LPI, particularly on the south beach, which is wide and easily accessible by boat. When people are present, particularly after eggs have begun hatching, Common Terns are agitated, resulting in their alarming and neglecting incubation, brooding, and feeding young. In addition, we have seen nests trampled by human visitors to LPI. This is in stark contrast with Gull Island, which has almost no human visitors (Miller 1987; pers. obs.).

CONCLUSIONS AND RECOMMENDATIONS

Based on Morris and Hunter's (1976) evaluation of factors that can cause Common Tern colony site abandonment, we believe the LPI colony is less than secure. The most prominant threats are predators, vegetation overgrowth on the north and west beaches, and human disturbance on the south beach. Steps that could be taken to protect the Leech Lake Common Tern colony are: (1) devegetation and maintainance of the north beach; (2) winter trapping of mustelids on Big Pelican Island, the likely source of these predators, which might substantially reduce nest predation on LPI; (3) controlling Ring-billed Gull populations, and restricting their access to Gull Island, which might allow the breeding colony to expand. If egg puncturing for Ring-billed Gull population control is implemented on Gull Island, it cannot be assumed that any middle-sized egg is a gull egg because of the large number of Caspian Terns present. In addition, regularly monitoring this colony's breeding numbers and reproductive success is necessary to determine whether the Common Tern continues its decline, and whether implemented management schemes are effective.

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LITERATURE CITED

Alberico, J.A.R., J.M. Reed, & L.W. Oring. in press. Nesting near a Common Tern colony increases *and* decreases Spotted Sandpiper nest predation. *Auk*.

Bent, A.C. 1929. Life histories of North American Shore Birds. U.S. Nat. Mus. Bull. No. 146.

Breary, D. and O. Hildén. 1985. Nesting and egg predation by Turnstones *Arenaria interpres* in larid colonies. Orins Scand. 16:283-292.

Coffin, B. and L. Pfannmuller. 1988. Minnesota's Endangered Flora and Fauna. University of Minnesota Press, Minneapolis.

Crossin, R.S. and L.H. Huber. 1970. Sooty Tern egg predation by Ruddy Turnstones. Condor 72:372-373.

Cuthbert, F.J., J.E. McKearnan & T.E. Davis. 1984. Status of Common Terns nesting in the Duluth Port Terminal 1982-83. ***The Loon*** 56:20-24.

Guertin, D.S. and L.A. Pfannmuller. 1985. Colonial waterbirds in Minnesota. An update of their distribution and abundance. ***The Loon*** 57:67-78.

Janssen, R.B. and G. Simonson. 1984. Minnesota's breeding bird distribution (part II). ***The Loon*** 56:219-239.

Kress, S.W., E.H. Weinstein & I.C.T. Nisbet. 1983. The status of tern populations in the northeastern United States and adjacent Canada. Colonial Waterbirds 6:84-106.

Maxson, S.F. and L.W. Oring. 1978. Mice as a source of egg loss among ground-nesting birds. Auk 95:582-584.

McKearnan, J.E. and F.J. Cuthbert. 1989. Status and breeding success of Common Terns in Minnesota. Colonial Waterbirds 12:185-190.

McNicholl, M.K. 1975. Larid site tenacity and group adherence in relation to habitat. Auk 92:98-104.

Miller, J.H. 1987. A study of aggressive interactions in a mixed larid breeding colony in Minnesota. Unpubl. Ph.D. thesis, University of Minnesota, Minneapolis.

Morris, R.D. and R.A. Hunter. 1976. Factors influencing desertion of colony sites by Common Terns (*Sterna hirundo*). Can. Field Natur. 90:137-143.

Nisbet, I.C.T. 1973. Terns in Massachusetts: present numbers and historical changes. Bird Band. 44:27-55.

Oring, L.W. and S.J. Maxson. 1984. Shorebird migration at Little Pelican Island, Cass County, Minnesota. ***The Loon*** 56:25-29.

Parkes, K.C., A. Poole & H. Lapham. 1971. The Ruddy Turnstone as an egg predator. Wilson Bull. 83:306-308.

Shugart, G.W. and W.C. Scharf. 1983. Common Terns in the northern Great Lakes: current status and population trends. J. Field Orn. 54:160-169.

Terres, J.K. 1982. The Audubon Society Encyclopedia of North American Birds. Alfred A. Knopf, New York.

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Comments On Eberhard Gwinner, "Internal Rhythms In Bird Migration"*

Walter J. Breckenridge

Eberhard Gwinner and several coworkers conducted numerous experiments that demonstrate the role of internal rhythms or biological clocks in several facets of the migration of birds. The experiments, conducted in laboratories in southern Germany, dealt with the Europe-Africa migration system used by many species of European birds. The main experimental subjects were Willow Warblers (*Phylloscopus trochilus*), Garden Warblers (*Sylvia borin*), and Blackcaps (*Sylvia atricapilla*), taken from the wild when only a few days old and reared by hand or bred in captivity. This assured the researchers of the exact age of the birds, and that previous experience would not be involved in interpretation of the results. The three species are night migrants and show, when caged, typical intense nocturnal activity when physiological events underlying migration have begun. This behavior, called nocturnal restlessness, varies in intensity, timing, duration and directional orientation. Octagonal cages with eight perches fitted with microswitches and recording devices gave data on the restlessness which could be compared with the direction, timing, and duration of natural migration.

One experiment extended over three years and involved three groups of Willow Warblers. Two groups were exposed to normal varying day-night photoperiods, one representing Germany and one, Zaire in Africa, where the species winters. The third group was exposed to 12 constant hours of daylight per day. All three groups showed intense night restlessness during the period when free normal birds would be migrating, and molted their feathers at the non-migrating periods as did free-living birds. The fact that the third group exhibited identical periods of nocturnal restlessness and feather molt as did the other two groups indicated that an internal clock was governing their activities, rather than external environmental factors.

In another experiment, Garden Warblers and Blackcaps (which molt twice a year), when kept under constant day lengths molted on an approximately ten-month "annual" schedule, not on a 12 month schedule. When exposed to normal day lengths, the molting schedule changed to 12 months, indicating that the internal "circannual" rhythm (from the Latin for "about a year") was corrected by the external factor of normal daylight photoperiods. Circadian (daily) rhythms typically are longer or shorter than 24 hours when free-running, but are continuously corrected in the real world by environmental cues.

Further experiments with Blackcaps showed that the duration of their nocturnal restlessness was proportional to the distance required for their migration. This species nests from Finland southwestward to the Canary Islands off northwest Africa, and winters in central Africa. Birds from Finland, with a much longer migration flight, showed a much longer restless period than those from the Canary Islands with their shorter migration flight. Birds from Germany and France showed intermediate activity. Breeding Blackcaps in captivity is very difficult, but persistence finally produced 32 hybrids between German and Canary Island Blackcaps: these hybrids showed almost exactly intermediate nocturnal activity between the parental populations, indicating polygenic control of the behavior.

The navigational system of inexperienced birds differs from that of adults that have made the migratory flight at least once before. A. C. Perdeck captured 1100 European Starlings (*Sturnus vulgaris*) in the Netherlands, along their migration route from Baltic breeding areas to wintering grounds in France and England. The birds were then transported by air south to Switzerland, banded and released. More than 300 were later captured. Experienced migrants compensated for the displacement and flew northwest to the normal wintering range. Inexperienced birds kept flying in the original southwest direction

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toward Spain, unable to compensate for the displacement and able to migrate only in one fixed compass direction.

In another experiment by Gwinner and Wolfgang Wiltschko, Garden Warlbers were used to show that the directional preference at any given moment is controlled by the circannual rhythms. Garden Warblers leave Europe in September, heading southwest as far as northern Spain. There they change dir ection to southeast, heading for south central Africa. In spring, the return journey takes them directly north back to Europe. Garden Warblers held in captivity under constant photoperiod and temperature, with no visual access to the sky, and therefore orientating only by the earth's magnetic field, showed dramatic behavior. In August and September, the warblers preferred a southwesterly direction; in October, November, and December, a southeasterly direction; in April, May and June, the warblers headed north, results in the experimental cages corresponding with the migratory directions of free-living birds at those times of the year.

Gwinner's work supports the ten-month "circannual" rhythm in these warblers but he attempts no plausible explanation for its presence. It seems reasonable that a 12 month rhythm with some flexibility to adjust for variable environmental factors would serve the same purpose. Further research may suggest a solution.

These experiments contribute substantially to our understanding of the remarkable abilities that birds exhibit in accomplishing their migrations. It is astonishing that control of such precise behavior appears inheritable since it has been incorporated by natural selection into the DNA of birds. **8840 W. River Road, Minneapolis, MN 55444.**

A Quantitative Assessment of Four Breeding Bird Communities of Itasca State Park

David E. Blockstein*

INTRODUCTION

Itasca State Park (128 km^2) is located at the convergence of Clearwater, Becker and Hubbard Counties in northwest Minnesota. It encompasses a transition zone from deciduous forest to northern coniferous forest and is only 40 km from the remnants of the prairie. During the past century, it has been the site of many ornithological studies. Its avifauna is well-known (Swanson, 1943; Hickey, et al. 1954, 1965; Hickey, 1956; Kendeigh, 1956; Parmelee, 1977, 1980). Despite this, there have been few quantitative studies of bird populations in the park and fewer still that have combined quantitative assessment of bird populations with quantitative description of the habitat, however see Ponto and Loeffler, 1980; Bell and Candee, 1981; Nagel and Madsen, 1982.

The Breeding Bird Census, initiated in 1937 by the National Audubon Society, provides a quantitative technique for assessing bird populations and habitat. Because the methods are standardized, it is possible to compare results from different sites, and from different years at the same site. Thus one can look at the impact of habitat on bird species composition as well as assess population change. Quantitative studies can be extremely useful in providing evidence of declining populations of songbirds (Terborgh 1989), which is of concern because of habitat destruction and fragmentation on the breeding areas and wintering grounds (Askins et al. 1990).

METHODS

The study was conducted from 15 June to 15 July 1990 by the ornithology class at the University of Minnesota Forestry and Biological Station at Itasca State Park, Clearwater and Hubbard Counties, Minnesota. We selected four sites in the park for breeding bird censuses: a mature red pine forest (red

pine); an open basswood-black ash forest with standing dead elm and birch (open basswood); a mature aspen forest (mature aspen); and a young aspen forest with an incomplete overstory of mature red and white pines (young aspen) (Figure 1)

The red pine plot was located on the Wilderness Drive of the park. It is a mature forest of red pines and scattered white pines comprising a 20-25m canopy, with a fairly dense understory of maple and quaking aspen forming a subcanopy of ± 10m (Table 1). The plot is fairly heterogeneous with more open forest on the south edge near the road, several clearings and a 1-ha sedge meadow near the center, and 1.5-ha decidious forest (aspen) along the northwest edge. There has been no fire in this area since the early 20th century and it is succeeding into a maple-aspen forest.

The open basswood plot covers most of Bear Paw Point, a peninsula into Lake Itasca adjacent to the field station. The dominant canopy trees are basswood and black ash. Paper birch and American elm were prominent canopy trees in 1979-81 but almost all are now dead due to storms and Dutch elm blight. Standing dead trees are common in the central portion of the plot. Ground cover consists primarily of ostrich fern (*Pteretis pennsylvanica*) and grasses, with patches of thistle (*Cirsium* sp.), nettle (*Urtica* sp.), and blue cohosh (*Caulophyllum thalictroides*). Two small marshes are present and the east border is cattail marsh and floating bog. Breeding bird censuses were conducted on this site from 1979-81 (Ponto and Loeffler, 1980, Bell and Candee, 1981, Nagel and Madsen, 1982).

The mature aspen plot is located at the intersection of the Red Pine and Ozawindib trails near Arco Lake at the south end of the park. This plot is covered mostly by mature aspen (*Populus* spp.) with young maple (*Acer* spp.), young oak (*Quercus* spp.), birch (*Betula papyrifera*), and mature red pine (*Pinus resinosa*) and white pine (*Pinus strobus*). A stand of mature red pine extends 50m into the southwest corner. The understory is predominantly young maple and beaked hazel (*Corylus cornuta*). The ground cover is mainly wild sarsaparilla (*Aralia nudicaulis*) and large leaf aster (*Aster macrophyllus*). The plot includes a 0.5-ha pond which is mostly covered with reeds and a 0.5-ha sphagnum bog that is partially covered with speckled alder (*Alnus rugosa*).

The young aspen plot is located near the sewage lagoons 1 km east of the field station. Most of plot is thickly forested with young quaking aspen that has grown since 1972 when the area was cleared of young trees and burned as part of a pine regeneration program. Large (25m) red and white pines dominate the northeastern quarter of the plot. The shrub layer includes beaked hazel, chokecherry (*Prunus virginiana*) and aspen saplings.

At each site, teams of three to four students conducted a breeding bird census according to the standard methods (Van Velzen 1972, Cornell Laboratory of Ornithology 1989). Grids of 9-11.5-ha (22-28 acres) were established consisting of squares 50m on a side, marked by surveyor's tape. Each team visited their study site eight times, usually in the morning with at least one evening visit at each site. Visits averaged three to four hours.

We walked along the grid and mapped the location of each bird seen or heard. The starting point and direction of travel varied with each trip, but we always walked within 50m of all locations in the study area. For each bird, we noted whether it was seen or heard, its sex, and any indication of breeding. Special notation was made of simultaneous singing by conspecifics.

We maintained a separate map for each species and used a different color for each day's notations. At the conclusion of the eight visits, we assigned territory boundaries for each individual, based on repeated sightings in the same location. Simultaneous singing was used to distinguish the boundaries of territories of adjacent males. We counted the total number of territories in the plot, assigning a value of 0.5 to territories that were half outside of the plot.

Species that occurred infrequently on the plot and that did not exhibit territorial behavior nor show signs of nesting were categorized as "visitors." These include species capable of breeding on the plot or in adjacent areas and resident birds that may have already completed breeding before the study began (jays, chickadees, nuthatches).

We surveyed the vegetation by randomly selecting ten 0.1-ha circles within each plot. We tallied the number of trees according to species and to size class in increments of three inches diameter at breast height (dbh)

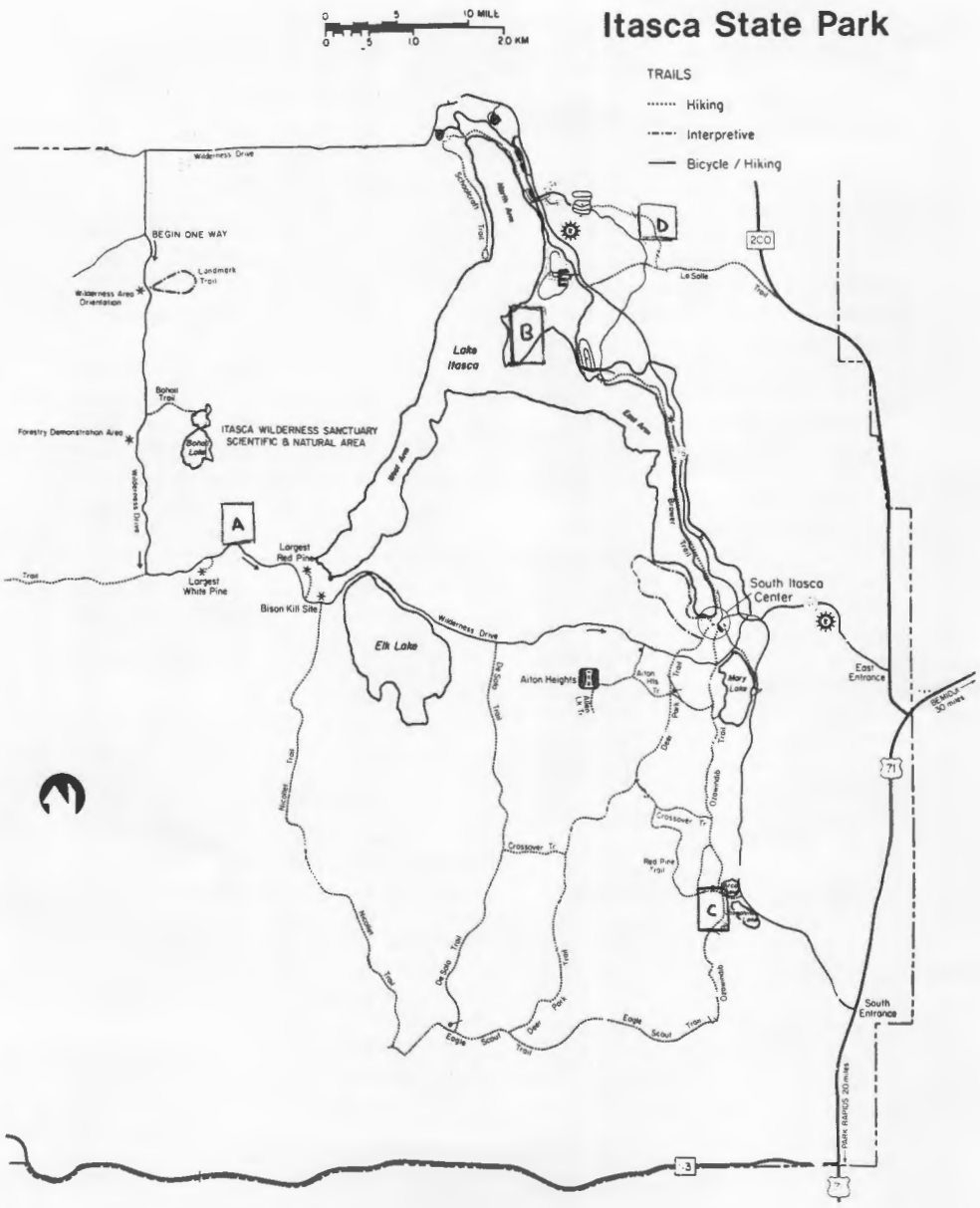

Figure 1. Map of Itasca State Park including study sites.

Legend: **A — red pine**
B — open basswood
C — mature aspen
D — young aspen
E — University of Minnesota Forestry and Biological Station

Table 1. Census Plots

Plot Name	Red Pine	Open Basswood	Mature Aspen	Young Aspen
Size (ha)	10	11.5	10	9
Dominant trees	Red Pine White Pine	Basswood Black Ash	Aspen	White Pine
Understory	Maple	Ostrich fern	Maple	Aspen
Trees/ha	642	878	719	813
Total basal area/ha	70	37	41	13
Shrubs/(stems/ha)	3,057	1,951	10,658	19,883
Ground cover (%)	60	94	47	76
Canopy cover (%)	73	71	80	72
Mean canopy (m)	21	17	18	10
Total observer hours	97	69	133	96
Total territorial males	117	83	94.5	102.5
Total territorial species	24	28	20	20
Territorial males/10 ha	117	72	94.5	114
Total visitor species	8	11	8	19

(James and Shugart 1970, James 1980). We used these measurements to calculate the relative dominance (percentage of total basal area accounted for by each species), number of trees per acre, relative density and frequency of occurrence for each species. Woody stems ‹3″ dbh were regarded as shrubs. Shrub density was estimated by walking along two transects across the diameter of each circle with arms outstretched and counting the number of stems touched by the arms. Canopy and ground cover were estimated by taking two diameter transects across the circle. At each step, the observer sighted vertically up and down and noted whether or not green vegetation intersected the crosshairs of a small sighting tube. Twenty sightings were made for each circle. We calculated percentage cover as the number of times vegetation was encountered divided by the total number of sightings.

RESULTS

A total of 41 species held territories on the plots. The number of territorial species per plot ranged from 20 to 28, and the total number of territorial males per plot ranged from 83 to 117 (Table 1). The largest plot, open basswood, had the largest number of species, but the fewest individuals. An additional 31 species were present on the plots, but were non-territorial or had less than one full territory within a plot and were considered visitors (designated by "t" in Table 2).

Red-eyed Vireo was the most abundant bird overall (16.9 territorial individuals/10 ha) and were one of the dominant species in all but the red pine plot (Table 2). Ovenbird (14.1) was the second most abundant despite having only a single individual in the open basswood plot. These species, along with the Veery, were each three times as common as any other species during a breeding bird survey along the Wilderness Drive of the park on 25 June (Blockstein unpub.).

The red pine plot had the largest number of territorial males (117) and the second largest number of species (23). Ovenbird (26.5) and Pine Warbler (21.5) were the dominant species. Other common species included Black-throated Green Warbler (12), Red-eyed Vireo (9) and Hermit Thrush (7.5). No other species exceeded five individuals in the plot. Three species that were territorial in the red pines did not occur elsewhere: Hermit Thrush, Black-backed Woodpecker and Pine Siskin. Of the nine species considered visitors on this plot, Blue Jay, Gray Jay, Purple Finch and Broad-winged Hawk may have bred on the plot earlier or nested nearby.

Red-eyed Vireo (22 birds/10 ha) was the most abundant species in the open basswood. Far less common were Black-throated Green Warbler (8.3), White-throated Sparrow (5.7)

Table 2. Breeding birds (territories /10 ha) present in study plots (JUNE-JULY 1990)

	Red Pine	Open Basswood	Mature Aspen	Young Aspen
Great Blue Heron		+		
Wood Duck	1	+		
Broad-winged Hawk	+		+	+
Ruffed Grouse	2		+	3.3
Black-billed Cuckoo	+			+
Barred Owl	+			
Ruby-throated Hummingbird		1	+	+
Northern Flicker		1		+
Pileated Woodpecker	1	1	1	+
Yellow-bellied Sapsucker	+	1	5	1
Hairy Woodpecker	2.5	1	2	1
Downy Woodpecker	2	1	1	1.5
Black-backed Woodpecker	1			
Great Crested Flycatcher	3	2.6	3	1.5
Eastern Phoebe			1	
Least Flycatcher			1	1.5
Eastern Wood-Pewee	3	1	3	+
Tree Swallow		+		
Gray Jay	+			
Blue Jay	+		+	+
American Crow		+		+
Black-capped Chickadee	1	2	+	+
White-breasted Nuthatch		1	+	+
Red-breasted Nuthatch	3	+	+	+
Brown Creeper	1	1	3	
Winter Wren	0.5	1		
Gray Catbird				4
American Robin		+	+	+
Hermit Thrush	7.5			
Veery		1	7	4.4
Cedar Waxwing		+		
Red-eyed Vireo	9	22	20.5	16
Black-and-white Warbler	+			+
Golden-winged Warbler				4.4
Nashville Warbler		1		3.3
Northern Parula	1	2		
Yellow-rumped Warbler				+
Black-throated Green Warbler	12	8.3	8.5	

Table 2 (con't.). Breeding birds (territories /10 ha) present in study plots (JUNE-JULY 1990)

	Red Pine	Open Basswood	Mature Aspen	Young Aspen
Blackburnian Warbler		1		
Chestnut-sided Warbler	5	1		27
Pine Warbler	21.5		7	9.4
Ovenbird	26.5	1	19.5	9.4
Mourning Warbler	1.5	3.5		6.7
Common Yellowthroat	5	5.2	2	1.5
Canada Warbler	4		2	
American Redstart		2	5	6.7
Red-winged Blackbird	2.6			+
Northern Oriole				+
Common Grackle		+		
Brown-headed Cowbird		+	+	+
Scarlet Tanager	2.5		2	+
Rose-breasted Grosbeak		+	+	2
Indigo Bunting		1		2
Purple Finch	+	+		+
Pine Siskin	1			
American Goldfinch				+
Savannah Sparrow				+
Chipping Sparrow		1		5.6
White-throated Sparrow		5.7		
Song Sparrow	+	2.6		+

and Common Yellowthroat (5.2). White-throated Sparrow was unique to this site as was the single Blackburnian Warbler that may have been a "spill-over" from the adjacent field biology station where the species is a common breeder. A total of 11 visitors included Brown-headed Cowbirds, which may have parasitized nests on the plot. Starting in late June, flocks of dozens of male Brown-headed Cowbirds moved through the area, along with Common Grackles and Red-winged Blackbirds, all of which fed on an abundant population of caterpillars.

The two aspen plots each held 20 territorial species although only 11 were common to both sites. The young aspen forest had 114 males/10 ha, including 27 Chestnut-sided Warblers, the highest density of any species in the study. Red-eyed Vireo was the most abundant species in the mature aspen (20.5) and second in the young aspen (16). Ovenbird was also common in both plots, 19.5 in the mature aspen and 9.4 in the young aspen. Pine Warblers (9.4 in young aspen and 7 in mature aspen) occurred mostly in the pines that were scattered in both plots. Species that occurred in mature aspen but not young aspen included Brown Creeper (3), Black-throated Green Warbler (8.5), and Canada Warbler (2). Golden-winged Warbler (4.4) and Gray Catbird (4) were unique to the young aspen. Other species present in the young aspen but not the mature aspen included Chestnut-sided Warbler (27), Mourning Warbler (6.7) and Indigo Bunting (2); each also occurred in other forest types. The young aspen plot had 19 visitors and the mature aspen had eight.

DISCUSSION

Each site was similar in having one or two species whose abundance was markedly greater than those of any other species. Although these generally were Red-eyed Vireo and Ovenbird, Chestnut-sided Warbler were dominant in the young aspen. Such a pattern is fairly typical of avian community composition (Whittaker, 1970).

Red-eyed Vireo and Ovenbird have been the most abundant birds in the park for at least 35 years (Hickey et al. 1965). Emlen (in Hickey et al. 1965) found eight Red-eyed Vireos per mile of trail in 1956. Kendeigh (1956) found them to be most abundant in aspen-birch forest with 16 birds/10 ha. Ovenbirds occurred at densities of four per mile (Emlen, op. cit.) and five birds/10 ha in aspen-birch and eight birds/10 ha in mixed forest (Kendeigh 1956). These species were also the dominant birds in breeding bird surveys along the wilderness drive from 1979-82 (F. James, unpub. data), and in our repeat of this survey in 1990 (Blockstein, unpub. data). Present densities of Red-eyed Vireos exceeded Kendeigh's estimates in all habitats except the red pine forest, but even there they were surprisingly high. Hickey (1956) also found Red-eyed Vireo to be common in red and white pine forests (8.6 birds per 10 stops on his transects) as well as in a spruce-fir forests. Ovenbirds also exceeded previous estimates in all but the open basswood, where only one male was noted. They reached their greatest density in the red pine forest where they were the most common species.

The abundance and wide distribution of these species that are considered to be birds of the deciduous forest are indications of the presence of a deciduous understory throughout the park. This succession towards a maple-basswood forest is the result of fire suppression and a lack of pine recruitment due to deer browsing throughout the 100 years that Itasca has been a park. The red pine forest showed a well-developed subcanopy of aspen and maple. The importance of forest cover for Ovenbirds can be shown at Bear Paw Point (open basswood plot) where a combination of disease, drought and storms during the 1980s killed most of the elms and birch that previously had formed a fairly closed canopy. The opening of the forest allowed the growth of a thick layer of ostrich fern that covered most of the point. Ovenbird density has declined from an average of 20/10 ha in 1979-81 to one in 1990 (Table 3). In contrast, White-throated Sparrows (5.7/10 ha) were present in the open basswood, but had been absent when the canopy was closed. Mourning Warblers were also present in 1990 (3.5/10 ha) although they had been less common in 1981 (2.3/10 ha) and were absent in 1979 and 1980. The distributions of these three species in the open basswood were highly correlated with the locations of patches of dead timber and dense undergrowth.

Hickey (1956), based on Lee (1948), regarded the predominant species of mature maple-basswood forest in the park to be: Great Crested Flycatcher, Least Flycatcher, Eastern Wood-Pewee, Red-eyed Vireo, Ovenbird and Scarlet Tanager. He noted that all but the Scarlet Tanager were present once young aspens have taken over a site. Least Flycatcher and Eastern Wood-Pewee were among the most common species in the park throughout the 1940s and 1950s (Lee 1948, Kendeigh 1956, Hickey et al. 1965). Neither was common in any of our plots. Eastern Wood-Pewee reached three birds/ten ha both in the pine forest and in the mature aspen. Least Flycatchers were present only in the two aspen plots, never reaching more than two birds/ten ha. Eastern Wood-Pewees have declined in the park during the 1970s and early 1980s (Parmelee, pers. comm.), but the decline of Least Flycatcher may be more recent. Parmelee (per. comm.) found a dozen or so Least Flycatcher nests in the young aspen plot a few years ago. Although Least Flycatchers may have declined, in part due to a closing of the understory, they are also considered to be vulnerable to habitat destruction on the wintering grounds (Terborgh 1989). Least Flycatcher was also absent from the open basswood which has an open understory although population density averaged 8/10 ha from 1979-81 (Table 3). Thus the drastic decline in this species cannot be explained entirely by the maturation of the forest. Data from the U.S. Fish and Wildlife Service Breeding Bird Survey from 1966-89 show a significant decline in Eastern Wood-Pewee and a nonsignificant decline in Least Flycatcher nationwide. Both species have shown a non-significant decline in Minnesota during this period (Droege and Sauer 1990).

Other changes in the avifauna of the park since the 1950s include the virtual disappear-

Table 3. Population density of selected species in open basswood plot 1979-81, 1990 (birds/10 ha).

	1979[a]	1980[b]	1981[c]	1990[d]
Red-eyed Vireo	28.7	23.0	24.1	22
Ovenbird	24.1	13.8	21.8	1
Least Flycatcher	4.6	6.9	12.6	0
White-throated Sparrow	0	0	0	5.7
Mourning Warbler	0	0	2.3	3.5

a — Ponto and Loeffler, 1980
b — Bell and Candee, 1981
c — Nagel and Madsen, 1982
d — This study

ance of Solitary and Yellow-throated Vireos (one per nine miles of trails and one per six miles of trails in 1956 respectively; Emlen op. cit.), neither of which occurred in our plots. Canada Warbler was regarded as rare by Hickey et al. (1965) who noted occurrences of single individuals only. We found four Canada Warblers in the red pine forest and two in the mature aspen. These individuals were found in locations with dense shrubs, often near small wetlands. Gray Jays have also apparently increased in the park in recent years although they were noted as visitors only on the red pine plot, where family groups of this early-breeding species often passed through. Hickey et al. (1965) regarded them as scarce and local.

Because previous bird surveys at Itasca Park were not standardized, it is hard to compare overall population levels. Kendeigh (1956) did a transect along the LaSalle Trail and calculated avian densities in each of the habitat types covered by the trail. Habitat types comparable to this study included aspen-birch with scattered large pines (80 individuals/10 ha compared with 96/10 ha in the mature aspen) and red and white pines with scattered birch (116 individuals/10 ha compared with 117/10 ha in the pine forest). There is presently no evidence of overall declines in the breeding bird communities of Itasca State Park.

The conclusions presented in this paper must be regarded with some caution. Bird populations are notoriously variable. Populations at Itasca appear to be especially variable, perhaps due to its location at the convergence of three major ecosystems (Parmelee 1980). We have compared data from a single year with historical data that were collected by different methods. The breeding bird census conducted this season provides a quantitative standard for future comparisons. M.O.U. members interested in bird populations should consider initiating breeding bird censuses in areas familiar to them.

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LITERATURE CITED

Askins, R.A., J.F. Lynch and R. Greenberg. 1990. Population declines in migratory birds in eastern North America. Current Ornithol. 7:1-57.

Bell, B. and M. Candee. 1981. Elm-ash-birch forest. American Birds 35: 58-59.

Cornell Laboratory of Ornithology. 1989. An Introduction to the Breeding Bird Census. 7 page mimeo.

Droege, S. and J.R. Sauer. 1990. North American Breeding Bird Survey Annual Summary, 1989. U.S. Fish and Wildlife Service, Biol. Rep. 90(8). 22 pp.

Hickey, J.J. 1956. Notes on the succession of avian communities at Itasca Park, Minnesota. The Flicker 28:2-10.

———, J.T. Emlen Jr., and S.C. Kendeigh. 1965. Early summer bird life of Itasca State Park. ***The Loon*** 37:27-39.

———, P.B. Hofslund, and H.F. Borchert. 1955. Bird nests in the Itasca Park area. The Flicker 27:16-21.

James, F.C. 1980. On understanding quantitative surveys of vegetation. American Birds 34:22-23.

———. and H.H. Shugart Jr. 1970. A quantitative method of habitat description. Audubon Field Notes 24:727-736.

Kendeigh, S.C. 1956. A trail census of birds at Itasca State Park, Minnesota. The Flicker 28:90-104.

Lee, Forest B. 1948. A comparison of bird occurrence and activity in two climax forests at Itasca Park, Minnesota. M.S. thesis, University of Minnesota. 122pp. + 6 unnumbered pp.

Nagel, M. and S. Madsen. 1982. Elm-ash-birch forest. American Birds 36:62.

Parmelee, D.F. 1977. Annotated checklist of the birds of Itasca State Park and surrounding areas. ***The Loon*** 49:81-95.

———. 1980. Itasca Birds. ***The Loon*** 52:51-58.

Ponto, S. and E. Loeffler. 1980. Birch-elm-ash forest. American Birds 34:51-52.

Swanson, G. 1943. Summer birds of Itasca Park. The Flicker 15:25-28.

Terborgh, J. 1989. *Where have all the birds gone?* Princeton Univ. Press, Princeton, N.J. 207p.

Van Velzen, W.T. 1972. Breeding bird census instructions. American Birds 26:1007-1010.

Whittaker, R.H. 1970. *Communities and ecosystems.* Collier-Macmillian, Ltd., London.

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Placid Nighthawks and Scolding Chickadees: A Summer Shift in an Orphan Bird Nursery

Valerie Cunningham

It's a springtime phenomenon we've all seen and been distressed by: birds who've tumbled from their nests, too young to care for themselves. Or perhaps we've rescued a young bird from the jaws of a marauding cat or dog, but don't know what to do next. And the violent windstorms of spring and summer sometimes knock whole nests to the ground with a cargo of healthy, but dependent, avian young.

It's at times like these that Mother Nature could use a helping hand. Such a helping hand is provided by the Wildlife Rehabilitation Clinic's Avian Nursery, a bustling operation created to rescue young birds. Affiliated with the College of Veterinary Medicine at the University of Minnesota, the clinic and its nursery are run by a dedicated group of veterinary medicine students, veterinarians and a cadre of volunteer workers.

The avian nursery's "clients" are brought in throughout the nesting season by the general public and by the staff of nature centers, humane societies, zoos, and state and federal agencies. From early May through late August the nursery provides medical treatment, food and lodging for young birds — the caseload in 1990 included more than 900 songbirds, shorebirds and waterfowl — preparing them for release back to the wild.

The umbrella organization, the Wildlife Rehabilitation Clinic, was founded in 1979 and cares for injured, orphaned and sick wildlife, with a total caseload of more than 3,000 crea-

tures in 1990. The clinic handles nearly 100 different species of birds, mammals, reptiles and amphibians each year, giving a new lease on life to many of them and, for those too sick or injured to recover, providing humane euthanization. The clinic and its nursery, under the direction of Dr. Linda Wolf, is run with a mixture of humor, tough realism and compassion. And there is one guiding principle in the forefront at all times: wild things should be returned to the wild.

As a birder in my spare time, working as a volunteer in the avian nursery was an ideal opportunity to spend time close to these creatures. About 100 of us were recruited through newspaper notices and word of mouth to staff for the 2½ hour shifts throughout all the hours of daylight. We signed on for 17 weeks of feeding and cleaning up after the hundreds of small birds and waterfowl that passed through the nursery. A shift usually involved pumping needle-less syringes full of a specially mixed food down tiny gullets at half-hour intervals. For some of the young birds, feeding time also meant an offering of worms, grubs or insects, often coaxing meals into reluctant beaks.

Linda was invariably on hand to provide advice, answer questions ("How do I get these blood worms into these robins?"), demonstrate feeding techniques and generally provide a calming influence. Dr. Mark Zens, the other staff veterinarian, was equally accessible, as were the students, to answer questions or confer on a bird's condition.

All volunteers attended a two-hour training session, but nothing, really, could prepare us for the reality of our first shifts. Mine occurred on 4 May 1990 between 2:00 P.M. and 4:30 P.M. Here's what happened: Walking into the room that serves as the avian nursery, I'm instantly aware of a number of unfamiliar odors and the heat. The smell comes from the wet bird food and fouled nests, and the warmth is coming in the windows and added to by the several incubators and hot pads under cages. Linda's on hand to provide some necessary on-the-job training. Luckily, the bird population is low — only three nests of tiny, featherless birds, eyes still closed, in the incubator. Feeding isn't complicated if everything goes by the book. Check a wall chart to correlate the bird's weight, in grams, to the amount to be fed, in milliliters. Fill a syringe with the proper amount of food, then tap the bird's nest or beak to get it to "gape" (open its bill), insert the tip of the syringe into the right side of its mouth and squeeze out some of the semi-liquid food. The younger the bird, the slower the food moves down its throat.

What looks so easy in Linda's hands becomes a lumbering, stumbling exercise in mine. The heat and the smell and the intricacy of feeding such small birds without harming them combine to make the task seem impossible. ("This is just not going to work," I tell myself. "I'll finish out this shift, but that's it.") However, by 4:30, I'm much calmer and not so terrified of harming the birds. All seven, each smaller than a quarter, are still alive in the incubator, so I decide to give it another week. (Later I learn, much to my relief, that other volunteers felt exactly the same on their first shifts.)

11 May: The pace is a little more brisk, with seven separate nests in the big incubator. There are two of us on this shift and we're kept busy thinning the master batch of food to the proper consistency, filling syringes and feeding birds, as well as cleaning out nests at each feeding. There's always an amazing amount of cleaning up and washing up to do on each shift. The tiniest birds are barely able to move and their nests quickly become fouled. We throw out the toilet paper nest linings and roll up new nests, all the while needing a third hand to make sure the squirming young don't drop off the edge of the counter.

Some species exhibit an instinctual trait we heartily applaud: they back up to and excrete off the edge of their nests, making cleanup much easier.

As the discarded toilet paper nest linings pile up in the waste baskets and as we rush to keep up with the feeding schedule, *our* admiration for parent birds grows. They spend harried weeks disposing of fecal sacs and bringing meals to their infants, and they do it alone — there's no relief at the end of a shift for them.

18 May: There are now 13 separate nests, for a total of 40 young birds, including sparrows, grackles, robins and a single Killdeer, who's kept in his own incubator. Mark has hung an old-fashioned feather duster from the incubator ceiling and the long-legged little bird runs under it for comfort and safety, just as he'd do with his mother in the wild.

These incubator residents are Barn Swallows rescued from the underside of a bridge being torn down. Note quarter at right for size comparison.

In mid-June, one of the nursery's two incubators holds 13 nests, enclosing American Robins, House Wrens, House Sparrows, a Downy Woodpecker and Blue Jays. Two weeks later, this incubator went "condo" — another shelf was added to squeeze in 24 separate nests. Photos by Dr. Linda Wolf.

The nursery's nests and cages strike me as ingenious, especially since our operating budget isn't even quite shoestring level. Left-over margarine tubs hold just-hatched young birds inside their toilet paper scrolls. Nestlings, slightly older birds with enough feathers to maintain body heat, spend their days in the rectangular plastic storage baskets, one wired on top of the other. The fledglings, well on their way to release, hop around inside plastic laundry baskets topped with netting lids. And there are two large playpens, also roofed in netting, for aggregations of same-species birds, who are just days away from the great outdoors.

We think the nursery seems pretty busy, but last year in the middle of summer there were 127 birds on hand, three times greater than the current population.

25 May: The incubator is wall-to-wall birds, with 11 separate nests. Ranged along counters all around the room are 14 small and medium-sized baskets full of larger birds.

Taking a nest out of the incubator to feed its occupants, I'm always struck with the birds' next-to-nothing weights. If an ounce is just over 28 grams, and some of the tiniest birds weigh only five or six grams, it's no wonder we can barely feel them in our palms. The larger birds, older grackles, robins and starlings, may weigh 55 to 60 grams, still only about two ounces.

Today the collection includes sparrows, a crow, robins, Blue Jays, a female cardinal with a strangely bent beak, like a crossbill, and starlings.

1 June: Now we're starting to see heavy spring traffic. Some of the birds have broken wings or legs, which the veterinarians bind up with surgical tape. Some have wounds across their heads or bellies, often due to cat attacks or lawnmowers.

We had the first death on my shift today, a White-breasted Nuthatch who spread his wings and died as I got ready to feed him. My partner wrapped the body up in tin foil and put it in the refrigerator for staff to check later. Linda explains that even seemingly healthy birds die in the nursery throughout the summer, often due to people who will keep a wild bird for a day or two, giving it inappropriate food before bringing it in to the clinic. These birds may already be dying by the time they're assigned a cage in the nursery.

Over the next several weeks I take note of new birds' charts, reading the line which records if their finders fed them. Sure enough, there are notations for such things as oatmeal, lettuce, milk and even "chopped-up worms."

8 June: There are so many birds, about 75, that we rush around without respite the entire shift. The combined cheeps, grunts, chirps and hollers must be deafening to those with such acute hearing. I'm intrigued to learn from the staff that birds have a poorly developed sense of smell. So much for the old wive's tale about not putting birds back in nests because their parents will reject them after human handling.

Linda is mixing a master batch of food base for the birds, up to her elbows in a soupy mix of dog food, baby food, ground oyster shells, bee pollen, vitamin supplements and strained egg yolk.

15 June: Big wind storms earlier in the week mean a full house in the nursery today, with many blown-down nestlings. There are more than 80 birds, including a cross-billed cardinal, a Rose-breasted Grosbeak, several Blue Jays, a woodpecker, nuthatch, starlings, grackles, robins, sparrows and one chickadee.

For sheer cooperativeness, starlings and robins head my list — they love to eat and we seldom need to use coaxing techniques on them. More recalcitrant birds may respond to a tap on the beak with the syringe or a drip of food onto their bills. If all else fails, their beaks must be forced open and food squeezed down their gullets. Birds that skip feedings begin to lose weight and may die.

22 June: The incubator and counter tops are crammed full of birds. As we move from nest to cage, we note the time and amount fed on each bird's chart. The tiniest birds may need only four to five milliliters of bird food, while the largest robins, weighing up to 60 grams, consume over five times that amount each feeding.

Even with two of us, when it's this busy we inevitably fall behind and can't get to every bird every half hour. I've seen Linda feed the entire nursery in 20 minutes, but she's in a class by herself.

29 June: Swallows now are showing up and there's a young oriole with a very aggressive personality. Most of the many Blue Jays appear healthy, suffering only from "mistaken orphan" syndrome, brought into the clinic by

well-meaning people who note a fledgling on the ground and "rescue" it, not realizing that its parents are probably nearby waiting to feed it.

The rarest bird we have all summer is brought in today, a Sora with a healthy appetite for meal worms but a very poor prognosis due to severe balance and coordination problems. His health deteriorated, we learn later, and he was euthanized.

6 July: It's fascinating to observe birds migrating through the nursery, many starting out in the incubator, then moving to larger quarters as their feathers and skills develop.

Each week there's generally one bird who's the "star," with more appeal than the others. For several weeks it's been the bent-beak cardinal, who bathes in her water dish and chortles as she eats. Before her it was the chickadee, full of scolds if a feeding was late. This week it's the oriole, busy tearing up the sponge in his cage and issuing flutey chirps. There's also a handsome young crow who gulps down his mixture of bird gruel and canned dog food, making a sort of witch's cackle as he swallows.

13 July: We're at the summer's peak now, with just under 100 birds on my shift. This week's stars are four Downy Woodpeckers, nestmates who were left on the doorstep of a suburban nature center. They chatter constantly and peck at everything — our fingers, their branches, even each other's heads.

20 July: Feeding of the nursery birds goes on from dawn to dusk. We're told that birds in the wild mature more quickly than do these captives, the major reason being that the all-species diet fed to most nursery birds is an approximation of, but not exactly, the food they'd be eating in the wild.

For the first time, there are nighthawks — large, rather placid birds, sitting in one spot on their cage floor until lifted out for live grubs and bird food.

27 July: On hand are the usual cast, plus Chimney Swifts, three tiny House Wrens and a Cedar Waxwing. Timer bells are going off all over the room, one to remind us to feed the swallows and swifts every 15 minutes, another to ensure that the waxwing gets fed every half hour, and a third reminds us that older birds have been moved to a separate room but still need feeding.

3 August: The bird population is thinning out and the incubator is nearly empty as we approach the end of nesting season for many species. We volunteers must seem a very dull crew to the increasingly colorful birds. To minimize our impact on them and reduce the possibility of their bonding to humans, we wear drab clothing, avoid bright jewelry and keep our voices low.

Linda brings in jarsful of insects trapped with a screen and light system. The kingbird and swallows snap them up eagerly.

10 August: There's been a dramatic drop in the nursery population, with only about 30 birds which haven't yet been released to the wild. In some free moments, I read their charts to see where they've been found, noting that the majority are picked up in people's yards or in parking lots.

The charts are an important means for tracking a bird's progress in the nursery. The tracking system comes in handy when people call back to see how a bird they brought in is doing.

17 August: The swallows have been moved to a walk-in cage in the Python Room, which, luckily, lacks any snakes. Even though the staff has found that insectivores have poor odds for survival in the wild (they lack practice in catching their own food), one clinic worker is determined that this year's crew is going to make it. He catches flies for the Barn Swallows and picks up moths for the nighthawks from the University's Department of Entomology.

He's also working on an ingenious system for replacing bent or broken tail feathers on the nighthawks, whose feathers suffer some damage in being caged and handled.

24 August: A very small crew is on hand today, only a kingbird, Purple Martin, two waxwings, seven Barn Swallows, a goldfinch, Pine Siskin and 11 nighthawks. There's time to talk to Corey, a mildly retarded resident crow who's used with educational programs.

Linda delivers the news: at the end of my shift, they're shutting the nursery down. The remaining birds either are ready for release or will go to backyard aviaries maintained by staff members. Birds disappear throughout this last shift as they're returned to the wild or moved to aviaries.

And then its's all over, 17 weeks in the avian nursery.

For someone who couldn't wait for that first shift to end, I (and many other volun-

teers) ended up fulfilling Linda's prediction that "you'll find you dream about these little guys."

The nursery is always hungry for volunteers, so in May 1991 we'll have a chance to pick up those syringes and start down the line again. If you are interested, the address is: Wildlife Rehabilitation Clinic, College of Veterinary Medicine, 460 Vet Teaching Hospital, 1365 Gortner Ave., St. Paul, MN 55108. Phone: (612) 624-7730.

1416 Frankson Ave., St. Paul, MN 55108

Southeast Birds in Northwest Minnesota

Steve Millard

When I began birding in the early 1970s in Minnesota, most of my trips afield were confined to a few favorite areas in western Otter Tail County. At that time, I was unaware that several species of birds common to the southeast portion of Minnesota could be found right here at home. When I thought of Red-bellied Woodpecker, Northern Cardinal, Red-shouldered Hawk, and others, it was in the context of an as-yet-to-be-experienced trip to the heavily wooded river valleys of southeast Minnesota. My first trip to the southeast was made with Bob Janssen and Ray Glassel in early March of 1977. The above-mentioned species were all seen, as were my first Northern Bobwhites and Wild Turkeys.

This trip opened my eyes to the similarity of wooded habitat stretching from west-central to southeast Minnesota. Though heavily fragmented by our agrarian society, large tracts of heavily wooded hills and valleys remain along this northwest-southeast axis. This area is roughly defined by I-94 from Otter Tail County to Minneapolis-St. Paul, and thereafter by the Mississippi River to the Iowa border. Much of the flora and fauna along this corridor is the same throughout its three-hundred plus miles. Many birds follow this route during migration and establish territories in a northwesterly "leapfrog" progression.

Many gaps have been filled since the 1970s on the status of the "southeast specialties" in northwest Minnesota, but there remain many unanswered questions. Can some species be found even further north? Which species are regular and which are only part of temporary northward movements? Certain areas that look ideal don't have the species we expect. Why? The answers to these and other questions are likely within reach of anyone willing to work for them.

A lot of time was spent looking and listening for the species in this article, but it was the kind of "work" that birders enjoy. It began with an earnest desire to explore new areas, to drive roads and hike trails that I had not previously birded. All birders are prone to return to their same favorite haunts time after time. This report is the result of a conscientious effort to break out of that rut. I hope that other birders will explore new areas in their favorite counties and add to our knowledge of Minnesota birds.

Because of the interest they generated, the significant numbers found, and time spent seeking them, two species in particular are focused on first. They are the Blue-gray Gnatcatcher and the Cerulean Warbler. On 20 May 1990 while tracking down a singing Chestnut-sided Warbler, we found a pair of gnatcatchers. The nest of this pair was also found, but was destroyed in early June by a predator. This discovery prompted more searching. Another gnatcatcher, an apparent female, was seen one-half mile south of the above location, and a male was seen 1.6 miles south. Four individuals were found at three sites in less than two miles along a township road that didn't seem any different, or potentially better, than many other roads in the area. Three more pairs plus one individual were subsequently located from late May through

June. One bird, probably a migrant, was seen 9 August. A total of twelve Blue-gray Gnatcatchers were seen at seven sites in Otter Tail County.

On 22 May the first of eleven Cerulean Warblers was found along the same road where the first gnatcatchers were seen. Ceruleans were found at ten separate sites in five townships, with five individuals in one township alone. Three singing males were found in a triangulated area roughly one-half mile on a side. Only one female Cerulean was seen, and no nests of this species were found. The bulk of the gnatcatcher and Cerulean records came from six townships in northwest Otter Tail County, the remainder from two townships in the southeast portion of the county. A little time was spent following birds in the hope of finding nests but our main objective was to find birds wherever we could in order to get an idea of how many there might be. To say that we missed a lot, indeed most, of the individuals that were surely present is a conservative understatement. One particularly intriguing example: after driving through approximately two miles of hilly, wooded land, I stopped and walked into the woods for about one hundred yards. In an area one hundred feet square, I located a male and female Cerulean Warbler, A Blue-gray Gnatcatcher, and an irate Cooper's Hawk. Better than average luck? Probably, but how many birds go undetected because of the many obvious limitations placed on the observer? Otter Tail is a large county with thousands of acres of good bird habitat. It would take many seasons of diligent work to find what lurks in its many unexplored sections. The same can be said of numerous other counties, especially in the central and northern parts of the state. My initial forays into unbirded areas are merely a beginning, creating a longing to know more.

Habitat requirements are stricter for the Cerulean Warbler than for the Blue-gray Gnatcatcher. Gnatcatchers were found in low, wet areas, in fairly open pastured woodland, and in hilly, well-drained woodland of moderate to heavy density. Ceruleans preferred tall, dark, older forest with light to moderate undergrowth. Walking in from roadways was quite easy — mosquitos were often a bigger problem than underbrush! The Cerulean is often regarded as being difficult to observe due to its predilection for feeding (and nesting) high above ground. To a large degree this is true, but we were able to watch several males at heights from eight to twenty feet. One bird was observed along a roadway for several minutes as it leisurely sang and foraged down low. We even had it in the spotting scope. Pishing worked marginally on gnatcatchers, but really brought Ceruleans in close several times. One, straight overhead and very high up, responded immediately when I pished. He dropped like a rock and landed just about eye-level only a few feet away — a most gratifying way to observe this tree-top bird.

Most birds were located by voice, then tracked down. The sounds of both species are distinctive, making them easy to pick out. Of the two, the Blue-gray Gnatcatcher is more animated and constantly on the move, making it the easier of the two species to locate. It also forages through a greater range of heights, occasionally at eye level or below. The tiny size of this bird gives it a metabolic rate that is probably near that of a shrew, which explains its nearly constant search for food. The Cerulean, characteristically, often remains high, methodically working the leaf clusters for food, sometimes singing for long intervals while foraging.

While searching for the aforementioned species, others of note were encountered. One that has *increased* in numbers dramatically is the Red-bellied Woodpecker. Fifteen years ago this bird created quite a stir when it began showing up in northwest Minnesota. Now it is accepted as being, if not common, relatively easy to locate, especially in winter. Every year I receive numerous reports from area residents of this species coming to their feeders. But Red-bellieds are no longer here just during the cold months. They are now being seen year-round, and nests and young have been located. I heard and saw several individuals last spring and summer while looking for other species. An in-depth search for Red-bellied Woodpeckers would surely turn up many more, especially by enlisting the aid of land-owners familiar with them. It is interesting that the increase in their numbers comes at a time when the Red-headed Woodpecker has suffered a serious decline in this area. The two events are probably unrelated, since their habitat requirements are somewhat different, and competition for food and nesting territories is limited.

Like the Red-bellied Woodpecker, the Northern Cardinal continues its expansion into northern Minnesota. It is most often reported from mid-autumn through winter, indicative of a post-breeding movement to the north by a small segment of the population. How many remain to attempt breeding in the spring is unknown, but reports of sightings in spring and summer are far fewer than during winter. We may still have quite a few birds present then, but since they are not at feeders, they go largely unnoticed. I saw only one male last spring in Otter Tail County. The distinct song and appearance of this bird make it easy to locate. The habitat is suitable throughout much of west central Minnesota. Perhaps our winters are just too harsh for many of them to survive. Conversely, maybe the ones that are here during the winter are of a strain that will one day become better acclimated and be able to produce a stable, self-sustaining population. Though still largely a seasonal bird, sightings seem to have increased somewhat the last several years. Hopefully the Northern Cardinal will become a permanent resident in the future.

It is not necessary to go to southeast Minnesota to see a Red-shouldered Hawk. This Buteo can be found in good numbers in appropriate wet woodlands of Otter Tail and several adjacent counties. Unlike the highly visible Red-tailed Hawk of open areas, the Red-shouldered keeps a lower profile and generally stays in wooded areas or on the edge of small clearings. Numbers seem to be stable from year to year in northwest Minnesota, and several birds can be found in a day with a little luck and perseverance. In fact, populations in our part of the state probably equal densities found in central and southeast Minnesota. The habitat is certainly outstanding in many of the townships where I have found them. The best time to find Red-shouldereds is mid-March through early April, when the birds vocalize and engage in territorial and courtship flights. When nesting begins in earnest, they are much more difficult to locate unless nest sites are known. This strikingly marked bird is arguably the most handsome of all the eastern buteos, and makes a fine addition to anyone's daily trip list.

Two enigmatic species often associated with central and southeast Minnesota are the Lark Sparrow and Wood Thrush. Their status in Otter Tail County is similar to Minnesota overall — scattered and sporadic. There are many areas that would seem to be ideal habitat, especially for the Wood Thrush, but apparently the birds just don't occur. This is also true for the Whip-poor-will, which I am still trying to locate here during the breeding season. The Wood Thrush and Lark Sparrow do occur in small numbers, and are always a treat to find due to their limited numbers and their visual and vocal appeal.

Somewhere between eastern Otter Tail County and Aitkin County, there must be a zone of overlap for the two species of meadowlarks. Nearly all meadowlarks in Otter Tail County are Westerns; most in Aitkin are Easterns. There are very few Easterns in Otter Tail, and their distinctly different song is a pleasure to hear. The Easterns seem to be confined to the sandy soils of north central and northeastern parts of the county. Finding the Eastern Meadowlark was a personal triumph for me, since I had never found one in the county before exploring new areas in 1990.

Two interesting warbler records occurred in the county in June of 1990. Though accidental, they add a southeast flair to the local birding scene, and serve to further reenforce this area's reputation as a haven for certain "southern" species. A Prothonotary Warbler, detailed on pages 70-71, was seen during much of June. In late May, a textbook Brewster's Warbler with the song of a Blue-winged was found by Gerry Winkelman in Maplewood State Park. This bird was seen several times by numerous observers and is, I believe, the first record for this area.

House Finches have moved into western Minnesota in such numbers in the last year that they no longer cause much excitement among veteran birders. With good numbers showing up at area feeders, we can nearly match the Twin Cities area for sightings. The spread of this species across the entire Midwest appears to be virtually complete. At the time of this writing (December 1990) I have four-five House Finches coming to my feeder daily.

It may be safe to assume that most species mentioned herein have reached their northwestern limits in this part of the state. A few are likely to be found north of here in Becker and Mahnomen Counties, possibly even further north in isolated river valleys of Gla-

cial Lake Agassiz. But for many, significant numbers probably decrease rapidly beyond the Todd-Douglas-Otter Tail Counties region. It is a known fact that birds on the periphery of their breeding ranges decrease in density. This, plus a loss of critical habitat on the wintering grounds, may explain why many areas that appear suitable do not have birds. There just are not enough birds to fill them. But there are enough to enjoy, and others yet to be found. **630 W. Laurel, Fergus Falls, MN 56537.**

Birds of the Lost Valley Prairie Scientific and Natural Area, Washington County — 1990

William H. Longley

I. Description of Area

The Lost Valley Prairie Scientific and Natural Area (SNA) is located in southern Washington County exactly three miles northeast of the city of Hastings in Denmark Township. It is 200 acres in extent, 80 acres in Section 28, and 120 acres in Section 29.

The Project Evaluation by John C. Almendinger, in the files of the Minnesota Department of Natural Resources, explains that the area is a dendritic complex of limestone ridges and dry swales. (Actually there are three ridges and three valleys in the final acquisition.) There is a relief of about 50 feet from ridge crest to swale bottom. Parts of the ridge tops are classified as bluff prairie. Being dry with a thin mantle of soil, these ridge tops have typical prairie grasses and herbs. Red cedar is invasive, and American plum thickets cover much of the unplowed hillsides. Sumac patches are also spreading on some hillsides. Box elder is the prominent invader of the old fields and pastured areas. Two aspen groves and two groups of cottonwood (consisting of fifty 90-foot trees) line the central ravine in which remnants of an old road may still be found. This was a township road, quite possibly part of the Point Douglas-to-Duluth Military Road built in the 1850s.

About 95 acres were still being farmed in 1990 (81+ acres of corn and 13+ of oats). The oats field was twice mowed for fodder except that three acres was not mowed because giant ragweed and giant foxtail invaded. This became a great gathering place for Fringillids in the fall while the rest of the field grew up to clover and smartweed that was attractive to Eastern Bluebirds. Two fields of alfalfa-brome grass (15 acres) were not harvested because the alfalfa winter-killed leaving a variety of plants: red clover, foxtail, lesser ragweed, aster, goldenrod, fleabane, sweet clover, and thistle. Lying fallow was a poor field (12.8 acres) grown to knee-high annual weeds, mainly grasses such as yellow foxtail, but it was little used by birds of any kind. Two old fields not plowed for about five years (8.5 acres) were grown to young box elder, quack grass, and tall goldenrod. These were populated mainly by American Goldfinches, Song Sparrows, and a few Clay-colored and Field Sparrows. All the fields are quite rocky, with broken limestone and glacial debris. Some large granitic boulders have been dug out and moved to field edges.

II. Methods

1. The spot mapping method was used as described in Longley, W.H. 1990. Birds of the Boot Lake Scientific Area, Anoka County, Minnesota, ***The Loon*** 62:46-50 and its bibliography.
2. On 18 days from 2 March to 30 October, I walked the length and breadth of the SNA at intervals of about two weeks. A day's walk began near dawn and ended usually in mid-afternoon.

III. Results

1. I recorded 89 species of birds on the SNA.
2. A total of 29 species nested on the area

Table One

Nesting and Inferred Nesting — Birds Present Throughout the 1990 Breeding Season

1. Red-tailed Hawk: One or a pair seen on 16 dates from 2 March to 30 October. Pair building nest on 14 April. An immature seen near nest in July.
2. Ring-necked Pheasant: One or two cocks heard and/or seen on eight dates, 14 April to 5 October.
3. Mourning Dove: At least ten pairs present. Two nests found. Many birds present on each trip from 29 March to 5 October. Maximum of nine males calling 25 June.
4. Black-billed Cuckoo: Two pairs probably nesting on area. One or two birds present from 14 June to 9 August. One carrying food in August.
5. Yellow-billed Cuckoo: Probably one nesting pair. One or two birds present 4 June to 9 August.
6. Downy Woodpecker: Two pairs present. Birds seen on 14 of 18 trips.
7. Hairy Woodpecker: One nesting pair. Birds seen on ten trips.
8. Northern Flicker: Recorded on 13 of 18 trips. One, possibly two pairs present.
9. Great Crested Flycatcher: One nesting pair. Recorded on seven of ten trips, 22 May to 29 August. Pair with three young on 9 August.
10. Eastern Kingbird: One nesting pair. Birds seen hassling Blue Jays when the brooding jay left its nest on two or three occasions. Two young kingbirds fed by parents in Blue Jay nest tree on 9 August.
11. Blue Jay: Eight pairs. Four nests with eggs found. Birds recorded on all trips.
12. Black-capped Chickadee: Seven pairs. Two pairs found excavating nests. On 1 August, 17 birds counted. Birds present on all trips.
13. House Wren: Probably 19 pairs. Birds present from 2 May to 5 October. On 14 June, at least 17 males singing.
14. American Robin: At least 12 pairs. Four active nests found. Others found after leaf fall.
15. Gray Catbird: At least 25 territories. Maximum of 23 singing males on 14 June. Maximum of 37 birds recorded on 25 June. One nest found. Young found at three other places.
16. Brown Thrasher: Ten territories. One nest found. Maximum of nine singing males on 14 June. Maximum count of 14 birds on 25 June.
17. Cedar Waxwing: One nesting pair, perhaps two. Birds present on 12 trips, 2 March to 30 October.
18. Common Yellowthroat: Six pairs or more. Nine singing males on 25 June and 9 August. Female carrying food on 16 July.
19. Northern Cardinal: Thirteen territories. Pairs with young on 4 and 25 June. Maximum of 11 singing males on 22 May. Birds recorded on all trips. Not much singing after 9 August.
20. Rose-breasted Grosbeak: Seven, perhaps eight, pairs. Adults carrying food on 7 July. Two pairs with young on 1 August. Seven singing males on 22 May, 4 June, and 14 June. Not much singing after 16 July.
21. Indigo Bunting: Eight pairs. Ten singing males on 16 July. Little singing after 1 August.
22. Clay-colored Sparrow: Twelve territories. Maximum of 13 singing males on 22 May. Some still singing on 9 August.
23. Field Sparrow: Fourteen pairs. Fifteen singing males on 14 June and 16 July. Two nests with eggs found. A few still singing on 29 August.
24. Vesper Sparrow: Six pairs. One young flushed on 14 June. Little singing after 16 July.
25. Song Sparrow: Probably 27 territories. Most singing males (30) on 14 April and 16 July.
26. Red-winged Blackbird: One territory (a male with two or three females). Nest in fence row on 25 June, four tiny young. No standing water anywhere near.
27. Brown-headed Cowbird: Five males. Never more than two females seen. Field Sparrow nest contained cowbird egg.

28. Northern Oriole: Probably four pairs. A family of five noted on 7 July.
29: American Goldfinch: Six or more territories. Twelve singing males on 24 July. Six nests found after leaf fall, one of which showed no signs of use.

Table Two

Summer Residents Recorded at the Area but Probably Not Nesting

1. Great Blue Heron: One to two flew over on three dates, moving between the Mississippi and St. Croix Rivers, a distance of eight miles.
2. Turkey Vulture: One, or a pair, soaring over the area on eleven dates, 29 March to 14 September. The possibility of nesting on the area cannot be completely ruled out.
3. Osprey: One flew over on 7 July from west to east.
4. Northern Harrier: Male coursed over west side on 2 May.
5. Cooper's Hawk: One seen on 24 July, 29 August (soaring with a vulture), and 30 October.
6. American Kestrel: One seen on four dates, 2 May to 7 July, and a pair on 14 June.
7. Wild Turkey: Tracks found on 11 May. Local resident saw one a few days earlier.
8. Killdeer: One to two present from 29 March to 11 May.
9. Common Nighthawk: One sighting only, 22 May.
10. Whip-poor-will: One flushed on 2 and 11 May.
11. Ruby-throated Hummingbird: Two in chase on 29 August.
12. Red-headed Woodpecker: One seen on three dates, 22 May to 29 August.
13. Red-bellied Woodpecker: One seen on 11 May and 5 October, two on 30 October.
14. Pileated Woodpecker: One on 29 August.
15. Willow Flycatcher: Two on 29 August. One on 14 September.
16. Least Flycatcher: One or two recorded on five trips, 11 and 22 May, 4 June, 9 and 29 August.
17. Eastern Phoebe: One only, 14 April.
18. Purple Martin: One to three feeding over south part of area, 22 May to 24 July.
19. Northern Rough-winged Swallow: Pair recorded over central part of area on four dates from 7 July to 14 September.
20. Barn Swallow: One to three feeding over area, from 22 May to 29 August.
21. American Crow: One to four recorded on seven trips. No nesting evident.
22. White-breasted Nuthatch: One to three recorded on six trips but not between 2 May and 9 August.
23. Blue-gray Gnatcatcher: One seen on 29 August.
24. Eastern Bluebird: One to four seen on five dates.
25. European Starling: Pair may have attempted nesting. One or two present on six dates from 29 March to 24 July.
26. Yellow-throated Vireo: Only one seen, 22 May.
27. Warbling Vireo: Only one, warbling on 9 August.
28. Red-eyed Vireo: One to two recorded on three trips.
29: Yellow Warbler: Three on 22 May.
30: American Redstart: One in May, nine on 29 August.
31. Ovenbird: Three on 29 August.
32. Rufous-sided Towhee: Two recorded, 22 May and 5 October.
33. Chipping Sparrow: Pair seen on 4 June.
34. Swamp Sparrow: One singing on 2 May, two seen on 11 May, one on 5 October.
35. Eastern Meadowlark: Pair present on 2 and 11 May. Single birds seen in June and July.
36. Common Grackle: Occasional overflights by a few.
37. Orchard Oriole: One singing on 14 June in tree where a nest was located in 1989.

Table Three

Transients (Migrants not Ordinarily Nesting in the Vicinity)

1. Sharp-shinned Hawk
2. Rough-legged Hawk
3. Brown Creeper
4. Golden-crowned Kinglet
5. Tennessee Warbler
6. Orange-crowned Warbler
7. Nashville Warbler
8. Chestnut-sided Warbler
9. Magnolia Warbler
10. Yellow-rumped Warbler
11. Bay-breasted Warbler
12. Black-and-white Warbler
13. Kentucky Warbler (*The Loon* 62:162)
14. Mourning Warbler
15. Wilson's Warbler
16. Canada Warbler
17. American Tree Sparrow
18. Fox Sparrow
19. Lincoln's Sparrow
20. White-throated Sparrow
21. White-crowned Sparrow
22. Dark-eyed Junco
23. Purple Finch

(Table 1).
3. Some 37 local resident species were recorded on the area, but did not nest there (Table 2).
4. Transient species numbered 23 (Table 3).
5. Based upon a minimum of 212 pairs, or inferred pairs, on the 200-acre area, the population density was as follows:
   106 pairs per 100 acres
   262 pairs per 100 hectares
   678 pairs per square mile

IV. Discussion

Certain types of birds, those which make themselves conspicuous, are ideally suited for the inventory method used. As is well known, they are the highly territorial song birds, especially those which sing throughout the breeding season and throughout the day and have a relatively small territory. Generally speaking, they are the passerine birds, but doves, cuckoos, and woodpeckers also have some of the same traits. The problem birds are the polygamous or polyandrous types such as the Ring-necked Pheasant, the Red-winged Blackbird, and the Brown-headed Cowbird. In such species, the terms "pair" or "singing male" do not quite fit because the number of females is the significant factor rather than the number of males. Of these three, only the pheasant gave me a problem because the hens are so secretive. I saw none and so counted only the one male. Species which are wide-ranging can complicate the count, of which the Turkey Vulture is an example. I was tempted to include the Whip-poor-will as a nesting species, but some nighttime visits would have been required to prove the point. **532 W. Broadway, Forest Lake, MN 55025.**

Birds of the Boot Lake Scientific and Natural Area, Anoka County Part Two: 1990

William H. Longley

INTRODUCTION:

The physical features and vegetative cover of the Boot Lake Scientific and Natural Area were described in *The Loon* (62:46-50), as was the method of censusing the bird population. Some results of the 1989 inventory were incorrectly reported then but corrected in *The Loon* (62:151) and below.

Table One

Nesting and Inferred Nesting

1. Common Loon*: One pair. Up to three birds present 12 April to 20 July. No young evident. Presence of Bald Eagles may have been a problem for loons and other water birds.
2. Green-backed Heron: One pair. One or two birds present 27 April to 8 September.
3. Canada Goose: One pair. Pair with one large gosling on lake 5 July seemed very nervous and hurried into hiding.
4. Wood Duck: Two pairs. No young evident. Birds present 12 April to 26 October. Failure of wild rice crop due to high water may have been responsible for reduced late summer gathering — about 100 birds.
5. Mallard: Two pairs present 12 April to 20 June. No young evident.
6. Blue-winged Teal*: One pair, perhaps two. Birds present 12 April to 13 May.
7. Bald Eagle: One pair raised one eaglet.
8. Red-shouldered Hawk: Two pairs. Nest found: at least one young fledged.
9. Ring-necked Pheasant**: One cock crowing 13 May to 11 July.
10. Ruffed Grouse: One drumming on 20 March. Second male apparently killed on drumming log.
11. Wild Turkey: Two gobbling sites. On 31 May a hen displayed furiously around me as if a nest or brood were near.
12. Sandhill Crane: One pair raised one young.
13. Black Tern*: One pair
14. Mourning Dove*: Two pairs.
15. Black-billed Cuckoo: One pair.
16. Barred Owl*: One pair.
17. Red-bellied Woodpecker: Two pairs, possibly three.
18. Downy Woodpecker: Two pairs.
19. Hairy Woodpecker: Three pairs, possibly four.
20. Northern Flicker: Two pairs. One nest found, with young.
21. Pileated Woodpecker: Three pairs. Immatures seen in two places.
22. Eastern Wood-Pewee: Thirteen pairs. Up from ten in 1989.
23. Alder Flycatcher: Three or four pairs.
24. Least Flycatcher*: one pair.
25. Great Crested Flycatcher: Nine pairs.
26. Eastern Kingbird: Two pairs.
27. Tree Swallow: Two pairs or three.
28. Blue Jay: Five pairs. Up from three in 1989.
29. American Crow: Two pairs.
30. Black-capped Chickadee: Eighteen pairs. Up from 14 in 1989.
31. Red-breasted Nuthatch*: Probably one pair present from 20 March to at least 30 June and in September.
32. White-breasted Nuthatch: Six pairs.
33. House Wren: Six, possibly seven pairs.
34. Sedge Wren: Four pairs.
35. Blue-gray Gnatcatcher: Two pairs.
36. Eastern Bluebird: Three pairs. Down from five in 1989.
37. Veery: Fifteen pairs. Down from 18 in 1989.
38. American Robin*: One pair. Several non-singing visitants.
39. Gray Catbird: Ten pairs.
40. Cedar Waxwing: One pair. Nest found, with one broken egg, 18 June. Adult perched nearby. Down from four pairs in 1989.
41. Yellow-throated Vireo: Six pairs, but seemingly much less activity than in 1989.
42. Red-eyed Vireo: Twenty-three pairs or more. One pair feeding a silent youngster on 5 July.
43. Golden-winged Warbler: Two pairs. Adults feeding brood of three young on 30 July.

Table One (con't.)

44. Nashville Warbler: One pair, possibly two.
45. Yellow Warbler: Two pairs, possibly three.
46. Chestnut-sided Warbler: Five or six pairs.
47. Pine Warbler: Six pairs, three less than last year.
48. Black-and-white Warbler: Three pairs, possibly four.
49. American Redstart: Eight pairs.
50. Ovenbird: Twenty pairs.
51. Northern Waterthrush: Three pairs.
52. Common Yellowthroat: Thirty-one pairs, three less than 1989.
53. Scarlet Tanager: Six pairs, possibly seven.
54. Northern Cardinal: Four pairs.
55. Rose-breasted Grosbeak: One pair.
56. Indigo Bunting: Seven or eight pairs.
57. Rufous-sided Towhee**: On 30 June a pair carrying food became frantic in my presence, indicating that young were near. The nest probably was outside the SNA boundary.
58. Chipping Sparrow: Nine pairs. On 30 June one sang a very buzzy two, three, or four note song much like that of a Clay-colored Sparrow! Three fewer pairs than in 1989.
59. Field Sparrow**: One pair. Adults with two or more young on 13 and 30 July.
60. Vesper Sparrow: Two pairs. Adults with young on 30 July.
61. Song Sparrow: Nineteen pairs.
62. Swamp Sparrow: Eight pairs.
63. Red-winged Blackbird: Eight pairs.
64. Brown-headed Cowbird: Four or five males.
65. American Goldfinch: Five pairs.

* Species recorded in 1989 but probably not nesting.
** Species not recorded on the area in 1989.

RESULTS:

1. In 1990 I made counts on 24 days, usually eight to 12 hours per day, from 1 March to 26 October, and I recorded 126 species on the area. For the two years the total number of species listed is 146. Five others were listed on the 1983 survey.

2. Species nesting on the area in 1990 numbered 65, 12 more than the previous year (Table 1). Of these, nine were present in 1989 but listed as probably not nesting, while three species were not found on the area in 1989.

3. Summer residents recorded on the area but probably not nesting there in 1990 numbered 28 (Table 2).

4. Thirty-three transient species were recorded in 1990 (Table 2).

5. Population density based upon a minimum of 328 territorial males (and pairs) and 232 acres of nesting habitat may be expressed as follows:

141 males per 100 acres (138 in 1989)
348 males per 100 hectares (342 in 1989)
902 males per square mile (886 in 1989)

6. Population density based upon a maximum of 340 territorial males (and pairs) in 1990 and 335 territorial males (and pairs) in 1989 would be as follows:

147 males per 100 acres (144 in 1989)
363 males per 100 hectares (356 in 1989)
941 males per square mile (922 in 1989)

DISCUSSION

As might be expected, there was a multitude of differences between 1989 and 1990 when one considers the weather and the habitat conditions and, no doubt, the overwinter survival of the various species of birds. Yet, the bird population density changed very little from 1989. Perhaps next year we will notice the effect of over 100 areas of oak wilt and/or chestnut borer deaths of oak trees that I counted in the fall of 1989. We know that openings created in the overstory would make great changes in the ground cover, and that the dead oaks would make much food available for the infectious agents — the bacteria, the fungi, the insects — and for woodpeckers,

Table Two

Summer Residents Recorded on the Area but Probably Not Nesting

1. Pied-billed Grebe: Pair present 12 April to 18 May.
2. Double-crested Cormorant: Only one, on 18 May.
3. Great Blue Heron: From 12 April to 19 September, as many as seven on feeding territories but usually less than four.
4. Ring-necked Duck: Eight pairs on 4 May but up to 200 in migration.
5. Northern Harrier: Three sightings in summer.
6. Cooper's Hawk: Seen only on 20 July.
7. Broad-winged Hawk: One on 4 May and in the fall, feathers were found indicating one's demise.
8. Red-tailed Hawk: Five sightings from spring to fall.
9. American Kestrel: One on 6 June.
10. Peregrine Falcon: Twice one flew over: 18 May and 18 June.
11. Sora: One heard on 2 September.
12. Yellow-billed Cuckoo: One seen on 31 May.
13. Great Horned Owl: Remains found on 12 April showing mammal-like bite marks.
14. Common Nighthawk: Three coursing over the lake on 18 May.
15. Belted Kingfisher: Two present 30 July to 8 September.
16. Red-headed Woodpecker: Only one seen, on 20 June.
17. Eastern Phoebe: Six sightings 27 April to 8 September.
18. Purple Martin: Five sightings 18 May to 5 August.
19. Cliff Swallow: Three or four over lake 18 May.
20. Barn Swallow: Two sightings in August.
21. European Starling: Four sightings.
22. Cerulean Warbler: Only one, 31 May.
23. Mourning Warbler: one sang long and loud on 20 June.
24. Savannah Sparrow: Only one, singing on 4 May.
25. Yellow-headed Blackbird: On 31 May a male was pestered by a Red-winged Blackbird until he stopped singing and flew off.
26. Common Grackle: One or two fed on the shore on five dates.
27. Northern Oriole: A male sang 18 June to 13 July. On 5 July a pair with young passed through the area.
28. Purple Finch: One or two seen on four days 25 April to 21 August.

Table Three

Transients (Migrants not ordinarily nesting in the vicinity)

1. American Black Duck
2. Gadwall
3. Common Goldeneye
4. Bufflehead
5. Solitary Sandpiper
6. Ring-billed Gull
7. Olive-sided Flycatcher
8. Yellow-bellied Flycatcher
9. Brown Creeper
10. Golden-crowned Kinglet
11. Ruby-crowned Kinglet
12. Swainson's Thrush
13. Gray-cheeked Thrush
14. Solitary Vireo
15. Philadelphia Vireo
16. Tennessee Warbler
17. Orange-crowned Warbler
18. Northern Parula
19. Magnolia Warbler
20. Cape May Warbler
21. Yellow-rumped Warbler
22. Black-throated Green Warbler
23. Blackburnian Warbler
24. Palm Warbler
25. Bay-breasted Warbler
26. Wilson's Warbler
27. American Tree Sparrow
28. Fox Sparrow
29. White-throated Sparrow
30. Dark-eyed Junco
31. White-winged Crossbill
32. Common Redpoll
33. Pine Siskin

things that thrive on, or in, such dead material. Another change from 1989 was the great increase in rainfall and subsequent flooding of margins of the lake, the marsh area, and the tamarack swamps. The high water may have eliminated some Swamp Sparrow habitat. Their numbers dropped from 14 to eight pairs. Or were there fewer Swamp Sparrows because of the terribly cold December of 1989 in the South? Maybe the Pine Warblers decreased from nine to six pairs for the latter reason. I think high water in the tamarack swamps reduced habitat of the Veery, Nashville Warbler, and Northern Waterthrush and caused some abandonment of established territories.

Storms wreaked havoc among old and weakened trees and among the young trees upon which they fell. Particularly, a heavy, wet snowfall on 8 March broke off innumberable white pine branches, (even oak and maple branches). Some tops were also broken off. Three of the few very tall (90-foot) jack pines broke off 20 to 30 feet above the ground. Most of the breaks occurred at places of inner decay on any of the tree species.

In contrast to 1989, deer flies were almost non-existent on the SNA this year. Apparently the larval stage was drowned out by the high water, a most welcome occurrence.

Categorizing the Ruddy Duck observed on the SNA in 1989 as "Transient" proved to be probably incorrect as a brood was observed on the Carlos Avery Wildlife Management Area in 1990. **532 W. Broadway, Forest Lake, MN 55025.**

Proceedings of the Minnesota Ornithological Records Committee

Kim R. Eckert

A meeting of the Committee took place on 2 December 1990, and among the topics discussed there were two involving votes on records. First, the "wildness" of the Eurasian Tree Sparrow (***The Loon*** 62:175-177) was voted on, and it was decided to accept it as an A(b) record (vote 9-1; all ten members participate in votes on wildness) — i.e., the majority felt it was most likely a genuine vagrant and probably was not an escape nor transported up the Mississippi River by barge. There are several records in recent years from southeastern Iowa and at least two from western Wisconsin. Second, a vote on the Whooping Crane (***The Loon*** 62:177-181) was taken and it was accepted on a 7-0 vote.

The following records were voted on by mail July-December 1990 and found Acceptable:

—White-faced Ibis, 9 June 1990, Rutland Twp., Martin Co. (vote 6-1)

—Barrow's Goldeneye, 29 March-13 April 1990, Sherburne N.W.R., Sherburne Co. (vote 7-0; ***The Loon*** 62:165).

—Eurasian Tree Sparrow, 20-27 June 1990, Eagan, Dakota Co. (vote 10-0 — all ten members vote on potential first state records; ***The Loon*** 62:175-177).

—Ross' Goose, 27 April-11 May 1990, Manfred Twp., Lac Qui Parle Co. (vote 7-0; ***The Loon*** 62:168).

—Rufous Hummingbird, 17-19 July 1990, North Branch, Chisago Co. (vote 7-0; ***The Loon*** 62:170).

—Short-billed Dowitcher, 15 October 1989, Wagona L., Kandiyohi Co. (vote 6-1; ***The Loon*** 62:169).

—Sprague's Pipit, 28 July-August 1990, near Roseau, Roseau Co. (vote 7-0; ***The Loon*** 62:167).

—Red-throated Loon, 26 May 1990, Duluth, St. Louis Co. (vote 6-1; ***The Loon*** 62:170-171).

—Tricolored Heron, 28-29 July 1990, near New Germany, Carver Co. (vote 7-0; ***The Loon*** 62:233).

—Lesser Black-backed Gull, 19 August 1990, Black Dog L., Dakota Co. (vote 6-1; ***The Loon*** 62:171).

—Western Sandpiper, 28 July 1988, Bloomington, Hennepin Co. (vote 6-1).

—Scissor-tailed Flycatcher, 21 July 1990, Mound Twp., Rock Co. (vote 7-0; ***The Loon*** 62:227).
—Harris' Sparrow, 3 June-20 July 1990, Flandrau S.P., Brown Co. (vote 7-0; ***The Loon*** 62:63).
—Scissor-tailed Flycatcher, 26 September 1990, Rockwell Twp., Norman Co. (vote 7-0; ***The Loon*** 62:62).
—Carolina Wren, 24 September 1990-January 1991, Bloomington, Hennepin Co. (vote 7-0; ***The Loon*** 62:231).
— Violet-green Swallow, 9-14 July 1990, Claremont, Dodge Co. (vote 7-0; ***The Loon*** 62:226).
— Red-throated Loon, 20 October 1990, Good Harbor Bay, Cook Co. (vote 5-2; ***The Loon*** 62:228).
—White-crowned Sparrow, 3 July 1990, Minneopa S.P., Blue Earth Co. (vote 7-0; ***The Loon*** 62:230).
—Pacific Loon, 27 October 1990, Duluth, St. Louis Co. (vote 7-0; ***The Loon*** 62:71-72).
—Ferruginous Hawk, 3 June 1989, Mound Twp., Rock Co. (vote 7-0 ***The Loon*** 62:64).
—Red-throated Loon, 21 May 1988, Duluth, St. Louis Co. (vote 6-1).
—King Eider, 20 October to late November 1990, Grand Marais, Cook Co. (vote 7-0; ***The Loon*** 62:66).

The following records were voted on July-December 1990 and found Unacceptable:
—Kirtland's Warbler, 24 May 1990, Olson L., Washington Co. (vote 5-2, with 6-1 required for Acceptance). The extensive documentation submitted, which included notes taken in the field, was enough to convince the majority of the Committee. However, those voting against the record felt that since this is such an unusual species, the documentation should have been even more complete with no inconsistencies. The description left them with some doubts about the flanks color, whether the streaking on the upperparts was on the nape or back, why no black lores were noted, and about the boldness and completeness of the eye ring. These doubts were mainly due to minor inconsistencies found between the original field notes and the description recopied and rewritten later. It also appeared that the observer may have been influenced too much by consulting field guides while the bird was in view.
—Kirtland's Warbler, 2 August 1990, Woodbury, Washington Co. (vote 0-7). The documentation by an inexperienced observer was not only incomplete with too much of the bird's plumage not described, but it also included a sketch that showed an eye ring that was far too bold for a Kirtland's and mentioned that the bird was starling — or bluebird-sized, too large for any warbler other than a chat.
—Eurasian Tree Sparrow, 19 June 1990, Woodbury, Washington Co. (vote 1-9) all ten members vote on potential first state records). The sketchy and incomplete description was thought to be inadequate for a first state record and did not preclude the possibility of juvenile House Sparrow. The fact that two individuals were reported also made the record less credible.
—Rough-legged Hawk, 23 June 1990, near Toimi, Lake Co. (vote 1-6). Although the description of this melanistic Buteo mentioned a "broad dark terminal tail band," hardly anything else was described to eliminate the possibility of other species. The documentation was also only provided from memory three months after the sighting, and the observer was not aware at the time that the species would be unusual in summer.
—Eurasian Wigeon, 11 October 1990, Bloomington, Hennepin Co. (vote 3-4). The majority felt the description was too brief, only mentioning a "dull yellow" crown and "solid rusty chestnut" sides of face. It was also learned after voting was completed that an experienced birder had also studied the same individual and was unsure of its identity since he noted a trace of green on the side of he head, indicating the possibility of a hybrid.
—Swainson's Hawk, 18 March 1990, near Windom, Cottonwood Co. (vote 2-5). The description was too brief and vague to be convincing, especially since the distinctive underwing pattern of a Swainson's Hawk was not clearly seen or described, probably because the hawk was reportedly a half mile away. The identification was based primarily on a dark upper chest, but many Red-tailed Hawks, adult male light-morph Rough-leggeds, and immature Bald Eagles are also dark on the chest/throat area. **— 8255 Congdon Blvd., Duluth, MN 55804.**

The Summer Season

(1 June to 31 July 1990)

Terry Wiens

The drought in Minnesota came to a screeching halt in the summer of 1990. Unlike the previous two years, rain was common and in some places downright annoying. Temperatures returned to tolerable levels. The birds, however, seemed unimpressed by the radical change in climate. Overall it was a fairly typical season: a few rarities scattered about, a few early or late migrants lingering, and the usual variation in numbers and distribution for the regular species.

June was a wet and moderately warm month. Rain was plentiful throughout the state, especially in the south. The central and southeastern regions, for example, had monthly totals that were more than 3″ above average; even the southwest, the driest region in the state, in June, had rainfall half an inch above normal. Despite the lack of sun for much of the month, temperatures were about a degree or so above average for all regions in the state. Not surprisingly, the coldest temperatures were recorded early in June; on 4° June the thermometers dipped below 40° statewide with a low of 25° in St. Louis County. Temperatures hit their peak at the end of the month, but nowhere did they ever get any higher than 97°.

July was a drier month than June for most of the state, although there was much variation from the north (very dry) to the south (very wet). The three northern regions received less than 3″ of rain for the month, well below normal; in contrast, the south-central and southeast were more than 2″ above average. Unlike June, there were no extensive periods of rain dominating the state. Also unlike June, the month was a little bit cooler

than average. All regions recorded temperatures slightly below normal, as much as 2° below average in the southwest. However, there was one particularly hot period during 2-5 July when many locations broke 100° and a high of 106° was recorded in Stillwater. In sharp contrast, about ten days later thermometers throughout the state plunged to the mid-40s, with a low of 32° in the northwest on 13 July.

Although they may have gotten a little wet for their efforts, no fewer than 82 observers contributed seasonal reports and/or breeding information for the summer. A total of 266 species was observed, very near the average of 264 for the previous ten years. It should be mentioned that the total number of observers, and the species total, have been relatively consistent for several years — a tribute to the diligent work of many summer birders. Unfortunately, the documentation of breeding in the state has not been as consistent. This year contributors sent in 580 nest or brood cards, even fewer than last year and about half the 1000+ submitted in both 1985 and 1986. Nesting information was obtained for 142 species, one fewer than last year and the lowest total in several years. Top nest/brood card contributors were Jean Segerstrom/Mark Newstrom (70), Jack Sprenger (66), William Longley (59) and Anne Marie Plunkett (53). A hearty thanks to all contributors for your fine work in the field!

Three or four species stand out as the most noteworthy sightings for the summer. A new species was added to the state list when a Eurasian Tree Sparrow appeared at an Eagan feeder in late June. This unexpected vagrant was observed on and off for several days, but unfortunately the appearances were sporadic and relatively few birders were able to see it. Almost as unusual was the second state record Violet-green Swallow that wandered in from the west, turning up in Dodge County on 9 July (the first record was almost 50 years ago!). Again, this bird stayed only briefly and most birders did not have the chance to track it down. Two other species made news this summer by breeding in Minnesota. The first documented nesting since 1963 of Barn Owls occurred in Dakota County. Seven young were successfully fledged from an old grainery building. One can only hope that this is more than just an aberrant incident; the return of even a modest number of Barn Owls to the state would be very welcome indeed. Finally, the first state nesting record for a pair of Mountain Bluebirds (a Mountain/Eastern mix nested in 1986) occurred this summer in Marshall County.

Other species of note this summer include: a Tricolored Heron making a brief appearance in a flooded area near Crane Creek in western Carver County; three White-faced Ibises in Martin County, only the second summer record in 10+ years; a Greater White-fronted Goose lingering in St. Louis County till early June; Northern Bobwhites again near Caledonia in Houston County; a Rufous Hummingbird at a feeder in Chisago County; a Scissor-tailed Flycatcher hob-nobbing with a Burrowing Owl in Rock County; a Bewick's Wren appearing for a couple of weeks in Sherburne County; a couple of singing male Sprague's Pipits north of Roseau in Roseau County; a White-crowned Sparrow in early July in Blue Earth County, only the second mid-summer record for the state; a Harris' Sparrow with a similar problem summering in Brown County; and, of course, the explosion of House Finches throughout southern Minnesota.

As in any year, some species stood out as being unusually abundant or scarce this summer. Several waterbirds such as American White Pelican, Redhead, Lesser Scaup, Hooded Merganser, Ruddy Duck, Caspian Tern and Forster's Tern were more common than usual; in contrast, the Great Blue Heron, Wood Duck, and many shorebirds were unusually scarce. Following the pattern of recent years, many raptors continued to increase in numbers; most notable of these were Turkey Vulture, Osprey, Bald Eagle, and Peregrine Falcon. One exception for raptors was the American Kestrel, which unexpectedly declined this summer following several years of gradually increasing reports. Other species for which there was a notable increase in reports included Sandhill Crane, Black-billed Magpie, Northern Mockingbird, Black-and-white Warbler, Lark Sparrow, and Pine Siskin. Species with notable declines included Rock Dove, Grasshopper Sparrow, Bobolink, Red-winged Blackbird, and House Sparrow. Finally, there were nine species worth mentioning because they were not reported at all this summer; Snowy Egret, Little Blue Heron, Piping Plover, Willet, Black-bel-

lied Plover, Lesser Golden-Plover, Three-toed Woodpecker, Yellow-breasted Chat and Rusty Blackbird. All of these species had been recorded in six or more of the previous ten summers. Most disturbing is the decline of the Piping Plover; this is the first time in who knows how many years that this species has not been reported!

The format for the species accounts is the same as the past several years. Breeding records are classified based on the criteria found in ***The Loon*** 58:22 or in Green and Janssen (*Minnesota Birds,* p. 7). Counties for which positive breeding is documented for the first time since 1970 are in italics and identified as such according to updated versions of Janssen and Simonson's breeding maps (***The Loon*** 56:167-186, 219-239, 57:15-34). Bold face indicates a county of first or unusual occurrence or an unusual species and date.

A final thanks to all of the summer season reporters who make it possible to document avian distribution and migration. Thanks also to Kim Eckert for his assistance in preparing this report.

Common Loon

Nested in St. Louis, Aitkin, Crow Wing, Anoka; probable nesting in Beltrami, Becker, Todd, Morrison. Seen in 21 other counties south to a line through Clay, Stearns, Hennepin.

Pied-billed Grebe

Nested in Clay, Anoka, *Rice* FKS; probable nesting in Hubbard, Otter Tail, Le Sueur, Steele. Seen in 25 other counties in all regions except northeast; scarce in west central and southwest.

Horned Grebe

Only report from Roseau.

Red-necked Grebe

Nested in Lake of the Woods, Clearwater, *Steele* AP; probable nesting in Clay, Becker, Otter Tail, Crow Wing. Seen in eight other counties in northwest and north-central plus Todd, Hennepin.

Eared Grebe

More reports than usual from east; nested in *Steele* AP and seen in Anoka KB, Hennepin mob, Winona AP, CS. Also seen in 10 counties within western range.

Western Grebe

Nested in *Steele* FKS, AP; seen in 12 other counties as far east as Isanti RJ, Hennepin OJ, Dakota AP, 6/3-8 Winona mob.

American White Pelican

Many reports for second straight year. Nested in Lake of the Woods; seen in 29 counties throughout state as far east as St. Louis, Aitkin, Rice, Freeborn.

Double-crested Cormorant

Nested in Lake of the Woods, *Rice* AP; seen in 36 other counties statewide.

American Bittern

Observed in 18 counties as far south as Lac Qui Parle, Meeker, Hennepin; plus Faribault GS.

Least Bittern

Seen in Renville, Sherburne, Anoka, Hennepin, Carver, Goodhue, Houston.

Great Blue Heron

Fewer reports than usual. Nested in Hubbard, Olmsted, Brown JS; seen in 44 other counties statewide.

Great Egret

Seen in 25 southern counties plus Marshall, Itasca, Clay, Becker, Otter Tail.

TRICOLORED HERON

One bird observed on 7/28-29 in Carver (***The Loon*** 62:233).

Cattle Egret

Several reports; 7/15 Grant MO, 7/21-29 Carver mob, 7/22-24 McLeod PS, RJ.

Green-backed Heron

Nested in Rice; seen in 39 other counties statewide as far north as Marshall, Itasca, Lake DPV.

Black-crowned Night-Heron

No breeding reported; seen in 20 counties as far north as Roseau in west and Sherburne in east.

Yellow-crowned Night-Heron

Only report: 6/1 Schmitt Lake, Dakota Co. AP.

WHITE-FACED IBIS
Three birds seen near Fairmont, Martin Co., **6/9** KH, DO; in past ten years, only one other ibis record in summer (1986).

Tundra Swan
Two reports: **6/16** Pennington RJ, **6/9** Polk (four) DJ.

Greater White-Fronted Goose
One late individual observed **6/9** St. Louis BS; **only second summer record for state.**

Snow Goose
Summering flock of at least ten in **Redwood** KE, RJ; also **6/18** Lyon HK, **6/7** Olmsted (two) AP.

Canada Goose
Nested in *Clearwater* AB, *Crow Wing* JS/MN, *Pipestone* JP, Clay, Hubbard, Washington; probable nesting in nine counties. Seen in 29 other counties statewide.

Wood Duck
Fewer reports than past three years. Nested in eight counties, probable nesting in eight; seen in 28 other counties statewide.

Green-winged Teal
Nested in Aitkin AB; also seen in Marshall, Clearwater, Clay, Wilkin, Otter Tail, Hennepin, Dakota, Winona.

American Black Duck
Seen in Roseau, Marshall, St. Louis, Lake, Cook, Chisago AB, Goodhue KB.

Mallard
Nested in Clay, Crow Wing, Le Sueur, Martin; probable nesting in eight counties. Seen in 40 other counties statewide.

Northern Pintail
Seen in Aitkin, Roseau, Marshall, Wilkin, Otter Tail, Lyon, Sibley, Hennepin.

Blue-winged Teal
Relatively few reports. Nested in *Aitkin* WN, Hennepin, Le Sueur, Pipestone; seen in 32 other counties statewide.

Northern Shoveler
Seen in 16 counties as far east as Clearwater in the north and Isanti, Winona in the south.

Gadwall
Seen in eight western counties plus Renville, Sibley, Blue Earth, Waseca, Hennepin, Washington.

American Wigeon
Seen in nine Northern counties including Clay, Wilkin, Otter Tail; plus Lyon HK, 7/23 Hennepin SC.

Canvasback
Nested in Hennepin; seen in 9 other western counties.

Redhead
More reports than usual. Nested in Anoka; probable breeding in Le Sueur. Seen in 18 other counties as far east as Aitkin, Winona CS.

Ring-necked Duck
Nested in Crow Wing, Aitkin; probable nesting in Clearwater, Cook. Seen in nine other northern counties plus Sherburne, Meeker, Anoka, Hennepin, Winona.

Lesser Scaup
More reports than usual; seen in 13 scattered counties in all regions except southwest.

Surf Scoter
Late migrant: 6/9 Paradise Beach, Cook Co. HT.

Common Goldeneye
Nested in Koochiching, Cass; probable nesting in Becker, St. Louis, Cook. Also seen in Mahnomen, Otter Tail, Beltrami, Lake.

Bufflehead
Two reports: Marshall DBl, 7/21 Clay MO.

Hooded Merganser
Many reports, similar to last year. Nested in Hubbard, Aitkin, Nicollet; probable breeding in Clearwater, Becker, St. Louis, Cook. Seen in 14 other counties in all regions except west-central and southwest.

Common Merganser
Seen in Koochiching, Beltrami, Cass, Hubbard, Lake, Cook.

Red-breasted Merganser
Observed away from Lake Superior in

Young Broad-winged Hawk at nest, June 1990, Blaine, Anoka County. Photo by David Mathews.

Clearwater and Cass (no dates, DBl); also seen in St. Louis, Lake, Cook.

Ruddy Duck

More reports than usual; nested in *Pipestone* JP, *Rice* FKS. Seen in 22 other counties within range plus Winona AP.

Turkey Vulture

Many reports, especially from south and west of usual range. Seen in **18** Southern counties including 6/2, 3, 10 Lac Qui Parle CMB, FE; 7/23 Murray ND; 6/9, 7/14, 21 Rock KE, ND; 6/11 Nobles ND. Also seen in 13 northern counties.

Osprey

Numbers continue to increase. Nested in Hubbard, Crow Wing, Aitkin; probable nesting in six counties including **Blue Earth** JSc, **Carver, Winona** (Prairie I., CS). Seen in 16 other northern counties including Clay, plus Sherburne, Washington, Rice, Goodhue, Olmsted.

Bald Eagle
Reports gradually increasing. Nested in *Chippewa* CMB, *Isanti* KB, *Anoka* KB; probable nesting in Becker, Otter Tail. Also seen in 12 northern counties plus Sherburne, Dakota, Goodhue, Houston, 7/27,29 Murray ND.

Northern Harrier
Seen in 31 counties in all regions.

Sharp-shinned Hawk
More reports than usual. Probable breeding in Polk, St. Louis; also seen in 12 Northern counties plus Sherburne SNWR, 7/1 Dakota SC, 6/26 Brown JS, Houston (many dates; possibly Cooper's?) EMF.

Cooper's Hawk
Nested in Hennepin, Ramsey; probable nesting in Olmsted. Seen in ten other counties as far north as Clearwater.

Northern Goshawk
Nested in *St. Louis* KB; also seen in Aitkin, Cook.

Red-shouldered Hawk
Nested in Anoka; probable nesting in Otter Tail, Washington. Also seen in Clearwater, Aitkin, Morrison, Isanti, Sherburne, Ramsey, Goodhue.

Broad-winged Hawk
Nested in Anoka, Winona; probable nesting in Clearwater, Otter Tail, Crow Wing. Seen in 16 other counties as far south as a line through Becker, Hennepin; plus Brown.

Swainson's Hawk
Probable nesting in Fillmore; seen in 13 other southern counties plus Polk.

Red-tailed Hawk
Probable breeding in Washington, Rice; seen in 52 additional counties statewide.

American Kestrel
Fewer reports than in recent years. Nested in Le Sueur; probable nesting in Otter Tail, Aitkin, Dakota. Seen in 49 other counties statewide.

Merlin
Many reports from St. Louis (probable breeding), Lake, Cook, Itasca.

Peregrine Falcon
Once again, good news; report from Midwest Peregrine Falcon Restoration Project (P. Redig, H. Tordoff) indicates increased breeding activity throughout Midwest. Successful nesting in Hennepin, Ramsey, *Washington*, Lake; probable breeding in Cook. Non-breeding territorial pair in Duluth, single territorial birds in Itasca, Olmsted. Also seen in Anoka WL, Aitkin WN.

Gray Partridge
Nested in Nobles, Le Sueur, Dodge, *Waseca* AB, *Fillmore* CH; seen in 25 other counties as far north as a line through Pennington, Morrison.

Ring-necked Pheasant
Nested in *Brown* JS, Le Sueur, Rice; probable breeding in Otter Tail, Swift, Fillmore. Seen in 33 other counties north to a line through Polk, Hubbard, Crow Wing, Chisago.

Spruce Grouse
Nested in Lake of the Woods, Itasca; also seen in Lake.

Ruffed Grouse
Nested in Beltrami, Lake, Aitkin, Mille Lacs; probable nesting in five other counties. Seen in nine additional counties within range.

Greater Prairie-Chicken
Only reports from Wilkin, Clay.

Sharp-tailed Grouse
Nested in Aitkin; also seen in Clearwater, Beltrami, St. Louis.

Wild Turkey
Observed in Houston, Winona, Fillmore, Olmsted.

Northern Bobwhite
Wild birds seen near Caledonia, Houston Co. KE, PS; only second summer record in seven years.

Yellow Rail
More numerous than in past two years. Nested in *Aitkin* WN; also heard near Bemidji, Beltrami Co. DJ.

Virginia Rail
Nested in Aitkin; probable nesting in Polk.

Seen in 11 other counties as far north as Marshall; no reports from northeast.

Sora
Probable breeding in Polk, Hennepin; seen in 27 other counties in all regions except northeast and west central.

Common Moorhen
Only report: nested in Houston.

American Coot
Nested in *Clearwater* AB, Anoka, Carver, Rice, *Faribault* GS; probable nesting in Otter Tail, Sibley, Le Sueur. Seen in 24 other counties in all regions except northeast.

Sandhill Crane
More reports than usual. Nested in Anoka; seen in nine other counties within range plus 6/7 **Murray** PL, 7/15 **Redwood** KE et al.

Semipalmated Plover
Only records: 6/9 Ramsey, 7/20 Stearns, 7/21 Wilkin.

Killdeer
Fewer reports than usual. Nested in *Isanti* MDP, Le Sueur, Fillmore; probable nesting in Cook, Becker, Otter Tail, Stearns. Seen in 49 other counties statewide.

American Avocet
Only two records: nested in Clearwater AB, seen 7/4 Olmsted AP.

Greater Yellowlegs
Fall migrants seen in 13 counties throughout state; early migrant 6/30 Clearwater.

Lesser Yellowlegs
Fall records for 31 counties statewide; early migrants 6/24 Wilkin, Otter Tail, Clay, and Becker.

Solitary Sandpiper
Seen in 21 counties statewide; late migrant 6/6 Olmsted, early migrant 7/6 Goodhue.

Spotted Sandpiper
Nested in *Olmsted* AP; seen in 35 other counties statewide.

Upland Sandpiper
Nested in Nobles; probable nesting in Pipestone. Seen in 19 other counties in all regions except northeast.

Whimbrel
One bird 6/7 Duluth FL.

Hudsonian Godwit
Only record: 6/6 Lyon HK.

Marbled Godwit
Only half the usual number of reports; seen in Marshall, Pennington, Mahnomen, Clay, Otter Tail, Lac Qui Parle.

Ruddy Turnstone
Only records: 6/7 St. Louis, 7/26 Pennington.

Sanderling
All records: 6/7 Duluth, **6/20** Goodhue KB; 7/20 Rock and Stearns, 7/26 Pennington.

Semipalmated Sandpiper
Seen in 15 counties in all regions except northeast and southwest; late migrant 6/9 Ramsey, early migrant 7/4 Winona.

Least Sandpiper
Observed in 20 counties in all regions except northeast and southwest; late migrant 6/4 Winona, early migrant 7/2 Polk.

White-rumped Sandpiper
Only records: 6/5 Le Sueur, 6/7,9 Dakota, 7/21 Lac Qui Parle, 7/30 Olmsted.

Baird's Sandpiper
All reports: 7/20 Stearns, St. Louis, and Pennington; 7/21 Clearwater, 7/23 Winona, 7/30 Olmsted.

Pectoral Sandpiper
Seen in 20 counties in all regions except northeast and southwest; late migrant 6/6 Olmsted, early migrant 7/8 Wilkin.

Dunlin
Only reports: 6/7,9 Dakota.

Stilt Sandpiper
Fall migrants seen in ten counties; early migrant 7/7 Lac Qui Parle.

Buff-breasted Sandpiper
All records: 7/25 St. Louis, 7/27 Dakota.

Short-billed Dowitcher
Early migrant 7/4 Winona; fall migrants also seen in Marshall, Polk, Pennington, Clay, Wilkin, Stearns, Rice.

Common Snipe
Nested in *Morrison* AB; seen in 19 other counties as far south as Brown, Le Sueur.

American Woodcock
Fewer reports than usual. Nested in St. Louis, Lake; Probable nesting in Cook. Also seen in Clearwater, Itasca, Aitkin, Morrison, Mille Lacs, Hennepin, Brown.

Wilson's Phalarope
Breeding reports away from usual range; nested in *Anoka* KB, probable nesting in Wright (***The Loon*** 62:156). Also seen in Hennepin, Isanti, 6/7 St. Louis; plus ten counties within range.

Red-necked Phalarope
Only records: 6/3-4 Winona, **7/15** Big Stone PS.

Franklin's Gull
Seen in Roseau, Lake of the Woods, Marshall, Beltrami, Pennington, Clearwater, Otter Tail, Pipestone, Nobles, Blue Earth, 6/3 Winona, 6/8 St. Louis PS.

Bonaparte's Gull
All reports: 6/9 Washington, 7/21,31 Crow Wing, 7/21 Aitkin, 7/28 Lake of the Woods.

Ring-billed Gull
Probable nesting in Becker; 8,224 pairs in Duluth (about same as 1989, BPg). Seen in 36 other counties in all regions except southwest.

Herring Gull
Seen in Lake of the Woods, Beltrami, Koochiching, St. Louis, Lake, Cook, Cass, Morrison, Carver, Goodhue.

Caspian Tern
Many more reports than usual. Spring migrants seen in seven southern counties; late migrants 6/10,17 Wright. Present all summer in Washington DS, Goodhue KB. Early migrants **7/4** Chisago AB (migrant or summering?), 7/28 Redwood. Also seen in 11 northern counties.

Common Tern
Seen in Lake of the Woods, Becker, Cass, Crow Wing, St. Louis, Morrison, Washington (no date, WL; Forster's?).

Forster's Tern
Many more reports than usual. Nested in *Anoka* KB; probable nesting in Otter Tail. Seen in 29 other counties as far east as Beltrami, Hubbard, Kanabec in north and Goodhue, Winona in south.

Black Tern
Nested in Itasca, Aitkin, Crow Wing, *Morrison* PDD, Anoka; probable nesting in Otter Tail, Stearns. Seen in 39 other counties in all regions except northeast.

Rock Dove
Fewer reports than in recent years. Breeding recorded in Pennington; probable breeding in Fillmore. Seen in 37 other counties statewide.

Mourning Dove
Nested in Brown, Le Sueur, Washington, *Fillmore* CH; probable nesting in Becker, Aitkin, Anoka, Olmsted. Seen in 50 other counties statewide.

Black-billed Cuckoo
Gradual increase in reports over last seven years. Nested in Le Sueur, Goodhue, *Winona* CS; seen in 47 other counties statewide.

Yellow-billed Cuckoo
Nested in Brown. Seen in 20 other counties as far north as Otter Tail, Kanabec; plus Clearwater AB, Itasca DA, 7/1 Lake BBa.

BARN OWL
Nested in *Dakota* (***The Loon*** 62:231); **first nesting in state since 1963.**

Eastern Screech-Owl
Only reports from Rock, Martin, Lyon, Le Sueur.

Great Horned Owl
Nested in Traverse, Sherburne, Anoka; probable nesting in Lake. Seen in 30 other counties statewide.

Burrowing Owl
Only reports from near Blue Mounds S.P., Rock Co. mob.

Barred Owl
Nested in Brown; probable nesting in Rice. Seen in 15 other counties within north-central, south-central, and eastern regions.

Great Gray Owl
Probable breeding in Sax-Zim bog area, St. Louis Co. Also seen SE of Fourtown, Beltrami Co. DJ; Tamarac NWR, Becker Co., BK, DBl; Whyte Rd., Lake Co., SW/MS.

Long-eared Owl
Only reports from Clearwater, Lake.

Short-eared Owl
Only report: 6/9 Marshall KSS.

Boreal Owl
Nested again in St. Louis, Lake, Cook.

Northern Saw-whet Owl
Only reports from Cook, Polk.

Common Nighthawk
Breeding recorded in St. Louis; probable breeding in Stearns. Seen in 30 other counties statewide.

Whip-poor-will
Nested in Houston (***The Loon*** 62:158-159); also reported from Marshall, Polk, Beltrami, Itasca, Aitkin, Lake, Cook, Sherburne, Anoka, Nicollet, Fillmore.

Chimney Swift
Probable nesting in Aitkin; seen in 48 other counties statewide.

Ruby-throated Hummingbird
Nested in Olmsted; probable nesting in Becker. Seen in 34 other counties statewide.

RUFOUS HUMMINGBIRD
An individual at a feeder in North Branch, Chisago Co., 7/17-19 (***The Loon*** 62:170).

Belted Kingfisher
Probable nesting in Lake, Otter Tail, Olmsted; seen in 42 other counties statewide.

Red-headed Woodpecker
Probable nesting in Anoka, Le Sueur, Waseca, Olmsted; seen in 38 other counties in all regions except northeast.

Red-bellied Woodpecker
Probable breeding in Otter Tail, Aitkin, Anoka, Le Sueur, Blue Earth; seen in 22 other southern counties plus Carlton DBe.

Yellow-bellied Sapsucker
Nested in St. Louis, Hubbard, Brown, *Nicollet* JS, *Winona* CS; probable nesting in Clearwater, Crow Wing. Seen in 25 other counties in all regions except east-central.

Downy Woodpecker
Nested in Pennington, Brown, *Morrison* PDD; probable nesting in Otter Tail, Crow Wing, Anoka, Washington. Seen in 43 other counties statewide.

Hairy Woodpecker
Nested in Crow Wing, Brown; probable nesting in Clay, Hubbard, Cass, Cook, Anoka. Seen in 33 other counties statewide.

Black-backed Woodpecker
Seen in Clearwater, Lake, Cook.

Northern Flicker
Nested in Anoka; probable nesting in Cook, Otter Tail, Crow Wing, Stearns, Le Sueur. Seen in 50 other counties statewide.

Pileated Woodpecker
Nested in *Lake of the Woods* KSS, Aitkin; probable nesting in Crow Wing. Seen in 35 other counties in all regions, including Lyon in southwest.

Olive-sided Flycatcher
Late migrants 6/4 Brown and Anoka, 6/6 Goodhue; seen in 11 northern counties within range.

Eastern Wood-Pewee
Nested in Anoka; seen in 39 other counties statewide.

Yellow-bellied Flycatcher
Seen in Beltrami, Aitkin, Lake, Cook; plus late migrants 6/4 Brown and Hennepin, no date Winona.

Acadian Flycatcher
Seen in Houston (Beaver Creek Valley S.P.), Rice (Nerstrand Woods S.P.), Scott (Murphy-Hanrehan Co.P.), Hennepin (Elm Creek Co.P.).

Alder Flycatcher
Seen in 18 Northern counties plus Isanti, Anoka, Washington. Spring migrants in Hennepin, Dakota, Brown, Blue Earth; late migrant 6/7 Goodhue.

Willow Flycatcher
Seen in 19 counties as far north as Norman in west and Sherburne in east.

Least Flycatcher
Nested in Brown; seen in 40 other counties statewide.

Eastern Phoebe
Nested in Pennington, Clearwater, Crow Wing, *Isanti* KB; probable nesting in Becker, Anoka, Rice. Seen in 34 other counties statewide.

Great Crested Flycatcher
Nested in Hubbard; probable nesting in Crow Wing, Washington, Le Sueur. Seen in 48 other counties statewide including 6/22 Cook KMH in northeast.

Western Kingbird
Seen in 12 western counties and six central and east central counties; plus Lake of the Woods, Clearwater, Le Sueur, 6/10 Duluth JHg.

Eastern Kingbird
Nested in Brown; probable nesting in Clearwater, Crow Wing, Olmsted, Winona. Seen in 54 other counties statewide.

SCISSOR-TAILED FLYCATCHER
First summer record since 1979; one bird seen 7/21 Rock (***The Loon*** 62:227).

Horned Lark
Seen in 43 counties in all regions except northeast.

Purple Martin
Nested in Olmsted; probable nesting in Clearwater, Becker, Otter Tail, Pope, Le Sueur. Seen in 44 other counties statewide.

Tree Swallow
Nested in ten counties including *Nicollet* JS; probable nesting in four counties. Seen in 44 other counties statewide.

VIOLET-GREEN SWALLOW
Second record for the state; one individual seen at Claremont, Dodge Co., 7/9-14 (***The Loon*** 62:226-227).

Northern Rough-winged Swallow
Probable nesting in Clearwater, Otter Tail, Crow Wing; seen in 31 other counties south of Clearwater, plus Lake.

Bank Swallow
Probable nesting in Becker, Otter Tail, Crow Wing, Sherburne, Isanti; seen in 36 other counties statewide.

Cliff Swallow
Nested in Lake, Sherburne, Anoka; probable nesting in Cook, Otter Tail, Isanti, Fillmore. Seen in 43 other counties statewide.

Barn Swallow
Nested in Crow Wing, Le Sueur; probable nesting in Clearwater, Otter Tail, Anoka, Washington, Fillmore. Seen in 53 other counties statewide.

Gray Jay
Nested in *Lake* SS; also seen in Lake of the Woods, Beltrami, Koochiching, Clearwater, Itasca, Hubbard, St. Louis, Cook.

Blue Jay
Nested in six counties including *Crow Wing* JS/MN, *Martin* BB, *Faribault* GS; probable nesting in five counties. Seen in 45 other counties statewide.

Black-billed Magpie
More reports than usual. Nested in Aitkin; also seen in St. Louis, Beltrami, Mahnomen, Roseau, Lake of the Woods, Pennington, Marshall, Polk, Norman.

American Crow
Nested in Anoka, Brown; probable nesting in Otter Tail, Crow Wing. Seen in 50 other counties statewide.

Common Raven
Nested in *Isanti* JH — **first nesting record for southern half of state.** Probable nesting in Aitkin; seen in 12 other northern counties.

Black-capped Chickadee
Nested in seven counties including *Murray*

Bewick's Wren, 9 June 1990, Clear Lake, Sherburne County. Photo by Kim Risen.

ND; probable nesting in five counties. Seen in 38 other counties statewide.

Boreal Chickadee
Reports from Cook, Lake, Itasca, Aitkin.

Tufted Titmouse
Only report from Houston.

Red-breasted Nuthatch
Probable nesting in Crow Wing; seen in nine other north-central and northeast counties plus Anoka, Washington.

White-breasted Nuthatch
Nested in Clay, Crow Wing, Le Sueur, *Fillmore* CH; probable nesting in Pennington, Otter Tail, Anoka, Olmsted. Seen in 40 other counties statewide.

Brown Creeper
Seen in Cook, Itasca, Clearwater, Hubbard, Otter Tail, Hennepin, Goodhue, Brown.

BEWICK'S WREN
First summer record since 1983; single bird in Clear Lake, Sherburne Co., **6/5-25** (***The Loon*** 62:154).

House Wren
Nested in Crow Wing, Anoka, Brown, Le Sueur, Olmsted; probable nesting in five counties. Seen in 48 other counties statewide.

Winter Wren
Nested in *Itasca* AB; also seen in Clearwater, Hubbard, St. Louis, Lake, Cook.

Sedge Wren
Seen in 41 counties statewide.

Marsh Wren
Seen in 36 counties in all regions except northeast.

Golden-crowned Kinglet
Seen in Clearwater, Hubbard, Itasca, Aitkin, St. Louis, Lake, Cook.

Ruby-crowned Kinglet
Only reports from Beltrami, St. Louis, Lake, Cook.

Blue-gray Gnatcatcher
Nested in Otter Tail, Brown, *Blue Earth* LF; seen in 14 other southern counties within range.

Eastern Bluebird
Nested in eight counties, probable nesting in six; seen in 40 other counties statewide.

MOUNTAIN BLUEBIRD
Several records, **including first state nesting record** for a Mountain Bluebird pair, *Marshall* Co. (***The Loon*** 62:160-161). A mixed pair (male Mountain, female Eastern) nested

Bell's Vireo, 1 June 1990. Eagle Lake Trail, Mankato, Blue Earth County.

Bell's Vireo nest, 1 June 1990, Eagle Lake Trail, Mankato, Blue Earth County. Photos by Brad Bolduan.

near the western edge of *Polk* DJ; at least one bird also reported north of Itasca State Park in Clearwater DBl.

Veery
Probable nesting in Anoka, Rice. Seen in 31 other counties throughout north and east; absent in southwest and scarce in central and west central regions.

Gray-cheeked Thrush
Late migrant **6/6** Washington WL.

Swainson's Thrush
Seen in Itasca, Lake, Cook; late migrant 6/1 Hennepin.

Hermit Thrush
Seen in Beltrami, Koochiching, Clearwater, Itasca, Hubbard, Aitkin, St. Louis, Lake, Cook.

Wood Thrush
Seen in 18 counties within range as far north as Cook SW/MS and as far west as Lac Qui Parle CMB, PS.

American Robin
Nested in 12 counties including *Isanti* MDP, *Blue Earth* BB; probable nesting in three counties. Seen in 43 other counties statewide.

Gray Catbird
Nested in Morrison, Hennepin, Washington, Le Sueur, Wabasha; probable nesting in Becker, Anoka, Rice. Seen in 47 other counties statewide.

Northern Mockingbird
More reports than usual; June sightings in Cook KMH, Lake SW/MS, Lac Qui Parle CMB, Le Sueur RJ, PS.

Brown Thrasher
Nested in *Aitkin* WN, *Isanti* MDP, *Winona* CS, Brown, Le Sueur; probable nesting in Hennepin, Washington. Seen in 39 other counties statewide.

SPRAGUE'S PIPIT
At least two singing males north of Roseau, **Roseau Co.,** 7/28-29 (***The Loon*** 62:167).

Cedar Waxwing
Nested in Crow Wing, *Morrison* PDD, *Isanti* MDP, Anoka; seen in 45 other counties statewide.

Loggerhead Shrike
Nested in *Rice* KB; probable nesting in Clay, Brown, Dakota, Goodhue. Also seen in Lac Qui Parle, Morrison, Washington, Blue Earth, Le Sueur, Olmsted.

European Starling
Nested in Le Sueur; probable nesting in Anoka, Fillmore. Seen in 42 other counties statewide.

Bell's Vireo
Breeding recorded in Wabasha, probable breeding in Winona; nest built but abandoned in **Blue Earth** BB. Also seen in Dakota.

Solitary Vireo
Probable breeding in Aitkin; also seen in Cook, Lake, St. Louis, Hubbard, Crow Wing.

Yellow-throated Vireo
Nested in Crow Wing, Anoka; seen in 29 other counties in all regions except northeast and southwest.

Warbling Vireo
Nested in Crow Wing; probable nesting in Olmsted. Seen in 46 other counties statewide.

Philadelphia Vireo
Only reports: Hubbard JL (no date — late migrant?), Cook.

Red-eyed Vireo
Nested in Crow Wing, Anoka; probable nesting in St. Louis, Becker. Seen in 42 other counties statewide.

Blue-winged Warbler
Seen in Nicollet LF, Scott, Ramsey, Rice, Goodhue, Winona, Houston.

Golden-winged Warbler
Probable nesting in Anoka. Seen in 11 Northern counties plus Isanti; Brewster's Warbler seen 6/1 Otter Tail SDM.

Tennessee Warbler
Seen in Lake of the Woods, Clearwater, Hubbard, Lake, Cook; late migrants 6/1 Lac Qui Parle and Hennepin, early migrants **7/16** Anoka, **7/19** Chisago.

Nashville Warbler
Seen in nine north-central and northeast counties plus Chisago, Anoka, Washington.

Northern Parula
Reports from Beltrami, Clearwater, Hubbard, Itasca, Aitkin, Lake, Cook.

Yellow Warbler
Nested in *Aitkin* WN, Hennepin, Brown; probable nesting in Becker, Otter Tail, Crow Wing, Le Sueur. Seen in 47 other counties statewide.

Chestnut-sided Warbler
Nested in Aitkin; probable nesting in St. Louis, Crow Wing. Seen in 11 other Northern counties plus Isanti, Chisago, Anoka.

Magnolia Warbler
Only records: St. Louis, Lake, Cook.

Cape May Warbler
Seen in Itasca, Lake, Cook.

Black-throated Blue Warbler
Seen in Lake, Cook; late migrant? 6/3 Itasca DA.

Yellow-rumped Warbler
Probable nesting in St. Louis; also seen in Beltrami, Clearwater, Hubbard, Itasca, Aitkin, Lake, Cook.

Black-throated Green Warbler
Seen in seven north-central and northeast counties plus Pennington, Anoka.

Blackburnian Warbler
Reports from Beltrami, Clearwater, Itasca, Aitkin, St. Louis, Lake, Cook, Anoka.

Pine Warbler
Probable breeding in Becker, Aitkin. Seen in six other Northern counties including Lake; plus Stearns, Isanti, Washington.

Palm Warbler
Only record: 6/16 Lake SW/MS.

Bay-breasted Warbler
Singing male at Boot Lake, **Anoka** Co., **6/30,** WL; also seen in Cook.

Cerulean Warbler
Seen in Houston, Goodhue, Rice, Scott, Brown, Otter Tail SDM.

Black-and-white Warbler
More reports than usual. Nested in *Winona* CS — **first breding record in southeast in many years.** Also seen in 14 Northern counties as far west as Becker; plus Isanti, Sherburne, Chisago, Anoka.

American Redstart
Nested in Rice, probable nesting in Becker, Crow Wing, Anoka, Brown. Seen in 29 other eastern and central counties plus Clay, Otter Tail in west.

Prothonotary Warbler
Nested in Brown; probable nesting in Hennepin, Goodhue. Also seen in Le Sueur, Winona, Nicollet, Rice, 6/13,15 **Otter Tail** SDM.

Ovenbird
Nested in *Isanti* JH; probable nesting in Aitkin. Seen in 27 other counties in all regions except southwest.

Northern Waterthrush
Seen in Cook, Lake, Itasca, Aitkin, Anoka; early migrant **7/25** Hennepin DB.

Louisiana Waterthrush
Only records from Rice (Nerstrand Woods State Park), Houston.

Kentucky Warbler
One male present near Hastings, Washington Co., 6/14-25 (***The Loon*** 62:162).

Connecticut Warbler
Relatively few reports; seen in Beltrami, Itasca, Aitkin, Lake, Cook.

Mourning Warbler
Seen in 11 north-central and northeast counties plus Otter Tail, Kanabec, Isanti, Chisago, Anoka, 6/20 Stearns BR; late migrants 6/1,4 Hennepin.

Common Yellowthroat
Nested in Anoka; probable nesting in Becker, Hubbard, Washington, Le Sueur. Seen in 56 other counties statewide.

Hooded Warbler
One report from Murphy-Hanrehan County Park, Scott Co.

Wilson's Warbler
Reports from Lake, Cook; also 6/1 Itasca (late migrant?).

Canada Warbler
Seen in Clearwater, Itasca, Lake, Cook; late migrant **6/15** Rice KB.

Scarlet Tanager
Probable nesting in Norman; seen in 29 other counties within range plus 7/20 Rock MB.

Northern Cardinal
Nested in Hennepin, Washington; probable nesting in Olmsted, Fillmore. Seen in 22 other Southern counties plus Kanabec; also near Bemidji, **Beltrami** Co., 6/28 (fide DJ) and Two Harbors, **Lake** Co., 7/4 DPV.

Rose-breasted Grosbeak
Nested in Brown; probable nesting in Marshall, Crow Wing, Blue Earth, Le Sueur, Olmsted. Seen in 40 other counties statewide.

Blue Grosbeak
Nested in Murray; also seen in Rock, Pipestone, Nobles, 7/21 **Renville** mob.

Indigo Bunting
Probable breeding in Goodhue; seen in 51 other counties statewide.

Dickcissel
Fewer reports than past two years, although still abundant. Seen in 42 counties as far north as Clay, Becker, Wadena, Mille Lacs.

Rufous-sided Towhee
Seen in 12 counties within range along diagonal from Beltrami to Houston; plus Brown, Nicollet, Blue Earth.

Chipping Sparrow
Nested in five counties, probable nesting in six; seen in 45 other counties statewide.

Clay-colored Sparrow
Nested in *Marshall* KSS, *Aitkin* WN, *Brown* JS; probable nesting in Crow Wing. Seen in 28 other counties statewide, although absent in southernmost tier of counties.

Field Sparrow
Nested in Brown, *Washington* WL; probable breeding in Anoka. Seen in 27 other counties as far north as Clay, Becker, Isanti.

Vesper Sparrow
Nested in Murray, Le Sueur, Fillmore, Anoka, *Goodhue* KB, *Washington* WL; probable nesting in Polk. Seen in 48 other counties statewide including Lake (6/28-7/16 Isabella SW/MS) in northeast.

Lark Sparrow
Many more reports than usual. Nested in Anoka, probable nesting in Houston; also seen in Washington, Polk, Sibley, Nicollet, Clay, Renville, Marshall, Wabasha, Otter Tail, Becker, Le Sueur, Sherburne.

Savannah Sparrow
Nested in Clay, probable nesting in Stearns; seen in 45 other counties statewide.

Grasshopper Sparrow
Fewer reports than in previous two years. Nested in Brown; seen in 31 other counties as far northeast as a line through Beltrami, Hubbard, Washington.

Henslow's Sparrow
One singing bird 7/7 Kettledrummer Nature Conservancy area, **Wilkin** Co. MO; also seen in Winona (although numbers reported down at O.L. Kipp State Park).

Le Conte's Sparrow
Probable breeding in Aitkin; seen in 10 other Northern counties.

Sharp-tailed Sparrow
Reports from Marshall, Polk, Aitkin.

Song Sparrow
Nested in St. Louis, *Crow Wing* JS/MN, *Isanti* KB; probable nesting in Clay, Becker, Anoka, Olmsted, Fillmore. Seen in 51 other counties statewide.

Lincoln's Sparrow
Seen in Roseau, Itasca, Lake, Cook.

Swamp Sparrow
Nested in St. Louis; seen in 39 other counties statewide.

White-throated Sparrow
Probable breeding in Clearwater. Seen in

12 other northern counties plus Chisago; early migrants (?) **7/14, 17** Hennepin KB, OJ.

White-Crowned Sparrow
Second mid-summer record for state; 7/3 Minneopa State Park, Blue Earth Co. (***The Loon*** 62:230).

Harris' Sparrow
First summer record, 6/3 Flandrau State Park, Brown Co. (***The Loon*** 63:63).

Dark-eyed Junco
Reports from Lake of the Woods, Koochiching, Itasca, Lake, Cook.

Chestnut-collared Longspur
Seen at usual Felton Prairie site, Clay Co.

Bobolink
Fewer reports than in recent years. Probable breeding in Clay; seen in 40 other counties statewide.

Red-winged Blackbird
Relatively few reports. Nested in Anoka, Washington, Brown, Le Sueur; probable nesting in Becker, Crow Wing, Fillmore. Seen in 50 other counties statewide.

Eastern Meadowlark
Nested in *Le Sueur* EK. Seen in 26 other counties as far west as Beltrami, Otter Tail, Brown; plus one singing bird all summer in *Clay* MO.

Western Meadowlark
Observed in 52 counties throughout the state, although only Duluth in northeast.

Yellow-headed Blackbird
Nested in *Morrison* PDD, Anoka; probable nesting in Aitkin. Seen in 50 other counties statewide including Ely, St. Louis Co. SW/MS and 6/6 Cook OSL.

Brewer's Blackbird
Probable breeding in Lake of the Woods. Seen in 33 other counties as far south as Lyon, Le Sueur; no reports from northeast.

Common Grackle
Nested in Washington, Le Sueur, Martin; probable nesting in Becker, Olmsted. Seen in 54 other counties statewide.

Brown-headed Cowbird
Breeding reported in *Isanti* JH, Anoka, Hennepin, Washington, Dakota, Brown; probable breeding in Marshall. Parasitized species included Red-eyed Vireo, Yellow Warbler, Ovenbird, Common Yellowthroat, Northern Cardinal, Indigo Bunting, Chipping and Clay-colored Sparrow, Red-winged Blackbird. Seen in 45 other counties statewide.

Orchard Oriole
Probable nesting in Clay, Brown; seen in 13 other Southern counties plus Wilkin, Otter Tail, Norman, Polk.

Northern Oriole
Nested in Washington, Fillmore; probable nesting in eight counties. Seen in 47 other counties statewide.

Purple Finch
Probable nesting in Crow Wing; seen in 13 other Northern counties plus 6/24,26 Lac Qui Parle CMB, 6/14 Ramsey RH, Washington (no date) WL.

House Finch
Exponential growth in reports continues; seen in **21** counties as far north as Clay, Todd, Benton. Probable breeding in Hennepin, Olmsted, Mower, Houston.

Red Crossbill
A few more reports than the previous three years. Seen in Itasca, St. Louis, Cook, Lac Qui Parle CMB, Stearns BR, Anoka GP, KB.

White-winged Crossbill
Only report from St. Louis.

Pine Siskin
Many more reports than in 1989. Nested in Hennepin; also seen in 16 Northern counties plus Isanti, Ramsey, Lyon, Rice, Olmsted, Mower.

American Goldfinch
Nested in Brown, Le Sueur; probable nesting in Crow Wing, Washington. Seen in 57 other counties statewide.

Evening Grosbeak
Observed in eight north-central and northeast counties plus Becker.

House Sparrow

Fewer reports than in recent years. Nested in Brown, Le Sueur, Rice; probable nesting in Washington. Seen in 45 other counties statewide.

EURASIAN TREE SPARROW

First state record; one bird at a feeder in Eagan, Dakota Co., 6/27-7/6 (***The Loon*** 62:175-177).

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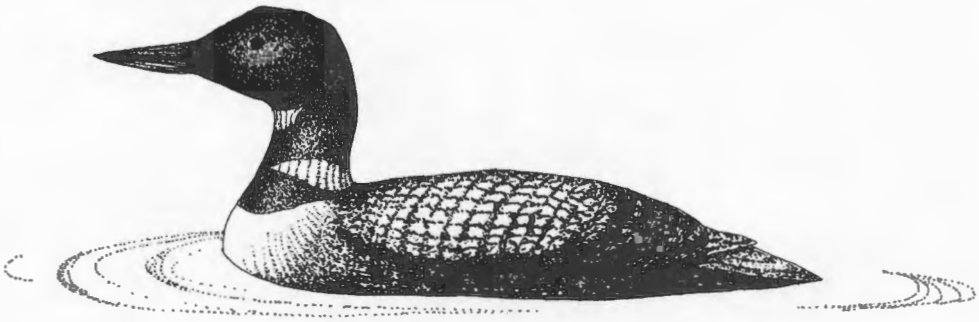
Corrections: ***The Loon*** 62:211, the American Kestrel listed as 3/9 Cook WP should read Merlin **3/9** Cook WP. Add Cinnamon Teal 5/10 Redwood RJ, one adult male.



NOTES OF INTEREST

LAKEWOOD PUMPING STATION CENSUS OF FALL MIGRATION — Again in 1990 the morning flight of migrants was monitored on a daily basis at the Lakewood Pumping Station in Duluth between 1 August and 31 October. (For an account of previous years' counts, see ***The Loon*** 62:99-105.) In all, there was coverage starting at dawn on 83 days, the number of hours covered totalled 167.75, and, since on some days multiple counters were involved, there were 236.5 observer-hours of coverage. During this time a total of 253,114 migrants was tallied, once again clear evidence that a lot of migrants other than raptors pass through Duluth on their way south each fall. (In 1988 and 1989, the other years of comparable coverage at Lakewood, the season totals were 239,872 and 262,101 respectively.) While our total of over a quarter of a million birds sounds impressive enough, it actually represents a disappointing fall migration. This is because 66,600 of these migrants were counted at times other than during early morning hours, and, if we are to fairly compare 1990 with the two previous seasons when the only coverage was during early and mid-morning, our adjusted total becomes a below-average 186,514 migrants. One period of such non-standard coverage fell on 14-15 September when an excellent flight of hawks was monitored at Lakewood by Mike Myers and Jon Peacock. On the 14th, from 12:20 to 6:35 P.M., they tallied 9405 hawks, 9195 of these Broad-wingeds. Then the next day, between 9:50 A.M. and 5:25 P.M., no fewer than 13,094 hawks, including 12,842 Broad-wingeds, flew past. But the most spectacular movement of migrants came during the evening of 26 August, when Mike Hendrickson was overwhelmed by an unprecedented movement of Common Nighthawks. Between 5:35 P.M. and darkness at 8:20 P.M., a minimum of 43,690 nighthawks was carefully documented during that amazing 2.75-hour period! The recorded total was not only as accurate as could reasonably be expected, but also virtually complete since no nighthawks were seen moving before coverage began at 5:35 P.M. (For a complete summary of this and other previously documented Common Nighthawk peaks in Duluth, see ***The Loon*** 62:68). Besides the three big Broad-winged and nighthawk days, there were other highlights worthy of note. There were five dates with morning counts of non-raptors above 10,000: 13,698 on 7 Oct., 13,202 on 19 Sept., 12,994 on 6 Oct., 10,787 on 5 Oct., and 10,610 on 26 Sept. During the three-day period 5-7 Oct., no fewer than 37,479 migrants were recorded; also impressive was the four-day movement 24-27 Sept. with 32,576 counted. But on the other hand, the migration was generally disappointing from August into mid-September, as it was again during the last half of October. Turning to specific birds, the following peaks were noteworthy:

Snow Goose — 194 unexpectedly early on 16 Sept.
Sharp-shinned Hawk — respectable Hawk Ridge-like totals were 267 (15 Oct.), 250 (6 Oct.) and 203 (23 Sept.).
American Kestrel — totals also reminiscent of Hawk Ridge were 116 (23 Sept.), 93 (5 Sept.) and 88 (22 Sept.).
Northern Flicker — 108 (19 Sept.).
Eastern Kingbird — 147 (26 Aug.) and 92 (1 Sept.).
Blue Jay — 3,268 (10 Sept.), 1,469 (16 Sept.) and 1,239 (20 Sept.).
American Crow — 2,415 (7 Oct.).
Eastern Bluebird — 58 (15 Oct.) and 42 (12 Oct.).
American Robin — 9,820 (7 Oct.), 9,275 (6 Oct.) and 8,060 (5 Oct.).
Cedar Waxwing — 2,255 (26 Aug.), 1,465 (30 Aug.) and 1,368 (1 Sept.).
warbler, sp. (mostly Palms and Yellow-rumpeds) — 9,420 (19 Sept.); these were late and down in numbers.
Dark-eyed Junco — 750 (12 Oct.).
blackbird, sp. — 2,377 (1 Sept.) and 1,902 (28 Aug.).
Purple Finch — 112 (1 Sept.).
Pine Siskin — way down in numbers with only one modest peak of 285 (15 Oct.).
Evening Grosbeak — 375 (17 Aug.), 245 (15 Oct.) and 204 (14 Aug.).
Besides the other primary counters (Dudley Edmondson, Laura Erickson, Mike Hendrickson, Mark Stensaas and Terry Wiens), I also wish to acknowledge the help of those assistants who helped on a regular basis without compensation: Barb Akre, Mary Gabrys, Esther Gesick, Kathy Hermes, Charlene Miller and Leata Pearson. This census was again made possible through funding provided by the Minnesota Ornithologists' Union who donated a share of their profits from the M.O.U. Birding Weekends. — **Kim Eckert, 8255 Congdon Blvd., Duluth, MN 55804.**

WESTERN TANAGER IN POLK COUNTY — During a Big Day in Polk County with David and Sharon Lambeth on 19 May 1990, a tanager was found near the north entrance to Tilberg Park on Cross Lake at approximately 5:00 P.M. After assembling in front of the bird, we had twenty additional seconds for study from about 25 feet. Lighting and contrast were poor as we looked toward the west under thick cirrus cloud overcast. We were close enough to notice feather tracts on the breast, which gave an initial impression of very faint streaking. All three observers agreed that it was definitely a tanager and we all saw the wing bars. One observer (SL) did not consider the possibility of Western Tanager during the actual observation and listed the bird as "tanager sp?" Observations were recorded on tape and field notes were written immediately after the sighting. The bird had a tanager bill with the lower mandible dull flesh in color. The face was very plain-looking. The head and face were drab olive yellow without any reddish hue. The darker greenish olive wings had two parallel wing bars that were distinct and whitish. The underparts were mostly yellowish, gradually becoming brighter yellow on the mid-breast, with pale yellow to whitish on the belly and vent. The back and rump were not seen and there were no vocalizations. Although the diagnostic contrast between the grayish back and the greenish nape of female Western Tanager could not be seen, other plumage characters were used to support the identification. The female Scarlet Tanager generally looks more greenish overall, including the under parts which are strongly yellow-green (Kaufman, 1988). Despite the limitation of poor contrast at Tilberg Park, yellowish tones were strongly evident on the under parts. A paler belly and less yellowish sides contrasting with brighter yellow on the mid-breast are supportive plumage criteria for Western Tanager. The face of Scarlet Tanager appears less plain in the field compared to Western Tanager, as it often shows a more obvious eye ring and pale lores. Immature Scarlet Tanagers may show wing bars in the fall, but these are rarely as wide or as distinct as those on the bird at Tilberg Park. Most discussions of wing bars on Scarlet Tanager (e.g. Kaufman, 1988) mention fall immatures as the cause of confusion. It is not generally appreciated that second-year birds, prior to their second prebasic molt, may continue

to show indistinct wing bars in the spring. The first prealternate molt of Scarlet Tanagers from February to May is partial and incomplete (Pyle et al., 1987). Such individuals would undergo complete molt to adult plumage (definitive basic) in the fall of their second year. Despite these caveats, our experience with tanagers and views of this bird from relatively close range led us to confidently conclude that it was a Western Tanager.

LITERATURE CITED

Kaufman, K. 1988. The Practiced Eye: Notes on female tanagers. Am. Birds 42:3-5.

Pyle, P., S.N.G. Howell, R.P. Yunick, and D.F. DeSante. 1987. Identification Guide to North American Passerines. Bolinas, California: Slate Creek Press.

Peder Svingen, 151 Bedford St. SE, Minneapolis, MN 55414 and David Lambeth, 1909 20th Ave. S., Grand Forks, ND 58201.

FIRST DECEMBER EASTERN PHOEBE — Gretchen and Roger Johnson reported an Eastern Phoebe found in a cemetery at the south end of Dresbach, Winona County on 15 December 1990 during the La Crosse Christmas Bird Count. Their description of the bird was submitted to me as follows: General body shape that of a flycatcher; larger than an Eastern Wood-Pewee, smaller than an Eastern Kingbird; a grayish-black head, back, wings and tail; a light yellowish belly and underparts; bill black; no eye-ring. "The bird was perched on a branch about 15 feet away from us, facing us most of the time, Roger observed briefly the tail wagging characteristics of an Eastern Phoebe." They viewed the bird for approximately eight minutes with 7X50 binoculars. On 16 December 1990 I went to this area, saw the bird and verified the identification by the Johnsons. The bird was not seen after this date. **Fred Lesher, 509 Winona St., La Crosse, WI 54603.**

Editor's Note: The previous late fall date for an Eastern Phoebe was 30 November 1986 of a single individual seen along the Mississippi River near the campus of the University of Minnesota.

SCISSOR-TAILED FLYCATCHER IN NORMAN COUNTY — On 26 September 1990, I found an adult Scissor-tailed Flycatcher (*Tyrannus forficatus*) in Section 22 of Rockwell Township, Norman County. The bird perched on telephone wires across the road from one of the Minnesota Nature Conservancy preserves. This area is approximately five miles west of Syre. The initial description was taken under harsh light conditions, looking SSE at approximately 3:00 P.M. with the sun shining through broken overcast skies. The dark bill appeared small for the size of the bird and, along with the shape of the head, recalled Vermilion Flycatcher. The head and nape were mostly gray, becoming paler on the throat, with an ill-defined dark wash through the lores. The back was slightly darker gray than the head while the very dark gray wings contrasted with the head and nape. There was a faint suggestion of wing bars formed by the buffy tips of the greater and median coverts. Under better light conditions, each primary and tertial was seen to be edged with pale buff on the lateral vane, highlighting individual feathers. The underparts were pale gray except for a distinct rosy wash on the flanks, rosy wing linings in flight, and whitish undertail coverts. The tail was longer than the entire length of the body. It was formed by elongated rectrices which appeared mostly black with bulbous tips, until the bird took flight. Then the deeply forked, black and white "scissor" pattern was obvious. The bird put on an impressive display while flycatching insects, returning to the wires again and again. I alerted residents of a nearby farm to the bird's presence as well as regional birders; observers searching on Saturday, 29 September were unable to relocate the bird. **Peder Svingen, 151 Bedford St. SE, Minneapolis, MN 55414.**

SUMMER RECORD FOR A HARRIS' SPARROW — On 3 June 1990 at Flandrau State Park in New Ulm in Brown County, I briefly saw the bird perched on top of a prickly ash clump in a grassy area with scattered trees. At a distance of about 25 feet, I saw the black face of the bird as it perched in plain view. On 20 July 1990, within 100 yards of the above mentioned area, I saw a large brownish sparrow perched on top of a sumac bush. From a distance of 25-30 feet I noted the pinkish legs and bill, a blotch of black extending over the face and ending on the chest where a necklace of brownish spots began and which also ran down along the sides. There was a small black triangle behind the eye and below the eyeline. The bird did not utter a sound. I looked for the bird on the following day and on later dates, but I never saw it again. **Jack Sprenger, 615 N. Jefferson, New Ulm, MN 56073.**

Editor's Note: This observation represents the first summer record for the Harris' Sparrow in Minnesota.

COMMON NIGHTHAWKS OVER CHANHASSEN — Having just returned from a fast drive to Arkansas to see a Green Violet-ear with Judith Sparrow and Dick Ruhme, I thought my birding for the weekend was over. But at 6:50 P.M. on Sunday, 26 August, I glanced out the kitchen window and noticed about a dozen Common Nighthawks. In the next ten minutes I counted 110, with some feeding on dragonflies over the field in front of the house. None passed for several minutes, and then an additional wave of 76 birds flew by in five minutes. I stopped watching at 7:15, having seen none for five minutes. I have observed migrating nighthawks many times from my yard, but never this heavy a flight. I wonder how many went by before I started counting. **Mike Mulligan, 8501 Tigua Circle, Chanhassen, MN 55317.**

Editor's Note: On the same date in Duluth, a total of 43,690 Common Nighthawks were counted at the Lakewood Pumping Station between 6:35 P.M. and 8:20 P.M.

PROTHONOTARY WARBLER IN POLK COUNTY — 19 May 1990, Sharon Lambeth, Peder Svingen and I were conducting a Big Day Count in Polk County. By 10:00 A.M. we were birding the north side of the sewage lagoons at Crookston where the woodlands of the Red Lake River and the lagoons adjoin. The woodlands in this area consist of a narrow strip of mature trees and a good understory, and the terrain slopes downward to the river about 50 yards away. While I was sorting through warblers as I stood at the edge of the woodlands, Peder and Sharon were scoping the lagoons, less than 50 feet away. Only a few warblers had been identified thus far when a brief glimpse of a predominantly yellowish-gold warbler prompted me to urge my companions to come over — immediately! For the next ten minutes, we watched the warbler forage at eye level no more than 50 feet away. The description of the bird verbalized, agreed to, and written down about one hour later when we returned to the car and before consulting a field guide included: large warbler with yellowish-gold head; unmarked face; black prominent eye and relatively long, straight, pointed black bill; bright yellow neck with greenish-yellow smudge on nape; yellowish-green back and rump; bluish-gray, unmarked wings; bluish-gray, squarish, slightly-notched tail with long, white undertail coverts, which gave a short-tailed impression; yellowish-gold breast; white belly and vent; and dark legs. No vocalizations were heard. The foraging patter of the bird was primarily to glean from the underside of the leaves. Consultation of a field guide confirmed that we had seen a male Prothonotary Warbler, a species each of us had considerable experience with in more southeasterly locations. To our knowledge, this is a first for Polk County, although not a completely unexpected find as there are several records for points farther west and/or north in North Dakota. **David O. Lambeth, 1909 20th Ave. S., Grand Forks, ND 58201.**

Editor's Note: There is one record farther north in Minnesota: a single bird was seen at Agassiz NWR, Marshall County on 13 May 1966.

SUMMER RECORD OF FERRUGINOUS HAWK — Date: 3 June 1989. Place: one mile north, three miles west of Blue Mounds State Park. Time: 8:30-9:00 A.M. Length of observation: two to three minutes. Distance: 20 yards to 200 yards. Optics: 8X42 Bushnell binoculars. Conditions: clear, sun fairly low in sky and at my back for most of the observation period. Experience: I've seen Ferruginous Hawks in North Dakota, Montana, Washington, Colorado and California. Familiar with most problems, i.e. confusion with Red-tailed and Rough-legged. Notes were written after observation and before consulting any field guides. Guides used after the observation were National Geographic and Peterson's Hawks. While attempting to take photographs of the nesting Burrowing Owls in Rock County, a pair of Eastern Kingbirds making loud noises behind me caught my attention. The two birds were harassing a large buteo-type raptor. The hawk, flying low to the ground, was being chased at an angle to me across an open field. The first thing to catch my eye was the bright white patches, basically square or rectangular on the upper wing surface at the base of the inner primaries. The back color, extending from wrist to wrist across the back, was a chestnut or rufous. It had whitish or light uppertail coverts with a slightly darker tail (pale to gray). The kingbirds, having pushed the hawk out of the area they were protecting, turned away and the hawk glided over a small hill and out of sight. I was unable to relocate it despite much searching that morning; however, Tony Hertzel observed a Ferruginous Hawk at this same location on 25 June. My observation of the Ferruginous Hawk lasted only two to three minutes, and the bird was observed only from above. It never got above eye level, and I was unable to relocate it later that day. The combination of white patches and their location and the color of the back and tail eliminate both Red-tail Hawk and Rough-legged Hawk. The white patches were square or rectangular and located at the base of the primaries. Red-taileds, though having white patches at times, show a paler area on the outer wing parallel with the body. The Red-tailed will show a pale back and wing covert area, while the bird I saw was a brighter chestnut or rufous on the back from wrist to wrist. Rough-legged Hawks have a paler area at the base of the tail and may have white patches at the base of the primaries, but they do not have the chestnut or rufous coloration that was observed on this bird. Rough-legged was also eliminated, in part, on seasonal occurrence. In Janssen's *Birds in Minnesota* the Ferruginous Hawk is listed as casual in summer. A number of June or July records are listed for the western counties of the state. Using this list, this observation of a Ferruginous Hawk would be the first summer record for Rock County. **Kim W. Risen, 1301 Hwy. 7, #52, Hopkins, MN 55343.**

CAROLINA WREN IN WASHINGTON COUNTY — "Guess what, dear," I said to my birder wife as she arrived home from a tough day at the office. "There was a Carolina Wren in the yard just 15 minutes ago and now I can't find it to show you. It was right there (pointing) on the ground under the pine trees. It flew there from behind this juniper by the garage door and stayed while I went into the house to get binoculars and field guides and set up observation on this stump. It was so neat how it stayed put and gave me time to verify my first guess by comparing the illustrations and text in Peterson's Field Guide and the National Geographic Guide. All the distinguishing characteristics were there so I was sure of what I was looking at, even knowing that a Carolina Wren is a rare happening in Minnesota. I was spending some time thinking and flipping through the guides to determine if the bird could possibly be anything else — one likes to be sure — and when I looked up it was gone. I have searched the yard and half the neighbor's yard, and I cannot find it. I really wanted to show you a Carolina Wren in our yard. I will look for it again tomorrow." I never saw it again, and I did not call the Rare Bird Alert because I could not relocate the bird. Fortunately I got good views of the bird. It first flushed only a few feet from me and flew only about 20 feet before it settled down. A wren was my first guess because of its rich brown color, body posture and general size. Seen with the naked eye, its "large" size and light eye stripe indicated a Carolina Wren. But knowing they are unusual in Minnesota, I wanted reinforcement for my thinking. With my 10X Nikon binoculars focused on the bird only 20 feet away in good light, and with two field guides to look at and compare, I eliminated

all other possibilities to my satisfaction. The conspicuous white eye stripe, the buffy-orangish underside, the lack of any white fringe on the tail and the lack of any black area with light streaks running through on its back, and its relative size eliminated all other wrens and any other birds I could think of. I was surprised to learn from Robert Janssen's book, *Birds of Minnesota,* that Carolina Wrens have been seen in Minnesota in late fall. I thought that the only wren that might be around then would be a Winter Wren. I did not behave like a person with scientific training when observing something rare: I did not take a photo, I did not make a sketch, I wrote down minimal notes on our daily bird log book that sits by the kitchen door, but I did observe carefully. **Tom Bell, 5868 Pioneer Road S., St. Paul Park, MN 55071.**

A DARK-EYED JUNCO'S LONG JOURNEY — Last summer I received notice from the Bird Banding Laboratory of the United State Fish and Wildlife Service that a Dark-eyed Junco (Band No. 1830-47989) had been recovered in White Horse, Yukon Territory. I had banded this male junco on 16 November 1989 in my yard in Forest Lake, Washington County, more than 2,500 miles distant. A game biologist for the Yukon Department of Renewable Resources reported the recovery date as 22 June 1990. As it turned out, three children, who later wrote me a letter, had rescued the bird from their pet, Blackie (a dog or cat). They took it to a neighbor lady who attempted to repair its injuries without success. They then took it to the authorities. **William H. Longley, 532 W. Broadway, Forest Lake, MN 55025.**

A BAY-BREASTED WARBLER IN ANOKA COUNTY: EARLY OR LATE? — While conducting a breeding bird survey on the Boot Lake Scientific and Natural Area on 13 July 1990, I was much surprised to hear the song of a Bay-breasted Warbler. The time was about 7:00 A.M. the exact place was at the northwest corner of "Field No. VI" where the land slopes sharply down to the marsh, and the slope is thickly grown with shrubbery, vines, and various trees, mostly oaks. The warbler was most deliberate as he moved about in the bright sunlight, a beauty to behold. He stayed in sight for what must have been several minutes, but he sang only one more time. Janssen (*Birds in Minnesota,* 1987) reports no Bay-breasteds in southern Minnesota between 14 June and 3 August. This one was approximately 200 miles south of its breeding range in Minnesota. **Wm. H. Longley, 532 W. Broadway, Forest Lake, MN 55025.**

AN EARLY BAIRD'S SANDPIPER — On 24 March 1990, Jo Pals and I decided not to go on a Jackson County wetlands tour because it was too cold. Instead we decided to stay closer to home and bird in Pipestone County. Standing out of the wind at Split Rock Creek State Park at Ihlen, we set up the scope and viewed the many Northern Shovelers, Gadwalls, American Wigeons, Canvasbacks, Common Goldeneyes, Buffleheads, and Common Mergansers which were across the lake from us. Suddenly we saw a sandpiper walking on the shore of the lake on the side closest to us. We watched it, using the scope and the binoculars, then slowly walked up to it, getting within 15 feet from it, viewing it with the naked eye. It didn't seem to notice us at all, just kept picking in the water, moving quite slowly along. We thought it was a Baird's Sandpiper, but wanted to be sure because of the early date. We noticed a dark rump when it flew a short distance. Also as it fed we noted that the wings were longer than the tail; it had black legs, dark long bill, buffy color across the breast, and white underparts. For size we said "larger than a Least Sandpiper." We watched it for about a half an hour, then scoped the lake again, double checked the Baird's with the bird books and left. A very rewarding day in spite of the cold! **Nelvina DeKam, Rt. 2, Box 90, Edgerton, MN 56128.**

Editor's Note: The earliest date on record for the Baird's Sandpiper in Minnesota is 20 March 1968 in Wabasha County.

EARLIEST FALL DATE FOR BLACK SCOTER — On 2 September 1990, I met Bill George to do some birding in Grand Marais. We decided to start at Artist's Point located near the Coast Guard station. Here we saw several warblers, vireos and sparrows. Our best bird was a Yellow-bellied Flycatcher feeding on insects. We decided to leave this area and do some birding farther up the North Shore at Paradise Beach. When we arrived, I noticed two scoters swimming near the large rock island. Bill put his scope on the birds, and we decided that we were looking at two breeding-plumaged male Black Scoters. They each were black all over, with the upper mandible having a protruding knob near the base of the bill. This knob was orangish in color. Several times they both flapped their wings which showed no white at all, which eliminated White-winged Scoter, and the entirely black head eliminated Surf Scoter. Later I found out that this sighting was the earliest date on record in fall migration, with 27 September the previous early date. — **Michael Hendrickson, P.O. Box 2282, Tofte, MN 55615.**

ELEVENTH RECORDED KING EIDER FOR MINNESOTA — On 20 October 1990 Kim Risen and I led a group of eleven people up the North Shore to Grand Marais as part of the annual Duluth October Birding Weekend. Temperatures were mild for mid-October but skies were overcast and a steady rain fell throughout the day. At about 1:30 P.M. we decided to break for lunch, and left the Grand Marais campground to head into town. Before breaking for lunch ourselves, Kim and I decided to walk down to the harbor near the Trading Post store to look things over. Upon our arrival we noted a group of about seven White-winged Scoters swimming and diving about 75 yards away on the east side of the harbor. Almost immediately we saw a duck break away from the scoters and begin swimming toward the Coast Guard station by itself. It stood apart from the very dark scoters by its light brown appearance, and suggested something unusual by its stocky, short-necked and inconspicuously-tailed profile. We both considered the probability that this was some species of eider and realized that a closer look at this duck was imperative. We ran back into town to retrieve a scope but when we returned the duck was nowhere to be seen. After a few minutes we relocated it in the sheltered backwater between the Coast Guard station and the breakwater and our suspicions were confirmed: the duck was a female King Eider (*Somateria spectabilis*). Our group, as well as a number of passersby attracted by all the commotion, spent the next 30-40 minutes watching, taking notes on, and photographing the bird at distances of twenty to sixty feet as it swam and indirectly associated with a group of about thirty Mallards. The eider was slightly shorter than the Mallards around it and had a much more stout appearance. The body shape was similar to that of Canvasback in that it was broad and low to the water giving it a "flat" appearance. The neck was short and very muscular, and the head was broad in the cheeks and more narrow at the crown making it appear triangular from the front and back. Overall, the bird was an ashen gray-brown, lighter than described in the field guides. The bill was solidly dark gray and less spatulate, more pointed and deeper than the Mallards nearby. The nostril was placed halfway between the tip of the bill and the end of the fleshy extension that came up onto the forehead from the upper bill. The head shape was somewhere between the rounded shape of a Mallard and the blocky shape of a Gadwall. The eye was all dark, and directly above it were lighter feathers forming a whitish crescent or eyebrow. A distinct but muted light line led back along the side of the head from the eyebrow to the top of the neck, setting off the grayish brown and heavily but finely streaked crown from the darker chestnut-washed cheek. The heavily feathered hindcrown gave the bird a helmeted appearance, unique in relation to the ducks we normally see in Minnesota. The feathered area between the fleshy extension of the upper bill and the gape of the lower bill was rounded, not pointed as in the Common Eider (*S. mollissima*), and was quite light, forming whitish spots against the darker face. The upper breast was buffy-gray and was finely but heavily spotted. Although difficult to see, the breast spots became heavier as they progressed back onto the upper flanks and formed dark chevron-shaped marks pointing toward the rear of the bird. These marks became more obscure back along the sides from a point below the joint of the wing due perhaps to the fluffed up posture the bird appeared to have taken against

King Eider, 21 October 1990, Grand Marais, Cook County. Photo by Anthony Hertzel.

the rain. The back feathers, scapulars and wing coverts were dark brown with light edges giving these areas a scaled appearance. The folded flight feathers and tertials were dark and unmarked with little or no sign of wear. The rump was chestnut-colored and appeared to be heavily barred. The rectrices were very short and all dark. The unworn feathers, relatively short tertials and very gray overall color suggest that this was a juvenile female bird. Interestingly, the area of the harbor in which we found the bird was almost exactly the same area where Steve and Teri Carlson found a King Eider on 30 October 1988. The 1990 bird seemed far more gray overall than the 1988 bird with fewer chestnut tones in the plumage, especially on the scapulars and wing coverts (see the cover photograph on ***The Loon*** 61: No. 1). However, the 1990 eider was present for about six weeks during which time these chestnut tones did begin appearing in the scapulars as molt progressed. The King Eider was located again the next day a few hundred yards from the harbor with Mallards in a small man-made pond adjacent to the Grand Marais community swimming pool. It was extremely cooperative and allowed many people to take numerous photographs at close range. The bird was seen through Thanksgiving weekend and appeared healthy throughout the period. Of the four records from Lake Superior, three have been from the Grand Marais harbor. **Parker Backstrom, 3409 Emerson Ave. S., #4, Minneapolis, MN 55408; Kim Risen, 1301 Highway 7 #25, Hopkins, MN 55343.**

LATE YELLOW-CROWNED NIGHT-HERON — On the afternoon of 10 October 1990, Jim Pomplun and I identified an immature Yellow-crowned Night-Heron at Wood Lake Nature Center in Richfield, Hennepin County. The heron was in front of the observation buildings at the northeast corner of the lake. We watched it with 7X binoculars for about thirty minutes as it stood along the shore, sunlit, approximately fifty feet away. Both of us are very familiar with immature Black-crowned Night-Herons, but we have little experience with Yellow-crow-

neds, especially with immature birds. So, while noting everything we could about the heron's appearance, we paid particular attention to those characteristics that seemed to distinguish it from a Black-crowned. When hunched up, the bird looked similar to a Black-crowned in size and shape. When standing erect, however, it looked nearly as tall and lanky as a Little Blue Heron. In this posture its neck looked long and thin, its head relatively small and ovate. The dull grayish-yellow legs were longer than a Black-crowned's. The bluish-gray bill was thicker, less pointed and slightly shorter than a Black-crowned's. Both mandibles appeared to curve evenly toward the tip, about one-half to two-thirds of the way from the base. The upperparts were brownish-slate, in general much grayer than a Black-crowned's. The grayest parts of the plumage were the unmarked primaries and tail. The shaggy crown and the back of the neck were peppered with white streaks. There were a few thin, white spots on the grayish back, but most of the white spotting was confined to feather tips on the wings. The spots were small, well-defined triangles. On the folded wings the feathers above the primaries were edged with white. These same feathers on Black-crowneds lack the white edging. This difference is depicted in most of the field guides, but I found no mention of it in the texts. When we informed the nature center staff of our sighting, they told us they had seen the heron in the same area for several days, but had assumed it was an immature Black-crowned. A naturalist returned with us and took photographs of the bird from as close as 25 feet. That evening Ray Glassel confirmed our identification when he too was able to approach to within 25 feet of the heron. It remained in the area until at least 12 October. This is the first October record for Yellow-crowned Night-Heron in Minnesota. **Steve Carlson, 2705 Dupont Ave. S., Minneapolis, MN 55408.**

A RECORD MOVEMENT OF COMMON NIGHTHAWKS — On 16 August 1986, 16,494 Common Nighthawks were counted in Duluth from Keith Camburn's yard along the North Shore of Lake Superior. This was considered to be a record not to be broken in some time. Four years later on 26 August 1990, I was coming down to Duluth from my home in Tofte, and stopped to visit Kim Eckert. It was around 5:15 P.M. when I arrived at Kim's house and noticed a small flock of Common Nighthawks flying over his house. I quickly counted them and went into his house to grab paper and pencil to write down the total. I then drove to the nearby Lakewood Pumping Station preparing for a huge flight since it had been rainy and foggy for two days prior to this day. The weather that evening was clear and warm with a temperature about 70° with light southwest winds. When I arrived at 5:35 P.M., I counted a flock or wave of 100 birds, and then another wave of about 500 came by. Before I knew it, the sky was full of nighthawks. They were almost uncountable since they were spread from the inland horizon to the lake. I counted as fast as I could, quickly counting up to 1,000 nighthawks, putting that total down on paper and counting again. A few times there was a lull, and I had a brief opportunity to get a breather before continuing. By about 6:00 P.M. it appeared the nighthawks were moving by nonstop at a constant rate, and I decided to do an experiment. I timed myself for one minute to see what total I got. On the first try I counted 400 nighthawks, in the second minute I got 390, and in the third I had 400. Kim Eckert, who was not home earlier, finally arrived at 7:00 P.M. and was happy to hear I was able to record this movement from the beginning. He proceeded to count the birds overhead and over the lake while I counted the nighthawks towards the inland ridge. Later Dudley Edmondson also arrived to help count. We also tried to count other species that were flying overhead (mostly waxwings and blackbirds), but that was difficult since the nighthawk flight was so immense. Finally the movement stopped as darkness settled in at 8:20 P.M., and we went back to Kim's house to add up the totals. We ended up with 43,690 Common Nighthawks, a new Minnesota record, and possibly the highest one-day count of nighthawks anywhere. **Mike Hendrickson, P.O. Box 2282, Tofte, MN 55615.**

Between 5:35 and 6:05 P.M., Mike Hendrickson tried counting each individual nighthawk as best he could and realized a few were passing by without being counted. Therefore, he started counting the nighthawks by tens at 6:05 P.M., which not only made documenting

the flight more manageable but also did not appear to result in any loss in accuracy. After I arrived at 7:00 P.M., Mike continued counting by tens and I counted by fives, and after Dudley arrived to help we had an opportunity to do some comparison counts to ensure our count was reasonably accurate. During several one-minute periods, Mike and I independently counted the nighthawks passing by, he by tens and I by fives, and each time our totals were within one percent of each other. Breaking the flight down into five periods, each 30-35 minutes long, the numbers were as follows:

Time (C.D.T.)	Total	Birds/Minute
5:35-6:05	12,780	426
6:05-6:40	10,450	298.6
6:40-7:12	12,980	405.6
7:12-7:45	6,090	184.5
7:45-8:20	1,390	39.7
2 hrs, 45 min	43,690	264.8

Except for its unprecedented magnitude, this record count day was similar to other big Common Nighthawk flights documented in Duluth in previous years: 1) all occurred in mid to late August, the earliest 14 August and the latest 27 August; 2) the movements started in late afternoon and ended or slowed down about one-half to one hour before sunset; 3) the weather on these days was mild, usually with above-normal temperatures and light winds; 4) most, if not all, flight days also had large numbers of migrating dragonflies, although the nighthawks generally were not observed to be in pursuit of these dragonflies or any other insects as they passed through; and 5) the nighthawks were generally silent as they migrated — only twice on 26 August did we hear a bird give a single call note. Following are the previous documented 1000+ Common Nighthawk flight days in Duluth; those counts from 1986, 1987 and 1988 were taken by Keith Camburn at 8255 Congdon Blvd., which is located 0.4 miles northeast of the Lakewood Pumping Station; the 1989 counts were from the Lakewood site and from downtown Duluth:

Date	Total
15 Aug 1986	1,030
16 Aug 1986	16,494 (13,595 of these from 6:05 to 7:36 P.M.)
21 Aug 1987	9,498 (7,595 of these from 6:31 to 7:11 P.M.)
27 Aug 1987	1,445
14 Aug 1988	5,994 (2287 of these from 7:32 to 7:56 P.M.)
24 Aug 1988	1,926
27 Aug 1989	2,490 at Lakewood, 6:00-7:00 P.M.
27 Aug 1989	3,750 in downtown Duluth, 6:30-7:30 P.M.

Kim Eckert, 8255 Congdon Blvd., Duluth, MN 55804

A CURE FOR THE WINTER BLAHS — It's mid-winter and you crave something more than the several House and Purple Finches at your feeder. What to do? When Mark Otnes called me 6 January 1991 and told me he'd seen seven Great Gray Owls in Roseau County, I knew I had the answer. Diane and I arrived in Roseau the night of 11 January, and the next morning (Saturday) we were out looking for owls. They were most co-operative. By 9:15 A.M. we'd found two along Highway 310 north of town. We then proceeded east and north in the Sprague Creek area and found four more. At one point I threw my gloves into the ditch and a Great Gray flew directly towards us, veering off just short of the gloves and our car. Impressive! Next we drove northwest of Roseau towards the Roseau River Wildlife Management Area. We were proceeding through open, boring farm country when I spotted a raptor atop a power pole adjacent to the road. Before I'd stopped the car, it was obvious the bird was a Gyrfalcon. We parked and observed the bird from close range. It didn't seem

to mind at all. This was a powerfully built, gray-brown falcon with a faint moustache and dark chevrons on the underparts. An adult gyr; I'd guess male. In a minute it flew, and I noted the two-toned underwings. The flight reminded me of that of the Prairie Falcon — quick, stiff strokes of the outer wing, the bird covering ground rapidly. I watched it for a long time as it flew southwest, but didn't see it land. Driving a mile west, I then turned north. We'd only gone a few hundred yards when Diane said, "I think there's a raptor on top of that pole ahead." About four poles ahead was one with a dark top. "Probably just creosote, but we'll check it out," I replied. I stopped the car, and we were more than mildly surprised to see another Gyrfalcon. Two gyrs just over a mile apart in about three minutes! At this point we were definitely having fun. This bird seemed larger, and was heavily streaked ventrally, suggesting an immature female. After an excellent look through the scope, we left. When we returned an hour later, the bird was in a tree in the same area. We headed east toward Roseau on Highway 11. Two miles west of town, a gyr crossed the road from north to south. I suspected this was the first bird we'd seen earlier. It kept going and we lost it. We drove the Thompson Forest Road through Beltrami Island State Forest. Not much doing, but we did see one adult Northern Goshawk. South of Warroad we added four beautiful male Pine Grosbeaks before turning east to Baudette. A few miles southwest of there, we saw what was possibly the whitest Snowy Owl we'd ever seen. Birding alone the same day, Peder Svingen also saw the Snowy Owl and found a Gyrfalcon near the Beltrami-Lake of the Woods County line on Highway 72. We drove through Carp (which has been dead for quite some time) and eventually came out on "the bog road", Highway 72. As we drove north, I soon spotted our seventh Great Gray Owl for the day. Eleven miles further, Diane picked out a Northern Hawk Owl, a fitting end to a fantastic day of birding. Just for fun, we mixed in seventeen Black-billed Magpies, three Northern Shrikes, some Common Redpolls, Sharp-tailed Grouse, and the salt and pepper color of Snow Buntings, and came up with the recipe for the remedy. Got the winter blahs? See two gyrs and call me in the morning. **Steve and Diane Millard, 630 W. Laurel, Fergus Falls, MN 56537.**

EARLY DATE FOR WILKIN COUNTY VARIED THRUSH — On the morning of 16 September 1990, I found a Varied Thrush at the south end of the Rothsay Wildlife Management Area. The thrush was at the east end of a small dirt road which runs east and west through the middle of Sections 21 and 22 of Tanberg Township. The east side of this road is lined with large cottonwoods on the north and with willow shrubs on the south. The thrush flew from the willow thickets into one of the large cottonwood trees. The dark robin-sized bird caught my eye and I immediately stopped the car and spotted the thrush in the cottonwood tree with my binoculars. It was a medium sized bird with a slate gray back, black face, orange stripe above the eye, orange-red throat and underparts, black chest band, and orange wing bars. It was clearly a male Varied Thrush, the first I had seen since the late 1970s in Montana. The Varied Thrush stayed in the cottonwoods for about a minute and then flew into a wooded swampy area, about a quarter mile to the east. This is the last I saw of the bird. **Mark Otnes, 1602-47th St. S.W., Fargo, ND 58103.**

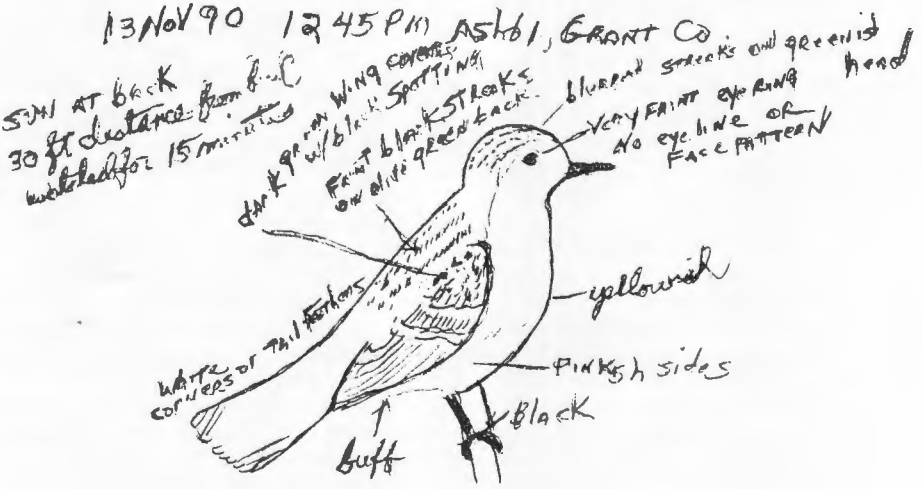
PROTHONOTARY WARBLER IN OTTER TAIL COUNTY — On 6 June 1990 I was birding with Gerry Winkelman near Franklin Lake in northwest Otter Tail County. It was a pleasant, sunny day with temperatures in the 70s. We stopped near a swamp to look and listen for birds. The swamp is the result of the work of beavers; many downed aspen and a beaver lodge are prominent features. All shrubs and trees in the swamp have been dead for several years. The total area is four to five acres, about one acre being open in the center, containing the lodge but no trees. A thick growth of duckweed covers all surface waters, giving the swamp a pea soup look. Sorting through the many songs, I soon heard something that triggered a memory from past years in southeast Minnesota. It came from the opposite side of the swamp and was somewhat broken up by a moderate breeze. I mentioned to Gerry that it sounded like a Prothonotary Warbler. I ran a few possibilities through my head and

couldn't come up with anything else that fit. We drove around and found a lake cabin frontage road on the west side of the swamp. We listened from a few more locations on this side but didn't hear the bird. We went home and listened to bird recordings that evening. We agreed the Prothonotary seemed the best choice. On 13 June I returned to the area shortly after 7:00 A.M. and heard the song immediately. I followed the sound as the bird sang intermittently. Numerous hidden deadfalls, tall wet grass, and hordes of mosquitos made conditions nearly unbearable, but I pressed on into the heart of the swamp. When I discovered the source of the song — a male Prothonotary Warbler — the conditions were temporarily forgotten. Since all branches were dead, it was fairly easy to pick out this beautiful golden warbler with bluish wings and large, dark eyes and bill. During the next two weeks the Prothonotary was seen by several birders. A female was never found, but on 19 June I watched the male carrying nest material to a cavity. It was just below the broken top of a seven-inch thick tree, about six feet above the water. Some research at home revealed that, in addition to several species of wrens, male Prothonotaries build dummy nests. The final nest site is chosen by the female. Once, the bird was seen flying into live vegetation on higher ground adjacent to the swamp, indicating that it probably foraged for food in this area. I watched it feeding just over the water one day. It walked along branches, probing and picking insects out from under the bark with its long bill. On more than one occasion the bird was observed through a 25X Kowa scope, affording some excellent close-ups. The Prothonotary Warbler was last seen on 29 June 1990. This represents a first record for Otter Tail County, and the first summer record for northern Minnesota. **Steve Millard, 630 W. Laurel, Fergus Falls, MN 56537.**

ANOTHER PACIFIC LOON IN DULUTH — On 27 October 1990 a juvenile Pacific Loon was found swimming in Lake Superior off Canal Park near downtown Duluth. I spotted the loon while leading a birding tour group, and during the next half hour or so we carefully studied the bird with the sun at our backs at distances as close as 50 yards. Although there were no other birds nearby for comparison, the loon appeared too small to be a Common; especially evident were the relatively short and slim bill and the slender head and neck profile. The bill was held level most of the time, but it once held its bill uptilted for several seconds in the manner of a Red-throated Loon; though Pacific Loons can sometimes assume such a profile, when seen well, as in this case, their bill shape is still visibly different from the Red-throated's since their lower mandible is not as upturned and since their culmen is slightly downcurved (straight in the Red-throated). More diagnostic was the nape and hindneck color which was clearly paler gray than the loon's darker grayish-brown back. Through my 40X Kowa TSN-4 spotting scope, we could also see the back and scapular feathers had paler tips which created a regular pattern of C-shaped chevrons on the upperparts, indicating this was a juvenile bird. The pale gray hindneck and the white foreneck met in a relatively straight line along the side of the neck, a distinguishing feature that precludes winter Common Loon which has an irregular pattern on the side of the neck. Also, when seen from the side, the white foreneck and gray hindneck appeared equal in extent and met along the centerline of the neck; on adult Red-throateds, the white of the face and foreneck is more extensive and extends farther back onto the hindneck, while juvenile Red-throateds are duskier on the face and foreneck than the Pacific Loon. On some Pacific Loons, there is a dark line down the side of the neck separating the white and gray areas, but none was visible in this case, perhaps a further indication of this loon's age. There was just a hint of a partial chinstrap, which, when present, is a diagnostic feature of Pacific Loon; the lack of a complete chinstrap in this case also further suggests this was a juvenile loon. Also of interest was that there was a narrow but continuous white area along the loon's sides at the water line. Such a mark is often mentioned as a possibly distinguishing feature between Pacific and Arctic Loons in basic plumage; however, as noted in *Birding* 22:72, Pacifics can often show this as well, so there is little reason to suspect our loon may have been an Arctic. Although the Pacific Loon is only a Casual Minnesota species, it does show up with some regularity, especially in Duluth and especially in late fall. Of the 13 acceptable records I'm aware of in the state in

the past ten years, eight have been from Duluth; there are also records from Jackson, Clearwater, Cass, Ramsey and Kandiyohi Counties. Also, eight of these 13 records have been from October-early November; the other five records have been in May-June. **Kim Eckert, 8255 Congdon Blvd., Duluth, MN 55804.**

NOVEMBER BAY-BREASTED WARBLER IN GRANT COUNTY — On 13 November 1990 at about 1230 P.M. I was parked on a residential street in Ashby, Grant County watching a bird feeder. A small bird flew down from a low hanging Spruce tree and landed on the lawn. I noted it was a warbler with considerable yellow on the face and breast and greenish on the back and top of the head. My first thought was a Pine Warbler because of the late date. This proved not to be the case as closer examination revealed fine black streaks on the crown and blurry black streaking on the back. This meant it was either a Blackpoll or Bay-breasted Warbler. Further examination disclosed a trace of pinkish-buffy wash on the flank characteristic of the remains of the bay flank markings of the Bay-breast. Further evidence separating it from Blackpoll was black legs, very yellowish green on the nape and buffy undertail coverts. I observed the bird for about ten minutes as it moved between the lawn and the spruce tree. I made a rough sketch while observing the bird. Since the latest date for the state is 25 October I thought this observation to be significant. **Raymond A. Glassel, 8219 Wentworth Ave. S., Bloomington, MN 55420.**



Sketch of bird done in pencil while observing bird. Later darkened with ink for reproduction purposes. RG.

BARROW'S GOLDENEYE IN DAKOTA COUNTY — On 22 March 1990, I was birding at an area known locally as the "Hampton Meadow" (Dak. Co. Rd. #47 & 210th St.) There is a large swale in the field here that becomes a lake in spring from snowmelt and rain. This attracts large numbers of migrating swans, geese, ducks and shorebirds. On this particular morning (about 10:30 A.M.) it was overcast, but visibility was good. I parked along the gravel road (210th St.) and began scoping the lake. There were about 75 Tundra Swans, many diving and puddle ducks, Common Mergansers and Canada Geese present that morning.

As I scanned around the lake a goldeneye surfaced in my view. Something about the white facial mark made me think "Barrow's", but before I could decide for sure it dove again. I watched for the bird to surface again and when it did, it obviously was a Barrow's Goldeneye. Field marks noted were: Elongated white facial mark, that ran from in front of the eye to below the bill. The lower back of the bird's head was more rounded than a Common Goldeneye and I could see short white streaks along the folded wing. The dark smudge (or line) seen in front of the wing was only seen briefly as the bird was diving most of the time. I was able to check my National Geographic and Peterson Field Guides while I was watching the bird and it surely looked like a Barrow's to me. I watched the bird for about five minutes when it suddenly took flight and flew toward where I was parked on the road. It began to make a huge upward circle and I could clearly see that the white wing patches were divided in two by a thin black line. The bird continued to fly in spiraling circles higher into the sky. A small flock of about eight swans flew over and the goldeneye flew up, joined them and was last seen going north with the swans. **Joanne Dempsey, 1017 W. 14th St., Hastings, MN 55033.**

RUFF AND REEVE IN YELLOW MEDICINE COUNTY — It was a pleasant, mostly sunny day on 3 August 1990, so I drove to Green Valley, School Grove and Lady Slipper Lakes in Lyon County, thence to Tyson Lake three miles south of Wood Lake, Yellow Medicine County. At the east end of Tyson Lake I took county highway A47 south to the point where it is flooded. There I found a mixed group of Rock Doves, Killdeer, two Double-crested Cormorants, Lesser Yellowlegs, Baird's and Semipalmated Sandpipers, a Least Sandpiper, about thirty-five Black Terns, two Pectoral Sandpipers, and mingled in with them, a Ruff and Reeve. Both birds were slightly heavier bodied than the terns and yellowlegs, the Ruff a bit larger overall than the terns, the Reeve slightly smaller. Killdeer, yellowlegs and Pectoral Sandpipers nearby gave good color, size, and markings comparison. Both birds had bills dark at the tip but yellowish at the base and slightly downcurved at the tip and not as slender as the yellowlegs. Their legs were dull greenish, eyes brown, and the breast of the larger bird was heavily streaked with dark marking not ending as the Pectorals with a distinct margin. The smaller bird had only smudges on the breast with no distinct spotting. Both birds had prominent white ovals at the sides of the posterior body. Both birds were silent. As they flew away the tips of the greater coverts made a striking white line, and the ovals which almost met over the coverts were very distinct. I watched the birds at distances of thirty to fifty feet for about twenty minutes using 10x30 binoculars. I am familiar with the species from numerous observations in Egypt and several previous occasions in Minnesota, but this is the first time that I have seen what appeared to be a pair, whether mates or not. The birds were not present on the following day. **Henry C. Kyllingstad, 205 S. 6th St., Marshall, MN 56258.**

A KING RAIL OBSERVATION — About 11:30 A.M. on 2 May 1990, I stopped by a marsh pond on 180th St. between Fisher and Goodwin Avenues in Dakota County to check for Virginia Rails, Soras, or what have you. There were numerous Red-winged Blackbirds, Yellow-headed Blackbirds and Marsh Wrens there that day. I had a tape with me and played the call of a Virginia Rail. Getting no response, I played it again and two Virginia Rails walked up from the marsh onto the road, one on either side of me. I didn't turn the tape off right away and it went on to the next call — the King Rail. To my astonishment, a bird in the marsh began answering the King Rail calls. I rewound and played it again, and once more there was an answer (actually the bird was calling right along with the tape). The calls seemed to be coming from a small clump of reeds at the edge of the pond, about three feet away from me. I turned off the recorder and took a step forward toward the pond to try to see into the reeds when a bird flew up and across about eight feet of water and dropped into another clump of reeds. During its short flight, I could see that this bird had rust on the wings, black mottling on the back and was at least twice the size of the Virginia Rails. As

it landed in the reeds it flushed a Sora, that walked out and just stood there in the water in front of the King Rail. At that moment I had the unbelievable good luck to have in view two Virginia Rails, a Sora and a King Rail. The King Rail was just inside the reeds and I could see it very well in profile. The neck and throat were rust colored, flanks heavily barred dark and white. At one point it poked its head out of the reeds and I could see it had a much longer bill than the Virginia Rails' and Sora's plus the face did not have the grayish face pattern of the Virginia. The bird began moving around in the reeds and again I played the tape. It answered the King Rail call, but only the first one. After watching the bird for a few more moments, it seemed to disappear right before my eyes and no amount of calling or watching brought it out again. It was then I checked my National Geographic and Peterson Field Guides and confirmed what I believed all along — that the bird I had been looking at was a King Rail. I never saw or heard it again even though I checked that pond at least one or two times a day for the next week. **Joanne Dempsey, 1017 W. 14th St., Hastings, MN 55033.**

NORTHERN GOSHAWK PREDATION ON SHARP-TAILED GROUSE — On the morning of 3 February 1991, Terry Savaloja and I took a group of birders to Aitkin County to look for Sharp-tailed Grouse. A number of birds were being seen regularly feeding early in the morning along an east/west road four miles north of Highway 210 on County Road 5. When we arrived shortly after dawn, we turned onto this side road and immediately saw two dozen Sharp-tails feeding on birch buds and catkins right next to the road. After leisurely looks we proceeded about a quarter mile and found a number of grouse standing on the road. As we looked at the birds in front of us, we saw a rapidly moving bird shoot across in front of our car. The bird, obviously a raptor, crossed the road perhaps five feet off the ground and entered an alder swale 40 yards in front of us. Almost immediately several Sharp-tailed Grouse that had been invisible to us exploded from the swale. The large hawk came flying straight up out of the swale. It made a 180 degree turn in the air and dove down onto a Sharp-tailed Grouse that was attempting to dive back into the cover of the alders from which it had just come. The hawk, which we quickly discovered was an adult Northern Goshawk, caught up to the grouse and almost instantaneously drove it to the ground behind a snow drift. All the while the half dozen grouse standing on the road remained stock still and alert. After several minutes the nearby grouse flushed and flew swiftly several hundred yards across open fields to land in a partially standing crop field. As we inched foward we moved into a position to see the predator standing on its prey on the front edge of the alders, the hackles on the back of its head and neck standing erect in excitement. We did not witness the actual kill. The goshawk began plucking the grouse then tried to drag it into cover before eating it. When we pulled the car up next to them, the goshawk flushed off the grouse, flew to a tree and watched us as we walked in to inspect the kill site. The upper breast and throat of the grouse had been plucked of feathers, and the crop was opened up exposing the tender birch buds and catkins that had made up the grouse's morning feeding. An examination of the area revealed that the goshawk appeared to have been following a weed and vegetation "path" formed along a small stream flowing through the adjacent fields, the only course of cover available to it on its approach to the feeding grouse. Its flight was swift, low and direct and it appeared to catch the grouse unaware, at least those feeding in the alders. The Sharp-tails on the road, it's assumed, saw the bird coming and froze in place lest they give themselves away. It was only after the hawk was settled on its victim that they bolted for distant cover. **Parker Backstrom, 3409 Emerson Ave. S. #4, Minneapolis, MN 55408.**

PHYSICAL INTERACTION BETWEEN A MALE BOREAL OWL AND MALE NORTHERN SAW-WHET OWL — While conducting surveys for the Boreal Owl in Cook County on 19 March 1990, I located a singing male in his cavity near Forest Service Road 165 in the Superior National Forest. I observed the owl for approximately 30 minutes, but did not see or hear any female respond to the male during that time. During inclement

weather on 23 March I returned to the site and shined my headlamp at the cavity. Two Northern Saw-whet Owls appeared at the cavity entrance. During subsequent visits to the site, I continued to observe the female saw-whet in the cavity and on several occasions watched as the male saw-whet made food deliveries to her. The male Boreal Owl was not hear between 23 March and 6 April. On 6 April 1990, Shawn McKeown and I were conducting nocturnal surveys along the same route when we heard a male Boreal Owl singing in the area that originally held a Boreal Owl and now, a pair of saw-whets. Prior to initiating a foot search for the Boreal Owl, I went to the cavity tree, kicked, and the female saw-whet appeared at the entrance. The male boreal was located in the same singing tree as two weeks previous, and we assumed it was the same owl. After several minutes, the boreal ceased singing and we walked back towards the road. As we approached the cavity tree, the male saw-whet was heard, and then observed, flying to the cavity with a food delivery. As he approached the cavity entrance, the male Boreal Owl flew at the male saw-whet and the two fell to the ground. I immediately approached and seperated the two birds. The boreal was on top of the saw-whet, with the latter emitting an unsaw-whet-like high pitched scream. I let the saw-whet go, inspected the Boreal Owl and finally released him. The next evening, Shawn returned to the site, heard the Boreal Owl approximately ½ mile northwest of the cavity site and observed several food deliveries by the male saw-whet, without further interaction between the two species. In addition, Long-eared Owl vocalizations were heard in the immediate area. This was the third time I have observed an inferred displacement of an unpaired male Boreal Owl by a saw-whet pair, and the first time I have seen a physical interaction. This suggests that natural cavities may be a limited resource for the two species and a source of interspecific competition. **Bill Lane, General Delivery, Tofte, MN 55615. Shawn McKeown, 1400 E. 98th St., Bloomington, MN 55425.**

WINTER RECORD OF GRAY CATBIRD FROM CROW WING COUNTY — The Gray Catbird is considered an accidental winter visitor to Minnesota with four winter records cited by Janssen (*Birds in Minnesota*, 1987) for the northern part of the state. Two mid-December records for Duluth, St. Louis County and Crookston, Polk County, a January record from Little Marais, Lake County and a bird that remained all winter at a feeder in Warren, Marshall County. On 15 December 1990 a Gray Catbird was found by Terry Savaloja in Ironton, Crow Wing County while participating in the Crosby Christmas Bird Count. On Sunday, 16 December, Steve and Jo Blanich, Warren Nelson, Parker Backstrom and I returned to see if it could be relocated. After a short search, it was found in the same area where Terry had originally observed it. The catbird was feeding in an apple tree and seeking shelter, when disturbed, in an adjoining spruce tree. The bird was studied by all and Warren and I attempted to obtain some photographs. With it's plain gray plumage, darker cap and tail and rusty undertail, it was a typical Gray Catbird, as was it's behavior, for it would not come out of the tangled branches of the spruce but would look at us from an almost impenetrable vantage point. Not wishing to disturb the bird too much Warren and I soon gave up the attempt to get photographs of this unusual record. **Kim W. Risen, 1301 Hwy. 7, #52, Hopkins, MN 55343.**

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 to 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 color and black/white photos. Photos should be preferably 5x7 in size. Manuscripts should be typewritten, double-spaced and on one side of 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 the number required. A price quotation on reprints will be sent upon receipt of information.

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

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Photo by Warren Nelson ..... Front Cover

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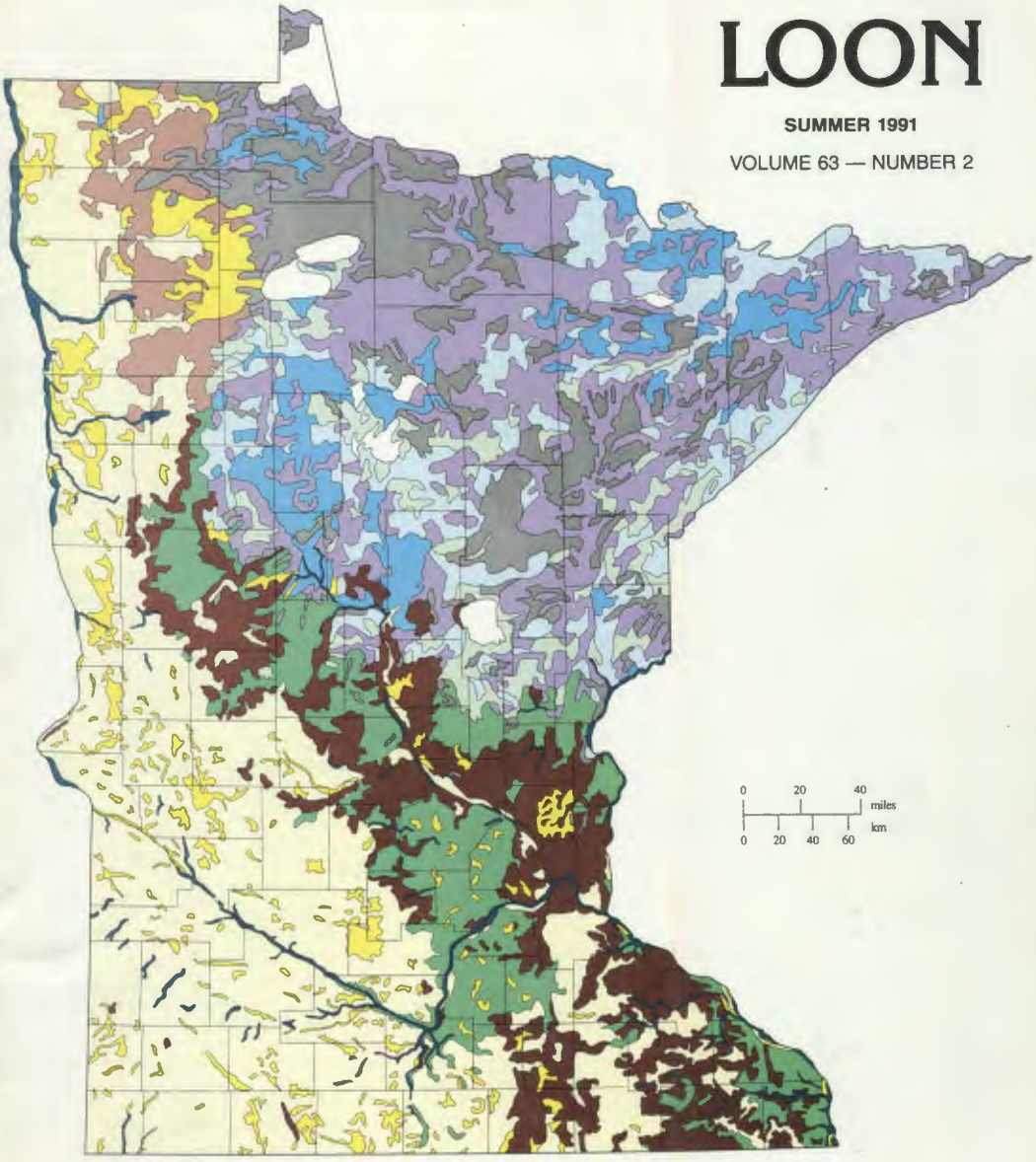

Vegetation Types of the Prairie and Deciduous Forest

- **Upland Prairie**—Bluestems, Indian Grass, Needle and Grama grasses; Composites and other forbs
- **Prairie Wetland**—Bluejoint Grass, Cordgrass, Cattails, Rushes, Sedges
- **Aspen Parkland**—Aspen Groves with Prairie and Sedge Meadow openings
- **Oak Woodland and Brushland**—Bur Oak and Pin Oak, Aspen and Hazel thickets, and Prairie openings
- **Floodplain Forest** —Silver Maple, Elm, Cottonwood, Willow
- **Maple-Basswood Forest**—Elm, Basswood, Sugar Maple, Red Oak, White Oak

Vegetation Types of the Conifer Forest

- **Northern Hardwood Forest**—Sugar Maple, Yellow Birch, Basswood, and occasional White Pine
- **Great Lakes Pine Forest**—White Pine, Red Pine with Paper Birch, and Aspen
- **Jack Pine Forest**—Jack Pine with Red Pine, Oak and Hazel
- **Boreal Hardwood-Conifer Forest**—Aspen, Birch, Balsam Fir, White Spruce, White Cedar
- **Peatland**—Sedge Fen, Black Spruce-Sphagnum Bog, White Cedar-Black Ash Swamp

The LOON Minnesota's magazine of birds, is published four times each year by the **Minnesota Ornithologists' Union,** the statewide bird club. Permanent address: J.F. Bell Museum of Natural History, 10 Church St. S.E., University of Minnesota, Minneapolis, MN 55455-0104. Anyone interested in birds may join. Any organization with similar aims may affiliate. All MOU members receive our two quarterly publications: ***The Loon*** and the **MOU Newsletter.**

MEMBERSHIPS AND SUBSCRIPTIONS: Jerry Bonkoski, Rt. 1, Box 24, Byron, MN 55920. To join the MOU and receive both MOU publications, donate $15.00 for a regular yearly membership. Other classes of membership that you may choose are: Youth (through age 17) $10.00 yearly; Family $25.00 yearly; Supporting $50.00 yearly; Life $300. Canadian and Foreign Subscriptions, $20.00 yearly. **All memberships are on a calendar year basis.** Also available: back issues of ***The Loon*** ($3.00 each ppd.) and MOU checklists of Minnesota birds (minimum lots of 20 for $5.00 postage paid).

Gifts, bequests, and contributions to the MOU Endowment Fund should be sent to the Treasurer.

EDITOR OF *THE LOON:* Robert B. Janssen, 10521 S. Cedar Lake Rd., #212, Minnetonka, MN 55343 (phone 612-546-4220). The Editor invites articles, short notes, and illustrations about Minnesota birds. See back cover for details. **ASSOCIATE EDITORS: Anne Marie Plunkett, 2918 S.W. 15th Ave., Rochester, MN 55902; Dr. Harrison Tordoff, Bell Museum of Natural History, University of Minnesota, Minneapolis, MN 55455. Photo Editor: Warren Nelson, 603 2nd St., N.W., Aitkin, MN 56431.**

"The Season" section of ***The Loon*** publishes reports of bird sightings throughout Minnesota. We particularly invite reports from parts of the state that have been neglected or covered lightly in past reports. To become a contributor to "The Season," request the report forms from the **EDITOR OF "THE SEASON," Kim Eckert, 8255 Congdon Blvd., Duluth, Minnesota 55804 (phone 218-525-6930).**

EDITOR OF THE MOU NEWSLETTER: Elizabeth Bell, 5868 Pioneer Rd. S., St. Paul Park, MN 55071. Publishes announcements and reports about activities of the MOU and its affiliated clubs. (Club officers should keep both MOU editors informed.)

Harrison 'Bud' Tordoff with Peregrine Falcon at Rochester, Spring 1991. Photo courtesy of Rochester *Post-Bulletin*.

This issue of ***The Loon*** is dedicated to 'Bud' Tordoff on his retirement from the University of Minnesota Bell Museum of Natural History. 'Bud', since his coming to Minnesota in 1976, has been a very active participant and promoter of the Minnesota Ornithologists' Union. His activities as an Associate Editor of ***The Loon*** and member of the Minnesota Ornithologists' Records Committee have been most appreciated. He will remain active in both areas after his retirement. We are very grateful for his participation.

A Landscape Classification for Breeding Birds In Minnesota: An Approach to Describing Regional Biodiversity

Janet C. Green

BACKGROUND — BIODIVERSITY

Biodiversity is a new watchword for conservation issues that involve species and their habitats. Because common use of the term is new, questions arise: what does it mean? and how is it used?

"Biodiversity" is shorthand for "biological diversity," an approach to organizing biological knowledge that has been used by ecologists for some time. It can be simply defined as the variety of life on earth. To be more technical, one can cite the definition published by the Office of Technology Assessment of the U.S. Congress (1987): "Biological diversity refers to the variety and variability among living organisms and the ecological complexes in which they occur."

Ecologists further subdivide the concept of biodiversity into several levels or spatial scales: genetic, species, ecosystems and landscape. The definitions of these levels has been clearly presented by Stephen C. Harper for the Northern Forest Lands Study (USDA Forest Service, Rutland, Vt., 1989):

> *Genetic diversity* deals with the variation within a species due to differing genetic make-up that individuals have inherited from their parents.
>
> *Species diversity* is perhaps the most familiar form. It is a measure of the number of individual species in any given area [*species richness*].
>
> *Ecosystem diversity* is used to describe different physical settings (i.e. environments) and processes that have more or less distinctive communities of species. For instance, the forested ecosystems of the Adirondack Park vary considerably from the forested ecosystems of South Carolina [*community* or *habitat diversity*].
>
> *Landscape diversity* is at the highest level and is the juxtaposition and size of various ecosystems across the land surface. It defines the linkages and connectedness between ecosystems leading to an integrated biosphere [*regional diversity*].

These definitions are precise but they may make the concept of spatial scales in describing biodiversity more complicated than necessary. Experienced birders who travel around the state recognize the habitat affinities (ecosystem diversity) of different species and also the landscape (regional) context of these habitats and species. For example, a deciduous woodlot in agricultural central Minnesota will not have the same woodland species found in heavily forested country farther north. Some of these differences are a function of climatic gradients but many are related to landscape/habitat configurations.

The landscape classification proposed here for the breeding birds of Minnesota is a very coarse-grained spatial look at diversity. It is primarily to aid in regional assessments for protecting biodiversity within Minnesota, taking into account bird species' adaptations to different habitat requirements and to different landscape contexts. Although much of the presettlement vegetation depicted on the map on the cover of this issue of ***The Loon*** has been highly modified by human activity, most natural species diversity still exists and many intact communities remain, especially in the north.

During the 1980s the term biodiversity has been increasingly invoked in descriptions of the accelerated loss of natural habitats worldwide, particularly rainforests, and the concomitant extinction of species. Although the emphasis of international/conservation has understandably been on the tropics because they contain more than half of the world's species and are undergoing an alarming rate of habitat loss, North America has

also suffered extinctions of species and habitat degradation. Since the 1500s the United States and its territories (including Hawaii and Puerto Rico) and Canada have together suffered extinction losses of 105 vertebrates (24 fish, 1 amphibian, 3 reptiles, 39 birds and 38 mammals — data from Kaufman and Mallory, 1986, *The Last Extinction,* MIT Press). Presently 495 species of all taxa including plants are officially listed on the federal endangered and threatened species roster, and about 4,000 more species are candidates for listing should the resource for reviewing their status become available to the U.S. Fish and Wildlife Service. Evidently the conditions in the United States for endangerment of species are accelerating.

Minnesota has been relatively fortunate with few species becoming extinct. The only bird to do so is the Passenger Pigeon although five species have been extirpated as breeding birds since the nineteenth century. However, the authorized list (Minnesota Department of Natural Resources) of endangered, threatened and special concern species in Minnesota now numbers 287 species of which 27 are birds. It is obvious that extinction does not just happen on islands or in the tropics. We need to pay attention to the stewardship needs in Minnesota under the conservation slogan of "Think globally, act locally."

Although the concern for the preservation of biodiversity has been driven by accelerating rates of habitat loss and species extinction, it is increasingly apparent that the problem cannot be effectively addressed on a species by species basis. This idea was succintly expressed in a letter to *Science* (v. 243, p. 589, Feb. 3, 1989): "The key to preserving biodiversity is ecosystem and landscape protection, not crisis management of an increasing number of endangered species." Traditional wildlife management has been species oriented, whether it is a game, non-game or endangered species program, for reasons of scientific and organizational simplicity. More detailed research into habitat needs and ecosystem processes is pushing that approach aside as the extraordinary complexity of natural systems is revealed and our limited knowledge and understanding shrinks by comparison. The Thomas report on "A Conservation Strategy for the Northern Spotted Owl" (p. 144; Portland, Oregon, 1990) stated the dilemma this way: "Wildlife biologists who provide information to aid management decisions are often challenged to distinguish between what a species uses and prefers, and what it must have. We contend, however, that the full range of a species' needs cannot be determined - that is generally unknowable and unresearchable.... When patterns of a species' abundance and distribution show a consistent, close association with a particular type or types of habitat, we assume that the habitat is essential for the species' persistence." This conclusion was reached by the government scientists after about five million dollars had been spent on Spotted Owl research since the early 1970s (Scott Horton, personal communication, 1989).

CLASSIFICATION RATIONALE

With that insight from the Spotted Owl report in mind, I have created a classification scheme for breeding birds that can be used in landscape managment and analysis. It is based on knowledge of species and their habitats but organizes their occurrence first on primary habitat affiliations (water/wetland, open country, woodland/trees). Next, the woodland/tree division is subdivided by landscape type (fragmented/disturbed, contiguous forest - decidiuous predominant; contiguous forest - coniferous predominant).

The emphasis is on wooded landscapes because of the present intense public discussion about forest management. Issues within that discussion (e.g. forest fragmentation, island biogeography, forest interior birds, edge effect and the decline of neotropical migrants) will not be presented directly, but my thoughts have obviously benefited from the lively debate that surrounds those topics. Since the underlying purpose of the classification is to better depict the occurrence of birds in different types of wooded terrain, a three-part scheme was constructed to identify birds that depend predominiantly on other habitat features - specifically water and open country.

The classification and the communities that make up each landscape/habitat division are given in Table 1.

In the woodland/trees division, shrubs as well as trees are included as habitat features. A main distinction is made between contiguous and fragmented forests. Some species that require trees have adapted to human-dominated landscapes where forests are fragmented by agriculture and development, or

TABLE 1
Communities Included In Each Landscape/Habitat Division

Water/Wetlands
- Lake and pond
- Stream and river
- Shallow and deep marsh
- Wet prairie
- Sedge meadow
- Fen
- Shrub prairie, meadow and fen
- Shrub wetland

Open Country
- Cultivated fields
- Pasture and hayfields
- Native upland prairie
- Brush prairie
- Tree claim
- Banks and gravel pits
- Cliffs, ledges and caves (includes structural mimics like culverts)

Woodland/Trees: Fragmented/Disturbed
- Savanna
- Orchards
- Remnant coniferous or deciduous forest
- Shelterbeds and hedge rows
- Farm woodlots
- Tree-covered settlements and suburbs
- Developed lakeshore with remnant forest

Woodland/Trees: Contiguous Forest-Deciduous Predominant
- Deciduous upland forest, young to mature, including: aspen, birch, oak, maple-basswood and mixed forests
- Floodplain forest
- Hardwood swamp forest
- Brush openings or cutovers

Woodland/Trees: Contiguous Forest-Coniferous Predominant
- Coniferous upland forest, young to mature, including: red and white pine, spruce, fir, jack pine, mixed conifers
- Mixed coniferous-deciduous forest, young to mature
- Conifer plantations, young to mature
- Conifer barrens and openings
- Conifer swamp forest (cedar)
- Forested bog (black spruce)
- *Open ericaceous (belonging to the heath family of plants) bog
- Boreal shrub wetland

---

where wooded conditions are created by plantings in suburbs and parks. These species are generalists (or edge species) in contrast to species that are forest-dependent and that occur in a variety of different specialized habitats. Some of these habitats may be shrubby, early successional stages of forest development which are structurally similar to brushy edges of fields or suburban backyards. Woodland generalists have adapted to the latter but forest-interior specialists have not. For example, in the warbler family the Yellow Warbler is a generalist but the Mourning Warbler is a specialist although they both require brushy habitats. Species that are classified as occurring in fragmented landscapes can also occur in contiguous forest landscapes that have the appropriate habitat requirements provided by openings or edges (either natural or man-made). But contiguous forest-dependent species do not have populations that persist in small forest fragments surrounded by fields or development. Much research is needed to delineate what size and spacing of forest patches is necessary for the breeding presence of forest species.

The distinction between conifer and deciduous forest is more easily recognized. However, many forests are a mixture of coniferous and deciduous trees. The proportion of conifers in each forest landscape, as well as their age, spacing and species composi-

Example of a Fragmented/disturbed Woodland Landscape (T134N, R31W, Sec. 15, Cass County — May Township)

Example of a Contiguous Forest-Deciduous Predominant Landscape (T56N, R7W, Sec. 18, Lake County — south of Tettegouche State Park)

Example of a Contiguous Forest-Coniferous Predominant Landscape (T62N, R4W, Sec. 19, Cook County — south of Sawbill Lake)

TABLE 2
Classification
Of Minnesota Breeding Birds
By Landscape/Habitat

Landscape/Habitat	Number of Species
Water/Wetlands	70
Open Country	34
Woodland/Trees	130
Fragmented — 44	
Contiguous forest-Deciduous predominant — 43	
Contiguous forest-Coniferous predominant — 43	
TOTAL	234

tion, is highly variable. Different bird species have habitat requirements that respond differently to these variables. In this coarse-grained classification, just the presence of conifers in a forest is considered. Some species classified as conifer-dependent can occur in forests without conifers (e.g. Black-throated Green Warbler) but they are usually found in landscapes with conifers. Other species in the conifer category have deciduous, brushy habitat requirements that are only found in boreal, conifer-dominated landscapes (e.g. Wilson's Warbler and Rusty Blackbird).

A summation of the number of species in each landscape/habitat division is given in Table 2. The three wooded landscapes are illustrated in the aerial photographs chosen as Minnesota examples of fragmented, deciduous and coniferous forests.

CLASSIFICATION METHODOLOGY

The background information for this classification is derived from two sources: abundance and distribution of Minnesota birds (from books on Minnesota birds by Thomas S. Roberts, Green and Janssen, Green and Niemi, Robert B. Janssen plus issues of ***The Loon***) and habitat and landscape occurrences of breeding birds as experienced by my own field birding and reading in the ornithological literature. I have also asked Gerald Niemi, JoAnn Hanowski, Lee Pfannmuller and Robert Janssen to review the classification and thank them for their comments. The final judgement of where to place a species is mine and I well recognize that there is room for debate on some species. Particularly difficult to pigeon-hole were brushy wetland species like Alder Flycatcher and Swamp Sparrow.

The basic approach was to create a classification that places the birds in a preferred landscape/habitat type and assigns them to only one type. Although this produces statistics that can be used in landscape analysis, it is very rigid and does not well accomodate birds notable for variations in behavior and habitat requirements. The goal is not to cover the natural history of all species for better biological understanding, but rather to create lists of species in a landscape context that is useful in resource assessments and integrated resource management policy and field decisions.

Operational guidelines were also developed that help in assigning species to the landscape/habitat divisions. These state that the habitat features are: a) used during the breeding season; b) used most of the time for resting and feeding; and c) ignored the actual nest site in a tree or shrub for open country, or water/wetland species (e.g. tree nesting herons, prairie raptors). The assignment looks at what dominant features of a terrain are most necessary for breeding. The list of breeding species used is from the Minnesota Ornithological Records Committee, "Checklist of Minnesota Birds" (published by the Minnesota Ornithologists' Union, 1988). All species on this list that have ever nested in Minnesota are included. Those that are either rare or local are so noted. The list includes all the nesting species in the state but a geog-

TABLE 3
Breeding Birds That Occur Mostly In Southern* Minnesota

	Regular	Rare
OPEN COUNTRY		
	Loggerhead Shrike	Burrowing Owl
	Dickcissel	Henslow's Sparrow
	Field Sparrow	
	Lark Sparrow	
WOODLAND-FRAGMENTED		
	Eastern Screech-Owl	Northern Bobwhite
	Red-bellied Woodpecker	Northern Mockingbird
	Northern Cardinal	Bell's Vireo
	Orchard Oriole	Yellow-breasted Chat
		Blue Grosbeak
WOODLAND-CONTIGUOUS DECIDUOUS PREDOMINANT		
	Wild Turkey	Hooded Warbler
	Acadian Flycatcher	
	Willow Flycatcher	
	Tufted Titmouse	
	Blue-gray Gnatcatcher	
	Blue-winged Warbler	
	Cerulean Warbler	
	Prothonotary Warbler	
	Louisiana Waterthrush	

*Southern is defined as a line drawn east to west through Mille Lacs Lake.

---

raphical list for northern Minnesota can be created by subtracting those species that are listed in Table 3 as just occuring primarily in southern Minnesota (south of approximately Mille Lacs Lake). The resulting number for Northern Minnesota woodland-dependent species are as follows: 36 species in fragmented landscapes (edge/settlement), 34 species in contiguous forest-deciduous predominant, 42 species in contiguous forest-coniferous predominant for a total of 112 northern woodland nesting species.

1754 Old North Shore Road, Duluth, MN 55804.

LANDSCAPE CLASSIFICATION FOR MINNESOTA BREEDING BIRDS BY PRIMARY HABITAT AFFINITY

SPECIES	PRIMARY HABITAT				
	Water/ Wetland	Open Country	Woodland/Trees		
			Fragmented/ Disturbed	Contiguous-Deciduous	Contiguous-Coniferous
Common Loon	X				
Pied-billed Grebe	X				
Horned Grebe (r)	X				
Red-necked Grebe	X				
Eared Grebe	X				
Western Grebe	X				
American White Pelican	X				
Double-crested Cormorant	X				
American Bittern	X				
Least Bittern	X				
Great Blue Heron	X				
Great Egret	X				
Snowy Egret (r)	X				
Little Blue Heron (r)	X				
Cattle Egret	X				
Green-backed Heron	X				
Black-crowned Night-Heron	X				
Yellow-crowned Night-Heron (r)	X				
Canada Goose	X				
Wood Duck	X				
Green-winged Teal (r)	X				
American Black Duck	X				
Mallard	X				
Northern Pintail	X				
Blue-winged Teal	X				
Northern Shoveler	X				
Gadwall	X				
American Wigeon	X				
Canvasback	X				
Redhead	X				
Ring-necked Duck	X				
Lesser Scaup (r)	X				
Common Goldeneye	X				
Bufflehead (r)	X				
Hooded Merganser	X				
Common Merganser	X				
Red-breasted Merganser	X				
Ruddy Duck	X				
Turkey Vulture			X		
Osprey	X				
Bald Eagle	X				
Northern Harrier	X				
Sharp-shinned Hawk					X
Cooper's Hawk				X	
Northern Goshawk					X
Red-shouldered Hawk				X	
Broad-winged Hawk				X	
Swainson's Hawk		X			
Red-tailed Hawk			X		
American Kestrel		X			
Merlin					X
Peregrine Falcon (r)		X			
Gray Partridge		X			
Ring-necked Pheasant		X			
Spruce Grouse					X

SPECIES	PRIMARY HABITAT				
	Water/ Wetland	Open Country	Woodland/Trees		
			Fragmented/ Disturbed	Contiguous-Deciduous	Contiguous-Coniferous
Ruffed Grouse				X	
Greater Prairie-Chicken		X			
Sharp-tailed Grouse				X	
Wild Turkey				X	
Northern Bobwhite (r)			X		
Yellow Rail	X				
Virginia Rail	X				
Sora	X				
Common Moorhen (r)	X				
American Coot	X				
Sandhill Crane	X				
Piping Plover	X				
Killdeer		X			
American Avocet (r)	X				
Spotted Sandpiper	X				
Upland Sandpiper		X			
Marbled Godwit		X			
Common Snipe	X				
American Woodcock				X	
Wilson's Phalarope	X				
Franklin's Gull	X				
Ring-billed Gull	X				
Herring Gull	X				
Caspian Tern (r)	X				
Common Tern	X				
Forster's Tern	X				
Black Tern	X				
Rock Dove		X			
Mourning Dove			X		
Black-billed Cuckoo				X	
Yellow-billed Cuckoo				X	
Eastern Screech-Owl			X		
Great Horned Owl			X		
Northern Hawk-Owl (r)					X
Burrowing Owl (r)		X			
Barred Owl				X	
Great Gray Owl (r)					X
Long-eared Owl				X	
Short-eared Owl	X				
Boreal Owl (r)					X
Northern Saw-whet Owl					X
Common Nighthawk		X			
Whip-poor-will				X	
Chimney Swift			X		
Ruby-throated Hummingbird			X		
Belted Kingfisher	X				
Red-headed Woodpecker			X		
Red-bellied Woodpecker				X	
Yellow-bellied Sapsucker				X	
Downy Woodpecker			X		
Hairy Woodpecker				X	
Three-toed Woodpecker (r)					X
Black-backed Woodpecker					X
Northern Flicker			X		
Pileated Woodpecker				X	
Olive-sided Flycatcher					X
Eastern Wood-Pewee				X	
Yellow-bellied Flycatcher					X
Acadian Flycatcher (r)				X	
Alder Flycatcher	X				

SPECIES	PRIMARY HABITAT				
	Water/ Wetland	Open Country	Woodland/Trees		
			Fragmented/ Disturbed	Contiguous-Deciduous	Contiguous-Coniferous
Willow Flycatcher	X				
Least Flycatcher				X	
Eastern Phoebe			X		
Great Crested Flycatcher			X		
Western Kingbird		X			
Eastern Kingbird		X			
Horned Lark		X			
Purple Martin		X			
Tree Swallow			X		
Northern Rough-winged Swallow		X			
Bank Swallow		X			
Cliff Swallow		X			
Barn Swallow		X			
Gray Jay					X
Blue Jay			X		
Black-billed Magpie (r)			X		
American Crow			X		
Common Raven					X
Black-capped Chickadee			X		
Boreal Chickadee					X
Tufted Titmouse				X	
Red-breasted Nuthatch					X
White-breasted Nuthatch			X		
Brown Creeper				X	
House Wren			X		
Winter Wren					X
Sedge Wren	X				
Marsh Wren	X				
Golden-crowned Kinglet					X
Ruby-crowned Kinglet					X
Blue-gray Gnatcatcher				X	
Eastern Bluebird			X		
Veery				X	
Swainson's Thrush					X
Hermit Thrush					X
Wood Thrush				X	
American Robin			X		
Gray Catbird			X		
Northern Mockingbird (r)			X		
Brown Thrasher			X		
Cedar Waxwing			X		
Loggerhead Shrike		X			
European Starling			X		
Bell's Vireo (r)			X		
Solitary Vireo					X
Yellow-throated Vireo				X	
Warbling Vireo			X		
Philadelphia Vireo				X	
Red-eyed Vireo				X	
Blue-winged Warbler				X	
Golden-winged Warbler				X	
Tennessee Warbler					X
Nashville Warbler					X
Northern Parula					X
Yellow Warbler			X		
Chestnut-sided Warbler				X	
Magnolia Warbler					X
Cape May Warbler					X
Black-throated Blue Warbler				X	
Yellow-rumped Warbler					X

SPECIES	PRIMARY HABITAT				
	Water/ Wetland	Open Country	Woodland/Trees		
			Fragmented/ Disturbed	Contiguous-Deciduous	Contiguous-Coniferous
Black-throated Green Warbler					X
Blackburnian Warbler					X
Pine Warbler					X
Palm Warbler					X
Bay-breasted Warbler					X
Cerulean Warbler				X	
Black-and-white Warbler				X	
American Redstart				X	
Prothonotary Warbler				X	
Ovenbird				X	
Northern Waterthrush				X	
Louisiana Waterthrush (r)				X	
Connecticut Warbler					X
Mourning Warbler				X	
Common Yellowthroat			X		
Hooded Warbler (r)				X	
Wilson's Warbler (r)					X
Canada Warbler				X	
Yellow-breasted Chat (r)			X		
Scarlet Tanager				X	
Northern Cardinal			X		
Rose-breasted Grosbeak				X	
Blue Grosbeak (r)			X		
Indigo Bunting			X		
Dickcissel		X			
Rufous-sided Towhee			X		
Chipping Sparrow			X		
Clay-colored Sparrow		X			
Field Sparrow		X			
Vesper Sparrow		X			
Lark Sparrow		X			
Savannah Sparrow		X			
Grasshopper Sparrow		X			
Henslow's Sparrow		X			
LeConte's Sparrow	X				
Sharp-tailed Sparrow	X				
Song Sparrow			X		
Lincoln's Sparrow					X
Swamp Sparrow	X				
White-throated Sparrow					X
Dark-eyed Junco					X
Chestnut-collared Longspur (r)		X			
Bobolink		X			
Red-winged Blackbird	X				
Eastern Meadowlark		X			
Western Meadowlark		X			
Yellow-headed Blackbird	X				
Rusty Blackbird (r)					X
Brewer's Blackbird		X			
Common Grackle			X		
Brown-headed Blackbird			X		
Orchard Oriole			X		
Northern Oriole			X		
Purple Finch					X
Red Crossbill (r)					X
Pine Siskin					X
American Goldfinch			X		
Evening Grosbeak					X
House Sparrow			X		

(r) = rare or local breeding bird

The Yellow Rails of McGregor Marsh

Warren Nelson

Imagine yourself standing by a large marsh with several other birders. You have finally decided to go look for Yellow Rails and everyone has told you what a wonderful experience it is. The sun is going down, the air is cooling and your anticipation is high. Everyone is dead quiet, straining to hear the first clicking. Fireflies start flashing and within a few minutes the whole marsh seems to be twinkling. Finally, off in the darkness comes the first tick, tick — tick, tick, tick. It gets louder and others join in. You think it's close, but you are in for a walk — the sound travels for quite a distance. You are informed that the time has come to head into the marsh, and you are ready, old tennis shoes on and a flashlight in hand. You take your first step. The ice hasn't been out of the marsh very long and your teeth start chattering in perfect rhythm to the calling rails. You start toward the closest rail. The idea is to surround it and get it in your light. As it calls, you walk; when it stops, you stop. It can seem like forever and the walking isn't easy — tussocks and holes. Avoid cattails or you may have to tread water. You keep moving and you start to get used to the water — or are you just turning numb? You have finally encircled the rail and are slowly moving in; it stops, you stop. Finally you are close enough and your leader tells you to turn on your flashlights and to start scanning in front of you and beside you; rails can easily walk right past without your knowing it. Suddenly, someone yells "I've got it" and all lights train in on it. Usually it will freeze, sometimes it will flush. What a sight! One of the ten most-wanted-to-see birds in all of North America and it's less than ten feet away from you. The water doesn't seem as cold anymore. It was all worth it. You watch for several minutes; then, when everyone is completely satisfied with his view, you let it walk away into the night. The adrenaline is flowing so fast you almost fly out of the marsh. You almost wish you could do it all over again. This scene has been played out in Aitkin County at least a hundred times and even the highway patrol doesn't stop to ask what's going on anymore. They know it's just "those crazy birdwatchers."

In July of 1973, Terry Savaloja first discovered the Yellow Rail marshes near McGregor. He probably didn't realize what a discovery he had made. But since then, they have become the premier Yellow Rail marshes in Minnesota and some of the best known in the country. Literally hundreds of birders from all over the United States, Canada, and as far away as France have come to Aitkin County to see this elusive little bird.

Through the years, Yellow Rails have been found in several marshes, rice paddies and flooded fields throughout Aitkin County. But the main marshes have always been those at McGregor. The marshes are located south of the junction of Minnesota Highway 210 and Minnesota Highway 65 just east of McGregor and also along Aitkin County Road 8, which runs between McGregor and Minnesota Highway 65. If you put together all of the main marshes, the total area is about three square miles.

During the 1970s and the early 1980s, the marshes supported an average of fifteen pairs of Yellow Rails. But during 1987, 1988 and 1989, there was a severe drought in the county which had an adverse affect on the marsh and on the rail population. In both 1987 and 1988, there were only two calling male birds — those being anywhere from a half to three quarters of a mile out into the main eastern marsh. In 1989, things improved slightly with a total of five calling male birds — three in the eastern marsh and two in the western marsh.

In 1990, something special happened. There were very timely rainfalls in the early spring before the rails returned to their breeding ground. This brought the water levels in the marshes back up to normal and slightly above normal. This also had a positive effect on the snail population in the marshes, snails being the rails' main food source. What happened was an incredible increase in population — a total of forty-two calling male birds — the largest number that the marshes have ever been known to have. And it wasn't only

Yellow Rail nest, June 1990, Aitkin County. Photo by Warren Nelson.

the Yellow Rails that were affected. Birds like the Sora and the Virginia Rail, which had been virtually nonexistant over the last three years, came back in very healthy numbers and could be heard calling throughout the marshes. It was a real treat to hear the marshes so alive after three years of silence.

In 1990, birders again showed up from all over the country — Arizona, Washington state, Florida, California, Connecticut, Wisconsin and throughout Minnesota.

On 4 June, Chuck Vinsonhaler, a birder from Connecticut, and I were out in one of the marshes in the early evening watching a Yellow Rail. On our return to the car, we jumped another rail which came out of a tuft of grass about ten feet in front of us. When I caught my wits about me, I walked over and opened the grasses to reveal a beautiful little nest containing seven buffy colored eggs with dark brown speckles around the larger end. The eggs measured approximately 1.1 inches by .8 inches. The nest was about six inches across and sat on a tussock 7½ inches above the water. Dead grasses formed a canopy three to four inches over the nest. The water depth under the nest was approximately four inches. I carefully covered the nest back up, inconspicuously marked where it was located, and then left the marsh.

The following evening, Steve Blanich and I returned to find that there were now eight eggs in the nest. This was particularly encouraging in that it meant the nest hadn't been abandoned, and that I had also found the nest before the entire clutch had been laid. Eight eggs did turn out to be the full clutch.

Saturday morning, 9 June, I returned with a lightweight portable blind which can be set up in two minutes flat. I set it up seven feet away from the nest and then opened the canopy of the nest on one side. Within thirty seconds of entering the blind, the female Yellow Rail was back at the nest deliberately looking over each egg to make sure they hadn't been damaged in any way. She then carefully sat down on the nest, turned the eggs and got them tucked in underneath her. After getting settled in, she then started repairing the nest. It wasn't just repairing the hole I had made, but interweaving both live and dead grasses all the way around the nest to form a perfect canopy. The only spot left open was an entrance hole which led out of the back of the nest to a trail or runway about two inches wide. The runway ran from the nest to waters edge; it proved to be the only way she entered or left the nest. It took her seventeen minutes to repair it and when finished, even at only seven feet away, she couldn't be seen through the grasses.

Every 30 to 45 minutes, she would leave the nest, presumably to stretch and find something to eat. Each time she left, I would step out of the blind and open the nest back up, an act that bothered me at first. But if you think about it, what else did she have to do? Just sitting on eggs all day must be awfully boring. The first time, she was gone for 1 minute 45 seconds. After that, the times varied from 30 seconds to nearly five minutes. Each time she returned she would have a look of total bewilderment as she looked at the hole in her nest, and then repairs began.

Other rails could be heard clicking periodically throughout the five plus hours I was there (including the mate to this one) from a distance of 10 to 20 feet behind the nest. Although he was never seen, he made his presence known every half hour to an hour with a few clicks.

Yellow Rails are quite beautiful little birds, only about seven inches long. They have a conspicuous brownish gold cheek patch which is highlighted by a brighter gold face, neck and breast. They have a bright yellow throat. The back feathering is all black with each feather outlined in white, giving it an almost spiderweb effect, with golden streaks of feathers going through that spiderweb. They are the only rail with white wing patches, but these are conspicuous only when they are in flight. The rails have short bills; female birds tend to have darker olive green colored bills in contrast to male birds which tend to have more yellowish colored bills.

During the next week, there were several thunder and lightning storms with some very heavy rainfalls, including one rainfall in the McGregor area of over four inches in one night. So it was no surprise when I returned on 17 June to find that the sideroad, where I had parked my car, was half under water. I was afraid that the nest might have been flooded out, but to my relief she was still carrying out her duties. But the nest, which had been at first 7½ inches above water, was now only ¼ inch above water. Luckily the water level continued to fall after that.

I borrowed a video camera and beginning

Yellow Rail nest, June 1990, Aitkin County. Photo by Warren Nelson.

Young Yellow Rails, June 1990, Aitkin County. Photo by Warren Nelson.

on 17 June, I started to tape the events at the nest.

One of the main things I wanted to find out, after discovering the nest, was the period of incubation. It didn't seem to matter which bird book I looked at (T.S. Roberts, Bent, the Audubon Encyclodpedia, Harrison, Peterson and several others), they all said essentially the same thing: incubation time unknown, or not enough known about this species. This is both encouraging and discouraging because rail chicks are precocial, so if you want to see the main event, you have to be there at the time. So starting on 20 June, I began driving the 25 miles over to the marsh twice a day, early morning before work and in the evening after work.

On Friday evening, 22 June, Steve and Jo Blanich were with me in the blind and finally we noticed the first very faint pippings on two of the eggs. Hatching was still several hours away. On Saturday morning, 23 June, I was back shortly after sunrise. I could see a lot of movement in the nest, but I didn't want to open it until the sun was up further. By 8:15 A.M. the sun was up far enough that it was shining partly on the nest, and I decided to open it. My first sight was of three little black balls of fluff, a fourth one in the middle of hatching out, and four eggs still unhatched. Newly hatched Yellow rail chicks are downy, about two inches long, solid black with a pale pink bill, and brownish legs. They are incredibly cute. The female tried to lead me away by calling and running off the nest, so I quickly returned to the blind to try to keep her agitation to a minimum. She was in the nest in only seconds, very quickly inspecting the young and then sitting down on top of them.

Every so often she would reach underneath herself and pull out an eggshell fragment. She would eat the embryonic sack out of it, then carry the fragment out the runway and drop it in a small pool of water only four feet from the nest. She would be gone only seconds before running back in to sit down on the chicks. A few minutes later, she repeated the whole procedure.

At 9:12 A.M., the first young rail left the nest by way of the same runway that the female used to enter or leave the nest. All the chicks would use the runway to leave. The chicks were very precocial; when they left the nest, they were still wet and couldn't walk. They used their wings to pull themselves out. The female was very nonchalant about the first young leaving, not paying attention to it at all. The same could be said when the second chick left, at 9:28 A.M.

The batteries on the video camera went dead and I had to leave to get them charged. While at home, Bill Stauffer called and later joined me to watch the proceedings of the day.

By 11:30 A.M., all eight eggs had hatched and six of the young had left the nest. The young rails could be heard peeping from a distance of 10 to 30 feet away from the nest in the direction in which the male bird had been calling. The female seemed to become more restless as each young left the nest. She would run out the runway to check the young that were off the nest, then quickly return to sit on the remaining young. After about two minutes, she would run off to start the whole procedure all over again.

At 1:06 P.M., the last chick left the nest, feebly crawling out while the female was off the nest looking after the others that were already out in the marsh. The female made one last quick check of the nest and then disappeared. Before leaving, I took one last look in the runway which revealed the last young rail. The other chicks could still be heard peeping and I had the urge to go and look for them, but I decided not to for fear of stepping on one of them. Also I did not want to cause the adult birds any additional stress.

The incubation period for this Yellow Rail family was eighteen days.

The next day, I returned one last time and collected the nest and all the eggshell fragments that I could find. The rails could still be heard calling within 40 to 50 feet of the nest. Still not wanting to take a chance of hurting any of the young, I very carefully entered and left the marsh. And so ended an experience of a lifetime. **603 2nd St. N.W., Aitkin, MN 56431.**

A Minnesota Longspur Tragedy

Ruth D. Hein

"Over a million Lapland Longspurs killed in and around Worthington in one night..."

"Total number of dead birds undetermined; deaths result of natural disaster..."

"During the night of 13 March 1904, over a million winged visitors were killed in and around Worthington, Minnesota..."

The visitors were Lapland Longspurs, described in the Golden Field Guide *Birds of North America* as "sparrow-like ground birds of open fields, tundra, and dunes." About 5¾ inches long, these dark birds often flock with Horned Larks, Snow Buntings, and other longspurs.

Ornithologist Henry C. Kyllingstad of Marshall, Minnesota said, "Some Lapland Longspurs remain in this area for the winter, and some go farther south. Some have been known to winter as far south as the Gulf (of Mexico)." Kyllingstad described the birds this way: "When you're driving along in the country and you see a large flock of small, dark birds settled on the field or in the road ditch, if they all fly up as you approach and then circle and settle down again, chances are they're Lapland Longspurs. Sometimes they'll be in a mixed group, but sometimes the whole flock will be just the one species."

Lapland Longspurs do not nest in Minnesota. Many spend the winter in the southern half of the state or in Iowa or farther south, feeding on the seeds of grasses, waste grain, and sometimes insects. Since they leave before the next year's grain crops mature, they are not a threat. In late February and early March, continuing into April, the changing weather or longer days or something in their inner selves compels these birds to start north. Usually by night, but also by day, their migration in huge flocks begins. They leave their winter homes to fly up to northern Canada or the Arctic region for their breeding season. There they build their nests of grasses, lined with feathers and hair. Naturalists say they make beautiful music in their Arctic summer home.

In 1904, thousands of them had been wintering in southern Iowa before tragedy struck shortly after their pilgrimage north began. Most southwest Minnesota and northwest Iowa residents don't need to be told that heavy, wet snows can come out of the northwest in the early months of the calendar year. They sometimes come at the same time that the Lapland Longspurs have begun their spring migration. When huge flocks of the birds collide with one of those snowstorms, a natural disaster can occur. That's exactly what happened the night of 13-14 March, 1904. Lew Hudson says of it, "(It was) one of the worst natural life disasters in the United States history, and Worthington, Minnesota was to be the focal point." (From Hudson's book, *From New Cloth — The Making of Worthington*).

Thomas S. Roberts, then Director of the Department of Birds of the Minnesota Natural History Survey, described the "catastrophe" in detail in his article "A Lapland Longspur Tragedy" (*The Auk:* 24:369-377). Roberts also relates the story in his book *The Birds of Minnesota*. "The night was very dark but not cold, and heavy, wet snow was falling with but little wind stirring," Roberts wrote. "Migrating longspurs came from the Iowa prairies in a vast horde, and from about 11 P.M. until near morning incredible numbers met their death in and about villages by flying against buildings, electric light poles and wires, and by dashing forcibly onto the frozen ground and ice, as in their wet, snow-laden, and bewildered condition they whirled and circled about in aimless flight."

The account of the 1904 disaster was retold 44 years later in *Audubon* (50: 90-95) in an article titled "Bird of Tragedy" by John K. Terres. "The first line of birds met the great storm from Ft. Dodge westward to Sioux City," Terres reported. "A mighty snowstorm rode southward, drifting slowly down across the migration route of the Longspurs," 200 miles north of the birds as they moved northward over Iowa.

The accounts of the tragedy reveal that the birds had probably already struggled against the storm for two hours or more before they were overcome by lack of food and by the heavy, wet snow that slowed them down and tired them out until they plummeted down to the snow and ice or onto roofs.

"Dead as they fell on ice, southwestern Minnesota 13-14 March 1904."

"Dead as they fell on land, southwestern Minnesota 13-14 March 1904." Photos supplied by Bell Museum of Natural History, University of Minnesota.

"Killed in storm, southwestern Minnesota 13-14 March 1904." Photo supplied by Bell Museum of Natural History, University of Minnesota.

When brief articles about the "kill-off" appeared in several area papers, Roberts sent Dr. L. O. Dart to investigate for the Minnesota Natural History Survey. Dart started his work eight days after the birds fell. He found that although some had been killed in a larger area, by far more were killed in the four counties in the southwest corner of Minnesota. At Worthington, Dart tried to determine how many died by taking the average of the numbers of dead lying on 20 square foot areas marked out on the ice of two small lakes, one on the west and one on the east of town. Then, figuring each lake to have about a square mile of surface, he estimated a total of about 750,000 just on the two lakes. There the snow had melted and frozen again, leaving surface ice where the birds could be more easily seen than in grassy yards and muddy fields and streets. Dart's estimate was considered to be conservative, according to his later report which stated that a million birds was probably nearer the truth. Other indications are that it may have been two million, just in and around Worthington.

After visiting Slayton and Avoca and interviewing eyewitnesses from other towns, Dart reported that the destruction also extended over those Minnesota towns as well as Heron Lake, Luverne, and Adrian. Sibley, in northern Iowa, reported a thousand dead in just a few blocks. However, Pipestone, Jackson, and Lakefield (nearby towns in southwest Minnesota) were outside the limits of the birds' flight, or at least the snow did not stop them and no dead were found, so the total area involved was about 1500 square miles.

Not all the birds died. Because they were injured or dazed, many were easily gathered in boxes or baskets and taken inside. There people dried them as best they could and warmed them. Some fed them grain. Those birds that revived were allowed to go on their way. Many rose from the snow on the ground or, according to Jim Drobeck, a farmer who lived on the edge of Worthington, out of lumps of snow on rooftops the next morning. He watched as the birds shook off the snow, dried off a bit, preened themselves in the sunshine and flew off. But he had found at least 75 dead in his yard as he walked from the house to the barn earlier that morning. Careful examination of many birds showed they had fallen headlong or plunged into the snow, and did not flutter down after hitting a tree or some other object. The snow was blood-stained where their mouths had lain, according to the testimony of Worthington physicians F.M. Manson and Edwin Ray Humiston. All of the birds were Lapland

Longspurs. No one reported any other species in that incident.

The Lapland Longspurs have sometimes been called "Northland Bobolink" or "Prairie Sparrow." According to the *Audubon* article, it is their long hind claw (as long as, or longer than, the bird's hind toe) that gives them the popular name of longspur. During the 1904 disaster, John Carlson, an emergency wireman for the Worthington electric light company, had seen what was happening when he went out on a repair call that night. Carlson examined a number of the fallen creatures and saw that claw, but didn't realize it was the mark that gave the bird part of its name. "Lapland" possibly comes from the fact that the birds spend their summers in northern lands that are, like over half of Lapland, within the Arctic circle and have an Arctic climate. The scientific name of the species is *Calcarius lapponicus*.

In 1904, after Dart visited other towns, sent inquiries to 23 postmasters (he received ten replies), and interviewed many people, he estimated that five million Lapland Longspurs died in that snowstorm. He concluded that the greatest destruction centered at Worthington. For 20 or 30 miles in all directions from there, the "kill-off" covered an area of 1500 square miles, including 40 towns in southwest Minnesota, northwest Iowa, and southeast South Dakota.

Dart's report also stated at least 250 dead birds were dissected and examined. Autopsy notes revealed that the birds had died of injuries such as fractured skulls, cerebral hemorrhages, crushed bodies and internal bleeding, ruptured intestines or lungs, and broken necks, wings and legs. Dr. Lowe, the Slayton doctor, found the same effects. The birds' bodies, though, were plump and had been in good condition before they met up with the storm. Except for a little gravel, all the stomachs were empty, indicating that they had flown for some time and were ready to feed soon.

Some who were aware of what had happened wondered if that would be the end of the species, or at least the last of their migrations in such large numbers. Terres wrote, "Fated by nature to raise large broods on the Arctic tundra, enormous numbers of them are equally fated to die, else they might over-run the earth."

Kyllingstad said, "The event has been repeated many times since 1904, though that may well have been the worst case. In the same kind of weather events, this sort of thing occurs to this day, but I suspect rarely with such large numbers of birds destroyed. "Lapland Longspurs are present in the state now. We recorded them on the Audubon Society Christmas Counts at Dawson, Lamberton, Cottonwood and Marshall in 1990, numbers being 40 or more on each count; 155 at Marshall."

A.D. Brown of Pipestone had reported to Dart that in his 25 years in southwest Minnesota, he had seen similar destruction of these birds in the spring and under similar conditions. His example was a sleet storm, during which the sleet froze into a layer of ice on which three inches of soft, wet snow fell. When the migrating birds came that night, tired and hungry, they fell. Those that didn't die were able to feed on fallen seeds the next day when the sun came out and melted the snow and ice. Then, strengthened for the journey, they went on heir way. Brown said that there were many Lapland Longspurs around Pipestone in March of 1904, but there was no snow, so they were able to find food before they left for their summer homes. None died there that year. Brown theorized that in early winter in southwest Minnesota, when the snow is dry and much of it blows off the fields, the weed tops still hold many seeds above the snow. Later, when the wet snows of early spring come, the seeds have been shaken to earth by strong winds and have sometimes been covered by snow. Then ground-feeding birds like the Lapland Longspurs that thrive on seeds have a hard time finding food.

Roberts said, "This theory of Mr. Brown's of rapid exhaustion from rapid withdrawal of food seems worthy of considertation and may seem, in part at least, to explain these rather mysterious occurrences." **1801 South Shore Dr., Worthington, MN 56187.**

Salt Lake Preserve

Chuck and Micki Buer

Salt Lake, also known as Rosabel Lake, is a beautiful shallow prairie lake of approximately 300 acres on the Minnesota-South Dakota border. Of these, 259 acres are in Minnesota and are located three miles southwest of Marietta in Lac qui Parle County.

Because of little precipitation, high evaporation, and a small watershed emptying into the lake, it frequently goes dry during summer. At normal highwater level, the maximum depth is about four feet with about a two-three foot average. The lake bottom is mostly silty mud with some areas of firm sand and gravel substrate. As the lake evaporates and recedes, a gravel island is exposed near the southwest shore. During highwater periods, a bay is formed in the southwest area of the lake and is separated from the main body of the lake by a peninsula running in an east-west direction. Primarily a watershed lake, there are three inlets which contribute runoff from the surrounding upland. Springs are located along the southwest shore and some seepage inflow into the lake does occur; however, there is not enough inflow to maintain the lake level. The lake has no outlet.

The surrounding upland is a gentle rolling landscape. A variety of clay loams create the heavy subsoil, and occasional clay hardpan hinders penetration by both roots and water. This condition prevents the leaching of minerals through the soil and thereby contributes to the alkaline nature of the area. As the lake evaporates, the concentration of soluble salts produces an alkalinity that is about ⅓ that of sea water. Thus Salt Lake is noted as the most alkaline lake in Minnesota and herein is the main attraction of the lake to the flora and fauna.

Salt Lake contains a distinctive natural community — saline prairie. This community forms along the lake margins. Soils, heavily laden with salts, support a unique flora adapted to saline-alkaline conditions. Growing in profusion along the lakeshore are two salt-loving plants, glasswort and alkali-grass. The lake has gained increasing popularity as a premier birding spot to seek certain species, especially waterfowl and shorebirds... During migration, the lake becomes a haven and staging area, with the greatest diversity and number of birds seen in spring. Irregularly the site harbors breeding populations of Eared Grebes and American Avocets. The area also attracts prairie songbirds, like Savannah Sparrows and Dickcissels. What makes the lake so enticing? There are a few islands of emergent plants such as exist in many prairie marshes. The dominant submerged vegetation is sago pondweed. Though little is known of the invertebrates present in the lake, they are abundant. The principal crustaceans are a red diaptomus and water fleas, both unique to alkaline environments. Dashing along the shore, shorebirds probe for bottom dwelling copepods and brine shrimp. Snails are also abundant. This lush growth of sago pondweed and high invertebrate populations provide the rich food source so attractive to waterbirds.

Bird List

Salt Lake M.O.U. Outings 1975-1991

At the time this checklist was compiled (May 1991) there has been a total of 207 species officially accepted and recorded for the Salt Lake outing from 1975 through 27 April 1991. Those species which are included in this list have been recorded in accordance with specific guidelines, as follows:

1. Species seen only on the Saturday of the M.O.U. Salt Lake weekend.
2. Species seen in Lac qui Parle County, or the adjacent counties — Big Stone, Chippewa, Swift, or Yellow Medicine. Species seen in South Dakota are not accepted and recorded.
3. Acceptable species are in accordance with the Minnesota Ornithologists' Union Records Committee (MORC).

The nomenclature, sequence, and taxonomy of this list is in accordance with the A.O.U. checklist.

REGULAR SPECIES — Likely to occur in suitable habitat. **U** = Uncommon, may be

present but not certain to be seen. **R** = Rare, seen only a few times.

Common Loon

Pied-billed Grebe
Red-necked Grebe **U**
Horned Grebe
Eared Grebe
Western Grebe

American White Pelican

Double-crested Cormorant

American Bittern
Great Blue Heron
Great Egret
Snowy Egret **R** (1978, 1980, 1990, 1991)
Little Blue Heron **R** (1980)
Cattle Egret **R** (1978, 1985, 1986)
Green-backed Heron
Black-crowned Night Heron
Yellow-crowned Night Heron **R** (1979, 1981, 1985)

Tundra Swan
Greater White-fronted Goose
Snow Goose
Canada Goose
Wood Duck
Green-winged Teal
American Black Duck
Mallard
Northern Pintail
Blue-winged Teal
Cinnamon Teal **R** (1988)
Canvasback
Redhead
Ring-necked Duck
Greater Scaup
Lesser Scaup
Black Scoter **R** (1989)
White-winged Scoter **R** (1990)
Common Goldeneye
Bufflehead
Hooded Merganser
Common Merganser
Northern Shoveler
Gadwall
American Wigeon
Red-breasted Merganser
Ruddy Duck

Turkey Vulture

Osprey
Bald Eagle
Northern Harrier
Sharp-shinned Hawk
Cooper's Hawk
Northern Goshawk **U**
Red-shouldered Hawk **U**
Broad-winged Hawk
Swainson's Hawk
Red-tailed Hawk
Ferruginous Hawk **R** (1983, 1985, 1986)
Rough-legged Hawk
Golden Eagle **R** (1977)

American Kestrel
Merlin **R** (1983, 1991)
Peregrine Falcon **R** (1980, 1986, 1989, 1990)
Prairie Falcon **R** (1977)

Gray Partridge
Ring-necked Pheasant

Yellow Rail **R** (1987)
Virginia Rail **U**
Sora
American Coot

Sandhill Crane

Black-bellied Plover
Lesser Golden-Plover
Semipalmated Plover
Piping Plover **R** (1976, 1984)
Killdeer

American Avocet

Greater Yellowlegs
Lesser Yellowlegs
Solitary Sandpiper
Willet
Spotted Sandpiper
Upland Sandpiper
Hudsonian Godwit
Marbled Godwit
Sanderling
Semipalmated Sandpiper
Western Sandpiper **R** (1975, 1983, 1985)
Least Sandpiper
White-rumped Sandpiper
Baird's Sandpiper
Pectoral Sandpiper
Dunlin
Short-billed Dowitcher
Long-billed Dowitcher

Common Snipe
American Woodcock
Wilson's Phalarope

Franklin's Gull
Bonaparte's Gull
Ring-billed Gull
Herring Gull
Caspian Tern
Common Tern
Forster's Tern
Black Tern

Rock Dove
Mourning Dove

Eastern Screech Owl
Great Horned Owl
Burrowing Owl **R** (1985, 1988)
Long-eared Owl
Short-eared Owl

Chimney Swift

Belted Kingfisher

Red-headed Woodpecker
Red-bellied Woodpecker
Yellow-bellied Sapsucker
Downy Woodpecker
Hairy Woodpecker
Northern Flicker
Pileated Woodpecker

Least Flycatcher
Eastern Phoebe
Eastern Kingbird

Horned Lark

Purple Martin
Tree Swallow
Northern Rough-winged Swallow
Bank Swallow
Cliff Swallow
Barn Swallow

Gray Jay **R** (1977)
Blue Jay
Black-billed Magpie **U**
Common Crow

Black-capped Chickadee

Red-breasted Nuthatch
White-breasted Nuthatch

Brown Creeper

House Wren
Winter Wren
Sedge Wren
Marsh Wren

Golden-crowned Kinglet
Ruby-crowned Kinglet
Eastern Bluebird
Swainson's Thrush
Hermit Thrush
American Robin

Gray Catbird
Brown Thrasher

Water Pipit

Cedar Waxwing

Northern Shrike
Loggerhead Shrike

European Starling

Solitary Vireo

Tennessee Warbler
Orange-crowned Warbler
Nashville Warbler
Yellow-rumped Warbler
Black-throated Green Warbler
Palm Warbler
Black-and-white Warbler
Northern Waterthrush
Wilson's Warbler
Northern Cardinal
Rufous-sided Towhee
American Tree Sparrow
Chipping Sparrow
Clay-colored Sparrow
Field Sparrow
Vesper Sparrow
Lark Sparrow
Lark Bunting **R** (1985, 1991)
Savannah Sparrow
Grasshopper Sparrow
Le Conte's Sparrow
Fox Sparrow
Song Sparrow
Lincoln's Sparrow
Swamp Sparrow
White-throated Sparrow
White-crowned Sparrow

Harris' Sparrow
Dark-eyed Junco
Lapland Longspur
Smith's Longspur **R** (1979, 1990)
Chestnut-collared Longspur
Snow Bunting
Bobolink
Red-winged Blackbird
Western Meadowlark
Yellow-headed Blackbird
Rusty Blackbird
Brewer's Blackbird
Common Grackle
Brown-headed Cowbird
Orchard Oriole
Purple Finch
Pine Siskin
American Goldfinch
House Sparrow

CASUAL SPECIES — Can be expected to occur irregularly.

White-faced Ibis (1988)

Ross' Goose (1990)

Long-billed Curlew (1976)

Say's Phoebe (1984)

House Finch (1990, 1991)

Rt. 2, Box 165, Dawson, MN 56232.

Alfred Peterson — Bird Observer of the 1920s

Bruce Harris

When Dr. Thomas Sadler Roberts was compiling data for his classic *The Birds of Minnesota*, he enlisted the aid of many naturalists and birders around the state. One of them was Alfred Peterson, an eccentric bachelor who worked for the Rock Island Railroad in Pipestone from 1904 to 1938. During that period Mr. Peterson contributed many bird specimens, particularly hawks, to the University of Minnesota. He also kept detailed notes on all birds observed, and forwarded to Dr. Roberts a good many valuable records of birds in his area. The spring migration dates for 1924 and 1925, shown here, are examples of the data he forwarded to Dr. Roberts.

Transferred to Brandt, South Dakota by the railroad in 1938, Peterson continued his bird observations in an area rich in varied habitats ranging from virgin prairie to wooded lakes, wetlands, and farmlands worked, up to that time, almost entirely by machinery pulled by horses. Brandt is a small town on the south edge of the northeast glacial lakes country of South Dakota; it is located about 17 miles southwest of Canby, being 8½ miles from the Minnesota border. When the South Dakota Ornithologists' Union was formed in 1949, Albert Peterson was well-known as an active birder, and was among the first to be approached to join the new organization. Albert had made shorebirds a particular focus of interest, and his voluminous field notes for that difficult group of birds formed the baseline data used in *The Birds of South Dakota*, published in 1978.

Most of the information I have on the life of Albert Peterson comes from an interesting biography written by James W. Johnson and published in *South Dakota Bird Notes* (12:4-7, 18). I had the opportunity of meeting the old gentleman on only one occasion, an SDOU field trip in the Webster area. He was well along in his eighties at that time (he died at Clear Lake, S.D. in 1967, at the age of 87), but I still recall being impressed with his knowledge of birds, which always pre-

ceded him. Sitting at a picnic table on the edge of the group of birders, he would not speak up to question a sighting, but glancing at him, I noted he would shake his head in disapproval when someone reported a bird that was not expected in the area!

According to the biography in *Bird Notes* (op. cit.) Peterson was the oldest of nine children, born in Iowa on 21 November 1880 to a poverty-ridden family. He was much interested in natural history at an early age, and apparently attended one year of high school before being sent to live with grandparents on an isolated farmstead in Wisconsin. There were no young people close to his age in the area, and he had no opportunity to continue high school. His character and intelligence allowed him to overcome these difficulties, and in 1902 at the age of 22 he began work with the Rock Island Railroad. Within two years he was appointed operator and cashier at Pipestone. Books and reading became very important to him, and he developed consuming interests in botany, geology, checkers and fishing in addition to his bird study. He identified 500 plant species from the Pipestone area, finding two species that were not recorded in Gray's *Manual of Botany*. One was a new variety of goldenrod, and the second was an arrowhead (*Dentatum*) that was eventually given the rank of full species.

The biography written by James Johnson describes vividly how this uneducated man had become a scholar while immersing himself in studies that developed his tenacious character;

"Arriving in Brandt to meet Peterson at near the appointed time, I found the thin, stooped figure walking up and down, waiting to greet me. At once he led me upstairs to his apartment, where he has lived alone for many years.

Two of the rooms had well packed bookcases standing at intervals around the walls, but they held nowhere near all the books I could see. Overflows were stacked here and there, on the table, on the floor, on top of cases, wherever room could be found not occupied by mineral specimens. For Peterson was also more than a little of a geologist. Besides the piles of specimens on the floor, boxes of uncommonly interesting minerals stood in stacks between, and in front of, the bookcases.

A many drawered cabinet against the wall held smaller specimens of mineral. A case of books on geology, with its attendant overflow, included well over a score of titles.

And he had made the game of checkers a study on a scale startling to one who had never imagined it had much of a literature. A case of books he showed me held his library on that subject. These books ran generally smaller in size than the others. They numbered just under 190 titles of the slightly over 210 possible, I was told. Peterson, himself, was working on a book on checkers that had already been underway for seventeen years."

Over the years Peterson sent dozens of bird specimens to Dr. Roberts, sometimes taking them to Minneapolis personally, as in the case of a wounded Ruddy Turnstone. The bird had been acquired for one dollar from a quarry worker in Pipestone, and Alfred wanted Dr. Roberts to see the bird. It was carried in a box onto the streetcar, but escaped when the bottom dropped out of the box. The agitated Peterson chased the turnstone up and down the isles on the streetcar, while the passengers on the vehicle enjoyed the chase immensely. Peterson recalled the incident, even after many years, commenting that not one person on the streetcar had offered help in catching the bird.

The many hawk specimens were forwarded to the University after Dr. Roberts questioned that the western phase of the Red-tailed hawk migrated thru the Pipestone area. Over the years, dozens of these hawks were sent to Dr. Roberts, presumably convincing him that the western Red-tailed did indeed occur at Pipestone. In Dr. Roberts' *Logbook of Minnesota Birdlife*, 1917-1937 there are 56 bird citations by Alfred Peterson. And he is given special mention in *The Birds of Minnesota* for contribution of records and specimens of birds.

While living in South Dakota, Alfred made regular birding trips to most of the better birding places in the northeast corner of the state, known as the Glacial Lakes area. He sometimes birded with a few local cronies who had an interest in natural history, and various SDOU members included him in their field trips. But more often he apparently birded alone. He recorded the exact number of species seen, with location and comments on weather, all written in narrative, and recorded in a six by eight inch notebook. Prob-

ZOOLOGICAL MUSEUM

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MINNEAPOLIS

CHECK LIST OF MINNESOTA BIRDS and MIGRATION AND NESTING RECORD BLANK

Observer Alfred Peterson Address Pipestone Minn

Locality Pipestone to Rush Lake & Lake Chetek Spring of 1924 Fall of 19---

This is a complete list of the birds of Minnesota so far as known, arranged for the recording of migration and nesting dates. Where species are represented in the state by more than one form or subspecies all are given, but in recording observations it is not necessary to attempt to recognize these distinctions. Species that are of such rare or accidental occurrence that their being seen is improbable are included in brackets and special caution is urged in making identifications of such birds in the field. The four species given in italics are still undetermined as positively Minnesota birds, but they are included because there are questionable records for each and because the general range of each includes Minnesota. An asterisk before a name signifies that the species so marked has become extinct in Minnesota within recent years. The names printed in heavy faced type are the common names used in the American Ornithologists' Union Check List for 1910. In a few instances additional names, better known locally, are given.

DIRECTIONS FOR RECORDING DATES. SUMMER RESIDENTS—*Spring:* give date when first seen, when common and first nest with fresh eggs. *Fall:* when last seen. TRANSIENT VISITANTS—*Spring* and *Fall:* when first seen, when common and when last seen. PERMANENT RESIDENTS—First nest. WINTER VISITANTS—When first seen in the fall or winter and last seen in the spring. Use separate sheets for reporting spring and fall observations.

Name of Species	First seen	Common	Last seen	First nest
Western Grebe, Swan-necked Grebe.	5-2		5-10	
Holboell's Grebe, Red-necked Grebe.				
Horned Grebe.	4-20		5-6	
Eared Grebe.	5-16		6-29	
Pied-billed Grebe, Hell-diver.	4-15			
Loon.	4-15		5-6	
Red-throated Loon.				
[Ancient Murrelet.]				
[Parasitic Jaeger.]				
[Long-tailed Jaeger.]				
Herring Gull, "Sea Gull."				
Ring-billed Gull.	4-16		6-23 + 8-10	
Franklin's Gull.	4-4		6-9	
Bonaparte's Gull.				
Caspian Tern.	5-25		5-25	
Forster's Tern.	4-23		6-12	
Common Tern.				
Black Tern.	4-27			
Double-crested Cormorant, Black "Loon."	4-13		5-4	
White Pelican.	4-13		5-4	
Merganser, Big Saw-bill.	4-21		4-21	
Red-breasted Merganser.	4-19		4-27	
Hooded Merganser, Little Saw-bill.	5-16		6-23	
Mallard.	4-3			
Black Duck, "Dusky Mallard."				
Gadwall, Gray Duck.	4-17		6-23	
Baldpate, Widgeon.	4-10		6-5	
Green-winged Teal.	4-17		4-20	
Blue-winged Teal.	4-15			
[Cinnamon Teal.]				
Shoveler, Spoon-bill.	4-10			
Pintail.	4-3			
Wood Duck.				
Redhead.	4-17		5-4	

Name of Species	First seen	Common	Last seen	First nest
Canvas-back.	4-16		6-5	
Scaup Duck, Big Blue-bill.				
Lesser Scaup Duck, Little Blue-bill.	4-4		6-29	
Ring-necked Duck, "Blue-bill," "Black D."	4-17		4-22	
Golden-eye, Whistler.	4-10		4-23	
Barrow's Golden-eye.				
Buffle-head, Butter-ball.	4-15		4-29	
Old-squaw.				
[Scoter.]				
White-winged Scoter.				
[Surf Scoter.]				
Ruddy Duck.	4-15		6-29	
Snow Goose (two forms):-				
Snow Goose, White "Brant."	4-6		Reported	
[Greater Snow Goose.]				
Blue Goose, Blue Wavey.				
White-fronted Goose, Speckle-belly.	3-23		5-11	
Canada Goose (three forms):-				
Canada Goose.	4-3		Reported	
[Hutchins's Goose.]				
[Cackling Goose.]				
Whistling Swan.				
***Trumpeter Swan.**				
[White-faced Glossy Ibis.]				
Bittern.	4-27			
Least Bittern.				
Great Blue Heron, Blue "Crane."	4-20		5-28	
[Egret.]				
Green Heron.	5-10		5-17	
Black-crowned Night Heron.	4-13			
[Whooping Crane.]				
[Little Brown Crane.]				
Sandhill Crane.	4-16		Reported	
King Rail.				

Name of Species	First seen	Common	Last seen	First nest
Virginia Rail.	5-9		5-9	
Sora.	5-8			
Yellow Rail.				
Florida Gallinule.				
Coot, Mud Hen.	4-4			
Northern Phalarope.	5-18		6-5	
Wilson's Phalarope.	5-3		6-15	
*Avocet.				
Woodcock.				
Wilson's Snipe.	4-17		5-19	
Long-billed Dowitcher.	5-16		6-5	
Stilt Sandpiper.	5-11		6-5	
[Knot.]	5-25		5-25	
Pectoral Sandpiper.	4-17		6-1	
White-rumped Sandpiper.	5-18		6-12	
Baird's Sandpiper.				
Least Sandpiper.	4-22		6-13	
Red-backed Sandpiper.	5-16		6-9	
Semipalmated Sandpiper.	4-29		6-12	
[Sanderling.]	5-18		5-28	
Marbled Godwit.	5-18		5-18	
Hudsonian Godwit.	5-2		6-1	
[Greater Yellow-legs.]	4-20		4-20	
Yellow-legs, Lesser Yellow-legs.	4-9		6-3	
Solitary Sandpiper.	4-27		5-22	
Western Willet.	5-4		5-25	
Upland Plover, Bartramian Sandpiper.	4-27		[illegible]	
[Buff-breasted Sandpiper.]				
Spotted Sandpiper.	5-2			
*Long-billed Curlew.				
Hudsonian Curlew.				
*Eskimo Curlew.				
Black-bellied Plover.	5-29		6-9	
Golden Plover.	5-11		5-18	
Killdeer.	3-27			
Semipalmated Plover.	4-17		6-1	
[Piping Plover.] Belted	5-18		6-25	
[Ruddy Turnstone.]	5-25		6-5	
Bob-white, Quail.	6-25			
Canada Spruce Partridge.				
Ruffed Grouse (two forms):-				
Ruffed Grouse, "Partridge."				
Canada Ruffed Grouse.				
[Willow Ptarmigan.]				
Prairie Chicken.	1-11			
Prairie Sharp-tailed Grouse.				
Ring-necked Pheasant (introduced).	3-23			
*Wild Turkey.				
*Passenger Pigeon.				
Mourning Dove.	4-3			

Name of Species	First seen	Common	Last seen	First nest
Turkey Vulture.				
Swallow-tailed Kite.				
Marsh Hawk.	4-6			
Sharp-shinned Hawk.	5-3		5-11	
Cooper's Hawk.	5-3		5-20	
Goshawk.				
Red-tailed Hawk (four forms):-				
Red-tailed Hawk.	4-20		6-29	
[Western Red-tail.]				
[Harlan's Hawk.]				
Krider's Hawk.				
Red-shouldered Hawk.				
Swainson's Hawk.				
Broad-winged Hawk.	4-27		4-27 ?	
Rough-legged Hawk.	4-3		4-22 ?	
Ferruginous Rough-leg.				
Golden Eagle.				
Bald Eagle.	4-22		4-30	
[Gray Gyrfalcon.]				
[Prairie Falcon.]				
Duck Hawk.				
Pigeon Hawk.				
Sparrow Hawk.	4-7		4-20	
Osprey, Fish Hawk.				
[Barn Owl.]				
Long-eared Owl.				
Short-eared Owl.	1-2			
Barred Owl.				
Great Gray Owl.				
Richardson's Owl.				
Saw-whet Owl.				
Screech Owl.	3-1			
Great Horned Owl (three forms):-				
Great Horned Owl.				
Western Horned Owl.				
Arctic Horned Owl.				
Snowy Owl.				
Hawk Owl.				
Burrowing Owl.	(4-27)			
[Groove-billed Ani.]				
Yellow-billed Cuckoo.	6-26			
Black-billed Cuckoo.	6-24			
Belted Kingfisher.	4-10			
Hairy Woodpecker (two forms):-				
Hairy Woodpecker.	5-3		6-15	
Northern Hairy Woodpecker.				
Downy Woodpecker (two forms):-				
Downy Woodpecker.	1-21			
Nelson's Downy W., Northern D. W.				
Arctic Three-toed Woodpecker.				

Name of Species	First seen	Common	Last seen	First nest
Tbree-toed Woodpecker, Am. 3-toed W.				
Yellow-bellied Sapsucker.				
Northern Pileated Woodpecker.				
Red-beaded Woodpecker.	5-17			
Red-bellied Woodpecker.				
Northern Flicker, Yellow-hammer.	4-4			
[Red-shafted Flicker.]				
Whip-poor-will.				
Nighthawk (two forms):-				
Nighthawk.	5-25			
[Sennett's Nighthawk.]				
Chimney Swift, Chimney "Swallow."	5-5			
Ruby-throated Hummingbird.	6-16	Reported		
Kingbird.	5-16			
Arkansas Kingbird.	5-16			
Crested Flycatcher.				
Phoebe.	5-7		5-7	
Olive-sided Flycatcher.				
Wood Pewee.				
Yellow-bellied Flycatcher.				
Alder Flycatcher.	5-29	6-	6-6	
Least Flycatcher, Chebec.	5-15		6-1	
Horned Lark (two forms):-				
Prairie Horned Lark.	2-10			
Hoyt's Horned Lark.				
[Magpie.]				
Blue Jay.	4-27			
Canada Jay, Moose-bird, "Camp Robber."				
Northern Raven.				
Crow.	1-3			
[Clarke's Nutcracker.]				
Bobolink, Reed-bird.	5-18			
Cowbird.	4-13			
Yellow-headed Blackbird.	4-21			
Red-winged Blackbird (two forms):-				
Red-winged Blackbird.	4-3			
Thick-billed Red-wing.				
Meadowlark.				
Western Meadowlark.	3-21			
Orchard Oriole.	5-25			
Baltimore Oriole.	5-17			
Rusty Blackbird.	4-6		4-13	
Brewer's Blackbird.				
Bronzed Grackle, Crow Blackbird.	4-3			
Evening Grosbeak.				
Pine Grosbeak.				
Purple Finch.				
[House Finch.]				
Crossbill, Red Crossbill.				
White-winged Crossbill.				

Name of Species	First seen	Common	Last seen	First nest
[Hepburn's Rosy Finch.]				
Hoary Redpoll.				
Redpoll (two forms):-				
Redpoll.				
[Greater Redpoll.]				
Goldfinch (two forms?):-				
Goldfinch, "Wild Canary."	1-22			
[Pale Goldfinch (?).]				
Pine Siskin.				
House Sparrow, English S. (introduced).	1-1			
Snow Bunting, Snow-flake.				
Lapland Longspur.	2-14		2-14	
[Smith's Longspur.]				
Chestnut-collared Longspur.				
McCown's Longspur.				
Vesper Sparrow.	4-13			
Savannah Sparrow.	4-17			
Baird's Sparrow.				
Western Grasshopper Sparrow.	5-17			
Henslow's Sparrow.	5-26		5-30	
Leconte's Sparrow.				
Nelson's Sparrow.				
Lark Sparrow.				
Harris's Sparrow.	5-5		5-31	
White-crowned Sparrow (two forms):-				
White-crowned Sparrow.	5-5		5-26	
Gambel's Sparrow.	5-5		5-26	
White-throated Sparrow.	4-23		5-31	
Tree Sparrow.	1-27		4-23	
Chipping Sparrow.	5-8		5-31	
Clay-colored Sparrow.	4-23		5-31	
Field Sparrow.	5-4			
Junco (two forms):-				
Slate-colored Junco.	3-27		5-3	
[Montana Junco.]				
Song Sparrow.	4-5			
Lincoln's Sparrow.	4-18		6-5	
Swamp Sparrow.	4-27			
Fox Sparrow.	4-14		4-22	
Towhee, Chewink.	5-11		5-26	
[Cardinal.]				
Rose-breasted Grosbeak.	5-17			
Indigo Bunting.	6-1			
[Painted Bunting.]				
Dickcissel.	6-11			
Lark Bunting.				
Scarlet Tanager.				
[Summer Tanager.]				
Purple Martin.	4-24			
Cliff Swallow, Eave Swallow.				

Name of Species	First seen	Common	Last seen	First nest
Barn Swallow.	5-2			
Tree Swallow.	4-27			
Bank Swallow.	4-24			
Rough-winged Swallow.	5-16			
Bohemian Waxwing.				
Cedar Waxwing.	5-31		5-31	
Northern Shrike, Butcher-bird.				
Migrant Shrike.	4-5			
Red-eyed Vireo.	5-25			
Philadelphia Vireo.				
Warbling Vireo.	5-25			
Yellow-throated Vireo.				
Blue-headed Vireo.				
Black and White Warbler.	5-8		5-25	
Prothonotary Warbler.				
Blue-winged Warbler.				
Golden-winged Warbler.				
Nashville Warbler.				
Orange-crowned Warbler.	5-1		5-17	
Tennessee Warbler.				
Northern Parula Warbler.				
Cape May Warbler.				
Yellow Warbler, "Wild Canary."	5-6			
Black-throated Blue Warbler.				
Myrtle Warbler.	4-27		5-30	
Magnolia Warbler.	5-30		5-31	
[Cerulean Warbler.]				
Chestnut-sided Warbler.				
Bay-breasted Warbler.				
Black-poll Warbler.	5-15		6-1	
Blackburnian Warbler.				
Black-throated Green Warbler.				
[Kirtland's Warbler.]				
Pine Warbler.				
Palm Warbler.	5-3		5-11	
Oven-bird.	5-9		5-30	
Grinnell's Water-Thrush.	5-7		5-31	
Louisiana Water-Thrush.				
Connecticut Warbler.				

Name of Species	First seen	Common	Last seen	First nest
Mourning Warbler.	5-26		6-3	
Maryland Yellow-throat.	5-11			
[Yellow-breasted Chat.]				
Wilson's Warbler (two forms?):-				
Wilson's Warbler.	5-25		5-30	
[Pileolated Warbler (?).]				
Canada Warbler.				
Redstart.	5-22		5-31	
Pipit, Tit-lark.				
Sprague's Pipit.				
[Mockingbird.]				
Catbird.	5-20			
Brown Thrasher, Brown "Thrush."	5-5			
House Wren (two forms):-				
House Wren.	4-28			
Western House Wren.				
Winter Wren.				
Short-billed Marsh Wren.	5-25		5-26	
Prairie Marsh Wren.	5-8			
Brown Creeper.	4-8		4-8	
White-breasted Nuthatch.	1-13		4-28	
Red-breasted Nuthatch.				
[Tufted Titmouse.]				
Chickadee (two forms?):-				
Chickadee.	1-1			
[Long-tailed Chickadee (?).]				
Hudsonian Chickadee.				
Golden-crowned Kinglet.				
Ruby-crowned Kinglet.	4-14		5-5	
[Blue-gray Gnatcatcher.]				
[Townsend's Solitaire.]				
Wood Thrush.				
Willow Thrush, Veery.				
Gray-cheeked Thrush.	5-6		6-1	
Olive-backed Thrush.	5-6		5-29	
Hermit Thrush.				
Robin.	3-21			
Bluebird.	3-24			

ably he worked his Minnesota material up in the same manner; it's possible that his Minnesota notes are on file at the Bell Museum of Natural History at the University of Minnesota. When SDOU members persuaded Peterson to compile his field data for publication, (which began in 1953) he must have spent many hours putting the dates into table form that was easily comprehendible to the reader.

Alfred Peterson was one of those shy retiring people who are sometimes overlooked unless they are "discovered" and sought out. There is no doubt that he contributed greatly to the ornithology of Minnesota and South Dakota. **Box 605, Clear Lake, SD 57226.**

BOOK REVIEWS

WALKING MINNESOTA by Mary Jo and Jim Malach, Voyageur Press, P.O. Box 338, Stillwater, MN 55082, 364 pages, $14.95.

This is a thick book. As an avid walker/hiker, I knew it would have to be so. After all, Minnesota has over 4,000 miles of trails designed for walkers. My expectations were high. I believed I had found a guide book which would excite me, telling me which trails are best suited to my interests. I wish it were so.

This is an interesting book. The team of writers who compiled interviews and background articles did a thorough job. The text defines three basic types of walking. It discusses health benefits and risks of walking. It promotes walking as a catalyst for creative thinking. It tells how to design a walking "tour". The book includes a list of walking organizations and a walker's resource list. For nearly 100 pages the authors held my attention. They made me feel good for having chosen such a healthy, stimulating sport.

Then the 150 suggested walks are introduced. The very first walk is one in my own Minneapolis neighborhood. I was disappointed that the text failed to excite me. It lacked emotion. I already knew that the trail leads out of the flat urban sprawl into a forest complete with canyons, cliffs, waterfalls, and beaches. A feeling of wilderness isolation greets me every time I walk there. If I were writing a guide to this trail, it would convey my euphoria for the wild oasis in the heart of the city.

But in *Walking Minnesota* readers learn how to drive to the trail, where to write for further information, what kind of clothing to wear and how to stay on the recommended route. The route guide to the trail is where a few choice adjectives could entice the reader to hike the trail. Instead the text matter-of-factly takes the reader from points one through five — from the stone wall to the dirt path. Turn left at the gas station. The only reference to my oasis is this: "The path along this stretch is well shaded."

And so it goes; 150 trails, walkways, shopping mall tours, or skyway routes are described. None of the descriptions make me want to put on my walking shoes and rush out to the trail described. On the other hand, if my plans include one of the described walks, or if I am heading to the area and need to know where a walking route might be, the book does serve as a point to point guide and opens the door for further discovery.

At the end of each walking route description is a small paragraph entitled "Giving Back". There the address and phone number for the administrating agency of each walking route is listed. This is an excellent resource for allowing you to contribute volunteer labor, money, compliments or critiques. Use it well. **Randy Hargesheimer, Midwest Mountaineering, 309 Cedar Ave., Minneapolis, MN 55454.**

WHERE TO WATCH BIRDS IN BRITAIN AND EUROPE by John Gooders, Passport Books, Lincolnwood, Illinois, 1988, 254 pages, $17.95.

If your work or holiday travel plans include Europe in the forseeable future, don't leave home without this book. For years I have used Gooders' 1978 edition of this book, and always found it very helpful. In the past I have Xeroxed the pages relating to my destination(s) because the 1978 book was hardbound, but the new soft-cover edition would

be easy to pack — an improvement, to my mind. Most of Europe's "hot spots" are detailed, most with useful maps of the area. Some of the newly included countries are Morocco, Tunisia, Asiatic Turkey, Cyprus and Israel — these in addition to the countries of continental Europe, the British Isles and Ireland.

Even for birders who have no plans for foreign travel, this book will provide many happy hours of reading what is essentially a travelogue with the focus on birds. You may also find that you learn a good bit of geography along the way, as Gooders describes the various areas well, and concisely.

One thing I miss however, is the inclusion of the national birding groups' names and addresses. I found it very useful to write for detailed information when I knew in advance that I would be in a certain area for more than just a passing stop. (Some are given in the text of this edition, but far from all of them.)

One more thing that adds to the pleasure of using this book is Gooders' humor in describing the various problems one might encounter along the road to finding good birds and birding spots. **Anne Marie Plunkett, 2918 S.W. 15th Ave., Rochester, MN 55902.**

American Nature Guides WESTERN BIRDS, by Frank Shaw, Gallery Books, New York, 1990, 232 pp., $9.95.

This newly released book has virtually no redeeming qualities. The nomenclature is pre-1983 A.O.U. Checklist. The illustrations by various artists vary in quality and accuracy. Only the adult breeding bird is depicted. The accompanying texts are just a few short lines. Of interest to Minnesota birders at this time is that Glossy and White-faced Ibis are treated as one species. Perhaps the saddest feature of all is that the cover of the book carries the American Birding Association name and logo, a detachable application for membership in ABA on the back cover, and on page 232 the statement that ABA is pleased to endorse these illustrated pocket guide books about North American birds! Hard to believe, as the book is useless for birders. **Anne Marie Plunkett, 2918 S.W. 15th Ave., Rochester, MN 55902.**

BIRD TRAPPING AND BIRD BANDING — A Handbook For Trapping Methods All Over The World by Hans Bub, Translated by Frances Hamerstrom and Karin Wuertz-Schaefer, Cornell University Press, 1991, Ithaca, New York; 330 pp., illus. $69.50.

The author has compressed a four volume set into one easy-to-read and amply illustrated book on bird trapping and bird banding, both current and historical. The subject of the trapping and banding of birds all over the world is well covered from before the 1800s to the present day.

For most members of the avian world there is some special trap design. Bub describes in detail traps for: land birds from raptors to kinglets; seabirds which include waterfowl, gulls and terns; game birds of all kinds, woodcock, grouse and pheasants; and gives detailed recommendations for trapping and banding the multitude of shorebirds.

The traps described run from small single cells, through those which catch several birds at once, to the gigantic Heligoland type, which resembles a huge "Horn-of-Plenty". The written instructions and descriptions on how to build stationary traps for any number of different kinds of birds are easy to follow, and the illustrations are excellent, including simple drawings and photographs. Decoy traps are discussed including recommended types of decoys for specific types and designs.

Mist nets and the various methods used to set them up are well described and illustrated. Other types of netting devices are included in detail.

In this text, the author writes in detail about the various governmental and other organizations which manage bird banding and programs set up for the purpose of management of various groups of birds: songbirds, both migratory and non-migratory; waterfowl and other game birds. Bub discusses at length the role that the U.S. Fish and Wildlife Service plays in North America. Also covered is the British Trust for Ornithology and its British Ringing Scheme in the United Kingdom.

Bub's introduction emphasizes the importance of being a well trained bird bander or ringer, so that the bird that is being banded at the moment is assured a safe passage to flight and freedom (i.e. release). It is vital that an enthusiastic beginner work with a ex-

pert (experienced) bander until the beginner comes up to the latter's expectations, demonstrates handling of birds correctly, and follows the specific procedures taught by the experienced bird bander. All this is necessary before one qualifies for a license to catch and band birds on one's own. A mistake in technique, or in the handling of a bird can unfortunately give the banding program involved a bad name. Banders must be heartily willing to explain to the interested birder, and the public at large, why certain routines have been developed and followed, and why the banding of individual birds is so important in the advancement of the science of ornithology. The work done by a licensed bird bander is a labor of love and a contribution of knowledge about individual birds that are banded over time.

Forwards by George Jonkel (Immediate Past Chief, Bird Banding Laboratory, U.S. Fish and Wildlife Service, Laurel, Maryland) and by Chris Mead (British Trust for Ornithology, Tring, England, General Secretary EURING, and head of the British Ringing Scheme) are contained in the book.

This book, because of its subject matter may have a limited audience; however, in view of the intricate discussion of bird traps and bird banding/ringing, this fine book should be added to every bird bander's library. It is a most absorbing book for banders and ringers everywhere. **Jane C. Olyphant, 8609 Hidden Bay Trail, Lake Elmo, Minnesota 55042.**

Problems With Resolving Our Ignorance Concerning Some *Empidonax* Flycatchers in the Northcentral Region

Kevin Winker

Without hearing a song, some flycatchers of the genus *Empidonax* can be difficult to accurately identify to the species level. As a result, we still have much to learn about the breeding distributions and timing of migration of several empidonaces. While distribution of song types during the breeding season will be of some help (see Zink and Fall 1981), finding evidence of breeding and properly identifying birds in the hand will be crucial to our understanding of this interesting group. Five species of *Empidonax* breed in Minnesota (Janssen 1987); this note considers identification problems with three species in the hand.

Because a very large, long- and pointed-winged morph of *E. alnorum* (Alder Flycatcher) occurs in migration in at least the southeastern part of Minnesota (e.g. BellMNH 37259 [male, wg. chord = 78.9 mm, formula B = 8.3 mm]), BellMNH 37268 [male, wg. chord = 79.3 mm, formula B = 7.4 mm]), by measurement alone migrant *norum* can easily be confused with *E. virescens* (Acadian Flycatcher) in this area and southward. Unless close attention is paid to colors — especially mouth lining and back — misidentification is likely. Dr. Allan R. Phillips (pers. comm.) suspects that some of these larger *E. alnorum* might be *E. alnorum alascensis,* but we lack adequate material from the region to determine whether individuals showing this morphology breed in this region. The mouth lining colors of an adult male *E. virescens* (BMNH 37358) and those banded by Bruce A. Fall (pers. comm.) in the Twin Cities metropolitan area were somewhat surprising to Dr. Phillips, suggesting that soft part colors in this species have not yet been fully documented.

A further problem considered here is our current knowledge of *Empidonax alnorum* and *E. traillii* (Willow Flycatcher). Zink and Fall (1981) offered an initial representation of the breeding distributions of these two species in Minnesota based on song. Our

knowledge concerning these two species in Minnesota has not progressed significantly since this study (Janssen 1987:202), and the zone of sympatry identified by these authors is still of unknown dimension. In addition, the migratory routes and timing of movements (especially age-related) in these species is not understood. Proper identification of these two species outside of the breeding season is the only avenue to understanding these aspects of their biology. At present, however, these two species *cannot* be reliably separated in the hand. Pyle et al. (1987:36) offer a scatter diagram and table of characters used to separate these species (from Stein 1963), but they add no new data to the problem and do not appear to interpret Stein (1963) correctly. Specimens in the Bell Museum from a wintering area in southern Veracruz, Mexico, suggest that Stein (1963) did not encounter the full range of variability in these species on their breeding ponds. Until this gap is filled with specimens from the breeding ranges of both species, we are likely to remain ignorant about their morphological variation, and until this variation is understood, identification based on morphology (particularly when using a key) will be suspect. Only the addition of good material to museums will solve this difficulty. More specimens of *E. traillii, E. alnorum,* and *E. virescens* are highly desirable. To be of any value, such material must be gathered with close attention to the recording of: call or song type (tape recorded, if possible), soft part colors, habitat association, and breeding condition.

Bird banders are in a unique position to contribute markedly to our understanding of *Empidonax* species (but see Johnson 1965, who recommends that banding of *Empidonax* continue only if recaptures are collected, since "idenfitications made at the time of initial banding usually are worthless"). Banders take note: without detailed measurements, as well as soft part (mouth lining and tarsi) and back color notations (using a standard, published color guide such as Smithe [1976, and especially 1981], or, lacking this, decent photographs of the colors of back, mouth lining, and tarsi using a film with relatively stable dyes, such as Kodachrome) your in-hand identifications are not verifiable. Preferably, bill (anterior end of nostril to tip; see Pyle et al. 1987:6 under "culmen"), formula B (distance from tip of longest primary to tip of primary 6), distance between tip of primary 10 and tip of primary 5 (positive value when p10 or longer, negative when p10 shorter than p5), tail, and wing chord lengths should be measured with accurate calipers and recorded on all *Empidonax* banded. Also, the condition of the outer margin of the sixth primary should be noted (see Phillips et al. 1966:155-6). Perhaps when suitable material is added to collections some sense can be made of these data (especially *traillii* and *virescens* from our region) and some separations can be made regarding the specific identification of banded birds. Until mouth color variation in *virescens* can be worked out, I refrain from giving guidelines to prevent any biases in data collection.

Banders should consider adding needed specimens to collections, and serious consideration should also be given to preserving any unusual or difficult individual for permanent study. As Phillips et al. (1966) noted: not only are recoveries unlikely, those recoveries that are made are not useful without proper specific identification. Banders considering such important activities should consult Articles 58-63 in the North American Bird Banding Manual, Vol. 1 (1991:2-12 through 2-16) so that the legalities are met. The Bell Museum would welcome any *Empidonax* flycatchers with proper data.

A final note in making *Empidonax* measurements: wing shape is an important character in this group. When measuring the various primary lengths in relation to one another, please "do as they say, and not as they show": measure the wing when it is held in a natural position, *not* when it is partially opened, as repeatedly shown in Pyle et al. (1987; they depict it correctly on p.8). Phillips et al. (1966) and Phillips and Lanyon (1970) are still the most useful guides to identifying the *Empidonax* in this region, with the caveat that some *alnorum* are quite large and that the mouth color of *virescens* might be brighter (n = 3) in the height of the breeding season (and at other times?). It should also be repeated (see Phillips and Lanyon 1970:191) that *Empidonax* identification involves the careful, comparative assessment of multiple characteristics.

I thank Allan R. Phillips for his consultation on our *Empidonax* problems here in the Bell

Museum, and Bruce A. Fall for examining mouth lining color in breeding *E. virescens*.

LITERATURE CITED

Janssen, R.B. 1987. Birds in Minnesota. Univ. of Minnesota Press, Minneapolis.

Johnson, N.K. 1965. Differential timing and routes of spring migration in the Hammond Flycatcher. Condor 67:423-437.

North American Bird Banding Manual. Vol. 1. 1991. U.S. Fish & Wildl. Serv. and Canadadian Wildl. Serv., Minister of Supply and Services, Canada.

Phillips, A.R., M.A. Howe, and W.E. Lanyon. 1966. Identification of the flycatchers of eastern North America, with special emphasis on the genus *Empidonax*. Bird-Band. 37:153-171.

——— and W.E. Lanyon. 1970. Additional notes on the flycatchers of eastern North America. Bird-Banding 41:190-197.

Pyle, P., S.N.G. Howell, R.P. Yunick, and D.F. DeSante. 1987. Identification guide to North American passerines. Slate Creek Press, Bolinas, California.

Smithe, F.B. 1975. Naturalist's color guide. Part I. Amer. Mus. Nat. Hist.

———, 1981. Naturalist's color guide. Part III. Amer. Mus. Nat. Hist.

Stein, R.C. 1963. Isolating mechanisms between populations of Traill's Flycatchers. Proc. Amer. Phil. Soc. 107:21-50.

Zink, R.M., and B.A. Fall. 1981. Breeding distribution, song and habitat of the Alder Flycatcher and Willow Flycatcher in Minnesota. Loon 53:208-214.

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The Fall Season

1 August to 30 November 1990

Steve Carlson, Oscar Johnson, Kim Risen and Dick Ruhme
Foreword by Robert B. Janssen

Fall 1990 was a most exciting birding season as the fall often is in Minnesota. Who could ask for much more than a Whooping Crane and then a new state bird, an Ash-throated Flycatcher. Both species, for a change, stayed around long enough so that everyone who wanted to had a chance to see them.

As with any season, weather is a topic of much discussion in Minnesota. Fall 1990 was no exception. Generally, it was a mixed-bag of weather, but for the period it was both warmer and wetter than normal.

August was hot, humid and wet. On 2 August a downpour resulted in 1.21 inches of rain in a few hours in the Twin Cities. September was more like summer than fall; it was hot, wet and humid until the 22nd when a major cold front swept through the state, dropping temperatures and bringing lots of migrants. Another intense cold front swept across the state on 6 October with strong northwest winds that produced excellent birding in many areas of the state. The first frost of the season in the Twin Cities occurred on 10 October which is later than normal. October weather can be beautiful in Minnesota and this was true for most of the state from the middle of the month until month's end. These type conditions are not conducive to heavy migration but most of us were so excited about the Whooping Crane that the lack of other migrants wasn't that hard to take. Novembers are always interesting months in Minnesota; they can be both very pleasant and very much like winter. November 1990 was both. On the 1st it was in the 70s all across the southern half of the state. However,

on the 3rd, the day of discovery of the Ash-throated Flycatcher, the Twin Cities had up to three inches of snow! Then it switched back to summer. Record highs of 71° on the 14th, 67° on the 21st and 59° on the 24th were all record highs in the Twin Cities. In typical Minnesota fashion, by the 25th the temperature had dropped to 19°, the 26th saw a freezing drizzle and by the 29th the Twin Cities low was 8°. Winter was upon us.

The following will only be the highlights of a very interesting season. As can be seen from the bold-faced dates, many species remained later than normal.

Casual and Accidental species recorded were a Pacific Loon in Duluth; another King Eider at Grand Marais, this one remaining for over a month; the Whooping Crane in October in Marshall and Polk Counties which was the highlight of the season: a Ruff and Reeve in Lyon were unusual in that presence of two birds at the same time and place was a first; the Barn Owl that fledged six young in August was only the third nesting record in 30 years; the Ash-throated Flycatcher which was the other major highlight of the season; Carolina Wrens in Hennepin and Washington Counties through most of the period; and House Finches continued to spread northward with records in Clay and Otter Tail Counties.

Other highlights of the season included a peak of 175,000 Canada Geese at the Lac Qui Parle WMA; at least three Gyrfalcon reports from Hawk Ridge, Duluth; a record late American Golden Plover; very late Eastern Phoebe, Eastern Kingbird, Marsh Wren and Philadelphia Vireo.

Incredible was the movement and counting of over 43,000 Common Nighthawks over Duluth on 26 August in two and three quarter hours. How many nighthawks were in the state when there were this many in Duluth?

PACIFIC LOON
Reported 10/27 Duluth KE.

Common Loon
Late north 11/14 Cook KMH, 11/18 Mille Lacs AB, 11/24 Lake DPV; late south 11/11 Ramsey RH, 11/12 Rice TB, 11/20 Hennepin SC.

Pied-billed Grebe
Late north 10/21 Aitkin WN, 10/28 Pennington KSS, 11/4 Clay MO; late south 11/9 Winona CS, 11/10 Lincoln RJ, 11/20 Hennepin SC.

Horned Grebe
Late north 11/4 Mille Lacs KE, 11/10 Beltrami DJ, **11/30** Lake DPV; late south 11/12 Hennepin KB, SC, 11/25 Brown JS.

Red-necked Grebe
Late north 10/14 Otter Tail DS, 11/11 Cook SDM, **11/24** Lake DPV; late south 9/27 Hennepin OJ, 10/30 Ramsey KB.

Eared Grebe
Reported 8/7 Steele RJ, 9/2 Polk AB, 9/25 Hennepin KB, 10/28 Otter Tail MO.

Western Grebe
Late north 8/24 Todd RJ, 10/14 Otter Tail DS, **11/13** Douglas RG; late south 10/5 Blue Earth MF, 10/17 Chippewa AB.

American White Pelican
Late north 10/17 Beltrami DJ, 10/23 Polk SDM, **11/22** Otter Tail MO; late south 11/24 Dakota RB, Hennepin RH, 11/25 Washington RG, **11/29** Goodhue DO.

Double-crested Cormorant
Late north 11/8 Pennington KSS, **11/11** Otter Tail MO, **11/12** Duluth SDM; late south 11/24 Mower RRK, Cottonwood RG, RJ, 11/28 Washington WL, **11/30** Goodhue RG.

American Bittern
Late north 8/9 Koochiching RJ, 8/25 Grant RJ, 9/14 Clay MO; late south 9/9 Anoka GP, 9/15 Rice TB, OR, 9/30 Washington DS.

Least Bittern
Reported 8/23 and 8/30 Hennepin SC, 9/15 Anoka KB.

Great Blue Heron
Late north 11/3 Hubbard RG, Aitkin WN, 11/4 Clay Mo, 11/7 Koochiching GM; late south 11/20 Olmsted AP, 11/23 Pipestone JP, **11/29** Goodhue DP.

Great Egret
Late north 8/26 Mahnomen BK, 9/23 Marshall KSS, 10/4 Otter Tail MO; late south 10/27 Dakota EL, McLeod AB, 10/31 Blue Earth LF.

Snowy Egret
Reported 8/7 Marshall PS, 8/18 Carver RG.

Cattle Egret
Reported 8/4 McLeod AB, 8/5,12 Carver GP, 8/31 Rice FKS, 9/8 Sibley RJ, 10/2 Wright RG, RJ, 10/24 Wabasha (8) DWM.

Green-backed Heron
Late north 9/14 Clay MO, 9/15 Duluth EL, Itasca AB; late south 10/25 Pipestone JP, 10/28 Blue Earth EK, **11/18-12/1** Hennepin JP.

Black-crowned Night-Heron
Late north 9/9 St. Louis AB, 10/1 Roseau MO; late south 10/2 Hennepin SC, 10/15 Rice OR, 10/22 Ramsey KB.

Yellow-crowned Night-Heron
10/10-11 Hennepin SC, mob (***The Loon*** 63:67-68).

Tundra Swan
Early north **9/23** Aitkin WN, 10/11 Marshall DJ; early south 10/15 Lac Qui Parle AB, 10/26 Goodhue HH; late north 11/23 Otter Tail MO, **11/24** Itasca AB; late south 11/30 Dakota RG, Wabasha DWM.

[TRUMPETER SWAN]
Probable released birds reported 11/14 Pine DO, 11/30 Sherburne DO.

Greater White-fronted Goose
Reported **9/16** Itasca AB, **9/21** Blue Earth BB, **9/30** Duluth KE, **11/10** Otter Tail MO.

Snow Goose
Early north 9/16 Itasca AB, 9/20 Cook SOL; early south 9/16 Chippewa RB, Ramsey KB; late north 10/29 Lake DPV, 11/17 Wilkin MO; late south 11/24 Cottonwood RJ, Nobles RG, RJ, **11/30** Martin BB.

Canada Goose
Reported from 20 counties north, 29 south, peak 11/30 Lac Qui Parle WMA, Lac Qui Parle Co. (175,000).

Wood Duck
Late north 10/16 Pennington KSS, 10/21 Aitkin WN, 10/24 Lake DPV; late south 11/12 Winona CS, 11/15 Anoka DS, 11/24 Dakota RH.

Green-winged Teal
Late north 10/23 Wilkin RJ, 10/24 Clay AB, 11/11 Otter Tail MO; late south 11/3 Rice TB, 11/4 Washington TEB, 11/25 Brown JS.

American Black Duck
Late north 9/1 Roseau MO, 10/4 Lake DPV, 11/30 Cook KMH; late south 11/24 Hennepin RH, EL, 11/28 Wabasha DWM, Washington DS.

Mallard
Reported from 19 counties north, 24 south.

Northern Pintail
Late north 10/20 Marshall KSS, 11/11 Grant MO, **11/26** St. Louis KE; late south **11/27** Winona CS, **11/30** Dakota DC, RG, Hennepin SC, GP.

Blue-winged Teal
Late north 10/13 Duluth EL, 10/14 Wilkin MO, 10/20 Marshall KSS; late south 10/17 Houston RJ, Wabasha SWM, 10/25 Winona CS, 10/26 Chippewa AB.

Northern Shoveler
Late north 9/2 Red Lake AB, Roseau MO, 10/7 Cook SOL, 10/20 Marshall KSS; late south 11/30 Dakota DC, Hennepin SC, GP, Martin BB.

Gadwall
Late north 9/22 Marshall BK, 10/11 Norman BK, **11/10** Otter Tail MO; late south 11/10 Lyon RJ, 11/24 Dakota RH, EL, 11/30 Hennepin SC, GP.

American Wigeon
Late north 10/11 Marshall DJ, 11/11 Otter Tail MO, **11/24** Beltrami AB; late south 11/24 Dakota RH, EL, 11/25 Hennepin SC, 11/28 Anoka RG.

Canvasback
Late north 11/8 Clay LCF, 11/23 Mille Lacs SC, 11/24 Otter Tail MO; late south 11/17 Hennepin SC, GP, 11/25 Big Stone SDM, 11/28 Wabasha DWM.

Redhead
Late north 10/20 Marshall KSS, 11/11 Grant MO, 11/24 Beltrami AB; late south 11/24 Jackson RJ, 11/27 Washington DS, 11/30 Hennepin SC, GP.

Ring-necked Duck
Late north 10/27 Cook KMH, 11/24 Itasca AB, 11/25 Otter Tail MO; late south 11/16 Olmsted AP, 11/24 Hennepin RH, EL, /11/27 Brown JS.

Greater Scaup
Late north **11/23** Otter Tail MO, **11/24** Itasca AB, **11/28** Cook KMH; late south 10/11 Olmsted AP, 10/26 Chippewa AB, 11/18 Meeker RJ.

Lesser Scaup
Late north 11/26 St. Louis KE, 11/28 Cook KMH, 11/29 Hubbard HJF; late south 11/30 Hennepin SC, Winona CS.

KING EIDER
Reported 10/20-11/24 Cook (Grand Marais) PB, KR, mob (***The Loon*** 63:66-67).

Harlequin Duck
Reported 10/20-**11/1** Cook (Grand Marais) PS, mob.

Oldsquaw
Reported 10/20 Roseau SW, 10/27-11/11 Cook mob, 11/12-15 Mille Lacs RG, SDM.

Black Scoter
Reported **9/2**-11/11 Cook mob, 10/24 St. Louis BL.

Surf Scoter
Reported 9/26 and 10/20 Cook KMH, PB, KR, **11/24-25** Goodhue RG, BL.

White-winged Scoter
Reported **9/22**-11/19 Cook mob, 10/17 Duluth KE.

Common Goldeneye
Early south 10/24 Ramsey KB, 10/29 Hennepin SC, Washington WL.

Bufflehead
Early north 10/1 Becker BK, 10/5 Norman PS; early south **10/4** Carver RB, 10/7 Dakota KB; late north 11/27 Lake DPV, 11/28 Cook KMH; late south 11/27 Washington DS, 11/30 Dakota DC.

Hooded Merganser
Late north 11/15 Cook SOL, 11/23 Mille Lacs SC (70+), 11/24 Beltrami AB; late south 11/26 Wabasha DWM, 11/29 Hennepin SC, 11/30 Dakota DC, RG.

Common Merganser
Early south **10/28** Goodhue KB, Ramsey RH, 11/10 Lincoln RJ.

Red-breasted Merganser
Late north 11/10 Aitkin WN, 11/17 Lake DPV, 11/23 Crow Wing SC; late south 10/25 Ramsey KB, 11/17 Olmsted AP, 11/28 Washington WL.

Ruddy Duck
Late north 8/12 Clay LCF, 9/2 Red Lake AB, 11/3 Becker MO; late south 11/14 Hennepin SC, 11/17 Rice TB, 11/18 Meeker RJ.

Turkey Vulture
Hawk Ridge count: 569; late north 10/4 Lake DPV, 10/8 Norman BK, **10/23** Hawk Ridge; late south 10/2 Wabasha DWM, 10/31 Goodhue HH, **11/5** Houston EMF.

Osprey
Hawk Ridge count: 190; late north 10/14 Cook KMH, 10/15 Hawk Ridge, **11/10** Beltrami DJ; late south 10/27 Rice FKS, 11/2 Goodhue BL, 11/15 Washington DS.

Bald Eagle
Hawk Ridge count: 422, another record high; late north 11/30 Beltrami DJ, Hawk Ridge, Norman BK; peak 11/17 Wabasha (71).

Northern Harrier
Hawk Ridge count: 384; late north 10/27 Otter Tail MO, Polk DS, 11/3 Aitkin WN, 11/4 Hawk Ridge; late south 11/24 Stearns DO, 11/27 Brown JS, 11/28 Houston EMF.

Sharp-shinned Hawk
Hawk Ridge count: 9956; late north 10/13 Lake AB, Norman BK, SDM, **11/28** Otter Tail MO; late south 11/12 Washington DS, **11/29** Houston EMF, **11/30** Hennepin KB.

Cooper's Hawk
Hawk Ridge count: 93; late north 10/11 Clay MO, 10/14 Lake AB, **10/30** Hawk Ridge; late south **11/20** Goodhue OJ, **11/24** Rice FKS, **11/30** Washington WL.

Northern Goshawk
Hawk Ridge count: 626; early north 8/9

Norman BK, 8/27 Hawk Ridge; early south 10/7 Anoka DS, 10/24 Ramsey KB, 10/26 Washington TEB.

Red-shouldered Hawk
Hawk Ridge count: 1; late north 8/5 Aitkin WN, 9/21 Clearwater AB, **10/27** Hawk Ridge; late south 9/17 Sherburne SWR, 10/24 Ramsey KB, 10/26 Washington WL.

Broad-winged Hawk
Hawk Ridge count: 24,461; late north 9/22 Aitkin WN, 9/30 Lake AB, 10/5 Hawk Ridge; late south 9/23 Hennepin SC, Winona CS, 9/24 Ramsey RH, 9/25 Waseca LF.

Swainson's Hawk
Hawk Ridge count: 3; late north 9/22 Mille Lacs DB, Otter Tail MO, 10/5 Aitkin DS, 10/12 Polk DS; late south 9/27 Pipestone JP, 9/30 Rice AB, 10/4 Brown JS.

Red-tailed Hawk
Hawk Ridge count: 3397; reported from 13 counties north, 29 south.

Rough-legged Hawk
Hawk Ridge count: 335; early north 9/24 Pennington KSS, 10/4 Hawk Ridge, 10/12 Marshall RG, RJ; early south 9/28 Pipestone JP, 10/5 Washington WL, 10/15 Lincoln RB.

Golden Eagle
Hawk Ridge count: 29; early south **10/13** Sherburne SWR, 10/31 Houston EMF, 11/13 Olmsted AP; late north 11/17 Aitkin WN, 11/23 Clearwater AB, 11/28 Hawk Ridge.

American Kestrel
Hawk Ridge count: 1123; late north 11/2 Aitkin SC, **11/28** Mahnomen BK, **11/30** Clay LCF.

Merlin
Hawk Ridge count: 188; early south 9/6 Hennepin OJ, 9/19 Winona CS, 10/13 Sherburne SWR; late north 11/9 Hawk Ridge, 11/10 Clay MO, 11/16 Pennington KSS. No late south dates.

Peregrine Falcon
Hawk Ridge count: 18; late north 10/13 Polk DS, 10/22 Cook AB, 11/3 St. Louis mob.; late south 9/27 Ramsey RJ, 10/6 Winona CS, 11/19 Hennepin SC.

Gyrfalcon
Reported 9/24, 10/19, 11/2, all at Hawk Ridge; also 11/4 Mille Lacs KE, 11/10 Cottonwood, Jackson, Nobles (same bird) RG, RJ.

Prairie Falcon
Reported 9/20, 10/8, 11/21 Clay PS, SDM, 9/30 Otter Tail SDM, 10/23, 28 Wilkin SDM, MO.

Gray Partridge
Reported from six counties north, 19 south.

Ring-necked Pheasant
Reported from six north and 24 south counties.

Spruce Grouse
All reports: 9/12 Cook KMH, 9/15 Lake SW/MS, 10/6 Lake KR, 11/2 Cook KMH, 11/7 Lake of the Woods (6) MK, 11/18 Beltrami DJ.

Ruffed Grouse
Reported from 20 north and 11 south counties.

Greater Prairie-Chicken
All reports: 10/6-10/13 Wilkin (max 30) MO, SDM, 10/20 Clay MO, 10/27 Polk (10) DC.

Sharp-tailed Grouse
Reported from Aitkin, Carlton and Roseau Counties.

Wild Turkey
Reported from Fillmore, Houston and Wabasha Counties.

Virginia Rail
Only north report 9/10 Becker BK; late south 8/25 Big Stone RJ, 8/26 Hennepin BH, 9/28 Winona CS.

Sora
Late north 8/25 Cook KMH, 9/15 Becker MO; late south 9/30 Hennepin SC, 10/14 Rice TB, **10/31** Blue Earth LF.

American Coot
Late north 11/2 Morrison RJ, 11/9 Cook KMH, 11/11 Otter Tail MO; late south 11/8 Wabasha DWM, 11/26 Rice FKS, 11/30 Hennepin GP.

Sandhill Crane
Reported from 14 counties; all north reports 10/6-10/18 Marshall (max 5,000) KSS, RJ, 10/21 Wilkin (3,000) SDM, 10/23-10/28 Polk (max 2,000) RJ, DB, DJ; late south 10/7 Anoka JH, 11/3 Lac Qui Parle CMB.

WHOOPING CRANE
10/11 Marshall MH, 10/21-10/28 Polk DSV mob (***The Loon*** 62:177-181).

Black-bellied Plover
Early north 9/9 St. Louis AB, 9/10 Beltrami DJ; early south 8/8 Blue Earth RJ, 8/19 Dakota EL; late north 9/23 Marshall KSS, 10/6 St. Louis KR, 10/22 Lake DPV; late south 10/28 Le Sueur AP, 11/10 Washington BL.

Lesser Golden-Plover
Early north 9/10 Beltrami DJ, 9/14 Cook KMH; early south 8/8 Swift KE, 8/20 Carver PS; late north 10/6 Lake KR, 10/27 Wilkin MO; late south 11/11 Carver RG, **11/24** Nobles RG, RJ (latest date on record).

Semipalmated Plover
Late north 9/3 Clay MO, 9/23 Marshall KSS, 9/28 Lake DPV; late south 9/19 Mower RRK, 9/27 Dakota KB.

Piping Plover
All reports: 8/18 Lake of the Woods (2) KE, 8/25 Stevens (2) RG, RJ, 8/28 Blue Earth MF.

Killdeer
Late north 10/22 Marshall BK, 10/27 Polk DC and Wilkin MO; late south 11/2 Pipestone JP, 11/14 Olmsted AP, 11/24 Lac Qui Parle CMB.

American Avocet
All reports: 8/9 Washington (4) WL, 8/24 Lyon (6) HK, 9/8 Blue Earth (4) MF, 9/9 Clay LCF.

Greater Yellowlegs
Late north 10/24 Mahnomen BK, 10/28 Clay LCF, 11/3 Aitkin PS; late south 10/30 Le Sueur EK, 11/1 Isanti DS, 11/2 Olmsted AP.

Lesser Yellowlegs
Late north 10/27 Otter Tail MO, 10/28 Clay LCF, **11/3** Aitkin WN; late south 10/17 Ramsey KB, 10/27 McLeod AB, 11/4 Olmsted AP.

Solitary Sandpiper
Late north 9/2 Polk AB and Roseau MO, 9/6 Cook KMH; late south 9/12 Brown JS, 9/14 Pipestone JP, 9/18 Olmsted AP.

Willet
One report: **8/3 Cass** (2) SW/MS.

Spotted Sandpiper
Late north 10/7 Clay LCF, **10/22** Morrison RJ; late south 9/28 Winona CS, 10/2 Pipestone JP.

Upland Sandpiper
All reports: 8/11 Clay MO, **9/1** Clay LCF, **9/14** Pipestone JP.

Whimbrel
One report: 9/15-18 Duluth KR, PS.

Ruddy Turnstone
All reports: 8/8 Polk PS, 8/20 Steele AP, reported from Lac Qui Parle and St. Louis Counties PS.

Red Knot
Two reports: 8/22 St. Louis (2) KE, 9/3 St. Louis PS.

Sanderling
Late north 9/19 Otter Tail RG, 10/6 St. Louis DPV; late south 8/21 Hennepin OJ, 9/24 Meeker RG.

Semipalmated Sandpiper
Late north 9/2 Red Lake AB, 9/12 Cook KMH, 9/23 Otter Tail MO; late south 8/11 Washington WL, 8/25 Hennepin SC, 9/7 Pipestone RJ.

Least Sandpiper
Late north 9/3 Clay MO, 9/23 Marshall KSS, 9/24 Lake DPV; late south 9/23 Winona CS, 10/1 Dakota KB, **10/28** Martin BB.

White-rumped Sandpiper
All reports 8/12 Clay LCF, 8/29 Kittson KSS, 9/8 Rock RJ.

Baird's Sandpiper
Early north 8/26 Otter Tail MO, 8/29 Cook KMH; early south 8/3 Lyon HK, 8/5 Dakota

Whimbrel, 15 September 1990, Park Point, Duluth. Photo by Peder Svingen.

Stilt Sandpiper, 2 September 1990, Grand Marais, Cook County. Photo by Peder Svingen.

AB; late north 9/16 Clay MO, 9/19 Cook KMH; late south 9/8 Blue Earth MF, 11/4 Winona CS.

Pectoral Sandpiper
Late north 10/15 St. Louis DPV, 10/28 MO; late south 10/28 Le Sueur AP and Winona CS, 11/6 Olmsted AP.

Dunlin
Early north 9/22 Hubbard RJ, 9/23 St. Louis AB; early south 10/21 Winona CS; late north 10/26 Wilkin MO, 11/4 Mille Lacs KE, **11/9** Cook KMH; late south 10/26 Chippewa AB and Le Sueur RG, AP, 10/28 Martin BB.

Stilt Sandpiper
Early north 8/8 Pennington PS, 8/12 Cook KMH, 8/17 Wadena AB; late north 8/26 Otter Tail MO, 9/2 Cook PS; all south reports 8/24 Lyon HK, 8/25 Hennepin SC, 8/26 Dakota EL, 9/1 Nobles RJ.

Buff-breasted Sandpiper
All reports: 8/3 Morrison (10) RJ, 8/8 Polk (16) PS, 8/9 Washington (10) WL, 8/18 Swift KE, 8/23 Pennington PS, 9/1-2 St. Louis mob, 9/1 Washington BL, 9/8 Lake of the Woods KSS.

RUFF
8/3 Tyson Lake, Yellow Medicine County (2, 1 Ruff and 1 Reeve) HK (*The Loon* 63:73).

Short-billed Dowitcher
Early north 8/12 Cook KMH, RJ, 8/17 Marshall PS; late north 9/2 Roseau MO, **9/4** Norman BK; two south reports 8/19 Dakota EL, 8/20 Rice AP.

Long-billed Dowitcher
Early north 9/4 Lake DPV, 9/9 Clay LCF, 9/20 Grant (100+) RG; late north 10/14 Otter Tail MO, **10/28** Wilkin MO; all south reports 9/14 Stevens RG, RJ, 10/1 Dakota KB and Olmsted AP, 10/4 Hennepin SC and Mower RRK, 10/6 Winona CS, 10/12 Pipestone JP.

Common Snipe
Late north 10/30 Beltrami DJ, 11/3 Hubbard RJ, 11/11 Otter Tail MO; late south 11/14 Houston EMF, 11/18 Martin BB, **11/28** Olmsted AP.

American Woodcock
Late north 10/21 Itasca AB, DB, 10/31-**11/7** Cook SOL; late south 11/3 Washington BL, 11/4 Brown JS.

Wilson's Phalarope
All reports: 9/2 Red Lake AB and Roseau MO, **10/7** Clay BK.

Red-necked Phalarope
Late north 9/2 Red Lake AB, 9/15 Douglas RJ, 9/20 Grant (65) RG, **9/27** Pennington PS; all south reports 8/19 Wright KE, 9/8 Pipestone RJ, 9/10 Mower RRK.

Parasitic Jaeger
9/2 Duluth (1) PS.

Franklin's Gull
Late north 10/21 Clay MO, 10/24 Grant AB; late south 10/17 Wabasha RJ, 10/24 Stevens AB, 11/7 Carver RG.

Bonaparte's Gull
Early north **8/8** St. Louis KE, **8/9** Roseau PS; early south 8/4 Ramsey BL, 8/7 Steele RJ; late north 11/10 Aitkin WN and Otter Tail MO, **11/23** Crow Wing (145) and Mille Lacs (25) SC; late south 11/12 Hennepin SC, Meeker RJ.

Ring-billed Gull
Reported from 14 north and 20 south counties; late north 11/10 Aitkin WN, 11/15 Becker BK, 11/30 Beltrami DJ.

Herring Gull
Reported from 12 north and nine south counties.

Thayer's Gull
Two reports: 11/23 Hennepin (1 ad.) KE, 11/30 Hennepin (1st yr) SC.

Glaucous Gull
Two reports: 11/10 Cook KE, SDM, 11/29-30 Hennepin (1 ad, 1 imm) SC, GP.

Caspian Tern
Early south 8/17 Benton AB, 8/18 Kandiyohi KE, 8/19 Dakota EL; late north 10/5 Becker BK, 10/7 Crow Wing AB, 10/14 Otter Tail DS; late south 10/3 Ramsey EL, **10/19** Chisago AP.

Common Tern
All reports: 8/19 Dakota EL, 8/24 Lake of the Woods AB, 8/27 Goodhue RH and Hennepin OJ, 9/22 Hubbard RJ.

Forster's Tern
Late north 9/20 Beltrami DJ, 9/23 Mille Lacs WL, 10/5 Becker BK; late south 9/1 Olmsted AP. 9/9 Carver KB.

Black Tern
Late north 8/23 Becker BK, 9/1 Marshall DJ, 9/2 Clearwater AB; late south 8/31 Anoka KB, 9/8 Murray RJ, 10/1 Rice OR.

Rock Dove
Reported from ten north and 30 south counties.

Mourning Dove
Reported from nine north and 20 south counties; late north 10/28 Otter Tail MO, 11/3 Aitkin WN, 11/7 Becker BK.

Black-billed Cuckoo
Two north reports 8/4 Aitkin WN, 8/19 Wilkin MO; late south 8/25 Anoka KB, 9/1 Brown JS and Houston EMF, 9/9 Winona CS.

Yellow-bellied Cuckoo
All reports: 8/1 Dakota AP and Washington WL, 8/3 Le Sueur EK, 8/13 Rice FKS, 8/26 Brown JS.

BARN OWL
Nested in Vermillion Township, Dakota County, 9/10, six juveniles, RJ. There are only two recent breeding records for the Barn Owl in Minnesota: Martin County, 1963 (***The Loon*** 62:231 and northern St. Louis County, 1985 ***The Loon*** 59:72-76).

Eastern Screech-Owl
Reported from Hennepin, Le Sueur, Lyon, Nobles, Rice, Wadena and Watonwan Counties.

Great Horned Owl
Reported from 11 north and 19 south counties.

Snowy Owl
All reports: 10/27 Cook mob and Duluth fide KE, 10/31 Cook PS, 11/3 Aitkin PS, 11/4 Otter Tail (2) SDM, 11/13 Todd DB, 11/15 Aitkin RG.

Northern Hawk Owl
All reports: **9/28** Waskish, Beltrami County RR, 11/9 Beltrami fide KH, 11/15 St. Louis fide KE, 11/24 Aitkin WN.

Barred Owl
Reported from seven north and 11 south counties.

Great Gray Owl
All reports: 9/1 Roseau MO, 10/12 Cook SOL, 10/13 Lake AB, 11/14 Cook KMH, 11/18 Beltrami (2) DJ, 11/24 St. Louis DE.

Long-eared Owl
All reports: 8/23 Beltrami DJ, 10/8 Hennepin SC, 11/9 Cook KMH.

Short-eared Owl
All reports: 8/9 Clearwater PS, 10/7 Hawk Ridge, St. Louis County KE, KR, 10/9 Lakewood Pumping Station, St. Louis County KE, 11/18 St. Louis fide KE.

Boreal Owl
10/24 St. Louis mob, fide KE.

Northern Saw-whet Owl
All reports: 8/8 Lake SW/MS, 9/26-27 St. Louis (calling male) SW/MS. Hawk Ridge Banding Station banded a seven year-old 9/23, this ties the longevity record for this species!

Common Nighthawk
Late north 9/14 Clay MO, 9/24 Clearwater AB; late south 9/28 Hennepin AB, DC, 10/5 Nicollet LF, Olmsted AP and Rice TB; major movements recorded 8/24 Koochiching (100's) GM, 8/26 Cass (150+) TS and St. Louis (43,690 in 2¾ hours!) MH, KE (***The Loon*** 63:68-69).

Whip-poor-will
All reports: 8/4-9/7 Cook SOL, 8/9 Houston EMF, 8/12 St. Louis KB, 9/7 Houston EMF.

Chimney Swift
Two north reports 8/22 Cass AB, 9/14 Clay MO; late south 9/24 Ramsey EL, 9/28 Rice TB, 10/11 Hennepin SC, GP.

Ruby-throated Hummingbird
Late north 9/15 Cook SOL, 9/25 Aitkin WN and Clay LCF; late south 9/14 Rice TB, 9/23 Houston EMF, 9/26 Nicollet MF.

Belted Kingfisher
Late north 10/12 Lake DPV, 10/22 Becker BK, 10/29 Beltrami KSS, **11/25** Otter Tail SDM.

Red-headed Woodpecker
Reported from four north and 21 south counties; late north 9/3 Clay MO, 9/9 Becker BK, 9/16 Lake SW/MS.

Red-bellied Woodpecker
Reported from six north and 27 south counties; numbers are up in the northeast; late north 10/27-11/30 St. Louis (3) fide KE, 11/18 Aitkin AB, 11/24 **Cook** SOL.

Yellow-bellied Sapsucker
Late north 10/5 Pine DS, 10/7 Itasca AB, 10/16 Lake DPV; late south 10/5 Winona CS, 10/6 Rice TB, OR, 10/12 Houston EMF.

Downy Woodpecker
Reported from 18 north and 28 south counties.

Hairy Woodpecker
Reported from 19 north and 26 south counties.

Three-toed Woodpecker
All reports: 9/16-11/30 Cook (1 female) KMH, 11/8 Lake of the Woods MK.

Black-backed Woodpecker
All reports: Cook (throughout period) KMH, 10/13 and 11/3 Lake SW/MS, 10/27-29 St. Louis SW/MS, KE, 11/4 Beltrami DJ.

Northern Flicker
Reported from 15 north and 24 south counties; late north 10/21 Aitkin WN, 11/2 Becker BK, 11/17 Pennington KSS.

Pileated Woodpecker
Reported from 19 north and 18 south counties.

Olive-sided Flycatcher
Early south **8/7** Rice TB, 8/13 Hennepin SC and Houston EMF; late north 8/26 Otter Tail MO, 9/2 Lake DPV, 9/8 Aitkin WN; late south 9/13 Hennepin SC, 9/14 Brown JS.

Eastern Wood-Pewee
Late north 8/24 Becker BK and Pennington KSS, 9/2 Beltrami DJ and Red Lake AB, 9/9 Clay LCF, MO; late south 9/24 Washington DS, 9/26 Winona CS, 9/30 Hennepin SC.

Yellow-bellied Flycatcher
Early south 8/19 Anoka GP, 8/20 Brown JS and Scott AP; late north 8/20 Lake DPV, 8/26 Clay LCF; late south 9/7 Hennepin SC, 9/12 Brown JS, 9/23 Washington DS.

Alder Flycatcher
Late north 8/22 Itasca AB, 8/24 Cook KMH, 8/26 Clay LCF; late south 8/21 Washington WL, 9/1 Nobles RJ, 9/4 Brown JS.

Willow Flycatcher
One north report 8/5 Clay MO; late south 9/8 Ramsey RH, 9/14 Washington WL, 9/19 Houston EMF.

Least Flycatcher
Late north 9/15 Itasca AB and Pennington KSS, 9/16 Wilkin MO, 9/20 Cook KMH; late south 9/21 Pipestone JP, 9/23 Washington DS, 9/25 Hennepin SC and Houston EMF.

Eastern Phoebe
Late north 9/27 Becker BK, 9/30 Clay MO, 10/3 Pennington KSS; late south 10/25 Ramsey KB, 11/2 Houston EMF, **11/13** Lac Qui Parle CMB.

ASH-THROATED FLYCATCHER
11/3-6 Morrison RG, RJ et al. First state record (***The Loon*** 63:3-11).

Great Crested Flycatcher
Late north 9/1 Cook KMH, 9/2 Clay LCF, Lake DPV and Red Lake AB, 9/9 Otter Tail MO; late south 9/12 Washington TEB, 9/16 Hennepin SC, 9/22 Rice TB.

Western Kingbird
Late north 8/26 Otter Tail DS, 9/2 **Cook** PS, 9/9 Clay LCF; late south 8/19 Kandiyohi KE, 9/7 Lyon RJ, 9/9 Murray ND.

Eastern Kingbird
Late north 9/8 Aitkin WN, 9/9 Lake AB and Pennington KSS, 9/16 Wilkin MO; late south 9/16 Winona CS, 10/2 Washington DS, **10/15** Lac Qui Parle CMB (ties latest date on record).

SCISSOR-TAILED FLYCATCHER
9/26 Norman PS (***The Loon*** 63:62).

Horned Lark
Reported from seven north and 15 south counties; late north 10/29 Lake DPV, 11/6 Cook KMH, 11/22 Otter Tail MO.

Purple Martin
Late north 8/24 Lake of the Woods AB, 9/5 Clay LCF, 9/8 Otter Tail MO; late south 8/26 Lac Qui Parle CMB, 9/1 Pipestone JP, 9/11 Washington DS.

Tree Swallow
Late north 9/15 Aitkin WN, 9/23 Clay LCF, 10/14 Otter Tail DS; late south 10/7 Brown JS, 10/12 Olmsted AP, 10/14 Rice TB and Winona CS.

Northern Rough-winged Swallow
Late north 8/22 Itasca AB, 9/22 Otter Tail MO, **9/23** Clay LCF; late south 8/26 Hennepin EL, 9/8 Blue Earth EK, 9/14 Lac Qui Parle CMB and Washington WL.

Bank Swallow
Late north 9/2 Clearwater AB, 9/9 Otter Tail MO, 9/23 Clay LCF; late south 9/7 Pipestone RJ, 9/11 Blue Earth BB, 9/12 Brown JS.

Cliff Swallow
Late north 9/1 Aitkin WN, 9/2 Polk AB, **9/23** Clay LCF; late south 9/17 Lac Qui Parle CMB, 9/20 Brown JS, 9/23 Washington DS.

Barn Swallow
Late north 9/19 Pennington KSS, 10/7 Clay LCF, 10/18 Otter Tail SDM; late south 10/3 Lac Qui Parle CMB, 10/6 Swift RJ, 10/14 Winona CS.

Gray Jay
Reported from 11 north counties.

Blue Jay
Reported from 19 north and 29 south counties; peak 9/10 Lakewood Pumping Station, Duluth (3268) fide KE.

Black-bellied Magpie
Reported from Aitkin, Becker, Beltrami, Clearwater, Hubbard, Koochiching, Lake of the Woods, Marshall, Norman, Pennington, Polk, Red Lake, Roseau and Wilkin Counties.

American Crow
Reported from 17 north and 29 south counties; peak 10/7 Lakewood Pumping Station, Duluth (2415) KE.

Common Raven
Reported from 16 north counties including **Clay** on 9/30 MO; two south reports 10/2 **Benton** (2) RG, 8/1-10/17 Anoka JH.

Black-capped Chickadee
Reported from 24 north and 30 south counties.

Boreal Chickadee
Reported from Aitkin, Beltrami, Cook, Lake and St. Louis Counties.

Tufted Titmouse
One report: 8/1-11/28 Houston (max. 4) EMF.

Red-breasted Nuthatch
Reported from 16 north and nine (28 last year) south counties; early south 8/27 Hennepin DB, 8/28 Washington RJ, 8/31 Mower RRK.

White-breasted Nuthatch
Reported from 20 north and 31 south counties.

Brown Creeper
Reported from 13 north and 16 south counties; late north 11/21 Cook KMH, 11/22 Aitkin SC and Otter Tail MO, 11/23 Pennington KSS.

CAROLINA WREN
9/24-11/30 Hennepin mob (***The Loon*** 62:231), 11/14 Washington TEB (***The Loon*** 63:64-65).

House Wren
Late north 10/2 Clay LCF, 10/6 Wilkin MO, 10/11 Cook KMH; late south 10/11 Houston EMF, 10/12 Washington TEB, 10/14 Martin BB.

Winter Wren
Early south 9/16 Hennepin SC and Ramsey KB, 9/23 Anoka GP; late north 10/20 St. Louis KB, 10/23 Cook KMH; late south 10/18 Anoka GP, 10/22 Hennepin SC.

Sedge Wren
Late north 9/2 Clearwater AB, 9/8 Aitkin WN, **10/20** Clay MO, **10/21** Wilkin MO; late south 10/7 Washington DS, 10/14 Martin BB, **10/22** Rice FKS.

Marsh Wren
Late north 9/21 Otter Tail MO, 9/26 Polk PS, **10/22** Lake DPV; late south 10/20 Anoka DS, 10/28 Martin BB, **11/25-30** Rice TB.

Golden-crowned Kinglet
Early south **9/19** Hennepin SC and Washington WL, 9/23 Anoka GP, Houston EMF and Ramsey RH; late north 11/12 Becker MO and Lake DPV, 11/22 Aitkin SC; late south 11/29 Houston EMF, 11/30 Brown JS.

Ruby-crowned Kinglet
Early south 8/30 Nicollet MF, 9/7 Hennepin SC; late north 10/23 Cook KMH, 11/1 Clay LCF, 11/10 Lake DPV; late south 10/26 Lyon HK, 11/1 Hennepin EL, 11/30 Goodhue RG.

Blue-gray Gnatcatcher
Three north reports 8/9 Otter Tail SDM and Pine RG, 8/12 **Becker** MO; late south 9/14 Winona CS, 9/16 Washington BL, **9/28** Hennepin RB.

Eastern Bluebird
Late north 11/3 Aitkin WN, 11/5 Morrison SC, 11/6 Cook KMH; late south 11/13 Houston EMF, 11/16 Sherburne DO, 11/30 Goodhue RG.

Mountain Bluebird
All reports: **10/15** Lac Qui Parle AB, **10/21** Lake MS.

Townsend's Solitaire
All reports: 10/20-21 Cook (1) BS et al., 11/11 **Olmsted** (1) JB, 11/18 **Norman** (1) MO.

Veery
Late north 8/9 St. Louis RJ, 8/18 Clearwater AB, 9/6 Lake DPV; late south 8/29 Ramsey KB, 9/2 Washington WL, 9/17 Hennepin SC.

Gray-cheeked Thrush
All reports: 9/2 and **9/17** Hennepin SC, DB, DC, **10/19** Olmsted JB.

Swainson's Thrush
Early south 8/28 Hennepin KB, SC, 9/7 Lyon RJ; late north 9/30 Aitkin WN, 10/6 Lake KR, 10/11 Clay LCF; late south 10/4 Washington DS, 10/8 Hennepin KB, 10/19 Olmsted JB.

Hermit Thrush
Early south **9/6** Houston EMF, 9/26 Hennepin SC, 9/29 Ramsey KB; late north 10/16 Cook SOL, 10/21 Itasca AB, 10/22 Lake DPV; late south 10/22 Hennepin SC, 10/28 Brown JS, 11/12 Anoka JH.

Wood Thrush
All reports: 8/16 Brown JS, 8/18 Waseca RJ.

American Robin
Reported from 13 north and 24 south counties; late north 11/11 Otter Tail MO, 11/15 Mille Lacs AB, 11/30 Koochiching GM; peak 10/7 Lakewood Pumping Station, Duluth (9820) KE.

Varied Thrush
One report: **9/16-17** Wilkin MO, SDM.

Gray Catbird
Late north 9/28 Lake DPV, 10/21 Cook BL, **11/6** St. Louis KE; late south 10/10 Hennepin SC, 10/24 Ramsey KB, 10/31 Houston EMF.

Northern Mockingbird
One report: 11/8 Koochiching GM.

Brown Thrasher
Late north 9/10 Pennington KSS, 9/21 Clay LCF and Otter Tail MO, **11/4** Morrison KE; late south 10/5 Anoka GP, 10/19 Olmsted JB, 10/23 Hennepin SC.

American Pipit
Early north 9/14 Cook KMH, 9/15 Lake DPV; early south **9/5** Hennepin OJ, 9/23 Anoka GP; late north 10/7 Otter Tail SDM and St. Louis KR, 10/19 Cook KMH; late south 10/28 Le Sueur AP and Martin BB, 10/30 Olmsted JB.

Sprague's Pipit
One report: Late July — **9/1** Roseau (2) MO et al.

Bohemian Waxwing
Early north 10/20 Cook KR, 10/21 Lake KR, 10/28 Beltrami DJ; no south reports.

Cedar Waxwing
Reported from ten north and 24 south counties; late north 11/6 Becker BK and Cook KMH, 11/17 Aitkin WN, 11/25 Otter Tail SDM; peak 8/26 Lakewood Pumping Station, Duluth (2015) KE.

Northern Shrike
Early north **10/4** Lake DPV, 10/12 St. Louis KB, 10/20 Cook KMH, KR and Norman MO; early south 10/19 Chippewa AB, 10/22 Sherburne SWR, 10/26 Anoka GP.

Loggerhead Shrike
All reports: 8/1 Goodhue/Rice (6) and Dakota (5) AP (***The Loon*** 62:164-5), 8/5 Dakota (1 ad., 1 imm.) AB, 8/8-22 Washington TEB, 8/11 Clay (4) MO, 8/19 Wilkin (1) MO, 9/3 Murray ND, 10/7 Clay LCF.

European Starling
Reported from 13 north and 29 south counties.

Bell's Vireo
One report 8/11-**9/1** Winona (2 ad., 4 imm.) CS, AP.

Solitary Vireo
Early south 8/28 Brown JS and Hennepin SC, PS, 8/29 Ramsey KB; late north 9/23 St. Louis AB, 9/29 Cook KMH, 10/12 Lake DPV; late south 10/6 Swift RJ, 10/10 Sherburne DO, 10/13 Hennpin SC.

Yellow-throated Vireo
Late north 8/24 Douglas RJ, 8/26 Otter Tail SDM, 9/3 Clay MO; late south 9/19 Sherburne SWR, 9/23 Brown JS, 9/25 Hennepin SC.

Warbling Vireo
Late north 8/29 Kittson KSS, 9/1 Clay LCF, 9/9 Otter Tail MO; late south 9/14 Hennepin SC, 9/15 Pope RJ and Winona CS, 9/19 Brown JS.

Philadelphia Vireo
Early south **8/15** Hennepin SC, 8/25 Ramsey EL; late north 9/8 Otter Tail MO, 9/10 Cook KMH, 9/15 Clay LCF and Lake DPV; late south 9/24 Hennepin SC and Washington DS, **10/11** Wright RG.

Red-eyed Vireo
Late north 9/15 Becker MO, 9/23 St. Louis AB, 9/26 Lake DPV; late south 9/23 Ramsey EL, 9/24 Hennepin SC, 9/26 Sherburne SWR.

Blue-winged Warbler
All reports: 8/2-9/5 Houston EMF, 8/19 Brown JS, 8/20 Rice TB, 8/28 Washington RJ, 9/2 Winona CS.

Golden-winged Warbler
Late north 8/8 Lake DPV, 8/12 Becker MO, 8/26 Beltrami DJ; late south 9/6 Brown JS and Sherburne DO, 9/13 Ramsey RJ, 9/16 Hennepin SC.

Tennessee Warbler
Early south 8/13 Hennepin SC, 8/14 Ramsey EL; late north 9/26 Cook KMH, 9/29 Todd RJ, 10/6 Lake KR; late south 10/6 Houston EMF and Winona CS, 10/9 Hennepin SC.

Orange-crowned Warbler
Early north 8/20 Clay LCF, 8/24 Lake of the Woods AB; early south **8/21** Ramsey PS, 9/2 Hennepin SC; late north 10/7 Otter Tail MO, **10/20** St. Louis KR; late south 10/19 Chisago AP, 10/21 Ramsey EL.

Nashville Warbler
Early south 8/13 Winona CS, 8/14 Anoka OJ; late north 10/1 Pennington KSS, 10/2 Clay LCF, 10/12 Lake DPV; late south 10/6 Brown JS and Winona CS, 10/12 Hennepin SC.

Northern Parula
Early south **8/17** Hennepin SC, 8/29 Ramsey KB; late north 9/10 Lake DPV, 9/15 Clay LCF, 9/18 Cook KMH; late south 9/15 Anoka GP, 9/20 Ramsey KB.

Yellow Warbler
Late north 9/1 Aitkin WN and Lake DPV, 9/4 Cook KMH, 9/11 Clay LCF; late south 9/16 Hennepin SC, 9/17 Brown JS, **10/3** Washington AP.

Chestnut-sided Warbler
Late north 9/11 Lake DPV, 9/15 Becker

MO, 9/26 Cook KMH; late south 9/21 Houston EMF, 9/23 Washington DS.

Magnolia Warbler
Early south 8/18 Anoka GP, 8/21 Brown JS, Houston EMF and Ramsey KB; late north 9/16 Wilkin MO, 9/22 Cook KMH, 10/6 Lake KR; late south 9/21 Winona CS, 9/26 Hennepin SC.

Cape May Warbler
Early south 8/26 Hennepin SC, 8/29 Ramsey KB; late north 9/2 Roseau MO, 10/6 Lake KR, 10/20 Norman MO; late south 9/8 Anoka GP and Rice TB, 9/10 Hennepin DC, 9/15 Pope RJ and Washington WL.

Black-throated Blue Warbler
All reports: 8/18 Cook KMH, 9/27 Pipestone ND, JP, **10/6** Lake KR.

Yellow-rumped Warbler
Early south **8/5** Lyon HK, 8/31 Ramsey RH; late north 11/6 Lake DPV, 11/14 St. Louis KE, **11/30** Becker BK; late south 10/21 Washington DS, 10/26 Winona CS, 11/7 Hennepin SC.

Black-throated Green Warbler
Early south 8/21 Ramsey EL, 8/28 Brown JS and Goodhue RH; late north 9/22 Cook KMH, 9/23 St. Louis AB, 9/28 Lake DPV; late south 9/13 Ramsey RJ, 9/24 Houston EMF, 9/25 Hennepin SC.

Blackburnian Warbler
Early south 8/10 Blue Earth LF, 8/15 Hennepin SC; late north 9/2 Roseau MO, 9/3 Cook KMH, 9/19 Pennington KSS; late south 9/20 Murray ND, 9/28 Houston EMF.

Pine Warbler
Late north 9/9 St. Louis AB, 9/5 Becker MO, 9/26 Beltrami DJ; late south 9/17 Hennepin DC, 9/20 Houston EMF, 9/28 Goodhue RH.

Palm Warbler
Early south 8/28 Winona CS, 9/9 Anoka GP and Rice TB; late north 10/13 Lake DPV, 10/14 Clay LCF, 10/22 Cook AB; late south 10/2 Winona CS, 10/10 Hennepin SC, 10/12 Washington TEB.

Bay-breasted Warbler
Early south 8/21 Ramsey KB, 8/22 Hennepin SC; late north 9/22 Cook KMH, 9/29 Todd RJ, **11/13** Grant RG (***The Loon*** 63:72); late south 9/25 Hennepin SC, 9/27 Pipestone ND, JP, 10/1 Olmsted AP.

Blackpoll Warbler
Early north 8/26 Cook KMH, 9/8 Lake DPV; early south 8/21 Ramsey KB, 8/28 Brown JS; late north 9/23 Cook KMH and St. Louis AB, 10/6 Lake KR; late south 9/19 Brown JS, 9/25 Hennepin SC.

Black-and-white Warbler
Late north 9/16 Beltrami DJ, Wilkin MO, 9/25 Cook KMH, 10/6 Lake KR; late south 9/23 Brown JS, 9/24 Sherburne SWR, 9/25 Hennepin SC.

American Redstart
Late north 9/24 Lake DPV, 10/4 Cook SOL, 10/6 Lake KR; late south 9/19 Houston EMF, 9/20 Washington WL, 9/21 Winona CS.

Prothonotary Warbler
One report **9/2** Winona CS.

Ovenbird
Late north 9/14 Clay LCF, 9/15 Becker MO, 9/19 Cook KMH; late south 9/19 Houston EMF, 9/20 Brown JS, 9/23 Anoka GP, 9/29 Hennepin SC.

Northern Waterthrush
Early south 8/13 Hennepin SC, 8/17 Brown JS, Houston EMF, 8/20 Rice AP; late north 9/9 Clay LCF, 9/14 Cook KMH, 9/19 Lake DPV; late south 9/15 Winona CS, 9/19 Ramsey KB, 9/26 Hennepin SC.

Connecticut Warbler
All reports: 8/20 Lake DPV, 8/31 Ramsey RH, 9/2 Olmsted JB, 9/12 Hennepin DB.

Mourning Warbler
Early south 8/17 Winona CS, 8/19 Brown JS, Hennepin SC, 8/20 Hennepin PS; late north 9/2 Cook KMH, 9/9 Otter Tail MO, **10/13** Lake DPV; late south 9/28 Olmsted JB, 9/29 Olmsted AP, 10/3 Lac Qui Parle FE.

Common Yellowthroat
Late north 9/27 Clay MO, 10/8 Lake DPV, **10/19** Cook KMH; late south 9/30 Dodge AB, 10/3 Hennepin GP, 10/8 Hennepin SC.

Hooded Warbler
All reports: 8/6 Washington RG, 8/12 Washington AB, 8/18 Washington EL.

Wilson's Warbler
Early south 8/14 Lac Qui Parle FE, 8/18 Hennepin SC, 8/20 Brown JS, Murray ND; late north 9/17 Lake DPV, 9/20 Cook KMH, **10/6** Lake KR; late south 9/15 Anoka GP, 9/19 Brown JP, 9/21 Hennepin SC.

Canada Warbler
Early south **8/11** Rice TB, 8/15 Hennepin SC, PS, 8/16 Brown JS; late north 9/10 Lake DPV, 9/14 Cook KMH, 9/19 Pennington KSS; late south 9/14 Hennepin SC, 9/19 Brown JS, 10/1 Olmsted AP.

Yellow-breasted Chat
One report 8/27 Murray ND.

Scarlet Tanager
Late north 9/1 Hubbard AB, 9/15 Becker MO, 9/20 Cook KMH; late south 9/25 Brown JS, Houston EMF, 9/27 Hennepin SC, 10/3 Hennepin GP.

Northern Cardinal
Reported from Clay, Cook and Otter Tail plus 20 counties south.

Rose-breasted Grosbeak
Late north 9/9 Otter Tail MO, St. Louis AB, 9/12 Cook KMH, 9/14 Clay LCF; late south 9/27 Houston EMF, 9/29 Hennepin SC, 10/14 Martin BB.

Blue Grosbeak
All reports: 8/24 Pipestone ND, 9/1 Pipestone JP, 9/30 Murray ND.

Indigo Bunting
Late north 8/20 Lake DPV, 9/10 Clay LCF, 9/30 Clay MO; late south 9/30 Mower AB, 10/5 Washington TEB, WL, 10/10 Hennepin SC.

Dickcissel
Late north 8/19 Wilkin MO; late south 8/5 Carver GP, 8/8 Pipestone JP, 8/14 Brown JS.

Rufous-sided Towhee
Late north 9/30 Clay MO; late south 10/17 Anoka GP, 10/30 Houston EMF, 11/11 Wright RG.

American Tree Sparrow
Early north 10/5 Pine DS, 10/8 Lake of the Woods SW/MS, 10/11 Cook KMH; early south 9/27 Rice OR, 10/12 Anoka JH, 10/13 Hennepin SC, Sherburne SWR.

Chipping Sparrow
Late north 10/19 Cook KMH, 10/29 Koochiching GM, 10/31 Cook SOL; late south 10/23 Hennepin SC, 10/26 Lac Qui Parle CMB, **11/11** Wright RG.

Clay-colored Sparrow
Late north 9/22 Lake DPV, 9/23 Wilkin MO, 9/30 Clay LCF; late south 10/9 Hennepin DC, 10/10 Houston EMF, 10/13 Hennepin SC.

Field Sparrow
Late south 10/18 Washington TEB, 10/23 Houston EMF, 10/24 Winona CS.

Vesper Sparrow
Late north 9/25 Pennington KSS, 10/11 Clay LCF, 10/14 Wilkin MO; late south 10/6 Winona CS, 10/7 Blue Earth MF, Rice TB, **10/14** Hennepin GP.

Lark Sparrow
All reports: 8/4 Anoka GP, 8/19 Wilkin MO.

Savannah Sparrow
Late north 10/18 Lake DPV, 10/19 Cook KMH, 10/21 Wilkin MO; late south 10/18 Lac Qui Parle AB, 10/21 Winona CS, 10/25 Winona AP.

Grasshopper Sparrow
Late north 9/2 Clay LCF, **9/23** Wilkin MO; late south 9/1 Pipestone JP, **10/1** Goodhue AP.

Le Conte's Sparrow
Late north 8/5 Aitkin WN, 8/11 Clay MO; late south 10/7 Brown JS, 10/8 Hennepin KB, 10/14 Olmsted AP.

Sharp-tailed Sparrow
All reports: 8/12 Clay LCF, 9/29 Hennepin OJ.

Fox Sparrow
Early north 9/23 Cook KMH, 9/26 Koochiching GM, Lake DPV, 10/6 Itasca AB, Otter Tail MO; early south 9/15 Washington

DS, 9/19 Anoka GP, 9/22 Rice OR; late north 10/23 Clay MO, 11/2 Cook KMH, 11/5 Koochiching GM; late south 11/1 Hennepin SC, Washington WL, 11/2 Anoka GP, 11/5 Ramsey KB.

Song Sparrow
Late north 10/21 Aitkin WN, 11/6 Cook KMH, **11/11** Cook SOL.

Lincoln's Sparrow
Early south 9/7 Ramsey KB, 9/14 Hennepin SC, 9/15 Winona CS; late north 10/13 Lake AB, DPV, 10/20 Clay MO, 10/21 St. Louis KR; late south 10/21 Hennepin GP, 10/23 Hennepin SC, Winona CS, 10/28 LeSueur AP.

Swamp Sparrow
Late north 10/13 Lake AB, DPV, 10/20 Clay MO, 10/21 Cook KMH, St. Louis KB; late south 10/23 Winona CS, 10/31 Ramsey KB, 11/14 Olmsted AP.

White-throated Sparrow
Early south 9/7 Hennepin SC, Rice TB, 9/8 Anoka GP, Ramsey RH, 9/11 Hennepin OJ; late north 11/6 Koochiching GM, 11/12 Lake SW/MS, 11/18 Clay LCF; late south 11/15 Washington DS, 11/23 Washington WL, 11/25 Houston EMF.

White-crowned Sparrow
Early north 9/14 Koochiching GM, 9/15 Duluth EL, 9/16 Wilkin MO; early south 9/15 Washington DS, 9/16 Rice AP, 9/18 Mower RRK; late north 10/19 Cook KMH, 10/21 Aitkin WN, 10/22 Lake DPV; late south 10/16 Hennepin KB, 10/18 Winona OJ, 10/22 Winona CS.

Harris' Sparrow
Early north 9/12 Cook KMH, 9/16 Wilkin MO, 9/18 Wilkin SDM; early south **9/15** Washington DS, 9/19 Ramsey EL, 9/22 Murray ND; late north 10/28 Clay LCF, 11/5 Morrison SC, 11/10 Otter Tail MO; late south 10/28 Martin BB, 11/18 Lac Qui Parle CMB, 11/19 Lac Qui Parle DC.

Dark-eyed Junco
Early south 9/15 Hennepin SC, Olmsted JB, Winona CS, 9/23 Ramsey EL, Washington DS, 9/24 Sherburne SWR.

Lapland Longspur
Early north 9/16 Wilkin MO, 9/17 Cook KMH, Lake DPV, 9/20 Beltrami DJ, Clay PS; early south 9/18 Hennepin OJ, 9/22 Olmsted AP, 9/23 Anoka SC, GP; late north 10/14 Clay LCF, 10/19 Cook KMH, 10/22 Cook AB.

Smith's Longspur
All reports: 10/13 Norman PS, 10/20 Clay MO, 10/21 Wilkin MO.

Chestnut-collared Longspur
All reports: 8/22 Clay PS, **9/3** Clay MO.

Snow Bunting
Early north **10/5** Cook KMH, 10/18 Lake DPV, 10/19 Lake PS; early south 10/19 Hennepin KB, OJ, 10/25 Hennepin SC, GP, 10/26 Winona CS.

Bobolink
Late north 9/8 Aitkin WN, 9/15 Clay LCF, 9/16 Wilkin MO; late south 8/31 Winona CS, 9/7 Pipestone RJ, 9/30 Dodge AB.

Red-winged Blackbird
Late north 11/18 Clay LCF, 11/19 Cook SOL, 11/23 Otter Tail MO, Polk KSS.

Eastern Meadowlark
Late north 11/3 Aitkin WN, Mille Lacs KE, 11/6 Cook KMH, **11/22** Cook SOL.

Western Meadowlark
Late north 10/22 Norman DB, 10/27 Wilkin MO, 10/28 Clay LCF.

Yellow-headed Blackbird
Late north 9/4 **Cook** KMH, 10/12 Marshall RJ, **11/11** Otter Tail MO; late south 9/8 Blue Earth MF, 9/25 Waseca LF, 10/1 Winona CS.

Rusty Blackbird
Early north 9/15 Becker MO, 9/23 Aitkin WN, St. Louis PS, 9/28 Lake DPV; early south 10/9 Sherburne SWR, 10/10 Rice TB, 10/15 Ramsey KB; late north 11/17 Aitkin WN, 11/21 Wilkin SDM, 11/23 Aitkin SC, Otter Tail MO; late south 11/3 Hennepin SC, GP, Nicollet LF, 11/18 Martin BB, 11/24 Cottonwood RJ.

Brewer's Blackbird
Late north 10/12 Lake DPV, 10/21 Wilkin

MO, 11/2 Cook KMH; late south 11/2 Pipestone JP, 11/6 Carver RG, **11/20** Lac Qui Parle CMB.

Common Grackle
Late north 11/19 Cook SOL, 11/25 Clay MO, 11/28 Aitkin WP.

Brown-headed Cowbird
Late north 9/1 Aitkin WN, 9/22 Becker BK; late south 10/26 LeSueur AP, 11/18 Martin BB.

Orchard Oriole
All reports: 8/12 Wilkin SDM, 8/16 Clay LCF, 8/18 Kandiyohi KE, 8/24 Pipestone JP, **8/26** Otter Tail MO.

Northern Oriole
Late north 9/3 Becker BK, 9/8 Aitkin WN, Otter Tail MO, 9/9 Pine AB, late south 9/9 Nicollet LF, Winona CS, 9/11 Hennepin DC, 9/14 Pipestone JP.

Pine Grosbeak
Early north 10/23 Cook KMH, 10/24 Duluth KE, 10/26 St. Louis SW/MS.

Purple Finch
Reported from 13 counties north and 18 counties south.

House Finch
Reported from Clay and Otter Tail and ten counties south.

Red Crossbill
Reported from eight counties north. One report south 11/17 Wabasha BL.

White-winged Crossbill
Only one report: 10/27 Duluth KE.

Common Redpoll
Early north 10/18 Cook SOL, 10/28 Pennington KSS, 11/2 Cook KMH.

Pine Siskin
Reported from 13 counties north and 17 counties south.

American Goldfinch
Reported from 17 counties north and 27 counties south.

Evening Grosbeak
Reported from 14 counties north. One report south: 10/26 Winona CS.

House Sparrow
Reported from 14 counties north and 24 counties south.

KEY TO SEASONAL REPORTS

1. Bold-faced species name (**PACIFIC LOON**) indicates a species occurring as a Casual or Accidental in the state.

2. Bold-faced dates (**10/9**) indicates a date of occurrence either earlier or later or within the earliest or latest dates that are on file.

3. Bold-faced counties (**Aitkin**) indicates a county of first or unusual occurrence for that species. City of **Duluth** also bold face when applicable.

4. Counties in italics (*Aitkin*) indicate a first county breeding record.

5. [ ] — species for which their is reasonable doubt as to origin or wildness.

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SC	Steve Carlson
GMD	Gordon & Mary Jo Dathe
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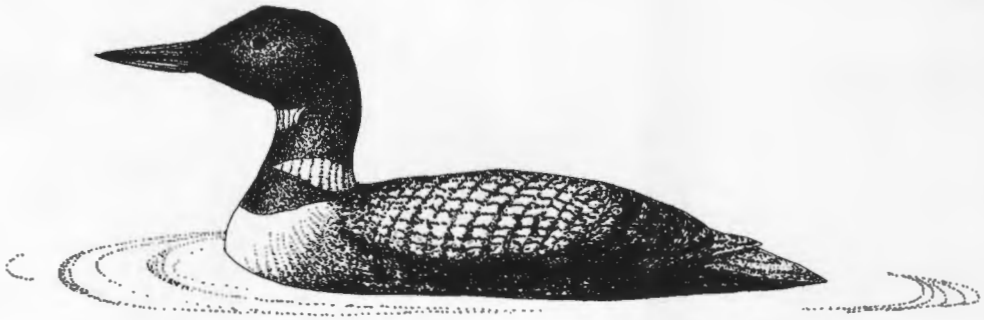


NOTES OF INTEREST

TEN YEARS OF BIRDING AT THE MINNESOTA STATE CAPITOL MALL, 1975 TO 1984 — The tree lined and hedgerowed sidewalks beside the streets of the mall south of the State Capitol were very pleasant for strolling in the early morning before work or at noontime after lunch. Probably the mall was at its best in the early 1970s before Dutch elm disease caused the destruction of the beautiful American elms whose branches had arched over the streets and the sidewalks beneath them, making beautiful shady lanes. I counted 150 great elms when the disease first appeared in 1977. In 1984 only 60 remained, but a variety of young trees were being planted to replace them. The hedgerows, nearly 1700 yards of them, were mostly of buckthorn, but there were 230 yards of Tatarian honeysuckle and 60 yards of alpine current. The buckthorn lined the fancy two-laned sidewalk for most of its length between the Capitol and the Veteran's Building, and the two sides of Iglehart Avenue which was about two hundred yards long. I say "was" because this stretch of Iglehart Avenue is no more. It was replaced by more lawn. And then the same thing happened to a similar stretch of Wabasha Street. The honeysuckle hedge around a small parking lot to the southwest also is no more. It succumbed to the ravages of the leaf-curling aphid. The buckthorn hedge also met with bad times and looked a bit sickly as injudicious use of herbicides ate away at the lowest branches and then severe pruning of the upper branches reduced its height from five feet to less than four. The herbicides were directed at the few species of plants managing to peek out from under the hedge (bitter nightshade, creeping bellflower, white snakeroot, and Canada violet). There were forty or so scattered specimen trees — yellow pine (3), scotch pine (1), blue spruce (6), white spruce (1), pyramidal juniper (6), green ash (6), sugar maple (1), black locust (3), flowering crab (6), basswood (2), Russian olive (6). The new saplings which replaced the elms included 60 sugar maple, 22 linden, 30 hackberry, and about 15 pin oak (which did not thrive very well in our climate). There were shrub plantings at the corners of lawns, eight in all (now seven), consisting of winged wahoo, tatarian honeysuckle, mock orange, nannyberry, arrowwood, ninebark, and some dwarf spiraea. Two patches of Japanese barberry were removed in the mid-70s. In addition to the above listed plants there were nice shrub plantings in front of the Capitol and around the Veteran's Building and its parking lot, with ten young trees in little islands in the parking lot. So this was the setting, some 30 acres of land, where I walked and watched birds on many mornings before the workday began and many noon hours during about 12 years of working in the Centennial Building for the Division of Fish and Wildlife

of the Department of Natural Resources. I recorded the species of birds and the number of each species seen there. Incidentally, I have kept such records nearly every day for nearly 50 years. The number of species recorded during the years 1975-84 was 71. Nests of 13 species were found, plus eggs of the Brown-headed Cowbird, of course, (Table One). Probable nesters included Mallard, Common Nighthawk, Chimney Swift, and Northern Rough-winged Swallow. In 1983 two pairs of Mallards used the fountain pool at the Veteran's Service Building, and one of these pairs was watched as they investigated possible nesting sites under shrubbery, particularly among the yews lining the Centennial Building foundation. Later, a citizen called to report a newly-hatched brood of Mallards was using a swimming pool about two blocks west of the State Highway Building. In 1981 I found a young Killdeer with its parents in the rose garden area at the Veteran's Building. At that time I thought the nest might have been atop the parapet because an adult played out the piteous broken-wing act on the ledge of the parapet. However in 1982 I located the nest among the wood chips around a tree on an "island" in the parking lot. A pair of American Kestrels nested in a crevice in a nearby building in the 1970s, just across the street from the Maintenance and Operations Building. They hunted the area where Highway 94 was being built. They were still to be seen around the Capitol area in the 1980s. Chimney Swifts were seen on several occasions taking twigs from the tops of elm trees (just where I had seen them doing that in the early 1940s), but the nest site was not evident. Common Nighthawks probably nested on one of the buildings. Indigo Buntings may have nested just outside the area on a weedy hillside. At least, the male sang from a large tree there during two summers.

Table 1. Nesting and inferred nesting at the Minnesota State Capitol complex

1. Mallard
2. Killdeer
3. Rock Dove
4. Mourning Dove
5. Common Nighthawk
6. Chimney Swift
7. American Crow
8. American Robin
9. Gray Catbird
10. Brown Thrasher
11. European Starling
12. Chipping Sparrow
13. Common Grackle
14. Brown-headed Cowbird
15. Northern Oriole
16. American Goldfinch
17. House Sparrow

Table 2. Non-nesting local species recorded at the Minnesota State Capitol complex

1. Great Blue Heron
2. Black-crowned Night-Heron
3. Cooper's Hawk
4. American Kestrel
5. Peregrine Falcon
6. Black-billed Cuckoo
7. Yellow-bellied Sapsucker
8. Northern Flicker
9. Downy Woodpecker
10. Eastern Wood-Pewee
11. Least Flycatcher
12. Great Crested Flycatcher
13. Eastern Kingbird
14. Purple Martin
15. Tree Swallow
16. Blue Jay
17. Black-capped Chickadee
18. House Wren
19. Eastern Bluebird
20. Cedar Waxwing
21. Warbling Vireo
22. Red-eyed Vireo
23. Yellow Warbler
24. Louisiana Waterthrush
25. Common Yellowthroat
26. Scarlet Tanager
27. Indigo Bunting
28. Rufous-sided Towhee
29. Clay-colored Sparrow
30. Field Sparrow
31. Vesper Sparrow
32. Song Sparrow
33. Red-winged Blackbird
34. Pine Siskin

I recorded 34 species which I would call "local", and for which there seemed to be no suitable nesting environment (Table 2). I would have thought there was no suitable nesting habitat for ducks, crows, or swallows either, but some birds can be unusually adaptable. Some of these local non-nesters were migrating through the area. Some, like the herons from the Pig's Eye heronry, were flying to and from feeding areas in lakes and wetlands to the north. Perhaps some were just visiting, and some were displaced by construction work and looking for unoccupied territories.

Table 3. Transients (Species not ordinarily nesting in the vicinity)

1. Ring-billed Gull
2. Herring Gull
3. Ruby-crowned Kinglet
4. Golden-crowned Warbler
5. Tennessee Warbler
6. Orange-crowned Warbler
7. Nashville Warbler
8. Chestnut-sided Warbler
9. Yellow-rumped Warbler
10. Black-throated Green Warbler
11. Palm Warbler
12. Blackpoll Warbler
13. Palm Warbler
14. Mourning Warbler
15. Wilson's Warbler
16. American Tree Sparrow
17. Fox Sparrow
18. White-throated Sparrow
19. Dark-eyed Junco.

The great majority of the transient bird species were warblers (Table 3). Herring and Ring-billed Gulls, flying in Vs between the Mississippi River and Ramsey County lakes were the non-stop transients.

William H. Longley, 532 W. Broadway, Forest Lake, MN 55025.

LATE WARBLER MIGRATION THROUGH TWO HARBORS, LAKE COUNTY — As the fall migration period for warblers rarely extends past late September or early October in northeastern Minnesota, with most of the late dates cited by Janssen (*Birds in Minnesota,* 1987) for regularly occurring northeastern warblers ranging from late September to late October, the presence of 12 species of warblers on 6 October 1990 at Two Harbors, Lake County is noteworthy. Arriving in Two Harbors after birding our way up the north shore from Duluth, Carol Schreter of Baltimore, Maryland, and I began to bird around the harbor and lighthouse areas. Although migration had been evident all morning, with large numbers of American Robins observed flying past Stoney Point along with many groups of Pine Siskins, American Goldfinches, sparrows and a few warblers, the number of warblers was very low and consisted of, almost exclusively, Palm and Yellow-rumped Warblers. After studying two Black-bellied Plovers and a very cooperative Lesser Golden-Plover, we began to bird the wooded area between the lighthouse and the shore. Few birds were observed at first, probably due to the Merlin that had just flashed through the area bent on getting his breakfast. After working our way through the many openings, we soon began to see large numbers of birds, many of them warblers. While most of them were Yellow-rumpeds and Palms, individuals of other species soon began to show themselves including the following: Tennessee Warbler, with the latest dates for the northern region listed as 24, 25 and 31 October, seven individuals; Blackpoll Warbler, with cited late dates of 8, 9, 10, 13, 19 and 24 October, one individual; Orange-crowned Warbler, 17, 18, 21, 28 October and 9 November, three individuals; Nashville Warbler, 22, 23 and 25 October, three individuals; Black-and-white-warbler, 11, 15 and 19 October, one individual; American Redstart, 24, 26, 28 October and 13 November, four individuals; Magnolia Warbler, 10, 13 and 18 October, one individual; Cape May Warbler, 23, 26, 27 October, 2, 13, 18 November, two individuals; Wilson's Warbler, 1, 8, 15 and 19 October, one individual; Palm Warbler 27, 28, 31 October, 9, 11

and 19 November, multiples (no numbers were noted); and, the best find of the day, a female Black-throated Blue Warbler. With the latest dates on record for this species for the northern regions listed as 25, 30 September and 2 October, our observation is the latest recorded for this region. Originally spotted by Carol, and recognizing it as something different, she brought my attention to it. The bird was studied for approximately three minutes as it moved through the area where we were standing. It had an unstreaked, uniform brownish back and no wing bars. This, along with an unstreaked mainly buffy breast, gave it a very plain appearance. With a pale line over the eye, a white crescent below the eye contrasting sharply with darker brown lores and auriculars, it had a unique facial pattern. The throat was a pale buff that was lighter than the somewhat brown back and the buffier breast. The wings, lacking any wingbars, had a rectangular white patch at the base of the primaries. This, if present (and it often is not), is diagnostic of Black-throated Blue Warbler. The undertail coverts were light in color and contrasted with the buffier flanks and breast. The bill and legs were dark. The bird made no vocalizations while we observed it. It was similar in size to a Yellow-rumped Warbler, at the time the only other species available for comparison. Along with the large number of warbler species mentioned, we observed good numbers of other birds such as Ruby and Golden-crowned Kinglets, a few Solitary Vireos, many sparrows including Lincoln's, Swamp, Harris', White-crowned and, the most common, White-throated. We ended our day in Isabella, Lake County along Gladen Road where we observed a number of family groups of Gray Jays, a few Boreal Chickadees and a very obliging male Spruce Grouse. All in all a very exciting fall birding day! **Kim W. Risen, 1301 Hwy. 7, #52, Hopkins, MN 55343.**

ROSS' GOOSE IN RENVILLE COUNTY — The scarcity of open water after a late winter storm in western Minnesota concentrated waterfowl in a flooded field near Sacred Heart in Renville County. On 30 March 1991 we studied an adult Ross' Goose for twenty minutes, with direct comparisons to eight Snow Geese at a distance of 75 yards through a Kowa TSN-4 spotting scope with a 40x eyepiece. The bird's bill was stubby, triangular in shape, and definitely smaller than the bill of the adult Snow Goose. It was also more narrow, seen when both species looked directly at the observers. The bill color was pinkish-orange, except for bluish-gray discoloration at the base of the bill, especially on the upper mandible. The dark "grinning patch" seen on the gape of the adult Snow Goose was not present. Overall, the plumage was very white except for black primaries. We relied on the smaller and more rounded head, bill characteristics, and smaller body size for identification. We estimated that the Ross' Goose was 15% smaller than adult Snow Goose when they were standing next to one another on the ice. The bill and body comparisons were again noted as the flock took flight and circled overhead before departing towards the northeast. **Peder Svingen and Sue Barton, 151 Bedford St. SE, Minneapolis, MN 55414.**

LITTLE BLUE HERON IN ANOKA COUNTY — The afternoon of 27 April 1991, I went for a bicycle ride around Trout Lake at the Coon Rapids Regional Park Dam in Anoka County. I had stopped at the north end of the lake to look at a Great Egret that was hunting along the shore. I scanned ahead along the shore to see if there was anything, and spotted a dark heron. At first I thought it was a Green-backed Heron and rode my bicycle closer for a better look. I noticed it was larger than a Green-backed Heron and the blue beak with the black tip made me realize it was something else. I noted the greenish-blue color of the body and legs and the reddish color of the neck. I observed the heron for about ten minutes and was able to get within 50 feet of it on my bike. I had seen a Little Blue Heron on a vacation trip to Virginia and Maryland a few years earlier and this was my initial guess. I did not have a field guide with me, so I whizzed home and before I even opened a book, I sat down and drew a picture of what I had seen. I realize that a Little Blue Heron is not a new state record and probably not an unusual sighting for many people, but it was exciting to see this heron because I spend much time birding in the park and most often only see Canada Geese

Little Blue Heron, 29 April 1990, Coon Rapids Dam, Anoka County. Photo by Anthony Hertzel.

and Mallards (and I was able to add it to my Minnesota Life List). It also proves that even if a person is not able to get out birding to cover the state and all its counties as some people are able to, birding can be very exciting and fun close to home (and maybe even more so because it is "in your own backyard"). **Charlotte Wenger, 1019 93rd Lane NW, Coon Rapids, MN 55433.**

WOOD DUCK OLFACTORY SENSE QUESTIONED — In ***The Loon*** (61: 202-203) a short article appeared over my name presenting experiments that appeared to indicate that Wood Ducks had a very keen sense of smell. In this article I reported that in three separate instances I had found that incubating birds, on returning undisturbed from feeding, entered the nest box directly without hesitation. Later, during the female's absence, I handled the eggs with my bare hands. On their returning they refused to enter the nest but appeared disturbed and made several approaches before entering. Later I used rubber gloves while handling the eggs and the birds entered directly without hesitation. These observations I interpreted as suggesting that the birds were disturbed by detecting the human odor. During this spring (1991) I arranged to make further observations on this problem. I carefully observed that two different undisturbed female Wood Ducks, after feeding, entered their nest boxes directly without hesitation. In both of these cases I then visited the nests while the birds were absent feeding, handled the eggs with my bare hands, replaced the down carefully, and watched the females on their return flights. In both cases they entered directly without any abnormal behavior that would indicate a disturbing sensitivity to the human odor from my hands. This, of course, refuted effectively my assumption that the three 1989 experiments indicated any particularly keen sense of smell on the part of these birds. The questions, then, will be "Did some other type of disturbance, completely undetected by me, cause the 1989 birds to hesitate before entering the nests?", or, "Did these experiments indicate a considerable variation exists in the keeness of the sense of smell in Wood Ducks?" This, of course, is a clear case of jumping to conclusions with far too few data. Perhaps some other Wood Duck enthusiasts might carry out more carefully prepared observations dealing with this problem. **W.J. Breckenridge, 8840 W. River Road N., Minneapolis, MN 55444.**

ROSS' GOOSE IN LINCOLN COUNTY — Spectacular spring concentrations of geese may be encountered in western Minnesota, increasing the odds for observers who seek Ross' Geese among the flocks of Snow Geese. There were 5,000 Snow Geese in Section 29 of Hansonville Township, also known as Twin Lakes, Lincoln County, on 7 April 1991. The flock was studied for thirty minutes through a Kowa TSN-4 spotting scope with a 40x eyepiece, from distances between 75 and 125 yards. Two adult Ross' Geese were identified before the flock briefly took flight and rearranged itself in the shallow marsh. They were relocated along with one apparent hybrid or intermediate form, but it was never certain that more than two Ross' Geese were present. Direct comparisons showed the smaller, stubby, triangular-shaped bill compared to the adult Snow Goose. It was pinkish-orange in color and slightly darkened at the base, although diagnostic warty protuberances could not be detected. The Ross' Geese lacked the dark "grinning patch" that could be seen on the adult Snow Geese. The neck was shorter and body size was estimated 15% smaller than Snow Goose, with similar neck thickness. Overall, the plumage was very white except for black primaries and there was no ferrous staining on the face or forehead. The apparent hybrid was similar in body size to Snow Goose, lacked the dark "grinning patch," and appeared to have an intermediate bill, although this was difficult to detect at 100 yards. I have had no previous experience with hybrids, but have seen Ross' Geese on several occasions in the Central Valley of California, where they winter in good numbers. **Peder Svingen, 151 Bedford St. SE, Minneapolis, MN 55414.**

EARLY SWAINSON'S THRUSH — Date: 9 April 1991. Time: 19:00 hours Weather: Somewhat cold, a bit snowy, windy, 34°. Place: At my back door where food (apple pieces, bread) had been put out for robins. Situation: A male Brown-headed Cowbird (of which I had banded 53 in the spring of 1990) was struggling to escape from one of my traps. Action Taken: I grabbed my banding pliers, opened a band (size 1A), put it into the pliers, and opened the back door. Result: A thrush flew up from two feet away and alit close by in the leafless highbush cranberry. Thrush Description: Olive-colored back and tail, distinct eye-ring, breast spotted with black. Conclusion: Swainson's Thrush. **William H. Longley, 532 W. Broadway, Forest Lake, MN 55025.**

WIGEON AT HYLAND PARK — An Eurasian Wigeon reported on the MOU Minnesota Bird Report was investigated by us on 14 October 1990. We received no information about the sighting other than the location and found a wigeon on Hyland Lake in Bloomington at 10:30. It loosely associated with three Mallards when first discovered and was solitary when feeding along the grassy southeast shore of the lake. The bird was wary when approached and showed no evidence of unusual feather wear. It made two short flights across the lake without difficulty. Our description was written on 5 December 1990 after Bob Janssen told me that the record was under consideration by MORC. The description was based on taped field notes which were recorded on 14 October 1990 while the bird was being observed through a Kowa TSN-4 spotting scope with a 40X eyepiece from an estimated distance of 200 yards, looking toward the northeast with the sun at our right shoulders. Description: A male wigeon with a relatively small, spatulate bill that was gray with a dark nail. A closer view from 75 yards also showed a dark nostril and a dark outline of the gape (cutting edge) but the bill color appeared more bluish gray. There was a "warm, cinnamon buff median crown stripe" with the entire head otherwise warm, cinnamon brown except for a small, attenuated greenish patch surrounding the eye. This patch was shaped like a tear drop and was more diffuse behind the eye. The eye itself appeared dark. We noted sparse, dark speckling on the foreneck. The breast and back were warm brown, becoming more cinnamon brown on the sides. The brown flanks ended abruptly at the white abdomen and extreme rear flank. There was a black crissum as if the rear of the bird had been dipped in black ink. The tail feathers were pointed and short. The primaries were dark and edged in brown with a large whitish patch visible on the wing at rest which was formed by the greater

coverts. During flight, white forewing patches and a dark green speculum were noted (PS) while the other observer reported grayish axillaries (SB).

Discussion: Two other observers were present near Hyland Lake and told us that they had just seen a Eurasian Wigeon. There were several aspects of the plumage which confused us after we returned to our car and reviewed the National Geographic Field Guide. The most obvious points of confusion were the brown breast, sides, and back. During eclipse, males of both species become chestnut brown on much of the body and resemble females of the species. We considered this possibility but it made little sense to assume eclipse plumage on the body but not on the head. Later in the day, we reviewed *Waterfowl* by Madge and Burn (1988). This did not resolve the issue and one of us (PS) went back to Hyland Lake on two of the next three days but the bird was not refound. On 17 October, several new species of waterfowl were present and two obvious American Wigeon were studied. The extent of the green eye patch was more than usual for American Wigeon and the speckling on the foreneck was unexpected. The axillary feathers were clearly described as grayish without prior knowledge of the diagnostic significance of this character, but such a field mark is difficult to see well in flight. We decided to leave the identification unresolved until photographs were developed, but they were inconclusive. On 1 December 1990 we observed a male Eurasian Wigeon at Point Reyes National Seashore, California. We were approximately 100 yards away with good lighting as the bird foraged in a muddy tidal pool but no spotting scope was available. Through Bausch and Lomb 10 x 42 Elites, the bird had a typical head pattern for male Eurasian Wigeon as well as a pinkish brown breast and brownish gray sides. We concluded that the bird at Hyland Lake was not typical and possibly represented a hybrid. **Peder Svingen and Sue Barton, 151 Bedford St. SE, Minneapolis, MN 55414.**

Editor's Note: The details of this observation were submitted to The Wildfowl and Wetlands Trust in Gloucester, England on 13 February 1991. We asked for their opinion but so far we have heard nothing from them.

HEARD-ONLY KING AND VIRGINIA RAILS — Playing rail tapes alongside Theurer Drive in Winona, Winona County, on 30 April 1990, I had no difficulty calling out Virginia Rails. One came right towards me, and had me backing up in a hurry. The tape played on while I made my retreat, and soon was playing King Rail. The tape I was using was the Peterson Guide to Eastern Birds' Songs. To my surprise, the Virginia Rail answered the King Rail tape with such similitude that, were I not watching the Virginia Rail actually making the sounds, I would have thought I was hearing a King Rail. I then repeated the program two more times, and each time the Virginia Rail gave a King Rail answer. This experience put to rest doubts I have had about a questionable King Rail heard along with Ray Glassel and Bob Janssen at the Sleepy Eye Sewage Ponds a few years back. We had all heard what to us sounded like it might have been a King Rail, but we only saw Virginias. Although the two rails' calls are not exactly alike, they are similar (the "wump, wump" call, i.e.). I made a tape of the two calls (using both Peterson, and The National Geographic tape) which is available, to anyone interested, at the DNR Library where MOU records are stored. This experience reminded me to be very cautious about identifying a King Rail in heard-only circumstances. **Anne Marie Plunkett, 2918 S.W. 15th Ave., Rochester, MN 55902.**

ANOTHER HENNEPIN COUNTY CAROLINA WREN — Early in November 1990, I stood overlooking Mooney Lake, Hennepin County, in our backyard when I noticed a bird in the undergrowth of some scrubby woodland behind the garage. It was small and buffy and my first though was that I had seen a Red-breasted Nuthatch. Yet even in that brief sighting, I knew the shape was wrong. I went indoors to get my binoculars, only to see the bird fly off when I returned. I had to admit I'd seen something and had no clue as to what it was. The first week in December, to my great surprise, I saw a large wren with a buffy breast, ruddy back and pronounced white eye stripe hopping around under the fat feeder,

Carolina Wren, 24 December 1990, Wayzata, Hennepin County. Photo by Mark Stensaas.

gleaning fragments of fat. The binoculars revealed a long beak and some fine barring on the rump and tail. It was unmistakably a Carolina Wren. I put out extra fat and hoped my visitor would survive the cold. By the end of December, the wren had established a pattern of feeding between 8:00 A.M. and 11:00 A.M. On Christmas Eve, Mark Stensaas from Duluth responded to my message on the bird hotline and came to photograph the wren. The last time I saw the bird, it looked well and lively clinging to the bricks and fishing for insects around the window frame on the afternoon of 24 December 1990. But the weather turned frigid over Christmas, and I have to assume that the Carolina Wren perished. I didn't see it again. **Elizabeth Weir, 1262 Hunker Drive, Wayzata, MN 55391.**

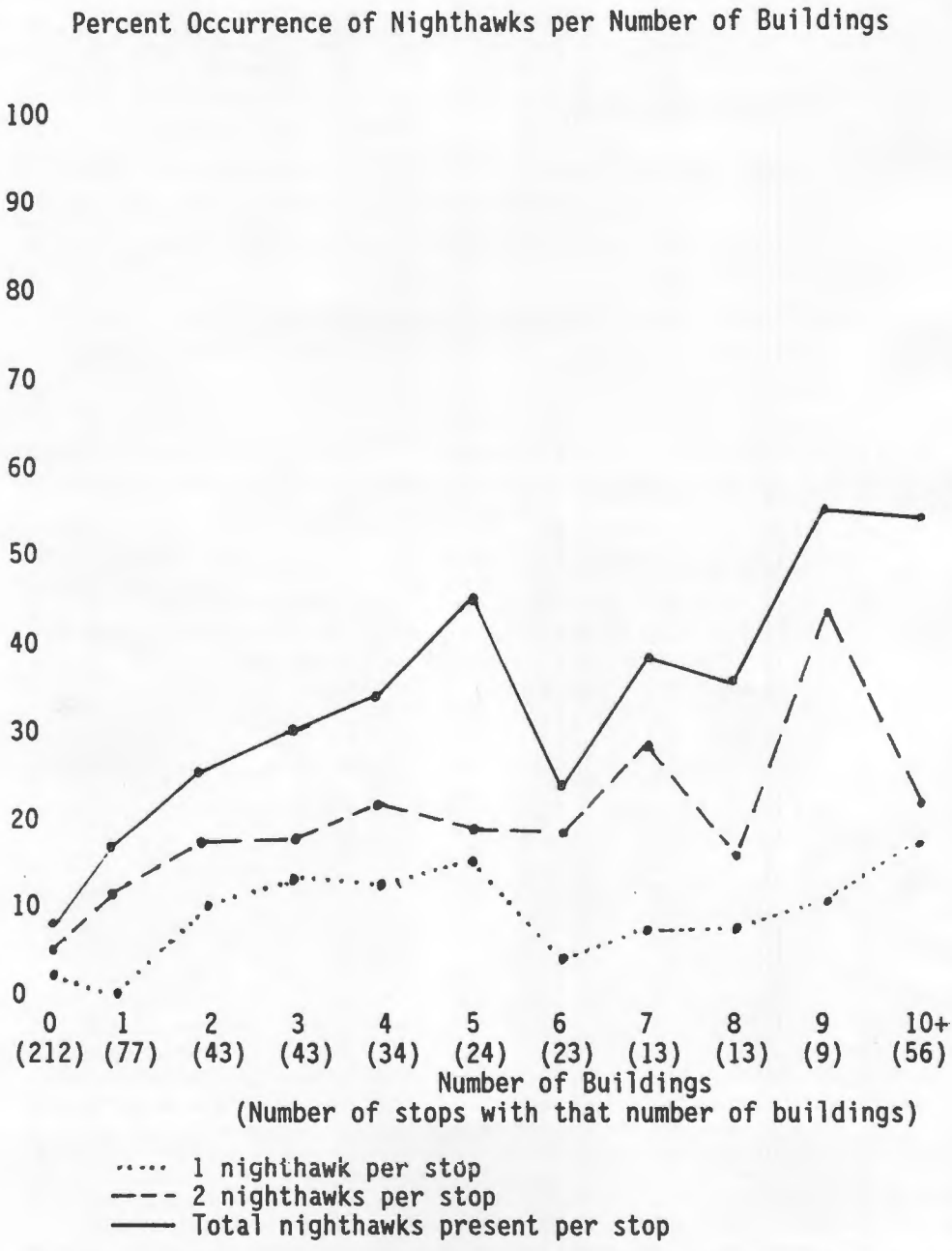
HARLEQUIN DUCK IN BENTON COUNTY — On 7 March 1991 at about 8:15 A.M., Kim Eckert and I saw a female Harlequin Duck associating with a flock of Mallards on an open stretch of the Mississippi River about one-half mile north of the Highway 15 bridge in Sauk Rapids, Benton County. The river here remains open the entire year because of the dam and the warm water effluent from the Champion Paper mill about one mile to the north in Sartell. For this reason there are fairly large flocks of overwintering waterfowl including approximately 100+ Canada Geese and Mallards, and 50+ Common Goldeneyes as well as an adult Bald Eagle. I had not been paying close attention to the flocks of Mallards and Canada Geese this winter, so I don't know when the Harlequin Duck arrived. It was only by chance that we saw the bird at all. Kim saw her first, perhaps 30 feet from shore, and identified her as a Harlequin Duck, the first I'd ever seen. The next day (8 March 1991) I went out alone and at about 9:00 A.M. located her again, this time downstream about a quarter mile north of the bridge and much closer to shore. She was loosely associating with a very small flock of Mallards and Canada Geese, about a dozen birds in all. She was moving back and forth and diving periodically at a distance of between ten and 20 feet from the shore. She even climbed out of the water onto an outcropping rock to preen for about five minutes, providing me with an excellent opportunity to observe and take notes. The following is a description of the bird as taken from the field notes I was able to make: The

duck was small and brown, about one-half to two-thirds the size of the male Mallards next to whom she swam. Her back and wings were a darker brown than her chest. She had a round white patch behind her eye and a triangular shaped gray-white patch extending from her bill towards her neck. She also had a whitish spot above her bill and in front of her eye which was not entirely distinct from the patch extending from her bill to her neck. I did not see her fly. When I got home, I checked my notes against a field guide in order to determine for myself if I could confidently identify the bird I saw as a Harlequin Duck. Because of the white patch above her bill and in front of her eye and also because of her size, I believe that she was neither a Surf Scoter nor a White-winged Scoter. Furthermore, the three white patches distinguished her from the female Bufflehead. **Suzanne Ross, 855 River Ave. N. #3 Sauk Rapids, MN 553679.**

Editor's Note: The Harlequin Duck was seen by several observers in the same general location as above during the week of 10 March. The last sighting as far as I know was on 16 March 1991.

SMITH'S LONGSPURS IN NORMAN COUNTY — Many small flocks of longspurs migrating through western Minnesota were more easily observed on 13 October 1990 after the winds shifted around to the south at approximately 20 mph, keeping the flocks lower to the ground. The dry, rattling three to four note calls from members of one flock alerted me to the presence of Smith's Longspur, and a stubble field in the northwest corner of Section 13, Rockwell Township, Norman County was searched on foot. The brisk winds kept the birds facing in one direction while on the ground and new arrivals flew toward me with the sun peeking over my shoulder through broken sky conditions. One female was studied on the ground from 15 feet and direct comparisons with Lapland Longspurs were possible. One male Smith's Longspur retained many features of alternate plumage which were visible in flight. The dark brown or blackish triangular face pattern was evident, along with chestnut which extended onto the nape. The white lesser coverts flashed in the wings and the two outermost rectrices contrasted with the rest of the dark brown tail. The bright buff underparts also contrasted sharply with the pale underwings in flight. It was estimated that about half of the first flock of one hundred were Smith's Longspurs, based mostly on call and relative number of longspurs identified. Another group of 50 individuals appeared to be all Smith's Longspurs. There were similar sized flocks of longspurs in Clay County and Wilkin County on the same day but none were close enough to identify positively. **Peder Svingen, 151 Bedford St. SE, Minneapolis, MN 55414.**

SURVEY OF COMMON NIGHTHAWKS IN MINNESOTA, 1990 — We have finally completed compiling the results of the 1990 Common Nighthawk survey and made plans for the 1991 season. As you can see from the survey results, significantly fewer nighthawks were found in the outer Metro region, compared to the outstate and inner Metro areas. Western Hennepin County had the lowest count of all. These findings were consistent between 1989 and 1990. The initial two years' surveys have shown that nighthawks are not uniformly distributed across the State. Consequently, we are modifying our study for 1991 to do a more in depth study of the "void" area, with specific emphasis on western Hennepin County. Student interns will be used to survey the "void" to determine its boundaries, and the cities and towns within this area will receive greater attention in an attempt to locate all nighthawks. The 1990 Common Nighthawk survey conducted by Hennepin Parks volunteers consisted of 84 routes (564 stops) in 43 counties. This is double the area covered in 1989. Sixty-five volunteers participated in the surveys. The 1990 survey differed from the 1989 survey by having stops outside of cities and towns where there were no flat-topped buildings, routes preassigned by Hennepin Parks staff, a later starting date of 10 June, and routes traveled only once. The 1990 survey also collected data on the number of flat-topped buildings per stop. All other methods were the same as the 1989 survey. Most of the changes were



incorporated to determine the frequency with which nighthawks nested in rural areas. The results of the survey showed a wide range of densities of buildings and nighthawks. For comparisons, the stops were separated by area into outstate (outside of the seven Metro counties), inner Metro (inside of the I-494-I-694 loop), and outer Metro (outside the I-494-I-694 loop). The stops were separated into two categories of building densities (less than three or three or more flat-topped buildings). This was done on the assumption that most areas

with three or more flat-topped buildings are in towns. The areas with three or more flat-topped buildings would probably also act as an attractant to nighthawks because of associated lights that attract insects. The number of stops with fewer than three flat-topped buildings and the type of habitat differed greatly among the three areas with 201 outstate sites in primarily wooded or agricultural areas, 27 inner Metro sites in residential areas, and 119 outer Metro sites in a mixture of rural and residential. The number of stops with three or more flat-topped buildings were similar among the different areas, ranging from 63 to 83 stops per area. The percentage of occurrence of nighthawks showed a direct correlation with more buildings (see graph). In areas with no flat-topped buildings, only six percent of the stops had birds. Once the density of buildings exceeded five, an average of 42 percent of the stops had nighthawks. The occurrence of birds at stops with less than three buildings was lower across all areas. The outer Metro was the lowest with only seven percent. At stops with three or more buildings, the percent occurrence was the same between the outstate and inner Metro (46%), but lower in the outer Metro (30%). A similar ratio between areas was found in 1989 with 55, 50, and 21 percent, respectively. When western Hennepin County (west of Highway I-494 north-south line) was looked at separately, the occurrence of nighthawks was similar between 1990 and 1989 with ten percent and seven and a half percent, respectively. We don't know why such low numbers were recorded for western Hennepin County, but we intend to investigate further. Although only six percent of stops with no flat-topped buildings had nighthawks, there is a tremendous amount of habitat available. Open areas may contribute significantly to the nighthawk population even though the percentage of occurrence is low. This study was not designed to determine the relative contributions of various habitat types to the total population, but it did show that nighthawks were found more frequently in urban areas. **Larry N. Gillette, Hennepin Parks, 12615 County Road 9, Plymouth, MN 55447-0320.**

BLACK-LEGGED KITTIWAKE IN WINONA COUNTY — On 30 March 1991 we saw a Black-legged Kittiwake at Lock and Dam #7 near Winona, Winona County. We observed the bird for approximately ten minutes at close range. Skies were clear, giving us excellent viewing conditions. These are my notes written immediately after the observation: Bird had dark spot by ear, dark nape, black legs, U-shaped black tip in tail, brownish diagonal stirp on wings. A yellow bill with black tip. Size seemed small — size of Bonaparte's or Franklin's. It stayed by itself, thus we could not compare it to Ring-billed Gulls which were in the area. Aside from diagonal marks, wings were pale. Wing tip color was not noted; apparently the wing tips were too pale to be of note. This is a puzzling bird. The wings and size resemble Bonaparte's. Although, I didn't note any dark markings other than the diagonal, but I wasn't concentrating on the tips or trailing edges when observing bird. The dark collar at the back of neck was smudgy — not brilliant black — and showed up distinctly in flight but disappeared when bird was in the water. We dismissed it as a Bonaparte's until it flew and we saw the black legs and collar. We also noted the black tip on the bill — the upper mandible had more black than the lower mandible when seen at close range. The lower mandible seemed yellow almost to the tip while the upper mandible was black on the distal portion. After noting the legs and collar, we decided to consult a field guide. We observed the bird with the guide and were still somewhat puzzled but felt we had been viewing a Black-legged Kittiwake. We only realized that we didn't have enough information on the wing tips and edges (although I had been looking intently at the wings whenever it flew but managed only to record the brownish diagonal mark) only after we returned to the car. When we went back to look for the bird again, it had disappeared. We returned to the Lock & Dam Sunday, 31 March but it was not seen. I'm pretty sure the outer primaries were black; because of the pattern I saw on the sitting bird when the bird flew, these outer primaries simply did not register. **Carol and Clemens Brysky, 277 East Morton, St. Paul, MN 55107.**

Editor's Note: This record represents the first early spring (March or April) record for this species in the state. The only other spring record is of a bird seen at Duluth from 27-30 May 1982 at Duluth (***The Loon*** 54:190).

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 to 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 color and black/white photos. Photos should be preferably 5x7 in size. Manuscripts should be typewritten, double-spaced and on one side of 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 the number required. A price quotation on reprints will be sent upon receipt of information.

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

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The LOON

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Gifts, bequests, and contributions to the MOU Endowment Fund should be sent to the Treasurer.

EDITOR OF *THE LOON*: Robert B. Janssen, 10521 S. Cedar Lake Rd., #212, Minnetonka, MN 55343 (phone 612-546-4220). The Editor invites articles, short notes, and illustrations about Minnesota birds. See back cover for details. **ASSOCIATE EDITORS: Kim Eckert, 8255 Congdon Blvd., Duluth, MN; Dr. Harrison Tordoff, Bell Museum of Natural History, University of Minnesota, Minneapolis, MN 55455. Photo Editor: Warren Nelson, 603 2nd St., N.W., Aitkin, MN 56431.**

"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," Peder Svingen, 151 Bedford St. S.E., Minneapolis, MN 55414.**

EDITOR OF THE MOU NEWSLETTER: Elizabeth Bell, 5868 Pioneer Rd. S., St. Paul Park, MN 55071. 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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A Wild Trumpeter Swan In Minnesota

Parker Backstrom

On 4 January 1991, Minnesota birder Don Mahle confirmed the presence of eight banded Trumpeter Swans on the open water at Read's Landing on the Mississippi River in Wabasha County, Minnesota. Eight Trumpeter Swans, as well as four Tundra Swans, were still present when I made a trip down the river on 14 January. Six of the Trumpeters were immature birds and two were adults. Each wore a yellow neck collar bearing a unique sequence of numbers and letters for identification. The immature Trumpeters were coded 24KT, 26KT, 28KT, 29KT, 30KT, and 35KT, and one of the adults wore a similar code, 06KT. Mahle's check with the U.S. Fish and Wildlife Service revealed that these seven swans were raised and released at Crex Meadows in Burnett County, Wisconsin as part of a recently initiated reintroduction program. The second adult Trumpeter Swan possessed the code 36FA on its neck collar and research indicated that this swan had been banded at the Lacreek National Wildlife Refuge (NWR) in Bennett County, South Dakota. Bennett County borders Nebraska to the south and is located in the southwestern quarter of South Dakota. The presence of this Trumpeter Swan in Minnesota raises some interesting and difficult questions about the "wildness" and "countability" of reintroduced species in general and Trumpeter Swans in particular, especially as they pertain to the Minnesota Ornithological Records Committee (MORC).

The Trumpeter Swan is officially listed as extirpated from Minnesota (Coffin and Pfannmuller, 1988). It formerly occurred as a migrant and summer resident in the state. Reports from the late 19th century indicate that the species probably bred in many places throughout the prairie and sparsely wooded portions of the state prior to the early 1800s (Roberts, 1932; Coffin and Pfannmuller, 1988). Reports from Swan Lake, Nicollet County, in 1823, describe the presence of "many" Trumpeter Swans, both mature birds and downy young. Dr. G. Suckley, ornithologist for the Pacific Railroad Survey through Minnesota in 1853, described the Trumpeter Swan as "quite common" during the summer in the vicinity of Pike Lake, Hennepin County (Roberts, 1932; Janssen, 1987). The last nesting records for wild Trumpeter Swans in Minnesota came from Heron Lake, Jackson County, in 1883, and Everson Lake, Meeker County, in 1885 (Roberts, 1932). As the western and central portions of the state were settled during the last half of the 19th century the species, easily hunted by settlers, gradually disappeared (Coffin and Pfannmuller, 1988). Today, the species is again being seen in Minnesota but only as a result of Trumpeter Swan restoration projects that began in Carver County in 1966 and have been carried on aggressively in Hennepin County since that time (Janssen, 1987; Coffin and Pfannmuller, 1988). Currently, the reintroduced Minnesota swans are considered "uncountable" as wild birds by the MORC (R. Janssen, pers. comm.).

In an effort to sort out the situation involving the status of "36FA" I contacted Rolf Kraft, Refuge Manager at the Lacreek NWR. He told me that the bird in question was from a wild breeding Trumpeter Swan population that was re-established at Lacreek NWR in the early 1960s. Trumpeter Swan "36FA" was captured and banded at Lacreek in 1988 when it was a subadult, between one- and three-years-old. This was the only record of it at the Lacreek Refuge. Its whereabouts for the next two years were unknown but on 25 August and again on 12 September 1990, "36FA" was reported from two different locations near Seney NWR on Michigan's upper peninsula. Three and a half months after the last sighting, it was discovered at Read's Landing with the released Crex Meadows Trumpeter Swans.

The occurrence of a bird from a reintroduced population such as this highlights a number of population ecology issues as well as questions about its "wildness." Some of the questions that come to mind regarding the population ecology of (re)introduced birds include: 1.) How many generations have been produced from the original released stock? 2.) Has the population remained stable or shown growth over a period of time? 3.) Is the population self-sustaining? Donna Com-

pton, Wildlife Technician for the Hennepin County Park Reserve District, provided several years worth of status reports and proceedings from conferences held by the Trumpeter Swan Society regarding the Lacreek NWR swan population, which I analyzed in an attempt to address these complex questions.

Thirty-four Trumpeter Swan cygnets were transferred from Red Rock Lakes NWR in southwestern Montana to Lacreek NWR and released between 1960 and 1962. 1962 was the last year that such transfers took place (Burgess, 1973). Because of the longevity of the species and the absence of genealogical records kept on individual Lacreek NWR Trumpeters it is not possible to determine how many generations lie between "36FA" and the original released swans. The age of the oldest Trumpeter Swan recorded in the wild is just over 24 years (Terres, 1980), but typically, nesting may begin for a pair of swans in about their fifth year (Banko, 1960). It is biologically possible, but unlikely, that "36FA" is a first generation "Lacreek-produced" bird, that its parents were among the original 34 birds released at Lacreek NWR. At the other extreme it is possible that "36FA" is a sixth generation bird. It is likely that the truth lies somewhere in between the two extremes, probably closer to the latter.

Information from the status reports show that the Lacreek Trumpeter Swan population continues to grow. The first successful reproduction took place on the refuge in 1963 and the first reproduction noted off-refuge took place in 1964 (Burgess, 1973). The Lacreek birds have been steadily expanding to surrounding areas ever since. Today, the "Lacreek population" is actually a broad label for Trumpeter Swans that breed and summer across western South Dakota, the sandhills of western Nebraska, and in southeastern Wyoming. Nearly all of them winter at Lacreek NWR (R. Kraft, pers. comm.). Refuge personnel conduct two different swan censuses in most years, an aerial production survey, conducted in late summer/early fall, and a breeding season peak population survey, conducted in early to mid-winter. Data from these surveys show that there has been a slow but steady increase in productivity within the vicinity of Lacreek NWR since the reintroduction program began over thirty years ago. If we concentrate on the last decade, productivity data from 1980 show 164 swans on breeding grounds in South Dakota and Nebraska while in 1989 aerial surveyors counted a total of 231 Trumpeter Swans (Englund, 1989).

As mentioned earlier, the Trumpeter Swans that breed in the vicinity of Lacreek NWR return to the refuge to spend the winter. Winter requirements for Trumpeter Swans include open water and adequate food supplies although other factors, like weather, do play a part. In 1989 the breeding season peak population survey found that 282 birds had returned to Lacreek NWR in late November (Kraft, 1990). It is believed that this number represents the total number of swans summering in the vicinity of Lacreek although verification is difficult due to the relatively small number of marked birds in the "Lacreek population." The fifty bird difference between the summer aerial production survey and the winter breeding season peak population survey totals, an average discrepency between these two counts, is thought to be made up of non-breeding swans that were within the summer census area but missed by counters. Very few, if any Trumpeter Swans emigrate from other populations to winter at Lacreek (R. Kraft, pers. comm.)

The increasing number of swans returning to Lacreek NWR to winter is increasing the competition for both food and habitat. Artificial feeding of the winter flock takes place to supplement the natural food supply at Lacreek NWR. One of the major objectives of refuge personnel has been to try to "persuade" a significant proportion of the Lacreek population, as much as 60%, to migrate away from the refuge to more southerly wintering grounds (Lockard, 1984). Efforts in this direction have met with limited success (R. Kraft, pers. comm.) In earlier years one way that Lacreek Refuge personnel attempted to induce migration was to remove the artificial winter food source. What they saw was that portions of the population became weakened and began dying of starvation (R. Kraft, pers. comm.). However, every winter a certain number of swans "pioneer" out of the refuge, especially in years with severe winter weather conditions (R. Kraft, pers. comm.) This self-induced migration suggests that some of the Trumpeter Swans are able to fend for themselves and are not ultimately dependent upon food provided to them. Refuge personnel currently do not consider the total Lacreek Trumpeter Swan population self-sustaining

Trumpeter Swan, #36FA (left), Reads Landing, Wabasha County, January 1991. Photo by Bill Drazkowski.

(R. Kraft, pers. comm.) but evidence indicates that were the artificial food supply withdrawn at least a portion of the population would move elsewhere and be able to survive.

Irrefutable conclusions about Trumpeter Swan number "36FA" are impossible. As a result, we are left with various degrees of probablity that the bird is from a self-sustaining, free-roaming, and growing population of Trumpeter Swans. It is well known that Trumpeter Swans have been breeding in and expanding around Lacreek NWR for almost thirty years. Number "36FA" is very likely a fourth or fifth generation bird from an established population that is aided by artificial feeding at their traditional wintering site. The evidence reviewed here indicates that number "36FA" is a valid, wild Trumpeter Swan, the first such known occurrence in Minnesota in over 100 years.

Acknowledgements

I would like to thank Rolf Kraft and Donna Compton for their time and expertise. I would also like to thank Steve Kittelson, Wildlife Specialist at the Minnesota DNR, Bruce Harris, and Bruce Fall for their helpful comments. Finally, I would like to thank Peder Svingen for his helpful comments on an earlier draft of this paper and Nancy Veverka for her technical assistance in its preparation.

LITERATURE CITED

Banko, W. E. 1960. The Trumpeter Swan. University of Nebraska, Lincoln and London.

Burgess, H., chairman. 1973. Proceedings and Papers of the Third Trumpeter Swan Society Conference. The Trumpeter Swan Society, pp. 35-46.

Coffin, B. and L. Pfannmuller, eds. 1988.

Minnesota's Endangered Flora and Fauna. University of Minnesota, Minneapolis.
Englund, J. V., ed. 1989. Proceedings and Papers of the Twelfth Trumpeter Swan Society Conference. The Trumpeter Swan Society, pp 88-90.
Janssen, R. B. 1987. Birds in Minnesota. University of Minnesota, Minneapolis.
Kraft, R. H. 1990. Status Report of the Lacreek Trumpeter Swan Flock Management Plan. Lacreek National Wildlife Refuge, Martin, South Dakota.
Lockard, F. R., chairman. 1984. North American Management Plan for Trumpeter Swans. Pacific Flyway Study Committee, p. 51.
Roberts, T. S. 1932. The Birds of Minnesota. University of Minnesota, Minneapolis.
Terres, J. K. 1980. The Audubon Society Encyclopedia of North American Birds. Alfred A. Knopf, Inc., New York.
3409 Emerson Avenue South #4, Minneapolis, MN 55408.

Minnesota's Second Curve-billed Thrasher

Steve Carlson

For years I've been trying to find a Lark Sparrow in Hennepin County. On the afternoon of 4 May 1991, my wife Teri and I checked several promising areas near Flying Cloud Airport in Eden Prairie. At about 3:20 p.m. we stopped at Staring Lake Park, just north of the airport.

Ten minutes later, as we were walking east beneath some oak trees near the southwest corner of the lake, an exotic-looking bird flew directly in front of us across the park lawn and landed on the grass. In flight it looked similar to a Brown Thrasher in size and shape. Its upperparts were an even grayish-brown, its underparts a little paler. There were conspicuous white corners on the tail, the tips of several feathers per side. Even in passing its orange eye and longish, black, curved bill were obvious. Without really believing it, I called out, "Curve-billed Thrasher!"

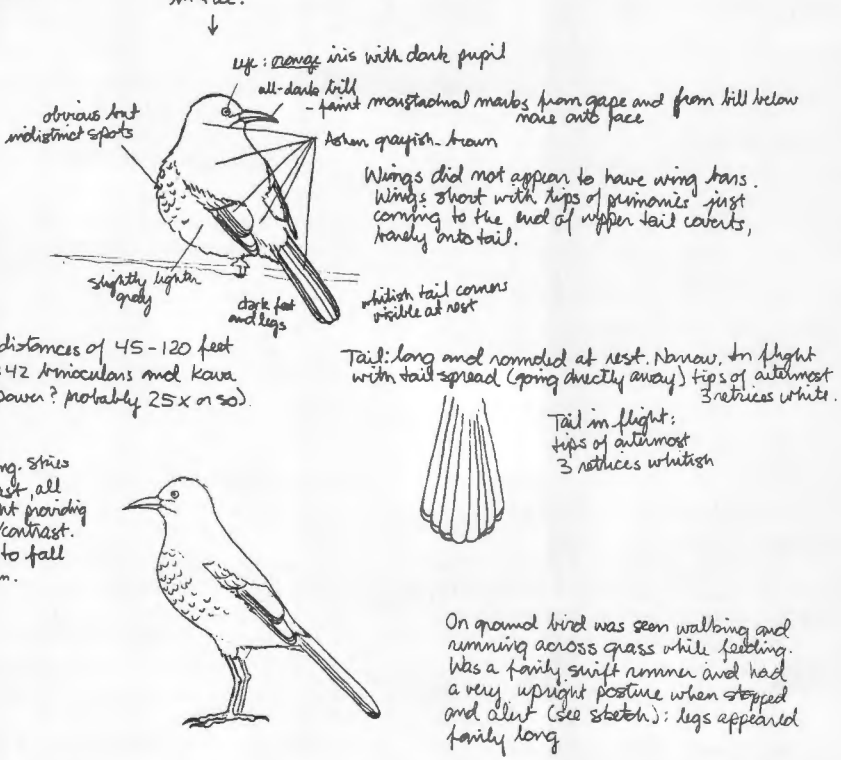
For the next 45 minutes we followed the bird around the area, jotting down notes as we studied it through our 7x binoculars. During this time we were able to watch it from many different angles, occasionally from as close as twenty feet. When seen side by side on the ground with Common Grackles the two species appeared to be the same size. As mentioned above, the upperparts were a fairly uniform, unstreaked grayish-brown. From twenty feet I noted that the tail was slightly darker than the areas above it. There was one thin, white bar on the wing. The underparts were a dirty off-white or pale buffy-gray, darkest on the breast. The breast was marked with indistinct grayish-brown smudges which faded out toward the belly. We eventually saw these smudges well, but they were subtle enough that at first we thought they were an effect of the bird's preening. Although the white corner spots were barely visible on the upper surface of the folded tail, we noticed, when the bird perched above us, that the bottom inch or so of the underside was white. The legs were a dusky flesh. The eyes always appeared orange or reddish. Seen at close range the bill was black throughout its entire length. It looked longer and considerably more curved than a Brown Thrasher's, but less curved than a Crissal Thrasher's.

When we had seen enough to convince ourselves that the bird was really a Curve-billed Thrasher, we drove home and began calling others to alert them of our discovery. I was aware that the species had been seen only once before in Minnesota. (The first record was of a bird seen by Kim Eckert in the extreme southwest corner of the state, at Blue Mounds State Park, on 9 September 1976.) Many people saw the thrasher at Staring Lake Park on the evening of 4 May, and at least one hundred birders from around the state saw it there during the next few days. Peder Svingen told me that he once relocated the

Curve-billed Thrasher
Staring Lake Park, Eden Prairie, Hennepin Co. MN.
4 May 1991

Viewed from 6:52 p.m. - 7:10 p.m.

D. Parker Backstrom



Behavior: when first seen was perched 8'-9' off ground in a stick branch in the crotch of some tree branches. Bird was aggressively picking through sticks with bill. It was also seen resting and preening on a branch of the same tree about 14'-16' feet off ground. Didn't seem particularly wary with all of the people milling about nearby and talking. Tree was on the edge of a scattered brushy/deep grass area. Bird flew out of tree above to a dead branch on a large oak 30' farther into brush area then flew out of sight to an NW behind some trees. When we rounded the corner of trees we found the thrasher feeding on open grass some 15' from trees/brush. Fairly active. Moved quickly when it moved from place to place across the grass occasionally running like SW U.S. thrashers do so well. Fed by picking at grass with bill.

Drawn from memory 45 minutes after bird was last seen and before consultation with field guide(s).

thrasher when it responded in kind to his whistled imitation of its distinctive "whit-wheeet" call. I believe the bird was last seen on 9 May 1991. **2705 Dupont Ave. S., Minneapolis, MN 55408.**

A Case of Polyandry in Black-capped Chickadees

James L. Howitz

The Black-capped Chickadee (*Parus atricapillus*) is a familiar bird throughout much of North America, and several studies (see references) have concluded that they are monogamous. Each bird has no more than one mate during a breeding season, and generally retains the same mate in succeeding breeding seasons, provided both survive. Polyandry can be defined as a situation where a female has more than one mate. I report here a case of polyandry in Black-capped Chickadees. A male chickadee, when his mate died, stopped defending a separate territory, and formed a polyandrous association with a female that already had a mate and nest.

I have studied a population of Black-capped Chickadees at the Cedar Creek Natural History Area in Anoka and Isanti Counties, Minnesota from 1976 to 1991. Resident chickadees are trapped and color banded during fall, winter, and spring. Birds less than one year old can generally be recognized by rectrix shape and wear, and during the breeding season, male and females can readily be distinguished by behavior.

On 29 March, 1991, a male chickadee, M1, in his third breeding season, was with a female, F1, in her second breeding season. Each had fledged young on adjacent territories in 1990 with a mate that evidently had since died. An unbanded male in his first breeding season, M2, was with them, and I trapped and color banded him that day.

On 28 April, F1 was with M1, and continuously gave the "Broken Dee" vocalization (Flicken, et al. 1978), used by females to solicit food from males. Female chickadees at Cedar Creek invariably give this call repeatedly only when nesting. Thus, M1 and F1 probably had a nest at the prelaying or laying stage. M2 was with an unbanded female, F2, in her first breeding season, that I then trapped and color banded. M2 appeared to hold as territory the western portion of an oak woods around a marsh, and M1 the territory east of that.

On 17 May, I found the nest of M2 and F2 in a 1m aspen stump in the marsh. They foraged together and he fed her several times on and off the nest. I then looked for M1's nest. I found M1 with M2, but there was no territorial dispute, as expected among neighboring male chickadees. Both birds disappeared in the general direction of M2's nest.

On 25 May, F2 was incubating, and I again looked for M1's nest. M1 was in a territorial dispute with a third male only about 200m from the nest of M2 and F2. M1 appeared to be defending M2's territory. M1 found a large caterpillar, which he ate. Male chickadees that find a large food item during the breeding season generally deliver it to their mate or babies. Because of his apparent lack of an adequate territory and failure to visit a nest, I thought he probably did not have an active nest on 25 May and that F1 had died.

On 6 June, I saw two young in F2's nest, and set out one last time to see if M1 had a nest. M1 and F2 were together north of the marsh. Much to my surprise, they copulated and I saw M1 find a caterpillar and fly across the marsh to F2's nest. At this point, I concluded that both F1 and M2 had died, and M1 had replaced M2 as F2's mate. I had found this situation once before (Howitz, 1986), and had a similar case in 1991. I waited by the nest and clearly saw both M1 and F2 feed the nestlings. Later that day I heard a chickadee south of the nest. It was M2. I was surprised to see that he was still alive, but I have had several instances where an older and more dominant male that lost his mate expropriated the mate of a younger and less dominant male. But this had always occurred early in the breeding season, and the newly formed pair made a new nest. M2 found a large caterpillar and flew to the nest. Thus, one female and two males were feeding the nestlings.

On 11 June, I color banded the two nestlings on the thirteenth day after they hatched. M1, M2, and F2 all fed the babies. M1 and F2 generally were together, and M2 foraged separately.

On 15 June, the nest held only one dead

nestling. The three adults were north of the nest, and no young were with them. The other nestling presumably died in the nest and may have been removed by an adult. I could not determine the cause of death of the last nestling, but it was not predation or starvation. The three adults foraged peaceably together and it was not obvious whether F2 "preferred" M1 or M2 as a mate, though M2 fed F2 on one occasion, suggesting that she might attempt a renesting.

On 24 June and 5 July the three adults again were north of the marsh. None of the three renested. At Cedar Creek, only 13 of 547 chickadee nests studied were replacement nests, and first year females have never replaced a nest that failed so late in the breeding cycle. So, it is not surprising that F2 did not attempt a second nest in 1991.

In early May, F2 very probably had only one mate, M2. In the first half of May, M1 evidently lost his mate. Since I have never found a mated female Black-capped Chickadee that left her mate and moved far away, she very probably died, especially considering that she nested successfully there the previous breeding season. After losing his mate, M1 evidently was unable to obtain a new unmated female. M1 had mated pairs to the west, north, and east. To the south, were four unmated males on territory. Three of these males had lost their mates by mid-May, and the fourth probably never had a mate. Thus, in this area, separated from other chickadee habitat by fields, marshes, and a lake, there was a local shortage of females. In each of the fifteen years of the study, there have been more males than females, and so some first year males do not obtain mates. This acute local shortage of females was unprecedented. With no unmated female available, M1 associated with a previously mated female. It is clear that F2 had two mates. She certainly copulated with M2 prior to egg laying, and I saw her copulate with M1 on 6 June, and so by definition this is an example of polyandry.

What could M1 gain by this polyandrous association?

Could M1 be genetically related to M2 or F2? A kinship selection explanation is most improbable. M1, M2, and F2 are very unlikely to be related, because juvenile Black-capped Chickadees disperse considerable distances (Weise and Meyer, 1979), and females disperse farther than males (this study).

Could M1 be genetically related to the nestlings? Smith (1989) reports that female Black-capped Chickadees solicit extra-pair copulations from neighboring males that outrank their mates. Thus, M1, who outranked M2, could theoretically have fathered one or both nestlings.

Even if M1 made no genetic contribution to the nestlings, he could still have increased his expected lifetime reproduction by feeding the nestlings through increasing the likelihood of mating with F2 in future breeding seasons (Howitz, 1986). At Cedar Creek 85% of chickadee pairs in one year breed together the next year, provided both birds survive. Older female chickadees at Cedar Creek on average lay larger clutches and fledge more young than females breeding for the first time.

A third adult was not needed to feed the two nestlings. Cedar Creek chickadee pairs commonly fledge broods of six, seven, and eight, and occasionally nine. Broods of five and six have successfully fledged where only one parent survived to the end of the nestling stage.

Waterman, et al. (1989) reported a case of polyandry in Black-capped Chickadees in Alberta. In that instance, a male lost his mate and formed a polyandrous association with a female that already had a mate. They were unable to find another example of polyandry anywhere in the literature for the genus *Parus*. Black-capped Chickadees are nearly always monogamous. In fifteen breeding seasons, I have found only this one case of polyandry in the Black-capped Chickadee and one case of polygyny, in which a male had two mates.

Literature Cited

Ficken, M. S., R. W. Ficken, and S. R. Witkin. 1978. Vocal repertoire of the Black-capped Chickadee. Auk 95:34-48.

Howitz, J. L. 1986. Brood adoption by a male Black-capped Chickadee. Wilson Bulletin 98:312-313.

Smith, S. M. 1989. Black-capped Chickadee summer floaters. Wilson Bulletin 101:344-349.

Waterman, J. A. Desrochers, and S. Hannon. 1989. A case of polyandry in the Black-capped Chickadee. Wilson Bulletin 101:351-353.

Weise, C. M. and J. R. Meyer. 1979. Juvenile

dispersal and development of site-fidelity in the Black-capped Chickadee. Auk 96:40-55.
Huron University, Huron, SD 57350.

Proceedings of the Minnesota Ornithological Records Committee

Kim R. Eckert

The following were voted on January-June 1991 and found Acceptable:

—Carolina Wren, 14 November 1990, Grey Cloud Island, Washington Co. (vote 7-0; ***The Loon*** 63:64-65).

—Western Tanager, 19 May 1990, Cross Lake, Polk Co. (vote 5-2; ***The Loon*** 63:61-62).

—Ruff (two individuals), 3 August 1990, Tyson Lake, Yellow Medicine Co. (vote 7-0; ***The Loon*** 63:73).

—Barrow's Goldeneye, 22 March 1990, Vermillion Twp., Dakota Co. (vote 6-1; ***The Loon*** 63:72-73).

—King Rail, 2 May 1990, Vermillion Twp., Dakota Co. (vote 7-0; ***The Loon*** 63:73-74).

—American Pipit, 16 March 1990, near Rochester, Olmsted Co. (vote 5-2).

—Ash-throated Flycatcher, 3-6 November 1990, near Randall, Morrison Co. (vote 10-0; ***The Loon*** 63:1-11). All ten members vote on potential first state records.

—Ross' Goose (two individuals), 7 April 1991, Twin Lakes, Lincoln Co. (vote 7-0; ***The Loon*** 63:138).

—Ross' Goose, 30 March 1991, Wang Twp., Renville Co. (vote 7-0; ***The Loon*** 63:136).

—Black-legged Kittiwake, 30 March 1991, Lock and Dam #7, Winona Co. (vote 7-0; ***The Loon*** 63:143).

—Ross' Goose, 6 April 1991, Hamlin Twp., Lac Qui Parle Co. (vote 7-0).

—Yellow-throated Warbler, 1 May 1991, near Vasa, Goodhue Co. (vote 7-0; ***The Loon*** 63:205).

—Worm-eating Warbler, 18 May 1991, Minneapolis, Hennepin Co. (vote 7-0; ***The Loon*** 63:201).

—Ross' Goose, 21 April 1991, near Luverne, Rock Co. (vote 7-0; ***The Loon*** 63:202-203).

—Ross' Goose, 17-24 April 1991, Thief Lake Twp., Marshall Co. (vote 7-0).

—Ross' Goose (two individuals), 18 April 1991, Tara Twp., Traverse Co. (vote 7-0).

—Ross' Goose, 6 March 1991, Rochester, Olmsted Co. (vote 7-0).

—Lazuli Bunting, 21 May 1991, Minneapolis, Hennepin Co. (vote 7-0; ***The Loon*** 63:194).

—Brant, 28 March 1991, Mountain Lake, Cottonwood Co. (vote 7-0; ***The Loon*** 63:209).

—White-eyed Vireo, 28 April 1991, Nerstrand Woods State Park, Rice Co. (vote 7-0; ***The Loon*** 63:205-206).

—Worm-eating Warbler, 11 May 1991, Eagle's Nest Co. Park, Watonwan Co. (vote 7-0; ***The Loon*** 63:208).

—Yellow-throated Warbler, 7 April 1991, Eden Twp., Brown Co. (vote 7-0; ***The Loon*** 63:197).

—Clark's Grebe, 8 June 1991, Thielke Lake, Big Stone Co. (vote 7-0; ***The Loon*** 63:194-196).

The following records were voted on January-June 1991 and found Unacceptable:

—Western Tanager, 16 September 1990, near Moorhead, Clay Co. (vote 1-6). This female/immature tanager was identified as a Western primarily because of its two "distinct wingbars." However, as noted in the Geographic and Master field guides (also see *American Birds* 26:713-714 and 42:3-5), some Scarlet Tanagers in fall can also show such wing bars.

—Great Black-backed Gull, 8 March 1991, St. Paul, Ramsey Co. (vote 0-7). While it was

agreed that this probably was a "black-backed" gull of some kind, there was no mention of leg color and no direct size comparison available with any other gulls; therefore, the possibility of Lesser Black-backed Gull is not precluded.

—Iceland Gull, 30 March 1991, Black Dog Lake, Dakota Co. (vote 3-4). This adult "white-winged" gull was identified as an Iceland rather than a Glaucous because its body and bill were "essentially identical in size to the Herring Gulls" which were present for direct comparison. However, some female Glaucous Gulls can appear to be no larger in overall size than male Herring Gulls, and at the distance involved (200 yards) it would be difficult to accurately determine bill size. Without a closer look and without mention of the head and neck size and shape, the majority felt Glaucous Gull was not precluded.

—Ross' Goose, 10 March 1991, German Lake, Le Sueur Co. (vote 3-4). This goose was only seen in flight in the company of Canada Geese, and was identified on the basis of its "short" neck, "tiny" bill, "small and round" head, and because "the call did not sound like a Snow." However, since there were no Snow Geese present for direct comparison, the majority felt that the observer's impressions of the bill, head, neck and call were too subjective to be useful, and that a more careful look (not possible with a goose flying by) is necessary before positively identifying a Ross'. **8255 Congdon Blvd., Duluth, MN 55804.**

Ground-Nesting Bald Eagles in Northwestern Minnesota

Peggy Hines and Howard Lipke

Ground nesting Bald Eagles are reportedly common in Alaska, but they certainly are a rarity in this part of the country. There was a report of a pair of ground-nesting Bald Eagles in Ohio in 1975, and this spring there was a pair in Minnesota. A Mahnomen County farmer, preparing for spring planting, discovered a Bald Eagle incubating one egg on a ground nest in a 30-acre field. Naturally, when the call came in we were rather skeptical. But after Department of Natural Resources (DNR) personnel flew over the nest site, skepticism turned to amazement.

The site was visited 10 May 1991 for documentation. Both adult eagles circled the area as we drove across the field to the eagle nest. Peering into the nest bowl, we discovered the single egg with the eaglet pipping from the egg. The beak was the only part visible.

We took numerous photographs and measured the nest which was six by eight feet. It consisted of a nest bowl and a feeding platform. The nest bowl was 20 x 21 inches and four inches deep. The four by six foot feeding platform was complete with a half-eaten American Coot.

The nesting material differed from the usual stick nests of tree-nesting Bald Eagles. The material was 20% sticks and 10% corn stalks, both of which occurred around the perimeter of the nest. The remainder of the nest material was grass (65%) which dominated the nest bowl. About 5% bare ground occurred just outside the southern rim of the nest bowl.

After leaving the nest site, we drove to the corner of the field to watch the adults' response to our presence. As we reached the corner of the field, one adult was already on its way to the nest, and was back on the nest in about one minute after we left.

It seemed that an eaglet on the ground would have a poor chance of survival. The U.S. Fish and Wildlife Service (USFWS), who has jurisdiction over this federally protected bird, decided to let nature take its course. Unfortunately, the eaglet died approx-

Ground nest of Bald Eagle, 10 May 1991. Mahnomen County. Photo by Peggy Hines.

Ground nest of Bald Eagle containing one egg, 10 May 1991. Mahnomen County. Photo by Peggy Hines.

imately ten days after hatch and was sent to the USFWS Health Research Center in Madison, Wisconsin for necropsy. Although the effort was hampered by decomposed conditions, the necropsy revealed that several ribs were fractured and the eaglet had kidney damage, likely occurring after death.

To encourage the eagle pair to nest in a tree, the DNR Nongame Wildlife Program will be erecting a Bald Eagle nesting platform in the area. The platform will be placed along the trees that border the field 200 feet to the south or east, and it is hoped that the pair will use it in 1992.

Since the Bald Eagle and Endangered Species Acts prohibits harassment of the nesting eagles or damage to a nest or egg, two tenant farmers were unable to continue farming efforts on the 30-acre field. Already investing $18.00 per acre, the farmers face a $540 economic loss. Donations from the Fargo-Moorhead Chapter of the National Audubon Society and Prairie-Woods Chapter of the Isaac Walton League of America totalled $250. The balance was to be covered by changes that the DNR made to a cooperative farming agreement with the two tenant farmers on other land. Additionally, the Department of Agriculture allowed a switch of fields qualifying for set-aside in the cooperator's participation in the Farm Bill Program.

Although unsuccessful in their effort to raise young this year, the nesting eagles were successful in drawing a wide range of interests together in a cooperative effort to help them.

Nongame Wildlife Technician, DNR, P.O. Box 823, Detroit Lakes, MN 56501 (Hines); Manager, USFWS Detroit Lakes Wetland Managment District, RR 3, Box 470, Detroit Lakes, MN 56501 (Lipke).

A Concentration of Eleven Ross' Geese

Kim R. Eckert

On 28 March 1991 a minimum of 11 Ross' Geese (*Chen rossii*) were found in a field in Section 10 of Lake Township in Traverse County. They were among a large, mixed flock of geese, estimated to consist of approximately 5,000 individuals. At least 90% of these were Snow Geese, with several Canada Geese (individuals of the smaller races) and Greater White-fronted Geese among them. After the three of us (I was with Bob Russell and another Wisconsin birder) came upon the flock, I decided to take the time to scan through the flock to search for Ross' Geese. Using the car as a blind, I was able to use my 20X Kowa spotting scope out the car window, and during the next 20 minutes or so, I looked at an estimated 1,000 geese that were close enough to the road (approximately 75-125 yards away) to examine. It was partly cloudy at the time, and when the sun came out it was at our backs. At least 11 Ross' Geese were eventually and carefully identified among the geese I looked over, and it seems certain that others would have been found if we had been able to more closely examine the entire flock. All 11 individuals were identified on the basis of diagnostic bill features: i.e., they all clearly lacked the oval "grinning patch" of the Snow Goose — most showed no black along the cutting edges of the mandibles, with a few having only a thin, straight black edge on the cutting edges; all had a stubbier bill than a Snow Goose, with the shorter overall length of the bill about equal to the depth of the bill at its base; and all had a relatively straight, vertical line where the base of the bill met the face, unlike the curved indentation at the base of the Snow Goose's bill. Also diagnostic, visible on more than half the birds, was the bluish-gray coloration on the basal half of the otherwise pink bill. In addition, all 11 individuals were smaller in overall body size than the adjacent Snow Geese, with a shorter neck and rounder head profile. However, note that none of the Ross's Geese were identified on body size and shape

differences alone; a clear look at the Ross' diagnostic bill features is necessary to preclude intermediates/hybrids and smaller female "Lesser" Snow Geese. (Several times I would notice a goose that appeared to have a smaller body or shorter neck, but a closer look at the bill would reveal the bird to be a Snow Goose.) Like the Snow Goose, all the Ross' were white overall with some black visible on the folded primaries, and their legs and feet (if visible) were pinkish.

Comments on Distribution and Relative Abundance

While this certainly represents the largest number of Ross' Geese ever recorded in Minnesota, it is less certain how exceptional this sighting actually is. In 1991 and other recent years, documented Ross' Goose records from western and southern Minnesota in spring have become almost routine, and it seems likely this "Casual" species is actually Regular. During the 1980s this species has also been reported during migration, usually among flocks of Snow Geese, with increased frequency in the wetlands of eastern Nebraska and the eastern Dakotas. This is probably due to both increased observer awareness and an actual increase in numbers of Ross' using this flyway. In my and others' experience in eastern Nebraska in mid and late March, it is not difficult to find Ross' Geese among the large Snow Geese flocks, and, although there is no census data on their relative abundance in this area, estimates are that at least 1% of the geese in the predominant Snow Goose flocks are Ross'. Bruce Harris, an authority on South Dakota birds, tells me Ross' Goose is a regular migrant in the eastern part of that state, that there are more fall records than in spring (probably because of waterfowl hunters bag checks), and he has heard suggestions that the proportion of Ross' there may be as high as 5%.

One is therefore tempted to assume Ross' Geese are indeed regular in Minnesota among migrant Snow Geese, and that on the average, assuming the 1% figure is a reasonable estimate, one might expect to find at least one Ross' among most flocks of 100 or more Snows. Note than the 11 individuals we found in Traverse County were about 1% of the estimated 1,000 geese I was able to look over. It is also worth noting that the goose migration in the spring of 1991 may not have been typical, perhaps accounting for the unusual number of Ross' Geese reported in Minnesota. Warmer than normal weather in mid-March prompted most of the vast flocks of Snow Geese to depart their staging grounds in the Rainwater Basin of eastern Nebraska earlier than usual, so that when I was there on a tour 21-24 March relatively few Ross' Geese could be found among the smaller than normal Snow Goose flocks. Then a band of heavy snow hit parts of eastern South Dakota and western Minnesota 22-23 March, perhaps serving to stall and concentrate the northbound goose flocks. This was followed by a vigorous warm spell 24-26 March, and in turn an equally strong cold front came through on the 26th. Such volatile weather probably resulted in grounding the large number of Snow Geese we saw as we birded through eastern South Dakota 26-28 March; indeed, record numbers of Snow Geese were censused at their staging area at Sand Lake N.W.R. Without exception, every time we stopped to examine a flock of Snow Geese at Sand Lake and other eastern South Dakota wetlands, it did not take long to find Ross' Geese among them. It was not surprising, therefore, to encounter Ross' Geese so quickly after crossing back into Minnesota on 28 March.

8255 Congdon Blvd., Duluth, MN 55804.

Burrowing Owls have been banded and color-marked in Minnesota and South Dakota with standard U.S. Fish and Wildlife Service bands and green or yellow leg bands. **Osprey** and **Peregrine Falcons** have been banded in various Midwestern states with U.S. Fish and Wildlife Service bands and a black leg band with a silver alpha-numeric code. Anyone sighting any of these birds please report the date, location, leg with color band and alpha-numeric code to the Bird Banding Lab., Laurel, MD 20708 and to Mark Martell, The Raptor Center — University of Minnesota, 1920 Fitch Ave., St. Paul, MN 55108.

BOOK REVIEWS

GOLDEN-CROWNED KINGLETS — TREETOP NESTERS OF THE NORTH WOODS by Robert Galati, 1991. 154 pages; Iowa State University Press, 2121 S. State Ave., Ames, Iowa, 50010. $18.95 plus $2 shipping.

This book is based upon studies conducted in Itasca State Park during five summers, 1954-58, and begins with author Galati taking an ornithology course from J. J. Hickey and selected the kinglet as his "course problem".

The Golden-crowned Kinglets nest so high in the spruce or fir trees that the nests are exceedingly difficult to find; though the species is common in northern Minnesota, only six nests had been recorded in the state when the Galatis began their studies. Fortunately the University's maintenance foreman at the Forestry and Biological Station helped to build towers and ladders permitting the nests to be studied at close range. The four towers from which many of the observations were made were 8, 30, 50 and 53 feet high. The Mr. and Mrs. Galatis spent more than 200 eight-hour days observing the kinglet nests at close range and recording all aspects of their nest behavior: nest-building, egg-laying, incubating, brooding and care of the young, and their development to fledging.

Dr. Hickey in the foreword describes the book as "one of the most intimate accounts of nesting birds that has been written. . . .

The reader will find many pleasant surprises; I select only a few as bait. This tiny bird lays a clutch of nine eggs and both parents feed the young, but the female is at work building a second nest before the first brood of young has fledged. The parents permitted the Galatis to handle them, and even flew into their blinds and landed on the observers. Eleven territories which the birds defended were mapped and found to average 4.1 acres. The territorial behavior involved chasing away some birds of other species, including both Black-capped and Boreal Chickadees.

The parents usually kept the nest clean by removing the fecal sacs the young produced. The young when hatched are naked and helpless but they grown rapidly and fledge when 15 to 19 days old.

Considering the difficulties of studying the nesting of the kinglets, the Galatis studies are remarkably detailed and comprehensive, and the accounts in this book are readable and fascinating. It is well illustrated with fine drawings by Colleen Nelson and photographs by the Galatis. Unfortunately a few of the photographs do not meet the high quality of the book, but I am happy to recommend it strongly. **Gustav A. Swanson, 1020 E. 17th Str. #35, Minneapolis, MN 55404.**

A SEASON WITH EAGLES by Scott Nielsen, Voyageur Press, P.O. Box 338, Stillwater, MN 55082, 96 pages, 70 color photographs, hardcover, $21.95.

Here is a book that should grace the coffee table of anyone interested in Bald Eagles or nature photography. It is a popularized account of the breeding biology and behavior of a pair of eagles and their young, illustrated with some remarkable photographs that perhaps have never before been committed to film.

Imagine yourself being so dedicated to a photographic project that you would climb into a 105-foot-high tree blind before dawn (to avoid disturbing the birds), stay there all day observing and recording the behavior of the eagles, and returning to the ground only after dark. Imagine doing this from early March through late summer, in all manner of weather and outdoor conditions that are possible in northern Wisconsin. Consider further that to obtain suitable photographs from a

distance of one-eighth mile from the nest, you must haul up a 50 pound, 2,500 mm mirror lens and other equipment. This is what Dr. Nielsen had to do to produce this photo-essay of intimate details of the family life of Bald Eagles.

The book follows a pair of eagles through the nesting season, starting with their arrival at the nest site in early March and ending with the fledging of the young in late summer. He was a careful observer, recording in his notebook the behavior of the birds along with some interpretations that were, for the most part, logical and appropriate, without being overly anthropomorphic, which is so often the case in writings of this nature.

But the power of this book is in the photographs. Nielsen has some fascinating sequences of copulation and reproductive behavior at the nest site that I doubt have been previously recorded. While most of the photos supplemented the text, I felt there was some repetition among the photographs that could have been avoided in the layout, and two or three were probably not of book quality from a technical standpoint. As a nature photographer myself, I can fully appreciate the technical difficulty and persistence required to photograph this species in the breeding situation.

The facts presented in the book were generally consistent with the literature with which I am familiar. There were occasions, however, where a reference would have been appropriate. For example, he states that 90 percent of young eagles in the United States are banded each year, which I question. Less than 10 percent are banded in Minnesota. He indicates that only 20 percent of the fledged young will make it to adulthood. I am not aware that this is a proven fact, and would have appreciated the source of the information.

These are minor points, and I hasten to summarize by saying that the book is an excellent one. Nielsen writes with care and enthusiasm, and has clearly captured the fascination and feelings of all of us privileged to work with and study this magnificent bird — the symbol of our nation and a threatened species. **John E. Mathisen, Chippewa National Forest, Route 3, Box 255, Cass Lake, MN 56633.**

WINGS OVER WINONA: A COLLECTION OF ESSAYS ON BIRDS OF HIAWATHA LAND by Grace Dahm Backus. Saint Mary's Press, Winona. 216 pages. Illustrations, photographs. $9.95.

Grace has drawn upon forty years of traveling for, learning about and loving birds in Minnesota (and even beyond) to publish these essays reprinted from the *Winona Post and Shopper.*

Those who relish not only a winter rarity such as a strange gray warbler at a feeder tray, but also a glorious assemblage of 10,000 Tundra Swans at the Weaver Marshes will enjoy the author's love for the community details of birdlore as well as the sweep of seasonal changes over the Mississippi Valley. The literate will be piqued by the poem dedicated to Brother Theodore Voelker which includes a reference to the "Bede's lone swallow whirring through the castle hall," illustrating the shortness of life.

Each essay is linked to a local bird event or birder. These links will be lost on many birder-readers, but the feeling for their own birding experiences which so often depend on others should be echoed in their birding brains. Remember the Henslow's Sparrow at O. L. Kipp State Park? Part of that essential birding experience for many Minnesota birders is recorded in an essay typical for Grace. In "His Eye Is On The Sparrow... Which One?", the author packs references to Ethel Waters, Carson McCullers, Mother Goose, the first black Archbishop of the Catholic Church in the United States, Dr. David Blockstein and Bob Janssen. Read the book to enjoy the graceful, local, yet sweeping depth and style of the author.

Other essays include "Audubon's 200th Anniversary: Winona's Winged Specialties," "Migrating Martins: Are the Feeders Ready?" and "A Special Tribute: Brother Theodore Voelker (1907-1974)."

Aside from the essays and birdy excerpts from months in 1988, 1989 and 1990 (including how to get to the Dorer Pools), the book records a major accomplishment for every birder. The author was a factor in the publication of a colorful brochure publicizing Winona area birds as tourist attractions. While some birders will criticize attracting tourists to any birding location, particularly in the case of threatened and endangered species,

the counter is that people are coming anyway. So encourage them to come for the birds. Maybe they will come, enjoy, and return peaceable and quietly. This brochure published by the Winona Convention Bureau won a prize for its design and tastefulness. I enjoy just knowing that the secretive, obscure sparrow of laconic song, the Henslow's, is featured in an advertising brochure. Thanks to Grace Dahm Backus for adding some needed depth, variety and graceful involvement from the birding world. **Fred Lesher, 509 Winona St., LaCrosse, WI 54603.**

Project FeederWatch Counts Birds Killed In Window Collisions

Cornell Laboratory of Ornithology

What's ubiquitous, nearly invisible, and deadly to birds? The windows on your house. Birds often fly full tilt into unseen windows; some are killed, others are left stunned and vulnerable to predators. A recent study by Project FeederWatch provides insight as to just how many birds meet death by collision each year.

Project FeederWatch, launched in 1987, is a long term survey of the numbers and kinds of birds at backyard feeders in North America. Over 7,000 volunteers participated in 1990-91. Scientists at the Cornell Laboratory of Ornithology in Ithaca, New York, and Long Point Bird Observatory, Port Rowan, Ontario — the organizations that sponsor FeederWatch — use the data to track changes in resident songbird populations.

During the winter of 1989-90, FeederWatchers recorded the number of birds killed in window collisions at their homes. Nine percent of all FeederWatchers reported finding one or more window-killed birds, with an average of 2.0 deaths per home reporting kills.

Homes where window kills occurred typically had above-average numbers of bird feeders (and therefore large numbers of birds visiting). Window kill sites were usually located in rural areas close to woods and open water, and the yards had plenty of vegetation. FeederWatchers documented 66 different species of birds killed in window strikes. Most were common feeder visitors: Pine Siskin, American Goldfinch, and Dark-eyed Junco together accounted for almost 44 percent of all window-killed birds.

The most frequently killed species died approximately in proportion to their abundance at feeders. A few species, however, seemed to be unusually unlucky. For example, Purple Finches make up 4.1 percent of all window-killed birds but accounted for only 1.8 percent of all the birds counted at FeederWatch sites.

All of the over represented window-killed birds (Pine Grosbeak, Purple Finch, Downy Woodpecker, Hermit Thrush, and Cedar Waxwing) are woodland or tree loving species; thus, these birds are often present at the homes FeederWatch has identified as being prone to window strikes.

Most window strikes probably happen because a bird just isn't paying attention. FeederWatchers don't always witness the events leading up to a window strike. But in 16 percent of the window strikes reported, observers saw a panic-stricken bird attempting escape from a raptor. In an additional 1.5 percent of window kills, the victims had been chased by other birds or startled by loud noises or passing cars.

The exact number of birds killed in window strikes each year is difficult to determine. Predators and scavengers quickly remove stunned or dead birds; in this study, for example, some FeederWatchers saw hawks grab birds as they bounced off the window. But extrapolating from the 1989-90 study period, scientists estimate that 0.55 per FeederWatch home per year are killed in window colli-

sions.

How does that compare to other window kill studies? To date, the best estimate of total annual window-strike deaths in the United States comes from Dr. Daniel Klem at Southern Illinois University. He believes that one to 10 birds are killed annually for every building in the country, for a total of 95 to 950 million victims. Our data suggest Klem's lower estimate may be the more realistic one.

Still, ninety-five million birds is one or two percent of the estimated total autumn population of birds in the United States — not a trivial number. We should strive to prevent window kills, particularly because the birds that die have been lured close to our houses by our feeders.

Recently, Klem also published the results of the first rigorous study of window strike-prevention devices: the hawk silhouettes, wind-socks, one-way films, and screens that are sold by many bird feeding supply outlets. Under Klem's experimental conditions, these commonly used deterrents did not reduce window strikes. The most effective window guard turned out to be a closely spaced grid of adhesive strips.

Few people, however, want to obscure their windows to this extent. FeederWatch participants who have had problems with window strikes recommend a less intrusive contraption: black plastic garden-protection netting mounted on frames installed about a foot away from the window. At one FeederWatch home where as many as seven collisions a day had occurred, bird mortality went down to nine over the entire winter after the netting was installed.

Table 1. Birds killed at FeederWatch homes in winter, 1989-90. (Total number of birds=945)

SPECIES	% of all window kills	% of all birds seen
Pine Siskin	16.9	11.1
American Goldfinch	13.2	13.9
Dark-eyed Junco	12.9	8.6
Northern Cardinal	8.8	4.1
Mourning Dove	5.5	6.4
House Finch	5.1	7.0
Purple Finch	4.1	1.8
Evening Grosbeak	3.7	3.6
Black-capped Chickadee	3.2	3.3
Pine Grosbeak	2.1	0.6
White-throated Sparrow	1.9	1.8
Common Redpoll	1.6	3.2
Downy Woodpecker	1.5	1.3
House Sparrow	1.5	6.3
Tufted Titmouse	1.1	1.6
Hermit Thrush	1.1	<0.5
Cedar Waxwing	1.1	<0.5
Cassin's Finch	1.1	0.6
Blue Jay	1.0	2.5
American Robin	1.0	0.6
Red-winged Blackbird	0.6	2.1
Chipping Sparrow	0.3	2.3
Common Grackle	0.3	1.4
European Starling	0.1	2.2
43 other species	<1.0	<1.0 each

An Influx of Northern Raptors, Fall-Winter 1990-1991

Kim R. Eckert

Beginning in late September 1990 and continuing into mid-March 1991, unusually high numbers of three species of northern raptors occurred in Minnesota. These included: Great Gray Owl (*Strix nebulosa*), which appeared in record numbers; Northern Hawk Owl (*Surnia ulula*), which had its best season in 28 years; and Gyrfalcon (*Falco rusticolus*), whose numbers were the highest ever documented in the state.

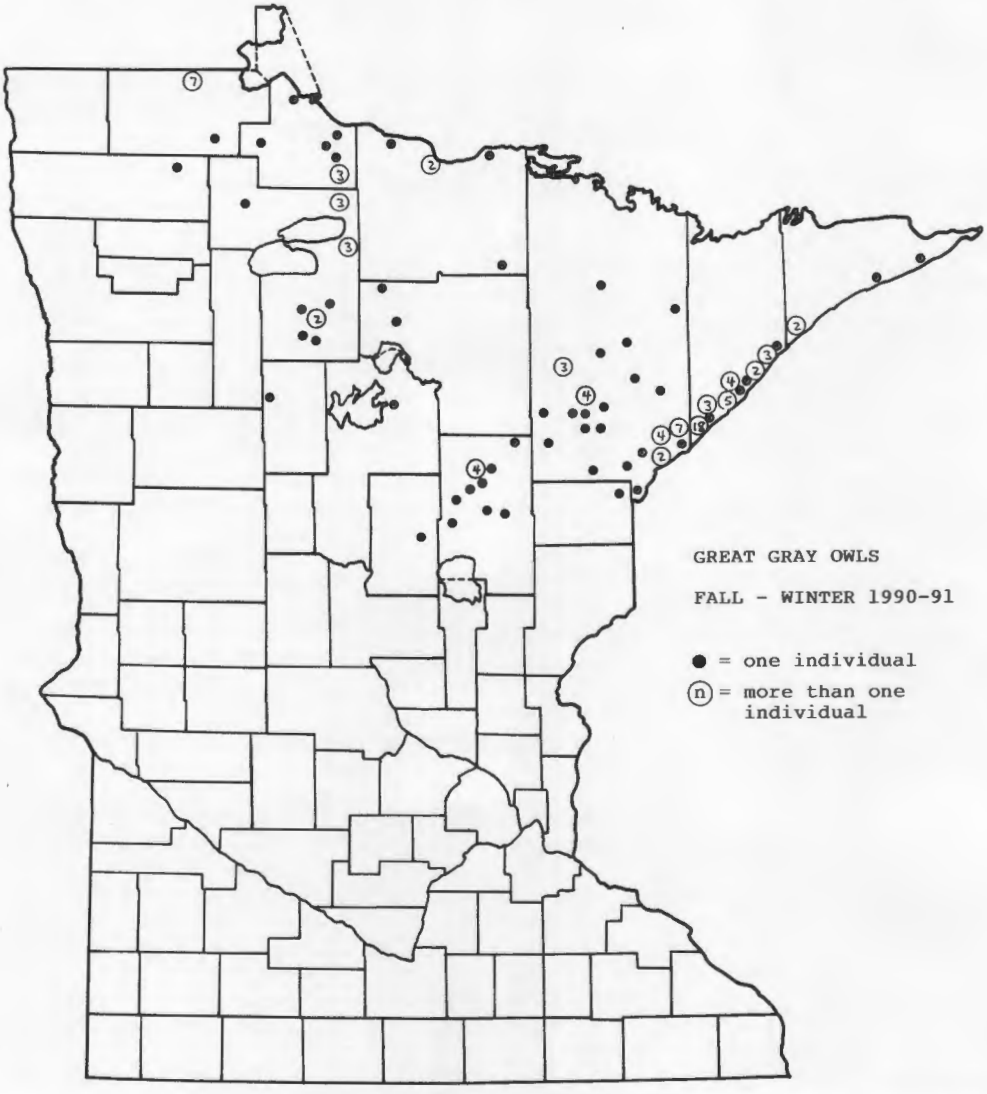
I. Great Gray Owl. Between early November 1990 and mid-March 1991, Minnesota recorded the largest number of individual Great Grays ever documented in the state. In all, at least 134 separate individuals were reported, with the previous highest total of 122 recorded in winter influx of 1983-84 (***The Loon*** 56:143-147). Determining an exact total such as this involves subjective decisions at times, but, since this and the totals from the three previous Great Gray invasions (1977-78, 1983-84 and 1988-89) were figured in the same way, the numbers are comparable and meaningful. As stated in the account of the 1988-89 influx: "Duplicate sightings of what are believed to be the same individuals are not figured into the total... based on how transient or sedentary the owls tended to be, on how far away an owl was from one reported earlier, and on the interval of days between sightings. While there may be a few duplicates included in the final total, this number is negligible when compared to the number of owls undetected or unreported." (***The Loon*** 61:115).

The first Great Gray considered to be part of this record total was seen in early November near Kelliher, Beltrami Co., and the last was on 6 April at Two Harbors, Lake Co.; as with previous invasions, owls seen in March or April on presumed breeding territory are not included here. The bulk of this influx started in late December, which coincided with the arrival of very cold temperatures after a period of generally warm weather earlier in the month, and continued into mid-March, with the number of new owls reported at a fairly steady pace throughout this period. There was, however, a lull in reports of new owls in mid-February, during a period of very mild weather, but in late February and early March there was a new flurry of sightings, especially in the vicinity of Two Harbors, Lake Co. Most of the owls were concentrated in three areas: in Roseau, Lake of the Woods and Beltrami Counties in northwestern Minnesota; in northern Aitkin and southwestern St. Louis Counties; and especially along the the North Shore of Lake Superior in the Duluth vicinity and in Lake Co. (curiously, there were only a few reports from the Cook Co. portion of the North Shore). There were no records in the southern half of the state,

with the most southerly sighting on the Crosby CBC, Crow Wing Co. The location of all individuals is plotted on the accompanying map.

The most remarkable concentration occurred in March in and around Two Harbors, perhaps the most Great Grays ever seen anywhere in such a small area. On 2 March, between about 3:00 and 6:00 p.m., two independent parties found 19 different owls in an area within three miles north and seven miles west of town; ten of these were seen in only 40 minutes (5:20-6:00) by Dan Versaw within only a four-square-mile area (sections 23, 24, 25 and 26 of T53N, R11W)! During the following evening, 3 March, from 4:40 to 6:00, Versaw counted 15 Great Grays within a nine-square-mile area (same area as 2 March plus sections 13, 14, 15, 22 and 27); he actually had 18 owl sightings, but considered three of them as duplicate individuals. Then on a morning survey on 16 March, 6:00-7:30, Versaw found 11 individuals in the same four-square-mile area surveyed 2 March.

Six dead and four injured Great Grays were reported, most of these probably as a result



of collision with vehicles. This total is similar to those in the previous two invasions in 1983-84 and 1988-89. To my knowledge, no owls were found dead or weakened from starvation, suggesting that small mammals were in adequate supply. Prey was also probably easier to find because snow cover in most areas was below normal, and there was only one period of severe cold (late December-early January), suggesting stress on owls from weather was minimal.

According to the *American Birds* summary of the Winter 1990-91 season, Manitoba, Ontario and Quebec also witnessed above normal numbers of Great Gray Owls. This was especially true in southeast Manitoba where "numbers rivalled the record winter of 1978-79; 80 birds banded were thought to represent a quarter of reports received" (*Am. Birds* 45:287). In southern Ontario the 13 reported represented a "noteworthy incursion," and the 20 individuals in the Thunder Bay area were the "most ever there" (*Am. Birds* 45:268-270). The 12 owls found in Quebec was described as a "minor invasion" (*Am. Birds* 45:248). No noteworthy numbers were reported in Wisconsin, Michigan or New England.

I wish to acknowledge the many observers who reported Great Gray Owls and made documentation of this record season possible. Especially helpful were the reports from Katie Haws, Warren Nelson, Peder Svingen, Dan Versaw and Steve Wilson.

II. Northern Hawk Owl. As near as can be determined, a total of 16 individuals was reported between late September 1990 and early March 1991. Although this is a relatively modest total compared to the number of Great Grays, it still represents the largest invasion of this species in Minnesota since the unprecedented influx of 1962-63. As mentioned above in the Great Gray Owl section, care was taken to eliminate duplicate sightings from the final total. All the records came from the northern half of the state, with the most southerly report near Hinckley, Pine Co. None of the reported owls were found dead or injured. As with Great Grays, partly because of the relatively warm and snowless winter, indications are that hawk owls had an adequate supply of prey. While most hawk owls are typically and relatively easy to relocate once they settle into an area, this year several of these owls were uncharacteristically elusive. This was probably due to the abundance of prey, so that owls did not need to spend as much time as usual hunting out in the open; as a result, some individuals proved difficult to find.

Unlike Great Gray and Boreal Owls, the Northern Hawk Owl is not generally thought of as an irruptive species, probably because its choice of prey is more varied, and, as a result, these owls are perhaps more likely to switch to alternate prey rather than "invade" when the population of one type of prey is low. As mentioned earlier, only the unprecedented invasion of 1962-63 was larger than this season's: from late October 1962 to early May 1963, there was a total of "136 Hawk-Owls, with minimal duplication of records" (*Flicker* 35:54). However, if the list of records in the seasonal reports for that year is examined (*The Flicker* 34:116-117, 35:20 and 35:54), it is clear that total actually included a considerable number of duplicate sightings, and the actual number of individual owls was much lower. It is impossible now, 28 years later, to determine an accurate total, mostly because many of the locations listed were not specific enough, but my reading of these records puts the actual number of hawk owls that season at closer to 47, not 136.

The summary of the Winter 1990-91 season in *American Birds* indicates more hawk owls than usual also appeared in Wisconsin (four records), Ontario (17 records, 12 of these in the southern part), and Quebec (21 records). In addition, Pennsylvania had its first record in over 100 years. Michigan, however, with only one record, was apparently excluded from this irruption, and Manitoba curiously reported a below average total of three records.

III. Gyrfalcon. Since no information in the literature could be found on irruptions of this species in Minnesota, it is assumed the 14 individuals reported in 1990-91 represent the largest (and only?) invasion on record. The last report of the season, 1 May 1991, was also significant because it is the latest date on record, and the first report on 24 September 1990, apparently represents the fourth earliest on record. Unlike the Great Gray and Northern Hawk Owls, Gyrfalcons did reach southern Minnesota with reports from Nobles and Anoka Counties as shown in the following list of records, see page 167.

Northern Hawk Owl Records

No. of owls	Date	Location
2 owls	28 Sept.-early Mar.	Hwy. 72, between Waskish, Beltrami Co. and Lake of the Woods Co. line
1 owl	15 Nov.	east of Meadowlands, St. Louis Co.
1 owl	5 Dec.-early Mar.	Hwy. 169, south of Aitkin Co. Rd. 18
1 owl	8 Dec.	Aitkin Co. Rd. 18, east of Hwy. 169
1 owl	8 Dec.	southwest of Roosevelt, Lake of the Woods Co.
3 owls	17 Dec.-late Feb.	vicinity of Sax, St. Louis Co.
1 owl	18 Dec.	I-35, south of Hinckley, Pine Co.
1 owl	12 Jan.	north of Roosevelt, Lake of the Woods Co.
1 owl	25 Jan.	Hwy. 72, south of Baudette, Lake of the Woods Co.
1 owl	7-18 Feb.	Proctor, St. Louis Co.
1 owl	8 Feb.-2 Mar.	Scanlon, Carlton Co.
1 owl	25 Feb.-4 Mar.	north of Duluth, Normanna Twp., St. Louis Co.
1 owl	date?	Hwy. 53 (location ?), St. Louis Co.

The morph classifications are according to those in *A Field Guide to Hawks* by Clark and Wheeler; this same reference was used to determine ages from the descriptions given. The sex of the 24 September bird was determined by in-hand measurements since this individual was banded; the sexes of the Roseau Co. Gyrs were surmised because of their apparent size difference.

Gyrfalcons seemed to have, at least in this 1990-91 irruption, a tendency to prey on gallinaceous birds. Observers reported good numbers of Sharp-tailed Grouse in Lake of the Woods Co. and assumed that species was a primary source of food for the two Gyrs in that area. The two Gyrfalcons reported in Wisconsin were "found feeding on prairie-chickens" (*American Birds* 45:275), while the one that made it as far as Illinois was "subsisting on large flocks of Ring-necked Pheasants" (*American Birds* 45:279).

In addition to Wisconsin and Illinois, the *American Birds* account of the Winter 1990-91 season shows this Gyrfalcon invasion was also witnessed in the Sault Ste. Marie, Michigan area (three individuals), Ontario (five north and seven south), Quebec (11 s.w. of Quebec City), Saskatchewan (14), western Montana (13), Wyoming (two) and Colorado (one). Presumably, Manitoba (no records mentioned) and the eastern Montana – North and South Dakota region (an apparently average total of five) were not included in this otherwise widespread irruption.

IV. Other Raptors. In the account of the 1988-89 Great Gray Owl invasion (***The Loon*** 61:115-117), it was noted that other species (in particular, Boreal and Barred Owls) often irrupt in numbers at the same time, presumably for the same reasons. This season other avian predators also seemed to be present in greater numbers than usual, although some of these cases were probably unrelated to the Great Gray Owl situation. These would include: Norther Harrier (relatively "open" winter to encourage overwintering), Northern

Gyrfalcon Records

Date	Location	Color/Age
24 Sept.	Hawk Ridge, Duluth	gray morph, imm. male
19 Oct.	Hawk Ridge, Duluth	gray morph, age unknown
2 Nov.	Hawk Ridge, Duluth	gray morph, age unknown
2 Nov.	Miller Hill Mall, Duluth	dark morph, age unknown
4 Nov.	Cove, Mille Lacs Co.	dark morph, age unknown
10 Nov.	near Dundee, Nobles Co.	gray morph, probable imm.
1 Dec.	Wadena County	no description
16 Dec.	Aitkin County	no description
28-29 Dec.	near Carp, Lake of the Woods Co.	gray morph, imm.
29 Dec.-12 Jan.	Hwy 72, Lake of the Woods Co. just north of Beltrami Co. line	gray morph, adult
12 Jan.	north of Badger, Roseau Co.	gray morph, adult, probable male
12 Jan.	north of Badger, Roseau Co.	gray morph, imm., probable female
27 Jan.	Anoka County	gray morph, probable adult
1 May	near Felton, Clay Co.	gray morph, adult

Goshawk (at the beginning of their ten-year abundance cycle), and Merlin (continuation of population increase in recent years). There were, however, three species more common than usual that seemed related to the invasion of the three principal raptors discussed: Snowy Owl (numbers not especially impressive, but widespread in distribution this winter), Barred Owl (also "invaded" during the three previous Great Gray incursions), and Northern Shrike (since most passerines were scarce last winter, shrikes probably preyed mostly on small mammals). It could also be argued that the Boreal Owl also participated in this invasion (as it had in four of the past five Great Gray invasions); although five records are a few more than average, only one of these (at Gooseberry Falls State Park) was seen outside this species' presumed breeding range. **8255 Congdon Blvd., Duluth, MN 55804.**

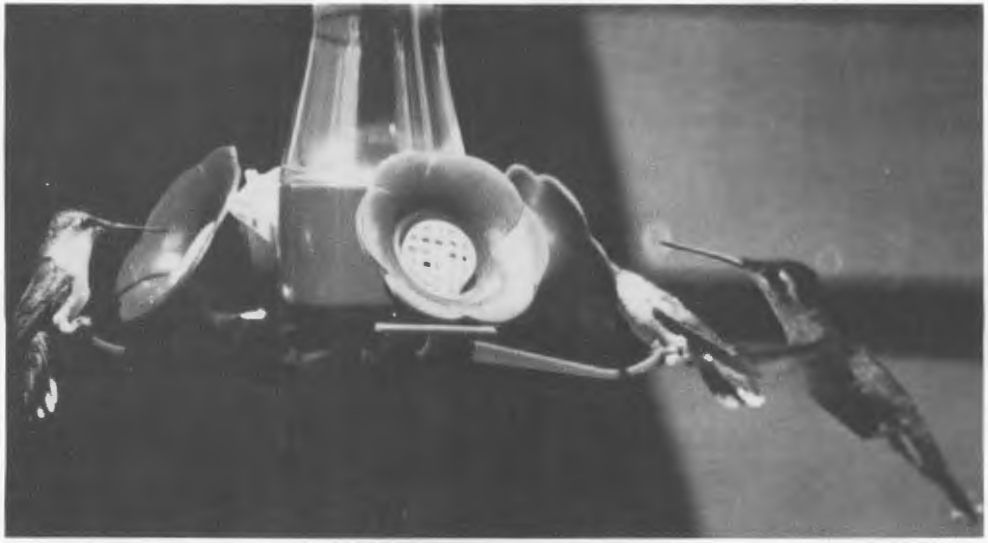
Corrections: The Gray Jay listed on page 104, ***The Loon*** Vol. 63 in the Salt Lake Preserve article should be deleted. The Cattle Egret listed on 8/31 Rice FKS, ***The Loon*** 63:117 should be deleted.

Notes on the Distributions of Some Minnesota Birds

Kevin Winker and Dwain W. Warner

The following records would seem significant according to Janssen (1987). Those records with specimen or photograph documentation are listed with Bell Museum of Natural History (BMNH) catalogue numbers. The nature of each record is coded as: S = skin; A = preserved in alcohol; P = photograph; B = banded; HY = hatching year; SY = second year; ASY = after second year. The specimen material has been accumulated in a number of ways, from salvage of window and road kills to active collecting. We thank all contributors of these materials for furthering our knowledge of Minnesota ornithology. Out of respect to private landowners and to potentially vulnerable nest sites, specific localities are not given.

1. Double-crested Cormorant (*Phalacrocorax auritus*). Lake of the Woods Co. 22 June 1988. Nesting colony of about 1,000 pairs (P, BMNH 39676).
2. Northern Goshawk (*Accipiter gentilis*). Lake of the Woods Co. 10 January 1985. Adult male (S, BMNH 36946).
3. Red-tailed Hawk (*Buteo jamaicensis*). Scott Co. June 1979. Nest with two young (P, BMNH 39683).
4. Yellow Rail (*Coturnicops noveboracensis*). Polk Co. 15 June 1975. Downy young (A, BMNH 38144).
5. Ring-billed Gull (*Larus delawarensis*). Lake of the Woods Co. 22 June 1988. Nesting colony, several hundred pairs (P, BMNH 39677).
6. Common Tern (*Sterna hirundo*). Lake of the Woods Co. 22 June 1988. Downy young with punctured abdomen, possibly caused by *Larus delawarensis* nesting in close proximity (A, BMNH 38138).
7. Black-billed Cuckoo (*Coccyzus erythropthalmus*). Wadena Co. 17 Sep 1972 and 13 June 1978. Juv. male in first prebasic molt; ad. female with fresh incubation patch and two recently ruptured follicles. (S, BMNH 26348, 32070).
8. Great Horned Owl (*Bubo virginianus*). Scott Co. April, May 1980. Downy young in nest, fledgling near nest (P, BMNH



Adult female Magnificent Hummingbird (right) at feeder, June 1987, Itasca State Park, Clearwater County. Photo by Dwain Warner.

39682, 39681).

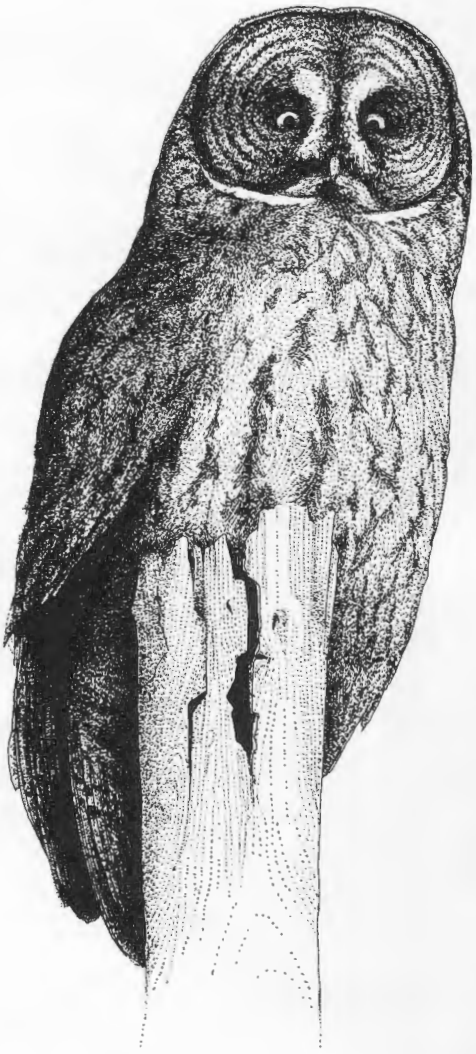
9. Magnificent Hummingbird (*Eugenes fulgens*). Clearwater Co. Mid-June through mid-July 1987. [Ad. female] at feeder. (P, BMNH 39684).
10. Downy Woodpecker (*Picoides pubescens*). Fillmore Co. 13 June 1972. Nestling (S, BMNH 28224).
11. Eastern Kingbird (*Tyrannus tyrannus*). Clearwater Co. June 1983. Nest (P, BMNH 39680).
12. Acadian Flycatcher (*Empidonax virescens*). Houston Co. 15 June 1988. Singing male, gonads in breeding condition; first state specimen (S, BMNH 37358). At least nine individuals were banded in May 1984 in Washington Co.; despite three more spring banding seasons at the same locality, no more individuals of this species were captured.
13. Barn Swallow (*Hirundo rustica*). Scott Co. 21 June 1987. Nestlings (P, BMNH 39678).
14. Veery (*Catharus fuscescens*). Scott Co. 20 June 1988. Ad. male singing and carrying food (S, BMNH 37245).
15. Nashville Warbler (*Vermivora ruficapilla*). Hennepin Co. 9 July 1988 Ad. male not yet in prebasic molt (S, BMNH 37361).
16. Yellow Warbler (*Dendroica petechia*). Scott Co. late June 1988. Juv. in first prebasic molt being fed by adult (S, BMNH 38143).
17. Black-throated Blue Warbler (*Dendroica caerulescens*). Fillmore Co. 12 September 1972 and 12 September 1974; age unknown male, HY male. Washington Co. 31 August 1986. HY male (S, BMNH 27575, 28113, 38146).
18. Yellow-rumped Warbler (*Dendroica coronata*). Washington Co. 23 August 1987. HY ind. in molt with about 80% of plumage still juvenal (mist net capture). Breeding has not been reported this far south, but might be sought.
19. Prothonotary Warbler (*Protonotaria citrea*). Ramsey Co. June 1988. Ad. [female] at nest feeding young (P, BMNH 39675).
20. Worm-eating Warbler (*Helmitheros vermivorus*). Ramsey Co. 30 May 1980. Ad. [ASY] female, ovary 9 x 4 mm, at least six developing follicles (*ca.* 1.5 x 1.5 mm); second state specimen (S, BMNH 38145). Although breeding has not been recorded in the state, the sex, apparent age, and ovary condition of this individual suggest that it might be expected.
21. Kentucky Warbler (*Oporornis formosus*). Hennepin Co. 22 May 1961. Ad. [female]; decomposing, no gonad condition recorded. Washington Co. 19 May 1985. Ad. male (S, BMNH 17324, 36513). Washington Co. 2 September 1984. HY male, no molt, moderate fat; fresh basic plumage (B, 2010-24132). Although breeding has not been recorded in the state, this evidence would suggest that it is likely.
22. Hooded Warbler (*Wilsonia citrina*). Washington Co. 4 May 1985. Ad. male (B, 1700-62113).
23. Summer Tanager (*Piranga rubra*). Becker Co. 7 May 1972. Ad. [SY] male. Hennepin Co. 10 May 1979. Ad female (enlarged ovary). St. Louis Co. 9 May 1979. Ad. [SY] male. These recent state specimens (S, BMNH 26029, 36091, 37360) were all found dead, and two were emaciated, suggesting vagrants; the evidence presented by Janssen (1987), however, suggests that the species might breed in the state.
24. Blue Grosbeak (*Guiraca caerulea*) Rock Co. 4 September 1990. Stub-tailed fledgling that just left nest (S, BMNH 38528).
25. Dickcissel (*Spiza americana*). Scott Co. 20 June 1988. Ad female with edematous incubation patch, nest, and eggs (S, BMNH 37797).
26. Bobolink (*Dolichonyx Oryzivorus*). Scott Co. 21 June 1987. Nest with five eggs (and cowbird parasitism; P, BMNH 39679).
27. Brewer's Blackbird (*Euphagus cyanocephalus*). Scott Co. 4 June 1989. Ad. female with edematous incubation patch; largest ovum 9mm (S, BMNH 38129).
28. Purple Finch (*Carpodacus purpureus*). Hubbard Co. 29 May 1972. Ad. female, "brood patch," three ruptured follicles (S, BMNH 25944).
29. House Finch (*Carpodacus mexicanus*). Hennepin Co. 24 June 1989. Female in juvenal plumage (S, BMNH 38130).
30. Pine Siskin (*Carduelis pinus*). Washington Co. 13 May 1985. Nestling male (S, BMNH 38099).

We thank D.F. Parmelee for access to the

Bell Museum ornithological collection. For their help in identifying item 9 (correspondence filed with photograph), we thank J.M. Bates, S.W. Cardiff, A.R. Phillips, J.V. Remsen, L.L. Wolf, and especially C.A. Marantz, who points out that the dorsal surface of the central pair of tail feathers is entirely greenish in the Magnificent Hummingbird, while those of the Blue-throated Hummingbird are not green at all. This diagnostic feature is inadequately represented in North American field guides.

REFERENCE: Janssen, R.B. 1987. Birds in Minnesota. University of Minnesota Press: Minneapolis.

Bell Museum of Natural History, 10 Church Street SE, Minneapolis, MN 55455.



The Winter Season
(1 December 1990 to 28 February 1991)

Robert P. Russell

Heavy snowfall in southeast Minnesota (16″ at LaCrescent) initiated winter on 2-3 December, but the remainder of the state remained mild until 20-26 December when below zero cold struck. Embarrass hit a chilling -45° on the 26th, and 0° high readings, even in the south, closed out the year.

January temperatures oscillated from average south and cold north the first ten days, with little precipitation, to a warm but dry spell from the 12th-19th with highs in the 20s and 30s, even in the north. The southeast remained under a snow blanket the entire month with little additional accumulation. The last third of the month brought cold, dry conditions statewide.

February opened with an unprecedented warm spell with high temperatures reaching close to 60° in the southwest and well into the 40s in the north. Grand Marais reached 54° on the 3rd, a record by 20°! Below zero readings returned to the north on the 13th with heavy snowfalls finally occurring in the southwest and west central on the 18th and in the extreme north on the 21st. Temperatures alternated between warm and cold to end the period with more snow in the central on the 23rd. Most areas of the state experienced below average snowfall for the entire season except the southeast where depths were near average.

How weather affected birdlife this winter is not very clear. Certainly the mild December allowed many waterfowl and gulls to linger while low snow depths in most of the state accounted for the large numbers of longspurs, Horned Larks and various blackbirds. These conditions favored juncoes which showed widespread abundance but did not seem to favor American Tree Sparrows which declined. Overall, nearly all passerines showed declines. My first reaction is that the mild conditions did not force birds into feeding stations but personal experience in wandering St. Louis County backroads in February convinced me that there weren't many birds in the wildlands either.

Over 100 observers recorded 138 species (last three years' totals of 141, 144, 146), hopefully not a continuing trend. No reports were received of White-crowned Sparrow, Prairie Falcon, Hermit Thrush, rare gulls, or documented Hoary Redpolls. Comments on this winter's birdlife ranged from "quiet" and "small birds in general, especially winter finches, obviously down in numbers throughout northern Minnesota," to "one of the poorest winters for birds I can remember" and "this winter has been the pits for birds."

Highlights of the season included the largest documented invasions of Great Gray Owls and Gyrfalcons, the first winter record for Green-backed Heron, good numbers of Northern Hawk Owls in the north, lingering waterfowl including grebes, pelicans(!), and gulls, single sightings of Marsh Wren, Yellow-headed Blackbird, Eastern Phoebe, and other gems.

A population explosion of Gray Partridge and Ring-necked Pheasants occurred across the southern counties and was part of a larger explosion which occurred in southwest Wisconsin and northern Iowa. These two species may have found the extreme drought of 1988 and the dry late spring of 1989 ideal conditions for raising large numbers of young. Conservation set-aside programs such as RIM undoubtedly helped but this abundance occurred even in areas with little fallow land.

Observers should note the continued decline in American Kestrel numbers with a similar pattern appearing with Red-tailed Hawks. Perhaps urbanization is having an impact in our long-established Christmas Bird Count circles. With the widespread decline in oak reproduction in the Upper Midwest, partially attributable to overgrazing which kills young oaks, and the lack of fire which allows brush buildup, shading out any young oaks, Red-headed Woodpeckers have been notably scarce in winter during recent years.

Finally, thanks to the many observers who birded the northern counties this year and provided valuable data. Several areas of the state would benefit from additional coverage in future winters: the four extreme southwestern counties; west central counties including Traverse, Big Stone, Grant and Stevens; and counties on the southern border of the conifer zone such as Morrison and northern Todd where such species as Northern Ravens are likely wintering but remain undocumented. Finally, continue to report House Finch records since seldom does an invasive species spread so quickly. Note that House Finches are not printed on the seasonal report form and must be added by the observer.

Common Loon

Late migrants reported from the Willmar CBC-CP 12/14 BT and Lakeland, Washington 12/14 BL.

Pied-billed Grebe

Late migrants noted in Cook 12/1 AB; on the **Bemidji** and **Duluth** CBCs; Wabasha 12/8 RJ; Lake Harriet, Hennepin 12/15 & 17 SC; and Ramsey 12/29. No overwintering noted.

Horned Grebe

Reported from Lake 12/1 AB and the Duluth CBC.

Eared Grebe

One at Lake Calhoun, Hennepin **12/4** to **12/21** mob.

American White Pelican

An amazing **five** at Black Dog, **Dakota 12/5** PKL with one bird overwintering and seen **2/22** SC; also **12/6 Otter Tail** SDM and one on the Albert Lea CBC.

Double-crested Cormorant

Reported from Rice 12/3 mob and the St. Paul CBC; rare January records from Goodhue 1/1 AB and 1/12 BL.

Great Blue Heron

Late migrants found at Anoka 12/2 PKL; Rice 12/4 (2) FKS and 12/16 TB; Goose Lake,

Ramsey 12/3 PC; also found on the St. Paul, Austin and Excelsior CBCs; probable overwintering bird at spring holes at Grey Cloud Island, Washington 1/3 & 1/16 TEB; early migrant on the Shell Rock R., Freeborn 2/3 RRK.

Green-backed Heron

12/1 at Old Cedar Ave. Bridge, Hennepin, Jim Pomplun (fide SC). **First winter record.**

Tundra Swan

Late migrants numerous this year: heavy SE Minnesota snowstorm stimulated departures in Wabasha with hundreds milling about overhead 12/1 WDM and 1,000 at Weaver marsh 12/2 KB but few later; Mille Lacs records from Aitkin 12/1 (30) and Crow Wing 12/1 (13) PKL; Winona until 12/14 CS; Houston 12/4 (30) EMF; wintering birds (2) in Wabasha 1/10-16 mob; eight at Reads Landing 1/20 EMF.

TRUMPETER SWAN

Introduced birds found on the Fergus Falls CBC, at L. Harriet, Hennepin 12/4 DC, overwintering at Monticello, Sherburne (8) DO and Wabasha with 8 on 1/14 BSE (one of which collar #36FA, a wild bird from Lacreek NWR in South Dakota; ***The Loon*** 63:147-150).

Snow Goose

Mid-December reports from L. Calhoun, Hennepin DC; Lac Qui Parle (7) CMB; Fergus Falls and Fairmont CBCs; five (1 blue morph) in Dakota 12/9 and one 2/10 AB.

Canada Goose

Seen in 34 southern and seven northern counties including Grand Rapids CBC, overwintering on Lake Bemidji, Beltrami (4) DJ; Becker 12/31 DB; and Pine City, Pine 1/31 (4) RG. 76,000 on Lac qui Parle CBC with 8,000 overwintering there, and 5,500-6,000 in Otter Tail SDM. 1,085 as late as 12/15 in Grant PKL; statewide CBC total of 110,376 is 12,000 fewer than last year but still very high. Early migrants in Redwood as early as 2/6 and Washington 2/8.

Wood Duck

Reported from the Winona (2), Owatonna, Excelsior (3) and Fergus Falls CBCs; Washington 1/1-1/6 mob; Mower 2/3 RRK; Hennepin 1/1 SC; Scott 1/25 EK and 2/22 SC (migrants?). One of the Winona birds overwintered while the other died in the oil spill.

Green-winged Teal

Recorded on the Rochester and Excelsior CBCs; also 12/8 Dakota RB and 1/19 Shakopee, Scott PKL.

American Black Duck

Overwintered in Cook on L. Superior KMH and in St. Louis KE; 12/15 Otter Tail SDM; and reported from 10 Mississippi R. counties from Hennepin to Houston. 13 total counties this year but 17 last year for a species that may be declining. Statewide CBC total of 63 (77 l.y.).

Mallard

Found in 38 counties (45 l.y.) with a statewide CBC total of 14,643 (18,782 l.y.). Overwintering noted in the north in Clay, Beltrami, Otter Tail, and Cook. 1,000s at Grey Cloud Island, Washington 12/16 TEB; 150 of a flock of 300 died in the Winona oil spill.

Northern Pintail

Overwintered in Dakota mob and St. Louis (TH, KE); also 12/6 Hennepin SC; early migrants (2) in Scott 2/22 SC.

Northern Shoveler

Noted on the Excelsior CBC; Hennepin 12/4 (3) RJ, RG with 14 on 12/6 SC; latest on L. Harriet (2) 12/15 PKL; and **50** in Martin 12/1 BB.

Gadwall

73 found on the Excelsior CBC; also found in Hennepin on 12/20 (2) GP; Wabasha 1/14 BSE; Winona 1/13 and at Whitewater WMA 2/2 PKL; Dakota 12/9 (3) with up to 15 overwintering at Black Dog L. KB. 52 migrants (?) at Shakopee, Scott 2/22 SC.

American Wigeon

Late migrants at Otter Tail 12/16 MO; Brown 12/23 BB and during CBC-CP at Mankato, Blue Earth MF.

Canvasback

Lingering birds in Hennepin 12/4 (2) RG and 12/20 GP, SC; also Wabasha 12/8 RJ and Washington 12/15 KB.

Harlequin Duck, 13 January 1991, Bayport, Washington County. Photo by Bruce Fall.

Redhead

Reported on the Excelsior, Bemidji 12/15 KH, and Fairmont CBCs; also at Winona 12/8 RJ and L. Harriet, Hennepin 12/11 (4) PKL and 12/20 (2) SC. Five early migrants in Cottonwood 2/21 ED.

Ring-necked Duck

Found on the Excelsior CBC and in Winona 12/8 RJ; Washington 12/15 KB and Ramsey 12/4 RG. Possible overwintering bird in Goodhue recorded 1/1 RJ, RG and 1/12 BL.

Greater Scaup

Reported on the St. Paul CBC-CP; also found in Hennepin 12/20 (4) GP, SC, and an injured bird in Scott Jan.-Feb. mob. (but see below).

Lesser Scaup

Widely reported. Noted on the Fergus Falls (10), Excelsior and Lac qui Parle CBCs and in Winona Co. on the LaCrosse, WI CBCs. Also found Wabasha, Ramsey 1/1 RH, Cook 12/15 KMH, Scott (1/1-2 RG, AB, injured bird, hopefully different from above species!), Martin, Mille Lacs 12/1 (6) PKL, Sibley, Winona and Washington. One scaup sp. seen on the Fairmont CBC.

Harlequin Duck

Found at the NSP plant in **Washington** on 12/28 and as late as 1/19 mob, a fine wintering bird for the Twin Cities.

Oldsquaw

A bird variously described as a female or first fall male (more convincingly, DC) was found on L. Calhoun, Hennepin 12/5 KB to 12/20 mob; another on White Bear L. on the Ramsey-Washington border KB. The Good Harbor Bay, Cook flock was estimated at 111 on 12/15 KMH.

Common Goldeneye

Roughly 1,500 birds wintered in the state, mainly on L. Superior and Mississippi R. where recorded from all counties from Stearns to Houston. Open water allowed birds to overwinter as far north as Koochiching GM and Cook KMH; also on CBCs in Fargo-Moorhead and Aurora, St. Louis. **544** found on Excelsior CBC. Early migrants in Cottonwood 2/12 ED with heavy flight in SE along Mississippi and Minnesota Rivers last week of Feb. (575 at Black Dog, Dakota 2/29 KB).

Bufflehead

December lingerers reported from: Otter Tail; Beltrami 12/5 DJ; Bemidji, Duluth, Bloomington, and Excelsior CBCs, Cook 12/17 (3) KMH; Anoka; Washington, Ramsey 12/2 PKL and Lake. Only Jan. records: 1/12 Winnebago Valley, Houston EMF and 1/20 Two Harbors, Lake DPV.

Hooded Merganser

Numerous late migrants found in Dakota 12/10 (23) RG; Hennepin 12/17 (4) SC; Winona 12/8 RJ; Olmsted 12/17 JB; Washington 12/31 RJ; Goodhue 1/1 AB; Ramsey 12/2 PKL and Anoka 12/1 (3). Overwintered in Dakota where found 1/28 (2) RG.

Common Merganser

L. Pepin buildup lower than recent years with many birds concentrating further north, i.e. 1,500 Mille Lacs 12/1 PKL; 1,894 on Excelsior CBC; and 325 on the Willmar CBC. 20,000 on L. Pepin 12/2 KB and only 10,000 12/8 RJ. Reported from 23 counties (17 l.y.) including northerly reports from **Koochiching** 1/11 (2) PKL; Duluth CBC; Virginia, St. Louis 1/11 PKF; Lake 1/21 DPV and Cook 1/10 SOL. Returning birds found in SW in Brown 2/27 JS and Cottonwood 2/12 ED and in SE in Goodhue 2/2 (100) PKL; Houston 2/24 EMF and Mower 2/23 RRK.

Red-breasted Merganser

Late birds found in Olmsted 12/9 AMP, Hennepin 12/11 RH; Ramsey 12/4 RG; Lake 12/1 AB and 32 on the Duluth CBC, a record high.

Ruddy Duck

BL found three at Lake City, Wabasha 12/8. Only report.

Bald Eagle

Reported from 38 counties statewide with a CBC total of 136 (110 l.y.). Overwintering birds as far north as Otter Tail and Lake 1/17 DPV. A 1/27 Beltrami bird KR may have been an early arrival since Sherburne birds working on nest by 1/25 SNWR.

Northern Harrier

Reported on the Fairmont, Long Prairie, Nicollet Co., and Willmar CBCs. Other December records from Becker 12/4 BK, Mower, and Jackson; spring migrants found in Murray 2/25 NDK; Lac qui Parle 2/27 CMB and at Talcot L. WMA, Cottonwood (2) 2/24 LR.

Sharp-shinned Hawk

About 24 birds (37 l.y.) reported from 17 counties (25 l.y.) is down somewhat from recent years, perhaps reflecting a lower prey base. Overwintered in Sherburne with northern reports from Aitkin, Itasca, Duluth CBC, and Mille Lacs 2/3 KR.

Cooper's Hawk

Eight reports (7 l.y.); Aitkin 1/16 WN, the most northerly; Excelsior CBC (2), Ramsey, Washington, Lyon, and Rice (Faribault CBC and 2/20 OR, a probable early migrant).

Cooper's Hawk near feeder, 25 December 1990, Woodbury, Washington County. Photo by Judy Wedul.

Northern Goshawk

Thirty-nine birds reported from 23 counties (8 l.y.), a prelude to a heavier flight this fall. Seen in seven southern counties south of the Minnesota R. and nine northwestern counties, the majority of records not occurring until late Dec. and Jan. Four seen on the Sax-Zim CBC.

Red-shouldered Hawk

Overwintered in Winona mob, with a peak of three 2/2 PKL. A bird released eight years ago and which has occasionally bred locally was found on the Excelsior CBC.

Red-tailed Hawk

Reported from St. Louis and Clay in the north. Overwintered in Sherburne and possibly Chisago where seen 1/18 PKL. 212 found statewide on CBCs (229 l.y., third straight decline).

Rough-legged Hawk

Locally distributed with reports from 33 counties (32 l.y.) with a statewide CBC total of 60 (44 l.y.) with most reports from the southeast and far northern counties. Absent from west central and scarce southwest although nine found in a field near Talcot L., WMA; Cottonwood 2/24 ED.

Golden Eagle

Reported in Lake of the Woods 1/24 MK; Felton, Clay 2/17 MO; Winona (2) AB and the Wabasha CBC, about normal for recent years.

American Kestrel

The continuing decline (the *fourth straight*) is disturbing, with records from only 44 counties (50 l.y.) and 96 on the CBCs (110 l.y.). However, some Twin Cities observers report increased sightings, so caution is necessary in interpreting any decline. Overwintered as far north as Otter Tail, Clay and Aitkin and recorded on the Crookston CBC.

Merlin

A phenomenal **19** birds (11 l.y.) reported from 15 counties throughout the state, eight of which were northwestern counties. Post CBC records included Pennington 2/12 KSS (2); St. Louis 2/1 TW; Norman 1/22 PS and Renville 2/28 RG. February records during mild late winters may represent early migrants?

Peregrine Falcon

Overwintered in Duluth and Hennepin. Also found on the Rochester CBC and in Ramsey 12/15 (fide SC).

Gyrfalcon

14 individuals reported Oct. to May during this record invasion year; see ***The Loon*** 63:163-167).

Gray Partridge

Population boom in the south! Reported from 36 counties (28 l.y.) with a statewide CBC total of **619**, over five times l.y. total of 112 (see introduction for comments on this phenomenon). RJ found 48 in one field in Cottonwood, observers in Fillmore reported flocks up to 30, and DS found 50 in Houston 2/21 and 22. Recorded northeast to Sherburne with normal or even below normal numbers in west central and northwest counties.

Ring-necked Pheasant

Reported from 41 counties (45 l.y.) and a statewide CBC total of 1332, nearly three times last year's 477. Pattern closely follows the above species with high numbers south, lower numbers locally in a couple of western counties such as Lac qui Parle. RJ noted "hundreds" in Mower 1/5.

Spruce Grouse

Recorded on the Isabella and Beltrami Island CBCs; also found at Silverdale, Koochiching RG and in Cook along the Gunflint Trail (5) KMH.

Ruffed Grouse

Scarce in southeast. Reported only from Houston, Fillmore, and Olmsted. Good numbers reported in northeast with **52** found on the Duluth CBC, a record high. Found in 20 counties statewide (34 last year) with a CBC total of 152 (239 l.y.).

Greater Prairie-Chicken

Reported from Wilkin 2/3 (45) KB; Skree Township, Clay 1/27 (53) LCF; and Polk.

Sharp-tailed Grouse

Reported from Roseau, Lake of the Woods, Beltrami, Koochiching, Aitkin, and St. Louis (Aurora CBC). Good numbers reported in Aitkin and Beltrami Cos.

Wild Turkey
Recorded in seven counties (9 l.y.) including Rice where DNR reports birds are established and "wild."

Northern Bobwhite
Hint of a slight recovery in Houston where up to seven found in January (EMF). Also probable escapes on the Albert Lea CBC.

American Coot
Overwintered in Otter Tail; late migrants found in Hennepin 12/11 (100+) PKL, Sibley, Rice, and 38 on the Excelsior CBC.

Common Snipe
Recorded on the Duluth, Excelsior, Owatonna, St. Paul, and Wild River CBCs. Also found in December in Mower, Washington, and Goodhue, and January in Hennepin 1/1 AB, Washington 1/1 BL, and Sherburne 1/28 (SNWR). No February reports.

Bonaparte's Gull
Mille Lacs L. yielded ten late migrants in Crow Wing 12/1 PKL. Latest dates for this species tend to occur in north with birds overflying the south or perhaps heading southeast to L. Michigan.

Ring-billed Gull
December lingerers numerous, with reports from the Duluth, Bemidji, Excelsior (**120**), and Minneapolis (**466**) CBCs; from Mille Lacs and Crow Wing on Mille Lacs L.; also Anoka, Ramsey, Wabasha, Washington, Rice, LeSueur and Winona. 1/6 Black Dog L., Dakota RG, AB, only January record.

Herring Gull
Overwintered on L. Superior in Cook and St. Louis (a few); recorded on the Carlton CBC with December records from Mille Lacs L. in Crow Wing and Aitkin, Sherburne, Wright, Hennepin, Dakota, Anoka, Wabasha, Rice and Winona.

Thayer's Gull
Increased reports. Found on the Duluth CBC, in Lake 12/1 DPV; Eggleston, Goodhue 12/5 RG; and in Hennepin on L. Harriet 12/17 (four which included two first-year, one second-year, and one adult, SC et al.).

Glaucous Gull
Becoming a regular early winter visitor to the Twin Cities with up to seven seen 12/17 at Lake Harriet KB (four ad., three imm.); also seen at Duluth on the CBC and 1/5 KE, and Cook 12/3 DPV.

Rock Dove
Recorded in 74 counties throughout the state.

Mourning Dove
Recorded in 34 (38 l.y.) counties with a pair overwintering in Bemidji, **Beltrami;** a record 48 on the Duluth CBC; Pine 12/27 PKL; and found on the Fergus Falls CBC. Large numbers reported from many Twin Cities feeders. Statewide CBC total of 936 (727 l.y.). Spring arrivals noted first week of February in the south.

Eastern Screech-Owl
Reported from 20 south and central region counties north to Todd 12/31 JSK and Clay (two on Fargo-Moorhead CBC). Statewide CBC total of 27 (l.y. 21).

Great Horned Owl
Recorded from 41 counties throughout the state (47 l.y.) with a CBC total of 115 (102 l.y.). Arctic race found at Sax-Zim, St. Louis 1/12 KE, and Lake 1/17 DPV.

Snowy Owl
At least 14 birds reported statewide from Redwood, Wilkin, Clay, Mower, Polk, Otter Tail, Aitkin, St. Louis, and Lake of the Woods.

Northern Hawk Owl
Major invasion with 16 individuals reported, Sept.-Mar. (***The Loon*** 63:163-167).

Barred Owl
Reported from 21 counties (27 l.y.) but more common on CBCs with a statewide total of 35 (28 l.y.). Not found west of Blue Earth Co. in south.

Great Gray Owl
Major invasion. KE compiled **134** individuals from late fall 1990 through spring 1991 (see ***The Loon*** 63:163-167 for complete report).

Long-eared Owl

This enigmatic species was found on the Bloomington CBC, Clay 1/20 LCF, and Scott 12/11 RG.

Short-eared Owl

Reported from 12/28 Aitkin WN and near Bingham Lake, Cottonwood 12/12 ED.

Boreal Owl

Light late winter flight in northeast: 1/24 Tower, St. Louis, died on 1/27; Lake 1/25 T56N, R07W, Sec. 4; 2/3 Gooseberry Falls State Park; St. Louis 2/24 T54N, R20W, Sec. 2, bird died; Ely, St. Louis 2/26, found dead; all fide SW.

Northern Saw-whet Owl

Record numbers for this season. Noted on the Bloomington CBC; Dundas, Rice 1/10 RG; overwintered in **Otter Tail** MO and at Isaac Walton Ponds, Hennepin mob. (still present 2/21 DC); Hennepin 12/26 GP, SC; St. Louis 1/7 found dead by SW, MS at T59N, R17W, Sec. 17, and Twig 2/4, St. Louis, TJ (fide KE); Carver 2/20 RG and Dakota 2/17 AMP. Latter two records on likely early migrants as RG, using tapes, found calling birds on 2/28 in **Redwood, Renville, Yellow Medicine** and **Chippewa.**

Belted Kingfisher

Overwintered in Winona, Otter Tail (five on CBC), Houston, and Washington Counties. Seen on the Crosby, Crow Wing CBC and in eight other counties in December and January. Late February records in Anoka and Hennepin perhaps early migrants. Statewide CBC total of 22 (24 l.y.).

Red-headed Woodpecker

Very scarce with only eight reports from seven counties north to Sherburne (CBC). CBC statewide total only eight (24 l.y.).

Red-bellied Woodpecker

Northward movement continues strong with records from **Duluth** 12/21, LP (fide KE); **Cook** 1/6 & 1/2 SOL; Aitkin 2/22 WN; Crow Wing 12/15 (4) KR; Todd; Otter Tail (overwintered); Crow Wing (Crosby CBC); Clay (2 on Fargo-Moorhead CBC); and **Polk** PS and DL. Also noted in 31 other counties (40 l.y.), with a statewide CBC total of 424 (46 l.y.). Strong southwest showing also with records from Lac qui Parle 2/28 (2) CMB; Lyon, Lake Shetek S.P., Murray 2/8 NDK et al.; Redwood, Cottonwood, and Jackson (6).

Downy Woodpecker

Reported from 57 counties (69 l.y.) with a statewide CBC total of 1,834 (2,017 l.y.).

Hairy Woodpecker

Reported from 51 counties (62 l.y.) with a statewide CBC total of 984 (1,306 l.y.).

Three-toed Woodpecker

Pair all season at Lace L., Cook KMH, only report.

Black-backed Woodpecker

Reported from Cook, Lake, Roseau (Beltrami Island State Forest), Beltrami, and St. Louis (3 reports).

Northern Flicker

Reported from 28 counties statewide (27 l.y.) with northern reports from Otter Tail (overwintered), Clay, Polk, Pennington (until 1/19 at Thief River Falls feeder KSS), and Duluth. CBC total of 34 (51 l.y.).

Pileated Woodpecker

Recorded on the Fairmont CBC, in Norman, Clay, and Polk in the northwest, and in 44 other counties (55 l.y.) with a state-wide CBC total of 223 (226 l.y.). Some local scarcities noted in Hennepin and Washington.

Eastern Phoebe

One found on the LaCrosse CBC in Dresbach Township, Winona **12/15** FL (***The Loon*** 62:62).

Horned Lark

Reported from a record 60 counties statewide with overwintering noted as far north as Becker, Clay, Otter Tail, and Wilkin and perhaps Pine where seen 1/18 PKL. Other northern records: Roseau 1/12 SDM; Marshall (Warren CBC); Polk 12/22 (2) PS. Northward movement in south and central first week of February, reaching Lake of the Woods 2/14 KH. 1,973 found on CBCs (1.y. 572).

Gray Jay

Reported from nine counties in its normal range with 107 recorded on CBCs statewide (149 l.y.).

WINTER OWLS

Northern Hawk-Owl, 3 February 1991, Sax, St. Louis County. Photo by Bruce Fall.

Northern Saw-whet Owl, 9 February 1991, Bloomington, Hennepin County. Photo by Anthony Hertzel.

Eastern Screech-Owl, 6 January 1991, Lake Harriet, Minneapolis. Photo by Anthony Hertzel.

Great Gray Owl, 23 February 1991, County Road 3, Lake County. Photo by Anthony Hertzel.

Blue Jay
Recorded from 67 counties throughout the state with a CBC total of 3,053 (4,410 l.y.), generally noted as reduced in numbers throughout the state.

Black-billed Magpie
Recorded in 11 northern and western counties (l.y. 11) south to Wilkin and Aitkin with three recorded on the Sax-Zim CBC in St. Louis.

American Crow
Recorded in 72 counties (69 l.y.) throughout the state, overwintering as far north as Grand Marais, Cook KMH, Roseau, Marshall, and Itasca. 61 found on the Baudette CBC. Large flocks moving north in Beltrami 2/1 DJ. Some northern areas only lacked crows for a few weeks in January.

Common Raven
Reported from 19 north region counties south to Mille Lacs, Kanabec, and Pine. 200 noted in Aitkin 1/5 WN. Pair displaying 2/7 at Tamarac NWR, Becker DB.

Black-capped Chickadee
Reported from 62 counties throughout the state (71 l.y.) with a statewide CBC total of 10,206 (11,810 l.y.).

Boreal Chickadee
Rather scarce with reports from only seven north counties and a statewide CBC total of 17 (17 l.y.).

Tufted Titmouse
Perhaps still decreasing, reported only from the Rochester CBC, and Houston 1-2 almost daily EMH.

Red-breasted Nuthatch
Low numbers spottily distributed with only one report (Lamberton CBC, Redwood) west of a line from Otter Tail on the north to Blue Earth on the south. Reported in 32 counties (56 l.y.) with a statewide CBC total of 232 (1,087 l.y.).

White-breasted Nuthatch
Reported from 56 counties statewide (66 l.y.) with a CBC total of 2,657 (l.y. 3,088). An amazing **295** on the Fargo-Moorhead CBC may partially be the result of the numerous diseased elms along the Red River which provide abundant forage for this species.

Brown Creeper
Reported from 25 counties (37 l.y.) throughout the state with a total CBC count of 81 (162 l.y.). Northern reports from Duluth CBC (2); Aitkin 1/6 BDM (fide KE), Cook (overwintered, KMH); Bemidji CBC; Crow Wing 12/15 KWR; possibly overwintering in Clay.

CAROLINA WREN
Two reports: one on the Bloomington CBC at a feeder and recorded as late as 1/13 KWR and 2/24 Washington at Stiefel's feeder (fide TEB), occasionally throughout winter.

Marsh Wren
One at the River Bend Nature Center, Rice **12/1** and **12/5** TB **(first December record).**

Golden-crowned Kinglet
Scarce for third straight winter. Found in 10 counties statewide with a CBC total of 104. Not recorded in southwest except in Brown.

Eastern Bluebird
Early December records from Goodhue and Fillmore with 10 found on the Willmar CBC (BT). Houston 2/2 PKL and Anoka 2/6 KB likely early migrants.

Townsend's Solitaire
One at Jordan, **Scott**, 12/11 RG was the only report.

American Robin
Reported from 21 counties (39 l.y.) throughout the state with a statewide CBC total of only 92 (798 l.y.). Very scarce in western half of the state.

Varied Thrush
Reported from Hubbard all season mob; Duluth CBC; and Hennepin 12/9 GP and south Minneapolis 12/26 mob, fewer than recent years.

Gray Catbird
One found on the Crosby CBC **12/15** in Crow Wing, KR, JB.

Brown Thrasher
Found on the Willmar, Sherburne NWR,

Nicollet County, and Windom-Mountain Lake CBCs.

Bohemian Waxwing

Reported from 11 northern counties and Hennepin (2/1 Cedar L. SC); Washington (Afton CBC, 2, HL); and Lac qui Parle (28 on CBC, CMB). Statewide CBC total of 867 (4,947 l.y.).

Cedar Waxwing

Reported from 30 counties (39 l.y.) throughout the state with a statewide CBC total of 2,325 (l.y. 1,517). Highest number on Afton CBC (510). No overwintering noted north of Sherburne.

Northern Shrike

Recorded in 43 counties (43 l.y.) statewide with a CBC total of 80 (68 l.y.).

European Starling

Reported from 67 counties statewide.

Yellow-rumped Warbler

Late migrants found in **Becker 12/2** BK; Ramsey **12/20** BAH; and LeSueur **12/7, 20 & 21** EK. Apparent overwintering bird found at Old Cedar Ave. Bridge, Hennepin, JP **2/5** and **2/6** SC.

Northern Cardinal

Reported from 36 counties (48 l.y.) with a statewide CBC total of 1,963 (2,026 l.y.). Northern reports numerous with birds in Hovland, Cook SOL; near Two Harbors (fide DPV); Duluth (4 reports at feeders, fide KE); Aitkin 2/24 WN; and on the Crosby and Long Prairie CBCs. Absent in Otter Tail Co. this winter.

Rufous-sided Towhee

Birds of the western "spotted" race were found at Coon Rapids, Anoka (overwintered 12/28-2/2 GP) and in Dakota 1/6 AB. A bird of the eastern race was reported from the Austin CBC while birds not identified to race were found in Becker (Tamarac NWR 2/8 DB) and Steele (Owatonna CBC).

American Tree Sparrow

Mixed reports with most observers noting a decline. Overwintered as far north as Polk and Pennington. Reported from 44 counties statewide with a CBC total of 5,032 (7,743 l.y.). Numbers particularly low in southeast where early December blizzard may have limited food availability.

Field Sparrow

One at a feeder in Ramsey **12/12-1/11** BH was a rare winter find.

Fox Sparrow

One found at a feeder near Cotton, St. Louis on the Sax-Zim CBC 12/17 KE.

Song Sparrow

Reported on the Rochester, Cedar Creek Bog, Marshall, Excelsior, and Fairmont CBCs. No other reports until KWR found one on 2/3 in Mille Lacs.

Lincoln's Sparrow

Reported on the Excelsior CBC **12/15** (fide DM).

White-throated Sparrow

Reported on the Mankato, Sherburne NWR, Duluth, Rochester (**4**), **Grand Marais**, and St. Paul NE CBCs; also found at Isabella, **Lake** 12/30-1/5 SW, MS; Hennepin (Wirth Park 1/31 GP and Cedar L. 2/3 SC); Bemidji, **Beltrami** 12/20 KH; Dakota; Ramsey 12/29; and overwintered in Houston EMF.

Harris' Sparrow

Reported on the Fairmont (**7**) BB; Lamberton (2) LF, PE; Marshall HK; and Willmar BT CBCs and in Murray 12/21 NDK. At least **11** total birds were reported in the Fairmont, Martin area during December BB.

Dark-eyed Junco

Reported in 51 counties statewide with a CBC total of 7,199 (6,656 l.y.). Overwintered as far north as Clay, Becker, and Cook and reported "abundant" in Washington Co. TEB. One of the few passerines to show an increase this winter.

Lapland Longspur

Reported from a record 21 counties with northern records from Wilkin 1/21 SDM; Roseau 1/6 (50+) MO; Lake of the Woods 1/2 PS; Marshall (**290** on Warren CBC GL); Duluth 1/14-2/28, (fide KE); and the Crosby CBC in Crow Wing (3, KR, WN). Northward movement noted in Murray 2/25 (500) NDK and Becker 2/26 (3) DB. Statewide CBC total of 666.

Snow Bunting

Reported from 44 counties (40 l.y.) with a statewide CBC total of 5,574 (9,037 l.y.). Concentrations noted in Rice (300) 1/16 AMP and Clay (1,000) 12/24 LCF. Noted in St. Louis at Meadowlands 12/17 M & D. Evans (fide KE).

Western Meadowlark

Two found in Houston 1/1 RJ, RG.

Meadowlark, sp.

Two on the Austin CBC.

Red-winged Blackbird

Reported from 21 counties statewide (27 l.y.) with northern reports from Otter Tail (overwintered with 25 on 1/20 SDM); December records from Mille Lacs, Aitkin, Becker, Polk, Itasca, and Marshall. A few overwintered in Houston EMF.

Yellow-Headed Blackbird

An adult male found at Fergus Falls, Otter Tail **1/20** SDM; not seen later.

Rusty Blackbird

Reported from five north, four central, and seven south region counties (17 l.y.). Overwintering occurred in Olmsted, probably Martin, and perhaps **Koochiching** where RJ and RG found a single bird 1/12 in a cattle yard.

Brewer's Blackbird

Reported on the Austin and Wild River CBCs; in a sheep feedlot in **Clay 1/13** LCF (details?); and in **Sherburne 2/16** RG (early migrant).

Common Grackle

Reported from 40 counties statewide (36 l.y.). Overwintered as far north as Aitkin WN, Otter Tail SDM, and Pennington (at feeder irregularly, KSS). Early migrants found in Wilkin 2/24 MO and Clay 2/18 (13) MO.

Brown-headed Cowbird

Found on the Rochester and Winona CBCs, only reports.

Pine Grosbeak

No echo from last year's invasion. Not recorded south of Crow Wing and Carlton. Only records outside coniferous region were: one on Fargo-Moorhead CBC and Becker 12/5 (6) BK. Statewide CBC total of 577 (2,936 l.y.).

House Finch

Reported from 23 counties (l.y. 17) in the south and central regions with a CBC total of 148 (l.y. not tallied). Well established in southeast and south central and rapidly colonizing central (BT notes population explosion in Kandiyohi) and west central where increasing in Otter Tail. Species likely established now in many towns and cities south of a line from Fergus Falls to St. Cloud to St. Paul. CBCs in southeast reporting numbers of Purple Finch and not reporting this species need to inform feeder watchers of critical field marks of these two similar birds. Species now being recorded at Grand Forks, North Dakota so birders in northwest Minnesota should be on the lookout for this species.

Purple Finch

Reported from 35 counties statewide (35 l.y.) with a CBC total of 498 (547 l.y.). Numbers moderate in northwest but spotty in southeast with some increases noted in Hennepin in February with likely northbound birds.

Red Crossbill

About 100 total birds reported from St. Louis, Lake, Becker, Beltrami, Hubbard, and Crow Wing with a statewide CBC total of 34 (57 l.y.).

White-winged Crossbill

Scarce. Reported from St. Louis 1/12 KB; Tofte, Cook 12/28 MH; Lyon 1/10 (2) HK; and Crosby CBC (5).

Common Redpoll

Very scarce, reported only from 27 counties (82 l.y.) with a statewide CBC total of 545 (10,795 l.y.). A few areas noted good numbers (Bemidji, common all winter DPJ, and Otter Tail, 300 on 1/6 SDM) but these were the exception. Only six counties south of the Minnesota R. recorded this species.

Pine Siskin

Reported from 39 counties (62 l.y.) with a statewide CBC total of 1,141 (3,548 l.y.). Some increases noted in February with probable northbound birds.

American Goldfinch

Reported from 46 counties (46 l.y.) with a statewide CBC total of 3,518 (3,896 l.y.) indicating a rather stable population. Overwintered as far north as Polk and Pennington but absent northeast.

Evening Grosbeak

Scarce outside north region. Reported from 17 counties (18 l.y.) with a CBC statewide total of 1,102. Not recorded west of Sherburne and Goodhue in central and south regions. A handful of birds trickled out of the coniferous zone into eastern counties where a few observers found them in Hennepin, Anoka, Sherburne, and Goodhue.

House Sparrow

Reported in 73 counties statewide. KE reports lower numbers in Duluth.

CONTRIBUTORS

KB	Karl Bardon
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DB	Deede Beneke
TB	Tom Boevers
BB	Brad Bolduan
AB	Al Bolduc
DB	Don Bolduc
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DC	Doug Campbell
SC	Steve Carlson
PC	Pat Colon
GJD	Gordon & Mary Jo Dathe
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HH	Harlan Hostager
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OR	Orwin Rustad
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SNWR	Sherburne NWR
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PS	Peder Svingen
BT	Ben Thoma
DPV	Dan & Pam Versaw
TW	Terry Wiens
SW	Steve Wilson
EW	Edgar Wolfe
DZ	Dave Zumeta
mob	many observers
et al.	and others
l.y.	last year

CBC Christmas Bird Count
CBC-CP Count Period

Addendum, Winter Season 1989-1990. The following species were inadvertently left out of last year's seasonal report:

Bufflehead
1/26 & 2/2, Two Harbors, Lake SW, MS.

Gadwall
2/10 Read's Landing, Wabasha (5) DZ, exceptionally early.

Glaucous Gull
12/2-12 Hennepin (4) mob.

Boreal Owl
1/19 singing male heard at Sand Lake, Lake Co. by Ron Brodigan (fide SW).

Eastern Bluebird
1/31 Whitewater WMA, Winona (12) PS, SB.

Spring Season 1990:

Merlin
4/15 Aitkin SC.

CAROLINA WREN
4/24 Minneapolis, Hennepin Co. mob.

CHRISTMAS BIRD COUNT SUMMARY
(counties in parenthesis)

LOCATION	DATE	COMPILER	NUMBER OF PARTICIPANTS	TOTAL SPECIES
Afton (Washington)	1/1/91	Boyd & Helen Lien	17	41*
Albert Lea (Freeborn)	12/28/90	Elaine Feikama	20	38
Aurora (St. Louis)	12/29/90	Chuck Neil	13	20
Austin (Mower)	12/16/90	Terry Dorsey	17	43
Baudette (Lake of the Woods)	12/28/90	Martin Kehoe	7	21
Beltrami Island (Lake of the Woods)	12/29/90	Martin Kehoe	6	9
Bemidji (Beltrami)	12/15/90	Katie Haws	17	37
Bloomington (Hennepin/Dakota)	12/29/90	Sue Kratsch	30	47
Carlton-Cloquet (Carlton)	12/16/90	Larry Weber	8	23
Cedar Creek Bog (Isanti/Anoka)	12/16/90	Helen Lien	6	34

Cottonwood (Lyon/Yellow Medicine)	12/29/90	Paul Egeland		
Crookston (Polk)	12/15/90	Tom Feiro	9	26
Crosby (Crow Wing)	12/15/90	Jo Blanich	14	41
Detroit Lakes (Becker)	12/15/90	Betsy Beneke	17	26
Duluth (St. Louis)	12/15/90	Kim Eckert	48	52
Excelsior (Hennepin/Carver/ Scott)	12/15/90	Dennis Martin	35	43
Fairmont (Martin)	12/15/90	Brad Bolduan	9	40
Fargo-Morehead (Clay)		Ron Nellermoe		41*
Faribault (Rice)	12/29/90	Forest Strnad		36
Fergus Falls (Otter Tail)	12/15/90	Paul Anderson	15	47
FillmoreCounty (Fillmore)	12/29/90	Nancy Overcott	17	32
EastGrandForks (Polk)	12/16/90	David Lambeth	3	13*
Grand Marais (Cook)	12/15/90	Ken Hoffman	16	36
Grand Rapids (Itasca)	12/15/90	Tom Sobolik	18	35
Hastings-Etter (Dakota)	12/22/90	Jon Peterson & Ann McKenzie	10	34*
Hibbing (St. Louis)	12/29/90	Janet Peterson	11	24
Isabella (Lake)	12/30/90	Steve Wilson	13	17
Lac Qui Parle (Lac Qui Parle)	12/15/90	Micki Buer	4	41

LaCrosse-LaCrescent (Houston)	12/15/90	Fred Lesher	7	34*
Lamberton (Redwood/ Cottonwood)	12/16/90	Lee French	4	34
Long Prairie (Todd)	1/1/91	John & Susan Kroll	18	24
Mankato (Blue Earth)	12/29/90	Merrill Frydendall	8	33
Marshall (Lyon)	12/30/90	Henry Kyllingstad	7	30
Minneapolis North (Hennepin/Anoka	12/15/90	Donn Mattsson	21	39
Mountain Lake-Windom (Cottonwood)	1/1/91	Mildred Schmidt	12	27
New Ulm (Brown)	12/30/91	John Schladweiler	9	38
Nicollet (Nicollet)	12/31/90	John Schladweiler	3	30
Owatonna (Steele)	12/22/90	Darryl Hill	38	35
Rochester (Olmsted)	12/15/90	Jerry Bonkoski	21	55
Roseau (Roseau)	12/29/90	Betty Johnson	11	18
St. Cloud-Collegeville (Stearns)	12/29/90	William Haider	8	24
St. Paul (Ramsey)	12/29/90	Clay Christensen	44	44
St. Paul NE (Ramsey/ Washington)	12/29/90	Gary Ash		
Sax-Zim (St. Louis)	12/17/90	Mark Stensaas	10	27
Sherburne NWR (Sherburne)	12/15/90	Ron Dexter	29	35
Tamarac NWR (Becker)	12/21/90	Betsy Beneke	11	26

Wabasha (Wabasha)	12/22/90	Don Mahle	6	32
Warren (Polk)	1/1/91	Gladwin Lynne		20
Wild River (Chisago)	12/15/90	Tom Anderson	9	43
Willmar (Kandiyohi)	12/15/90	Ben Thoma	15	36
Winona (Winona)	12/29/90	Walter Carroll	8	30*

*Minnesota records only

6429 Bridge Rd., Apt. 106, Madison, WI 53713.

Ruby-throated Hummingbird nest and young, August 1989, Lakeview Township, Becker County. Photo by W.H. Wyatt.

Nesting Behavior of the Common Merganser

Ray Cunningham

During the years 1971-1973 I erected 30 waterfowl nest boxes on our property near Floodwood, St. Louis County, Minnesota. This parcel of land borders the St. Louis River and a one-acre pond adjacent to the cabin overflows into the river. Many mature black ash, quaking aspen, basswood, red maple and other lowland species thrive in this area. During the following years I released a number of hand-reared Wood Ducks on this pond. To my knowledge no Wood Ducks nested in this vicinity and I could account for but one Hooded Merganser nest. Subsequently a colony of each of these species was established.

Each spring before the river became totally ice-free, a number of Common Mergansers and Common Goldeneyes spent some time on our property, often directly opposite the cabin. However, they showed no interest in the nest boxes I provided and moved on as additional open water became available.

In the autumn of 1978 a single Common Merganser hen arrived and remained for two weeks during which time she inspected a number of the nest boxes. I suspect that this was an immature bird. Common Mergansers do not nest until their second spring. On 2 May 1979 a pair of Common Mergansers appeared on our pond. The hen was most likely seeking a nest site. She entered various nest boxes at this time, some of which were within 30 feet of the cabin. Hen Common and Hooded Mergansers often land on flat-top nest boxes. Seldom do they alight on tree branches — this is particularly true of the Common Merganser. Judging from numerous observations, drake Common and Hooded Mergansers do not follow their mates to these elevated perches but invariably land in the water nearby. This is in direct contrast to Wood Duck drakes who regularly perch on tree limbs as they follow their mates about.

I believe 1979 to be the first year a Common Merganser nested in our area. The resulting brood was the beginning of a colony which appears to be firmly established to this date (1991).

Nest boxes for Common Mergansers may vary considerably and still remain attractive to them. They may be of wood or various other materials. A number of nests that I have erected are of aluminum, and these too are satisfactory. Nest height is not critical. They may be quite low or as high as is practical for maintenance. Common Mergansers often nest on the ground. Subsequent years have added to this colony with this year's (1991) total being six successful nests. These birds lay eggs every other day and it requires 18 to 20 days to complete a ten-egg clutch. Of the six hens that nested in 1991, four completed clutches of ten eggs and two nests contained nine each. Thus, although they may initiate nests very early (3 April this year), they do not complete incubation much in advance of Wood Ducks. Wood Ducks lay an egg each day and a complete clutch averages 12 eggs.

Common Merganser drakes do not defend a territory as such; only the immediate area surrounding the hen — perhaps 10 to 25 feet — is defended. As the drakes court the hens, and also while hens are on nests, they often give ritualistic mating calls. These are resonant low-pitched sounds, nasal in character and given in a series of three notes. Typically these three notes are given in two seconds or less. The drake lifts his head and the neck is stretched upward. Hen's calls are coarse, rather guttural quacks, often given in flight. When nest box entry attempts are futile, due to adverse winds or an improper approach pattern, hens often quack upon alighting on the water.

Drakes may wait nearby for many hours while hens are on nests. Usually they remain near the river bank where the flow of water is less. They may vary their position occasionally and sometimes tuck their bills in their feathers and appear to doze. Drakes of each of these tree-nesting mergansers desert their mates immediately after incubation begins. They are not generally seen in this area until the following spring. This behavior contrasts with that of Wood Ducks who often remain and escort incubating hens to their nests for two weeks or more. The incubation period for all three species (30 days) appears identi-

Common Merganser nest hunting, April 1991. Near Floodwood St., St. Louis County. Photo by Ray Cunningham.

Common Merganser incubating in nest box, April 1991. Near Floodwood, St. Louis County. Photo by Ray Cunningham.

Young Common Merganser leaving nest box, June 1991. Near Floodwood, St. Louis County. Photo by Ray Cunningham.

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From the 58 eggs these six mergansers laid in 1991, 53 ducklings hatched. Each of the remaining five eggs had developed to the pipping stage. Eggs which are in a late stage of development or already pipped, succumb readily to chilling. Conversely, embryos in very early stages may survive identical chilling for extended periods — even days. My experience indicates this to be true of a number of precocial species. One hen deserted, and I was compelled to hatch her ten pipped eggs in a very primitive incubator. This consisted of improvised hot water bottles tended throughout the night. The six ducklings which survived this ordeal were placed in a nest with similarly aged ducklings. This hen and her brood of 16 left the following morning. These departures usually occur between 8 and 10 a.m. One unhatched duckling died in an advanced state of development from unknown causes.

By 9 April 1991, a total of seven eggs had been laid in the nest boxes. These eggs remained viable although the temperature dropped to 17°F this night. The ability to tolerate such hostile conditions is noteworthy. As is customary the eggs were buried in the litter but not attended by a female.

In response to the calls of the hen, the day-old ducklings join her in the water. Immediately they begin to splash and make shallow dives. Often they hop aboard their mother, grebe-like, and ride for considerable distances. I have video-taped 36 of these as they plummeted from the nest and gambolled their way across the pond to the sanctuary of the river.

The Common Merganser is primarily a fish eater. This often places it in conflict with man's interests. Moreover, the burgeoning human population remains a malady out of control. The fact that a species with a history of such dismal incompetence is calling the shots for every form of life on earth is frightening.

Let us hope that this unique and elegant merganser will survive our intrusion into its world. **3651 Rustic Place, Shoreview, MN 55126.**

1991 Peregrine Falcon Nesting Summary — Midwest United States

Patrick T. Redig and Harrison B. Tordoff

We are trying to identify each individual Peregrine Falcon (*Falco peregrinus*) holding a territory in the Midwest and to band and take a blood sample from each wild young produced and each young released by hacking. The object is to get a detailed look at the population dynamics of this new, artificially reconstituted population as it grows and eventually stabilizes. The peregrines, however, are not willing cooperators and some wild broods have already fledged unbanded. Of the 62 adult peregrines known to us to be on territory in the Midwest in 1991, 39 are individually identified, 12 more are banded but not yet further identified, two are unbanded, and nine are of unknown status, leaving no doubt that the extensive releases starting in 1982 (453 falcons through 1990, 98 more in 1991) are the source of the new population. Recognizing the strong interest in peregrines, we here present a brief summary of the 1991 breeding season. Pairs in cities are on buildings unless otherwise indicated; pairs on cliffs are so designated. Individual peregrines are identified by a two-digit number and a letter (i.e., 72V) engraved on a black band, or a name and number/letter (i.e., Chase 06T) for birds better known by a name given at release, or simply by a name (i.e., Fridge) for birds released before we began using the black bands in 1987. Hacked birds have the black band on the left leg; wild young have the black band on the right leg. All banded falcons also have standard U.S. Fish and Wildlife Service lock-on bands on the leg opposite the black band. "Wild" indicates birds produced in the wild, rather than hacked from captivity.

EGG-PRODUCING PAIRS

Location	Eggs	Hatched	Fledged
Multifoods Tower, Minneapolis, MN (Same pair, Muffin and Will 04Y, 3rd year)	5	4	3
North Central Life Tower, St. Paul, MN (Same pair, Meg and Beaner, 2nd year)	4	3	3
Control Data Corp., Bloomington, MN (Same pair, female 08V and male 04T, 3rd year; 2 young fostered)	3	0	2
NSP King Power Plant, Bayport, MN (Same pair, Mae 31V and male 13T, 2nd year)	4	3	3
Montgomery Ward Tower, St. Paul, MN (Same pair, Comet 11V and Maverick 05T, 2nd year)	4	4	4
Palisade Head cliff, Lake Co., MN (Same female, Fridge, 4th year; new unidentified male, silver band right leg, left bare)	4	4	3
N. of Kennedy Creek cliff, Lake Co., MN (Same pair, Blueberry 20P and green-banded male, 2nd year; nested in 1990 at Wolf Ridge Environmental Learning Center)	?	?	3
Mt. Leveaux cliff, Cook Co., MN (Female with black band, male unbanded)	?	2+	0

Rouchleau Mine cliff, Virginia, MN 3 2 2
(Female 25V, male unknown; 25V injured hitting wire 24 July; released at Virginia 8 August)

Bong Bridge, Duluth, MN ? ? 2
(2nd year pair present; female 15V, replaced band with 34R; male 6P3 hacked in Quebec City, 1986)

First Wisconsin Center, Milwaukee, WI 4 1 2
(Sibella 20V, 3rd year; new male, 74T; 1 young fostered)

State Capitol Building, Madison, WI 1+ 0 0
(New pair, adult male, first year female; both with black and silver bands; eggs laid on ledge, broken)

125 S. Wacker Building, Chicago, IL 4 2+ 0
(Harriet, 4th year; male black band left leg, silver right)

Cline Ave. at Lake Michigan, E. Chicago, IN 2+ 1+ 1
(Same pair, Phoenix 08P and male Floydy 34Y, 3rd year; 34Y died in May, new male in late June)

U.S. Steel Plant, Gary, IN 4+ 3+ 2
(Probably same pair, Susy Q 52P, Doc 55Y, 2nd year)

Commodore Perry Hotel, Toledo, OH 4 1 1
(Female, Canadian red band 3C7, 4th year; new male, Solo 20Y, from Detroit)

Trap Hills cliff, Bergland, Ontonagon Co., MI ? ? 1
(3rd year pair present; identity unknown)

Porcupine Mountains, Wilderness State Park,
Ontonagon Co., MI ? 3 0
(2nd year pair present; female CN died in July; released Bay of Fundy, New Brunswick, July 1989)

Cliff near Calumet, Keweenaw Co., MI ? ? 0
(New pair, male adult, black band; female died during incubation)

Nipigon, Ontario, cliff at mouth of Nipigon River ? "young heard begging"
(Red-banded adult male; subadult female, maybe unbanded)

Delta Winnipeg Hotel, Winnipeg, Manitoba 4 2 2
(Same pair, Maud 27P and male 5P9 hacked in Winnipeg, 1986, 3rd year)

Southwestern Bell Building, St. Louis, MO 2 1 2
(One young fostered; 1-year-old female; 2-year-old male; both released St. Louis)

NON-BREEDING PAIRS

Mayo Clinic, Rochester, MN. Male, Chase 06T, released Mayo Clinic 1988; wild female, Minnsoar 75V, from Control Data building, Bloomington, MN 1990. Present all season.

Colonnade Building, Hwy. 100 and I394, Minneapolis, MN. Female 81V, released in Cedar Rapids, IA 1990, and wild adult male 31T from St. Paul, 1989, present May to September.

Old Central High School and Duluth Hotel, Duluth, MN. Reported in July; both adult male and adult female with black bands on left leg, silver right.

Irving Park, Chicago, IL. Male, Pegasus 14Y; female, Silverstreak 42V?

Hyde Park, Chicago, IL. Unidentified pair, both banded.

Lansing, MI Unidentified pair present and copulating in early season.

Detroit, MI. Unidentified pair present in early spring; Solo 20Y moved to Toledo. Individual falcons seen through summer. Pair of Canadian red-banded falcons seen in mid-August.

University of Manitoba, Winnipeg, Manitoba. Wild male 1X produced by downtown Winnipeg pair (female 27P and male 5P9) in 1989 and female 52V released in Cedar Rapids, IA 1989, copulated but did not nest.

SINGLE AFTER-HATCHING-YEAR FALCONS IDENTIFIED

Wild female 72V (Multifoods Tower, Minneapolis 1990) and wild male 84T (NSP, Bayport 1990) seen separately at Northwestern Financial Center, Xerxes and I494, 72V early April, 84T in summer. 72V picked up in St. Cloud, MN on 18 April with injured wing (falcon strike?), permanently disabled. On 14 August, 84T was also found injured (falcon strike?) in Minneapolis, recovering at Raptor Center.

Male 86Y, wild young from Chicago 1989, injured and released in Louisiana, again in trouble, sent to Raptor Center, not releasable.

Female 93V, released in Cedar Rapids, 1990, downed by territorial peregrines in St. Paul on 20 July 1991, then hit by car, died at Raptor Center.

Male tentatively identified as Savage 15X, released Isle Royale 1990, seen in May and June on Isle Royale, MI.

Male 93T released in Cedar Rapids, IA 1990 present at hack site in Des Moines, IA in 1991.

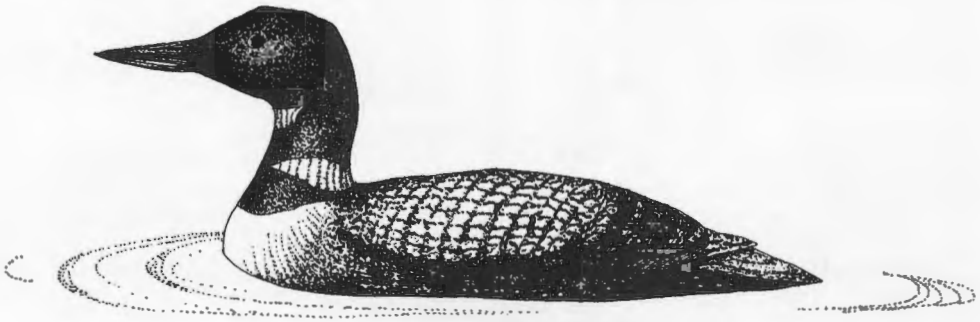
SUMMARY

A total of 30 pairs were on territories: 22 pairs nested; 17 pairs produced 36 fledged young (including four fostered); five nesting pairs were unsuccessful. Eight pairs nested on cliffs (two in old raven nests, one in hack box), 12 on buildings, one on a bridge, one under a highway overpass.

The number of fledged young per territorial pair was 1.2; young per nesting pair, 1.6; young per successful pair, 2.1.

Population growth is on schedule with our prediction made in 1989: predicted 1990, 20-22 pairs; 1991, 26-30 pairs. Actual count, 1990, 23 pairs; 1991, 30 pairs. The regional goal of 40 pairs should be reached in 1993 or 1994. Releases of captive reared falcons in other Midwestern states (Minnesota ended releases by hacking in 1989) will probably end soon thereafter.

A reasonable guess is that we are missing about 10% of the nesting pairs. Inevitably, unbanded birds will be an ever-increasing segment of the population as the wild breeders thwart our efforts to keep track of them. But before we are forced to give up bird-by-bird monitoring, we hope to learn lessons from these Midwestern peregrines that might be useful if similar efforts are required in the future. **The Raptor Center and Bell Museum of Natural History, University of Minnesota, Twin Cities, MN 55108 and 55455.**

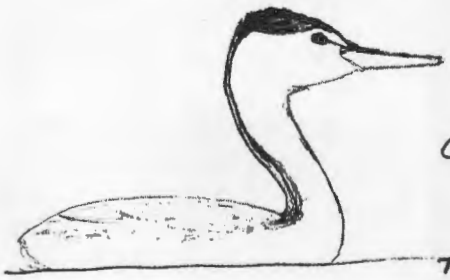


NOTES OF INTEREST

LAZULI BUNTING AT ELOISE BUTLER WILDFLOWER AND BIRD SANCTUARY — On Tuesday morning, 21 May 1991, I was walking near the bog area in the Eloise Butler Sanctuary at Wirth Park in Minneapolis, hoping to catch some remnants of the fantastic warbler wave that had come through the previous weekend. Although I didn't see any migrating warblers, I was treated to a view of an unusual and striking bird. My attention was first attracted to this bird by an unfamiliar call note coming from a clump of grass, a very dry and abrupt note. Very shortly, a colorful bird flew up into a small bush approximately 25 feet away, facing me directly from a low and open branch. I knew immediately that I had not seen this bird in Minnesota, nor was I familiar with it. The bird's entire head was a very light, but rich, blue color. Beneath the blue head on the upper chest area was a large chestnut-red patch which was cleanly divided from the head color by a sharp line. The remainder of the underparts were dusky white. The wings were dark and marked by two distinct white bars, the former of which was distinctly broader than the latter. The bill was short and conical. The size of the bird was slightly larger than a Common Yellowthroat seen just before in the same area. After 15 to 20 seconds in the bush, the bird flew into a small tree nearby. As soon as it had arrived in the tree, another bird flew at it and a noisy squabble and chase occurred. It is likely that this second bird was an Indigo Bunting which I had seen singing actively from this tree earlier. Unfortunately, the unknown bird flew off behind the sanctuary beyond the locked back gate and I could not pursue it. After arriving at work, I quickly wrote down notes on the bird. At home that evening, I looked through the National Geographic Society guide and quickly found the male Lazuli Bunting, which fit my observations very well. This bird is considered accidental in Janssen, *Birds in Minnesota,* 1987, which notes 13 observations all in the months of April, May and June. **Howard Towle, 7915 Western Ave., Golden Valley, MN 55427.**

NOTES ON A CLARK'S GREBE AT THIELKE LAKE — The status of Clark's Grebe (*Aechmophorus clarkii*) in Minnesota has not "officially" changed since Eckert's 1989 review article (Eckert, 1989). Four earlier records were recently found Unacceptable (Eckert, 1990a) and the 29 April 1989 record from Big Stone Lake was submitted and also found Unacceptable (Eckert, 1990b) although this latter record or any of the other records could be reconsidered by the Minnesota Ornithological Records Committee (MORC) in the future. All four of the

records currently found Acceptable by MORC are from the month of May (Eckert, 1989). Like many optimistic and opportunistic birders in Minnesota, I've sorted through Western Grebes at Lake Osakis, Todd County and various lakes in Big Stone County whenever possible. In addition, Sue Barton and I spent several days in December 1989 along the Lower Colorado River Valley in Arizona where both species winter together. I was convinced that bill color could be reliably detected from a considerable distance, depending upon light conditions, and gained some familiarity with their calls. Both species were actively calling during December, so vocalizations can be listened for at all times of year. All of this preparation paid off handsomely when I discovered a "classic" Clark's Grebe at Thielke Lake, Big Stone County, on 8 June 1991 at 3:20 p.m. Strong east to southeast winds had pushed all of the waterfowl near the southwest shoreline, where they could be observed from the road less than ½ kilometer away. Lighting was excellent as I looked toward the northeast with the sun obscured by cirrus overcast. Through a Kowa TSN-4 spotting scope with 40x eyepiece, the orange bill was directly compared with the greenish-yellow bills of eleven Western Grebes that were present. The red eye was completely surrounded by white on all sides, except for the thin lore line. The upper portion of the nape stripe was thinner by direct comparison with Western Grebe but the width of the lower portions were similar. The lower portion of the nape stripe was slightly less black than that of Western Grebe, producing a



Clark's Grebe

—Peder Svingen
8 June 1991

Thielke Lake
Big Stone County

grebes near southwest shoreline ~ ½ km
looking northeast 3:20 to 3:50 pm
cirrus overcast, sun not visible in sky
Kowa 40x – TSN4

reddish eye completely surrounded by white except line of facial skin that goes thru lore

bill orange, straight culmen
dagger shape overall; bill of Western Grebe in same vicinity greenish-yellow
bright orange stands out well during side-by-side comparisons with ~ 10 Western Grebes present

nape stripe thinner on upper portion of nape, compared to Western Grebe (side by side, viewed from back) – lower part of nape on Western Grebe appears blacker

sides and especially flanks paler than Western Grebe; flecked and dabbled with light gray

crown and nape stripe black; contrast slightly with gray back, wings

pale secondary coverts seen at rest and during wing flap – breast and belly white except 3 faint parallel lines across lower neck

occasionally pulling at leaves and stems of barely exposed vegetation; legs & webbed feet gray

6 pm. Bird relocated farther out on lake, diving repeatedly.

6:20 pm courtship display toward Western Grebe; head turning (symmetric maneuvers), head bobbing, and head near water with neck extended. Display for ~ 1 minute, then Western Grebes paired up and continued courtship display.

11 (not 10) Western Grebes present. ~ 6:45–7:15 Hearty Kyllingstad present.

"four-toned" effect on the upperparts of the Clark's Grebe: black crown and upper nape stripe, slightly less black lower nape stripe, pale gray back, and whitish sides. The flanks and sides of the Clark's Grebe were sparsely flecked and dabbled with pale gray, with the sides and especially the flanks significantly paler than Western Grebe. The Clark's Grebe flapped its wings once and pale secondary coverts were seen. The breast and belly were white with three very faint, parallel lines across the lower part of the foreneck. The webbed feet and legs were dark gray. The Clark's Grebe usually remained on the periphery during display and courtship behavior by the Western Grebes. Only once was courtship behavior by the Clark's Grebe observed. It approached one of a pair of Western Grebes and began head-bobbing, followed by symmetric head-turning. The two birds then extended their necks along the surface of the water as they faced one another. The entire interaction lasted about one minute before the two Western Grebes again paired up and went dancing across the water in the Rushing Ceremony (Nuechterlein and Storer, 1982). The Clark's Grebe frequently pulled at the leaves and stems of partially submerged vegetation, which was not a behavior exhibited by the Western Grebes on the lake. It was unclear whether it was gleaning insects or seeking leaves for presentation to prospective mates. Mate feeding among the *Aechmophorus* grebes reportedly occurs after pairing and just prior to nest building, rather than during the elaborate courtship ceremonies (Nuechterlein and Storer, 1989). After making phone calls, I returned to Thielke Lake and showed the bird to Martin and Ellen Gunderson who were monitoring an American Avocet nest at the lake. Henry Kyllingstad arrived about 6:45 p.m. and Steve and Diane Millard relocated the bird after the rest of us had departed. The bird could apparently not be found the next day, when numbers of Western Grebes on the lake had increased.

LITERATURE CITED

Eckert, K. R. 1989. Identification and status of Clark's Grebe in Minnesota. ***The Loon*** 61: 99-108.

———. 1990a. Proceedings of the Minnesota Ornithological Records Committee. ***The Loon*** 62:12-14.

———. 1990b. Proceedings of the Minnesota Ornithological Records Committee. ***The Loon*** 62:134-136.

Nuechterlein, G. L. and R. W. Storer. 1989. Mate feeding by Western and Clark's Grebes. *The Condor,* 91: 37-42.

———, ———. 1982. The pair-formation displays of the Western Grebe. *The Condor,* 84: 350-369.

Peder Svingen, 151 Bedford St. SE, Minneapolis, MN 55414.

WESTERN SANDPIPER DOCUMENTATION — On 21 May 1991, I observed two Western Sandpipers at Aggassiz NWR in Marshall County. I have scrutinized hundreds of "peeps" in Minnesota in both spring and fall, but I have previously never observed what I felt was this species until I found this pair in with a mixed flock of Semipalmated and Least Sandpipers. The lighting was perfect — with the evening sun at my back — and thus I could clearly see the yellow-green legs of the Leasts and the black legs of the Semipalmated and Westerns. The most striking feature of the Westerns was the sharp contrast between the very pale grayish color of the folded wing and the very colorful rusty-edged scapulars. Least Sandpipers often have a lot of rust color on the head and scapulars, but it blends in with the overall warm brownish color of the plumage and adult Semipalmateds never look this reddish on the head or body. The bills of the Westerns were remarkably large for a peep — clearly longer than the Semipalmateds next to them, and on one individual the bill was slightly drooped. Their bills were wide-based and more tapered toward the tip than the also drooped, but thinner bill of the Leasts and the shorter, tubular bill of the Semipalmateds. I also noted the breast markings to be neater and more distinct than on the Semipalmateds or Leasts. These chevron-like marks did not appear to extend below the breast along the flanks, however. Despite this difference with the standard field guides, I am convinced these were

Western Sandpipers. When the entire mixed flock of peeps flew, I followed the two Westerns, noting that they did not have a white rump (White-rumped also have a lot of reddish color on the head and scapulars, and can have a droopy bill), but I could not pick out the Western's call from the high "kreet" of the Leasts and the low "churk" of the Semipalmateds. **Karl Bardon, 8150 W. River Road, #346, Brooklyn Park, MN 55444.**

Associate Editor's Note: It is curious that the scapulars are described as "rusty-edged". Adult alternate-plumaged Western Sandpipers are normally rusty on the basics or centers of the scapular feathers, not on the edges. — Kim Eckert.

YELLOW-THROATED WARBLER IN BROWN COUNTY — Bill Wicklow and I were walking along County Road 10, Eden Township, Brown County on 7 April 1991, when we came to the Minnesota River where we stopped to do some birding. I noticed a small bird in the lower branches of a tree about 15 feet off the ground. All I was able to see was a small patch of black and yellow and a grayish back. I assumed it was a Yellow-rumped Warbler, but when the bird moved from behind the branches, I could see immediately that it was a Yellow-throated Warbler. It had a bright yellow throat, black face patch, white eye line and white ear patch behind the black face. It also had a plain gray cap, back and upper tail. The tail was long and square on the end. There were two large wing bars on the gray wing and the legs were dark. The black face extended into a large black stripe down the flank with several other black spots along this stripe on the flank. The belly and under tail coverts were all pure white. The bird also had a long slightly decurved bill. We watched the bird for about three minutes before it flew off along the road. Several minutes later we relocated the bird along the strip between the river and the road about two hundred feet farther west. It was in a tree slowly moving about the lower branches about 15 feet above the ground. After about five minutes it flew to the top of a smaller tree where it began singing. It was very faint at first, becoming loud enough for me to hear after three or four songs. The song was high-pitched and faster — somewhat like a Yellow Warbler's song. The bird then flew over us and across the road to the edge of a large tree where it sat for a couple of minutes. It then flew back to a tree on the river bank where it moved about the tree for another five minutes before we watched it fly across the river to a large tree in Nicollet County. We tried to relocate the bird for at least another five to ten minutes, but were unsuccessful. **Al Bolduc, 4400 Oakland Ave. S., Minneapolis, MN 55407.**

BLUE-WINGED X CINNAMON TEAL IN AITKIN COUNTY — An unusual teal discovered by Nelson in the late evening on 8 May 1991 was relocated by Svingen the following afternoon in the rice paddies along County Road 56, northeast of Aitkin. The bird was identified as an apparent hybrid between Blue-winged (*Anas discors*) and Cinnamon (*A. cyanoptera*) Teal. Other observers confirmed characters of both parent species during additional observation through 10 May 1991. It lacked the deep, brick-red tones of the adult male Cinnamon Teal. Views through a spotting scope from 30 yards confirmed this impression of "washed-out" rusty coloration and revealed extensive brown spotting that mimicked the male Blue-winged Teal pattern. Side-by-side comparisons with male Blue-winged Teal revealed minimal differences in overall body bulk and bill size, rather than the expected larger body (Palmer, 1976) and longer bill (Jackson, 1991) of typical Cinnamon Teal. Hybridization was suspected and we independently recorded descriptions which were combined into the following. DESCRIPTION: Bill dark, large, spatulate. Legs orange. Iris bright red. Greenish wash on crown and from eye to nape, filling in the posterior supercilium and auricular area, then becoming attenuated on the upper nape (depending on the lighting, this looked either deep kelly green or dark gray). Small, triangular-shaped, pale mark in front of eye. Head otherwise pale reddish-brown. Cinnamon tones strongest on cheek, sides and flanks. Foreneck, breast, sides and flanks with pale reddish-brown wash and distinct brown spotting, becoming finely stippled on sides of neck and lower nape. Spots most prominent on flanks

near dark crissum, where the conspicuous white patch of Blue-winged Teal is not present. Brown spotting on abdomen seen during tip-feeding behavior. Undertail coverts dark. Tail relatively short with gray-brown upper tail coverts. Tertials edged with buff. Brown spots extend onto a portion of brown scapular feathers. During several brief flights, white wing linings contrast with gray flight feathers. Leading edge of underwing dark. Upperwing shows a powder blue forewing patch and green speculum. DISCUSSION: The wing patterns of Blue-winged and Cinnamon Teal in the field are not separable (Jackson, 1991). The overall cinnamon color, iris color, and wing details of the Aitkin County bird are entirely consistent with Cinnamon Teal. The spotted underparts are not consistent with Cinnamon Teal, although two geographically isolated races from Columbia and the nominate race from South America show dark spotting on various aspects of the underparts. (Madge and Burn, 1988). Male Cinnamon Teal in first alternate plumage show subdued body coloration but otherwise resemble the adult (Jackson, 1991). Even in "eclipse" plumage, males do not show distinct spotting, although mottling may be present (Oberholser, 1974). Plumage characters of the Aitkin County bird that suggest hybridization include the dark wash on the crown and head, which probably represents a combination of the two species' plumages. The triangular mark in front of the eye may represent the tip of Blue-winged Teal's facial crescent, although an outline of the crescent was not detected. The distribution of the spotting and the feeding behavior was similar to the Blue-winged Teal. The tip-feeding behavior was determined in part by habitat, but the rice paddies also had shallow, grassy edges that might be attractive to a Cinnamon Teal. Hybrids between these two species, although rare, have been previously reported from the Great Plains (Madge and Burn, 1988).

Literature Cited

Jackson, G.D. 1991. Field identification of teal in North America. *Birding,* 23: 124-133.
Madge, S. and H. Burn. 1988. *Waterfowl.* Boston: Houghton Mifflin Co.
Oberholser, H. C. 1974. *The Bird Life of Texas.* Austin: UT Press.
Palmer, R. S. (ed.). 1976. *Handbook of North American Birds,* Volume 2.

Peder Svingen, 151 Bedford St. SE, Minneapolis, MN 55414, Warren Nelson, 603 Second St. NW, Aitkin, MN 56431.

SAY'S PHOEBE IN POLK COUNTY — At 7:15 a.m. on 1 May 1991, I noted a bird briefly hover in front of a south-facing picture window of my home located ten miles southeast of Crookston. The bird then landed on our deck railing corner for a few seconds then flew to the other corner of the deck where it perched a few seconds more. I viewed the bird from about 20 feet through the patio door during this time and noted immediately the robin breast-type coloring on the belly and thought first of Varied Thrush, which hit a window at the university campus in the spring of 1990 and now came to mind. It clearly was not a Varied Thrush for it lacked the breast band, had the flycatcher profile, and wasn't big enough. The back was dark gray which clearly contrasted with the dark head and eye. Faint wing bars were noted. After a total viewing time of about one minute from 20 feet, the bird then flew north of the house and landed on the light snow-covered ground. I then grabbed the Robbins field guide to confirm this new bird. I viewed the bird through an open window with a spotting scope for two to three minutes and studied again the rusty belly and dark head contrasting with the lighter back. I did not get a good look at the tail which, according to Robbins, is black. The bird seemed a bit out of place as it sat on the ground since I so seldom see flycatchers on the ground. It was overcast, temperatures in the low 30s and very few flies to be caught! Say's Phoebes are a western species, but Stewart, in *Breeding Birds of North Dakota,* lists them as breeding in Nelson County located about 65 miles west of this sighting. We had relatively mild weather the week before with temperatures in the 70s on the 24th, 25th and 26th, and accompanied by strong (20 mph, gusting to 30) south winds from 24 through 28 April. The day before the sighting, we had three to four inches of snow driven by strong northwest winds which may have influenced the bird showing up at the

eastern edge of the Red River Valley. I did not see the bird again, but I was out of town until 7 May. A male Northern Cardinal was also present around our home and associated aspen grove the last three to four weeks of April which may have been associated with the weather patterns as well. Janssen, in *Birds in Minnesota*, notes that seven of the ten Minnesota Say's Phoebe records have been from western counties, the most northerly being Clay. This sighting is therefore the most northerly record for the western part of Minnesota. **W. Daniel Svedarsky, University of Minnesota, Crookston, MN 56716.**

A SCISSOR-TAILED FLYCATCHER IN DULUTH — On 19 July 1991, I received a phone call from Bob Ulvang, an experienced birder from Duluth now living in California, who had just seen a Scissor-tailed Flycatcher (*Tyrannus forficatus*) at Park Point. While in town for a visit, Bob decided to hike out on the Point and found the bird in the sandy, weedy field just beyond the Sky Harbor Airport buildings. Later that afternoon, I went to the area and relocated the flycatcher about a half mile south of the original site near the south end of the airport runway. I watched the bird as it hawked for insects for about 15 minutes with 10X binoculars with the sun at my back at a distance of 50-100 feet. The identification was straightforward, and the bird was judged to be an adult male because of its very long tail, an estimated eight or nine inches in length, nearly two-thirds the total length of the bird. Also noted were the bright pink axillaries, visible in flight, the paler pink wash on the flanks and under tail coverts, and the uniform pale gray head, all features which eliminate Fork-tailed Flycatcher, the only similar species. The breast and back was also pale gray, the wings were dark gray or blackish, and the black rectrices were edged with white. Several birders were notified of the sighting that day and evening, but unfortunately no one was able to relocate it the next day. (As a personal note, thanks to Bob Ulvang, the sighting of this individual represented the 300th species I have seen within the Duluth city limits). **Kim Eckert, 8255 Congdon Blvd., Duluth, MN 55804.**

MORE ON WOOD DUCK OLFACTION — I wish to comment on the article by W. J. Breckenridge as regards olfactory perception in Wood Ducks (***The Loon*** Vol. 63:137). I began studying Wood Duck olfaction in 1964. Since then I have recorded a multitude of observations and many other instances, not recorded, of this behavior. I am convinced that Wood Duck hens can very definitely detect foreign odor at the nest. Their reaction is so readily apparent that it never ceases to amaze me that it is so seldom recognized. The chemical composition of human body odors varies considerably. If a particular incubating bird does not react to scent disturbances, one must make an effort to dispense an odor of more intensity. My experience indicates that the majority of hens will react from simply handling nest contents. Many have (flared from nest upon returning) when I merely ran the palm of my hand around the nest entrance and did nothing to disturb the interior. Types of scent that may be utilized for experiments are limited only by one's imagination. May I suggest some of the vast array of trapping musk or urine scents which are readily available at sporting goods stores. In the 1960s I experimented with such scents but soon discovered that incubating hens can detect much more subtle smells. If one experiments with these trapping scents, do not place the scent within the nest box as the hen may desert. A small amount sprayed on the box exterior is adequate. Often returning incubating hens have flared time and again from nests I have inspected during their absence. Occasionally they have refused to enter for hours. An incubating Wood Duck returning to an undisturbed nest does so directly and with no hint of hesitancy. I have observed hundreds of such entries. The flaring, the refusal to enter, the obvious agitation are such foreign behavior to a normal entry that one must somehow account for it. When visual disturbance, outside intererence, another hen in the box, squirrel or other animal inside, alternate possibilities, etc., have been eliminated the remaining explanation becomes justifiable. In the 1960s, returning Wood Ducks laid 600-800 eggs annually in boxes I erected. I indeed had occasion to view large numbers of birds. Hundreds of these eggs were donated to the Northern Prairie Research

Center of Jamestown, North Dakota. This was at a time when no such numbers of eggs were available to them in the entire U.S. Now of course the Wood Duck is the darling of duckdom and nest boxes proliferate many areas. Finally, I have spent many hours reviewing the literature on the olfactory sense of birds. One comprehensive study (B.G. Bang, 1971. Functional Anatomy of the Olfactory System in 23 Orders of Birds. Acta Anatomica, Supplementum 58, 76 pages, S. Karger, Basel, etc.) describes the olfactory structures of Wood Ducks and lists them 17th of 124 bird species studied in olfactory perception. **Ray Cunningham, 3651 Rustic Place, Shoreview, MN 55126.**

ALWAYS? — WELL, ALMOST ALWAYS — Always is a slippery-slope word, which one should use with caution. For instance, wouldn't you think it fair to say that when a female Wood Duck completes hatching out her brood, she always drops to the ground near her nest and pipes the ducklings down to her? Well, last spring I learned about always and Wood Ducks. Because all the other Wood Duck houses around had long since been emptied of their young occupants, it seemed strange that this one house had this one hen, still going about her morning and evening rest breaks. Perhaps she was sitting on infertile eggs or perhaps there were too many for her to keep warm continually and they had become chilled and died. One way to find out: up the ladder and open the nest. There sat our little friend with no intention of leaving. As a last resort, she was lifted off and away she went, complaining. And no wonder she hadn't wanted to leave, for inside a circle of five eggs were four hatched out-ducklings. Lid back on, down the ladder. No doubt that tomorrow would be the big day. About 11:00 A.M. she took up her half-out position in the nest entrance. By then the camcorder was in place and ready. Soon the familiar ritual began. Finally, after two and a half hours, she disappeared into the nest for the last time. However, she failed to reappear and drop to the ground. Instead, out popped a little duckling. Then another and another. Then several long pauses followed, unlike the usual way of an entire hatch bursting out pell-mell in just a few minutes. On three occasions, with attending commotion, she would put her head out of the entrance and rest her bill momentarily on the lower edge, only to disappear. Each time she did this a chick or two would emerge. Then it was over. Nine ducklings had made their leaps for life and were wandering aimlessly about until she came out and dropped down and led them off to the water. Hereafter, it might be prudent for one to say that *almost* always a mother Wood Duck precedes her ducklings from the nest. **Paul Carson, 6001 Pine Grove Road, Edina, MN 55436.**

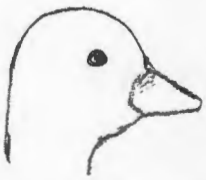
IMMATURE FERRUGINOUS HAWK IN WILKIN COUNTY — A large Buteo was observed for nearly two hours by Tony Hertzel and myself at Rothsay Wildlife Management Area, Wilkin County on 1 May 1991. Its posture on the ground was more erect than Red-tailed Hawk. The head appeared whitish, except for light brown streaking that formed an eye patch. When the bird looked directly toward us, the eye patches formed a "V". There were also faint streaks on the crown and nape. The wings and back were brown, except for two rows of buffy scapular feathers. White patches at the base of the primaries were noted. We repositioned ourselves on different roads in the area but remained about ½ mile away, looking through a Kowa TSN-4 spotting scope with 40x eyepiece. After 45 minutes of studying the bird on the ground, it was decided that flight views were needed to confirm the identification. It briefly perched in trees twice, but otherwise favored the ground. There were brief side-by-side comparisons on the ground and in flight with an immature Red-tailed Hawk that flew in and harassed the Ferruginous Hawk. During several successive views in flight, the dramatic white wing patches were carefully studied. These patches were two to three times as wide as the pale patch that may be shown by immature Red-tailed Hawk. The bird appeared "long" in the wing and glided with a flight profile that recalled Swainson's Hawk. The upper tail coverts and tail appeared whitish, gradually becoming buffy near the tip. During inflight views from less than 200 yards, the terminal tail showed sparse spotting and light barring, especially on the outer webs. The pale "leggings" did not contrast with the rest of the

underparts, although the tarsi were darker than the plumage. This was noted in flight and on the ground. It was carefully noted that the leading edge of the underwing lacked the dark patagial mark of Red-tailed Hawk. The entire underparts were pale to whitish, without a belly band. The adult Ferruginous Hawk's field marks were not helpful for identification of this immature. We relied upon a combination of perching behavior, flight dihedral, wing shape, extensive white primary patches, whitish tail, and absence of patagial mark to confirm the identification. We identified ten other species of hawks earlier in the day and welcomed the direct comparisons at Rothsay WMA with immature and adult Red-tailed Hawks. **Peder Svingen, 151 Bedford St. S.E., Minneapolis, MN 55414.**

NORTHERN MOCKINGBIRDS IN PIPESTONE COUNTY — We went birding on 11 May 1991 and at 9:00 A.M. we stopped to check the trees and bushes that surrounded an old gravel pit north of Edgerton, Pipestone County. We spotted a bird perched on the top of a tree and said, "What's this, a shrike"? At the same time the bird flew towards us, chasing a robin and showing large white patches on the wings and tail. A second mockingbird showed up which was also chasing the robin. One perched in a tree near us and we noted the dull gray color, darker above and lighter below, the slender bill, and it had no mask. We heard the mimicking sounds it made. We watched it for a few more seconds, when it flew away. In the next half hour we saw and heard it several times. It was very aggressive as we saw it chasing robins again. We had just seen our first Northern Mockingbird for Pipestone County and for Minnesota. On 15 May one bird was seen and heard (recorded) for 15 minutes. It was last seen on 18 May. **Nelvina DeKam, Rt. 2, Box 90, Edgerton, MN 56128 and Johanna Pals, Rt. 1, Box 132, Edgerton, MN 56128.**

A RECORD LATE DATE FOR GYRFALCON — Gyrfalcons invaded early and in good numbers throughout the prairie provinces of Canada and the northern United States during the autumn of 1990 (Kenn Kaufman, 1991, *American Birds* 45: 63-66). Minnesota reports had dwindled by the end of winter and the species was not on our "wish list" as Tony Hertzel and I approached the longspur pastures at the Felton Prairie on 1 May 1991. Two raptors circling north of Clay County Road 26 appeared similar in size from a distance, so we drove to within 125 feet and stopped for a closer look. One was a Red-tailed Hawk but we both exclaimed that the other bird was a falcon, just before it dropped from an altitude of 50 feet and skimmed the ground as it then flew northward. A lack of dark feathering in the axillary region was specifically noted, since we initially looked for field marks of the Prairie Falcon. However, the entire dorsum, including wings, back, rump and tail, was uniform pale gray, except for the outermost primaries which were shaded slightly darker gray (not black as in Northern Harrier). There was no white on the rump. We observed two male Northern Harriers less than ten minutes later and noted their obvious white rump, tail bands, "V" shaped dihedral, black primary tips, and leisurely flight as they tipped from side-to-side in similar wind conditions. While the falcon flew close to the ground, we had good looks at the upperparts. The back had a prominent "humped" appearance. The long tail was like an extension of the body, narrowing slightly with "clipped off" corners. The wing tips appeared pointed since the bird was flying directly into a 20 mph headwind. We drove 50 mph for about a mile, which allowed us to gradually overtake the falcon and stop the car for a second look. There were no distinguishing marks on the head, face, or underparts. The bird continued flying northwest, rising to approximately 50 feet altitude as it left the escarpment. Its powerful flight directly into a brisk headwind must have been at 50 mph or greater. Overcoming our initial disbelief because of the late date, we concluded that the bird was a Gyrfalcon. The previous latest date for Minnesota was 17 April (Janssen, *Birds in Minnesota,* 1987), which nearly coincided with the latest date for migration through North Dakota on 18 April 1971 (Gordon Berkey, unpublished data, October 1989). **Peder Svingen, 151 Bedford St. SE, Minneapolis, MN 55414.**

ROSS' GOOSE IN ROCK COUNTY — The gravel pit ponds near Blue Mounds State Park, Rock County, provide open water for migratory waterfowl in a county where wetlands are scarce. Thirty Snow Geese were there on 21 April 1991, along with one Ross' Goose (*Chen rossii*). The birds were only 50 yards away for the first five minutes of observation. The flock then entered the water and swam to a sandbar that was 125 yards away. The Ross' Goose immediately stood out from the rest of the flock, due to its smaller size and immaculate white plumage. Most of the white morph Snow Geese either showed ferrous staining on the face or a gray wash on the wings, nape, and head. The smaller size of the Ross' Goose was



adult Ross' Goose
gravel pit pond near Luverne
Rock County, MN
21 April 1991
1:15 to 1:45 pm
looking north
intermittent sun
broken stratocumulus
40x eyepiece, Kowa TSN-4
seen at 50 yards for ~ 5 mins.
flock entered water, swam
to different sandbar
125 yards away
- smaller, rounded head
- bill triangular shape, lacks grinning patch, bluish at base of upper mandible, bill otherwise pink-orange
- "clean" white plumage
- no gray wash or ferrous staining

Snow Goose
- longer, thicker, longer bill with dark gape patch ("grinning patch")
- forehead slopes to culmen
- ferrous stains on face
- "dirtier" plumage with gray wash on wings, nape, and face of most white morph individuals
- about 15% larger size overall with bulkier body
- total of 30 Snow Geese

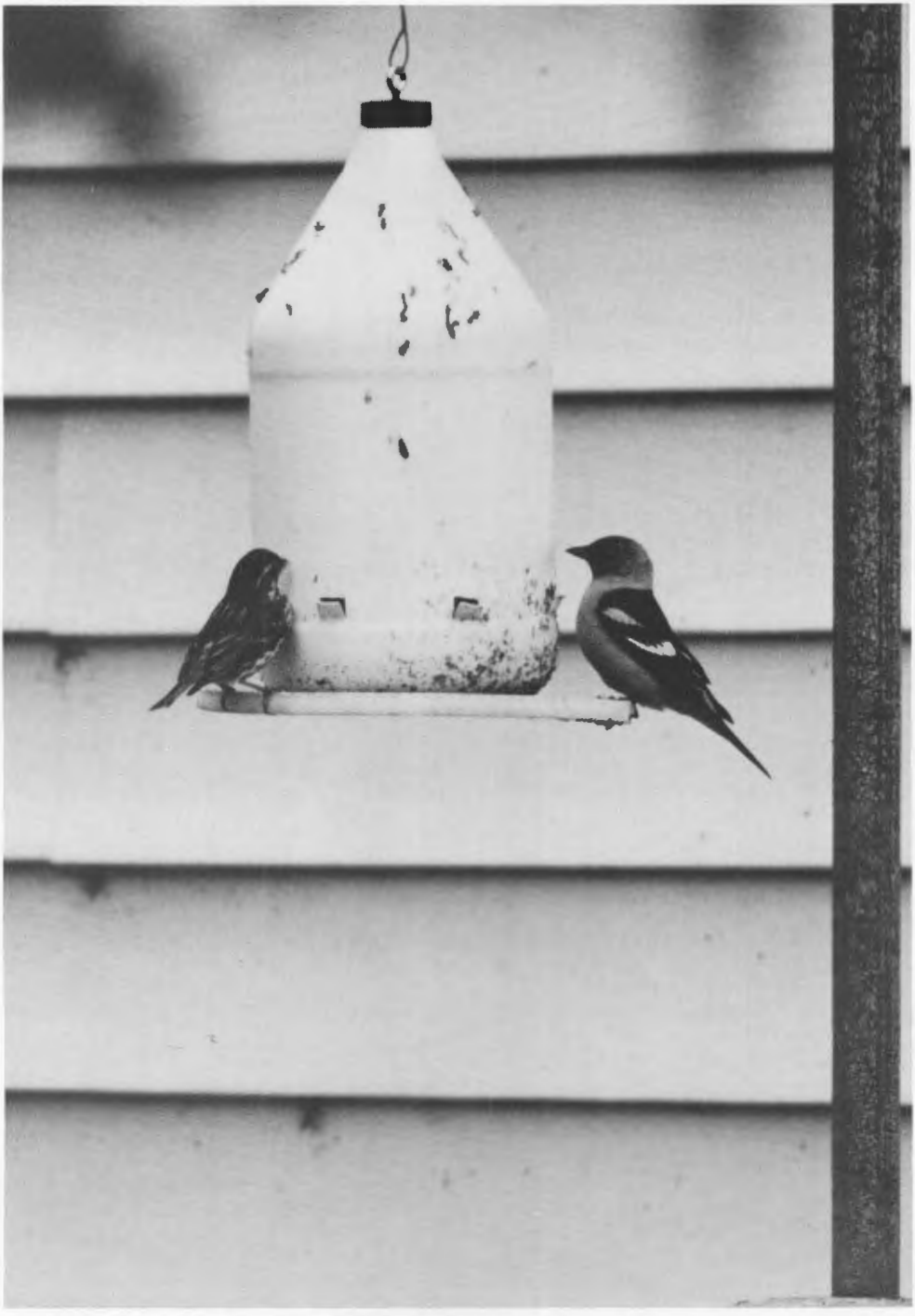
Peder Svingen

most evident as it walked across the sand, directly behind a Snow Goose. Through a 40x eyepiece on a Kowa TSN-4 spotting scope, the smaller, more rounded head and the smaller, triangular-shaped bill was studied. The bill lacked a dark "grinning patch" and had bluish discoloration at the base of the upper mandible. This was the fourth Ross' Goose that I've discovered this spring (one in Renville County and two in Lincoln County) and other observers have located them in at least four other counties. Ross' Goose may eventually achieve Regular status in the state. **Peder Svingen, 151 Bedford St. SE, Minneapolis, MN 55414.**

WORM-EATING WARBLER IN MINNEAPOLIS — At about 2:00 P.M. on 18 May 1991, I saw a Worm-eating Warbler at William Berry Park in southwest Minneapolis. I was on a footpath near the bottom of one of the park's wooded hills when I first spotted the bird. It was about 35 feet away, standing on a branch several feet above the ground. Although it remained on its perch for only about twenty seconds before it disappeared, my view during this time was unobscured, and I was able to observe the following through 7X binoculars. The bird was a medium-sized warbler with a thin, average-sized warbler bill. The legs were pink. The upperparts were a plain, light brownish-olive. There were no wingbars. The underparts were unmarked, a light buffy color darkening toward the upper breast and throat. There was a blackish line through the eye. Above this line there was a narrow, buffy area, then another blackish stripe and, finally, a light buffy crown. Not long after I lost sight of the bird I hear its short, dry, Chipping Sparrow-like song. A few minutes later, just before I left the area, it sang again. Two hours later I returned to the park with Greg Pietila. We didn't see the warbler, but we heard it sing three times, always from the same wooded hillside, during our half-hour plus search. **Steve Carlson, 2705 Dupont Ave. S., Minneapolis, MN 55408.**

SUMMER LECONTE'S SPARROW — On 9 May 1991, while birdwatching at Bunker Hills Park, Anoka County, I heard at least two, possibly three, LeConte's Sparrows singing from the marsh. This marsh, still officially known as Bunker Lake, has a mixture of wetland vegetation ranging from tall cattails to other shorter grasses. I went out into the marsh and saw one sparrow running through the short grass, noting the white central crown stripe, the finely streaked nape, and the very bright buff on the head. Although I am very familiar with this species as a migrant in Anoka County, I had never heard them singing in this area before. The sparrows were later seen or heard on 12 and 20 May. On 14 June, I returned to the marsh and found two sparrows in the same location. Steve Carlson visited the park and verified the presence of two LeConte's Sparrows on 18 June. At no time was any breeding evidence seen (nest, carrying food, etc.), but the birds were always seen in the same location. One bird, which I assumed was the male, would fly off at my approach. The other remained in the area, chipping repeatedly. In July I checked the marsh three times but failed to find the sparrows. It is a rather unusual occurrence to have LeConte's Sparrows in the southern part of the state during the summer season. In the 1950s and 1960s this species was found as far south as Lac Qui Parle County in the west and Dakota County in the east (Janssen, *Birds in Minnesota*). **Gregory Pietila, 11830 Juniper St., Coon Rapids, MN 55448.**

WESTERN TANAGERS, SPRING 1991 — On 11 May 1991, I was birding in Goodhue County at Hok-Si-La Park near Lake City and observed a male Western Tanager. This area is a great place for observing migrating warblers and I added several to my life list. Being a novice in rare bird sighting disciplines, I made several rookie mistakes. I did not take immediate field notes and did not confirm this sighting with other experienced birders or M.O.U. members in the area. I was able to observe this bird closely, perhaps at a distance of 50 to 75 feet and had time to refer to my Peterson field guide to verify that this bird matched the illustration and description for a male Western Tanager. I was not able to distinguish any calls being made by the bird. The bird was of Rose-breasted Grosbeak size, had a yellow body with black wings, back and tail and a white wing stripe. The yellow and black colors were similar in tone to a summer American Goldfinch. The head and face were a rich red color. The bird flew from his perch in the branch of a deciduous tree after being observed by myself and another birder. This bird was then observed by a large group of birders going through the area. I was again able to observe this bird within about 200 yards of the first sighting location. On 14 May, I came back to bird in this area but did not see the tanager. This area borders the Mississippi River and is composed of mixed growth deciduous trees and shrubs. A former boy scout camp, it has picnic and camping facilities and is managed by the city of Lake City. **Harlan Hostager, 304 2nd St. W., Zumbrota,**



Western Tanager, 1 May 1991, Cotton Lake, Becker County. Photo by Anthony Hertzel.

Western Tanager, 9 May 1991, Minnieska , Winona County. Photo by Wilfrid Viring.

MN 55992.

Editor's Note: There were two other records of Western Tanagers in Minnesota during May 1991. One was photographed at Minnieska, Winona County, on 9 May 1991. Another individual spent several days at a feeder at Cotton Lake, Becker County.

YELLOW-THROATED WARBLER IN GOODHUE COUNTY — On 1 May 1991, my wife Amy Proffit and I drove to the Vasa area (Belle Creek bottomlands) in Goodhue County. We arrived around 10:30 A.M. on a cold (40°F) gray day. We drove to the creek but, as several inches of water were flowing over the road, we turned around. Near the bend in the road we heard and saw good numbers of birds, so we stopped and I followed a deer path into the woods toward the creek and immediately flushed many White-throated Sparrows, a Rufous-sided Towhee, a House Wren, Blue-gray Gnatcatchers and a Yellow Warbler. I continued down the path seeing several Yellow-rumped Warblers and Blue-gray Gnatcatchers when I noticed a bird with a yellow throat foraging among the budding leaves. I was able to observe the bird with my 10x50 Bushnell binoculars, noting the yellow throat color forming a bib, white belly, sides streaked with black, black ear area and face with a white eyebrow and prominent white half-circle under the eye, dark blue-gray upperparts and two white wing bars. After observing the bird for nearly five minutes, I was sure it was a Yellow-throated Warbler even though it did not vocalize. Unfortunately it had left the area by the time I was able to return with Amy. **Ed Jacobs, 5612 Pillsbury Ave., Minneapolis, MN 55419.**

WHITE-EYED VIREO AT NERSTRAND WOODS STATE PARK — Our search for the dwarf trout lily at Nerstrand Woods State Park in Rice County on 28 April 1991 led to a singing White-eyed Vireo (*Vireo griseus*). Its distinctive song was first heard at approximately 8:30 A.M. and the bird was located a few minutes later near the Beaver Creek Trail. The song was taped and a brief plumage description was recorded. I hurriedly found Sue and we relocated the bird for additional viewing. It stopped singing at 9:00 A.M. and was not

seen or heard by us thereafter. Field marks that were recorded included the dark vireo bill, white iris, mustard-colored lores with yellow sweeping across the base of the upper mandible, greenish-yellow forecrown, gray nape, greenish back, two white wingbars, pale gray throat, and a wash of yellow-green along the sides that contrasted with the whitish breast and belly. We did not notice an eye line and did not see the rump or tail well as the bird moved through the foliage. We were familiar with the vocalizations and elusive habits of this species from recent observations in the Gulf Coast states. We found seventeen acceptable records of White-eyed Vireo in Minnesota that were published in ***The Loon***. Most occurred during spring migration and only four of the seventeen records were prior to 1980. There were no previous April records so a new earliest date for the state has now been established. The earliest date had been 3 May 1977 (***The Loon*** 49: 174). **Peder Svingen and Sue Barton, 151 Bedford St. SE, Minneapolis, MN 55414.**

WHITE-FACED IBIS NEAR WATERVILLE — On 20 May 1991, at 2:30 P.M., I was checking bluebird houses at the Merle Grubish farm which is located in Rice County just north of the Waseca County line near Waterville. On the west side of a north bound dirt road is a field in the Conservation Reserve Program (CRP), and on the east side of the road there is a large cattail marsh. As I was checking one of the bluebird hourses, I noticed a medium-sized, dark bird at the edge of the marsh about 100 feet from me. I looked at the bird through 8x40 binoculars and noted the following features: a dark bird roughly Mallard-sized, standing on long legs, with a heavy, long and decurved bill. The plumage had hints of green on the back. As the bird faced me I could see a white border around the base of the bill, reminding me of a female Lesser Scaup. I knew at first look that this was an ibis, after seeing the face I was sure it was a White-faced Ibis. The bill color was not red, but a steel-gray, the tops (only portion seen) of the legs were the same color. In flight, the feet trailed behind the body and the bird seemed to be heading downward, even in level flight — this was due to the curvature of the bill. I viewed the bird for over an hour. **Wally Swanson, 128 S. Buchannon, Waterville, MN 56096.**

NESTING BELL'S VIREO: WINONA COUNTY 1991 — Location: Mud Lake Bike Path/Dike. Location is between Highway 61 and the Mississippi River where there is a dike topped with a paved bike path that extends from Highway 61 and the Winona Sewage Treatment plant on Shive Road. Mud Lake is east of the creek between Hwy. 61 and the Mississippi River. This path runs basically north/south. **Nest Location:** At the edge of the dike there is an almost continuous line of trees in this area. There are two groups of mixed woods bordered on both sides and between by young willows. Behind these rows of trees is an open area that's mixed marsh and mud flats. On the west side of the bike path/dike is a low lying area that is mowed. The nest could be seen from the bike path/dike one quarter mile from the sewage treatment plant on the east side. The nest was in a one and one-half inch diameter 12 foot box alder sapling three feet from the ground suspended from a fork of a branch. The fork is approximately eight inches from the trunk. The inside diameter of the nest is two inches and the depth is 3⅛ inches. The inside of the nest is cup-shaped and the outside appears more like a funnel. (Similar to Bent's description of the White-eyed Vireo nest.) **1991 Nesting and Sightings:** I sighted the vireo in this location 13 May and again on 31 May. 5 June: I was walking near the edge of the woods and dike, heard a Bell's Vireo, looked up and saw one on a branch five feet away and I watched another fly up from the nest which was one foot in front of me. I quickly looked in, saw four eggs and left to walk up on top of the dike. When it got to the top of the bike path/dike, I could not see the nest. 14 June: I thought the birds may have hatched since the vireo was aggressively singing and hopping from branch to branch as I approached the area. I was unwilling to walk close to the nest but when I looked in the general area I had previously seen the nest, I saw a Bell's hover and sit on the nest! The branch had drooped and for this reason I had a view of the adult on the nest. The other adult was still aggressively singing and hopping around.

After a few minutes the nest sitter was on the edge as the other adult arrived with food. I counted four hungry mouths but was unable to see much of them. The young appeared gray and without feathers or down. 18 June: I put a scope on the birds and was able to count four young. For a time one adult sat on the edge of the nest. The other adult was aggressively singing and hopping from branch to branch. Also, I found two other Bell's Vireos on this path. One was hopping and singing in a tree one-quarter mile south and another bird was further south on the path. I watched each for one-half hour and could not see them with another bird or see them near a nest. They were almost continuously singing like the nesting birds. 19 June: I went to the area with the Snyders, put on the scope and was able to see four young. One adult was constantly defending as described above. 21 June: I went to the nest with local photographers and, while one adult was aggressively singing in a nearby tree, the young were not in the nest. I suspected because of this behavior the young were on or near the ground approximately 10 feet away from the nest. The nest was intact. 23 June: Approximately 30 feet from the nest sight along the same row of trees, I saw and heard one adult near three young that I could see from different locations. All three young were begging. The adult also went into a small elder berry where I suspected the fourth was. I did not hear a bird from that shrub. 25 June: I saw and heard one adult. 29 June: I saw and hear one adult and saw three young. 5 July: I saw and heard one Bell's Vireo. 13 July: I saw and heard two. 31 July: No sightings. Some Notes of Interest: 1) Bell's Vireo was most aggressive in behavior and singing when the nest was approached within 40-50 feet while eggs and young were in the nest. After young fledged, the adult only sang a short song while when I approached and young were present. A direct relationship between the nest and increased singing. 2) In following the Bell's for two summers, I have noticed that singing continues throughout the summer, occurs most often when young are present, and occurs throughout the day. I heard them in the heat of the noonday sun when nothing except American Goldfinches were moving or singing. 3) As summer progresses however, predicting the time of day Bell's Vireos will sing becomes more difficult. In 1990 I guess 30% in August, and in 1991 50% in June and 30% in July. 4) The best way to "see" is HEAR. Sound is by far the best clue that these birds are present. 5) This is a two-brood bird. Whether this is true in our area needs to be documented. In 1990 evidence shows the birds may stay longer than indicated in Janssen's *Birds in Minnesota.* 6) Predation is a problem. Yet this nest was located within one foot of a deer path that I've also seen used by dogs. Please do not play tapes. Learn the song, then find the bird. This is one of the few places we have confirmed nestings in the state: let's keep them here and coming back. There is so much interesting behavior and nesting to be studied, and I request that this be done without detriment to the birds. **Carol Schumacher, 1411 Skyline Dr., Winona, MN 55987.**

NESTING MOUNTAIN BLUEBIRDS — On 29 June 1991, while working for the Minnesota Department of Natural Resources' County Biological Survey in Kittson County, I found a male Mountain Bluebird mated to a female Eastern Bluebird that had just successfully fledged four chicks. This is only one of three other nest records for the state, the first in Aitkin County in 1986 (***The Loon*** 58: 194-196), the second in Marshall County in 1990 and again in 1991 (***The Loon*** 62: 160-161), and the third in Polk County in 1990 (***The Loon*** 62: 218). The only record of a pure pair of Mountain Bluebirds nesting in the state is the Marshall County pair, while all three other records have been of mixed pairs consisting of male Mountain Bluebirds mated to female Eastern Bluebirds. This is significant since there is only one known hybrid between Mountain and Eastern Bluebirds (Terres, J. K. *The Audubon Society Encyclopedia of North American Birds,* 1982). This was a polygamous male Mountain X Eastern Bluebird that was mated to both a female Eastern and a female Mountain Bluebird, collected in southwestern Manitoba in 1968 (*The Blue Jay* 27: 18-21). Hybrids of Mountain and Eastern Bluebirds are considered very rare and have not been studied (Ehrlich, et al. *The Birder's Handbook,* 1988). This situation in Minnesota offers an excellent opportunity for someone to study this hybrid phenomenon, especially since at least two of these four records are birds known to be returning for a second year in a row. The Kittson County

bluebirds were found on a bluebird trail in a remote pasture in the north central part of the county only two miles from the Manitoba border. The owner of this bluebird trail stated that a pure pair of Mountains (presumably the same male) nested in an adjacent nest box last year (1990), and that at least two other pairs of Mountain Bluebirds were present earlier this year (migrants?). I was able to get very close to this family of bluebirds, and watched as both the male and the female fed the chicks. The chicks had fledged the same day I found them, and the male was very defensive of them, a characteristic apparently more of Mountain Bluebirds than Easterns. Close observation of all four chicks revealed differences in their wing and tail coloring, although this is probably due more to their different sexes than hybridization. Two of the young had a distinct white edge on the outer tail feathers. Of these two chicks, one had no blue color visible in the wings or the tail as seen when the wing and tail were folded, and the other had blue color visible only in the tail. The other two chicks did not have the distinct white edge to the outer tail feathers, but had extensive blue color visible in the wings and tail. All four chicks had the same spotted breast washed with a warm, rufous color, a grayish head with a distinct white eye ring, and a mottled gray back. Unfortunately, no photographs were taken. **Karl Bardon, 8150 West River Road, #346, Brooklyn Park, MN 55444.**

SCISSOR-TAILED FLYCATCHER IN ANOKA COUNTY — On 15 July 1991 I saw a Scissor-tailed Flycatcher near the junction of Anoka County Roads 57 and 116 in the city of Ramsey. I had been watching birds in this area for a little more than a week; it's a good area for this. There is a cross section of wooded areas, open fields and sandy grassland. On the 15th I was walking across the field northeast of the intersection mentioned above. Sitting on the wire fence crossing this area was a new bird for me. The bird was a very light gray, almost white on its head and back. Its tail hung down like a dark ribbon, about two or three times the length of its body. I brought up my binoculars. Now I could see a white edge up and down each side of the tail. I was looking at the back of it. The bird had its head turned looking at me over it's shoulder. The body size, shape, and profile of its head was like that of a kingbird. When I tried to get closer it took flight. Its tail spread into two long streamers, like a Barn Swallow, but what seemed absurdly exagerated in length. In a few seconds I lost track of him in the brush and over a hill. There are a number of large flycatchers in this same area. A pair of Western Kingbirds was feeding its young here at the time, and Eastern Kingbirds are common. There is also a pair of Great Crested Flycatchers. This Scissor-tailed was too light on the head and back (like I said almost white), and the long tail was like nothing I'd ever seen before in Minnesota. **Robert E. Koenig, P.O. Box 582764, Minneapolis, MN 55458.**

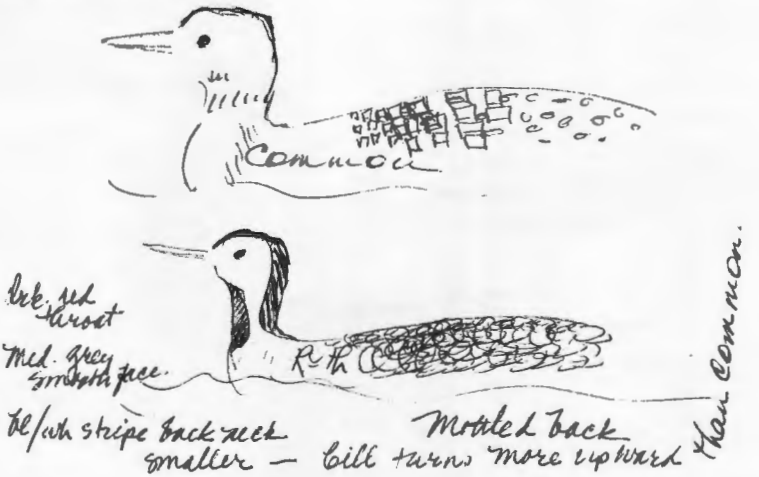
WORM-EATING WARBLER IN WATONWAN COUNTY — At about noon on 11 May 1991, Bob Janssen and I were birding at Eagle's Nest County Park, west of Madelia in Watonwan County. We were walking along the west side of the Watonwan River when I spotted a small bird, with bold black head stripes, fly up from the ground and cling creeper fashion to the trunk of a tree. It was only in sight for a few seconds but this allowed us enough time to observe the black head stripes (one through the eye and one on each side of the crown), the golden tan color of the head, throat and breast and the unmarked greenish back. By the time I had calmed down enough to try to explain its location to Bob, the bird dropped back to the ground. Shortly thereafter, it flew up about ten feet into a small tree and we were both able to view the above-mentioned field marks plus the bright pink legs that stood out in the sunlight. The bill was quite long and pointed, more so than most warblers. It sat there briefly and then flew back down into the underbrush, and we could not relocate the bird after a ten minute search. **Raymond Glassel, 8219 Wentworth Ave. S., Bloomington, MN 55420.**

BRANT AT MOUNTAIN LAKE — At 8:45 A.M. on 28 March 1991, as I was checking the waterfowl on Mountain Lake, Cottonwood County, I spotted a Brant in with a group of the small race of Canada Geese. At first I only saw the posterior portion of the bird, the anterior being obscured by Canada Geese, but I could tell it was something different by the vertical markings on the flanks and its darker back. When I got a clear view of its head I was delighted to see the all dark head (no white chin mark), the black on the chest extending all the way to the waterline and a small white oval mark on the side of the neck. I was at a distance of approximately 75 yards and was viewing the bird with a 25X Kowa scope. I went into town and notified Buddy and Loren Feil. They accompanied me back to the lake to see the bird. After they left I watched the bird for about 15 more minutes and did the accompanying crude sketch. As I was doing the sketch, something frightened the geese and they all flew. The Brant was seen later that day by Ed Duerksen at the Mountain Lake Golf Course. There are only two other spring dates for Brant in Minnesota, and this is the earliest on record and the only March date. **Raymond Glassel, 8219 Wentworth Ave., Bloomington, MN 55420.**

ADULT LITTLE GULL IN KITTSON COUNTY — On 16 May 1991, while working for the Minnesota Department of Natural Resources' County Biological Survey, Steve Stucker and I saw an adult Little Gull at the Karlstad sewage ponds in Kittson County. We had already been at the site for half an hour when three small, hooded gulls flew in. Two of them were clearly Bonaparte's Gulls, while the third was easily recognized as an adult Little Gull. The two Bonaparte's landed on the surface of the sewage pond, but the Little Gull hesitated by circling low over the water before finally departing northward. Even though it was seen only briefly, and the other details of its plumage were never seen, the gull was identified as an adult Little Gull by the striking contrast between the entirely light gray mantle, and the entirely blackish undersurface of the wings. This gull lacked the Bonaparte's

white wedge on the fore edge of the wing, and the black on the undersurface of the wing was bordered by a thin, white trailing edge on the flight feathers. The only other small, hooded gull which has black on the undersurface of the wings is the Common Black-headed Gull, but the black is limited to the primary portion of the wing only, with a white wedge on the fore edge of the wing. This is an unusual sighting for this rare but regular species since there are only two other spring records away from Duluth (Janssen, R. B. *Birds in Minnesota,* 1987). Interestingly, the Little Gull is a rare but irregular inland migrant in the Prairie Provinces, including southern Manitoba, and they are a rare breeder at Churchill (*The Blue Jay* 49: 76-80). **Karl Bardon, 8150 West River Road, #346, Brooklyn Park, MN 55444.**

RED-THROATED LOON AT STONEY POINT — 1 July 1991 was a cold, overcast, foggy day with a fairly strong northeast winds. A little after 1:00 P.M. we observed a breeding-plumaged Red-throated Loon (*Gavia stellata*) for about 20 minutes in the lee-side waters on the southwest side of Stoney Point, St. Louis County. The bird was seen from the open area near the old fishing shacks, diving near a reef about 50 feet from shore. There were also two breeding-plumaged Common Loons (*G. immer*) present so the difference between the two species was immediately apparent, the Red-throated appearing smaller in size with a smaller and slightly upturned bill. With 8x40 binoculars and a 20-45x spotting scope, the red throat, gray head, vertically striped back neck, and slightly mottled back were easily and distinctly seen. A quick look in the National Geographic field guide confirmed our initial identification. **Mary Jane Evans and David L. Evans, 2928 Greysolon Rd., Duluth, MN 55812.**



HOODED WARBLER: WINONA COUNTY — After a phenomenal wave of warblers on 9 May 1991 at Prairie Island in Winona, birding was comparatively quiet on 10 May. I decided to head to Gilmore Valley where the last two years I had seen many "low level" warblers. After walking 50 yards along Gilmore Creek, I had a marvelous look at a male Mourning Warbler. I walked ten more yards and saw a male Hooded Warbler. The Hooded stayed in view a few seconds and as I continued to search for it, I heard loud singing ahead. I followed the sound and saw the bird perched 20 feet ahead in a willow tree singing again and again. Checking the same area each morning I did not see the Hooded on 11 or 12 May. I saw and heard the bird several times on the 13th through the 15th. I could hear it calling in a localized area approximately 250 yards by 250 yards. Its flight was very direct and aggressive. The bird would perch, sing a few choruses, move to the far reaches of this area,

then criss-cross in every direction and start over. I saw a bird with Anne Marie Plunkett and the Snyders on 16 May. Between 9:20 and 11:00 A.M. on 19 May I saw and heard the bird for one five minute interval. (I later learned someone had played a tape to call the bird in view on 18 May. Did this affect the previous predictable singing and behavior?) 21 May I heard it singing ten times. 23 May between 7:30 and 10:00 A.M., Ray Glassel and I searched for the bird. He heard the song one time for a brief interval. As we were leaving the area we heard it calling strongly and got a brief look at it. On 28 May I heard and saw it singing loudly almost continuously from 9:10 to 10:55 A.M. and it was still singing when I left. There was, however, a marked change in the flight pattern from the previous sighting. Flying distances were much shorter and it perched and sang as long as 17 minutes at one stop. This is the last time I saw the bird. I never was alerted to the bird by the chip call. I was only listening for the song and did not realize that the chip may have helped me find the female and nest (conversation with Bruce Fall and ***The Loon*** 61:1). On 16 May after viewing the bird, Anne Marie Plunkett and I returned to her car to listen to the Borror tapes and compare them with what we heard. The vocalizations of this bird did not match any of the five variations of the tape. On 22 May, Ray Glassel described it as a Hooded Warbler song, but a very short Hooded Warbler song. The habitat is a mixed, dense, very mature woods (willow, walnut, hickory, oak, basswood) with almost impenetrable underbrush interspersed with trails. This area is on a steep bluff in a sometimes narrow valley with an active creek running along the bottom. In 1989 I looked unsuccessfully in this area after being alerted by another birder of a possible sighting of a Hooded Warbler. On 5 May 1990 Joanne Dempsey heard a Hooded Warbler singing in this same area. (***The Loon*** 62:4) **Carol Schumacher, 1411 Skyline Dr., Winona, MN 55987.**

SUMMER RECORD FOR HARLEQUIN DUCK IN ROSEAU COUNTY — On 2 June 1991, while doing work for the Minnesota Department of Natural Resources' County Biological Survey, Steve Stucker and I found two male Harlequin Ducks at the Roseau city sewage ponds. The two birds were initially singled out from the other waterfowl present because of their peculiar scoter-like, wing-out diving technique. These two birds also resembled White-winged Scoters because of their indistinct, white facial patches, sloping forehead profile when diving, and the white markings seen at the base of the wing on one individual. Close observation, however, showed that the sloping bill profile disappeared when the birds discontinued diving, and their size was seen to be as small as the adjacent Lesser Scaup. Details of their plumage were difficult to describe exactly since our view was directly into the late afternoon sun, and the two birds were on the far pond nearly one half mile distant. Although the two Harlequins looked slightly different from each other, both individuals showed a prominent white patch at the base of the bill, and one or two other white patches on the side of the face. They also had a white line extending up the sides between the breast and the flanks. When one individual reared up to do a wing-flap, it showed the trace of a white line around the neck, and small white markings were visible on the scapulars at the base of the wing. The rest of their plumage appeared dark, with no cinnamon color visible, although this may have been due only to the distance and poor lighting. The other markings of typical adult male Harlequins were absent. These two individuals were probably first-year males since adult males do not begin molt into eclipse until late June (Bellrose, F. C. *Ducks, Geese and Swans of North America,* 1976). The two Harlequins observed resembled the illustrations of both the first-winter male in the National Geographic Society *Birds of North America,* and the molting male in the *Audubon Society Master Guide to Birding.* At the time of this observation, there was a general influx of waterfowl into Roseau County including Lesser Scaup, Ruddy Ducks, Redheads, Mallards, Common Goldeneyes, and individual records of Bufflehead and American Black Duck. Ray Glassel and Bruce Harris also observed these two Harlequins on 5 June 1991, but I could not find them at this site the following week. The Harlequin Duck is accidental in the summer in Minnesota with only one June record (considered a very late migrant), and two July records (Janssen, R. B. *Birds in Minnesota,* 1987). **Karl Bardon, 8150 West River Road, #346, Brooklyn Park, MN 55444.**

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 to 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 color and black/white photos. Photos should be preferably 5x7 in size. Manuscripts should be typewritten, double-spaced and on one side of 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 the 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 Peder Svingen. See inside front cover.

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The LOON

WINTER 1991

VOLUME 63 — NUMBER 4

The LOON Minnesota's magazine of birds, is published four times each year by the **Minnesota Ornithologists' Union,** the statewide bird club. Permanent address: J.F. Bell Museum of Natural History, 10 Church St. S.E., University of Minnesota, Minneapolis, MN 55455-0104. Anyone interested in birds may join. Any organization with similar aims may affiliate. All MOU members receive our two quarterly publications: ***The Loon*** and the **MOU Newsletter.**

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Gifts, bequests, and contributions to the MOU Endowment Fund should be sent to the Treasurer.

EDITOR OF *THE LOON:* Robert B. Janssen, 10521 S. Cedar Lake Rd., #212, Minnetonka, MN 55343 (phone 612-546-4220). The Editor invites articles, short notes, and illustrations about Minnesota birds. See back cover for details. **ASSOCIATE EDITORS: Kim Eckert, 8255 Congdon Blvd., Duluth, MN; Dr. Harrison Tordoff, Bell Museum of Natural History, University of Minnesota, Minneapolis, MN 55455. Photo Editor: Warren Nelson, 603 2nd St., N.W., Aitkin, MN 56431.**

"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," Peder Svingen, 151 Bedford St. S.E., Minneapolis, MN 55414.**

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A Minnesota Fieldfare

Ken and Molly Hoffman

On Sunday, 3 November 1991, Ron Randklev called to tell us that he had a bird feeding on mountain ash berries by his home on Lake Superior and the west bank of the Devil Track River, Cook County. He felt, based on the only illustrations he had, that the bird was a Gray-cheeked Thrush. Nothing in his description of the bird at that time alerted us to anything than possibly he was seeing a Swainson's Thrush. Ron called again Wednesday morning, 6 November, and said the bird was still coming with robins to feed on mountain ash berries. Again the question of Gray-cheeked Thrush was discussed and we decided that we would investigate the bird on our next trip to Grand Marais.

We went about our usual town chores and at about 11:30 a.m. on Thursday, 7 November, we arrived at the Randkev's. Ron and Arlene had not seen the bird all morning. There were few berries left in their yard and no robin activity. We decided to search for the bird after discussing with the Randklevs again what the bird looked like, hearing that they now believed the bird to be larger than the robins, and learning that neighbors called it the "big" robin.

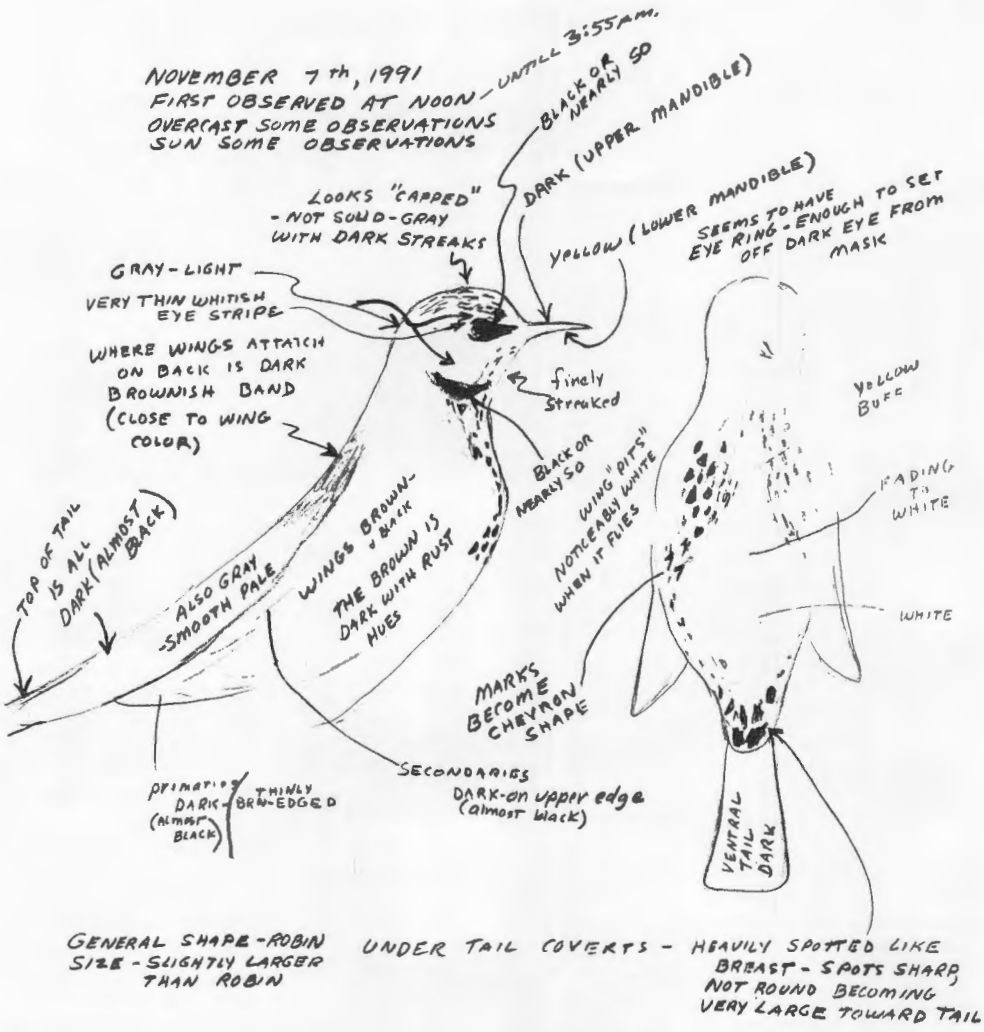
I headed west along the lake and through yards looking for robins and berry trees while Ken headed east along the highway doing the same. At nearly noon Arlene and I came out to the highway and looking east could see Ken waving for us to come. I ran and Ken told me he had just seen a Fieldfare in the crab apple tree north of us and the highway. The thrush had disappeared and we searched with binoculars the crab apple trees and woods behind and just east of the Devil Track River bridge and north of the highway. Finally, a bird flew from the area and directly over us, flashing bright white wing linings, and landed on a mountain ash tree near the lake on the east river bank. Ken and Arlene remained on the bridge while Ron and I ran to his yard where I had my first opportunity to closely observe the bird. We had no idea that the bird would return to the crab apple trees and had to assume it may be on its way. So when the bird flew again, I returned to the Randklev's and with cold numbed hands made a pencil drawing, including as many of the numerous field marks that I could remember. Ken returned for the scope, added more to the drawing in progress and headed back to more closely examine the bird which he had located again in the crab apple trees.

It was such a distinctly marked bird that we decided we had enough information to alert the Minnesota birding community and so made calls to Duluth and the Twin Cities from the Randklev's. We had no field guide with us, nor did the Randklevs, which had a picture or description of a Fieldfare, but, as every birder has done, we had looked at the odd species in our guides at home. The Fieldfare, a fairly hardy northern thrush, the largest of the thrushes ever seen in North America and a boldly marked bird, had lodged itself in Ken's memory banks. We continued to watch the bird until about 2 p.m. when we decided to try to locate a picture of a Fieldfare just to be sure. The library had nothing but we finally found a Peterson Western Guide and Robbins, et al. (1983) for sale. The pictures of a Fieldfare were indeed the bird we had been observing.

In addition to feeding on the apples, we observed the Fieldfare kicking duff in an area melted free of snow on the hillside north of the apple trees — in much the same manner of the robins also feeding there. We watched the Fieldfare until nearly 4 p.m.

There have been about 20 previous sightings of Fieldfares in North America. The closest to Minnesota of these sightings occurred in May of 1975 at Long Point, Ontario on Lake Erie. There have been four sightings from the "lower 48", all from east coast states and all between February and April. There are also four records from Alaska and about 12 from eastern Canada. The last North American sighting was in February 1991 in New Brunswick. Most records fall in the January through April period. This appears to be the first November record.

The Fieldfare is not a rare bird where it regularly nests and in many areas is the rough equivalent of our American Robin. The Fieldfare is "a characteristic bird of the forest belt of northern Europe and Asia" (Bent,



1949). It winters primarily in China, India, Turkey, the British Isles, and central and southern Europe. There is an isolated sedentary population of Fieldfares in Greenland.

The Fieldfare, as described by Bent, is a bird of birch forests. Unlike our American Robin, it nests in colonies. Apparently adaptable, these colonies, when not in their preferred birch forests, occur also in pine forests, parks, orchards, gardens and even in towns. Nests, similar to our robin's, are of twigs and grasses lined with mud. Nests are usually built one per tree in the birch forest colony, but again, as circumstances vary outside the birch forest, so does choice of nest site and some may be built in sheds, woodpiles or even on the ground. The Fieldfare and the American Robin both vary their diets, eating primarily invertebrates in the summer and exploiting berry crops in the winter. The Fieldfare wanders in flocks during the winter and is considered wary, a fact probably attested to by at least a few of the photographers attempting to get closeup shots.

We returned on several of the following days to watch the Fieldfare and found it returning consistently to apple trees north of the highway. We had observed on Thursday, 7 November, that the Fieldfare was being pursued by a Northern Shrike and many obser-

vers on Friday, Saturday and Sunday reported similar dramatic chases. We have observed a Northern Shrike killing and eating Pine Grosbeaks in our yard and the literature includes robins as part of this predator's diet. It is not out of the question that the shrike may have killed and eaten one of the rarest bird visitors Minnesota has ever recorded!

On Monday, 11 November, the Fieldfare could not be located. In spite of attempts by numerous birders searching berry and apple trees throughout the area, no further sightings were reported.

Acknowledgements

Our thanks to Ron and Arlene Randklev for alerting us to the presence of the Fieldfare. And I think we can add the thanks of the many birders who experienced the Randklevs' enthusiasm and hospitality as we all called them or knocked on their door throughout the Fieldfare visit. Also thanks to Peder Svingen who provided from his research a list of the North American records of Fieldfare sightings.

Literature Cited

Bent, A.C. 1949. Life Histories of North American Thrushes, Kinglets, and Their Allies. U.S. National Museum Bulletin 196.

Peterson, R.T. 1990. A Field Guide to Western Birds. Houghton Mifflin Co., Boston.

Robbins, C.S., B. Bruun, H.S. Zim, and A. Singer. 1983. Birds of North America, Golden Press, New York.

H.C. 64, Box 410, Grand Marais, MN 55604

First Record of the Fork-tailed Flycatcher in Minnesota

Peder Svingen

On 6 September 1991 at approximately 9:15 A.M., I was startled by the sudden appearance of a Fork-tailed Flycatcher (*Tyrannus savana*) near the access to the 40th Avenue West Erie Pier area in Duluth, St. Louis County. A black and white bird with an extremely long, black, fluttering tail, landed on an exposed perch near the yellow gate, about thirty feet above the ground. The bird made one more dash from this perch with an audible snap of its bill before it flew to another exposed perch on top of a thirty-foot sapling. I hurriedly retrieved a camera from my car and continued recording details of the observation into a tape recorder.

The bird recalled Eastern Kingbird except for its very long tail and gray back that contrasted with the black cap. The wings were dark gray-brown. Details of the face, nape, wing coverts, and rump were not recorded. The entire underparts were clean white, except for a very faint, lemon yellow wash on the undertail coverts. Wing linings were white and contrasted with the darker flight feathers. It was estimated that the length of the tail equalled the distance from bill to undertail coverts. The inner rectrices were similar in length to those of a kingbird, while the outermost two or three rectrices were progressively longer. The entire tail was black, except for a pale outer web on the outermost rectrix.

Lighting was excellent for observation from distances between forty and sixty feet, but the underparts were better seen than the upperparts due to the bird's behavior. It did not select low perches or approach the ground during the observation. It continued flycatching but did stay on one perch for four photographs. Body size was estimated at slightly less than Eastern Kingbird (no direct comparisons were available). There were no vocalizations. The bird flew south into a sparse grove of aspens and could not be relocated by myself or other observers who thoroughly

Fork-tailed Flycatcher, 6 September 1991, 40th Ave. W., Duluth. Photo by Peder Svingen.

searched the area. The total observation lasted only two minutes.

DISTRIBUTIONAL SUMMARY

The highly migratory southern South American subspecies, *T. s. savana*, breeds from eastern Bolivia, Paraguay, Uruguay, and southern Brazil, south to Patagonia, and migrates northward after the breeding season (Monroe and Barron, 1980). It "winters" in northern South America and is the form responsible for nearly all records in North America and in Cuba, Bermuda, and the Lesser Antilles, where it is also casual (AOU, 1983). Two winter records in Texas, both documented by photographs, are widely thought to be the northern subspecies, *T. s. monachus* (Lasley and Sexton, 1989), which breeds from southeastern Mexico, south through Middle America, to northern South America (AOU, 1983). One winter specimen from Texas on 4 February 1961 was identified as *savana* (TOS, 1984). A specimen of the sedentary *T. s. sanctaemartae* from New Jersey in 1900 has been questioned (Monroe and Barron, 1980; AOU, 1983)

The recognition that most North American Fork-tailed Flycatchers occurred in the fall was attributed to Kenneth C. Parkes and thoroughly reviewed by Monroe and Barron through 1978, at which time 33 of 40 North American records were from July through November (Monroe and Barron, 1980). I reviewed all subsequent citations in *American Birds* through 1990 using the same format. Within this total of 33 records since 1978, the preponderance of fall records was less striking (17 of 32 during July through November). There were three winter records, all from Texas. More than a third of these recent records (12 of 32) were from April through June, when "overshoots" of birds migrating to their wintering grounds may be detected in North America. Monroe and Barron had also discovered that almost two-thirds of all records through 1978 were from the Northeast, between Nova Scotia and Maryland, another pattern that has weakened with accumulation of more data. Only 15 of the past 32 records were from the northeast coast between Maryland and Nova Scotia, plus two additional records from nearby Virginia.

I found no obvious correlation between this increase in records from April to June and the trend toward occurrences away from the Northeast, during the period 1980 through 1990 (there were no 1979 reports). In our region, the Fork-tailed Flycatcher has now occurred in Wisconsin (twice), Michigan (specimens from 1879 and 1983), and Ontario.

The timing of molt in this species is not completely understood, but if tail feathers are molted after reaching the wintering grounds, as in one Virginia bird which lingered for nearly two months (*American Birds*, 1989 43:79), immatures with short tails might be overlooked during their northward migration. Such an individual would arrive in our "spring" and bear a striking resemblance to Eastern Kingbird (e.g., see the photograph by Serge LaFrance in *American Birds*, 1984, 38:892). For further discussion of patterns of vagrancy, see Monroe and Barron's 1980 review article and comments attributed to Kaufman (Perkins, 1990).

IDENTIFICATION SUMMARY

Identification of this striking species is relatively easy, as long as contrast between the gray back and the rest of the upperparts is noted. The strongly contrasting black cap and white wing linings rule out Scissor-tailed Flycatcher. An immature Fork-tailed Flycatcher can be differentiated from Eastern Kingbird by the constrasting gray back and the lack of distinct white tips on the tail feathers.

Attempting to age birds by tail length alone is hazardous, since sexual dimorphism and stage of molt also affect tail length. The outer rectrices (measured from the tip of the central rectrices) add up to 8 inches additional length in adult males and 5½ inches additional length in adult females (Stiles and Skutch, 1989). Photographs of the Duluth bird show that the tail length is probably not adequate for a non-molting, adult male. Aging is also based upon appearance of the wing coverts, development of the yellow crown patch, and degree of emargination on the outer three primaries, details which could not be obtained during a brief sighting. A Fork-tailed Flycatcher in September normally may undergo partial, prealternate molt but normal plumage cycles may be interrupted by migration or altered by vagrancy. The yellow wash on the undertail coverts of the Duluth bird might suggest subadult plumage, since the completely white underparts of definitive

plumage are not acquired before completion of the second prealternate molt (Oberholser, 1974). However, these measurements and Oberholser's descriptions refer to *monachus* and may not be accurate for *savana*. It can be assumed that the highly migratory *savana* is the form responsible for any record in Minnesota, unless proven otherwise by specimen.

The Fork-tailed Flycatcher typically sallies forth from low perches within three feet of the ground, to catch flying insects or to snatch them after dropping to the ground (Stiles and Skutch, 1989). Exposed perches on top of small trees are also utilized (Oberholser, 1974). Its preferred habitat of dry or wet savannah with scattered trees and shrubs (Oberholser, 1974; Stiles and Skutch, 1989) might even describe portions of the 40th Avenue West, Erie Pier area, given freedom of imagination. Vocalizations include "a pebbly *krrrrrr;* a metallic *zlit*" (Peterson and Chalif, 1973) and percussive chirpings that recall the sound of clapping castanets (Oberholser, 1974).

LITERATURE CITED

American Ornithologists' Union. 1983. Check-list of North American Birds, 6th edition. Lawrence, KS: Allen Press, Inc., pp. 475-476.

Lasley, G.W. and Sexton, C. 1989. Texas Region. *American Birds* 43: 333-340.

Monroe, B.L. and Barron, A. 1980. The Fork-tailed Flycatcher in North America. *American Birds* 34: 842-845.

Oberholser, H.C. 1974. The Bird Life of Texas. Austin: University of Texas Press, pp. 539-540.

Perkins, S.A. 1990. New England Region. *American Birds* 44: 399.

Peterson, R.T. and Chalif, E.L. 1973. A Field Guide to Mexican Birds. Boston: Houghton Mifflin Co.

Stiles, F.G., Skutch, A.F. and Gardner, D. 1989. A Guide to the Birds of Costa Rica. Ithaca, NY: Cornell University Press, pp. 306-307.

Texas Ornithological Society. 1984. Checklist of the Birds of Texas, 2nd edition. Austin: Texas Ornithological Society, p. 81.

Note: A list of North American records of Fork-tailed Flycatcher from 1979 through 1990 is available upon request to the author.

151 Bedford St. S.E., Minneapolis, MN 55414.

Possible Clark's Grebe Breeding Record in Minnesota

Kim Eckert and Micki Buer

On 27 July 1991, a family group of Clark's Grebes (*Aechmophorus clarkii*) was discovered from the Hwy. 117 bridge and dam at the north end of Lake Traverse, T127N, R47W, Sec. 31, Traverse County. While leading an M.O.U. Birding Weekends tour, I spotted one adult Clark's Grebe accompanied by two dependent young, which were about two-thirds grown, among several adults and young Western Grebes which were feeding in the outlet channel which flows north into Mud Lake. This channel is about 50 yards wide and forms the border between Minnesota and South Dakota, and it is assumed that all the grebes present nested in the marshes which line both sides of the channel and cover most of Mud Lake just to the north. Unfortunately, it is not possible to determine on which side of the state line the Clark's Grebes nested. Everyone's attention was called to the grebes, and during the next hour or so all 25 of us had excellent views of the Clark's Grebes at distances as close as 25-30 feet. It was overcast with steady rain falling at the time, but

light conditions were favorable since we had no problems with sunlight angles or glare affecting bill or plumage colors, and Paul Egeland, Dennis Martin and Bonnie Mulligan were all able to obtain identifiable photos of the Clark's Grebes. The attending adult providing food for the two young, presumably the female, was easily identified because it was so close to us for so long and because there were several Westerns present for direct comparison. Its bill color was a bright yellow-orange, consistently brighter and more orange than the duller greenish-yellow bills of the Westerns, and provided the quickest way to pick this grebe out among the others. The facial pattern, which is often difficult to clearly see on *Aechmophorus* grebes and sometimes ambiguous or intermediate, in this case was easily observed and entirely typical of Clark's Grebe: the red eyes were completely surrounded by white since the edge of the black cap was up higher on the side of the head than on the Western Grebe and met the bill at the culmen rather than at the base of the lower mandible. In addition, the Clark's Grebe's flanks were consistently whitish, unlike the blackish flanks of all the Westerns present, and its grayish back/folded wings color was also paler than on a Western, and paler than its black hindneck stripe. This stripe could at times also be seen to be narrower than on a Western Grebe, another secondary and supporting character of Clark's Grebe. This narrower width was visible not only from behind but also from a side view in which the hindneck stripe appeared virtually invisible at the nape area; on a Western Grebe, the hindneck stripe is more even and more visible from the side. A couple of times the adult Clark's also gave its one-syllabled "creeek" call, similar in quality to, but different from, the two-syllabled call of the Western. About the only feature we failed to take note of was whether or not the Clark's looked smaller or appeared to ride lower in the water than the Westerns present — a difference I and others have noted on Clark's Grebes seen previously at various locations.

The two dependent young Clark's Grebes were never seen to approach any of the adult Western Grebes, nor did we see the adult Clark's feed or pay attention to any other juvenile grebes. Likewise, no adult Westerns were seen to attend the juvenile Clark's, and we did not see any juvenile Westerns approach the adult Clark's. At an early age *Aechmophorus* chicks are separable in the field, with young Clark's whiter overall than the more two-toned Westerns of the same age. The juvenile Clark's we saw were large enough so that their plumage differences were not as striking. However, we did note their more three-toned appearance on the head and neck: whitish crown, blackish nape, gray hindneck. All the juvenile Westerns were more uniform in pattern with little contrast in the crown, nape and hindneck colors. The younger Westerns were generally paler gray on the crown-nape-hindneck, while the older, larger juveniles were more blackish. After awhile I also identified a second adult Clark's Grebe on the Minnesota side of Lake Traverse on the south side of Hwy. 117, presumably the mate of the adult with the young in the channel. It was swimming and diving in the company of a dozen or so adult Westerns about 100 yards or more away, and, because of the distance and since we had seen the other Clark's so well, this grebe was not as carefully studied. However, its brighter, more orange bill in direct comparison with the adjacent Western Grebes, the eye entirely surrounded by white with the lower edge of the black cap higher on the side of the head, and its paler flanks and back color, again in direct comparison with Westerns, all clearly indicated Clark's Grebe. This individual was relocated by several other observers on subesequent days, although only a few reported seeing the adult with young, most recently on 10 August. This represents only the sixth documented record for Minnesota, and the first photographic record; the article "Identification and Status of Clark's Grebe in Minnesota" (***The Loon*** 61:99-108) lists four Acceptable records, with the only other record since then at Thielke Lake, Big Stone Co., 8 June 1991. Again, if it could be determined that these Clark's Grebes had nested on the Minnesota side of the border, this would represent the first breeding record for this species in the state. **8255 Congdon Blvd., Duluth, MN 55804.**

For several days in July-August 1991, a family of Clark's Grebes were observed in Lake Township (Section 31), Traverse County. The grebes were discovered in the afternoon of 27 July by Kim Eckert and a group of birders enjoying another MOU Weekend ad-

venture. Upon receiving a call informing us that the Clark's Grebe family was observed at close distances in a river channel, we knew what this rare happening signified — a golden opportunity to study and become more familiar with one of Minnesota's most interesting and remarkable birds.

Chuck and my first encounter with the Clark's Grebe family lasted for 2½ hours. It had been raining; however, upon arriving to Lake Traverse, a break in the cloudy skies had already begun with the passing of the storm. Though it was 6:30 P.M. on the 27th, the early evening light was ideal, with no harsh shadows or overly brilliant reflections. We were sheltered from any light wind coming across Lake Traverse. Due to the narrowness of the river, I was able to watch intently the female Clark's Grebe feeding her young, and interact with the adult Western Grebes at distances of 20 to 50 feet. On two occasions the female Clark's Grebe was as close as approximately ten feet, and the juveniles about 15 feet. I recorded on tape the diagnostic characteristics that would identify these grebes as Clark's. With such optimum conditions, we were able to see distinctly the diagnostic characters, and after noting descriptive details, I began my study on the Clark's Grebe's behavior, especially with regard to feeding, loafing, and interactive displays with adult Western Grebes.

The female Clark's Grebe seemed much more active than the adult Western Grebes. Although the parent Western Grebes did occasionally dive for minnows to feed their young, the Western Grebe family groups spent much of their time preening, loafing, and resting. The female Clark's Grebe would dive frequently for minnows to feed her young. When she surfaced with a minnow, her young would lower their head, forming a nearly parallel alignment with the water surface, and rush towards her to receive the tasty morsel. During the entire feeding sequence, their begging calls were a plaintive single-noted piping, unlike the double-noted strident piping of the juvenile Western Grebes. Comparatively, the calling of the juvenile Clark's Grebe impressed me with its slight similarity to the call of a Piping Plover, while that of the juvenile Western Grebes sounded somewhat like that of a Killdeer. Infrequently the female Clark's Grebe would let her young nibble at the fish, then initiate a chase before feeding the minnow to one of the young. The female would swim with her young briefly (approximately 5-7 minutes) before resuming her dives for more minnows. Fish must have been abundant for only rarely would the female Clark's Grebe surface without a minnow in her bill. The Clark's Grebe family were aloof, and only tolerated any social interaction with the Western Grebe family groups. The female Clark's Grebe was very protective of her young. If an adult Western Grebe ventured too near, the female Clark's Grebe went into a threat display behavior. First, she lowered her head into a threat-point posture. Then she abruptly charged at the intruder and a chase would ensue with the female Clark's Grebe uttering a long, repetitive, single-noted, tremolo-like distress call. These threat chases lasted only until such time that the female Clark's Grebe was certain that the interloper had left. The threat display sequence usually was of a brief duration, most often about five minutes, and of short distances often less than five yards.

With birding companions, Wayne Shelton and Nelvina DeKam, I returned the morning of 29 July. After watching for nearly 1½ hours, we decided that probably the Clark's Grebe family returned to the colony on Mud Lake. So we explored viewing areas of Mud Lake. At 2:00 P.M., we returned to the river in anticipation that the Clark's Grebe family may have returned. I began looking for a very white plumaged grebe diving or feeding young, and I saw the female Clark's Grebe diving and bringing minnows to her young. After indicating where to look for the Clark's Grebe family to Wayne and Nelvina, I resumed recording on tape additional plumage details and began studying the behavior of the female and the juveniles. Again, we were fortunate to have excellent light conditions. I was more intent on studying the feeding and interactive behavior of the Clark's Grebe family; nevertheless, I continued recording any significant plumage details. For the next two hours I watched the Clark's Grebe family with intense interest. The female and juveniles still distanced themselves from the Western Grebe family groups. However, the female hesitantly tolerated intrusions by the adult Western Grebes; only infrequently did the female Clark's Grebe display any threat behavior. I was amazed at the maturity of the juvenile Clark's Grebes since my first en-

Adult and juvenile Clark's Grebe, July 1991, Lake Traverse, Traverse County. Photo by Micki Buer.

Juvenile Clark's Grebe, July 1991, Lake Traverse, Traverse County. Photo by Mick Buer.

counter. Though the female still fed them, it was less often. The juveniles were becoming independent and practicing feeding dives by dipping beneath the surface for minnows. Occasionally they were seen nibbling up insects from the water surface.

Wayne Shelton and I returned the next morning in hopes of taking some photographs. Additionally, knowing this would most likely be my last visit, I wanted to record some final documentation on behavior, as well as re-examine plumage and anatomical characteristics. We arrived at 10:00 A.M. Though the skies were cloudy, there were enough breaks to allow the sun to filter over our shoulders, thus providing optimum conditions for excellent photography and observation. After a 30-minute search, I saw the juvenile Clark's Grebes feeding near the rocks, then had a glimpse of the female as she dove. For the following three hours I watched with fascination the female Clark's Grebe and her young; recording on tape significant behavior or plumage characteristics, and photographing their behavioral activities. I also photographed Western Grebe family groups to document comparative social behavior. The female Clark's Grebe was sometimes seen in close proximity to adult Western Grebes when returning to her favorite diving spots. On a rare occasion, the female would feed one of her young a minnow with little attention given to a Western Grebe nearby. During this three hour study, I only noted occasional incidents of threat display sequences by the female Clark's Grebe. However, there was more intense social interaction between the juvenile Clark's and Western Grebes. The juvenile Clark's Grebes appeared somewhat aggressive, often initiating threat display sequences. They seemed to be testing assertive independence. The young Clark's Grebes were also mastering their feeding skills and diving more often for minnows. There seldom was any surface feeding. The female Clark's Grebe was intently diving with regularity, often leaving her young to care for themselves. Infrequently she would feed a minnow to her young. Completing my study, I took a final fond look at the female preening with her young loafing by her side, still displaying a somewhat smug and aloof demeanor as to their associations with the Western Grebe family groups.

Additional Identification Notes

Size: The female Clark's Grebe impressed me as being smaller than the adult Western Grebes. This especially was noticeable when comparing the female Clark's Grebe with the smaller sized Western Grebe females. Many of the articles and publications I have read about Western Grebes mention this apparent size difference. Some birders have suggested that Clark's Grebes swim lower in the water than Western Grebes, thus making the former appear smaller in size. However, the very conspicuous whiteness and pattern of the flanks that I observed would lead me to have doubts about the swimming posture significantly influencing the size of the female Clark's Grebe I was studying.

Flight Feathers: Infrequently the female raised up and flapped her wings, showing a considerable amount of white in the underwing. The whitish wing-linings extended to the outer primaries.

Juveniles: The plumage was so light that at a distance they appeared conspicuously snowy white with a contrasting black triangular upper nape patch. I could single out both juveniles easily from nearby juvenile Western Grebes. The bright orange-yellow bill was tipped with black. The eye appeared dark. Snowy white feathers encircled the eye. There was no slate-gray or grayish-black cap or forehead. Comparatively, the crown (cap) of the juvenile Western Grebes was characterized by shades of gray from light to dark, each juvenile's cap color differed in tone. Both juvenile Clark's Grebes had a brilliant whiteness, unlike the variable shades of gray typical of the juvenile Western Grebe. The only contrast of color in the juvenile Clark's Grebes was the pale pearl-gray of the mantle, appearing whitish at a distance (even at approximately 30 feet), and the restricted ash-gray smudge of the flanks. A sharply defined black triangle was concentrated to the upper nape, from the mid-part of the occiput and ending sharply where the upper nape is horizontally aligned with the lower edge of the facial area. This prominent triangular patch was wider in the occiput, then narrowed into a thin stripe (less than ¼ the width of the nape), and thus ended as a linear point. This linear point suffused into an indistinctly defined, very pale ash-gray thin stripe (about the width of the upper black stripe), that extended down to the hindneck and blended

into the back. The inconspicuous gray tones of the nape and mantle accented the nape's black triangle and snowy whiteness of the head, neck, and underparts. One juvenile was slightly larger than the other. They slightly differed in plumage markings and gray shading. I recorded on tape notations of the significant differences seen in the larger and slightly darker juvenile. The facial feathers were light ash-gray in comparison to the pearl gray of the smaller juvenile. There was a linear smudge behind the eye, giving an impression of a partial superciliary stripe beginning mid-way between the eye and occiput. This linear smudge suffused into the triangular patch of the upper nape. There was faint, diffused ash-gray feathering to the hindmost part of the crown that blended into the upper occiput. In comparison to the smaller sibling, this juvenile had a thin, darker ash-gray nape stripe. The mantle was ash-gray and not as pale as the smaller juvenile. The characteristic flanks smudge had darker ash-gray feathering.

Behavior: The social behavior I had been watching during the three days raised many questions. That the female Clark's Grebe was always seen feeding and protecting her young, and her mate was never observed as part of the family group seemed so puzzling. Pair-bonding in Western Grebes was very evident, with both parents closely associated with their juvenile young, whether feeding, preening, loafing, or resting. I enjoyed watching a Western Grebe parent feed a tiny minnow to a chick that was riding on the mate's back. Western Grebe pairs, including intermediate birds, interacted infrequently in threat display sequences; however, their customary demeanor was not aggressive. Western Grebes were conspicuously more gregarious than the Clark's Grebes. Was the apparent lack of pair bond and shared parental care of young characteristic behavior for Clark's Grebes? Was the less gregarious and somewhat aggressive nature of the Clark Grebe family usual social behavior for this species? I am anxiously looking towards future encounters with a family of Clark's Grebes to seek the answers to such atypical behavior. **Rt. 2, Box 165, Dawson, MN 56232.**

An Anna's Hummingbird in Minnesota

Ken and Molly Hoffman

At a few minutes before 9:00 A.M. on Monday, 11 November 1991, we received a call from Peggy Heston, a resident of the Grand Marais Apartments, explaining excitedly to us that she was, as we talked, looking at a hummingbird outside her window. Peggy is a very reliable observer and despite our astonishment we knew we must attempt to document the observation. Because we live 30 miles from Peggy's apartment and the road we would travel was snow-packed and icy we decided to contact someone closer to town who could go to Peggy's and help her carefully observe the bird. Don Davison was willing and left for Peggy's while we set out on our longer journey.

Don and Peggy discovered that the bird was visiting a neighbor's feeder. Evelyn Renn had recently moved into the Cook County Nursing Home and her feeder had been left full and still hung at her window. Don moved the feeder to Peggy's window and when the bird returned to feed, Don filmed through the window with his video camera. In addition, both he and Peggy took photographs as the bird hovered. We arrived at 10 A.M., and we first viewed it at 10:30 A.M. and were quite amazed. Because of the bright white of the snowbank which was the background for the feeder and because the sky was heavily overcast it was difficult to see much color. As it hovered at a feeder like our own, it seemed

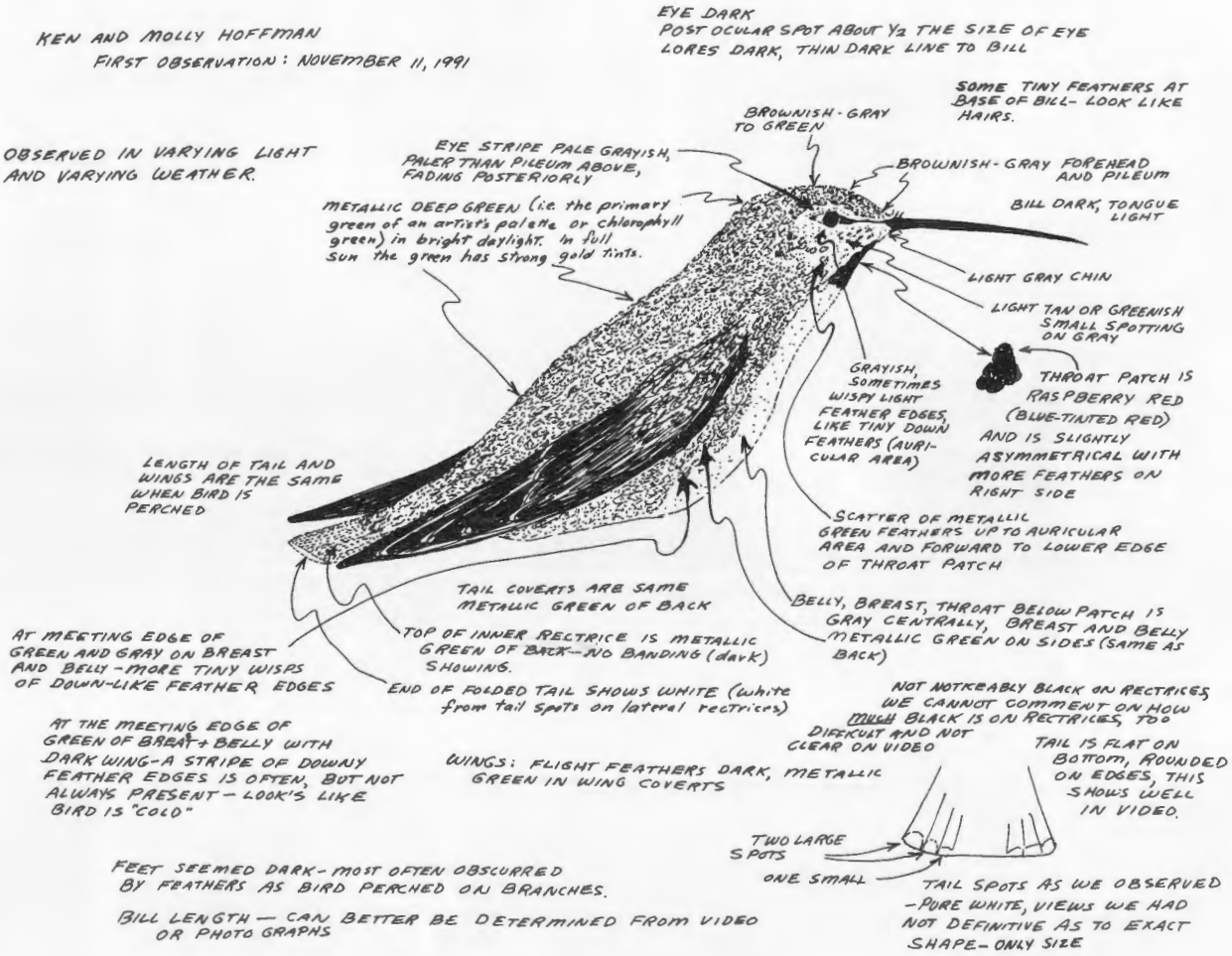
Female Anna's Hummingbird, 14 November 1991, Grand Marais, Cook County. Photo by Anthony Hertzel.

larger than the Ruby-throated we watch all summer. Without another bird to compare it to we could not be sure of any size difference. There was visible a throat patch in a shape we had never seen on a Ruby-throated and white in the tail. We watched several more times as the bird returned to the feeder but our frustration at not being able to discern color finally drove us outside.

We located the hummingbird immediately as it perched in low brush and observed it with binoculars and two scopes, 20x and 40x. We had determined quickly the obvious field marks — ocular spot, metallic green of back and sides of breast and belly, gray of breast and belly, triangular throat patch, sides of patch not marked with black feathers but lightly spotted, the presence of white tail spots on outer tail feathers. We started searching Peterson's Western Guide and Volume 2 of the Master Guide. It seemed superficially easy, the adult female Anna's Hummingbird in Peterson's was the bird we were looking at. After 15 to 20 mintues of observation the hummingbird left, not returning to the feeder. Anxious to have other eyes look at the bird, Ken drove to the Devil Track River bridge to recruit the birders who were there on a Fieldfare vigil. Five birders returned with binoculars and scopes. The hummingbird returned, fed and perched as it had before and was closely examined by seven birders with four scopes from about thirty feet. We continued to add to and refine our initial sketch and notes, while Steve Carlson commenced taking notes. The sky was heavily overcast and a few flakes of snow fell. The temperature was near freezing. A small intense hummingbird perched on a leafless twig with a background of snow is perhaps the most unusual sight I have ever seen!

The birding communities in Duluth and the Twin Cities were alerted and the following day, 12 November, several carloads arrived to study the bird. The morning's observers dispersed and we returned to the area at 11:30 A.M. and set up our scopes south of the perched bird and observed until after noon. It was during this time that we were able to see the color on the throat patch clearly. The bird spent a long time preening head and throat with claws and stretching one or both wings, fanning the tail when stretching one wing. Kim Eckert and Don Kienholz joined us at about noon. As we stood talking and observing the hummingbird, Jo Johnson came out of the building and spoke with us about the bird we were observing. She told us that there had been many hummingbirds at Mrs. Renn's (her mother) feeder this fall and as recently as Thursday (7 November) she had still seen two hummingbirds coming together to the feeder. She described these two hummingbirds to the four of us. She thought the two birds were a pair, and said that the bird she felt was a male (the one with the throat patch we were now studying) was larger and was accompanied by a smaller sleeker bird she assumed was the female. She assured us that the bird with the throat patch was the same bird we now studied. Kim showed her the hummingbirds in Peterson's Western Guide and she pointed to the picture of the adult female Anna's Hummingbird as being the male she had described. Ken pointed to the female Ruby-throated picture and asked if that was the second smaller bird. She said that it was hard to say, because the bird she saw showed very little color and was much plainer (the picture of the female Ruby-throated in Peterson shows noticeable buff on the sides). On 4 December 1991, Ken spoke with Fran Johnson, Jo Johnson's husband, about the hummingbird. Fran said that the two birds described by his wife Jo had been coming to the feeder as early as October 24th which was before the substantial November 1st Minnesota snow storm. Fran and Jo had, in fact, after the storm, refilled the feeder with a thicker syrup as the cold weather immediately after the storm had been freezing the feeder syrup. Both birds continued to come to the feeder even though freezing was still a problem. Fran described the Anna's as being "blockier" and larger than the plain hummingbird with it. He felt that the Anna's was a male because of the throat patch and that the smaller bird was a young one that had not grown to full size yet.

Size: In our observations an accurate determination of size was impossible as there were no other hummingbird species present for comparison. There was, however, the description by Jo Johnson of this bird and a smaller, sleeker bird coming to the feeder together. We have no way of confirming an identification of this smaller hummingbird but it does seem reasonable to assume it to be a female or immature Ruby-throated as this is our only nesting species and is very common at feeders


KEN AND MOLLY HOFFMAN
FIRST OBSERVATION: NOVEMBER 11, 1991
EYE DARK
POST OCULAR SPOT ABOUT ½ THE SIZE OF EYE
LORES DARK, THIN DARK LINE TO BILL
SOME TINY FEATHERS AT BASE OF BILL- LOOK LIKE HAIRS.
BROWNISH-GRAY TO GREEN
BROWNISH-GRAY FOREHEAD AND PILEUM
OBSERVED IN VARYING LIGHT AND VARYING WEATHER.
EYE STRIPE PALE GRAYISH, PALER THAN PILEUM ABOVE, FADING POSTERIORLY
METALLIC DEEP GREEN (i.e. the primary green of an artist's palette or chlorophyll green) in bright daylight. In full sun the green has strong gold tints.
BILL DARK, TONGUE LIGHT
LIGHT GRAY CHIN
LIGHT TAN OR GREENISH SMALL SPOTTING ON GRAY
GRAYISH, SOMETIMES WISPY LIGHT FEATHER EDGES, LIKE TINY DOWN FEATHERS (AURICULAR AREA)
THROAT PATCH IS RASPBERRY RED (BLUE-TINTED RED) AND IS SLIGHTLY ASYMMETRICAL WITH MORE FEATHERS ON RIGHT SIDE
LENGTH OF TAIL AND WINGS ARE THE SAME WHEN BIRD IS PERCHED
SCATTER OF METALLIC GREEN FEATHERS UP TO AURICULAR AREA AND FORWARD TO LOWER EDGE OF THROAT PATCH
TAIL COVERTS ARE SAME METALLIC GREEN OF BACK
BELLY, BREAST, THROAT BELOW PATCH IS GRAY CENTRALLY, BREAST AND BELLY METALLIC GREEN ON SIDES (SAME AS BACK)
AT MEETING EDGE OF GREEN AND GRAY ON BREAST AND BELLY - MORE TINY WISPS OF DOWN-LIKE FEATHER EDGES
TOP OF INNER RECTRICE IS METALLIC GREEN OF BACK — NO BANDING (dark) SHOWING.
END OF FOLDED TAIL SHOWS WHITE (white from tail spots on lateral rectrices)
NOT NOTICEABLY BLACK ON RECTRICES, WE CANNOT COMMENT ON HOW MUCH BLACK IS ON RECTRICES, TOO DIFFICULT AND NOT CLEAR ON VIDEO
AT THE MEETING EDGE OF GREEN OF BREAST + BELLY WITH DARK WING - A STRIPE OF DOWNY FEATHER EDGES IS OFTEN, BUT NOT ALWAYS PRESENT — LOOKS LIKE BIRD IS "COLD"
WINGS: FLIGHT FEATHERS DARK, METALLIC GREEN IN WING COVERTS
TAIL IS FLAT ON BOTTOM, ROUNDED ON EDGES, THIS SHOWS WELL IN VIDEO.
TWO LARGE SPOTS
ONE SMALL
TAIL SPOTS AS WE OBSERVED - PURE WHITE, VIEWS WE HAD NOT DEFINITIVE AS TO EXACT SHAPE - ONLY SIZE
FEET SEEMED DARK - MOST OFTEN OBSCURRED BY FEATHERS AS BIRD PERCHED ON BRANCHES.
BILL LENGTH — CAN BETTER BE DETERMINED FROM VIDEO OR PHOTO GRAPHS

throughout the county. If this is the case, the bird we identify as Anna's was a larger bird than the Ruby-throated. All the literature we consulted states that Anna's is a larger bird than the Ruby-throated, Costa's or Black-chinned. Johnsgard (1983) says, "Female Annas are distinctly larger than other western hummingbirds except for the Broad-tailed," and Bent (1940) observed that the adult female without a throat patch "can generally be distinguished from Costa's by its larger size... and from the Black-chinned by its stouter form."

Probability of Occurrence: Anna's Hummingbird is unique in that it is the only hummingbird species that winters mainly in the United States and winters further north than any other hummingbird species (Peterson, 1990). Johnsgard (1983) and Peterson (1990) indicate that the winter range of the Anna's is expanding. The nearest extralimital record to Minnesota was an adult male at a feeder in Wales, Wisconsin from late August to December 3, 1990. The only other midwestern record was a male at Oxford, Kansas between 15 September and 24 November 1990. There was an adult female in Arkansas in January 1988. Other extralimital fall or winter records are from Idaho, Montana, Alberta, Utah, Louisiana and Florida.

Bent (1940) describes the hardiness of Anna's: "In January, 1937, during the most prolonged period of freezing weather in the history of southern California, when the temperature repeatedly fell to 24 F. at my home in San Gabriel Valley, when ice remained on pools and birdbaths throughout the days and the sky was dark with soot from orchard heaters, half a dozen or more hummingbirds buzzed and twittered about a tall blooming eucalyptus tree and seemed not in the least distressed." Oberholser (1974) describes Anna's as being "more insectivorous than most other western hummingbirds." Such an ability to utilize other than nectar food would be an obvious advantage for survival in a colder environment.

Similar Species: In reaching our identification we eliminated a number of species. The presence of the throat patch, its size and color, shape of the tail, presence of tail spots, and the distribution of metallic green plumage eliminated other species in all plumage sequencies. However, as this is a first state record, we offer the following.

The most obvious hummingbird to consider is the male Ruby-throated in first winter or pre-nuptial plumage. The tail of the bird we observed was nearly square-bottomed, flat on the bottom and barely rounded at the edges. It was not forked. From the literature we searched, the plumage sequence of a male Ruby-throated does not have a stage at which the bird would have some sort of consolidated throat patch and a rounded tail with spots. The "juvenile male" has a forked tail with spots if we are to believe Robbins et al. (1966). Oberholser (1974) describes the first winter male Ruby-throated as being "similar to first nuptial male..." and lists the exceptions but does not indicate that the tail is any other shape than what is described as the first nuptial male. Further, he describes in his account of Anna's that "young male Ruby-throated may also have red throat-spots, but his tail is forked, rather than nearly square-tipped as is that of female Anna's."

We also examined the throat patch to see if it could be interpreted as the color of a young Ruby-throated. The color is not the red of the Ruby-throated we have observed but a blue-tinted red, termed by one observer as being "raspberry red". In the plumage sequence of the male Ruby-throated, the red first appears as scattered red feathers across the whole extent of what is to become the adult male's flaming red gorget. Oberholser (1974) describes the first winter male throat as having "a few scattered red metallic feathers." We have observed fall Ruby-throateds that have had a few scattered metallic feathers. Bent (1940) says that the young Ruby-throated acquires such scattered feathers but "no great progress in this direction is made before they leave for the south," and Bent further quotes another source as saying: "In February and March both adults and young go through a complete molt, and at this time the young males acquire the red throat of maturity." There were no other scattered metallic feathers in the gorget area of this birds throat, the only such feathers being in the triangular patch.

We also considered other identification problems with the female or young of Costa's, Black-chinned and Ruby-throated. The female Ruby-throated does not have a throat patch in any plumage and does not show metallic green on the sides of the breast and belly. The Costa's may have a very few scat-

tered metallic feathers on the throat but never an extensive patch as this bird does, and, according to Kaufman (1990), the Costa's wingtips extend beyond the tip of the tail when the bird is perched. The bird we are describing, when perched, clearly showed wingtips and tail nearly the same length. The female Black-chinned lacks a throat patch at any age. The young male Black-chinned may have some color in the feathers on the lower throat but the bird we have identified as Anna's has the throat patch on the upper throat and it is definitely red and not black or purple.

The hummingbird we observed did not have any warm brown, cinnamon or rust in the plumage and therefore we have eliminated from consideration species with such color in the plumage.

Perhaps the most difficult distinction we have faced is to decide if the bird was an adult female Anna's or a first-winter male Anna's. Johnsgard (1983) says of the first-winter male Anna's that "(at least in older individuals) with metallic purplish red feathers on crown as well as on throat." National Geographic (1983) shows the immature male with scattered red feathers on the head. However, Oberholser (1974) describes the first-winter male as having "relatively few metallic rose feathers on throat and sides of head, sometimes none on sides of head." We had therefore not eliminated the possibilty of a young male solely by the absence of red feathers on the head. The upper surface feathers of young males as described by Johnsgard (1983) are "narrowly and indistinctly margined with pale buffy grayish" and by Oberholser (1974) as being "somewhat more broadly tipped with brown and dull buff." We detected no buff or brown edging on any of the deep metallic green feathers of the back or rump. Differences in the amount of black on the rectrices may also distinguish young males from adult females (Johnsgard, 1983) but neither field observation, the video or photographs we have seen could resolve this.

The only notable inconsistency we found in the field characters of the hummingbird we are describing and the published literature we have consulted is that this individual had a distinct post-ocular spot. Oberholser (1974) says of Anna's female adult that there is a "post-ocular streak, instead of spot." The spot, however, appears in most guides. It also appears in the photographs in both Farrand (1983) and Terres (1980).

Behavior: We observed the hummingbird at paper birch trees, probing the bark crevices. The hovering and probing resembled hummingbirds visiting flowers. This activity was much more frequent on warmer days with sun and temperatures into the forties. We also observed this hummingbird "hawking" for insects just above the alder brush near the apartment building. Bent (1940) describes in detail Anna's fondness for insects not related to nectar and even describes the hummingbird pursuing insects in flight.

We observed many instances of preening. What we first thought was scratching we later realized was preening as the bird used its claws to preen head and neck feathers. The bill was used to preen areas which could be reached. During these preening sessions there was often stretching, the tail being spread most often when the bird stretched one wing only. The bird when perched often looked from side to side. None of this activity seemed any different than we would have expected of a Ruby-throated. We had not, however, observed so intently these habits before.

The original feeder the hummingbird had been coming to had no perches and so the video tape shows the bird hovering as it fed. After reading Kaufman (1990) describing the difference in the orientation of the bird while hovering, we carefully watched again the video. We noted that the tail does seem, in the several minutes of film, to be on the same axis as the body which is characteristic of Anna's (Kaufman, 1990).

Also, according to Kaufman (1990), when hovering Costa's "flip the tail up and down" Black-chinned "usually flips and spreads the tail almost continuously" Ruby-throateds "may move the tail much less than Black-chinneds" and Anna's "usually holds its tail in line with the axis of its body, with relatively little flipping or spreading of the tail." However, without a similar film of other hummingbirds to compare it with, it is difficult to know if the tail flipping and spreading are more or less frequent than other species.

The hummingbird fed briefly and on colder days perched in a patch of brush east of the building. On warmer days it flew further and timing between feeder visits was less predictable. Most often the time between visits was

between 15 and 45 minutes.

Voice: We heard vocalizations only a few times. Several notes were heard short and sharp, but as we have no experience with this species the vocalizations were difficult for us to characterize.

Acknowledgements

Our very special thanks to our friend Peggy Heston who not only alerted us to the hummingbird but shared her home and enthusiasm with everyone. Thanks also to Don Davison who rushed from his home with video camera, binoculars and books to help Peggy document the bird, and to Peder Svingen who compiled a list of extralimital sightings which are summarized in the above discussion.

Editor's Note: The Anna's Hummingbird was last seen on 1 December 1991 when temperatures dropped below zero in Grand Marais.

Literature Cited

Bent, A.C. 1940. Life Histories of North American Cuckoos, Goatsuckers, Hummingbirds and Their Allies. U.S. National Museum Bulletin 176.

Farrand, J. Jr. 1983. The Audubon Society Master Guide to Birding. Alfred A. Knopf, Inc., New York.

Johnsgard, P.A. 1983. The Hummingbirds of North America. Smithsonian Institution Press, Washington, D.C.

Kaufman, K. 1990. Advanced Birding. Houghton Mifflin Co., Boston.

National Geographic Society. 1983. Field Guide to the Birds of North America. National Geographic Society, Washington, D.C.

Oberholser, H.C. 1974. The Bird Life of Texas. University of Texas Press, Austin and London.

Peterson, R.T. 1990. A Field Guide to Western Birds. Houghton Mifflin Co., Boston.

Robbins, C.S., B. Bruun, H.S. Zim, and A. Singer. 1966. Birds of North America. Golden Press, New York.

Terres, J.K. 1980. The Audubon Society Encyclopedia of North American Birds. Alfred A. Knopf Inc., New York.

HC 64, Box 410, Grand Marais, MN 55604.

BOOK REVIEWS

SHOTGUN AND STETHOSCOPE/THE JOURNALS OF THOMAS SADLER ROBERTS, edited by Penelope Krosch, 1991, published by James Ford Bell Museum of Natural History, University of Minnesota, Minneapolis, Minnesota, 55455, pages v plus 290. $12.50. Foreword by W.J. Breckenridge.

MOU members are well aware that the two-volume *Birds of Minnesota* by Thomas S. Roberts (1932) is one of the very best of state bird books, but many of us do not know much about the author. After all, he died in 1946, before many of us were born. A new limited edition publication of the Bell Museum gives us an introduction to Roberts.

His extensive journals have been transcribed and edited by Penelope Krosch, Archivist of the University of Minnesota libraries. It was a tremendous job, resulting in a volume of nearly 300 fine print pages, to which she devoted thousands of hours includ-

ing a year's sabbatical leave. The journals, in diary form, were hand-written, of course, and began in 1874 when Roberts was 16 years old. He was born in 1858, the year Minnesota became a state, so the journals give many fascinating sidelights of Minneapolis' and Minnesota's early history. The Roberts material which Krosch studied is extensive, because Roberts was an inveterate saver. His own files in the University archives filled 16 standard file drawers, and he had deposited family manuscript material in the Minnesota Historical Society, including the journals of his father and mother beginning in 1864, a total of 30 volumes. Krosch drew upon this primary source material in producing the publication.

The book is primarily the journals of Thomas S. Roberts from 1874 to 1884, but Krosch has used additional archives material in summarizing, especially in introductory paragraphs to each chapter of the journals. The first years, when Roberts was a teenager, describe his walks and horse and buggy rides, usually with his father, in areas near their Minneapolis home, and they include natural history notes on what they saw. Roberts wrote in another context that his strong interest in birds developed between his 12th and 15th years. The last journal for 1884, deals almost entirely with his time in medical school at the University of Pennsylvania, so includes very little natural history.

A sampling of the contents may help you decide if you should purchase your own copy. The Roberts family arrived in Minneapolis in 1867 from Philadelphia, when Thomas was nine years old. (His father, John, moved west for his health). They came by train to Dubuque, Iowa, and steamship from there to St. Paul. They soon selected Minneapolis as home, though St. Paul and St. Anthony were considerably larger. Within easy walking or horse and carriage driving distance from their home they found Passenger Pigeons, prairie-chicken booming grounds, and tamarack swamps. Roberts met the experienced eastern ornithologist, Franklin Benner, in 1874, who taught him to make bird skins. In 1875 a group of seven teenagers formed the Young Naturalists' Society, with Roberts as president, and they held regular meetings at which they presented "papers" on natural history topics.

In 1876 the family returned east to visit relatives in Philadelphia and Maryland, which gave Thomas a chance to go to Long Island, N.Y. to visit his friend, Franklin Benner, and go birding on the Island and off shore as well. A quote from Roberts' account of this side trip reveals his dry sense of humor: "The boatman we had was a model seaman since he neither drank, smoked, chewed, swore nor would he go out sailing on Sundays."

In 1877, when Roberts graduated from Minneapolis High School, he took two long trips which are well described in the journals, one for two weeks to northeastern Minnesota, the other for a week, into the Dakota Territory. He then entered the University of Minnesota, but continued to make many natural history notations, usually using the scientific names of both plants and animals. He regularly collected birds, and always analyzed the stomach contents carefully.

Roberts suffered ill health during his two years at the University and doctors advised an outdoor life, so he spent four summers, 1880-83, working with railroad-land-examiner crews in Minnesota and the Dakota Territory. He entered the University of Pennsylvania Medical School in Philadelphia in January of 1882, but kept no journal until September of 1883 to April, 1884. These entries dealt only with his medical school experiences. They were sometimes as brief as: "At college all day", but often more detailed. He was especially proud to be taking his anatomy course from Professor Joseph Leidy, one of America's most respected scientists. In 1885 he finished medical school, graduating fifth in a class of 132, then stayed on in Philadelphia for his residency. He returned to Minneapolis in 1886 and began his highly successful medical practice. He became Chief of Staff at St. Barnabas Hospital, and Professor of Children's Diseases at the University. He was such an excellent diagnostician that William Mayo of the Mayo Clinic in Rochester considered him one of the best in the United States.

In her final chapter Krosch draws upon scattered journals and other material in the archives to carry Roberts career briefly to 1914 when he decided to join the University in charge of the Zoological Museum, and give up his medical practice except for a few families. During the medical career, 1886 to 1914, he had continued his interest in birds,

and had made many extensive trips in the state to study them. He was especially fond of Heron Lake, which he visited several times, sometimes in the company of his friend, Frank M. Chapman, head of the bird department in the American Museum of Natural History in New York City. Roberts was a pioneer in the use of photography as a tool to study birds, and at the invitation of Chapman wrote an article on it for the very first issue of *Bird Lore* magazine in 1899.

Krosch opens her last chapter with the words: "The years between the last entry in Roberts' journal for 1884 and his retirement from medical practice in 1914 were the most active and important years of his life". Those of us who knew Roberts as an ornithologist consider his years after 1914 his most important, for it was then he was able to devote his major effort to ornithology, writing the *Birds Of Minnesota,* and developing the Bell Museum.

Krosch's volume is valuable because it brings to us more information about Roberts than was available before, but for his career as an ornithologist and museum builder, it brings us only to the beginnings. **Gustav A. Swanson, 1020 E. 17th St., #35, Minneapolis, MN 55404.**

WISCONSIN BIRDLIFE, POPULATION & DISTRIBUTION, PAST & PRESENT, by Samuel D. Robbins, Jr., 1991. University of Wisconsin Press, 702 pages, over 350 maps, 54 b&w illustrations, 1 color, hardcover $75.00.

"*Wisconsin Birdlife* has been nearly 70 years in the making." So begins the introduction to this long awaited volume on Wisconsin's birdlife. The author, Samuel D. Robbins, Jr., is eminently qualified to write this book. He has been a leader of Wisconsin ornithology for over 50 years, was instrumental in the implementation and success of the Breeding Bird Survey in Wisconsin, and he has been one of the most active field observers in the state, keeping detailed records since 1939. The idea of a detailed book on Wisconsin's birdlife is nothing new. Passing from person to person in the 1920s and 30s, when economics prevented the funding of such a project, Owen J. Gromme (whose painting of a Pileated Woodpecker pair graces the front cover) began work on the project in 1939. After many setbacks it was decided that the artwork for the book would be published separtately from the species accounts. This resulted in the publication of Gromme's book *Birds of Wisconsin* (1963). It contained plates of most of Wisconsin's birds along with accompanying range maps. The author became involved with the project in 1969 and continued the compilation of information for the publication of the species accounts. Suffice to say it has been a long wait.

As a very interested student of birds in Wisconsin in the mid 1970s I discovered that accurate information on the population and distribution of Wisconsin's birds was next to impossible to find. If you were lucky, could find a copy of Kumlein and Hollister's *Birds of Wisconsin* (1903), or the updated version with annotations by A. W. Schorger published in 1951, both, unfortunately, hopelessly outdated. The Wisconsin Society for Ornithology published a series of checklists with migration charts beginning in 1942 and followed with updated versions in 1950, 1960, 1975, and 1988, but this was very general information at best. As the 1980s drew to a close, the situation had not improved a great deal. The publication of *Wisconsin Birds: A Seasonal and Geographic Guide* (1987) by Stanley Temple and John Cary would, for a variety of reasons, prove to be of little use. With only outdated or very limited information on the status and distribution of Wisconsin's birds available, the anticipation for this book has been extremely high. I believe few people will be greatly disappointed with this publication.

Starting with a section of 32 pages on the development of Wisconsin ornithology, you get a historical overview of the birdlife and the people who were there to record it. *Wisconsin Birdlife* (hereafter *WB*), true to its title of *Past & Present,* gives you a good historical base upon which to build your knowledge of Wisconsin's birds.

In an interview published in *The Passenger Pigeon* (44:46-55) in 1982, Sam Robbins states, "I won't be a bit surprised if when it comes out some reviewers will pan us saying that we've put some unnecessary material into it, which is not strictly historical data, but may be dealing a little bit more with the habits and behavior of birds. I have in mind a book which I hope will appeal not only to resear-

chers but also to a lot of people who will want it in their own homes, in their own personal libraries." While this reviewer is not out to "pan" this publication, when you consider the price of this book ($75.00) your first thought is, "How could they have made it less expensive?". Quite possibly the 32 page section on the ornithological history could have been left out considering much of this information is in the process of being published in *The Passenger Pigeon* or is readily available elsewhere. But, I feel its inclusion is appropriate and is a positive feature. What about the 55 pages titled *The Landscape and the Birds?* It is a very detailed and well written geographical account of Wisconsin that is well illustrated with maps, covering climate, geology, vegetation, land use, historical changes in the vegetation and habitats, the impact of human settlement (bad and good), and other related topics. Although this takes up quite a large portion of space the information it contains is valuable and timely. It provides you with a great deal of useful information that should be well received. The 35 page bibliography is magnificent. Anybody who is serious about Wisconsin birds will find this as valuable as any information contained within the species accounts. These may well be the most valuable 35 pages in the book. With only the species accounts left you soon realize that although much lengthy, non-bird related material is contained in *WB*, it is not frivolous information but is useful and pertinent. So is the $75.00 price tag justified? If you are truly interested in Wisconsin's birdlife or want current information on birds in our neighboring Midwestern state, I believe it is.

Any bird book is only as good as the information on the birds it contains. The species accounts cover 550 pages and are filled with information. There is an accompanying map for all but the rarest of Wisconsin's birds. The text is written in a casual manner and is easy to read. Compiling the data for accurate species accounts is a more difficult job than many people realize. This is especially true in Wisconsin. Unlike Minnesota, which has had a strong central figure (T.S. Roberts) and establishment (The J.F. Bell Museum of Natural History) that has acted as a clearing house for bird records and information, Wisconsin's records, specimens, and other valuable data are spread over the entire state, demonstrating the amount of work the author has done since 1969 in compiling these accounts. There are graphs showing the seasonal status and distribution, as well a detailed graph showing habitat preference (along with the indicators of each habitat type) that nicely supplement the species accounts. The species accounts typically list the status, habitat, migration dates, breeding data (if applicable), and a reference to the corresponding plate in Gromme's *Birds of Wisconsin*. As stated earlier, all but the rarest of species have an accompanying map. These maps show seasonal occurrence, extralimital (and seasonal) occurrences, range increases/decreases, and breeding bird survey data. I particularly enjoyed the maps showing the expanding range of some species (e.g. Red-bellied Woodpecker). The species accounts also contain a good assortment of photographs, used, for the most part, to illustrate and/or document rare sightings. Almost all are of high quality and reproduced well.

With all of this you may think *WB* has no drawbacks. You may be assured that it has. Probably the most visible is the $75.00 price. This is enough to prevent many people from even giving it a serious look. It will not be bought or used by "bird-appreciators, interested in birds but not necessiarily involved in ornithological activity beyond feeding birds in winter...", as stated by the author in his preface. Although the information contained in *WB* may justify the expense, it is never-the-less a serious drawback. One of the best features is also one of the most aggravating: the maps. Using multiple types of maps instead of a uniform one, the user of this book can be easily confused. When you take a look at a breeding bird survey type map you don't have a clue as to the status and distribution of that bird in the state. These are as useless, in my opinion, as the maps in Temple and Cary's book. This data, if it needed to be published, could have been incorporated into a standardized style of map for consistency, ease of use, and comprehension.

As many of the species accounts were written before the "official" records committee was established, many of the records cited have never been formally accepted by the committee. This may not seem important until you try to read some of the more unusual species accounts. How many of those Anhingas soaring over the hawk watches are valid

records? You may be confused by a number of other accounts as well. The status of Ivory Gull is described as "Accidental. Four records", but then the text describes five records. One is "hypothetical" but you have to read closely to tell which are supposed to be the "accepted" records. This is true of many of the rarer species. The use of hypothetical is confusing and never seems to be defined well. It would be less confusing if Wisconsin's records committee had disposed of this category, as have other states, such as California and Minnesota. I would disagree with the status of a few species as listed in the List of Wisconsin Species Showing Status and Distribution or as described in the text. Western Grebe is listed as rare (rare defined as present one out of five years), but they are actually regular (defined as occuring every year), as "Nearly every year since 1948, from one to five reports have come from somewhere in Wisconsin." The same applies to American White Pelican, Harlequin Duck, Swainson's Hawk, Yellow Rail, Buff-breasted Sandpiper, Thayer's Gull, Western Kingbird, Bohemian Waxwing, and a few others. All of these accounts are misleading, as are those of Little Blue Heron and Varied Thrush. Described as "rare", the heron, "with from one to three bird observed annually since 1963", should be listed as regular. Varied Thrush is similar: "Beginning in 1963, one or more birds have turned up every winter." It would seem that the status of these birds has changed over the years but *WB* fails to acknowledge this. There is one missing record I know of, that of a Prairie Warbler in Grant County in May 1986, observed by many attending the W.S.O. convention in Platteville. This is the only record of Prairie Warbler from southwestern Wisconsin.

All things considered, the fact remains that this is the only current and detailed account of the status and distribution of Wisconsin's birds and is a must-have book for anyone interested in Wisconsin's birdlife. You may have to swallow once or twice to get past the $75.00 price tag, but if you do I think you will be pleased. You may have problems with the maps or deciphering some of the species accounts, but all-in-all it is a good book and contains a great deal of information that may surprise you. Did you know that the first record for North America of White-winged Tern was from Wisconsin? That the only breeding record of Western Tanager east of the Black Hills is from Wisconsin? **Kim W. Risen, 5756 Brunswick Ave. N., Crystal, MN 55428.**

THE BIRDS OF SOUTH DAKOTA, second edition, by the South Dakota Ornithologists' Union, 1991. Northern State University Press and SDOU, Box 740, Aberdeen, SD 57401. With 31 black-and-white habitat photographs, 3 figures, 1 table, numerous distributional maps, pp. xxxiii, 411, hardcover, $29.95.

This revision of the 1978 edition was written by the checklist committee of the South Dakota Ornithologists' Union, the group that integrated data from a variety of historical and contemporary sources for the first edition. The first edition was itself an historic successor to Over and Thomas' revised edition of the *Birds of South Dakota,* published by the University of South Dakota Museum in 1946. Unfortunately, this latest revision is a modest improvement at best. Although the introduction claims that it is "completely revised" only the species accounts are truly updated, and the student of South Dakota bird life would do well by keeping the first edition and subscribing to *South Dakota Bird Notes.*

The layout of the second edition accounts for the additional 100 pages as compared to the first edition. The distributional maps are larger, records and migration dates are now listed in a column, and blank spaces appear randomly. Blank space sometimes precedes the beginning of a new family, while elsewhere two different families, from two different orders, both begin on the same page. Significant amounts of information have been deleted from the species accounts compared to the first edition, which was subtitled "An Annotated Check List." A comparison of the accounts of Canada Goose best illustrates the succinct approach of the second edition.

The book begins with an introduction and review of the geography, weather, vegetation, and birds of South Dakota. Except for a sentence added or deleted in a few spots and changes in format, it is identical to the first edition. One new paragraph has been added to the section "How human settlement has changed the environment," and another re-

written paragraph mentions that the state list has grown from 377 to 395 species between editions. If you want to know which species are new to the state list, you will have to buy both editions and compare them.

The first edition contained a "Summary of the bird life of South Dakota" which tabulated the breeding status, winter status, and overall status in South Dakota for each species. This summary also contained codes for the type of documentation (photograph, specimen, multiple records, etc.). The revised edition contains no such list and even the species index is pared down to common (English) names only. Also gone is the index of localities which cited coordinates on a reference grid in the first edition.

The first edition contained ten species on an annotated "Hypothetical list." Four of these have been added to the state list on the basis of new information, but the others (along with obvious escapes such as Egyptian Goose) have been relegated to Table 1 in the revised edition, which is titled "Reports of species from South Dakota that are probably erroneous or of escapes from captivity." Some of these species may be of special interest to Minnesota observers, such as Black Vulture, Lesser Nighthawk and Golden-crowned Sparrow, but the second edition contains no discussion of these records. Inexplicably, Mute Swan is included in the main text of the second edition as a hypothetical species.

The habitat photographs are a vast improvement over those in the first edition, many of which were out of focus or improperly exposed. A new feature is the inclusion of maps which depict banding recovery data. A number of these include only one banding recovery, while other maps contain so many arrows (for example, Common Grackle) that much of mid-America is obliterated and the reader can only conclude that Common Grackles banded in South Dakota move south at some time during the year. The coded distributional maps for each species are fairly easy to interpret and provide more useful information.

The species accounts themselves include the status of the species in the state, a very brief description of habitat, early and late dates for migration, nesting dates, winter records, and the distributional maps. All records are listed for accidental species and sometimes for casual species, although the designation of casual status is applied inconsistently throughout the book. Some species with a grand total of three records are listed as casual (such as Common Eider, Curve-billed Thrasher, and Mountain Chickadee) while the status of Lesser Goldfinch is listed as accidental, with four records between 1969 and 1988. Boreal Chickadee is also listed as casual, on the basis of only two records, both from 1972! At least six species have the status section completely omitted, although it can be determined from the number of records that all are accidental. It is hoped that the revised edition will help stimulate field studies where data is lacking, such as determining the true status of Broad-tailed Hummingbird in the Black Hills. The reader is left to conclude whether introduced populations of such species as Chukar and California Quail have truly been self-sustaining.

One feature that is consistent and useful throughout the book is citations for records, migration dates, and status comments. An exhaustive list of references follows the species accounts. The average date for peak migration is usually given, rather than a range of dates for the period of migration. Attempts are rarely made to analyze population trends or to discuss changes in distribution since the first edition. How are Loggerhead Shrikes doing in South Dakota, compared to regional states and provinces? Least Tern and Piping Plover are both federally listed and South Dakota is one of their strongholds, right? Are the numbers of Bald Eagles also increasing in South Dakota? One has to look elsewhere for the answers to these questions.

Faced with choosing between the two editions of *The Birds of South Dakota,* the first edition is still recommended. However, observers needing current information on nesting records or early and late dates for migration will find the second edition worthwhile, especially since its price is reasonable compared to many state bird books. **Peder Svingen, 151 Bedford St. S.E., Minneapolis, MN 55414.**

A PARROT WITHOUT A NAME, by Don Stap, published by Alfred A. Knopf, Inc., 201 E. 50th, New York, NY 10022, 1990. 239 pages, map by George Colbert. Hardcover $19.95, paper $14.95.

As strange as it may sound, I have never been that excited about birds and birding in the tropics. The bird life north of the Rio Grande seemed to have enough challenges to keep me busy for years to come. Even the names of some of those "funny" birds were enough to put me off on tropical birding. With names that brought no mental images to mind, such as Hoatzin, Tawny Tit-spinetail, and White-crested Spadebill, tropical birds were just letters on a page. That is until I read this book. And reread it, and reread it and reread it...

Don Stap, whose only other book prior to *Parrot Without a Name* (hereafter *Parrot*) was a book of poetry, has done a remarkable job of providing an interesting (and very readable) overview of birds and birding in the tropics, the people who live and work there, the hardships they face, the uniqueness that is the rainforest and much of what resides there.

Concentrating on the Peruvian rainforest and two of the best known and, for very different reasons, interesting tropical ornithologists, John O'Neill and Ted Parker, you are introduced to tropical field ornithology from a "ground level" perspective. The author, as a participant in an expedition to Peru, under the aegis of Louisiana State University and led by O'Neill, quickly relates a few of the political, socioeconomic and cultural realities one must work with in order to accomplish anything in a developing country such as Peru. From a loss of supplies, the government's refusal to grant collecting permits, transportation problems, and even routine dental care, the obstacles seem to never disappear. You are able to empathize with the members of the expedition as the anticipation and excitement grow at the thought of working in an area of the rainforest that is, as of yet, unknown. You can understand their frustration and aggravation over the mundane (and yet so very important) details that further delay their departure.

Parrot includes many interesting stories or "tidbits". These fascinating stories consist of historical narratives, detailed, and yet understandable, scientific lectures on speciation and the history of ornithological fieldwork in South America. Such denizens as a Pink-footed Tarantula, a wolf spider larger than the palm of your hand, and snakes large enough to pull a grown man into a river are enough to make most people squeamish, but the birds more than make up for these. With more than 1700 species of birds to be found in Peru, there are certainly enough exotic and exciting birds to keep your mind off of these "distractions".

Parrot shows you Peru through the fieldwork of O'Neill and Parker. It offers many personal glimpses of both ornithologists. The emotions, ambitions, foibles, quiet determination, and the manner in which they deal with everyday problems help you to admire them and their work all the more. O'Neill made a grand entrance into the ornithological establishment by discovering a species new to science... while still a freshman. His methodical and workman-like approach to his work has resulted in one of the best tropical bird collections in the world. Parker, on the other hand, made his first splash as a record-setting-teen when, in 1971, while in his senior year in high school, he set a new record of 626 birds observed in a single year north of Mexico. With two such different personalities the professional O'Neill and the proficient Parker, you would think they have nothing in common. Nothing could be further from the truth. They both share an encyclopedic knowledge of South American birdlife. The enthusiasm with which they approach their work is contagious, since "they have never lost the insatiable curiosity and adventurous spirit they had as twelve-year-olds.".

Parrot is sub-titled *"The Search for the Last Unknown Birds on Earth"*, but does not dwell on the subject of finding bird species new to science. You are given insights into the region and the manner in which fieldwork is done. The "possibility" of finding something new just adds to the excitement of the expedition. Your knowledge of tropical Peru, the birds, and the practicalities of birding such a country are bound to be improved.

The best recommendation I can give is that I was not interested in tropical rainforest birds and birding until I read this book. Furthermore, I did not really want to read this book in the first place, but once I started reading it I did not put it down until I was finished. **Kim W. Risen, 5756 Brunswick Ave. N., Crystal, MN 55428.**

The Importance of Avian Collections and the Need for Continued Collecting

Kevin Winker, Bruce A. Fall, John T. Klicka, David F. Parmelee, and Harrison B. Tordoff

"The well-known spring and summer call of the Chickadee, consisting of three clear whistles, is uttered by both sexes. I am not aware that record has ever been made of this fact, which I determined some time ago through the judicious use of firearms." (Dwight 1897).

"Because the higher-level systematics of birds actually has a poorer foundation than in any other division of vertebrate zoology, research based on museum specimens will be absolutely essential to lifting this pallium of ignorance." (Olson 1981).

"...conservation organizations do the conservation of biological diversity a disservice by ignoring some subspecies and even opposing or prohibiting the collecting of material needed to understand the variation of life on earth. Subspecies are vital to such understanding. And without understanding, *we cannot conserve." (Phillips 1986).*

"This study demonstrates the accuracy and routine nature of the use of museum specimens in the analysis of mitochondrial sequence variation in natural populations, and, importantly, that a temporal aspect can now be added to such studies." (Thomas et al. 1990).

"Understanding the diversity of nature is, in various forms, a fundamental problem of ecological research. New techniques have extended the temporal and spatial scales over which patterns of diversity can be detected... Characterizing patterns of diversity is a critical first step in preserving that diversity." (Lubchenko et al. 1991).

Abstract

1. The purpose of a bird collection is to preserve the avian record, providing a source of material for both present and future research. A museum collection, much like a library, is a storehouse of reference material. Unlike books, however, each bird specimen is unique and cannot be replaced.

2. Avian collections have been the basis for our general understanding of birds. There are essentially four types of variation that we attempt to document through specimen preservation: individual, geographic, short- (within-year or lifespan) and long-term (decades) temporal variation.

3. Properly preserved specimens are useful for centuries, but older specimens often lack the data needed to answer modern questions. In general, existing collections do not have enough material for thorough investigations.

4. Specimens are added to museums today through salvaging birds found dead and through limited active collecting.

5. Preparation of specimens often includes preservation of the skeleton, skin, stomach contents, and a tissue sample, maximizing the usefulness of every bird.

6. Our understanding of avian diversity and classification is currently undergoing a revolution through the application of new techniques to bird specimens.

7. Hundreds of new bird species have been discovered in the past decade, mostly through the accumulation and examination of specimens

8. Conservation efforts rely upon accurate knowledge of avian diversity. Our knowledge

of avian diversity is rapidly changing.

9. Given the likelihood of future change in climate, habitat, and populations, tracking these changes through time by regularly sampling populations is very important.

10. Biological productivity enables the vast majority of avian populations to sustain regular harvesting of some portion of an annual surplus.

11. Scientific collecting is overzealously legislated. A single licensed hunter in Minnesota can legally take more than 5,190 game birds in a year, while an entire institution with many scientists collecting under scientific collecting permits can take only 120 birds of the same game species.

12. Collection of birds for scientific and educational purposes contributes 0.00011% to all human-caused avian mortality. More birds of a *single species* (e.g. Mallard) are killed by hunters in one year than the scientists of North America have preserved of all species in the last century.

13. Continued documentation and examination of biological diversity will be essential to successful conservation efforts. Museum collections and researchers will continue to be at the forefront of this research.

Introduction

During interactions with people who are not familiar with the nature of our work in a museum of natural history, we frequently encounter questions about why birds are collected and how they are preserved and used. As the quotations above suggest, birds are collected for many reasons and specimens are used in a variety of researches. Let us state at the outset that we care deeply about birds, and that we have a strong commitment to their continued well-being. At the same time, we feel that judicious collecting and continued specimen-based research are essential to solving a number of the problems in avian evolution and conservation. A communications gap between avian researchers and others interesed in birds often results in hostility against scientific collecting. We hope to bridge that gap and to show how the state bird collection and avian collections in general are being used to further our knowledge of birds.

Mission of a museum collection

The purpose of a bird collection is to preserve the avian record, providing a source of material and data for both present and future research. The state bird collection, started late in the last century, is housed in the Bell Museum of Natural History, at the University of Minnesota in Minneapolis. Much of the early material was collected by Thomas Sadler Roberts and his friends, and this nucleus of the collection served as the basis for Roberts' two volume "Birds of Minnesota" (1932), still widely regarded as one of the best state bird books. Most of the birds that Roberts collected are still available to researchers today. During the past 100 years the collection has grown to its current size of about 40,000 specimens. It is now broad in scope and has many strengths, both in species composition and geographic coverage. It is used by scientists throughout North America on a regular basis. Recent grants from the National Science Foundation have demonstrated that this collection is of national importance, and it is currently being computerized to make it more accessible to researchers everywhere.

Typically, specimens are collected by a researcher working on a particular problem and are ultimately deposited in a collection. Other material is added by museum staff, who carefully choose and prepare many of the hundreds of birds brought in each year ("salvaged") that have died from a variety of causes (e.g. road kills, window kills, starvation, etc.). The Bell Museum collection has grown by an average of 1.7% per year during the past decade. This growth is sustained through salvage, acquisition of older material (e.g. ancient personal collections), and limited active collecting.

How bird specimens are used

Ornithological collections have been used to form much of the basis of our present understanding of birds. Modern field guides are derived largely from careful consideration of tray after tray of bird specimens collected over a span of time and geographic space. You are the direct beneficiary of collections when you consult most field guides, since the plates in these guides are usually painted using specimen "consultants." Field guides improve as more of the variation in species is included. We know about this variation (e.g. individual, age, sex, and geographic) through large series of specimens patiently accumulated over many decades. This, the major contribution of specimens to the bird-

ing community and natural history art, is only a very small way in which collections are used.

Modern preparation of specimens includes preservation of the skeleton, skin, stomach, and a tissue sample, in order to maximize the usefulness of every bird received or collected. Research skin specimens are not like taxidermy mounts. Skins are prepared by removing the body (including most of the bones) and replacing it with cotton. The result is a stylized, rigid bird with cotton eyes that lies on its back. Skeletons are prepared by placing the dried carcass, without skin, into a colony of dermestid beetles, which eat the meat but leave the bones. Skeletons are usually then disarticulated by soaking in water until the joints come apart and the bones separate. Skins and skeletons are kept in insect-proof cases when not being used by researchers. Properly preserved specimens are useful for centuries.

A museum collection is a storehouse of reference material. In some ways collections are similar to libraries, but specimens are not books; each specimen is unique and cannot be replaced. Once a specimen has been used for the purpose for which it was collected, its careful preservation allows it to be examined by future researchers. As an example, Parkes (1989) reexamined some Bell Museum specimens collected over a century ago to revise the classification of some Philippine birds. Specimens may later be used for purposes that the original collector could not have imagined. We have been asked about our Greater Prairie-Chicken (*Tympanuchus cupido*) holdings from the last century by a researcher who would like to explore historical genetic diversity in this species by examining DNA in the dried skins and comparing it to that found in today's remnant populations. A loss in genetic diversity would have serious implications for prairie-chicken conservation.

Our understanding of species and subspecies limits, indeed, our understanding of avian phylogeny (lineages and their relatedness) as a whole, is presently undergoing a revolution through the application of new techniques to bird specimens. This area of research is probably the single most active in bird collecting today, since it often requires materials not traditionally saved: tissues and skeletal material, for example. Most people think that bird taxonomy is well understood. This is not so. The lead quote of Dr. Storrs Olson shows that the relationships among higher taxa (genera, families, and orders) are poorly understood. Similarly, our knowledge of geographic variation within species is only "skin deep."

Examination of geographic variation in specimens was instrumental to Darwin's development of the theory of evolution. This type of research is alive and well today, and is experiencing a dramatic surge in activity, since we are now able to examine the genetic bases of the visible differences that gave Darwin and others so much food for thought. A tremendous amount of current specimen-based research is directed toward the examination of the connection between phenotypic (visible) and genotypic (genetic) characteristics. Already-classic studies (e.g. Zink 1986) show that geographic variation in allozymes (various forms of enzymes) does not always reflect geographic variation in morphologic and plumage characters, upon which subspecies limits in particular have been traditionally based. The general finding that patterns of genetic variation frequently do not match patterns of phenotypic (externally visible) variation, as was frequently assumed in phenotypic studies of yesteryear, makes this an exciting area of evolutionary research.

Many studies that examine geographic variation in molecular characters (e.g. Zink 1986, Avise 1989) imply that what the early taxonomists learned by looking at study skins may not reflect the underlying genetics of the birds examined. While this general finding is revitalizing museum-based studies of avian evolution, it also holds important consequences for conservation. A last-ditch effort to save some of the genetic stock of the Dusky Seaside Sparrow (*Ammodramus maritimus nigrescens*) failed because it was based on flawed taxonomy (Avise 1989). Another situation with conservation implications occurs when separate populations or groups traditionally treated as subspecies may actually be full species. Analyzing blood proteins, Barrowclough and Gutiérrez (1990) recently discovered that the Spotted Owl (*Strix occidentalis*) of New Mexico is genetically quite distinct from Spotted Owl populations in Oregon and California. A careful examination of new material will probably reveal that the two groups represent separate species —

a very important consideration for Spotted Owl conservation strategies.

Relatively few specimens are collected today to determine species' ranges, although this continues to be an effective means of learning the avifauna of poorly understood areas (e.g. Gibson 1981, Remsen et al. 1987, Winker and Klicka 1991). Studies that fail to secure voucher specimens (representative specimens of the organisms being studied) are criticized both for their own incompleteness and for the lost opportunity to make material available for future study (Johnson 1983). Changing taxonomies (e.g. splitting one species into two) often rely upon the examination of specimens to determine distributions (e.g. *Empidonax* flycatchers; Johnson 1980, Zink and Fall 1981; Western and Clark's Grebes [*Aechmophorus* spp.]; Storer and Nuechterlein 1985). Classic studies of migration and distribution (e.g. Aldrich and Duvall 1958) depend on large numbers of specimens accumulated over a long period of time, and they can only be as complete as the specimen base itself. The migration patterns and wintering grounds of North American birds south of the United States are still known mainly through museum specimens (Barlow and Flood 1983). As Ramos (1988) has recently shown, tremendous advances in our knowledge of migration strategies, timing, route selection, and wintering ranges of songbirds can be made through the collection and careful analysis of specimens. Skeletal specimens are being used heavily for comparative purposes in the study of paleo-ornithology (avian fossils; cf. Olson 1981) and for identification in archaeological studies. Pickled (or spirit, or fluid) specimens are seeing a revival in the systematic study of anatomy, especially of musculature. Specimens can also play important roles in studies of population and community ecology (Ricklefs 1980, Fitzpatrick 1985).

In 1980, experts considered that there were approximately 9,021 species of birds in the world (Bock and Farrand 1980). The most recent book on the taxonomy and distribution of birds of the world (Sibley and Monroe 1990) recognizes 9,672 species. How did scientists discover 651 new species of birds in the past decade (including many new species in North America)? Mostly through the patient accumulation and examination of specimens. Using the ever-more-powerful tools available to us to discern differences between groups of birds, we are finding that the class Aves contains a lot of diversity that wasn't evident before with limited techniques and often more limited preserved material. Now, in addition to sometimes minor differences between populations in morphology, we are finding that there are frequently differences in habitat associations, vocalizations, behavior, body proteins, and even gene frequencies that clearly indicate very different populations — often recognized at the species level. Some might think that we are entering an era of rampant splitting (creation of new species by splitting old ones), but the qualities that a population must possess to qualify as a species have probably never been more stringent than they are today. What we are seeing in this increase in avian species is the beginning of a more complete understanding of true avian diversity.

Why collecting must continue

Every specimen represents a point unique in space and time. Have you ever seen anyone who looks exactly like you? Just as in humans, there is a tremendous amount of variability within bird species. This variability takes several forms: birds from one population are different from each other (individual variation). Birds of a single species from one area are often different than those from another (geographic variation). Birds also show changes with season and age (short term temporal variation). Finally, at any given locality a population probably changes genetically (and possibly morphologically) through time (long term temporal variation). The object of specimen preservation is to document these types of variation both for present and future research. Ultimately, investigating variation furthers our understanding of speciation and other aspects of evolution; along the way we learn much of practical value (e.g. species limits, population uniqueness, distribution and dispersal patterns, and sex and age-related characteristics). The amount of variation found in a species determines the number of specimens adequate to document and fully understand that variation. To satisfy statistical analyses, samples from any given locality often have to be at least ten individuals, preferably of each sex and age class (e.g. ten adult females, ten immature males, etc.). In general, existing collections do not have

enough material for thorough investigations (Zusi 1982), and new specimens tend to be collected by project-oriented researchers. General collecting is still warranted, however. Given the likelihood of change over time in climate, habitat, and populations, temporal samples (regular sampling through time) are very important. In addition, the worldwide holdings of both skeleton and fluid specimens have been inventoried and found to be far short of current and future research needs (Jenkinson and Wood 1985). Perhaps part of the problem is that there appears to be a widespread misconception that patterns of geographic variation (at least in North America) and their evolutionary significance are well understood; this is not so (Zink and Remsen 1986).

Collection of individual birds carefully studied in life is often still necessary to learn the age or sex of birds showing certain behaviors. Thus, Dwight's collection of chickadees revealed that both sexes sing. Winker et al. (1990) used this technique to learn that in Wood Thrushes (*Hylocichla mustelina*) both sexes defend individual winter territories, an important aspect of nonbreeding population dynamics.

Vagrants, which are unlikely to survive and reproduce anyway, and individuals of certain problem species, should probably be collected more frequently so that we can confirm their species (e.g. *Larus* sp. Hoffman and Hoffman 1986; *Myiarchus cinerascens* Svingen and Risen 1991), what subspecies (and thus geographic region) they belong to (e.g. Curve-billed Thrasher [*Toxostoma curvirostre*] Carlson 1991), and whether they are of wild or captive origin (e.g. Magnificent Hummingbird [*Eugenes fulgens*] Eckhardt 1987). These four recent Minnesota records do not have specimen documentation, which has proven useful with other recent distributional records in the state (e.g. confirmation of immature female California Gull [*Larus californicus*], Janssen 1986; decision of captive origin of Common Black Hawk [*Buteogallus anthracinus*] ***The Loon*** 60:14). Having said this, we hasten to say that we have no intention to deny birders their opportunity to see rarities by routinely collecting them upon discovery.

Although collecting a bird has an undeniably immediate impact, on a population level this loss is usually inconsequential and only temporary. If a breeding bird has been taken, the following year, or perhaps later in the same year, there will probably be another breeding pair at that location. The loss of habitat, on the other hand, has a less-noticed but far more detrimental and permanent impact upon avian populations. Worldwide, many habitats are disappearing quickly, and the job of collecting and preserving specimens of populations that will vanish with these habitats is falling upon museums worldwide. Because of inadequate levels of support, this job is not being satisfactorily performed, and smaller museums have quite a job in attempting to keep up with adequate preservation of the fauna of their regions.

A factor dealt with daily in collections is that older material tends to have fewer data than newer specimens. Because of this paucity of data many older specimens cannot be used to answer current ecological questions (Stiles 1983). For example, specimens collected and used for taxonomy in the last century are usually of no use in the examination of things such as diet, gonad development, fat levels, breeding seasons, or molt schedules. The lack of data on older material may necessitate further collecting, with more thorough documentation (see Parkes 1963). With current rates of habitat alteration, however, species may be displaced from an area where formerly common, and new material may be impossible to obtain. Failure to collect recent specimen examples may prevent us from answering both current and unknown future research questions. For example, good specimen samples of House Finches (*Carpodacus mexicanus*) taken today in Minnesota would enable us in the future to view evolution in action as these populations adapt to environments that they did not formerly occupy. As another example, consider that egg collectors of the pre-DDT era had no idea that their specimens would prove crucial to demonstrating the noxious effects of DDT on avian reproduction.

General collecting activities have decreased markedly in the past few decades. This stems not only from a decline in active collectors, but also from a slow bureaucratic throttling of legitimate collecting activities. The Bell Museum holds just one set of permits for the institution — with 35 people authorized to salvage dead birds and perform limited collecting under it.

Legal protection of birds

Current legal restrictions on scientific collecting are quite severe. This severity has been imposed only during the past decade. Permits used to be issued regularly to individuals, and there were no limits to the number of birds that might be taken (except that endangered species could not be taken). Generally, this freedom was not abused by scientists. Individual permits became discouraged by federal authorities, however, who now issue permits (in our region) only to institutions. Shortly after this change, institutional permits began to impose limits. At the Bell Museum in 1986 there were no limits to the number of birds of non-endangered species that could be collected by its scientists. In 1987 our federal institutional permit had a limit imposed of no more than four individuals of permitted species.

Presently, federal collecting permits in our region allow only three birds of most species to be taken in a single year (in other regions it is as low as two). This figure is not based on any reasonable biological criteria; it is lower than the *daily* bag limit of most game species for a licensed hunter (see Table 1). In addition to federal permit restrictions, many states add further restraints (Minnesota is one exception here). Protection is certainly warranted, but many scientists are finding that the restrictions are too severe, often preventing them from taking advantage of unforeseen opportunities when they get into the field. Exceptions to a limit of three can be applied for on a species-by-species basis, but because permit application procedures take months, a fleeting chance in the field often has to be passed up. As an example, two of us were recently unable to collect mortally wounded waterfowl under our permits because we hadn't anticipated encountering them. It is ironic that these birds were legally protected from us (who wanted to preserve their skins, skeletons, and tissues for future study), but not from the hunters who had injured them. We think that over-restrictive regulation of collecting probably arises from a misguided attempt to safeguard avian populations.

In the ornithological community the current permit restrictiveness is a widely recognized problem (King and Bock 1978, Diamond 1987). Researchers feel frustration at this situation, because while there is an urgent need for new specimen material to generate the knowledge needed to formulate effective conservation policies (among other uses), misguided conservation concerns thwart efforts to collect birds. The biological laws of

How Many Birds Can A Minnesota Hunter Harvest?

Table 1. If the appropriate hunting licenses are purchased, how many birds of protected species can an individual hunter take in a year in Minnesota? These figures are from the 1990 hunting regulations.

Species	Season	Days	Daily limit	Season limit[1]
Ruffed & Spruce Grouse	15 Sep-31 Dec	107	5 combined	535
Sharp-tailed Grouse	15 Sep-30 Nov	76	3	228
Gray Partridge	15 Sep-31 Dec	107	5	535
Ring-necked Pheasant	13 Oct-9 Dec	56	2	112
American Crow	1 Jul-1 Nov	124	no limit	no limit
American Woodcock	1 Sep-4 Nov	65	5	325
Sora & Virginia Rail	1 Sep-4 Nov	65	25 combined	1625
Common Snipe	1 Sep-4 Nov	65	8	520
Ducks (excluding mergansers)	6 Oct-4 Nov	30	3	90
Mergansers	6 Oct-4 Nov	30	5	150
Coots & moorhens	6 Oct-4 Nov	30	15 combined	450
Geese	29 Sep-17 Dec	80	7 combined	560

[1]Limit for entire season if daily limit is taken on every day of the open season.

productivity and an examination of sources of avian mortality show that scientists constitute a negligible threat to birds, excepting only such easily dealt with special cases as truly endangered species or local populations.

Sources of avian mortality

Avian populations generally fluctuate widely in size during a given year. After the reproductive season a population is at its largest, and usually more individuals exist at this time than the environment can support through the coming year. Annual mortality eliminates the surplus, and the number of birds alive at the beginning of a reproductive season is usually near the number that existed at the same time the year before. Natural causes of avian mortality are responsible for about 98.1% of the estimated 10 billion birds that die annually in the United States; the remaining 1.9% is directly or indirectly related to human activities (Banks 1979).

Hunting is the major direct human-related cause of avian mortality. Banks (1979) noted that five million Mallards (*Anas platyrhynchos*) were killed in both 1970 and 1971. As Dr. Kenneth Parkes has said (pers. comm.), this *annual* haul of a single species exceeds the total number of research specimens of all species in North American museums, which have been accumulated over about a century and a half (see also King and Bock 1978:23). Over one million American Woodcock (*Scolopax minor*) were shot by hunters in the 1970-71 season. Between 1942 and 1965, the national kill of Mourning Doves (*Zenaida macroura*) was from 11 million to 42 million annually. Clearly, some species can withstand tremendous levels of human predation in complement with natural factors causing mortality. The population dynamics of many non-game species are comparable, except that hunting does not contribute significantly to the elimination of the annual population surplus.

An individual who purchased the requisite annual hunting licenses in 1990 could legally take over 5,190 birds of game species in the state of Minnesota (Table 1). The Bell Museum's 1990 scientific collecting permits allowed the entire institution (tens of scientists) to take only 120 birds of these same species (including waterfowl and American Crows [*Corvus brachyrhynchos*]).

Your house may kill more birds per year than we collected under the Bell Museum's collecting permit during the last calendar year (1990: 22 birds). Klem (1990) monitored window kills at two houses in southern Illinois and found that a rural and suburban home killed 33 and 26 birds respectively through window strikes during a 12-month period. Klem (1990) has been investigating avian mortality due to window strikes since 1974, and estimates that between 97.6-975.6 million birds are killed annually in this fashion in the United States.

Communications towers (usually television), which are of necessity tall structures supported by a network of cables, are another common human-related cause of avian mortality. By law, they must have flashing lights every 100 ft. On nights during migration when the cloud ceiling is low, the lights on these structures somehow confuse nocturnal migrants (most songbirds) and attract them like moths to a flame so that they fly in circles — many strike the tower or its cables and are killed or mortally injured. On a single night during migration a tall television tower might kill hundreds or even thousands of migrants. Using several independent sources, Banks (1979) estimated that approximately 2,500 nocturnal migrants are killed annually at each of these towers, and that the annual U.S. toll from this source was approximately 1.25 million birds.

Birds are also killed at phenomenal rates along our roads. Again, using figures from several studies, Banks (1979) estimated that approximately 15.1 avian deaths occur annually per road mile, resulting in about 57.2 million deaths per year in the United States. Churcher and Lawton (1989) examined a poorly understood source of bird death: the domestic cat. They found that at least 20 million birds a year are killed by Britain's cats. If cats in the United States hunt as effectively, and if cat numbers correspond to human populations, then we might expect more than 80 million birds to be killed annually by domestic felines in the United States.

In comparison, scientific collecting is an infinitesimal contributor to avian mortality. About 0.00011% of all human-related avian mortality is caused by collection for scientific or educational purposes (King and Bock 1978). Paulson (1989) compared collecting levels at the Burke Museum in Washington state to that state's avian population. In a

"good" year, scientists at the Burke Museum collect approximately 700 birds. By using breeding bird census figures from *American Birds*, Paulson estimated that Washington state produces about 70 million birds each year. The Burke Museum, then, collected about one out of every 100,000 birds produced in Washington state on an annual basis.

Conclusion

We hope that this communication convinces persons unfamiliar with the functions of a bird collection that maintenance of a collection is important and that continued collecting will be instrumental in answering a variety of research questions. Continued documentation of biological diversity and an increased understanding of geographic variation will be essential to successful conservation efforts. Museum collections and researchers will continue to be at the forefront of this research. Most populations of birds can easily withstand the loss of a few individuals each season, and if these individuals allow us to gain a more thorough understanding of the species or population, then we are in a better position to successfully perform our duties as stewards of the environment. Modern scientific collecting is carried out with due concern for population levels at local and global scales, and samples are not taken from populations that cannot replace themselves. Every effort is made to acquire specimens through salvage by picking up birds killed inadvertently through contact with man (e.g. television tower, window, and road kills). As the mandated state repository for avian specimens, we will accept any prepared or unprepared specimens for which the date and locality of collection (or salvage) are known.

Literature Cited

Aldrich, J. W. and A. J. Duvall. 1958. Distribution and migration of races of the Mourning Dove. Condor 60:108-128.

Avise, J. C. 1989. A role for molecular genetics in the recognition and conservation of endangered species. Trends Ecol. Evol. 4:279-281.

Banks, R. C. 1979. Human related mortality of birds in the United States. U.S. Fish & Wildlife Service, Special Scientific Report, Wildlife No. 215.

Barlow, J. C. and N. J. Flood. 1983. Research collections in ornithology — a reaffirmation. Pp. 37-54 in Perspectives in ornithology, A. H. Brush and G. A. Clark, Jr., eds. Cambridge Univ. Press, Cambridge, USA.

Barrowclough, G. F. and R. J. Gutiérrez. 1990 Genetic variation and differentiation in the Spotted Owl (*Strix occidentalis*). Auk 107:737-744.

Bock, W. J., and J. Farrand. 1980. The number of species and genera of recent birds: a contribution to comparative systematics. Amer. Mus. Novitates 2703:1-29.

Carlson, S. 1991. Minnesota's second Curve-billed Thrasher. ***The Loon*** 63:150-151.

Churcher, P. B. and J. H. Lawton. 1989. Beware of well-fed felines. Natural History July 1989:40-46.

Diamond, J. M. 1987. Justifiable killing of birds? Nature 330:423.

Dwight, J., Jr. 1897. The whistled call of *Parus atricapillus* common to both sexes. Auk 14:99.

Eckhardt, F. 1987. Magnificent Hummingbird in Boyd, Lac Qui Parle County. ***The Loon*** 59:145.

Fitzpatrick, J. W. 1985. The role of collections in ecological morphology. Pp. 195-207 in Museum Collections: their roles and future in biological research, E. H. Miller, ed. British Columbia Prov. Mus. Occ. Papers No. 25.

Gibson, D. G. 1981. Migrant birds at Shemya Island, Aleutian Islands, Alaska. Condor 83:65-77.

Hoffman, K. and M. Hoffman. 1986. Thayer's/Iceland Gull identification problem. ***The Loon*** 58:18-20.

Janssen, R. B. 1986. A "mysterious" gull at Lake Harriet. ***The Loon*** 58:16-18.

Jenkinson, M. A. and D. S. Wood. 1985. Avian anatomical specimens: a geographic analysis of needs. Auk 102:587-599.

Johnson, N. K. 1980. Character variation and evolution of sibling species in the *Empidonax difficilis-flavescens* complex (Aves: Tyrannidae). 112:1-151.

————. 1983. Review of "The avifauna of the South Farallon Islands, California". Auk 100:240-242.

King, J. R., and W. J. Bock. 1978. Workshop on a plan for ornithology: final report submitted to the National Science Foundation and the Council of the American Ornithologists' Union.

Klem, D. Jr. 1990. Collisions between birds and windows: mortality and prevention. J. Field Ornithol. 61:120-128.

Lubchenko, J. et al. 1991. The sustainable biosphere initiative: an ecological research agenda. Ecology 72:371-412.

Olson, S. L. 1981. The museum tradition in ornithology — a response to Ricklefs. Auk 98:193-195.

Parkes, K. C. 1963. The contribution of museum collections to knowledge of the living bird. Living Bird 2:121-130.

————. 1989. Notes on the Menage collection of Philippine Birds: 1. Revision of *Pachycephala cinera* (Pachycephalidae) and an overlooked subspecies of *Dicaeum trigonostigma* (Dicaeidae). Nemouria 33:1-9.

Paulson, D. R. 1989. Bird-specimen collection and preparation: a user's view. Pp. 41-46 *in* Notes from a workshop on bird specimens (S. P. Rogers and D. S. Wood, eds.). Carnegie Museum of Natural History: Pittsburgh, PA.

Phillips, A. R. 1986. The known birds of North and Middle America. Part I. Denver Museum of Natural History, Denver, Colorado. 259 pp.

Ramos, M. A. 1988. Eco-evolutionary aspects of bird movements *in* the northern Neotropical region. Pp. 251-293 in Acta XIX Congressus Intern. Ornithol., H. Ouellet, ed. National Museum of Canada.

Remsen, J. V. Jr., M. A. Traylor Jr., and K. C. Parkes. 1987. Range extensions for some Bolivian birds, (Tyrannidae to Passeridae). Bull. Brit. Ornithol. Club 107:6-16.

Ricklefs, R. E. 1980. Old specimens and new directions: the museum tradition in contemporary ornithology. Auk 97:206-207.

Roberts, T. S. 1932. The Birds of Minnesota. Univ. Minnesota Press, Minneapolis.

Sibley, C. G., and B. L. Monroe, Jr. 1990. Distribution and taxonomy of birds of the world. Yale Univ. Press, New Haven, Conn.

Stiles, F. G. 1983. On sightings and specimens. Auk 100:225-226.

Storer, R. W. and G. L. Nuechterlein. 1985. An analysis of plumage and morphological characters of the two color forms of the Western Grebe (*Aechmophorus*). Auk 102:102-119.

Svingen, P. and K. Risen. 1991. First Minnesota record of the Ash-throated Flycatcher identification. ***The Loon*** 63:4-11.

Thomas, W. K., S. Pääbo, F. X. Villablanca, and A. C. Wilson. 1990. Spatial and temporal continuity of kangaroo rat populations shown by sequencing mitochondrial DNA from museum specimens. J. Molecular Evol. 31:101-112.

Winker, K. and J. T. Klicka. 1991. A Harris' Sparrow and breeding Surfbird from northwestern Bristol Bay, Alaska. Northwest. Natur. 72:33-34.

————., J. H. Rappole, and M. A. Ramos. 1990. Population dynamics of the Wood Thrush in southern Veracruz, Mexico. Condor 92:444-460.

Zink, R. M. 1986. Patterns and evolutionary significance of geographic variation in the Schistacea group of the Fox Sparrow (*Passerella iliaca*). Ornithol. Monogr. 40:1-119.

————. and B. A. Fall. 1981. Breeding distribution, song and habitat of the Alder Flycatcher and Willow Flycatcher in Minnesota ***The Loon*** 53:208-214.

————. and J. V. Remsen, Jr. 1986. Evolutionary processes and patterns of geographic variation in birds. Current Ornithol. 4:1-70.

Zusi, R. L. 1982. Infraspecific geographic variation and the subspecies concept. Auk 99:606-608.

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Spruce Grouse in display, 20 April 1991, Isabella, Lake County. Photo by Kim Risen.

The Spring Season

(1 March to 31 May 1991)

Steve Carlson, Oscar Johnson, Kim Risen and Dick Ruhme

Foreword by Peder Svingen

Spring 1991 was characterized by cool and wet conditions over much of Minnesota. A series of cold fronts brought precipitation which replenished underground aquifers in many areas and set the stage for flooding in the south. Away from northwestern Minnesota, the drought of the late 1980's was over. Still, pockets of low moisture persisted in some northern counties and the complete recovery of species such as Sedge Wren and Sharp-tailed Sparrow remained in doubt.

March opened with waterfowl migration already underway, as usual. Ross' Geese were found in several areas, including eleven birds in one Traverse County flock! One of the few spring occurrences ever for Brant was an individual in Cottonwood County on the 29th and a Harlequin Duck was observed for two weeks on the Mississippi River in Sauk Rapids. Spring migration of raptors also continued throughout March but it is difficult to summarize and remains poorly understood, especially compared to fall migration at Hawk Ridge Nature Reserve. Observers who never get tired of watching Great Gray Owls (all of us?) enjoyed the conclusion of the largest invasion of this species ever documented in the state! Short-eared Owls returned early and in good numbers, welcome news for this troubled species.

April was mostly wet and cool, a pattern that continued throughout May. The temperatures were actually very close to normal, but the windy and warm springs of the past few

years have skewed our perceptions of "normal." Several species of sparrow returned early with the Lark Sparrow in Duluth notable for its location, early date, and willingness to be easily observed for over a week. Shorebird migration is normally one of the hallmarks of late spring, but this year's migration was an enigma. Despite excellent habitat in flooded fields and probably an average amount of coverage by observers in the western region, flocks were elusive. The early dates listed for some species are misleading, in that early arrivals were not followed by an orderly progression of migrants. For some shorebird species, the dates listed were virtually all the birds that were reported. A few strays were discovered, such as the Marbled Godwit on Sand Point, Frontenac, that should have been elsewhere by the 29th of May. Some observers speculated that weather held back shorebird migration in general, so that many flocks simply overflew the state as soon as conditions permitted.

Snowy and Cattle Egrets made a good showing this spring, starting with the annual M.O.U. Salt Lake Weekend. An adult Little Blue Heron remained near Coon Rapids Dam, Anoka County, for five days. White-faced Ibises were found in two locations but the headline news from the ibis family was the Glossy Ibis at Heron Lake, Jackson County. It was in the company of two White-faced Ibises and conclusively documented by Kelly McDowell's photograph on 15 May. Hopefully, outstanding records such as this will generate enthusiasm and support for the Heron Lake Area Restoration Project (***The Loon*** 61: 108-114).

The state's second record of Curve-billed Thrasher was remarkable in many respects. Its discovery at "little known and seldom birded" Staring Lake Park in Eden Prairie, reflected the diligent coverage of Hennepin County by Steve Carlson throughout each year. The scores of observers who lined up with spotting scopes to share the experience during a weekend of pouring rain, walked away with much more than a new addition to their state lists.

The highlight of the passerine migration was the steady, extended migration of warblers throughout May, especially in the southern region. Blackpoll Warblers were widespread, but no Kentucky Warblers were found. Rare warblers included a Yellow-throated Warbler along the Minnesota River on the incredibly early date of 7 April and another in Goodhue County on 1 May. Two Worm-eating Warblers were reported but could not be refound, a typical pattern. Yellow-breasted Chats went unreported, for the second consecutive spring.

Many other unusual or interesting events were sprinkled throughout spring migration in 1991. The immature Black-legged Kittiwake on 30 March in Winona County, was an unusual spring occurrence. The Gyrfalcon at the Felton Prairie, Clay County on 1 May concluded an influx of this species into Minnesota (and other states) in 1990-91. The Spruce Grouse displays in Lake County were awesome to behold and another spring record for jaegers should encourage observers to look for them on Lake Superior in May. The pair of Mountain Bluebirds returned again to nest in Marshall County, a most welcome encore! Sprague's Pipits have made the field along Sprague Creek, Roseau County, famous. Several rare tanagers were found and the brief appearance of a male Lazuli Bunting at Wirth Park, Hennepin County on 21 May was tantalizing. Many more outstanding records await your interest in the following pages!

Common Loon

Early south 3/30 Freeborn JM, 4/2 Dakota KB, Ramsey RH; early north **3/27** Clearwater EK, 4/4 Morrison DJ, 4/7 Clay LCF.

Pied-billed Grebe

Early south 3/10 Anoka PS, 3/14 Rice OR, 3/18 Sherburne DO; early north 3/29 Becker TEB, 4/5 Cook PS, 4/6 Beltrami DJ, Clay MO.

Horned Grebe

Early south 3/22 Washington WL, 3/26 Carver KR, 3/30 McLeod PS; early north 4/16 Cook KMH, 4/18 Clay RJ, 4/20 Pine AB, Becker BK.

Red-necked Grebe

Early south **4/2** Hennepin KB, 4/12 Freeborn AP, 4/16 Anoka GP, Lyon HK; early north 4/5 Becker DEB, 4/13 Douglas RJ, 4/15 St. Louis KE.

Eared Grebe

Early south 4/16 Ramsey DS, 4/17 Cotton-

wood ED, 4/20 Lac Qui Parle FE; early north **4/6** (earliest date on record) Clay MO, 4/25 Roseau KSS, 4/28 Otter Tail SDM.

Western Grebe
Early south 4/25 McLeod RH, 4/26 Lac Qui Parle CMB, Cottonwood ED; early north 4/25 Roseau KSS, 4/28 Otter Tail SDM, 5/4 Traverse FKS; also 5/25 St. Louis AB, BL.

American White Pelican
Early south **3/7** (earliest date on record) Wabasha WDM, 3/30 Renville BL, 4/3 Chippewa FE; early north **4/3** Koochiching GM, **4/6** Becker MO, Otter Tail SDM, Todd KB.

Double-crested Cormorant
Early south 3/25 Dakota KB, 3/26 Lac Qui Parle RG, 3/30 Kandiyohi CJ; early north **4/6** Otter Tail SDM, Todd KB, 4/13 Becker MO.

American Bittern
Early south 4/10 Blue Earth LF, 4/26 Lac Qui Parle CMB, 4/29 Winona AP; early north **4/4** (earliest date on record) Becker DEB, 4/14 Aitkin WN, 4/26 Cook KMH.

Least Bittern
Reported 5/11 Hennepin KR, 5/18 Kittson KB, **5/23** Roseau KB, 5/24 Hennepin OJ.

Great Blue Heron
Early south 3/8 Dakota KR, 3/10 Anoka GP, 3/13 Rice OR; early north 3/20 Becker DEB, 3/26 Hubbard JL, 3/27 Aitkin WN.

Great Egret
Early south **3/20** (earliest date on record) Anoka GP, Hennepin KB, Le Sueur MTS; early north 4/5 Beltrami KH, 4/6 Grant, Otter Tail SDM, 4/21 Clay LCF.

Snowy Egret
Reported 4/27 Big Stone PB, KR, 4/28 Swift EL, 5/4 Traverse FKS, 5/8 Kandiyohi JR.

Little Blue Heron
Reported 4/29-5/3 Anoka mob (***The Loon*** 63:136-137).

Cattle Egret
Reported from 11 counties; early south 4/27 Big Stone mobs, Olmstead BSE, 4/29 Cottonwood ED; early north 5/23 Clay MO.

Green-backed Heron
Early south 4/15 Ramsey EL, 4/23 Lac Qui Parle CMB, 4/25 Wabasha WDM; early north 5/4 Becker DEB, MO, 5/10 Clay LCF, 5/12 Hubbard JL.

Black-crowned Night-Heron
Early south 3/27 Rice OR, 3/30 Washington TEB, 4/3 Hennepin SC; early north 5/4 Becker DEB, MO, Marshall KSS, 5/15 Kittson KB.

Yellow-crowned Night-Heron
Only report 4/17 Dakota PB.

GLOSSY IBIS
First confirmed (photographed) state record 5/15-16 possibly present in same location since 5/8, Heron Lake, Jackson County KM, RJ, EB, KC, mob.

WHITE-FACED IBIS
Reported 5/8-25 Jackson mob, 5/20 Rice WS (***The Loon*** 63:206).

Tundra Swan
Early south 3/1 Wabasha KR, 3/8 Winona CS; early north **3/17** Otter Tail SDM, 3/21 Grant AB; late south 4/27 Big Stone AB, DB, KR, 5/10 Washington DS; late north 5/26 Kittson KB, 5/27 Marshall KB.

MUTE SWAN
Reported 4/15-26 Winona AP, CS, 4/20 Goodhue AP.

Greater White-fronted Goose
Early south 3/6 Pipestone ND, JP, 3/9 Cottonwood ED, Martin BB, Rock ND; early north 3/29 Otter Tail MO, 3/31 Clay AB; late south 4/27 Lac Qui Parle mobs., 5/14 Steele AP; late north **5/23** Roseau KB; peak 4/17 Yellow Medicine HK (200+).

Snow Goose
Early south **3/2** Dakota PS, 3/5 Nobles LF; early north 3/25 Clay SDM, 3/28 Morrison DJ; late south 4/17 Washington WL, 5/5 Lac Qui Parle KR; late north 5/8 Norman BK.

ROSS' GOOSE
Many reports; south 3/6 Olmsted BSE, AP, 3/30 Renville PS (***The Loon*** 63:136), 4/17 Lincoln PS (***The Loon*** 63:138), 4/21 Rock PS (***The Loon*** 63:202); north 3/28 (***The Loon***

63:157-158) and 4/18 Traverse KE, RJ, 4/17 and 4/24 Marshall RJ, PS.

BRANT
Reported 3/29 Cottonwood ED, RG (***The Loon*** 63:209).

Canada Goose
Reported from 32 counties south, 20 counties north.

Wood Duck
Early south **3/2** Houston EMF, 3/5 Nobles LF, 3/8 Anoka KB; early north 3/17 Otter Tail SDM, 3/20 Becker DEB, 3/28 Clay MM.

Green-winged Teal
Early south 3/2 Olmsted BSE, 3/9 Dakota KB, RG, PS, 3/11 Cottonwood ED, Rice OR; early north 3/30 Otter Tail MO, 3/31 Grant AB, 4/3 Clay MM.

American Black Duck
Late south 5/11 Wabasha DZ, 5/22 Hennepin SC, 5/31 Ramsey DS.

Mallard
Reported from 37 counties south, 21 counties north.

Northern Pintail
Early south 3/1 Hennepin KB, 3/2 Dakota PS, 3/6 Cottonwood ED; early north 3/25 Otter Tail SDM, 3/28 Wilkin MO, 3/30 Aitkin WN.

Blue-winged Teal
Early south 3/10 Le Sueur AP, 3/20 Anoka KP, Lyon HK; early north 4/4 Becker DEB, 4/5 Clay MO, 4/6 Beltrami DJ, Otter Tail SDM.

Cinnamon Teal
Reported **3/26** (earliest date on record) Chippewa RG, GSw, 5/24-25 Rice TB, FKS. Hybrids reported 4/27 Lac Qui Parle AB and 5/8-10 Aitkin WN, PS (***The Loon*** 63:197-198).

Northern Shoveler
Early south 3/2 Olmsted BSE, 3/11 Cottonwood ED, 3/13 Winona CS; early north 3/26 Otter Tail SDM, 3/31 Grant AB, 4/4 Lake MH.

Gadwall
Early south 3/1 Cottonwood ED, 3/6 Olmsted BSE, 3/8 Kandiyohi CJ; early north 3/31 Grant AB, Otter Tail SDM, 4/3 Clay MM.

American Wigeon
Early south 3/5 Pipestone ND, JP, 3/8 Cottonwood ED, Kandiyohi CJ; early north 3/28 Wilkin MO, 3/31 Grant AB, 4/3 Clay MM.

Canvasback
Early south 3/1 Rock ND, 3/5 Cottonwood ED, 3/10 Waseca AP, Washington KB; early north 3/26 Otter Tail SDM, 4/3 Clay MM, 4/5 Beltrami DJ.

Redhead
Early south 3/3 Blue Earth MF, 3/5 Nobles LF, 3/8 Olmsted BSE; early north 3/25 Otter Tail SDM, 3/31 Grant AB, 4/3 Clay MM.

Ring-necked Duck
Early south 3/1 Cottonwood ED, 3/5 Dakota AB, Pipestone ND, JP; early north 3/20 Beltrami DJ, 3/26 Cook KMH, Otter Tail SDM.

Greater Scaup
Early south **3/5** Dakota KB, 3/9 Scott RG, 3/17 Olmsted AB; early north 3/31 Grant AB, 4/2 Mille Lacs JR, 4/6 Beltrami DJ.

Lesser Scaup
Early south 3/5 Dakota AB, Cottonwood ED, 3/8 Hennepin KB, Pipestone ND, JP; early north **3/10** Otter Tail SDM, 3/29 Becker DEB, St. Louis KB.

Harlequin Duck
Reported **3/7-20** Stearns KE, PS, (***The Loon*** 63:140-141), 4/20 Cook MH, 4/22 Benton JR.

Oldsquaw
Reported 3/30-4/1 Houston KE, FL, AP, 4/20-5/25 Cook PB, KR mobs.

Surf Scoter
Only report 5/7 St. Louis SS.

White-winged Scoter
Reported 4/27 Big Stone BF, 5/4 Washington WL, 5/7 St. Louis KE, 5/8-9 Clay MO.

Common Goldeneye
Late south 4/16 Hennepin SC, Winona AP, 4/23 Ramsey KB, 5/13 Anoka GP.

Bufflehead
Early south **3/2** Winona HH, 3/5 Rice OR, 3/7 Hennepin KB; early north 3/17 Otter Tail SDM, 3/30 Morrison AB, 4/2 Cook KMH; late south 5/11 Dodge HK, Hennepin KB, OJ, 5/12 Yellow Medicine AB.

Hooded Merganser
Early south 3/1 Lac Qui Parle FE, 3/8 Cottonwood ED, Dakota RG; early north 3/17 Otter Tail SDM, 3/25 Beltrami DJ, 3/26 Cook KMH.

Common Merganser
Late south 4/24 Rice TB, 4/28 Washington WL, 5/26 Hennepin SC.

Red-breasted Merganser
Early south 3/12 Dakota RJ, 3/14 Washington KB, 3/17 Blue Earth MF, Kandiyohi JR; early north 4/6 Aitkin WN, Becker MO, Otter Tail SDM.

Ruddy Duck
Early south 3/18 McLeod RG, 3/20 Martin BB, 3/21 Cottonwood ED, Hennepin KB; early north 4/17 Clay MO, 4/25 Roseau KSS, 5/13 Carlton RJ.

Turkey Vulture
Early south 3/21 Houston EMF, 3/25 Goodhue BL, Washington WL; early north 4/2 Pope SDM, 4/3 Cass HJF, St. Louis TW.

Osprey
Early south 3/31 Sherburne SWR, 4/4 Hennepin KB, 4/6 Carver MB; early north 4/4 Cook SOL, 4/9 Pennington KSS, 4/10 Otter Tail SDM.

Bald Eagle
Reported from 28 counties south, 15 counties north; peak 3/31 Wabasha 292 KE.

Northern Harrier
Early south 3/5 Sherburne SWR, 3/8 Brown JS, Fillmore GMD, Goodhue RG; early north 3/7 Mahnomen BK, 3/8 Becker DEB, Wilkin MO.

Sharp-shinned Hawk
Early south 3/3 Nicollet LF, 3/5 Anoka GP, Rice TB; early north **3/9** St. Louis TW, 3/13 Lake DPV, 3/26 Becker BK, Hubbard JL.

Cooper's Hawk
Early south 3/5 Rice OR, 3/6 Sherburne DO, 3/8 Hennepin KB; early north 3/31 Beltrami DJ, 4/7 Becker MO, 4/10 Norman PS.

Northern Goshawk
Late south 3/10 Hennepin RJ, 4/2 Olmsted BSE, 4/6 Scott DB.

Red-shouldered Hawk
Early south **3/10** Washington KB, 3/12 Sherburne SWR, 3/13 Anoka GP; early north 3/17 Clay MO, Otter Tail SDM, 3/19 Aitkin WN.

Broad-winged Hawk
Early south, 4/6 Carver MB, Olmsted AP; early north, **4/3** Becker DEB, 4/21 Pennington KSS.

Swainson's Hawk
Early south 4/2 Pipestone JP, 4/4 Fillmore GMD, 4/6 Lincoln RG, RJ, Olmsted BSE; early north 4/24 Clay SDM, 5/17 Norman GS, 5/19 Kitson KB.

Red-tailed Hawk
Reported from 29 counties south, 21 counties north.

Ferruginous Hawk
Reported 4/6 Rock RG, 5/1 Wilkin PS (***The Loon*** 63:200-201).

Rough-legged Hawk
Late south 5/7 Olmsted AP, 5/10 Dakota TEB, 5/16 Benton LF; late north 5/8 St. Louis SW/MS, 5/12 Aitkin WN, **5/25** Roseau MO.

Golden Eagle
Late south 3/17 Fillmore, Houston AB, 3/31 Wabasha AP, 4/6 Rock RG, RJ; no reports north.

American Kestrel
Early north **3/1** Morrison PS, **3/2** Aitkin WN, 3/6 Otter Tail SDM.

Merlin
Early south **3/14** Hennepin GP, 3/24 Rice TB, 4/2 Dakota KB; early north 3/2 Beltrami MO; 3/17 Pennington KSS, 4/5 Cook KMH.

Prairie Falcon
Reported 4/5 Douglas RB.

Gyrfalcon
Late north **5/1** (latest date on record) Clay PS (***The Loon*** 63:201).

Gray Partridge
Reported from 29 counties south, 7 north.

Ring-necked Pheasant
Reported from 15 north and 32 south counties. Many observers reported increased numbers.

Spruce Grouse
All reports: 3/12-4/5 Cook KMH, 4/20-21 Koochiching KB, 4/20-21 Lake (up to 9 displaying males!) PB, KR, 5/2 Lake PS.

Ruffed Grouse
Reported from 15 north and 12 south counties.

Greater Prairie-Chicken
All reports: 3/10-4/21 Clay (max 28) LCF, 3/31 Polk AB, 4/6 Norman MO, 4/6-28 Wilkin (max 90) mob, 4/25-5/4 Hubbard RG, RJ.

Sharp-tailed Grouse
Reported from Aitkin, Carlton, **Hubbard** (needs details), Itasca, Kanabec, Kittson, Koochiching, Marshall, Polk, Roseau and St. Louis Counties. Reported from only three counties last year.

Wild Turkey
Reported from Fillmore, Houston, Olmsted, Wabasha and Winona Counties.

Northern Bobwhite
One report: 4/22 Houston AP.

Yellow Rail
All reports: **4/27-28 Wabasha** TSa, AP, PS, 5/4-7 **Hennepin** GSw, SC, 5/14 Aitkin WN, 5/19 Kittson KB, 5/21 Roseau KB.

Virginia Rail
Early south 4/22 Sherburne SWR, 4/23 Mower JM, 4/27 Lac Qui Parle CMB; early north 5/13 Carlton AB, 5/18 Kittson KB, 5/25 Marshall EL.

Sora
Early south 4/18 Le Sueur EK, 4/21 Rice TB, 4/22 Sherburne SWR and Wabasha DWM; early north **4/20** Otter Tail MO, 5/10 Hubbard JL, 5/13 St. Louis TW.

Common Moorhen
All reports: 5/4-5 Wabasha (max 8) AB, PS, 5/11 Houston FL, 5/20-22 Rice TB, PB.

American Coot
Early south **3/5** Dakota KB, 3/7 Winona CS, 3/9 Goodhue BL and Washington TEB; early north 4/4 Aitkin WN, 4/5 Clay MO, 4/6 Beltrami DJ.

Sandhill Crane
Early south **3/14** (earliest date on record) Washington WL, **3/18** Sherburne SWR, 3/23 Anoka KB; early north **3/17** Wilkin SDM, 3/31 Polk AB, 4/4 Pine RG.

Black-bellied Plover
All reports: 5/12 Brown AB, 5/13 Clay MO, 5/15 St. Louis PS, 5/19 Becker KSS, 5/21 Cook KMH, 5/23 Roseau KB, 5/25 St. Louis AB, 5/27 Marshall KB.

Lesser Golden-Plover
Early south 4/20 Lac Qui Parle CMB, 4/22 Hennepin KB, 4/27 Lyon HK and Meeker RJ; late south 5/16 Murray ND and Watonwan (30) BB, 5/18 Jackson (50) AP; only north reports **4/14** (earliest date on record) Wilkin MO, 4/28 Otter Tail SDM, 5/19 Polk PS.

Semipalmated Plover
Early south 4/24 Pipestone ND, 4/25 Cottonwood ED, 4/26 Lincoln KR; early north 5/11 Marshall KSS, 5/15 Becker MO, 5/16 Polk KB; late south 5/25 Carver RJ, 5/26 Olmsted BSE; late north 5/26 Marshall KB, 5/28 St. Louis DPV.

Piping Plover
Only report: 5/21 Morris Point, Lake of the Woods Co. PS.

Killdeer
Early south 3/5 Pipestone ND, JP, 3/6 Olmsted BSE, 3/9 Wabasha BL; early north 3/20 Clay SDM, 3/23 Aitkin WN and Beltrami KH, 3/26 Becker DEB, BK.

American Avocet
All reports 4/27 Olmsted (6) and Winona (8) AP, CS, 4/27-5/7 (max 8) Big Stone PB, KR, 5/9 Jackson (25) ED, 5/16-19 Polk mob, 5/16-25 Marshall mob, 5/19 Kittson KB, 5/23 Roseau KB.

Greater Yellowlegs
Early south 4/4 Winona PS, 4/6 Cottonwood ED, Pipestone RG, RJ and Winona CS, 4/7 Renville AB; early north 4/6 Douglas KB,

4/10 Clay MO, 4/14 Aitkin WN; late south 5/24 Olmsted BSE, 5/25 Hennepin SC; late north 5/24 Kittson KB, 5/25 Roseau MO.

Lesser Yellowlegs

Early south 3/25 Pipestone JP, 4/4 Hennepin KB and Winona PS, 4/6 Cottonwood ED; early north 4/6 Clay MO and Otter Tail SDM, 4/14 Aitkin WN, 4/20 Beltrami DJ; late south 5/26 Olmsted BSE, 5/30 Winona CS; only late north date 5/27 Norman MO.

Solitary Sandpiper

Early south **4/14** Hennepin OJ, 4/26 Rice TB, 4/27 Lac Qui Parle mob, Olmsted BSE and Pope RJ; early north 4/27 Aitkin WN, 5/4 Becker DEB, MO and Wilkin SDM, 5/6 Lake DPV; late south 5/11 Olmsted BSE, HK, 5/12 Brown AB and Hennepin SC

Willet

Early south 4/21 Pipestone PS, 4/26 Rock (3) PB, KR, 4/27 Lac Qui Parle mob and Pope RG, RJ; late south 5/15 Olmsted BSE, 5/16 Scott RJ; all north reports 5/4 Wilkin SDM, 5/15 Lake of the Woods SW/MS.

Spotted Sandpiper

Early south **4/11** Olmsted MF, 4/20 Lac Qui Parle CMB, 4/26 Hennepin AB, SC; early north 5/2 Clay LCF, 5/4 Becker MO and Morrison RJ, 5/6 Beltrami DJ.

Upland Sandpiper

Early south 4/26 Pipestone KR, 4/27 Lac Qui Parle mob and Lyon HK, 4/28 Big Stone RB, DL; early north 5/4 Wilkin SDM, 5/8 Polk PS, 5/13 **Lake** (2) RG, RJ.

Whimbrel

All reports: 5/19 St. Louis (18) PB, 5/21 Cook (40) KMH, 5/21-26 St. Louis mob.

Hudsonian Godwit

Early south 4/21 Pipestone PS, 4/22 Cottonwood ED, 4/28 Lac Qui Parle mob, Stearns KR and Stevens KR; early north 4/27 Grant RG, RJ, 5/5 Becker MO, 5/11 Marshall KSS; late south 5/12 Redwood AB, 5/18 Jackson BL; late north 5/23 Roseau KB, 5/25 Marshall EL.

Marbled Godwit

Early south 4/13 Lac Qui Parle DO, Stearns RG, RJ and Wilkin KE, 4/22 Cottonwood ED, 4/24 Pipestone ND; early north 4/13 Becker MO, 4/14 Wilkin KB, 5/15 Polk KSS. Two unusual reports: 5/27 Two Harbors, Lake Co. DPV, 5/29 Sand Pt., Goodhue Co. PS.

Ruddy Turnstone

All reports: **5/11-20** Marshall KSS, 5/18 Clay LCF, JL, 5/19 Becker MO, 5/22 Norman PS, 5/22-25 Roseau KB, 5/25 St. Louis AB.

Sanderling

All reports: 4/27 Olmsted BSE, 5/13 Scott PS, 5/19 Becker MO, 5/20 Marshall KSS, 5/22 Winona RG, 5/23 Clay MB, 5/25 St. Louis AB, 5/26 Clay LCF and Winona AP.

Semipalmated Sandpiper

Early south **4/10** Cottonwood ED and Winona CS, 4/26 Lincoln KR and Pipestone KR; early north **4/27** Grant RJ, 5/11 Marshall KSS; late south 5/26 Olmsted BSE; late north 5/25 St. Louis AB, 5/27 Clay ND and Norman MO, 5/28 St. Louis DPV.

Western Sandpiper

Only report: **5/21** Marshall KB (***The Loon*** 63:196-197).

Least Sandpiper

Early south **4/6** Cottonwood ED, 4/10 Pipestone JP, 4/11 Mower JM; early north 5/9 Clay MO, 5/14 Lake DPV, 5/15 Aitkin WN, Otter Tail SDM and Todd GS; late south 5/19 Lyon HK, 5/28 Olmsted BSE; late north 5/22 Marshall KB and Norman PS.

White-rumped Sandpiper

Early south **4/26** Rock (2) PB, KR, 5/10 Lac Qui Parle CMB, 5/11 Hennepin OJ; early north **5/11** Marshall KSS, 5/15 Becker MO, 5/18 St. Louis KR; late south 5/16 Jackson RJ, 5/28 Olmsted BSE; late north 5/26 St. Louis PS, 5/27 Clay MO and Norman MO.

Baird's Sandpiper

Early south 4/2 Pipestone JP, 4/6 Yellow Medicine RJ; early north 4/17 Marshall RJ, 5/9 Otter Tail SDM; late south 5/25 Anoka DZ, 5/26 Houston AP and Olmsted BSE, 5/30 Winona CS; only late north reports 5/15 Becker MO and Otter Tail SDM, 5/18 St. Louis KR.

Pectoral Sandpiper

Early south **3/24** Le Sueur RG, 3/26 Carver

KR, 4/1 Lyon RJ and Winona AP; early north 4/13 Clay MO, 5/15 Aitkin WN and Mille Lacs RJ; late south 5/18 Lac Qui Parle CMB, 5/28 Olmsted BSE; late north 5/24 Kittson KB, 5/26 Clay LCF, 5/27 Norman PS.

Dunlin

Early south 4/27 Big Stone AB, KR and Lac Qui Parle CMB, 4/28 Carver PS; early north 5/15 Aitkin WN and Becker MO, 5/18 Clay JL; late south 5/27 Lyon HK, 5/28 Olmsted BSE, 5/30 Winona CS; late north 5/25 Lake DPV and St. Louis AB, 5/26 Marshall KB, 5/27 Clay and Norman MO.

Stilt Sandpiper

All reports: 5/11 Rice SC, **5/11-15** Becker MO, 5/16 Marshall KB and Winona AP, 5/19 Polk PS, 5/24 Kittson KB, 5/26 Clay LCF, 5/27 Lyon HK.

Buff-breasted Sandpiper

Only report: 5/18 Heron Lake, Jackson Co. (13) WL.

Short-billed Dowitcher

Ealry south **4/27** (earliest date on record) Big Stone KR, 5/3 Blue Earth LF, 5/4 Pipestone JP; late south 5/18 Benton RJ and Watonwan ED, **5/30** Winona CS; all north reports 5/15 Aitkin WN, Becker MO, Mille Lacs RJ and Todd GS.

Long-billed Dowitcher

Early south **4/16** Rock ND, 4/19 McLeod KR, 4/23 Big Stone DB; late south 5/12 Lac Qui Parle DB, 5/14 Dodge and Steele AP; all north reports 5/11 Marshall KSS, 5/13 Carlton RJ, 5/15 Aitkin WN.

Common Snipe

Early south **3/17** (earliest date on record) Fillmore AB, 3/31 Mower KM, 4/2 Wabasha DWM and Winona CS; early north **3/26** Aitkin WN, 4/4 Cook SOL, 4/5 Clay MO.

American Woodcock

Early south 3/19 Rice TB, OR, 3/21 Brown JS and Winona CS, 3/24 Carver AB and Washington TEB; early north **3/16** (ties earliest date on record) Norman MO, 3/27 Aitkin WN, 3/30 Cook SOL (4/16 nest with four eggs).

Wilson's Phalarope

Early south 4/23 Olmsted AP, 4/27 Lac Qui Parle CMB, KR and Lyon HK, 5/5 Winona CS; early north 5/2 Becker DEB, 5/7 Polk PS, 5/8 Clay MO. Also reported 5/28 St. Louis fide KE.

American Woodcock, 27 April 1991, Big Stone NWR, Big Stone County. Photo by Kim Risen.

Red-necked Phalarope
All reports: 5/18 Cottonwood ED, 5/19 Polk PS, 5/20 Marshall PS, 5/23 Roseau KB, 5/26 Marshall EL, 5/27 Norman MO.

Parisitic Jaeger
5/17-19 Duluth (2) PB, mob, 5/26 Duluth (2) AB. (Second consecutive spring with jaeger observations.)

Franklin's Gull
Early south 3/30 Rice FKS, 4/6 Rock RG, RJ, 4/11 Murray ND; early north **4/6** Norman MO, 4/14 Pennington KSS, 4/17 Marshall RJ and Wilkin SDM.

Little Gull
All reports: 5/16 Karlstad, Kittson Co. KB (***The Loon*** 63:209-210.), 5/17 Duluth PB, 5/20 Duluth DBe.

Bonaparte's Gull
Early south **3/28** Freeborn JM, 4/4 Hennepin KB, 4/6 Goodhue BL; early north **4/6** Becker MO, 4/20 Otter Tail SDM, 4/27 Mille Lacs WL.

Ring-billed Gull
Early north 3/25 Beltrami DJ, 3/26 Otter Tail SDM, 3/29 St. Louis KB. Reported from 12 north and 29 south counties.

Herring Gull
Reported from 18 north and 22 south counties.

Thayer's Gull
All reports: **3/25** Goodhue RG, 4/18 Anoka RJ, 4/27 Stearns.

Glaucous Gull
All reports: 3/8 St. Louis (5) PS, 3/29 Wabasha (1st yr) BL, 5/26 St. Louis MB.

BLACK-LEGGED KITTIWAKE
Only report: **3/30** Winona, Winona Co. CCB (***The Loon*** 63:143).

Caspian Tern
Early south **4/16** (ties earliest date on record) Blue Earth MF, 4/28 Olmsted BSE, 5/1 Scott RJ; early north 5/11 Hubbard JL, 5/12 Aitkin WN, 5/15 Itasca RJ, Otter Tail SDM and St. Louis PS.

Common Tern
Early south **4/16** (ties earliest date on record) Yellow Medicine HK, 4/26 Chippewa RH and Swift CMB, 4/27 Rice OR; early north **4/27** Mille Lacs WL, 4/30 Becker DeB, 5/2 St. Louis PS.

Forster's Tern
Early south 4/5 Rice RG, 4/7 Ramsey KB, 4/13 Hennepin RB; early north 4/17 Polk RJ, 4/25 Becker DJ, 4/29 Pennington KSS.

Black Tern
Early south **4/7** Chippewa HK, 5/1 Washington WL, 5/3 Kandiyohi; early north 5/4 Todd RJ, 5/7 Douglas PS, 5/11 Otter Tail SDM.

Rock Dove
Reported from 14 north and 30 south counties.

Mourning Dove
Early north 3/14 Mille Lacs KR, 3/17 Clay LCF, 3/20 St. Louis TW. Reported from 16 north and 31 south counties.

Black-billed Cuckoo
Early south **5/3** Anoka JH, 5/9 Olmsted BSE, 5/12 Lac Qui Parle CMB; early north **5/11** Hubbard JL, 5/16 Clay LCF, 5/19 Polk PS.

Yellow-billed Cuckoo
Early south 5/14 Blue Earth MF, 5/19 Ramsey AB, 5/20 Lac Qui Parle CMB; one north report 5/27 **St. Louis** (2) PS.

BARN OWL
Barn Owls returned to their nesting site in Vermillion Township, Dakota County (***The Loon*** 63:231). They nested in a newly erected nest box placed by the Minnesota DNR.

Eastern Screech-Owl
Reported from Hennepin, Lac Qui Parle, Le Sueur, Lyon, Martin, Mower, Nobles (5/22 nest with four young ND), Olmsted, Pope, Ramsey, Watonwan and Wright Counties.

Great Horned Owl
Reported from 13 north and 31 south counties.

Snowy Owl
All reports: 3/1-4/18 St. Louis mob, 3/3 Pine AB, 3/5 Pipestone ND.

Great Horned Owl with young, 27 April 1991, Aitkin, Aitkin County. Photo by Warren Nelson.

Northern Hawk Owl
All Reports: 3/2 Aitkin WN, 3/4 St. Louis KE, 4/20 Koochiching KB.

Burrowing Owl
One report: 5/23 Rock ND.

Barred Owl
Reported from 13 north and 17 south counties.

Great Gray Owl
Largest invasion ever documented in Minnesota! At least 134 separate individuals reported. Numbers were present through March, with a max. of 19 individuals near Two Harbors, Lake Co. on 3/2 (***The Loon*** 63:163-167). Other reports: 4/15 Koochiching RJ, 5/18 St. Louis (4) mob.

Long-eared Owl
All reports: 3/25 Dakota RG (found dead), 3/31 Olmsted AP, 4/21 Pine AB, 5/11 Kandiyohi JR, 5/30 St. Louis SW/MS.

Short-eared Owl
Early south 3/25 Hennepin JF, 4/1 Renville RG, 4/5 Rice TB, FKS; early north **3/14** Mille Lacs KR, 4/6 Wilkin KB, 4/10 Polk PS. Reported from 19 counties (6 l.y.) with a max of nine 4/20 Lincoln PS.

Boreal Owl
All reports: 3/2-4/29 Lake SW/MS et al., 3/15-5/21 Cook mob.

Northern Saw-whet Owl
Reported from Beltrami, Blue Earth, Cook, Hennepin, Isanti, Kanabec, Koochiching, Lake, Mahnomen, Nicollet, Nobles, Pine, Ramsey, Roseau, St. Louis and Stearns Counties.

Common Nighthawk
Early south 5/4 Goodhue AB, 5/9 Hennepin SC, KB, Olmsted BSE and Rice TB; early north 5/12 Aitkin WN, 5/13 Otter Tail SDM, 5/15 Kittson KB.

Whip-poor-will
Early south 4/28 Washington TEB, 4/29 Cottonwood ED, 5/1 Rice AP; early north 5/7 Clay LCF, 5/10 Itasca TS, 5/13 Cook SOL and Lake RJ.

Chimney Swift
Early south 4/23 Rice TB, 4/25 Rock ND, 4/26 Hennepin SC; early north 4/27 Otter Tail SDM, 4/28 Clay LCF, 5/4 Aitkin WN.

Ruby-throated Hummingbird
Early south 5/5 Winona CS, 5/8 Houston EMF, 5/9 Olmsted BSE; early north 5/9 Becker DEB, BK, Grant SDM and Hubbard HJF, 5/11 Koochiching GM, 5/12 Aitkin WN, Beltrami DJ, Cook KMH, Lake SW/MS and Otter Tail MO.

Belted Kingfisher
Early north **3/15** (earliest date on record) Crow Wing, Mille Lacs KR, 3/26 Becker DeB.

Red-headed Woodpecker
Reported from 13 north and 24 south counties.

Red-bellied Woodpecker
Reported from Aitkin, Becker, **Clay, Cook,** Grant, Mille Lacs and **Polk** Counties in the north and 26 south counties.

Yellow-bellied Sapsucker
Early south 3/28 Houston EMF, 4/2 Cottonwood ED, Hennepin SC and Olmsted AP; early north **4/1** Aitkin WN, 4/4 Becker DEB, 4/5 Beltrami DJ.

Downy Woodpecker
Reported from 23 north and 22 south counties.

Hairy Woodpecker
Reported from 17 north and 24 south counties.

Three-toed Woodpecker
All reports: 4/21 Koochiching KB, throughout the period at Lace Lake, Cook Co. KMH.

Black-backed Woodpecker
All reports: 3/10 Itasca AB, DB, 3/24-5/20 Roseau MO, KB, 4/7 Hubbard TS, 4/20-21 Lake KR, 5/7 St. Louis KB; throughout period Cook KMH, KB, WP.

Northern Flicker
Early north **3/10** (earliest date on record) Clay LCF, 3/24 Pennington KSS, 4/1 Aitkin WN.

Pileated Woodpecker
Reported from 19 north and 24 south counties.

Olive-sided Flycatcher
Early south **5/4** Hennepin OJ, 5/6 Cottonwood ED and Le Sueur MTS; early north 5/11 Hubbard JL, 5/13 Clay LCF, 5/15 Cook KMH and Lake of the Woods SW/MS; late south 5/27 Dakota DZ, Olmsted BSE and Yellow Medicine GS, 5/30 Hennepin DZ.

Eastern Wood-Pewee
Early south 5/7 Murray ND, 5/11 Hennepin, Ramsey and Scott KR; early north 5/12 Becker SDM, 5/15 Lake of the Woods SW/MS, 5/18 St. Louis KR.

Yellow-bellied Flycatcher
Early south 5/11 Watonwan RJ, 5/13 Mower JM; early north 5/15 Lake of the Woods SW/MS, 5/18 Clay LCF, 5/21 Roseau KB; late south 5/26 Lincoln HK and Washington DS, 5/31 Hennepin SC.

Acadian Flycatcher
All reports: 5/25 Hennepin SC, 5/26 Houston FL, 5/29 Goodhue PS.

Alder Flycatcher
Early south **5/11** Washington RH, DS, **5/12** Hennepin DB; early north **5/9** Clay LCF, 5/16 Kittson KB, 5/18 Aitkin WN; late south 5/29 Brown JS and Winona CS, 5/30 Hennepin SC.

Willow Flycatcher
Early south **5/4** Hennepin OJ, **5/5** Lac Qui Parle CMB, 5/9 Olmsted BSE and Washington PC, WL; two north reports **5/5** Grant SDM, **5/9** Clay LCF (both earliest dates on record).

Least Flycatcher
Early south 4/27 Brown JS, Lac Qui Parle AB, CMB and Washington DS, 5/2 Hennepin SC, 5/3 Winona CS; early north 4/26 Becker DEB, 5/9 Clay LCF, MO, 5/10 Cook KMH.

Eastern Phoebe
Early south 3/21 Houston EMF, 3/23 Freeborn JM and Murray ND, 3/24 Goodhue WP and Winona CS; early north **3/29** Becker and Otter Tail MO, 4/1 Aitkin WN, 4/2 Morrison DJ.

SAY'S PHOEBE
5/1 Polk DSv (***The Loon*** 63:198-199).

Great-crested Flycatcher
Early south 5/4 Le Sueur PS and Wabasha DZ, 5/7 Brown JS and Washington WL, 5/8 Mower RRK and Murray ND; early north 5/10 Beltrami DJ and Clay LCF, 5/11 Otter Tail MO, 5/15 Hubbard HJF.

Western Kingbird
Early north 5/9 Clay LCF and Otter Tail PS, 5/11 Wilkin MO, 5/15 Kittson KB, 5/21 **Lake of the Woods** (2) PS; one south report 5/22 Sherburne DO.

Eastern Kingbird
Early south 5/1 Cottonwood ED, 5/4 Houston AB and Olmsted BSE, 5/5 Goodhue DZ and Lac Qui Parle CMB; early north 5/9 Douglas SDM, 5/10 Lake DPV, 5/12 Aitkin WN and Otter Tail MO.

Horned Lark
Reported from 18 north and 29 south counties.

Purple Martin
Early south 4/5 Cottonwood ED and Fillmore GMD, 4/12 Wabasha DWM; early north **4/6** (earliest date on record) Todd KB, 4/17 Mille Lacs PS, 4/21 Itasca TS, Otter Tail SDM and Pennington KSS.

Tree Swallow
Early south 3/25 Dakota KB, RG and Hennepin SC, 3/26 Rice OR and Winona CS, 3/28 Anoka GP; early north 4/4 Pine RG, 4/6 Aitkin WN, Otter Tail SDM and St. Louis SW/MS, 4/7 Becker MO and Mille Lacs KR.

Northern Rough-winged Swallow
Early south **4/6** Cottonwood ED, 4/8 Dakota RG, 4/14 Washington TEB; early north 4/21 Otter Tail SDM, 4/28 Clay LCF, 5/2 Beltrami DJ.

Bank Swallow
Early south 4/9 Cottonwood ED, 4/13 Dakota PS, 4/20 Olmsted AP, CS; early north **4/15** Norman BK, 5/2 Beltrami DJ, 5/9 Clay MO and Grant SDM.

Cliff Swallow
Early south **4/18** Sherburne DO, **4/19** Fillmore AP, **4/21** Ramsey KB; early north

4/27 Aitkin WN, Pennington KSS and Roseau MO, 4/28 Clay LCF, 5/4 Wadena RJ.

Barn Swallow
Early south **3/26** Big Stone RG, 4/6 Lac Qui Parle CMB, 4/15 Washington DS; early north 4/26 Lake DPV and Traverse DJ, 4/28 Clay LCF and Roseau MO, 5/1 Beltrami DJ and Pennington KSS.

Gray Jay
Reported from nine north counties.

Blue Jay
Reported from 18 north and 29 south counties.

Black-billed Magpie
Reported from Aitkin, Beltrami, Kittson, Marshall, Norman, Polk, Roseau and St. Louis (4/15 fide KE) Counties.

American Crow
Reported from 14 north and 32 south counties.

Common Raven
Reported from 18 north counties; one south report Anoka (nesting again) JH.

Black-capped Chickadee
Reported from 23 north and 30 south counties.

Boreal Chickadee
Reported from Aitkin, Cook, Itasca, Koochiching, Lake, Lake of the Woods, Roseau and St. Louis Counties.

Tufted Titmouse
All reports: 3/17-5/11 Olmsted mob, 4/21-5/9 Goodhue AP, WP, 5/15 Mower AP; Houston (resident, max. 4) EMF et al.

Red-breasted Nuthatch
Numbers down. Reported from 13 north and four south counties.

White-breasted Nuthatch
Reported from 18 north and 29 south counties.

Brown Creeper
Reported from 15 north and 33 south counties.

CAROLINA WREN
3/17-21 Washington TEB (***The Loon*** 63:64-65).

House Wren
Early south 4/20 Lac Qui Parle CMB, 4/22 Houston EMF, 4/25 Rice TB and Winona CS; early north 5/2 Clay LCF, 5/9 Grant and Wilkin SDM, 5/12 Aitkin WN and Cook MH.

Winter Wren
Early south 3/29 Hennepin SC, 4/3 Brown JS, 4/5 Le Sueur RG; early north **3/31** Pine DZ, **4/6** Cook KMH and Lake DPV, **4/7** Becker MO; late south 5/4 Hennepin SC and Winona AB, 5/9 Rice TB.

Sedge Wren
Early south **4/16** Blue Earth BB, 5/2 Ramsey KB, 5/3 Rice TB; early north 5/11 Wilkin MO, 5/12 Aitkin WN, 5/13 Pine RJ.

Marsh Wren
Early south **4/6** Lincoln RG, RJ, **4/16** Blue Earth BB, 5/6 Hennepin SC, PS; early north 5/4 Becker DEB, MO, 5/11 Marshall KSS, 5/15 Kittson KB and Otter Tail SDM.

Golden-crowned Kinglet
Early north 3/31 Pine DZ and St. Louis TW, 4/5 Beltrami DJ, 4/6 Lake DPV; late south 4/21 Goodhue HH, 4/25 Hennepin SC, 4/26 Blue Earth LF.

Ruby-crowned Kinglet
Early south 3/26 Hennepin SC and Houston EMF, 3/28 Rice RG; early north 4/4 Clay LCF, 4/6 Norman MO, 4/7 Hubbard TS and Mille Lacs KR; late south 5/15 Brown JS, 5/20 Hennepin SC.

Blue-gray Gnatcatcher
Early south 4/26 Blue Earth LF, 4/27 Brown JS, Goodhue BL, Hennepin SC, Houston EMF, Rice TB and Winona AP; all north reports 5/9-15 Wilkin SDM, 5/13 Pine RJ, 5/20 **Duluth** DBe.

Eastern Bluebird
Early south 3/5 Blue Earth BB, MF, Houston EMF and Mower RRK, 3/7 Rice OR, 3/8 Anoka KB and Goodhue RG; early north 3/17 Otter Tail SDM, 3/20 Becker DEB and Pennington KSS, 3/23 Aitkin WN and Mille Lacs KR.

Mountain Bluebird
All reports: **3/18** Kandiyohi (male) RG, 3/31 Norman (pair) AB, 4/15-5/26 Florian, Marshall Co. (pair returned) mob.

Townsend's Solitaire
One report: 4/4-16 Duluth (1) GN et al.

Veery
Early south 5/4 Houston AB, Lyon HK, Olmsted BSE and Winona CS, 5/6 Hennepin PS, 5/7 Rice TB; early north 5/9 Clay LCF, 5/10 Beltrami DJ, 5/11 Hubbard JL.

Gray-cheeked Thrush
Early south 4/29 Nicollet LF, 5/2 Hennepin DZ, 5/3 Houston EMF; early north 5/4 Wilkin SDM, 5/7 Clay LCF, 5/12 St. Louis TW; late south 5/23 Hennepin DZ, 5/28 Washington DS.

Swainson's Thrush
Early south **4/9** Washington WL, **4/10** Houston EMF, 4/11 Murray ND; early north 4/28 Clay LCF, 5/1 Becker DEB, 5/4 Wilkin SDM; late south 5/20 Anoka JH and Winona CS, 5/29 Hennepin SC, DZ and Washington DS.

Hermit Thrush
Early south 4/2 Cottonwood ED, Olmsted AP and Washington WL, DS, 4/5 Rice RG, 4/6 Yellow Medicine RJ; early north 4/13 Douglas RJ, 4/14 Wilkin MO, 4/15 Clay LCF and Pennington KSS; late south 5/7 Hennepin SC, 5/18 Ramsey AB.

Wood Thrush
Early south 4/28 Rice PS, 4/30 Washington DS, 5/5 Carver RB; early north 5/12 Otter Tail SDM, 5/13 Clay LCF, 5/27 **Roseau** PB, DJ, EL.

American Robin
Reported from 20 north and 31 south counties.

Varied Thrush
One report: 4/4-6 Duluth (male) KE.

Gray Catbird
Early south 4/27 Rice TB, 4/29 Anoka SC, GP and Ramsey RH, 5/3 Cottonwood ED; early north 5/9 Becker DEB and Grant SDM, 5/10 Clay LCF, 5/15 Cook KMH.

Northern Mockingbird
All reports: 5/10 Hennepin (1) SC et al. and Lake (1) DPV, 5/11-18 Pipestone (2) ND, JP, 5/15 Duluth (1) fide KE, 5/18 Duluth (1, different location) PB.

Brown Thrasher
Early south 4/15 Hennepin KB, 4/16 Blue Earth MF, 4/18 Rock ND; early north 4/27 Aitkin WN and Clay LCF, 4/28 Otter Tail SDM, 5/5 Becker DJ.

CURVE-BILLED THRASHER
Second state record. 5/4-9 Eden Prairie, Hennepin Co. SC et al. (***The Loon*** 63:150-151).

American Pipit
All reports: 4/6 Pipestone RG, RJ, 4/14 Wilkin MO, 4/28 Lac Qui Parle AB, DB, 5/6 Big Stone KR, 5/14 Cook KMH, 5/15 Lake of the Woods SW/MS, 5/20 Marshall PS.

Sprague's Pipit
All reports: **4/27**-5/31 Roseau (three returned to last year's site) MO et al., 5/5 Felton Prairie, Clay Co. (1) MO.

Bohemian Waxwing
Reported from only eight counties. Late south 3/21 Winona (6) CS, 4/7 Redwood AB; late north 4/3 Aitkin WN, 4/5 Beltrami DJ and St. Louis TW.

Cedar Waxwing
Reported from nine north and 25 south counties.

Northern Shrike
Late south 3/29 Anoka JH, Le Sueur RG and Olmsted BSE, 3/31 Wabasha KE, 4/6 Blue Earth RG; late north 3/30 Cass AB and Lake DPV, 4/1 Cook SOL, 4/6 Aitkin WN.

Loggerhead Shrike
Early south 3/18 Blue Earth BB, 3/28 Winona CS, 4/5 Le Sueur LF and Sherburne DO; early north 4/13 Becker BK, 4/17 Marshall RJ, 4/26 Clay LCF; also reported 5/14 **Cook** KMH, 5/25 Lake DPV.

European Starling
Reported from 13 north and 29 south counties.

WHITE-EYED VIREO

4/28 (earliest date on record) Nerstrand Woods State Park, Rice Co. (1) PS (***The Loon*** 63:205-206).

Bell's Vireo

All reports: 5/10-11 Wood Lake, Hennepin Co. (1) JPo et al., 5/11 Fillmore GMD, 5/13-31 Winona (two locations) CS, 5/20-26 Dakota (2) AB, RG, 5/22 Rock (1) PB, 5/23 Blue Earth (2) MF, 5/24 Wabasha DWM.

Solitary Vireo

Early south 4/27 Lac Qui Parle mob, 4/28 Anoka JH and Rice TB, 4/29 Brown JS; early north 5/9 Wilkin SDM, 5/10 Lake DPV, 5/11 Cook KMH and Marshall KSS; late south 5/20 Olmsted AP and Washington WL, 5/29 Lac Qui Parle CMB.

Yellow-throated Vireo

Early south **4/28** Le Sueur MTS, 5/9 Goodhue WP and Hennepin SC early north 5/11 Beltrami DJ, 5/12 Becker SDM and Otter Tail MO, 5/14 Clay LCF.

Warbling Vireo

Early south 5/3 Rice TB, 5/4 Hennepin OJ, Olmsted BSE and Winona AB, CS, 5/5 Wabasha DZ; early north 5/9 Itasca TS, Otter Tail SDM and Pennington KSS, 5/10 Becker DEB, 5/11 Beltrami DJ.

Philadelphia Vireo

Early south 5/8 Cottonwood ED and Rice TB, 5/9 Goodhue WP, Olmsted BSE and Ramsey RH; early north 5/13 Marshall KSS, 5/14 Clay LCF, 5/16 Becker GS; late south 5/19 Hennepin DZ, 5/24 Lac Qui Parle CMB.

Red-eyed Vireo

Early south 5/4 Anoka JH, 5/9 Lac Qui Parle CMB, Olmsted BSE, Sherburne DO and Winona CS, early north 5/10 Becker DEB and Hubbard JL, 5/11 Lake SW/MS, 5/12 Aitkin WN and Otter Tail SDM.

Blue-winged Warbler

Early south 5/3 Winona CS, 5/4 Olmsted BSE, 5/9 Hennepin SC and Rice TB; one north report 5/15 Otter Tail SDM.

Golden-winged Warbler

Early south 5/4 Houston AB, 5/6 Brown JS, 5/7 Goodhue WP, Hennepin SC, Rice TB and Winona CS, 5/8 Murray ND; early north **5/7** Becker DEB, 5/9 Grant SDM, 5/10 Clay LCF.

Tennessee Warbler

Early south **4/27** Brown BB, 4/29 Houston EMF, 5/2 Olmsted BSE and Winona CS; early north 5/9 Grant SDM, 5/10 Clay LCF and Otter Tail MO; late south 5/25 Anoka DZ, 5/29 Hennepin SC.

Orange-crowned Warbler

Early south **4/19** Lac Qui Parle CMB, 4/23 Hennepin SC, DZ; early north **4/21** Clay LCF and Wilkin MO; late south 5/14 Nicollet LF, 5/16 Brown JS; late north 5/15 Aitkin JF, 5/23 Clay LCF.

Nashville Warbler

Early south 4/27 Brown JS and Lac Qui Parle AB, 4/28 Dakota DZ and Rice TB; early north 5/4 Aitkin WN, 5/9 Becker DEB, Clay LCF and Grant SDM; late south 5/25 Washington DZ.

Northern Parula

Early south 5/3 Hennepin DZ, Houston JM and Winona CS, 5/4 Le Sueur PS; early north 5/9 Becker BK and Grant SDM, 5/10 Beltrami DJ and Cook KMH; late south 5/15 Washington TEB, 5/23 Hennepin SC.

Yellow Warbler

Early south 4/26 Winona CS, 5/2 Olmsted BSE, 5/3 Hennepin DZ, Houston JM and Rice TB; early north 5/8 Becker DEB, 5/9 Clay LCF, MO, Grant SDM and Hubbard JL, 5/10 Beltrami DJ.

Chestnut-sided Warbler

Early south 5/6 Martin GS, 5/8 Murray ND; early north 5/9 Becker DEB and Clay LCF, 5/11 Beltrami DJ, Hubbard JL and Lake SW/MS; late south 5/27 Brown JS, 5/30 Hennepin DZ.

Magnolia Warbler

Early south **4/27** Brown BB, 5/3 Hennepin SC, DZ; early north 5/9 Becker BK, Clay LCF and Wilkin SDM, 5/11 Hubbard JL, Lake SW/MS, Otter Tail MO and St. Louis SS; late south 5/25 Washington WL, 5/26 Houston AP.

Cape May Warbler

Early south 5/9 Goodhue WP and Winona

CS, 5/11 Hennepin SC, GP, KR, Lyon HK, Rice SC, Wabasha AB and Watonwan RG, RJ; early north 5/10 Lake DPV, 5/11 Hubbard JL, 5/12 Itasca TS; late south 5/18 Hennepin SC.

Black-throated Blue Warbler
One report: 5/12 Olmsted (1) BSE.

Yellow-rumped Warbler
Early south 4/2 Hennepin OJ, 4/3 Anoka KB, 4/4 Rice TB; early north **4/5** Cook PS, 4/7 Mille Lacs KR, 4/9 Otter Tail SDM; late south 5/20 Olmsted AP, 5/21 Lac Qui Parle CMB, 5/22 Washington DS.

Black-throated Green Warbler
Early south **4/27** Brown JS, 4/29 Blue Earth LF, 5/1 Hennepin AB; early north 5/4 Becker DEB, RJ, MO, 5/5 Beltrami DJ late south 5/19 Scott DZ, 5/22 Hennepin SC, GP.

Blackburnian Warbler
Early south 5/4 Winona AB, 5/6 Rice TB; early north 5/11 Beltrami DJ, Cook KMH, Hubbard JL and Lake SW/MS, DPV late south 5/19 Brown JS, Hennepin SC and Scott DZ, 5/22 Anoka JH.

YELLOW-THROATED WARBLER
4/7 (earliest date on record) Brown/Nicollet (1) AB (***The Loon*** 63:197), **5/1** Goodhue (1) EJ (***The Loon*** 63:205).

Pine Warbler
Early south 4/26 Isanti OJ, 5/1 Ramsey RH and Rice AP; early north 4/22 Becker DEB, 4/26 St. Louis KB, 5/4 Hubbard RJ.

Palm Warbler
Early south 4/24 Olmsted AP and Washington DS, 4/25 Le Sueur EK; early north 4/27 Aitkin WN, 4/28 Becker SDM, 4/29 Beltrami DJ; late south 5/14 Steele AP, 5/19 Ramsey AB.

Bay-breasted Warbler
Early south 5/11 Goodhue EL, DZ, Hennepin KB, KR, Lyon HK and Olmsted GMD, GS, 5/12 Le Sueur PS; late south 5/18 Hennepin SC, 5/19 Winona CS; one north report 5/16 Kittson KB.

Blackpoll Warbler
Numbers up. Early south 5/3 Ramsey DZ, 5/4 Le Sueur PS, Rice TB and Winona AB; early north 5/9 Becker DEB, Beltrami DJ, Clay LCF and Grant SDM, 5/10 Hubbard JL and Pennington KSS; late south 5/22 Hennepin SC and Wabasha DWM, 5/30 Rice AP; late north 5/22 Clay LCF.

Cerulean Warbler
Early south 5/6 Le Sueur MTS, 5/7 Olmsted AP, 5/11 Fillmore GMD, Goodhue mob and Lyon HK; one north report **5/12** (earliest date on record) Otter Tail SDM.

Black-and-White Warbler
Early south 4/27 Brown JS, 4/28 Goodhue WP, Rice TB; early north 5/4 Becker MO, 5/5 Grant SDM, 5/9 Becker BK, Beltrami DJ.

American Redstart
Early south 5/3 Houston JM, 5/4 Hennepin OJ, LeSueur PS, Winona AB; early north 5/9 Becker DEB, Beltrami DJ, Clay LCF, MO, Douglas SDM, 5/10 Becker BK, Hubbard JL, Pennington KSS.

Prothonotary Warbler
Early south **5/3** Winona CS, 5/10 Hennepin KB, PB, 5/11 Goodhue EL, DZ.

WORM-EATING WARBLER
Two reports: 5/11 Watonwan RJ, RG (***The Loon*** 63:208), 5/18 Hennepin SC (***The Loon*** 63:203).

Ovenbird
Early south 5/1 Rice AP, Sherburne DO, 5/3 Brown; early north 5/7 Becker DEB, 5/9 Beltrami DJ, Clay LCF, Pennington KSS.

Northern Waterthrush
Early south 4/27 Hennepin SC, GP, DZ, Kandiyohi JR, 4/28 Goodhue WP, Le Sueur PS, Rice TB; early north **5/1** Itasca DB, 5/5 Grant SDM; late south 5/20 Olmsted BSE, 5/21 Brown JS, Hennepin SC.

Louisiana Waterthrush
All reports 5/4 Winona AB, 5/11 Washington RH, 5/13 **Pine** RJ, 5/14 Goodhue HH.

Connecticut Warbler
Early south 5/14 Freeborn AP, 5/18 Brown JS; early north **5/9** Clay LCF, 5/14 Aitkin WN; late south 5/20 Hennepin DB, Rice TB, 5/21 Brown JS.

Mourning Warbler
Early south 5/10 Winona CS, 5/11 Brown JS, Goodhue DZ, Mower JM; early north **5/9** (earliest date on record) Becker DEB, BK, 5/14 Clay LCF; late south 5/28 Pipestone JP, 5/31 Hennepin SC.

Common Yellowthroat
Early south 4/30 Rock ND, 5/1 Mower RRK, 5/3 Houston JM; early north 5/9 Clay LCF, Otter Tail SDM, 5/10 Hubbard JL.

Hooded Warbler
Early south 5/10 Winona CS, 5/11 Scott KR, 5/12 Scott PB.

Wilson's Warbler
Early south 5/3 Brown JS, Goodhue WP, Hennepin DZ, Winona AP, CS, 5/4 Hennepin DC, OJ, Martin BB, Mower RRK, Olmsted BSE, Wabasha AB; early north 5/9 Becker BK, Beltrami DJ, Clay LCF, MO, Grant SDM; late south 5/21 Dakota AP, 5/29 Hennepin SC; late north 5/21 St. Louis SW/MS, 5/27 Lake DPV.

Canada Warbler
Early south 5/9 Olmsted BSE, 5/10 Stearns JR, 5/11 Brown JS, Goodhue HH, EL, Olmsted TEB, Wabasha DWM; early north **5/10** Becker BK, 5/11 Hubbard JL, 5/15 Clay LCF, Lake of the Woods SW/MS; late south 5/19 Brown ED, JS, Mower JM, Scott DZ, 5/20 Ramsey AB.

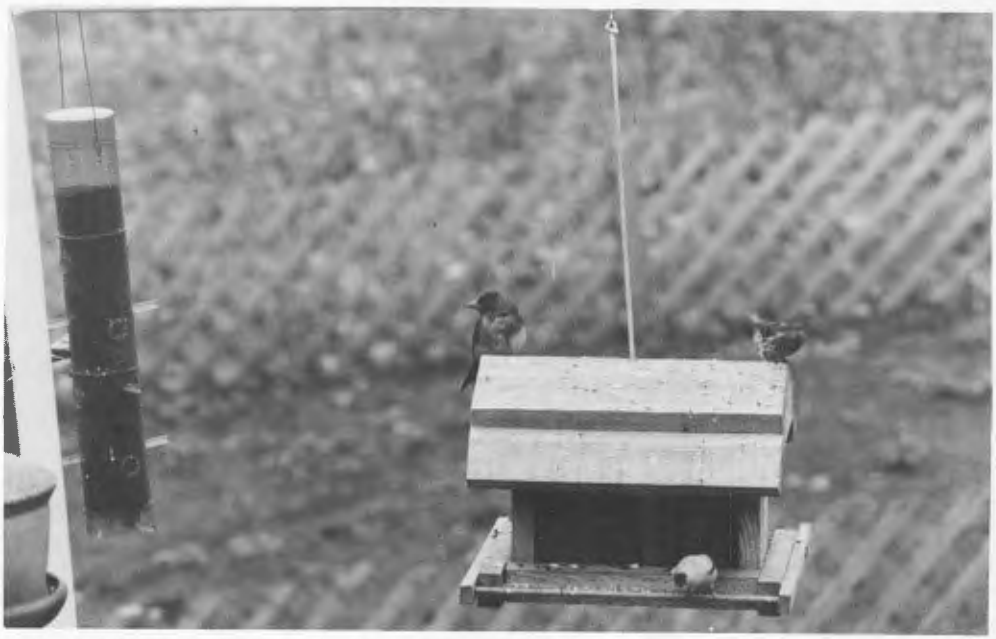
Summer Tanager
All reports 5/7-9 Chisago PB, RJ, KR, 5/27 Hennepin SC.

Scarlet Tanager
Early south 5/8 Murray ND, 5/9 Goodhue WP, Hennepin SC; early north **5/1** (earliest date on record) Becker DeB, **5/7** Hubbard JL.

WESTERN TANAGER
All reports **4/28**-5/1 (earliest date on record) Becker PB, SDM et al. (***The Loon*** 63:204), 5/11 Goodhue EL, HH (***The Loon*** 63:203).

Northern Cardinal
Reported from Aitkin, Becker, Clay, Mille Lacs, Otter Tail and 29 counties south.

Rose-breasted Grosbeak
Early south 4/28 Hennepin SC, Kandiyohi



Summer Tanager, Purple Finch and American Goldfinch at feeder, 7 May 1991, near North Branch, Chisago County. Photo by Deb Kubat.

JR, 4/29 Houston EMF, Rice OR; early north 5/9 Becker DEB, Clay LCF, MO, Otter Tail SDM, 5/10 Lake DPV, St. Louis TW.

Blue Grosbeak
Early south 5/21 Pipestone ND, 5/22 Rock PB, 5/24 Murray ND.

LAZULI BUNTING
5/21 Hennepin HT (***The Loon*** 63:194).

Indigo Bunting
Early south 5/7 Washington WL, 5/9 Olmsted BSE, Rice TB, OR; early north **5/9** Becker DEB, **5/11** Beltrami DJ, 5/12 Becker BK, SDM, Otter Tail MO.

Dickcissel
Early south 5/10 Rice OR, 5/14 Cottonwood ED, Pipestone JP, 5/15 Murray ND.

Rufous-sided Towhee
Early south 4/16 Houston EMF, 4/27 Lac Qui Parle CMB, 4/29 Anoka SC; early north 5/3 Marshall KSS, 5/4 Becker DEB, Hubbard RJ, 5/9 Clay LCF.

American Tree Sparrow
Late south 4/23 Lac Qui Parle CMB, 4/24 Washington WL, 4/29 Hennepin JF; late north 5/14 Clay LCF, 5/16 Cook SOL.

Chipping Sparrow
Early south 3/28 Winona CS, 4/1 Cottonwood ED, 4/4 Olmsted BSE; early north 4/21 Clay LCF, Otter Tail SDM, 4/26 Becker BK, Koochiching GM.

Clay-colored Sparrow
Early south **4/17** Murray ND, 4/23 Hennepin SC, 5/4 Rice RG; early north 4/28 Clay LCF, Otter Tail SDM, 5/4 Wadena RJ.

Field Sparrow
Early south 3/25 Rice TB, OR, 4/2 Hennepin DB, DC, Olmsted AP, 4/3 Houston PS; early north 4/18 Cook SOL, 4/21 Clay LCF.

Vesper Sparrow
Early south **3/13** Lac Qui Parle CMB, **3/17** Lyon HK, **3/25** Olmsted AP; early north **4/6** Clay MO, Otter Tail SDM, 4/7 Clay LCF, Mille Lacs KR.

Lark Sparrow
Early south 4/22 Anoka GP; early north **4/12-19**, Duluth KE, PS, PB.

Lark Bunting
One report **4/27** Big Stone DC.

Savannah Sparrow
Early south **3/23** Kandiyohi CJ, 4/11 Hennepin SC, Olmsted AP, 4/14 Rock ND; early north 4/20 Aitkin WN, Carlton AB, Otter Tail MO, Roseau KSS.

Grasshopper Sparrow
Early south 4/26 Olmsted AP, 4/27 Lac Qui Parle KR, 5/4 Hennepin SC, Wabasha AB; early north 5/8 Clay MO, 5/18 St. Louis PB, KE, 5/19 Kittson KB.

Henslow's Sparrow
Two reports: 5/27 Winona FL, 5/29 Winona PS.

Le Conte's Sparrow
Early south 4/23 Hennepin SC, 4/24 Hennepin DC, 4/25 Hennepin DB; early north 5/11 Otter Tail MO, 5/14 Lake DPV, 5/15 Kittson KB, Otter Tail SDM.

Sharp-tailed Sparrow
Only reports: **5/19** Kittson KB, Polk PS, 5/23 Roseau KB, 5/25 Marshall PB.

Fox Sparrow
Early south 3/12 Houston EMF, 3/14 Lac Qui Parle CMB, 3/21 Brown JS, Martin BB, Sherburne SWR, Winona CS; early north **3/23** Clay LCF, 3/27 Aitkin WN, 3/30 Becker DeB; late south 5/5 Hennepin SC, **5/24** (latest date on record) Wabasha DWM; late north 4/21 Itasca TS, 4/25 Cook KMH, Koochiching GM, 5/1 Pennington KSS.

Song Sparrow
Early north 3/26 Clay LCF, 3/29 Morrison AB, Otter Tail SDM, MO, 4/1 Aitkin WN, Becker DEB.

Lincoln's Sparrow
Early south 4/6 Washington DZ, 4/24 Cottonwood ED, 4/26 Lac Qui Parle RH, Rock KR; early north 4/28 Clay LCF, 5/2 Pennington KSS, 5/5 Clay MO; late south 5/18 Brown JS, 5/20 Hennepin SC, 5/24 Wabasha DWM.

Lark Sparrow, 18 April 1991, Park Point, Duluth. Photo by Peder Svingen.

Swamp Sparrow
Early south 3/21 Watonwan ED, 4/5 Brown JS, 4/6 Olmsted BSE; early north 4/20 Aitkin WN, 4/21 Otter Tail MO, 4/22 Hubbard JL.

White-throated Sparrow
Early south **3/7** (earliest date on record or wintering bird?) Hennepin SC, 3/19 Houston EMF, 3/23 Sherburne KR; early north **3/19** (earliest date on record or wintering bird?) Aitkin WN, 4/16 Marshall KSS, 4/20 Becker DEB; late south 5/19 Hennepin SC, Winona CS, 5/22 Houston EMF, 5/25 Olmsted BSE.

White-crowned Sparrow
Early south **4/2** Cottonwood ED, 4/26 Kandiyohi JR; early north 4/22 Becker DEB, 4/29 Koochiching GM; late south 5/20 Scott AP, 5/22 Washington DS; late north 5/20 Roseau KB, 5/21 Cook KMH.

Harris' Sparrow
Early south 3/23 Murray ND, 3/24 Rice OR; early north **4/22** Becker DEB, 5/5 Aitkin WN, Clay MO; late south 5/18 Kandiyohi CJ, 5/22 Lac Qui Parle CMB; late north 5/18 Koochiching GM, **5/30** Pennington KSS.

Dark-eyed Junco
Late south 5/9 Hennepin SC, Winona CS, 5/10 Washington WL, 5/20 Lac Qui Parle CMB.

Lapland Longspur
Early north 3/31 Polk AB, 4/7 Wilkin SDM; late south 4/23 Stevens PS, 4/26 Pipestone KR, 4/27 Lac Qui Parle CMB, KR; late north 5/5 Clay MO, 5/15 Koochiching GM.

Smith's Longspur
Three reports **4/13** (earliest date on record) Otter Tail KE, **4/14** Wilkin KB, 5/6 Wilkin PB.

Chestnut-collared Longspur
Three reports: 5/1 Clay PS, 5/5 Clay MO, 5/24 Clay EL.

Snow Bunting
Late south 3/22 Hennepin OJ, 3/29 Hennepin SC, 4/13 Mower JM; late north 4/7 Aitkin WN, 4/9 Cook KMH, 4/15 Polk KSS.

Bobolink
Early south 4/27 Lac Qui Parle KR, 5/1 Fillmore GMD, 5/4 Brown JS, Houston JM; early north 5/5 Aitkin JF, 5/9 Grant SDM, 5/10 Clay LCF, Wilkin MO.

Red-winged Blackbird
Early north 3/16 Clay MO, 3/17 Aitkin WN, Clay LCF, Otter Tail SDM, 3/19 St. Louis TW.

Eastern Meadowlark
Early north 3/27 Aitkin WN, 4/4 Cook SOL, 4/5 Cook KMH.

Western Meadowlark
Early north 3/11 Clay MM, 3/14 Pennington KSS, 3/16 Clay MO.

Yellow-headed Blackbird
Early south 3/31 Big Stone SDM, 4/2 Rice OR, 4/3 Rock ND; early north 4/13 Becker DJ, 4/17 Clay MO, Mahnomen RJ, 4/19 St. Louis KR.

Rusty Blackbird
Early south 3/6 Murray ND, 3/15 Lac Qui Parle CMB, 3/18 Faribault AP; early north **3/3** Clay LCF, **3/9** Otter Tail MO; late south 4/26 Winona CS, 5/1 Hennepin SC; late north 5/1 Beltrami DJ, **5/25** Lake AB.

Brewer's Blackbird
Early south 3/18 Rock AP, 3/27 Lyon HK, 3/31 Cottonwood PS; early north **3/21** Becker DEB, 4/7 Wilkin SDM.

Common Grackle
Early north **3/8** Otter Tail SDM, 3/12 Pennington KSS, 3/19 Aitkin WN.

Brown-headed Cowbird
Early south 3/17 Goodhue PS, 3/24 Lyon HK, Mower RRK, 3/25 Murray ND, Washington WL; early north **3/31** Aitkin WN, 4/7 Becker MO, Clay LCF, Cook MH, Grant SDM, St. Louis SS, 4/10 Koochiching GM.

Orchard Oriole
Early south 5/5 Cottonwood ED, 5/9 Brown JS, Rock ND, Washington WL; early north 5/22 Clay LCF, 5/26 Marshall EL.

Northern Oriole
Early south 5/2 Wabasha DWM, 5/3 Fillmore GMD, Hennepin SC, Lyon HK, Winona AP, CS; early north 5/8 Becker DEB, 5/9 Beltrami DJ, Clay LCF, Grant SDM, Pennington KSS.

Pine Grosbeak
Late south 3/14 Anoka JH, 3/27 Cottonwood ED; late north 4/3 Aitkin WN, 4/20 Lake KR.

Purple Finch
Reported from 27 counties south and 18 counties north.

House Finch
Reported from Becker, Douglas, Grant, Hubbard, Mille Lacs, Otter Tail, Pine and 33 counties south.

Red Crossbill
Four reports 3/1 Clearwater PS, 3/10 Beltrami DJ, 3/15 Beltrami DJ, 4/20 Lake KR.

Common Redpoll
Late south 3/10 Washington TEB, 3/12 Lac Qui Parle CMB; late north 4/12 Koochiching GM, 4/15 Beltrami RJ, Cook KMH, 4/25 Pennington KSS.

Pine Siskin
Reported from 15 counties north and 22 counties south.

American Goldfinch
Reported from 16 counties north and 28 counties south.

Evening Grosbeak
Late south 4/10 Sherburne SWR, 4/18 Cottonwood ED,

House Sparrow
Reported from 15 counties north and 25 counties south.

CONTRIBUTORS

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Dan & Pam Versaw	DPV
Terry Wiens	TW
Steve Wilson/Mary Shedd	SW/MS
Dave Zumeta	DZ
many observers	mob

Corrections

The Loon 63: 123 under Barn Owl add the reference for the 1963 nesting as ***The Loon*** 36: 6-7.

The Loon 62: 209 add Cinnamon Teal, reported 5/19 Polk PS.

The Loon 62: 221 under Prothonotary Warbler change Pope to Polk.

Bald Eagle Population In Minnesota

Mary Miller and Lee Pfannmuller

A. Breeding Season

The Bald Eagle population in Minnesota achieved a record high in 1990. From 115 known occupied breeding areas[1] in 1973, the year statewide surveys were initiated, the population has increased dramatically to 437 areas (Table 1). Four survey areas within the state were monitored by federal and state agencies, including the U.S. Forest Service, the National Park Service, the U.S. Fish & Wildlife Service and the Minnesota Department of Natural Resources' Nongame Wildlife Program (Table 2).

Aerial surveys were conducted in the first half of April to determine nest occupancy and in late June or early July to count young near fledging. The results show that the population has surpassed, for the fourth consecutive year, the Minnesota recovery goal set by the Northern States Bald Eagle Recovery Plan (300 occupied breeding areas by the year 2000). This represents an increase of 12% over the 1989 breeding population and continues the significant growth observed since 1980. Of the 437 occupied areas, 69% (300) were successful, producing a total of 467 young (Table 1). The number of young produced per occupied area was 1.07 and the average brood size was 1.56. The Northern States Recovery Plan establishes a goal of at least one young per occupied breeding area as a recovery objective.

In conjunction with the population increase, Bald Eagles have expanded their breeding range from the north central and northeastern regions of the state to habitats where they have not nested for 100 years or more. Breeding pairs are now established in east-central Minnesota, along the Mississippi River between St. Paul and the Iowa border, in the Twin Cities metropolitan area and in several western counties (Figure 1). Some pairs are now choosing nesting sites near developed areas and adjacent to lakes with moderate recreational use.

Data collected from the annual aerial surveys is stored in the Natural Heritage Information System maintained by the Natural Heritage and Nongame Wildlife Programs. Locations of eagle nests are plotted on 7.5 min. quads and included with other information about the nests in a computerized database. An historical database has recently been developed that will also track the breeding activity of each nest each year and will contain additional data (e.g., nest tree characteristics, distances to water and development, etc.) on each nest site. To date, these data have been maintained in manual files and on computers in DNR regional offices. The new database will improve our ability to monitor breeding area productivity as well as individual nest activity.

B. Winter Studies

Winter poses special problems for eagles that remain in Minnesota during the cold months. Two ongoing monitoring projects gather data on the population size and habitat requirements of Minnesota's winter eagle population.

Minnesota has participated in the National Wildlife Federation's Mid-Winter Bald Eagle Survey since 1979. In 1987, a standardized survey route was established which includes the Minnesota River from Ortonville to Fort Snelling and the Mississippi River from Minneapolis to Wabasha, the areas in Minnesota most likely to sustain wintering eagles. The route was surveyed in January 1990 by John Schladweiler, Lonnie Hebl and Mary Miller of the Nongame Wildlife Program and Mark Martell of The Raptor Center. Sixty-five eagles were observed, with the greatest concentrations (44) occurring along the Mississippi River between Red Wing and Wabasha (Table 3).

The second project, to identify winter roost and feeding areas utilized by eagles along the Mississippi and St. Croix Rivers, is being conducted by Joan Galli of the Nongame Wildlife Program.

Aerial surveys to locate eagle concentrations have been conducted for three years and will be continued for one additional winter in 1990/1991. When areas have been identified, they will be included in the Natural Heritage Information System Database and protection strategies will be explored.

Table 1. Minnesota Bald Eagle Nesting Data, 1973-1990

	Breeding Areas			Young		
Year	Occupied[a]	Number Successful	% Successful	Total	Per Occupied Breeding Area	Average Brood Size
1973	115	71	62	113	.98	1.59
1974	127	77	61	96	0.76	1.25
1975	120	87	73	145	1.21	1.67
1976	122	93	76	163	1.34	1.75
1977	156	114	73	179	1.15	1.57
1978	168	115	68	188	1.12	1.63
1979	159	111	70	196	1.23	1.77
1980	181	133	73	239	1.32	1.80
1981	190	132	69	242	1.27	1.83
1982	207	145	70	245	1.18	1.69
1983	229	170	74	321	1.40	1.89
1984	245	165	67	274	1.12	1.66
1985	250	161[b]	71[b]	275[b]	1.21[b]	1.71[b]
1986	266	187[c]	72[c]	312[c]	1.21[c]	1.67[c]
1987	350	227	65	360	1.03	1.59
1988	372	250	67	412	1.11	1.65
1989	390	261	67	430	1.10	1.65
1990	437	300	69	467	1.07	1.56

[a] Number of occupied breeding areas regardless of outcome.

[b] These figures do not include data from 23 occupied nesting areas of unknown outcome in the Boundary Waters Canoe Area.

[c] These figures do not include data from 9 occupied nesting areas of unknown outcome in the Boundary Waters Canoe Area.

[1]Areas where evidence of breeding is observed: a) young observed, b) eggs or eggshell fragments observed, c) one adult in incubation posture, d) 2 adults at nest or within breeding area, e) 1 adult and 1 immature at or near a nest and f) an empty nest which shows clear evidence of having been repaired in the current season.

C. Federal Status Assessment

The successful recovery of Bald Eagle populations in four of the five federal recovery regions in the lower forty-eight states has led the U.S. Fish and Wildlife Service to review the bird's status in preparation of a proposal to either reclassify or delist the species. Originally, the Bald Eagle was listed as endangered in the lower 48 states under the 1966 Endangered Species Preservation Act. However, when the Endangered Species Act was passed into law in 1973, the Service reclassified the species as threatened in Minnesota, Wisconsin, Washington, Oregon and Michigan where higher population numbers did not meet the criteria for endanagered

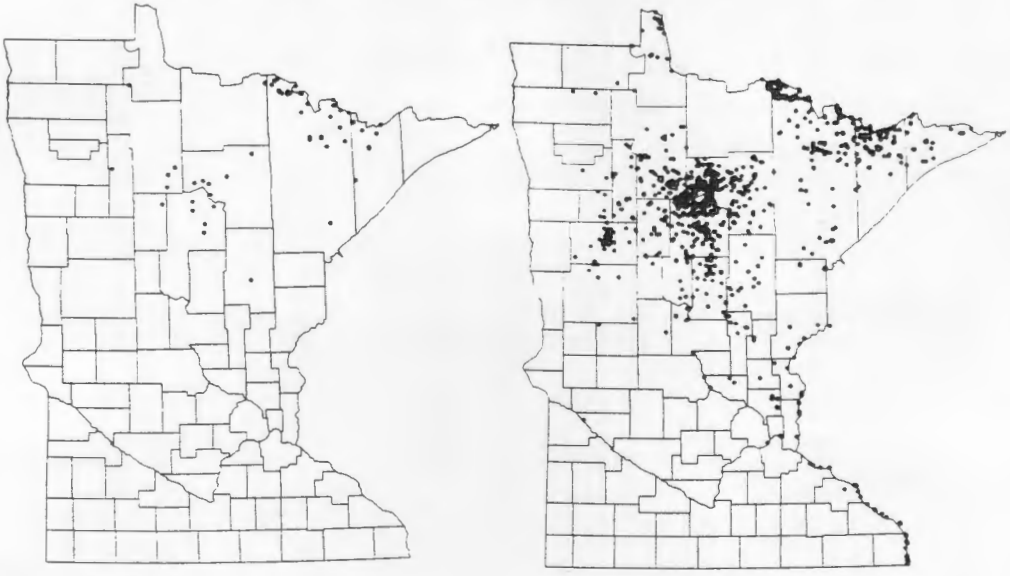
Table 2. Minnesota Bald Eagle Nesting Activity in Four Survey Areas, 1990

Survey Area	Occupied Breeding Areas	Successful Breeding Areas	Percent Successful	Number of Young	Young per Occupied Breeding Area	Average Brood Size
Chippewa NF	154	102	66	160	1.03	1.56
Superior NF	74	57	77	85	1.15	1.49
Voyageurs NP	28	17	61	23	.82	1.35
"Other Areas"	181	124	68	199	1.10	1.60
Statewide	437	300	69	467	1.07	1.56

Table 3. The National Wildlife Federation's Midwinter Bald Eagle Survey

	Route #1 Minnesota River Ortonville-Fort Snelling			Route #2 Minnesota & Mississippi Rivers Black Dog Lake-Hastings			Route #3 Mississippi River Red Wing-Wabasha			Total		Total Eagles
	Adults	Imm.	Total	Adults	Imm.	Total	Adults	Imm.	Total	Adults	Imm.	
1987	14	11	25	1	0	1	18	8	28	33	19	54
1988	16	4	20	11	2	13	20	3	23	47	9	56
1989	23	11	34	6	3	9	33	24	57	62	38	100
1990	12	1	13	6	1	7	42	2	44	60	4	64

Bald Eagle Records in the Heritage Database



Pre 1976

As of January 1991

status. A notice of review published in the Federal Register in February 1990 states that the Service "is requesting information on... impacts that would result from a proposal to either reclassify, downlist, or delist all or specific populations of the Bald Eagle."

Minnesota's eagle population is the largest in the conterminous States; however, it is unlikely that delisting will occur. A news release from the Department of the Interior issued on the same day as the notice of review quotes Service Director John Turner as saying "...It is possible a reclassification to threatened (i.e., throughout the species range) may reflect more accurately the species' actual biological status. I want to emphasize the Service is not considering removing the Bald Eagle from the protection of the Endangered Species Act. A reclassification to threatened, should we decide that is warranted, would continue to offer the full protection of the Endangered Species Act." An additional statement in the news release further appears to negate the delisting possibility. "No consideration is being given to completely removing any Bald Eagle population from the Endangered Species List."

The Minnesota Department of Natural Resources submitted comments to the Endangered Species Coordinator of the USFWS in March of 1990. The Department agreed with the proposed downlisting of the Bald Eagle to Threatened due to recovery of the species throughout much of its range, and supported retaining the species as federally threatened in Minnesota. A decision on reclassification is expected sometime in 1991.

In the event that Minnesota's federally threatened Bald Eagle population is delisted, population monitoring will continue. Section 4 of the Endangered Species Act directs the Secretary of the U.S. Fish and Wildlife Service to implement a system to monitor recovered species for not less than five years. When monitoring shows that protection is needed to prevent a significant risk to a species, the Service is to utilize the Act's existing emergency listing authority.

Minnesota Department of Natural Resources, Section of Wildlife — Nongame Wildlife Program, 500 Lafayette Road, St. Paul, MN 55155.

In Memory of Gordon W. Gullion

Gordon W. Gullion, 68, a University of Minnesota professor and world renowned expert on Ruffed Grouse, died on 23 September 1991 after a long battle with cancer. Gullion's three decades of research on Ruffed Grouse and other forest wildlife has been instrumental in the development of practices used by public agencies and private foresters to manage forests for the combined benefit of wildlife and timber production.

Gullion was born in Eugene, Oregon and received his B.S. degree at the University of Oregon at Eugene and his M.S. at the University of California at Berkeley under the direction of the notable wildlife scientist, Starker Leopold. After working for seven years with the Nevada Fish and Game Department on Sage Grouse and Gambel's Quail, he joined the Department of Fisheries and Wildlife at the University of Minnesota in 1958 to head the forest wildlife project at the Cloquet Forestry Center. For the next 32 years, he conducted a management oriented study of Ruffed Grouse and its habitat relationships that is unequalled in duration and intensity in the world. His studies have clearly identified the influence of specific habitat components, especially aspen, on the life history of Ruffed Grouse and from these findings, he forumulated forest management procedures to benefit Ruffed Grouse and other wildlife.

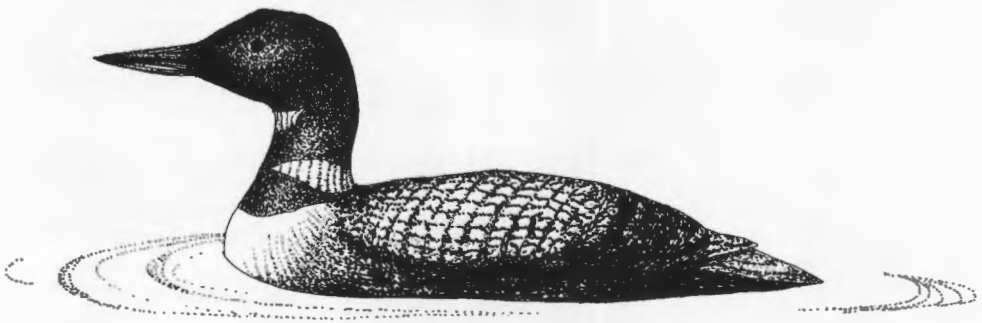
Hundreds of students, researchers, land managers and private forest owners have been influenced by Gullion and his research. He also played a key role in the Ruffed Grouse Society by authoring wildlife management booklets, newsletter articles, and serving on the national board of directors and as chairman of the research committee since 1972.

Gullion has authored over 160 professional and popular articles including the 1984 book, *Grouse of the North Shore*. During the past year he has been honored by the Minnesota

Forestry Association with an award for "excellence in wildlife habitat management;" by the North Central Section of The Wildlife Society with its premier award, the Professional Award of Merit; by the Izaak Walton League with its Honor Roll Award; and by Minnesota Governor Arne Carlson for "outstanding work in forestry and Ruffed Grouse research."

The Department of Fisheries and Wildlife, University of Minnesota, has established a fund for an endowed chair to honor Gordon Gullion and to perpetuate his work. Contributions may be sent to: Gordon W. Gullion Fund, University of Minnesota Foundation, 201 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108.

Ira R. Adelman, Department of Fisheries and Wildlife, 200 Hodson Hall, University of Minnesota, 1980 Folwell Ave., St. Paul, MN 55108.



NOTES OF INTEREST

MINNESOTA'S THIRD BLACK-THROATED GRAY WARBLER — On 31 August 1991, I observed a male Black-throated Gray Warbler at Lakewood Cemetery in south Minneapolis, Hennepin County. The cemetery, 250 acres of gentle hills with shapely evergreens and oaks, is located between Lake Calhoun and Lake Harriet, and bordered on the south by T.S. Roberts Bird Sanctuary. I was walking through the north end of section seven, an area dominated by mature oaks, when I spotted the bird approximately 25 feet away. It was about 4:30 P.M. and the sun was at my back. Through 7x binoculars I saw a warbler with a black throat, black mask and white underparts. My first throught was, "Golden-winged?" Then I saw the entire bird and recognized it immediately as a Black-throated Gray Warbler, a species I have seen a number of times in the Chiricahua Mountains. It was a compact warbler (smaller than a nearby American Redstart), with a neat, sharply-defined black, white and gray plumage. Its face pattern was striking: black crown, fading into gray toward the nape; white area beneath the crown; wide, black mask; white lower face; well-defined black throat. There was a yellow spot between the eye and the bill. This diagnostic mark was particularly evident during the first minutes of the observation when I watched the bird from as close as twenty feet. The back appeared to be plain gray. The wings were grayish, contrasting somewhat with the back, and there were two white wingbars. Beneath the black throat, and confined to the sides and flanks, there were bold, black streaks. The rest of the underparts were bright white. The underside of the tail was also white, except for a small black area at the tip and thin black edges. The legs were black and the bill was dark. My field notes refer to the

warbler's "deliberate movements." It walked slowly along the outer branches of the oaks, poking its bill around the twigs and leaves. I watched the bird for about 15 minutes, then decided to make some phone calls. Before I reached the bike rack, however, I met Tom Tustison, who had just driven into the cemetery. I told him about the Black-throated Gray, and rode with him back to section seven. Less than ten minutes later Tom relocated the warbler when he heard its chip, a call familiar to him from his recent observations of the species in southwest Colorado. The chip sounded to me like a cross between a Yellow-rumped's and a Black-throated Green's, a little drier and less metallic than the latter. We watched the bird from about 4:55 to 5:10 P.M. During this time there were more warblers in the area than there had been earlier, and the Black-throated Gray was less cooperative. It was generally higher in the crowns, and it moved from tree to tree more often. Even so we had many good looks. At 5:10 P.M. I left Tom with the bird, and rode to the nearest phone booth. Unfortunately, no one else was able to find the warbler that evening or the following day. Tom Tustison last saw it at about 5:40 P.M. There are two previous records of this species for Minnesota, both from the spring: a male seen in Minneapolis, 24 April 1938, and a female collected in Madison, Lac Qui Parle County, 14 May 1956. **Steve Carlson, 2705 Dupont Ave. S., Minneapolis, MN 55408.**

A FALL RECORD OF RED-THROATED LOON — While birding at Park Point in Duluth on 1 October 1991, I found a juvenile Red-throated Loon (*Gavia stellata*) on Lake Superior. When I first located it swimming about 80-100 yards off shore, it was nearly a mile away, and through my 40x Kowa TSN-4 spotting scope its overall appearance suggested an immature cormorant because its bill was held up at an angle the entire time. I then drove to a closer assess point on the beach at 22nd St. and had an excellent view of the bird as it continued to swim and dive less than 100 yards away. Although it was overcast at the time with light drizzle, viewing conditions were good since there was no glare from the sun and since the wind and lake surface were calm. Notes were taken in the field as I studied it for the next 10-15 minutes. Its overall size appeared smaller than a Common Loon, although no other birds were nearby for direct size comparison. Not only was its bill uptilted the entire time of observation (Pacific Loons can also assume this posture), but I was close enough to clearly see that the lower edge of the lower mandible was angled upward and the culmen was relatively straight. In addition, the crown appeared flatter than a Pacific or Common Loon, creating the impression of the crown and bill forming a straighter, more continuous line. The entire head and neck were dusky grayish brown overall, indicating juvenile plumage — adult Red-throateds in winter are whiter on the face and foreneck; this feature also served to preclude Pacific Loon which has a white foreneck contrasting with gray hindneck. The chest at the waterline was whiter, and it was also a bit whiter around the eye, at the chin and near the base of the bill. The back, folded wings and sides were the same grayish brown color as the neck (on a Pacific Loon the nape and hindneck are paler), and the feathers on the back and wings were paler-edged, giving an overall impression of spotted upperparts — on a juvenile Pacific Loon seen the previous week the pale feather edges on the back and folded wings gave an overall barred appearance of longer lines across the upperparts. Eventually the loon took flight and put down in the lake about a half mile away, and even in flight the upturned bill was evident. The loon was relocated the next morning in the same area, but it was not seen again after that. Although Red-throated Loons are seen almost every spring on Lake Superior, records are quite scarce in fall, a time of year when the Pacific Loon is more likely. Observers should also be aware that none of the standard field guides adequately cover the juvenile Red-throated Loon; they primarily discuss whiter-necked winter adults, although the Geographic guide includes an adequate illustration of a juvenile on page 19. The best references on loon identification are the article "Identification of Divers in Immature and Winter Plumage" (*British Birds* 79:365-391) and "The Winter Loons" chapter in *A Field Guide to Advanced Birding*. **Kim Eckert, 8255 Congdon Blvd., Duluth, MN 55804.**

AN UNUSUAL NESTING — My wife was at a friend's house in the southeast part of Austin, Mower County, when she was told her that she had two bird nests in a heart-shaped wicker basket hanging on the front of the home. She said one of the nests was thought to be a robin's and the other was a wren's. My wife investigated and found the robin's nest but then correctly identified the lower nest as that of a House Finch, containing young nearly ready to fledge. I then went to the home and photographed this unusual nesting of American Robin and House Finch. **John Morrison, 1210 N.W. 7th Ave., Austin, MN 55912.**

American Robin and House Finch nest, May 1991, Austin, Mower County.

Closeup of House Finch nest. Photos by John Morrison.

BAIRD'S SPARROW AT FELTON PRAIRIE — While birding the Felton prairie area of Clay County, 1 June 1991, after leading a group of birders to central North Dakota, I studied a Baird's Sparrow (*Ammodramus bairdii*) for approximately 45 minutes. I was driving through an area of Felton prairie I had never birded before, three miles east of Highway 9 on County 108 and 1½ miles northeast of 108 and I heard a Baird's Sparrow singing its unmistakable song from a section of very nice looking short grass prairie. It took a moment for the song to register... Baird's Sparrow... in Minnesota! Having just returned from an area where we were able to see and hear many of these over much of the last three days, it took a moment for the significance of this song in this location to sink in. As I stopped the car, the bird, which had been singing much closer to the road, flew a short distance to the west where it began to sing again. The following notes were written with the bird in view and before any field guides were consulted. The song, by far the most distinctive characteristic, consisted of "2-3 tsip notes followed by a soft, wavering musical trill". The song of Baird's Sparrow was fresh in my mind not only because I had recently heard them in North Dakota but because it is one of my favorite bird songs as well. As the bird moved about in the vegetation, I backed the car up to get better light on the bird (I was looking basically west at 5:00 P.M.) to take notes. Over the next 30 to 45 minutes, all of the features of Baird's Sparrow were noted as follows: the song as described above; an obvious facial pattern consisting of two distinct spots on the ear coverts with a line connecting them to a double malar stripe; a buff/orange crown stripe with the color fading on the nape and the sides of the face; the throat was paler than the buffier face and nape; the breast streaking on this individual, more distinct and well defined than many Baird's Sparrows I've observed, was fairly uniform with a "necklace" of streaks on the upper breast and with streaks extending along the sides to the flanks; lower breast and belly were white; bill pale; eye dark; legs I was unable to see well as the bird was perched in vegetation the entire length of my observation; the tail appeared to be of a more "balanced" appearance, not the short-tailed appearance you would get from a Grasshopper, Henslow's or LeConte's Sparrow, and was notched; no wingbars; the back, visible as the bird sang while facing away from me, had thick, dark streaks that contrasted with the more obvious, from this angle, orange/buff color of the crown. Since 1980 there have been only three other records of the Baird's Sparrow in Minnesota. Two of these are from the Felton Prairie area; 6 July 1986 (***The Loon*** 59:33) and 24 June 1988 (***The Loon*** 60:132-133). The other record is of a vagrant in Crow Wing County 24-28 June 1986 (***The Loon*** 58:131-132). **Kim W. Risen, 5756 Brunswick Ave. N., Crystal, MN 55428.**

LESSER BLACK-BACKED GULL IN COOK COUNTY — On 26 October 1991 at 10:00 A.M., an apparent adult Lesser Black-backed Gull immediately stood out among the hundreds of Herring and Ring-billed Gulls in the harbor at Grand Marais, Cook County. We studied the bird for the next thirty minutes through a Kowa TSN-4 spotting scope with 40x eyepiece. Lighting was good as we looked toward the southwest under overcast skies and the distance was less than 100 feet after we walked out onto the end of a dock near Tom's fishing shack. It was slightly smaller than Herring Gull with a dramatic difference in mantle color. The wingtips extended more than one bill length beyond the tail and the bird appeared "long-winged" in flight. The head was not as broad, the crown was slightly flatter, and the slope from forecrown to base of bill was a little steeper, compared to adult Herring Gull. Its bill was slimmer than Herring Gull but the length was similar, with a more prominent "hook" on the tip of the upper mandible. Bill color was yellow except for a red gonydeal spot, a smaller dark smudge on the lower mandible just proximal to the red spot, and another dusky mark near the nares. The iris was yellow with a dark pupil. The legs and feet were dull yellow. Plumage of the head and neck was white with faint, brown streaks on the nape, crown, and especially around the eye, onto the auriculum. The underparts and tail were completely white. The mantle was charcoal gray with broad, white edging on the tertials and on the most posterior, lowermost scapular feather. The primary extension was blackish with white apical spots on at least three of the primaries. Brief flights revealed the uniform, charcoal gray mantle and upper wing surface, with the primaries becoming black near the

Lesser Black-backed Gull, 26 October 1991, Grand Marais, Cook County. Photo by Kim Risen.

wingtip. The broad, white trailing edge was especially pronounced on the secondaries. The white underwing coverts contrasted with dusky flight feathers when viewed overhead. The primaries from below also became blackish toward the wingtip. The Lesser Black-backed Gull usually perched on the top of the rocky breakwater, or occasionally on the south side of the breakwater, where it could not be seen from the fishing shack. It often responded to Herring Gulls with apparent aggression when they flew within a few inches of its perch, by opening its bill and pointing it skyward. The adult plumage with subadult bill color possibly indicated a fourth-winter bird (Basic IV plumage). The charcoal gray mantle with blackish wingtips identified it as the expected subspecies in our region, *Larus fuscus graellsii*. We called Ken and Molly Hoffman, who concurred with our identification. The bird was independently found later in the day by Parker Backstrom and Kim Risen, with many observers able to study it through at least 27 October. This was approximately the tenth record for Minnesota (a recent report from Black Dog Lake of a bird in Prebasic II plumage is not included). Note that all age classes have been reported in the state and that the species will soon achieve casual status in Minnesota. The vast majority of our records have been away from Lake Superior.

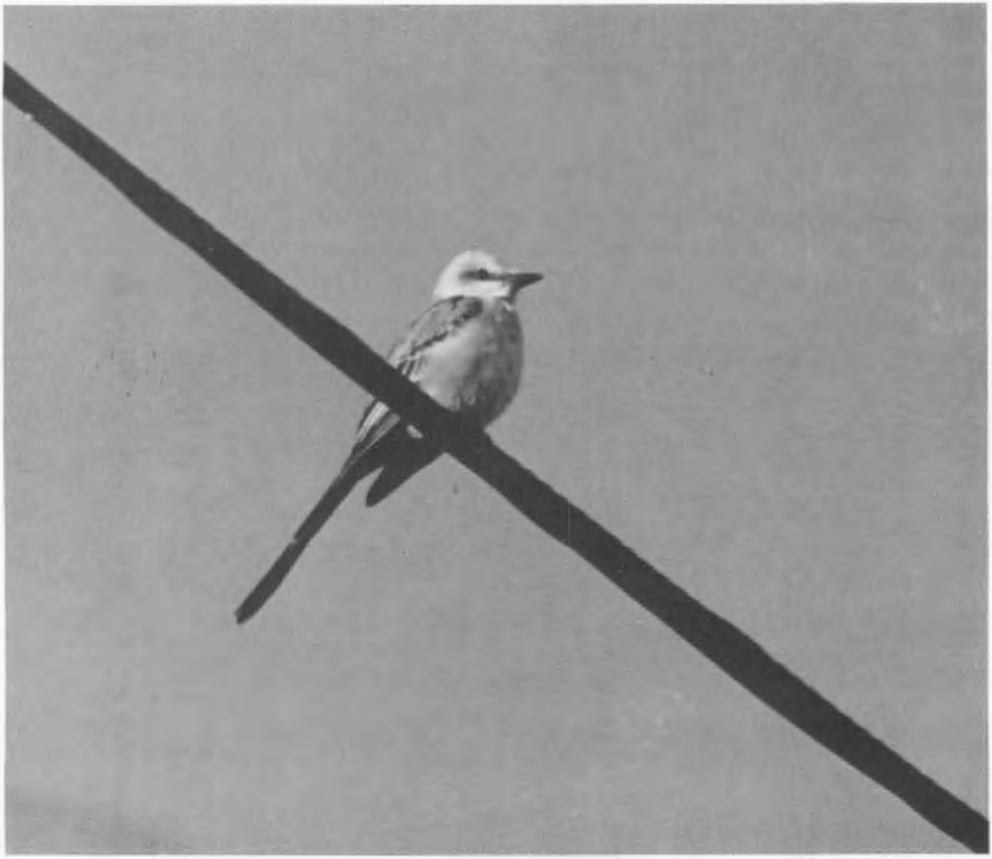
Date	Location	Age	Reference (The Loon)
09 August 1990	Black Dog Lake (Dakota)	adult	62: 171
29 April 1990	Goose Lake (Carver)	adult	62: 119
05 April 1990	Colville Park (Goodhue)	2nd S	62: 111-112
06 May 1989	Minnesota City (Winona)	2nd S	61: 83-84
30 Nov-09 Dec 1988	Black Dog Lake (Dakota)	3rd W	61: 45
11-14 Sept 1988	Diamond Lake (Hennepin)	adult	61: 44-45
20-25 Dec 1987	Black Dog Lake (Dakota)	2nd W	60: 50-52
28 Nov 1987	Grand Marais (Cook)	1st W	60: 40-41
19, 23 Oct 1984	Minnesota Point (St. Louis)	adult	56: 40-43

Peder Svingen and Sue Barton, 151 Bedford St. S.E., Minneapolis, MN 55414.

SCISSOR-TAILED FLYCATCHER IN LAC QUI PARLE COUNTY — During the morning of 10 July 1991, I was watching our platform feeder in our backyard in Cerro Gordo Township, Lac Qui Parle County. At 9:30 A.M. I looked up and perched, in the open, on a dead branch of a box elder tree was a large flycatcher. The flycatcher was approximately 15 feet from where I was sitting and slightly above horizontal eye level, approximately 10-12 feet above the ground. My first impression, because of color and size, was a Northern Mockingbird. However, the most striking character was the bird's deeply forked tail (at least two inches). I began to reflect upon other birds with deeply forked tails that I had seen. Having recalled that I have seen Scissor-tailed Flycatchers in southern California, southeastern Arizona and Colorado with similar plumage characters, could it be remotely possible that this bird was a Scissor-tailed Flycatcher? But, adult Scissor-tailed Flycatchers have deeply forked tails with elongated streamer-like rectrices. This bird's tail had no streamers; it was just prominently forked. Upon observing some specific physical characteristics, I concluded that the bird was definitely a flycatcher, and was quite likely a young male Scissor-tailed. Because of the flycatcher's calm nature, and apparent curiosity, I had the opportunity to watch it for approximately ten minutes as I recorded notes on tape. The next morning the flycatcher returned and once again perched out in the open on a dead branch. I was fortunate to watch the flycatcher for approximately 45 minutes, at approximate distances of 15 to 20 feet and heights of 10 to 15 feet from where I was sitting. Since the flycatcher was observed during the morning, I had excellent light conditions to observe the flycatcher from different angles. The morning skies were partly cloudy with scattered, fair weather, cumulus clouds. I referred to Audubon's *Master Guide to Birding* and National Geographic's *Birds of North America* to verify my identification. Though both of these references include immature Scissor-tailed Flycatchers, with some similar plumage characters indicated in the description, neither drawing in either reference depicted all plumage characteristics of the bird I was observing. This was the third Scissor-tailed Flycatcher seen during the summer season in Minnesota, and the first in Lac Qui Parle County. Most interesting is that other summer observations were in the later part of July, and thus, this would in all probability be the earliest date in July that this species has been seen. The flycatcher's overall color was a pearl gray contrasting with the sooty gray wings, upper tail coverts, and tail. The flycatcher's coloration was much lighter than the ashy-gray head, breast, nape, and back of a Western Kingbird. There was no olive tint to the back, nor yellow to the belly. A prominent narrow black band (or mask) through the eye, was intensified by the very light contrasting pearl gray on the face and head. There were no white wing patches. A faint gray to the edges of the covert feathers gave an impression of two faded wingbars. As the flycatcher flew out to snatch insects, a flash of off-white along the mid-shaft portion of the outer tail feathers created a break in the uniformity of the black rectrices. The white marking could not be seen when the bird was perched. In flight, a tint of ruby color appeared in the axillaries however, this was only distinctly noticeable when the flycatcher flew towards me from a short distance (approximately 15 feet). Occasionally the flycatcher made a coarse *kek* call. A repetitive double-noted *ka-eeep,* with the ending note briefly prolonged, also was heard. The flycatcher was last seen the morning of 11 July 1991. **Micki Buer, Rte. 2, Box 165, Dawson, MN 56232.**

LATE CLIFF SWALLOW — On 19 October 1991, an immature Cliff Swallow was seen actively foraging for insects at the mouth of the Knife River in Lake County. It was an overcast, relatively mild day, and there were numerous small insects over the water and adjacent points of land. The swallow had a pale yellow-orange rump and ill-defined head features. By contrast, a young Cave Swallow would show a dark cap contrasting with a light throat, and its rump would be a bit more reddish; therefore it was eliminated as a possibility. This bird was initially located by Howard Towle from Golden Valley. Shortly thereafter, Howard, my wife Diane, and I observed it for several minutes. According to Janssen, the latest date for Minnesota is 14 October, so a new late date has been established for the species. **Steve Millard, 630 W. Laurel, Fergus Falls, MN 56537.**

A SCISSOR-TAILED FLYCATCHER IN KNIFE RIVER — On 9 October 1991, Mike Hendrickson and I spotted a Scissor-tailed Flycatcher (*Tyrannus forficatus*) perched on a utility wire on the east side of Knife River, Lake Co. Judging by its moderate tail length, about as long as the wing chord, this individual was probably an adult female or an immature in first-winter plumage. In addition to the distinctively long, forked tail with a white edge on the outer rectrices, we also noted the bright pink axillaries, pale orange flanks, pale grayish white head and back, and dark eye line, wings and tail. Other birders were alerted to the bird's presence, and during the next several days it remained in the same location and was seen and photographed by many observers until it was last reported on 22 October. It was subsequently learned that local residents first noticed and identified the flycatcher on October 4, although birders did not become aware of it until five days later. This individual therefore remained in one place for at least 18 days, certainly the longest ever for a Scissor-tailed Flycatcher in Minnesota — it is also certain this individual was observed by more Minnesota birders than any other Scissor-tailed. Equally certain is that this was the biggest year ever for this species in the state, especially in northeastern Minnesota: an adult male was at Park Point in Duluth on 19 July; one was seen in Lutsen, Cook Co. on 18-20 October; and there was yet another sighting on 26 October near Gooseberry Falls State Park, Lake Co. — this may have been the same individual which had been at Lutsen or Knife River. **Kim Eckert, 8255 Congdon Blvd., Duluth, MN 55804.**



Scissor-tailed Flycatcher, 12 October 1991, Knife River, Lake County. Photo by Anthony Hertzel.

FERRUGINOUS HAWK AT FELTON PRAIRIE — Early in the morning on 24 July 1991, an immature Ferruginous Hawk flew across the "longspur road" and perched on a flat rock near the lake at Felton Prairie, Clay County. This large buteo was studied for 15 minutes before it resumed flight toward the northwest. It recalled the immature Ferruginous Hawk seen at Rothsay WMA on 1 May 1991, except that its wing patches were less extensive and its wing coverts showed more reddish-brown. The same "V" formed by white superciliary lines was apparent when the bird looked toward the observer. Overall, its very pale head was marked only by fine brown streaks on the crown, and gray feathering surrounding the eye that gave a faint impression of an eye patch. This head pattern is depicted on page 45 of *Hawks in Flight* (Dunne et al., 1988). The back feathers looked brown and the scapulars were reddish-brown. The lesser and median coverts were more prominently rusty, compared to the greater coverts which were dark brown and edged rusty. The primaries and secondaries appeared dark brown while the bird was perched. The pale underparts showed sparse reddish-brown and brown spotting on the flanks, just above the feet. In flight, the tail looked white except for buff mottling on the upper surface near the tip. The prominent white wing patches on the bases of the innermost primaries did not extend onto the secondaries. The bird was not seen gliding, so wing dihedral was not estimated and there were no other buteos present to confirm my impression of relatively long wings. The bill was gray with a pale cere. The iris and feet were yellow. Although the rusty color on the wing coverts and scapulars was extensive, the bird was not in definitive plumage (acquired in the fourth year of life according to Oberholser) because it lacked the rusty leggings and back of the adult. This immature was the second sighting of Ferruginous Hawk at the Felton Prairie this summer! An adult bird was found by Kim Eckert and his tour group on 22 June 1991.

Literature Cited

Dunne, P., Sibley, D., and Sutton, C. 1988. Hawks in Flight. Boston: Houghton Mifflin Company.

Oberholser, H.C. 1974. The Bird Life of Texas. Austin: University of Texas Press.

Peder Svingen, 151 Bedford St., S.E., Minneapolis, MN 55414.

A BLACK-LEGGED KITTIWAKE IN COOK COUNTY — A large group of about 30 birders from Duluth and the Twin Cities observed a first-winter Black-legged Kittiwake (*Rissa tridactyla*) as it flew past us in Tofte, Cook Co. on 27 October 1991. We had stopped to observe some scoters from the park on the west side of town, when Mike Hendrickson and Peter Neubeck were the first to notice a gull flying towards us from the northeast. Since it looked like something out of the ordinary, Mike called it to my attention, and I could see it was a kittiwake in first-winter plumage and called it to the group's attention. It was in view for only a minute or so, as it flew past us as at about eye level at a distance of about 50 yards from shore. Light conditions were favorable since it was overcast at the time and there was no sun in our eyes, so I could easily note all the diagnostic field marks with 8x42 binoculars. The overall size was judged to be smaller than a Ring-billed Gull, although no other birds were nearby for direct size comparison. Both the bill and eyes appeared all dark, there was a black spot behind the eye, and the diagnostic, sharply-delineated black bar across the nape was carefully noted. The outer primaries were black, and there was a black line continuing diagonally across the wing coverts from the bend of the wing; these black areas combined to form a distinctive zig-zag W or M pattern across the mantle. A long, white triangular area was formed behind the black zig-zag by the white secondaries and inner primaries. The rest of the wing coverts and back were gray. The white tail was black-tipped, and once the gull turned briefly so I could see a shallow notch on the tail tip. The underparts appeared entirely white; leg color was not visible. The kittiwake continued along the shore in a southwesterly direction and flew out of sight, and unfortunately no one was able to relocate the gull later. **Kim Eckert, 8255 Congdon Blvd., Duluth, MN 55804.**

NOTES ON A FEMALE RUFF — An unfamiliar wader with unusual feeding behavior was studied for a total of 45 minutes at Carlos Avery WMA, Anoka County, on 31 July 1991. I considered the possibility of Ruff at the time of the observation, but thought the bird too small (my previous experience has been male Ruffs). The identification was made three weeks later after field notes recorded during the observation were transcribed and compared with references on shorebirds. The bird had a dainty gait and seemed to walk on tiptoes as it leaned far forward to pick near the surface of the muddy grass along the pond. It looked like it might actually fall on its face! It never approached the water during 45 minutes of observation and did not probe the mud like a Stilt Sandpiper. Ruffs feed "by picking in muddy areas, often among vegetation" (Chandler, 1989) with a "steady Redshank-like walk and pecking action" (Hayman et al, 1986) or by wading. The size of the body was between Lesser Yellowlegs and Killdeer, which suggested that it was a female. Published ranges for body length (Hayman et al, 1986) are 230-250 mm for Lesser Yellowlegs, 230-260 mm for Killdeer, and 200-250 for female Ruff. The male Ruff is 260-320 mm in body length.

The dark, straight bill recalled Pectoral Sandpiper but was not as bulky. The head was proportionately small with a slim neck. The head appeared paler buff compared to the underparts, with brown tones on the crown contrasting with a pale supercilium. Eye color was not detected but there was an impression of bulging cheeks. A checkered pattern on the upperparts was formed by buffy edges on the medium to dark brown scapulars, coverts and back feathers. Two parallel buffy lines formed by the scapular edges were seen when the bird was tipped forward, toward the observer. This posture also lifted the tertials to expose the sides (edge) of the tail which appeared white. The wingtips barely extended beyond the tip of the tail. The bird was not observed in flight. The foreneck, breast, and sides were buffy and unmarked, becoming much paler on the flanks, with white undertail coverts. The relatively long legs looked orangish with long, orange toes. The checkered pattern of dark brown scapulars and coverts, edged with buff, along with the buff breast and neck, suggests it was a juvenile (see photographs in Chandler, pages 129-130). Juvenile leg color is dull yellowish-brown (Hayman et al, 1986) or dull yellowish-green, while first-winter birds begin to show the orange tones of the adult (Chandler, 1989). However, leg color in Ruffs is known to be highly variable and the sun shining behind the observer's position may have intensified the color. I usually carry selected reference books as well as field guides during birding trips but I had none on this trip. This idenfication experience confirmed the value of recording as many details as possible during an observation and describing what is seen, not what the books and articles depict.

Literature Cited

Chandler, R.J. 1989. The Facts on File Field Guide to North Atlantic Shorebirds. New York: Facts on File.

Hayman, P., Marchant, J. and Prater, T. 1986. Shorebirds. Boston: Houghton Mifflin Company.

Peder Svingen, 151 Bedford St. S.E., Minneapolis, MN 55414.

ANOTHER FALL RECORD OF PACIFIC LOON IN DULUTH — Sue Barton spotted a juvenile Pacific Loon (*Gavia pacifica*) from Brighton Beach, St. Louis County, on 22 September 1991 as it repeatedly dove beneath the surface of Lake Superior. We had excellent looks from 75 yards away, through a Kowa TSN-4 spotting scope with 40x eyepiece, when it stopped diving and preened for ten minutes. Its gray bill was relatively slender, with a blunted tip and an unobtrusive gonydeal angle. The bill was held horizontal and the bird's slim, rounded head shape was sketched. The crown and hindnape were lighter gray than the overall charcoal gray color on the back. Darker gray lores and a darker gray vertical stripe on the side of the neck, where the gray nape met the white foreneck, were noted. The foreneck was white except for an indistinct wash which represented the "chin strap" of adults in basic plumage. The scapulars and back feathers were edged light gray or buff which gave

a "scalloped" look and aged the bird as a juvenile. Sue noted a complete, narrow, brown "vent strap" while the bird preened its underparts. The presence of a distinct vent strap and chin strap in an adult loon is thought to help rule out the Siberian race of the Arctic Loon (*G. arctica viridigularis*) in basic plumage (Roberson, 1989). We did not specifically note the absence of a distinct, white flank patch. When present, this patch also indicates *viridigularis* (Walsh, 1988). It has been assumed that all of Minnesota's records refer to *pacifica*. Until recently *arctica* has not been recorded in North America outside of Alaska (McCaskie, et al., 1990). The bill characteristics, head shape, dark lores, dark back compared to the nape, rudimentary chin strap, and the dark vertical border between the nape and foreneck eliminate other divers (see Kaufman, 1990) and confirm the Brighton Beach bird as a Pacific Loon. We were unable to relocate the bird after it resumed diving and drifted toward the east, although other observers did relocate this individual two-three miles farther up the shore on 23-24 September. We have previous experience with Pacific Loon in Minnesota and have compared them with other loon species during trips to Arizona and California. More than half of all Minnesota records for Pacific Loon are from Lake Superior in St. Louis County, including fall records in four of the past five years (1987-1991).

Literature Cited

Kaufman, K. 1990. A field guide to advanced birding. Boston: Houghton Mifflin Company, pp. 20-29.

McCaskie, G., Dunn, J.L., Roberts, C. and Sibley, D.A. 1990. Notes on identifying Arctic and Pacific Loons in alternate plumage. *Birding* 22: 70-73.

Roberson, D. 1989. More on Pacific versus Arctic Loons. *Birding* 21: 154-157.

Walsh, T. 1988. Identifying Pacific Loons: some old and new problems. *Birding* 20: 12-28.

Peder Svingen, 151 Bedford St. S.E., Minneapolis, MN 55414.

FURTHER COMMENTS ON ROSS' GOOSE ABUNDANCE — In the last issue of ***The Loon*** (63:157-158), Eckert states in regard to Ross' Geese, "...there is no census data on their relative abundance in this area..." This statement appears to refer back to eastern South Dakota and eastern Nebraska. I would like to point out that in western Iowa, which includes the same large concentrations of geese that migrate through eastern South Dakota and Nebraska, there are census data. At De Soto National Wildlife Refuge, which is in both Iowa and Nebraska, the abundance of Ross' Geese relative to Snow Geese was 0.83% in 1968 and 0.86% in 1969 (Prevett and MacInnes 1972) and 0.38% in 1981 (Frederick and Johnson 1983). From 1972 to 1985, the relative percentage of Ross' Geese taken by hunters at three southwest Iowa locations was 0.14% (Priebe 1987). There is some indication that the numbers of Ross' Geese are increasing in Iowa. In the spring of 1991, Steve Dinsmore found 1,200 in the southwest corner of Iowa on March 6th and estimated that the number was equal to 4 to 5 percent of the Snow Geese (Kent, Fuller and Bendorf 1991). He also reported 41 and 82 at central Iowa locations. One or two have been seen at eastern Iowa locations in the past two years, a very rare occurrence in the past. Based on these data, I was not surprised that more are being seen in Minnesota.

Literature Cited

Frederick, R.B., and R.R. Johnson. 1983. Ross' Geese increasing in central North America. *Condor* 85:257-258.

Kent, T.H., J.L. Fuller, and C.J. Bendorf. 1991. Field reports spring 1991. *Iowa Bird Life* 61:88-98.

Prevett, J.P., and C.D. MacInnes. 1972. The number of Ross' Geese in central North America. *Condor* 74:431-438.

Priebe, C. Ross' Goose in southwest Iowa. *Iowa Bird Life* 57:9-10.

Thomas H. Kent, 211 Richards St., Iowa City, IA 52246.

ROCK WREN IN MINNEAPOLIS — On the early afternoon of 26 September 1991, I was birdwatching along the railroad tracks between North Cedar Lake and the new Highway 12 project, a grassy area with a rapidly growing number of sapling aspen trees. The day was very cold and the cloud cover was perfect for birdwatching with no glare but still very good light. I was watching a small flock of Palm Warblers when I noticed a small gray bird not 20 feet away. I gave him (or her) a look with my Nikons and noted a sharp pointed bill, lightly streaked breast, white eyestripe and buffy rump. I then moved closer to the bird which did not become uneasy until I got within five or so feet. It then began to bob up and down and moved deeper into the pile of sheet metal and rusty tin cans that it had staked out. I did not recognize the bird as anything I had seen before, but thought it looked suspiciously like a Rock or Canyon Wren, birds I had never seen but was casually aware of from field guides (I had neither a field guide or camera with me). I watched its strange bobbing among the cans for ten minutes or so before it flew weakly among some trees. When I returned 15 or so minutes later it had returned and I sketched and observed it for a good twenty or more minutes more before I had to go to class. On comparing my notes and drawings with the birds in my field guide I concluded the bird was, as I suspected, a Rock Wren. Further research revealed this to be a very rare sighting in Minnesota. **Eric Warner, 3247 E. Lake Calhoun Parkway, Minneapolis, MN 55408.**

FIRST NORTHERN MINNESOTA RECORD OF MISSISSIPPI KITE — On 30 August 1991, Terry Wiens, Molly Evans and I observed a Mississippi Kite (*Ictinia mississippiensis*) as it migrated past the Main Overlook at Hawk Ridge Nature Reserve in Duluth. Terry and I first spotted the bird as it approached us from the northeast, and without any binoculars my initial impression was immature *tundrius* Peregrine Falcon because of its pale-headed appearance and falcon profile. But when Terry looked at it through his 10x35E Nikon binoculars he immediately called out "Mississippi Kite", Molly then got her binoculars on it, and after a few seconds I retrieved my 10x42 Elites from the car and followed the kite as it continued southwest along the ridge and turned south towards Lake Superior and eventually out of sight. Immediately afterwards, Terry and I independently, and without consulting each other or any field guides, wrote down a description of what we saw. The time was about 2:00 P.M., and it was clear with the sun to our backs at first, but as the kite flew towards the lake we were looking into the sun. In all the kite was in view for about two minutes and at its closest was about 100 feet away. Again, my initial view was without binoculars, and I noted the following: a very pale head; its size and shape suggested a Peregrine Falcon (though no other hawk was present at first for direct size comparison); under side of body appeared solid color without markings and gray overall, palest gray on the breast and becoming dark gray or blackish on the tail; under wings also appeared solid gray and without markings, paler gray on the wing linings and slightly darker on the flight feathers. With binoculars I noted the following when the kite was about 100 yards away: the tail was shallowly but distinctly notched, similar to a Sharp-shinned; diagnostic white patches on secondaries clearly visible for a few seconds when the bird banked once, but difficult to see exact extent of these because of the angle; after the kite turned south towards the lake it circled briefly in a thermal next to a Sharp-shinned Hawk, and it appeared about 50% larger in overall length and wingspan; unique flight — mostly glided with only occasional flapping, wingbeats were shallow and slow, bouyant and nighthawk-like. Molly did not note any additional field marks, but she concurred that the flight was especially noteworthy and unique. Terry, who had the best look at it since he was the first to view it through binoculars, also wrote an extensive description and noted some additional details: "Most striking feature was overall lightness... head was white or near white... the dark eye stood out on the head. No moustache or other facial feature seen... streaks on upper breast... primaries and secondaries dark in contrast with lighter wing linings (reminiscent of a Swainson's Hawk). Of the primaries and secondaries, the primaries appeared darkest." Although neither Terry or Molly had any previous experience with Mississippi Kites, they have watched and counted tens of thousands of hawks over the years at Hawk Ridge and are thus thoroughly experienced with

field marks, shapes and flight styles of all Minnesota raptors; my Minnesota experience is similar, and in addition I have seen hundreds of Mississippi Kites during spring migration in Texas in 1988 and 1991. While none of us have any doubts about the identification, there may be some uncertainty about the age of this kite. One reason for this is that none of us were able to see whether or not there was any pale barring on the under side of the tail; this is because the tail was never fanned out enough for us to see its pattern, and because the kite was never high enough to give us enough of an angle to see under the tail. And while most of the details noted, especially the white secondaries and the under wing pattern, suggest the kite was an adult, the breast streaking Terry noted seems to indicate a sub-adult. However, I am of the opinion that the kite was an adult, that the streaking may have been too indistinct to be of any consequence since neither Molly or I could see it, and that adult Mississippi Kites (third-year birds?) might sometimes retain some breast streaks (e.g., see photo 5c on p. 124 in *A Field Guide to Hawks* by Clark and Wheeler). **Kim Eckert, 8255 Congdon Blvd., Duluth, MN 55804.**

A SMITH'S LONGSPUR IN COOK COUNTY — On 3 October 1991, in Colville, Cook County, I noticed that one of the seven longspurs on the shoulder of Highway 61 seemed paler than the rest. Before I could study its plumage, a passing truck flushed the birds into flight. The paler bird's tail showed more white than the other longspurs and its dry, sharply delivered, rattling call was consistent with Smith's Longspur, but as the flock disappeared it was just "another one that got away." I returned to the spot an hour later and was amazed to find a lone Smith's Longspur across from the same driveway! From a distance of 15 feet, it was studied and photographed for three minutes before passing traffic again flushed the bird. Its face was rather plain, lacking the patterned appearance of Lapland Longspur. There were slightly darker ear coverts on the otherwise buff face with a distinct, whitish eyering. The wing coverts lacked the rufous tones that can usually be detected in Lapland Longspurs and the lesser coverts were distinctly white. Two white outer rectrices that contrasted with the rest of the brown tail could occasionally be seen while the bird foraged along the edge of the roadway. The underparts were bright buff, with crisp, thin streaking across the breast and especially down the sides. Smith's Longspurs, accidental away from their migration corridor through western Minnesota (Janssen, 1987, *Birds in Minnesota*), can be looked for in fall among the longspurs that move along the North Shore of Lake Superior. **Peder Svingen, 151 Bedford St. S.E., Minneapolis, MN 55414.**

Smith's Longspur, 30 October 1991, Colville, Cook County. Photo by Peder Svingen.

ANOTHER SPRAGUE'S PIPIT SIGHTING — I've noticed in recent issues of ***The Loon*** that there are few reports from Cass County in the "Season" section. I've lived in Hackensack for about three years and regularly bird in and around the county in all seasons. One sighting from this spring was unusual enough to mention here. It was a Sprague's Pipit over in Hubbard County. On the morning of 25 May 1991, my sister Jane Cullen from Des Moines and I were out birding west of Backus on Highway 87. After finding some prairie-chickens along the county line, we went up Highway 64 a few miles and turned west down a dirt road. After about three miles we turned around and started back. I saw a small bird skulking in the grass by the road and stopped to look. I pulled over and parked on the left side of the road next to it. We observed the bird for about ten minutes from an open driver's side window. It was slightly below us in the grasses of an uncultivated field, about fifteen feet away, on the north side of the road. It was about 11:00 A.M. and there was good light. Although at first it was partially hidden in the grasses, it later came out into the open. Our best views of the bird were from the front and right side. The first thing that struck me was the large eye. It had that black button-eyed look of an Upland Sandpiper. Looking more closely, I saw it had a thin, complete white eye-ring. The side of the face was very pale. The bird seemed more slender than a sparrow in both its body and head. It had a general buffy wash overall and was streaked with black on the back. I told my sister I thought it was a pipit. The bird came out in the open and I saw that it had pink legs. Jane had her field guide open and the bird pictured there as a Sprague's Pipit didn't look much like our bird. The bird's bill was longer and narrower than a sparrow's but not the needle-pointed beak in the picture. The lower bill was a pale yellow and the upper one was light with a dark ridge. It had a soft white throat separated from the white on the lower cheeks by a thin line of dark streaks. Below the throat was a narrow necklace of fine dark streaks across the breast. The tail had a white edging to it but the white was not prominent. The bird did not bob up an down like an American Pipit, but rather, when it seemed aware of us, would crouch down like it was trying to hide. At one point a Clay-colored Sparrow flew up and landed about three feet from the bird. The bird was slightly larger than the sparrow and its head and chest were more slender. Shortly after that, the bird flew up into the air in a rather steep and high flight and then dropped down rather sharply on the far side of the field. I was able to follow its flight in my binoculars and saw the white edged tail clearly. After returning home, we looked up Sprague's Pipit in the Audubon Master Guide. On seeing the photographs of the bird, we both exclaimed "that's him." There was a very strong feeling of recognition on seeing the photo. **Dave Holle, RR 1 Box 91D, Hackensack, MN 56452.**

BAIRD'S SPARROW IN ROSEAU COUNTY — On 19 June 1991, I found a Baird's Sparrow within the Roseau River Wildlife Management Area of Roseau County. This state-endangered bird was found while doing field work for the Minnesota Department of Natural Resources' County Biological Survey, which documents the presence of rare, state-listed species. This record is significant since the Baird's Sparrow occurs only casually in Minnesota, and has only twice been recorded away from the Felton Prairie area of Clay County in the last thirty years (records from Wilkin and Crow Wing Counties). The Baird's Sparrow was formerly a summer resident from Traverse County north to Kittson County (Janssen, R.B. *Birds in Minnesota,* 1987). This particular individual was heard and seen singing on the mornings of 19 and 21 June and again on 9 July. On all three occasions it sang actively for more than an hour, with only brief flights into the grass and back up again — presumably to feed. On no occasion did this bird show signs of alarm at the presence of observers, even though it often sang within twenty feet. It maintained a consistent territory throughout this period, singing from the same small shrubs on subsequent visits, and it was seen chasing and being chased by Savannah Sparrows. No nesting behavior or potential mates were observed. These observations suggest this individual was an unmated male and never nested. Since I have had previous experience with Baird's Sparrows in North Dakota, this bird's song was distinctive and easily recognizable. The song consisted of three short, high "sip" notes followed by a sibilant trill, and was much more musical than a Savannah Sparrow's

song. The Baird's Sparrow's song carried surprisingly far, since this bird could often be heard clearly at a distance of 400 meters. The only distinctive feature of this individual's plumage was the ochre-colored stripe on the crown, which was seen best when the bird was facing away from the observer, and singing with its head thrown back. Even then the orangish color was very subtle, and since this stripe became wider in the back, it was even harder to see from the front. The area in which the bird was found is a large pasture roughly two square miles in size. The cover is a diverse mixture of grasses, forbs and sedges of varying height depending on the grazing pressure. The Baird's Sparrow's territory was moderately grazed with vegetation approximately four to six inches in height. Associated species using the same or similar habitat within one half mile included Grasshopper and Savannah Sparrows, Bobolinks, Upland Sandpipers, Sandhill Cranes, and Brewer's Blackbirds. Much of this area is dominated by sedges, and after the heavy rains of late June and early July, this area became flooded with two to ten inches of water. The Baird's Sparrow was still present on 9 July after this flooding, even though its territory was under several inches of water, and Yellow Rails were calling nearby. **Karl Bardon, 8150 W. River Rd., #346, Brooklyn Park, MN 55444.**

DICKSISSEL IN GRAND MARAIS — We live 30 miles north of Grand Marais where growing apples is nearly impossible. The varieties that survive our boreal climate and thin soil will not survive black bear visits. And so we were, on Friday, 4 October 1991, "alley picking" in Grand Marais; harvesting from those graceful old unattended trees whose branches bend low into the public alleys, weighted down with apples. At 4:45 P.M. as birds were moving through the trees on both sides of the alley and on the ground in front of us, we heard an unfamiliar throaty call note, a sort of BZZRRT, and spotted the source of the sound perched seven feet off the ground on a bare tree branch. It was a bird we could not immediately identify. The possibility of a Bobolink was considered and rejected. The bird lacked the dark eyebrow and its heavier pale conical bill was not a Bobolink's more blackbird-like bill. It was not an Indigo Bunting or any sparrow species we were familiar with — too creamy on the head, breast and belly, too large, too yellow and the bill was pale, large and conical, larger than the bill of any sparrow species we are familiar with. We examined the bird as it perched in full view, with binoculars from about fifty feet. The overcast sky lit the bird evenly and perhaps even highlighted the creamy yellow of the breast and eyestripe, a color which because it was such a pale wash might have been missed in the bright light of direct sun. The bill was light in color, large and finch-like in shape. The entire head and face were creamy buff, darker on the crown, paler beneath and marked with creamy white and a thick cream-white stripe extended from the end of the lower mandible down the side of the throat reminding me of a similar mark on a winter Clay-colored Sparrow. The stripe above the eye was broad and a pale yellow that matched the pale yellow across the creamy buff breast. Only the back and wings had sharp-edged feather markings in brown and russet, distinct from the smooth pale shadings of the ventral plumage. We observed no flank, breast, or belly striping and as visibility was excellent we believe there was no striping. After perhaps a minute the bird flew and we again heard the call note, several times. We discussed the bird for a time, uncomfortable with our initial decision. Although we were considering the bird to be a Dicksissel, a species we have no experience with, we did not come to a final decision until consulting various field guides. Even the guides, however, show the female and juvenile Dicksissel as having flank striping and it was not until further reading that our bird, which in all other ways appeared a Dicksissel, could be accepted without its "field guide" flank marks. Previous sightings in October are rare but not unprecedented. Kim Eckert reported the species on 24 October 1986 and 10 October 1989 in Duluth. Only one other record for the species in Cook County has been published, a spring flock at a feeder in May of 1983. **Ken and Molly Hoffman, HC64, Box 410, Grand Marais, MN 55604.**

Chronology of the Minnesota Bird List Since 1984

Robert B. Janssen

In ***The Loon*** 56:165-166 (Fall 1984) in an article entitled "Chronology of the Minnesota Bird List Since 1936", I listed those birds added and deleted from the Minnesota list since the publication of T. S. Roberts *The Birds of Minnesota*.

Since the fall of 1984 another 18 species have been added to the list; the species added to the list in chronological order are:

1984 Black-bellied Whistling-Duck
1984 Lesser Black-backed Gull
1985 White-winged Dove
1986 Common Black-headed Gull
1986 Sandwich Tern
1986 Clark's Grebe
1987 Garganey
1987 Golden-crowned Sparrow
1987 Magnificent Hummingbird
1987 Cassin's Finch
1988 Magnificent Frigatebird
1989 Black-necked Stilt
1990 Eurasian Tree Sparrow
1990 Ash-throated Flycatcher
1991 Glossy Ibis
1991 Fork-tailed Flycatcher
1991 Fieldfare
1991 Anna's Hummingbird

During this same period five species were deleted from the list: Chukar because the introduced population died out; the Common Black-Hawk because it could not be determined how the specimen arrived in the state; and the Glossy Ibis, Black-shouldered Kite and Anhinga because of reconsideration of their documentation by the Minnesota Ornithological Records Committee.

With the net addition of 13 species (18 less five) the state list totals 410 species, and in seven years we are adding an average of 1.9 species per year. In the previous article I stated the average was 1.5 species over 48 years, but the law of diminishing returns would set in soon and diminish this average; however, this has not happened over the past seven years. **Robert B. Janssen 10521 S. Cedar Lake Road, #212, Minnetonka, MN 55343.**

THE COMMITTEE ON CLASSIFICATION AND NOMENCLATURE — (Check-list Committee) of the American Ornithologist's Union has announced revised plans for the next edition of the Check-list of North American Birds. The intended treatment at the subspecies level, with statements of patterns of variation, has been postponed because the work was much greater than anticipated. That treatment will come at a later date. Meantime, the Committee intends to revise the present 6th edition species-level Check-list in 1993. That edition will take into account taxonomic changes since 1983, update range statements, incorporate a world numbering system as indicated in the last (July 1991) Supplement, and will include new statements of habitat. There will also be some changes in classification and therefore the arrangement of species. The Committee will consider a modified version of the classification by Sibley, Ahlquist and Monroe (based on DNAxDNA hybridization data) as a working hypothesis for critical comparison with the classification used in the 6th (1983) edition, which was based primarily on comparative morphology and behavior and not directly on genetic evidence. To a great extent and at many levels the two classifications are fundamentally in agreement, and the committee will evaluate and attempt to resolve matters of disagreement between them. No decision has been made at this stage to adopt or reject either system, either wholly or in part or to any specific extent.

THE MOU 300 CLUB

Totals are as of December 1, 1991.

1)	381	Raymond Glassel
2)	379	Robert B Janssen
3)	374	Kim Eckert
4)	372	Don Bolduc
4)		Dick Ruhme
6)	369	Terry Savaloja
7)	367	Jo Blanich
8)	364	Bill Litkey
9)	360	Liz Campbell
9)		Bill Pieper
11)	357	Paul Egeland [a]
12)	356	Karol Gresser
12)		Warren Nelson
14)	355	Al Bolduc
15)	353	Steve Millard
16)	350	Oscar Johnson
16)		Gary Swanson
18)	349	Jerry Gresser
18)		Jon Peterson
18)		Kim Risen
21)	348	Hap Huber
21)		Ann McKenzie
23)	347	Gloria Wachtler
24)	346	Parker Backstrom
24)		Don Kienholz
24)		Dick Wachtler
27)	345	Anne Marie Plunkett
28)	342	Mike Mulligan
29)	339	Ron Huber
30)	338	Leata A Pearson
30)		Peder Svingen
32)	334	Keith Camburn
32)		Diane Millard
34)	333	Doug Campbell
34)		Bob Ekblad
36)	332	Anthony Hertzel
36)		Dick Sandve
38)	331	Jerry Bonkoski
38)		Elaine McKenzie
40)	330	Bonnie Mulligan
40)		Ruth Andberg
42)	328	Mary Enley
43)	327	Steve Ekblad
43)		Tammy Field
45)	326	Dave Sovereign
46)	323	Phyllis Basford
47)	322	Bruce Baer
47)		Byron Bratlie
47)		Doug Johnson
47)		Ken LaFond
51)	320	Joanne Dempsey
51)		Mike Hendrickson [a]
53)	318	Henry Kyllingstad
53)		Judith Sparrow [a]
53)		Helen Tucker
56)	317	Jay Hammernick [a]
56)		Bill Penning
56)		Jim Williams [b]
59)	316	Jeris Pike
60)	315	Dennis Martin [b]
61)	314	Ilene Haner
62)	313	Roger Field
62)		Peter Neubeck
62)		Bill Stjern [b]
65)	312	Don Wanschura
66)	310	Kathy Heidel [b]
66)		Fred Lesher [b]
68)	309	Joan Fowler
68)		Jerry Pruett
70)	308	Dave Benson [b]
70)		William Marengo [b]
70)		Barbara Martin [b]
73)	307	Micki Buer [b]
73)		Mark Stenssas [a]
73)		Tom Tustison [b]
76)	306	Alice Hennessey [b]
76)		Gene Sylvestre [b]
78)	303	Burnett Hojnacki
78)		Torry Davidson [a]
80)	302	Joan Johnson [a]
81)	300	Gary Simonson [b]

[a] Denotes numbers from 1990 list.

[b] Denotes new member.

THE 200 COUNTY CLUB

Aitkin (294)
265 Warren Nelson
262 Jo Blanich
237 Raymond Glassel
230 Robert B Janssen
227 Kim Risen
226 Ken LaFond

Anoka (297)
279 Ken LaFond
250 Raymond Glassel
241 Steve Carlson
231 Robert B Janssen
230 Ruth Andberg
210 Dick Rengstorf
206 Kim Risen

Becker (274)
221 Raymond Glassel
215 Robert B Janssen
214 Mark Otnes
208 Betsy Beneke
208 Ken LaFond

Beltrami (277)
228 Jeffrey Palmer
223 Raymond Glassel
220 Ken LaFond
213 Doug Johnson
209 Al Bolduc
205 Robert B Janssen

Benton (245)
219 Raymond Glassel
213 Ken LaFond
212 Robert B Janssen

Big Stone (263)
244 Micki Buer
221 Raymond Glassel
206 Robert B Janssen
206 Ken LaFond

Blue Earth (271)
240 Merrill Frydendall [a]
226 Raymond Glassel
209 Robert B Janssen
205 John Frentz [a]
200 Ken LaFond

Brown (256)
230 Raymond Glassel
209 Robert B Janssen
201 Ken LaFond

Carlton (250)
228 Ken LaFond
209 Raymond Glassel
202 Robert B Janssen

Carver (264)
244 Kathy Heidel
238 Raymond Glassel
217 Robert B Janssen
204 Dennis Martin
203 Mike Mulligan
201 Ken LaFond

Cass (267)
212 Raymond Glassel
206 Ken LaFond

Chippewa (243)
215 Raymond Glassel
214 Micki Buer [a]
207 Robert B Janssen
203 Ken LaFond

Chisago (257)
232 Raymond Glassel
225 Ken LaFond
211 Robert B Janssen

Clay (290)
246 Laurence Falk [a]
244 Carol Falk [a]
228 Raymond Glassel
221 Mark Otnes
217 Robert B Janssen
212 Ken LaFond

Clearwater (270)
247 Al Bolduc
216 Raymond Glassel
213 Ken LaFond
204 Robert B Janssen

Cook (296)
269 Ken Hoffman
269 Molly Hoffman
238 Kim Eckert
225 Raymond Glassel
225 Robert B Janssen
218 Walter Popp [a]
203 Ken LaFond
202 Kim Risen

Cottonwood (267)
255 Edward Duerksen
238 Buddy Feil
220 Raymond Glassel
214 Jerry Bonkoski
211 Robert B Janssen
201 Ken LaFond

Crow Wing (274)
245 Jo Blanich
223 Raymond Glassel
219 Warren Nelson
215 Robert B Janssen
214 Ken LaFond
209 Kim Risen

Dakota (297)
273 Raymond Glassel
270 Joanne Dempsey
255 Tom Tustison
252 Karol Gresser
245 Robert B Janssen
234 Al Bolduc
229 Anne Marie Plunkett
225 Kim Risen
223 Bruce Baer
220 Jon Peterson
218 Ann McKenzie
217 Bill Litkey
215 Ken LaFond
209 Dick Rengstorf
202 Elaine McKenzie

Dodge (246)
228 Anne Marie Plunkett
223 Raymond Glassel
210 Jerry Bonkoski
206 Robert B Janssen
201 Bob Ekblad
200 Ken LaFond

Douglas (242)
214 Raymond Glassel
210 Robert B Janssen
203 Ken LaFond

Faribault (241)
214 Raymond Glassel
207 Robert B Janssen
200 Ken LaFond

Fillmore (258)
241 Anne Marie Plunkett
221 Raymond Glassel
207 Robert B Janssen
203 Ken LaFond

Freeborn (263)
230 Raymond Glassel
212 Robert B Janssen
202 Anne Marie Plunkett
202 Ken LaFond

Goodhue (290)
252 Bill Litkey
251 Raymond Glassel
239 Robert B Janssen
231 Anne Marie Plunkett
225 Joanne Dempsey
212 Kim Risen
209 Al Bolduc
200 Ken LaFond

Grant (258)
220 Raymond Glassel
219 Kim Eckert
213 Robert B Janssen
202 Ken LaFond

Hennepin (332)
301 Oscar Johnson
299 Raymond Glassel
299 Robert B Janssen
294 Steve Carlson
277 Al Bolduc
266 Gary Swanson
264 Greg Pietila [a]
254 Kim Risen
248 Karol Gresser
240 Paul Egeland [a]
236 Kathy Heidel
228 Ken LaFond
226 Bill Litkey
225 Tom Soulen
218 Ed Jacobs
218 Amy Proffit
218 Dick Rengstorf
209 Gary Simonson
206 Ruth Andberg
206 Warren Woessner
201 Elaine McKenzie
200 Pat Leacock

Houston (265)
233 Fred Lesher
226 Raymond Glassel
224 Anne Marie Plunkett
214 Jon Peterson

THE 200 COUNTY CLUB

212 Robert B Janssen
208 Ken LaFond
208 Ann McKenzie
207 Kim Risen

Hubbard (261)
221 Raymond Glassel
208 Ken LaFond
204 Robert B Janssen

Isanti (254)
227 Ken LaFond
223 Raymond Glassel
204 Robert B Janssen

Itasca (254)
205 Raymond Glassel
205 Ken LaFond

Jackson (269)
220 Raymond Glassel
214 Robert B Janssen
200 Ken LaFond

Kanabec (238)
223 Ken LaFond
221 Raymond Glassel
202 Robert B Janssen

Kandiyohi (258)
226 Raymond Glassel
211 Robert B Janssen
211 Ken LaFond

Kittson (256)
213 Raymond Glassel
212 Ken LaFond
200 Robert B Janssen

Koochiching (237)
222 Ken LaFond
200 Raymond Glassel

Lac Qui Parle (299)
266 Micki Buer
250 Chuck Buer [a]
232 Raymond Glassel
230 Robert B Janssen
228 John Schladweiler
226 Bill Litkey
220 Paul Egeland [a]
220 Al Bolduc
215 Gary Swanson
208 Ken LaFond
201 Henry Kyllingstad

Lake (278)
230 Steve Wilson
220 Mary Shedd
219 Dan Versaw
217 Raymond Glassel
209 Ken LaFond
203 Robert B Janssen
201 Kim Risen

Lake of the Woods (258)
213 Raymond Glassel
210 Kim Eckert
210 Robert B Janssen
205 Ken LaFond
202 Keith Steva
201 Shelley Steva

Le Sueur (262)
244 Raymond Glassel
208 Robert B Janssen
205 Horrace Chamberlain [a]
204 Ken LaFond

Lincoln (244)
215 Raymond Glassel
206 Robert B Janssen
201 Ken LaFond

Lyon (281)
263 Henry Kyllingstad
256 Paul Egeland [a]
224 Raymond Glassel
215 Robert B Janssen
200 Ken LaFond

Mahnomen (247)
211 Raymond Glassel
208 Robert B Janssen
201 Ken LaFond

Marshall (295)
237 Shelley Steva
227 Raymond Glassel
225 Keith Steva
219 Kim Eckert
215 Robert B Janssen
202 Ken LaFond

Martin (264)
218 Raymond Glassel
206 Robert B Janssen
201 Ken LaFond

McLeod (252)
218 Raymond Glassel
204 Robert B Janssen
202 Ken LaFond

Meeker (245)
221 Raymond Glassel
209 Ken LaFond
207 Robert B Janssen

Mille Lacs (269)
228 Ken LaFond
223 Raymond Glassel
213 Robert B Janssen

Morrison (259)
223 Raymond Glassel
219 Loiel Ryan [a]
214 Ken LaFond
201 Robert B Janssen

Mower (266)
244 Ron Kneeskern [a]
243 Rose Kneeskern [a]
228 Richard Smaby
225 John Morrison
220 Raymond Glassel
217 Anne Marie Plunkett
203 Robert B Janssen
201 Ken LaFond

Murray (255)
222 Nelvina DeKam
215 Raymond Glassel
203 Robert B Janssen
200 Ken LaFond

Nicollet (269)
241 Raymond Glassel
237 John Frentz [a]
233 Merrill Frydendall [a]
215 Robert B Janssen
204 Ken LaFond

Nobles (240)
211 Raymond Glassel
200 Robert B Janssen
200 Ken LaFond

Norman (244)
214 Raymond Glassel
206 Robert B Janssen
201 Ken LaFond

Olmsted (289)
274 Anne Marie Plunkett
271 Jerry Bonkoski
262 Bob Ekblad
254 Steve Ekblad
248 Joan Fowler
242 Jerry Pruett
229 Raymond Glassel
226 Vince Herring [a]
221 Helen Tucker
214 Robert B Janssen
206 Jon Peterson
205 Ken LaFond
203 Ann McKenzie

Otter Tail (297)
265 Steve Millard
248 Mark Otnes
218 Raymond Glassel
215 Ken LaFond
212 Robert B Janssen

Pennington (254)
217 Shelley Steva
213 Raymond Glassel
209 Keith Steva
206 Robert B Janssen
200 Ken LaFond

Pine (264)
234 Ken LaFond
229 Raymond Glassel
216 Mike Link [a]
215 Robert B Janssen

Pipestone (256)
209 Raymond Glassel
203 Ken LaFond
202 Kim Eckert
202 Johanna Pals

Polk (276)
246 David Lambeth
231 Sharon Lambeth
227 Al Bolduc
224 Raymond Glassel
219 Robert B Janssen
216 Shelley Steva
213 Peder Svingen
205 Ken LaFond

Pope (247)
221 Raymond Glassel
218 Robert B Janssen
202 Ken LaFond

Ramsey (296)
261 Raymond Glassel
255 Bill Litkey

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KEY TO SEASONAL REPORTS

1. Bold-faced species name (**PACIFIC LOON**) indicates a species occurring as a Casual or Accidental in the state.

2. Bold-faced dates (**10/9**) indicates a date of occurrence either earlier or later or within the earliest or latest dates listed in *Birds in Minnesota* (Janssen, R.B., 1987).

3. Bold-faced counties (**Aitkin**) indicates a county of first or unusual occurrence for that species. City of **Duluth** also bold face when applicable.

4. Counties in italics (*Aitkin*) indicate a first county breeding record.

5. [ ] — species for which their is reasonable doubt as to origin or wildness.

(See pages 247 thru 267)

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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 to 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 color and black/white photos. Photos should be preferably 5x7 in size. Manuscripts should be typewritten, double-spaced and on one side of 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 the 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 Peder Svingen. See inside front cover.

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