

THE PRESIDENT'S PAGE

Roger Tory Peterson in a chapter of the new National Geographic Book, "*Song and Garden Birds*", quotes Roger Barton's estimate of no fewer than 10,000,000 people who have an interest in bird watching to one degree or another. Many more people now watch rather than shoot birds. As a sport, it offers every degree from the passive "feeder" amusement to the most rugged and adventurous expeditions.

The very variety of interests makes it most difficult to weld into a force of respect amongst politicians or the general populace. Only the National Audubon Society of all the bird groups, has been able to assert any real satisfactory force for conservation measures, and even here it has been a long uphill battle. I rather suspect that conservation is fortunate to have the center of the government on the east coast rather than the midwest. I say this, because such pursuits as "bird watching" have reached respectability on the eastern border while in the midwest this standard of culture is just beginning to make itself known. Then, too, the eastern half of our country is much closer to the population explosion and it has seen the destruction of nearly all of those recreations not protected by government agencies.

A rather disturbing editorial in the Cook County paper following the resolution in favor of the BWCA directive taken at the Grand Marais meeting brought this home. Two things took focus as far as I was concerned: one, although contempt was expressed for bird watchers in general, their power as a "pressure" group was beginning to be recognized even in the hinterlands; and secondly, that the reasons why we favor, at least five to one, such legislation is not understood by those who are not close to anything but the most passive aspects of our vocation and avocation.

The realization that pressure can be exerted by such "altruistic" groups as "birdwatchers" is satisfying, but I would much prefer it if more people would realize that economically as well as esthetically there are long-term gains.

I believe there is no propaganda as powerful as education, and in starting my third term as your president, I state frankly that what I hope most for the M.O.U. is that we can become structurally so sound that when we are faced with an issue we believe in, we are listened to with respect.

We are now and have been setting into motion over the past couple of years several projects we hope will bear fruit. First, is the incorporation, which is now an actuality. Thus, we are in a legal position to receive gifts, bequests, and donations. Without the benefit of such monies we cannot expect to accomplish much more than we do now. We hope that members of the M.O.U. will undertake to bring this to the attention of prospective donors. Secondly, we hope by certain articles in "*The Loon*" to stimulate the most passive of members to taking a little more active interest. A new feature will be a series of articles on identifying the more difficult groups of birds. These articles can provide a challenge as well as an educational feature. We hope also within the year to have the first major publication sponsored by the M.O.U. in the hands of the publishers. And now, under the chairmanship of William Bryson, we are organizing an educational committee, to be the focal point for many worthwhile efforts. There are others, some new, some corollary, but these four are the nearest to realization. We hope with your enthusiasm and your help that the M.O.U. can be a force to bring the term "bird watcher" into something at least as respectable as "hunter" in the minds of the general populace.

Sincerely, P. B. Hofslund, President

THE BURROWING OWL IN MINNESOTA

R. A. Grant

INTRODUCTION

1. Field work and acknowledgements

The field work for this study was done in the Dakotas and western Minnesota during 1963 and 1964. About 13,000 miles were driven searching for breeding pairs, pellets were collected at a number of sites and analyzed, and about 55 hours were spent observing the species from the blind. Further observations were made on a captive bird over a period of two months. I thank R. Huber for making the pellet analyses summarized below and for compiling a list and map of all Minnesota records known to him. Other records were contributed by R. Janssen, E. Strubbe, and N. Zeller.

Special thanks are due to Wesley Ernst Jr. of Alberta, Minnesota for permitting repeated access to his land, on which a pair of Burrowing Owls nested in 1964. The photograph in the present *Loon* was taken by E. Strubbe from a blind set up on Mr. Ernst's farm and most of my own sustained observations were made from the same blind.

The studies of Rhoads (1892), Roberts (1932), Errington (1935), Bent (1940), and others have given us an excellent general picture of the habits of the species but there remain gaps in our knowledge of its biology. The account which follows is indebted with respect to methodology and arrangement of headings to Watson's (1957) superb treatment of the breeding biology of the Snowy Owl, a model of what such things should be.

2. Range in Minnesota

Roberts (1932) terms the Burrowing Owl in Minnesota a "summer resident, breeding on the western prairies of the state from the Iowa line at least to Marshall County, and east to Martin County, and Montevideo, Chippewa County." He calls it "a comparatively

recent immigrant," noting that it was not seen "in June 1879, when Roberts and Benner visited Grant and Traverse counties, where it is now common." From the first record in 1881 the species "increased steadily in numbers until by 1924 it was nesting commonly throughout Grant, Traverse, Pipestone, Lincoln, and Lac qui Parle counties and farther north in the Red River Valley." The accompanying map, which records (solid dots) all early and recent breeding records of the species in Minnesota known to me, shows that there has been no significant extension of the breeding range although a few non-breeding records (open dots) have accumulated for eastern Minnesota, as indeed they have for a number of states to the east of Minnesota even as far as Maine and New York (A.O.U. Checklist, 1957)

3. Sexual determination

A special difficulty in the field study of Burrowing Owls concerns distinguishing the sexes of the adults. A number of observers refer confidently to the "male" and "female" without indicating how the distinction was made. Roberts (1932) noted that pairs consisted of a gray and a reddish-brown bird, and that the actions of paired birds indicated that the former was probably the male, the latter the female, since the gray bird was the "sentinel and hunter and dark bird the home-body." My own observations support this distinction. In every instance the members of a pair were easily distinguishable on the basis of color, even in poor light, and the different duties assumed by the gray and brown birds conformed to Roberts' account. I have therefore assumed that a definite and reliable distinction can be made and in the descriptions of behavior which follow have referred to the male or the female, as the case may be, doing this or that.

However it should be noted that an examination of the small series (about 20 sexed adults) of Burrowing Owls collected in the Minnesota-Dakota area and kept in the collection of the Minnesota Museum of Natural History does not support this distinction. Males and females both ranged from light gray to dark brown and the overlap was complete. Neither was a distinction on the basis of size possible. My identifications as to sex are consequently presumptive rather than certain.

STUDY AREA & POPULATION

In the spring and early summer of 1963 and 1964, I made three trips into North and South Dakota, crossing those states six times on the east-west axis, each time by a different route. Repeated stops were made to check likely habitats with binoculars, to observe owls, and to collect pellets. One colony (containing between five and nine pairs), and eight non-colonial pairs were found. Although these few records do not indicate present abundance in the Dakotas, the species does not seem to have been much, if any, more abundant formerly. Wood (1923) seems to have found but four pairs during a much more prolonged investigation of North Dakota birds forty years ago and could find only a few earlier reports.

In the prairie region of western Minnesota I found but four breeding sites (one site was used in both years) in 1963-64 although I travelled about 10,000 miles during the breeding seasons. My trips extended as far north as the Canadian border and as far south as U. S. Route 212 but the four sites found were all in either Stevens or Traverse counties in central western Minnesota. Extensive inquiry among farmers and wildlife officers in those counties and in the adjacent Grant, Big Stone, and Swift counties produced five or six additional records but all who knew the species agreed that

it was no longer as common as formerly. While I certainly missed some pairs, I doubt that the annual breeding population of the five counties named is much in excess of twenty pairs.

Clearly, the Burrowing Owl can no longer be termed a common resident in western Minnesota. Intensive cultivation, the plowing of prairie and pasture lands, and the decimation of the mammalian species whose burrows are used by the owls, have combined to reduce its numbers.

BEHAVIOR

1. Flight

The Burrowing Owl is a strong flier, capable of sustained flight, as we might suspect from the existence of breeding populations on a number of islands in the Caribbean and off the western coast of Mexico, e.g. the Revilla Gilgado Islands (Brattstrom and Howell, 1963), which are about 250 miles from the mainland. Patterson (1946) reported seeing a Burrowing Owl flying strongly over the sea in calm weather at a point almost exactly half way between the Revilla Gilgedos and the mainland. However, on its home range, sustained flights are rare. Most flights last but a minute or two and cover distances under 300 yards. Although it frequently glides for short distances, I never observed soaring flight. Hovering flight (usually from five to fifty feet up) is common when hunting terrestrial prey, repelling invaders on territory, and in display flight. Although not a rapid flier, the Burrowing Owl is a very bouyant and highly manueverable flier, capable of very abrupt ascents after flying prey, of sudden and precise changes of direction. My impression of a recently fledged bird, kept captive but permitted to fly where it wished within a house, was that it was considerably more manueverable than Sparrow Hawks, Screech Owls, or Short-eared Owls kept in the same situation at various times, and more manueverable

than accipitrine hawks observed in the wild. The flight is soundless. Heights attained seldom exceed 100 feet.

2. Display flight

I twice witnessed a peculiar sustained flight on the breeding territory which exceeded in duration, distance, and height anything observed at other times. Both occasions involved the pair at Alberta, Minn. Neither seemed to have hunting as its primary purpose. On the first occasion the female took off at 5:05 A.M. on June 29 in a prolonged rising, hovering, gliding, swooping flight, sometimes with legs dangling, sometimes rising as high as 200 feet, at other times barely skimming the pasture grass. There were sudden dives, and ascents no less abrupt. The direction was erratic and involved many changes but the flight ultimately took the owl more than a quarter mile from the burrow. I was able to follow the bird for 4 minutes, during which time it did not land and was not seen to take any prey. Before this owl returned, the male flew off in a very similar flight, again sustained and far-ranging and involving no attempt at hunting, although when mobbed by a small bird at about 100 feet up, the owl briefly turned in futile pursuit. The flight had lasted more than three minutes when the owl was lost from view. Both individuals, however, ultimately returned with prey, the first seven minutes and the second five minutes after departure. Although the flights overlapped, no interaction was observed. The second such flight was observed at 9:28 P.M. on July 10 and involved only the male. The flight lasted fully eight minutes and on this occasion I was able to record its characteristic sequence thus: up sharply to about 100 feet, hovering for 5 to 10 seconds, a steep dive of 20 to 50 feet, up as before, hovering as before, etc. At intervals this sequence was varied by a low pass over the fields but again no hunting was observed. The owl was lost from view at 9:36 but

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returned without prey at 9:39. Light conditions—dim and very near sunrise or sunset—were similar on the two occasions. On these flights the owls went well beyond their home range as delimited by all other flights observed (see below under Breeding).

3. Voice

The Burrowing Owl has a variety of calls. When protesting intrusions, its characteristic call (heard more often and loudly from the male) is very like that of a Sparrow Hawk—a sharp, rapid “kek-kek-kek-kek-kek”—delivered in flight or from a perch, and repeated until the intruder departs. The same call is used—although more softly and without repetition of the sequence—by adults returning to the burrow with prey especially at night or when the other owls are not in view. More commonly, the adult birds signalled their return with food with a single low melodious “coo-n” note, or with a doubled “chuck-chuck,” also low. A single “chuck,” low but more rapid, from either adult, sent the young scurrying below. Livestock, humans, and a passing Marsh Hawk all evoked this warning note which was obviously intended for the young rather than the intruder. The adults also had distinctive calls, heard only when they were perched or standing near one another and probably connected with courtship: from the male a “coo-Coo-coo-o-o” and from the female in response a “kurruna-kurruna-kurruna.” These calls were heard from newly arrived adults standing on the nest mound in late April very regularly, especially about sunset but also at sunrise or into the early morning. Later the adults gave the calls rarely but always the circumstances suggested a connection with courtship or mating. The male’s call was very suggestive of the opening notes of a cock Ring-necked Pheasant or a distant barnyard rooster. Indeed on one occasion at dawn, the suggestion was amusingly confirmed when a rooster crowed about

a half mile away across the fields and the male answered with that call.

The young had at first three distinct calls: a soft, throaty "chur-r-r" when being fed (given about one third of the time but sufficiently regular to enable one to arrive at a rough estimate of the number of feedings during the night); a low, "krunnnk" when playing or preening one another; and a dry agitated sound when being handled or threatened by a human. This last is presumably the rattlesnake-like buzz reported by various observers. Although I did not at first hear adult calls from the young, one juvenile taken by me just at the flying stage, and retained for two months, developed the adult "kek-kek-kek-kek" protest note within a week or two (that is, by late July). The same bird also used the "chur-r-r" note of the juvenile being fed when approached closely by a free-flying adult gray-phase Screech Owl kept in the house with him.

4. Reactions to intruders

Intrusions by men, machines, mammals, and other species of birds produced reactions of varying intensity. Before and during incubation, and after hatching, the male protested human intrusion by calling and hovering but tended to retire to some distance and after an interval might even cease to call. Once the young had emerged, calls were more vigorous and prolonged, and were often synchronized with sudden swoops at the intruder, always from behind. Five feet or so seemed to be as close as even the boldest male venture in these swoops and if a second person was present the male usually confined himself to hovering and calling. The female was almost always less bold than the male, if in evidence at all, and usually called only once or twice before retiring to a distant perch in silence. This is a sexual difference which I have noted with other raptors—Peregrines, Pigeon Hawks, Sparrow Hawks, Cooper's Hawks, and Marsh

Hawks—and which others have noted (e.g. Watson, 1957).

With darkness the adults ventured closer to a human intruder but called less often. Bobbing and head-swaying were common in perched birds at all times. Reaction to cars and tractors was less intense but took much the same forms.

I observed few reactions to mammals other than live-stock. Twice Jack Rabbits passed very near perched owls and their young. The latter retreated down the burrow but the adults merely watched the rabbit silently, once moving from a perch on the ground when approached too closely. Richardson's Ground Squirrels are almost invariably found with the owls in western Minnesota. The lane in which the Alberta pair nested was mined throughout its length by the squirrels but they seemed to respect the immediate area of the owls' burrow, the squirrel holes for fifteen yards on either side standing unoccupied and the squirrels avoiding that stretch of the lane. On three occasions squirrels did approach the burrow and each time one or both of the adults reacted sharply by either flying to the mound and watching the squirrel from a very erect posture or else threatening. The threat involved 1) ruffling slightly; 2) spreading the wings; and 3) voicing a low, rasping buzz suggestive of a rattlesnake. Walker (1952) tells of a pair of owls taking an occupied Prairie Dog burrow when flooded out of their original burrow. They successfully kept the dog from reoccupying by harrying him whenever he approached. This suggests, as do my observations, that the owls are capable of defending their usurpations if need be.

The nesting lane in Alberta was regularly used by cattle and horses and although the young owls generally retreated when stock was passing, they did not always do so. Only when a horse or steer got within three or four

feet did the adult owls react by calling or ruffling briefly.

Birds regularly mobbed the owls without visible effect. I observed mobbing by Barn Swallows, Yellow-shafted Flickers, Common Grackles, Black Terns, Western and Eastern Kingbirds, Red-winged Blackbirds, and, in the Dakotas, Chestnut-collared Longspurs. Only when surprised from behind did the owls ever start or duck their heads and then but once or twice. On the other hand, analysis of pellets revealed no evidence that any of these species were taken by the owls. Passing ducks, pheasants and shorebirds were ignored. Two Marsh Hawks were seen to pass at different times at a distance of about a quarter mile; one was not seen by the owls, the other was noted with alarm by the adults who immediately called to the young. The young disappeared and both adults retreated to the mound from which they watched the distant hawk attentively until it disappeared. The Burrowing Owl has been very infrequently recorded as a prey of other raptors: I find only two instances—by the Prairie Falcon (Webster, 1944) and the Great Horned Owl (Peeters, 1963).

Human intrusion regularly gave rise to displacement activities — preening or hunting on the part of the female, and, if prolonged, sometimes produced the same results in the male owl. Hole-guarding—either from the mound or from an adjacent fence post—was observed in response to intrusions of people, vehicles, livestock, and ground squirrels, and sometimes adults would preen each other or their young during such an intrusion.

5. Distraction display

Distraction display has been observed in some owls (e.g. Long-eared Owls) but I never observed it in the Burrowing Owl. Indeed, with most potential predators the owls show an opposite form of behavior by flying directly to the nesting burrow. With

mammalian or avian predators (see above) this flight is usually silent but when man is the potential predator it is punctuated with loud calls. Every one of the dozen or so owls started from roadside perches during my auto trips in the Dakotas flew to or over the burrow calling loudly. The burrow is thus very easy to locate (I have never had to search more than a few minutes, even in tall grass), and as it is also conspicuously marked by excavated debris, droppings, and pellets, it is apparent that little survival value attaches to its concealment.

6. Hunting techniques

Unlike some other ground-nesting raptors, e.g. Marsh Hawks and Short-eared Owls, the Burrowing Owl does not hunt by quartering the ground from a low altitude but rather glides or darts out from a perch. It hunts what it can see (or hear) from its perch, and rarely flies more than 100 yards to intercept prey. Frequently terrestrial prey (toads, frogs, mice, beetles) are secured by an uninterrupted short or longer glide from a low perch. Where initial altitude or intervening obstacles prevent such a flight, the owls flap up slightly, frequently hover over their prey and then plunge abruptly upon it. Aerial prey (beetles) are something secured by a sharp climbing flight from a perch, but, if low-flying, quite as often by a more or less level chase.

Successful forays preponderate: in a period of one hour (7:50-8:50 P.M., July 2, 1964), the Alberta pair was seen to pursue 19 (mostly flying) beetles and one toad, taking 17 and one respectively. Walker (1952) lists prey brought to the young by the adults in a period of 100 minutes in Colorado: 39 large insects, two lizards, one frog, and one jumping mouse. Prey are always taken with the feet but often transferred to the beak-occasionally in flight, but usually on a perch—for presentation to the young. Small prey are carried back under the tail but

heavier prey (mice, frogs) may be carried in dangling feet. The Burrowing Owl has been termed diurnal, crepuscular, and/or nocturnal in its hunt-

ing habits. The pairs I watched were markedly crepuscular as the following table (summarizing 55 hours of observation from the blind) shows.

MAXIMUM NUMBER OF PREY TAKEN PER HOUR BY ONE PAIR

A.M.											P.M.													
12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0	0	1	0	4	6	3	1	1	0	0	0	0	0	0	0	0	1	0	7	15	5	14	1	

Sunrise and sunset occurred at about 5:30 A.M. and 9:20 P.M. C.D.T. respectively. Observations between 10:30 P.M. and 4:45 A.M. were made using food and other calls as indicators and checked by occasional use of strong flashlight. During that period of near or total darkness there was very little movement on the part of either adult and the young were only two or three times in view.

Prey may be brought still living to the mound and even to the nesting chamber (Walker, 1952). I observed crippled but living beetles, toads, and frogs on the mound and in the entrance to the burrow, and noted, as Walker did, that these were more frequent after the young were well grown. Dead prey had usually been killed by decapitation (mice), by being bitten or torn in two (insects), or by being repeatedly trodden and partially eaten (toads, frogs). Insects were usually carried live to a perch, held up in one foot, and picked at with the bill. Batrachians were almost always stalked in a series of short hops, the last of which brought the owl to rest on the struggling prey, which was then convulsively grasped not once but repeatedly, sometimes for as long as eight or ten minutes, during which time the owl acted as though it were on a slow tread-mill. Occasionally this marching in place on the hapless prey would be punctuated by a sharp peck aimed almost indifferently at one or another soft part of the batrachian's anatomy. One such prey, examined at the burrow, was still twitching although the lower jaw, part of the pelvic girdle, and much of the entrails

had been eaten (the belly had been opened from below).

7. Food-begging by adults

Females were never seen to surrender food to their mates but males regularly brought food to the burrows, where it was sometimes taken by the females and eaten or else dispersed to the young. The transfer was usually accomplished by a mutual rapid bow, the female taking the food from the male's bill with her own. Once the male landed about 100 yards from the burrow with a large prey, whereupon the female flew to him, landing close by. The male then flew away from her with the prey. This procedure was four times repeated and the male ultimately secreted the prey rather than surrender it. A commoner form of begging occurs when the female simply flies to a perch a few yards from where the male stands on his prey, and watches him. Usually he shortly thereafter flies to the burrow and surrenders the prey.

8. Eating

No owls were observed to eat the larger prey species in a single gulp. Frogs or toads were picked at in the manner described above, the heavier bones and the skull being ignored. Mice were almost invariably beheaded, the head eaten, and the remainder eaten later. Even certain larger insects were taken in several bites. In the case of beetles, the head was frequently discarded with a flip of the bill and the rest eaten piece-meal. Watson (1957) observed that Snowy Owls commonly raised their head and stood high on their feet, looking down at the prey

before taking the first bite. I have observed this habit in Burrowing, Screech, Short-eared, Great Horned, and Hawk-Owls and assume it to be widespread in the family. After eating, adults, and sometimes young, wiped their bills on a perch, or on grass or dirt. Food particles were carefully picked from the feet. No owl was observed to drink or bathe and my captive rejected water even in the hottest weather. However, owls are remarkably erratic in this respect. Of two Minnesota-bred Screech Owls which I kept for a total of five and a half years, one bathed and drank daily if water was offered, while the other never bathed or drank.

9. Preening, Stretching, and Sanitation

Preening took much time every day and even the young were seen to preen, or attempt it, well before they had fledged. Frequently the adults preened the young, and sometimes, especially early in the breeding cycle, they were seen to preen each other. The usual manner of stretching, on a perch or on the ground, involved extending the foot and wing on the same side together but once I observed an adult to extend both wings over the back until they touched above.

Although adults habitually clean out (and often enlarge) a burrow when taking up residence, I know of no certain evidence that they continue to do so after the young hatch. Certainly the mound and entrance to the burrow are thickly strewn with crushed pellets and discarded fragments of prey by the time the young emerge. Once, a few feet from a burrow I found a half egg shell, which fitted the description and dimensions of Burrowing Owls eggs. This would seem to indicate some attempt at sanitation on the part of the adults. Pellets were cast by adults indifferently on the mound or from a nearby perch but were rarely found more than 100 yards from a nesting burrow. I have observed casting in the late afternoon (about 3 to 4 P.M.) and

the early morning (5 A.M.). The bird kept by me for two months cast regularly about 8 to 10 hours after eating. Faeces are dropped by the young on the mound at first but a little later are deposited in the grass a few inches or feet away. The adults dropped faeces at perches some distance away, the same perches, often at which cast pellets were to be found.

10. Reaction to weather

Burrowing Owls often seek shade through the midday hours of hot days. In practice this sometimes meant that the female stood sentinel on a post, boulder, or mound while the male, who did most of the food-procuring earlier and had stood sentinel through the night, rested in the mouth of a nearby burrow (usually not the nesting burrow). If no suitable second burrow was available he might be found standing in the shade of a fence-post, boulder, bush, or plant. The male at Alberta regularly stood beneath a large milkweed plant at the edge of a field of flax. Often the gular tract could be seen to be vibrating. Extreme heat, heavy rain, or a strong wind sometimes caused even the sentinel of a pair to seek shelter but usually at least one of a pair remained in view. At times the sentinel owl perched in the mouth of the nesting burrow, its eyes at the level of the closely cropped grass. As one rarely enters an occupied territory during the breeding season without occasioning protests from one or both adults, I assume that a sentinel is always posted.

BREEDING

1. Habitat selection

The Burrowing Owl throughout its range in Minnesota and the Dakotas shows a very strong preference for closely cropped pastures with resident colonies of Richardson's Ground Squirrels. Exceptions to this preference include breeding sites in Prairie Dog colonies (one pair in the western Dakotas) and in short-grass prairie (two

pairs in the Dakotas). Sites are usually on flat or slightly rolling but well-drained ground. Exceptional sites noted include one on a gentle hillside and one in a badger hole in a bare fall-plowed field. The Alberta pair nested in an enlarged ground squirrel hole on the edge of a narrow (10 yards) pastured lane between two cultivated fields—an unusual site. However the lane was bordered with fence posts, heavily populated with ground squirrels, and opened (200 yards from the burrow) onto an extensive pasture. It is worth noting that as soon as the young fledged, the owls did most of their hunting in the pasture instead of—as formerly—along the lane. Nineteen of the twenty-five breeding sites known to me by observation or recent (1963-64) report were in short cropped pastures populated by colonies of Richardson's Ground Squirrels.

The preference for close-cropped pasture seems to be strong in many parts of the Burrowing Owl's range. A recent extension of the range of the Florida sub-species was noted as coinciding with and apparently dependent upon the expansion of the range-cattle industry there (Ligon, 1963).

Sites always included nearby observation posts: a fence, raised mounds, boulders, or occasionally a utility pole. Bushes or trees are rarely in an owl territory but where included they may be used as perches (one instance in Minnesota known to me). Sites usually included secondary burrows used by the male for day-time shelter and, after fledging, by the female and juveniles as well.

2. Size of territory

Breeding territories are small and I never saw owls flying outside territory except in the display flight described above. Display flights beyond the bounds of the breeding or hunting territory are common in raptorial birds as Craighead (1956) and others have noted. The two pairs most ex-

tensively observed by me (Herman, Minnesota, 1963 and 1964 and Alberta, Minnesota, 1964) confined their activities including hunting to areas of 16 and 12 acres respectively. Reports of densely populated colonies (Rhoades, 1892) are now less common than formerly but suggest that the owls require only a small home range. In one such colony in an 80 acre feed lot a few miles east of Watford City, North Dakota, I observed nine adults perched on mounds at midday and assumed that five to nine pair nested, totals which would allow for territories of from ten to eighteen acres.

Road census data also suggests that territories are rather small. None of the owls seen from the car in the Dakotas proved to be more than 200 yards from the nesting borrow and usually the distance was under 100 yards.

3. Associated species

Common avian species on Burrowing Owl territories in Minnesota include all the species mentioned as displaying mobbing behavior, and in addition the Ring-necked Pheasant, Western Meadowlark, Upland Plover, Horned Lark, Dickcissel, American Goldfinch, and several grassland sparrows: Vesper, Song, and Grasshopper. In the Dakotas Chestnut-collared Longspurs, Lark Buntings, and Gray Partridges were also seen in association with the owls.

4. Inception of breeding season

Adults in central western Minnesota usually arrive about April 18-30 and immediately take up territories. My earliest records are for April 23, 25 and 29 (three different pairs: small pellet accumulations), and May 5 and 7 (two pairs: considerable pellet accumulations). Roberts (1932) lists two slightly earlier records: April 10 and 17, and there is a record for April 18, 1964 (Huber, 1964). On the other hand, in north central South Dakota on May 5, two pairs seemed to have just arrived as there were no pellets and very

little faeces about the burrows and perches.

5. Pair relations

I observed courtship behavior in newly arrived birds on several occasions. On April 25, about 6 p.m., a pair on a mound was watched for about 30 minutes. During this time the soft cooing courtship calls were heard repeatedly. The birds bowed simultaneously a number of times and at several points the male drew himself up to his full height and then leaned forward and billed. Once after billing, he appeared to attempt coition but this was broken off with some fluttering on the part of both birds. The female several times entered the burrow and emerged after a few seconds. The behavior agrees closely with that observed by Howell (1964) in a captive pair. He also noted that the female alone developed an incubation patch and incubated. After egg laying (presumed to have occurred within two weeks or so) courtship behavior observed by me was confined to occasional billing, mutual preening, and calling.

Feeding and hunting behavior pointed to a rather strict division of duties. During incubation the female was rarely seen above ground by day while the male was regularly seen. Even after the half-fledged young had begun to show themselves the female tended to stay with them and receive food from the male rather than hunt. Of 18 prey taken by both adults in the space of one hour, the male took 15 and fed all but two to the young, while the female took three and consumed all of them herself. This was typical.

6. Brood size

Four broods observed by me included two, six, six, and eight young. On the other hand, at least two Minnesota pairs were obliged (by plowing or flooding) to desert their nest burrow, and one was known to have been unsuccessful in raising any young, deserting for no apparent reason about

July 18.

7. Development of young

The young of the Alberta, Minnesota pair were already half-fledged and emerging on the mound to sun when the pair was first observed June 24, 1964. By July 6 these young were flying short distances. A pair a few miles away at Herman, Minnesota, which had been on territory at least from April 18, 1964, had eight strongly flying young on July 3. On the other hand Roberts (1932) gives egg-dates as late as June 4 (fresh), and June 19 (partly incubated), indicating that the season may at times be later, and the fact that I saw nine adults but no young at a colony in western North Dakota on July 9 would seem to corroborate this.

I know of no account juxtaposing arrival dates with laying dates or hatching and fledging dates. Data derived from a captive pair (Howell, 1964) suggests that about 15 days might elapse between pair formation and deposition of the first egg. If we take 15 days for the interval between arrival and the beginning of egg laying and add the 28 or 29 days usually given as the incubation period, we might expect the first young to hatch about 44 days after arrival of the adults, and to fledge about 30 days after hatching. The cycle from arrival to fledging of first young would thus involve about 74 days. The pair observed at Herman in 1964 and mentioned above had at least one young capable of flying on June 26—an interval of 69 days. This interval agrees closely with that given for a European species in many respects similar to the Burrowing Owl, namely the Little Owl (Witherby, et al., 1947).

Obviously all this is highly speculative and more precise observations of the crucial dates than I have made are needed. It is unfortunate that the only person who has with infinite ingenuity "gone underground" with a breed-

ing pair (Walker, 1952) failed to record anything on these points.

When the young first emerge above ground they are just beginning to fledge and spend most of their time resting quietly on their belly by the entrance to the burrow. Later they show more activity, picking at or pouncing upon chips of debris, running about, fluttering or jumping a few inches off the ground, intently watching passing objects. They ranged farther as they grew older and even before they could fly were occasionally seen 20 to 30 feet from the burrow. By this time they were very fast on their feet and one easily outran me when I started from a slightly greater distance and leapt a fence in an attempt to head it off from the burrow.

The first attempts at flying took the form of fluttering runs through the grass. A few days later young were observed to leap into the air about a foot and flutter as far as 30 feet before coming to earth. Before another week had passed the young were flying strongly over short distances. I was unfortunately unable to continue my observations beyond this point but the captive juvenile retained by me took and easily killed a mouse offered Aug. 15 although he had never had an opportunity to take live prey previously. Errington (1935) thought that the young of several Iowa pairs were hunting for themselves by late July and deduced from the marked increase of insect remains in the pellets during late July and August that young owls tended to take the easier insect prey. I should suppose that flying insects, at least, might require considerable powers of flight whereas mice or batrachians would demand only sharp talons and a strong grasp (which newly fledged owls have, as I can testify). Errington's sample may simply reflect local scarcity or abundance of prey species. In a sample from California, mice and kangaroo

rats occurred in but 7% of the pellets collected in June, in 28% of July pellets, and in 82% of August pellets (Glover, 1953).

8. Frequency with which young are fed

The young at Alberta were offered a very high proportion (roughly 75%) of prey taken during the peak hunting hours from 4-7 a.m. and 7-11 p.m. I recorded five large (rodents or batrachians) and 14 small (insects) items offered to the two young at Alberta in the course of 95 minutes (9-10:35 p.m., June 26). This rate of food procuring seemed well in excess of the needs of that small brood (my captive maintained his weight on no more than two mice per day) but as almost no food is offered to the young except at these peak hours (the few items taken between the peaks are usually eaten by the hunting adult), and as both adults (but especially the female) frequently avail themselves of food accumulated at the burrow, the offerings may have been consumed.

9. Behavior of the young when fed

The young owls often rushed up to an adult returning with food and sometimes a brief tussle between the young ensued but neither was a frequent occurrence at Alberta where the supply plainly exceeded the demand. Usually the adult was simply followed into the burrow where he deposited the prey a foot or two from the entrance. The pair at Herman in 1964 were feeding eight young and there was consequently much more competition. The young were frequently observed to beg with lowered, extended head, and, if up on the mound, always rushed toward an adult returning with prey.

10. Post-breeding dispersal

In late July the Alberta pair were reported to have disappeared but when I returned in August I found they had simply moved 250 yards to the adjacent pasture and taken up residence

in ground squirrel burrows there. This pair no longer had young to feed as I had taken one for study and the other had disappeared in my absence but the same sort of dispersal had earlier been observed with the more advanced brood at Herman. The young continually flew farther afield and by mid-July were found to be scattered widely, one or two on each of several mounds, some as much as 200 yards from the nest. This brood had altogether vanished when I returned in mid-August.

The post-juvenile moult of breast feathers in my captive began in the last days of July and was all but complete when I released the bird on Sept. 6, although the facial pattern still made it easy to distinguish him. He took up without apparent conflict a hunting territory smaller than, but completely overlapping, the new territory of the parent bird but used a different burrow. The only interaction thereafter observed occurred on Sept. 11 when the male killed a large prey and was joined by the juvenile. The male drove the young bird away with a warning "kuk" and a ruffling of feathers, and then ate. These three—two adults, one young—were seen on Sept. 18 but were gone on the 27th.

11. Breeding success

I have insufficient data for an estimate of present breeding success in western Minnesota but it is worth noting that there are comparatively few reports of fledged broods—at a rough count hardly 25% of the 25 pairs reported since Roberts (1935: 2nd ed.) have been reported as having young of any age. Furthermore, reported broods are rarely large: 3, 3, 5, 2, 8—an average of 3.83 per "successful" pair.

The rather specialized habitat requirements of the species in Minnesota—large, level, dry, short-cropped, ground-squirrel-infested pasture—and the regularity with which prime habi-

tate is reconverted to crop land or allowed to grow to high grass and weeds as soil bank land, must all work to sharply restrict its Minnesota population and to keep breeding success low.

FOOD ECOLOGY

1. Availability of prey

In prime habitat insect, batrachian, and rodent prey abound. Neither the Herman nor Alberta pairs seemed to have any difficulty in obtaining food. Had they done so, we would expect their hunting ranges to have been larger but instead the ranges were as small as those in the western Dakotas. Moreover on good habitat I frequently found desiccated remains of prey which had been merely picked at after being killed.

2. Food depots

Excess food was usually to be found in the entrance to the burrow but often some was on the mound. Other food depots might be almost anywhere within the hunting territory but were usually within 100 feet of the burrow and rarely contained more than one prey. The male seemed more prone to establishing such isolated depots, possibly as a means of hiding those few food items which he reserved for his own consumption. I many times observed the Alberta male fly to the ground well away from the burrow, drag out a stiff frog or mouse, and proceed to pick at it.

3. Pellet analyses

Because I did not make regular collection of pellets and also because I was unable to collect many pellets after mid-July in either 1963 or 1964 I have lumped the several groups of analyses into just two without distinction as to date: the pellets from the western Dakotas and those from western Minnesota. It will be noted that although fully 300 miles separate the two areas, the prey species are substantially the same in the two areas. In one respect this is mislead-

ing: I suspect that few batrachians were taken in the dryer Dakotas but know that they were taken regularly by all Minnesota owls whose pellets I collected. Indeed, throughout the hours of my observations at least one and more likely two batrachians were taken by the Minnesota owls for every vole or mouse taken. Yet not one bat-

rachian appears in the pellets analyzed because only the soft parts were eaten. The analyses are also prejudiced in favor of pellets containing rodent remains over those containing purely insect remains as the latter easily disintegrate and are then lost or overlooked.

A. Western Dakotas; June 12 - July 9, 1963: 92 pellets.

Mammalia

Rodentia

Cricetidae

<i>Peromyscus maniculatus bairdii</i> (Prairie White-footed mouse)	10
<i>Microtus pennsylvanicus</i> (Common Meadow Mouse)	18
Other*	1

Aves

Galliformes

<i>Phasianidae</i> or <i>Perdidae</i> , species?	1
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Insecta

Coleoptera

Scarabaeidae (Lamellicorn Beetles, or Scarabs)

<i>Bolbocerosoma farctum</i>	1
<i>Aphodius</i> , species?	2

Silphidae (Carrion Beetles)

<i>Necrophorus americanus</i>	5
<i>Silpha inaequalis</i>	2

Carabidae (Ground Beetles)

<i>Calosoma calida</i>	1
<i>Calosoma frigidum</i>	1
<i>Calosoma</i> , species?	2
<i>Pasimachus punctulatus</i>	1
Unidentified ground beetles	13

Tenebrionidae (Darkling Beetles)

<i>Eleodes tricostata</i>	4
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Hydrophilidae (Water Scavenger Beetles)

<i>Hydrophilus triangularis</i>	1
Unidentified beetles	19

* One grooved upper incisor was found in this batch of pellets, indicating the occurrence of a Harvest Mouse, *Reithrodontomys*, species ? or a Pocket Mouse, *Perognathus*, species? The latter is from a separate family, *Heteromyidae*. The corresponding lower mandibles were not present, either, hence the indeterminate identification.

B. Traverse and Stevens Counties, Minnesota; May 5, 1963 - July 12, 1964:
175 pellets.

Mammalia

Rodentia

Cricetidae

<i>Microtus pennsylvanicus</i> (Common Meadow Mouse)	34
<i>Peromyscus maniculatus bairdii</i> (Prairie White-footed Mouse)	44

Aves

Passeriformes

Unidentified bird (sparrow-sized)	1
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Insecta

Coleoptera

<i>Carabidae</i> (Ground Beetles)	
<i>Elaphrus ruscarius</i>	1
<i>Platynus cupripennis</i>	2
Unidentified	36
<i>Hydrophilidae</i> (Water Scavenger Beetles)	
<i>Hydrophilus triangularis</i>	5
<i>Silphidae</i> (Carrion Beetles)	
<i>Necrophorus tomentosus</i>	3
<i>Necrophorus</i> , species?	1
<i>Silpha americana</i>	10
<i>Silpha noveboracensis</i>	1
<i>Dermestidae</i> (Skin Beetles)	
Unidentified	23
<i>Coccinellidae</i> (Lady Beetles)	
<i>Hippodamia convergens</i>	1
<i>Tenebrionidae</i> (Darkling Beetles)	
<i>Eleodes tricostata</i>	1
Unidentified	1
<i>Scarabaeidae</i> (Lamellicorn Beetles, or Scarabs)	
<i>Phyllophaga fervida</i>	1
<i>Canthon laevis</i>	3
<i>Bolbocerosoma farctum</i>	3
<i>Cotinas nitida?</i>	1
<i>Aphodius distinctus</i>	9
Unidentified	4
<i>Curculionidae</i> (Snout Beetles)	
<i>Calendra aequalis</i>	1

Not included above are the remains of four dried toads, representative of a considerable number of frog or toad remains which lay half-eviscerated and so infested with carrion insects that collection of them was rejected. In South Dakota on July 6, I found the remains of an adult Burrowing Owl a few yards from a burrow inhabited

by two adults and several young. The dead bird was well enough preserved for me to determine that no part of it had been eaten by the living owls. Two or three cases of presumed cannibalism have been reported (Bent, 1938; Robinson, 1954) but none is convincing to my mind.

4. Per diem consumption of prey

For a number of reasons, some listed above, pellet analysis is an inaccurate indicator of the quantity of prey consumed by Burrowing Owls. I made no attempt to arrive at estimates as to quantity by any other means but as all prey taken while I watched were noted and as I was sometimes present through both periods of intensive hunting in a single day, I can offer a rough and qualified estimate of the per diem kill of a pair with two half-fledged young. On June 26 I saw eight large (mammalian or batrachian) prey and 17 small (insect) prey taken in nine and a half hours: 6:20 - 11:20 A.M. and 6:10 - 10:35 P.M. A reasonable estimate

of prey taken during the remainder of the 24 hours (mostly inactive as far as hunting is concerned) might be arrived at by halving those totals. The total kill for the day would thus approximate 12 large and 25 small prey species. Somewhat similar results may be obtained from my observations of June 28-29 when between 9:20 P.M. and 8:15 A.M. I saw seven large, seven small, and six undetermined prey taken. Here the factor of 1.5 would produce 24-hour totals of 10.5, 10.5, and 9 respectively. If we add the last two figures together the two 24-hour sets compare as follows in tabular form (estimates of weight of prey inserted parenthetically in grams).

FOOD TAKEN DURING 24 HOURS (by family of 2 adults, 2 young)

Dates	Large Prey (average weight per unit: 25)	Small Prey (average weight per unit: 2)	Total Weight
June 26	12 (total weight: 300)	25 (total weight: 50)	350.0
June 28-29	10.5 (Total weight: 262.5)	19.5 (total weight: 39)	301.5

An adult Burrowing Owl weighs about 170 grams, half-fledged perhaps 150, and the family in this instance thus aggregated about 640 grams or barely twice their daily kill. Obviously all these figures are raised on slender foundations and have value only as very rough estimates of prey taken. It seems most unlikely that the owls should eat half their weight each day, especially as my captive juvenile maintained his weight on about 40 grams of mice per day, and the figures confirm that wastage of food which is to be noted at some breeding sites.

CONCLUSION

I am acutely aware of the small size of the sample I had to study, the brevity of my observations from the blind, and, especially the speculative nature of some of the labels applied, determinations offered, and conclusions hazarded. For very few of these can I claim substantive foundation or

offer rigorous argument. Obviously 300 or 400 hours in the blind, early as well as later in the breeding season, would have immensely strengthened this account, which in any case I hope to modify with future observations.

SUMMARY

1. I observed Burrowing Owls extensively during the breeding seasons of 1963-1964 in Minnesota and the Dakotas, and spent 55 hours observing their behavior from a blind in June and July 1964.

2. Distribution in all three states was found to be sparse and only one colony was noted. The population in central western Minnesota is estimated to be 20 pairs or less.

3. The flight, including an apparently unnoticed display flight, is described, as are also the quite varied calls and their associations with such activities as courtship, feeding, threaten-

ing, and the care of the young.

4. Reactions to avian, mammalian, and human intruders are described, including threat postures, attack, and displacement activities.

5. Hunting techniques, hours of prime activity, and methods of killing prey are summarized.

6. Prime habitat, size of territory, nest sites, and breeding dates are examined.

7. Pair relations and roles of the sexes are discussed.

8. The development, feeding, behavior, and dispersal of the young are described.

9. Analyses of 267 pellets are given with some supporting comment on food which does not appear in the pellets.

10. A rough estimate of per diem prey species taken is attempted.

11. A concluding section stresses the limitations of the present study.

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THE WINTER SEASON

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Weather: Early December was relatively mild for the third consecutive year. January was somewhat colder than normal and by the first week of February, Lake Superior had frozen over almost up to Grand Marais. Several periods of sustained below zero temperatures took their toll of half-hardy birds which were trying to overwinter (Catbird, Rufous-sided Towhee, etc.). Heavy snows during January and February melted slowly away during brief warm-spells which followed, but they were soon replaced by near-blizzard conditions. Despite the volume of reports I received (92 observers!), most observers felt that it was a rather poor winter for birds.

Common Loon: last reported 12-9, Ramsey Co, 1, ELC.

Horned Grebe: last reported 12-3, Lester River, St. Louis Co, 1, JCG.

Great Blue Heron: One wintering at Prairie Island, Winona Co, seen by many observers thru Dec. and Jan. Seen last on 2-13 (RG, RLH) for first Minnesota February record.

Canada Goose: 12-9 Hennepin Co, 1, probably last migrant, RDT; all winter at Rochester, many observers, 4000-6000 birds; all winter, Howard Lake, Wright Co, 5 wild and 2 domestic (LJ, DP, RG, RLH); 2-13 Winona Co, 5, RG, RLH; 2-18 Dakota Co, 20, MAS; 2-27 Hennepin Co, 50, MAS all three reports probably early migrants.

Snow Goose: One bird all winter at Howard Lake, Wright Co, in company with 2 domestic Blue Geese, DP, LJ, RG, RLH.

Blue Goose: The sedentary individual at Rochester for the past 4 years still remains.

ROSS' GOOSE: The much-photographed immature wintered until 1-8 (NG) and 1-10 (EMB),

Black Duck: A few present with wintering Mallards in Cook (AEA), Winona (DB), Ramsey (BL), Washington (BL), Goodhue (RG, RLH), Anoka (XC) and Hennepin (MHM) Co's.

Gadwall: 12-9 Ramsey Co, 1, probably late migrant, EWJ; 1-2 Prairie Island, Winona Co, 2, WRP, RG, RLH; 1-23 same place, 2, DB, RBJ.

Pintail: 1-2 (WRP, RG, RLH) and 1-23 (DB, RBJ), Prairie Island, Winona Co, 1 male.

Green-winged Teal: 12-6 Prairie Island, Winona Co, 1, WRP, RG, RLH.

American Widgeon: 1-1 Black Dog, Dakota County, 1, RBJ, RG. 1-2, Prairie Island, Winona Co, 2, WRP, RG, RLH; 2-22, Rochester, 1, LJ.

Wood Duck: 12-2, Ramsey Co, ACR; 1-2, Prairie Island, Winona Co, 1 male, WRP, RG, RLH; 1-14, Hennepin Co, 1, MHM; all winter, Howard Lake, Wright Co, EC, LJ, RG, RLH.

Ring-necked Duck: 12-9, Ramsey Co, 1, EWJ; 1-2, Prairie Island, Winona Co, 1 male, WRP, RG, RLH.

Greater Scaup: 12-31, Two Harbors, Lake Co, 1, DP, LJ, good verbal details from DP.

Lesser Scaup: 2-13, Rochester, a pair, RG, RLH.

Common Goldeneye: All winter at various places with open water: North shore of Lake Superior until 1-30 (lake frozen over on 2-4, JCG); also Stearns (NH), Dakota (ACR), Washington (BL, DH), Anoka (LJ), Wabasha (RAG), Hennepin (MHM) and Olmsted (JPF, RBJ, DB) Co's.

Bufflehead: 12-3 to 1-5, a very few along north shore of Lake Superior (JCG, DG, DP); thru most of Jan, Dakota Co, 1 male, EWJ, RG.

Oldsquaw: 12-19 to 1-30 from Duluth to Two Harbors; peaks 12-31, Two Harbors, 40, DP; 1-2 Duluth, 30, JCG; 1-3, Two Harbors, 45, RK; 1-25, French River, 100, JGH; 1-30, Lake Co, 60, RPR; In Cook Co, AEA reports 75 on 1-24 and 50 on 2-13. Most unusual record was 1-6, Point Douglas, Washington Co, 3, BL, good details given.

Ruddy Duck: 12-6, Prairie Island, Winona Co, 1 male, WRP, RG, RLH.

Hooded Merganser: 12-5 to 12-9, Hennepin Co, 1, RDT and 12-9, Ramsey Co, 1, EWJ; all winter in Dakota Co, 1 male, EMB, RLH and Olmsted Co, 1 male, RG, RLH.

Common Merganser: 12-5, Hennepin Co, 1, RDT and 12-6, Wabasha Co, 50, WRP, RG, RLH; a few from Duluth to Two Harbors until 2-30, JCG, RK; a few in Cook Co on 2-13, AEA and 2-20 EMB; all winter, Rochester, 1 or 2, JPF; 2-22 Wabasha Co, 4, LJ.

Red-breasted Merganser: A very few along north shore of Lake Superior from 12-3 to 1-2. Peak at Duluth, 9 seen on 1-2, JCG.

Goshawk: About 30 reports from 18 observers. County records: Ramsey (BL, ACR, ELC, EMB), Washington (BL), Wabasha (DGM, RG, RLH), Hennepin (MEH, MAS), Carlton (RPR), Stearns (RPR), Anoka (ELC, LJ, MAS, EWJ), Wadena (RO, WRP, RG, RLH), Cass (RO), Beltrami (RO, RG, RLH), Lake (JCG, RK), and St. Louis (JNG, AKA, NJH). From 1 to 3 birds in each case.

Red-tailed Hawk: Scarce according to most observers. County records: Washington (DH, BL, DS), Ramsey (BL, ACR), Dakota (BL, EWJ, MAS), Wabasha (DGM, LJ), Anoka (ELC, MAS), Hennepin (MEH), Olmsted (JPF), Rice (OAR), Scott (RLH), Winona (XC), Rock (RG, RO, RLH). 1 to 3 birds each.

Red-shouldered Hawk: 1-1, Afton, Washington Co, 1, XC; 2-18, Kellogg, Wabasha Co, 1, FN; 2-20, Dorer Pools, Wabasha-Winona Co line, 1, FV; 2-26, Dakota Co,

1, BL; 2-27, just N. of Mankato, but in Nicollet Co, 1, RLH; 2-28, Washington Co, 1, DH.

Rough-legged Hawk: Very widespread but with no large concentrations. County records: Nobles 3 (RG, RO, EHW), Watonwan 4 (RG, RO, RLH), Cottonwood 1 (RG, RO, RLH), Jackson 1 (RG, RO, RLH), Rock 1 (RG, RO, RLH), Martin 1 (RG, RO, RLH), Winona 3 (WRP, RG, RLH, DGM), Ramsey 4 (XC, ACR), Anoka 10 (MAS, LJ, BL), Hennepin 5 (TEM, EMB, MHM, EWJ, MAS), Wabasha 3 (DGM, JPF), St. Louis 6 (AKA, JKB), and Beltrami 1 (JLR, PEB).

Golden Eagle: 12-6, Stockton, Winona Co, 2 imm, WRP, RG, RLH; 12-31, Elba, Winona Co, 1 ad, BL, RLH; 1-1, Carlos Avery Refuge, Anoka Co, 1, LJ; 1-25, Mulligan Lake, Beltrami Co, 1 ad, JLR, PEB; 2-13, Weaver, Wabasha Co, 1 ad, RG, RLH; 2-20, Wabasha Co, 2, GD, FV, KK; 12-20 to 2-17, sporadically, Newport, Washington Co, 1 to 2 imm, MRR.

Bald Eagle: As usual; most birders focused their attention on Read's Landing, Wabasha Co, where counts of 1, 3, 3, 5, 12, 12, 15 were obtained between 12-1 and 2-28; Other areas: 12-1, Lake Co, 1 ad, 1 imm, RK; 12-3, Hennepin Co, 1 ad, RDT; 12-4, Duluth, 1 ad, HEP; 12-5, Pine Co, 1 ad, DO; 12-6, West Duluth, 1 ad, OAF; 12-18, Lake Co, 1 ad, RK; 12-19, Stoney Point, St. Louis Co, 1 imm, JCG; 1-2, Kellogg, Wabasha Co, 5 ad, WRP, RG, RLH; 1-5, Winona Co, 2, GZ, TST; 2-7, Caledonia, Houston Co, 2 ad, RO; 2-7, Washington Co, 2, ACR; 2-10, Wright Co, AS; 2-13, Elba, Winona Co, 1 ad, RG, RLH; 2-13, Hovland, Cook Co, TP; 2-26, Washington Co, 1, BL; 2-27, Dakota Co, 1 ad, ACR.

Marsh Hawk: Scarce. 2-7, Hennepin Co, 1, EMB; 2-21, Wright Co, 1, EC.

Sparrow Hawk: Scarce. County records: Dakota (ACR, MAS, VS, LR, RLH), Wabasha (DGM), Olmsted (JPF), Fillmore (JPF), Pine (BL), Morrison (CW), Ramsey (BL), Hennepin (MHM, MAS), Washington (BL), and Winona (GB).

Spruce Grouse: 1-4, Shotley, Beltrami Co, 1, MG; 1-30, Gunflint Trail, Cook Co, 1, HH.

Ruffed Grouse: Scarce, reported in small flocks of 1 to 4 from St. Louis (JCG, VFB), Lake (BL, MIG), Cook (LS, MOP), Beltrami (MG), Ramsey (BL), Anoka (XC) and Winona (XC) Counties.

Greater Prairie Chicken: Very scarce in Wadena and Cass Co's this winter (RO); Flock of 20 seen 1-23 near Pine River, Cass Co, RO, RG, RLH.

Bobwhite: 12-15, Winona Co, 20, TST; 12-26, White Bear Lake, Washington Co, 2, XC; 1-23, Kellogg, Wabasha Co, 1, DB, RBJ. I can't remember when someone last saw 20 at once.

Gray Partridge: 1-2, Moorhead, Clay Co, 15, XC; 2-24, Alberta Stevens, Co, 1, ES; 2-7, Caledonia, Houston Co, 2, RO.

American Coot: Dec, Hennepin Co, 1, EMB; all winter, Rochester, 2, JPF, RG, RLH; 2-21, Wright Co, EC.

Killdeer: Three wintered at Prairie Island, Winona Co, seen by many observers; 12-26, near Stillwater, Washington Co, 2, XC; 1-2, near Etter, Dakota Co, 2, RG, RLH.

Common Snipe: 12-26, Washington Co, 9, XC; 1-2, Dakota Co, 1, ACR; several wintered at Prairie Island, Winona Co seen by many observers and on 2-13 they numbered 12 or 13, RG, RLH; 2-23, St. Paul, 3, BL.

AMERICAN WOODCOCK: last week Dec, Stillwater, Washington Co, 1 seen in marshy spring with Common Snipe by John Upgren of the Conservation Dept. Appears to be second winter record for Minnesota.

BLACK-LEGGED KITTIWAKE: 12-15 (JCG) and 12-16 (BL), Knife River, Lake Co, 1 imm seen at close range, excellent black & white photos obtained by JCG. First Minnesota record.

Glaucous Gull: Present at Knife River, Lake Co, from 12-18 (4, RK) to 2-13

(JCG). Peak on 1-3 (14, JCG); 2-13, Grand Marais, Cook Co, 1, RBJ.

ICELAND GULL: 12-27 and 1-3, Knife River, Lake Co, 1, JCG; this species will probably prove to be a regular winter visitor each year, now that we've learned the secrets of identifying it.

Herring Gull: 2 at Rochester until last week of Dec, DP, RLH; usual wintering flock at Knife River, Lake Co; peak observed there on 1-3, about 800, JCG.

Ring-billed Gull: 12-4, Kellogg, Wabasha Co, 3, DGM.

Mourning Dove: 12-7, Wabasha Co, 7, DGM; 12-13, Stearns Co, 1, RPR; 12-23, Rice Co, 12, OAR; 12-26, Washington Co, XC; 1-1, Hennepin Co, 13, MAS; 1-2, Dakota Co, 11, ACR; 1-3, Winona Co, 29, XC; 1-6, Ramsey Co, 1, ELC; 2-7, Dakota Co, 8, ACR; 2-23, Washington Co, 2, BL.

Screech Owl: Reported from Ramsey (ELC), Hennepin (MHM), Stearns (RPR), Stevens (RAG, ES), Washington (XC) and Traverse (RAG, ES) Co's.

Snowy Owl: Situation parallels Rough-legged Hawk — widespread but small numbers; peak on 12-31 when DP saw 7 on Minnesota Point, Duluth; county records: St. Louis 7 or more (DP, LP, JCG, BL, LJ, RN, JKB), Lake 1 (JCG, RK), Cook 1 (TP), Dakota 1 (WJB), Grant 1 (RAG), Stevens 2 (RAG, BMG), Morrison 1 (WRP, RG), Hennepin 2 (EMB, MHM, MAS), Clay 1 (XC), Nobles 2 (EHW) and Jackson 1 (RG, RO, RLH).

Hawk-Owl: Dec, Cloquet Valley State Forest, Carlton Co, several, JCR *vide* JCG.

Barred Owl: Many reports from Stearns (RPR), Wadena (RO), Crow Wing (MSB), Ramsey (ELC, ACR), Wabasha (FN, DGM), Hennepin (MHM, EMB, RDT, DB), Dakota (BL, ACR), Goodhue (WRP, RG), Cook (HH), St. Louis (ED, ROK, AKA), Anoka (WHL, XC) and Winona (XC) Co's.

Boreal Owl: 1-19, Duluth, 1, excellent color-photos obtained at very close range, JCG.

Saw-whet Owl: 2-2, Univ of Minn campus, Minneapolis, 1, LJ.

Belted Kingfisher: The usual few reported from SE Minn: Dakota (VS, EWJ), Olmsted (JPF), Winona (XC, RG, RLH), Washington (XC) and Hennepin (MAS) Co's.

Yellow-shafted Flicker: 12-20, Stevens Co, ES; 12-27, Anoka Co, XC; 12-28, Kandiyohi Co, XC; 1-1, Olmsted Co, FN; 1-2, Dakota Co, ACR; 1-8, Olmsted Co, JPF; 1-9, Stevens Co, RAG; first week in Jan, Winona Co, XC; 1-26, Ramsey Co, ELC; 1-31, Jackson Co, RO; 1-31, Watonwan Co, RG, RLH; 2-13, Winona Co, RLH; all winter at feeder, Cottonwood Co, MMM; all reports one each.

Pileated Woodpecker: Reported from Beltrami (RLH), Stearns (RPR), Ramsey (ELC, ACR), Washington (DS, DH, BL), Kanabec (RHJ), Cook (LS, MOP), St. Louis (AKA, WJH, JCG, VFB), Lake (MIG), Wabasha (DGM), Dakota (BL, ACR), Hennepin (MEH, VS), Olmsted (LJ), Goodhue (FN), Kandiyohi (XC), Anoka (XC), and Winona (XC) Co's.

Red-bellied Woodpecker: Usual SE records with peak numbers of 19 and 18 on the NE Sub. St. Paul and Winona XC's, respectively. Two interesting records: 12-28, Willmar, Kandiyohi Co, XC and 1-31, Jackson Co, RG, RO, RLH.

Red-headed Woodpecker: Wintering along eastern edge of state and Mississippi River north to Collegeville, Stearns Co, (RPR), Mora, Kanabec Co, (RHJ) and Cambridge, Isanti Co (RBJ). Peak numbers of 16, 17 and 20 on the NE SUB St. Paul, Afton and Winona XC's, respectively and two of the Anoka Co XC's totalled 14 between them.

YELLOW-BELLIED SAPSUCKER: 12-26, Elba, Winona Co, 1, eating Juniper berries, RG, RBJ; all winter, a pair wintering at Pickwick Winona Co, MOF fide GD; very few reliable winter records for Minnesota.

Black-backed Three-toed Woodpecker: all winter, Lutsen, Cook Co, 1, LS; Jan,

Wadena and Cass Co's, near Nimrod, a few, RO.

NORTHERN THREE-TOED WOODPECKER: further invasion evidence; late Dec, Pillager, Cass Co, 1 ad male found dead, Mrs. Milton Mortenson; Dec and Jan, Wadena and Cass Co's, near Nimrod, 5 to 7 birds, several collected, RO, 2-28, Minneapolis, 1 ad male, FL, RBJ, HFH, southernmost Minn record.

Horned Lark: A few wintered north to Washington (DS, BL), Anoka (BL, LJ, MAS) Stearns (NH) and Stevens (RAG) Co's but the largest flocks were observed in the SW corner of the state (BA, RG, RO, RLH) where some 600-800 were seen on a single trip, on 1-31.

Gray Jay: Usual report from Cook (HH, MOP), Lake (RK, JCG), St. Louis (LJ, JCG, SM, NJH), Carlton (JCG) and Beltrami (MG, RLH) Co's.

Black-billed Magpie: 1-23, S. of Kelliher, Beltrami Co, 1, RG, RO, RLH; 1-23, N. of Washkish, Beltrami Co, 4, RG, RO, RLH; 1-26, Bass Lake, St. Louis Co, 2, Bill Martin; 2-4, Hibbing, St. Louis Co, Lloyd R. Flynn.

Common Raven: Usual reports from Cook (MOP, HH), Lake (JCG, DB, RK), St. Louis (LJ, JCG, VFB), Hubbard (LJ) and Beltrami (MG) Co's. Peak numbers on 1-27 (12), 2-8 (20) and 2-19 (20) at Tofte, Cook Co (MOP).

Boreal Chickadee: Except for an unusual occurrence on 1-15 at Long Lake, Hennepin Co, at feeder of Mrs. C. L. Graham, all reports were restricted to Cook (EMB, MIG) and St. Louis (LJ, VFB, NJH) Co's; 1 to 3 birds each time.

Tufted Titmouse: Reported from Winona (KL, PW, RR, AK, MOF), Wabasha (DGM), Rice (OAR), Olmsted (JPF, FBB), Dakota (TEM), Washington (DS, DH), Ramsey (ELC, ACR), Hennepin (EMB, MEH, VS), and Anoka (TEM, LJ) Co's. Of special interest were 3 at Willmar,

Kandiyohi Co on 12-28 (XC); all reports were of 1 to 3 birds except 2 to 6 in Olmsted Co by JPF.

Red-breasted Nuthatch: Three Twin Cities records: 12-9, Ramsey Co, 1, EWJ; 12-10 to 1-17, Minneapolis, 1, EMB; Dec to 1-8, St. Paul, 2 to 3, ACR; all other reports from Cook (HH, MIG), Lake (DB, RK, MIG) and St. Louis (LJ, VFB, NJH, HM, JCG) Co's. All reports of 1 to 4 birds except peaks on 12-31 (24, LJ) and 2-14 (20, MIG).

Brown Creeper: 12-5, Shotley, Beltrami Co, 1, MG; all other reports from farther south: Stearns (RPR, NH), Cass (JAM), St. Louis (VFB, HM), Hennepin (FN, WJB, MEH, VS), Mille Lacs (WJH), Rice (OAR), Wabasha (DGM), Ramsey (ACR), Washington (DH, XC), Winona (XC), Kandiyohi (XC), Olmsted (JPF), Co's. Peak numbers on 1-3 (10, NH) and 7 on Duluth XC.

MOCKINGBIRD: 12-10 to 12-12, Duluth, G. Sundquist, good details given to RN. Few winter records, especially as far north as Duluth.

CATBIRD: late fall to 12-27, Newport, Washington Co, 1, MRR.

BROWN THRASHER: Dec to present time, 1 at feeder in S. St. Paul, Dakota Co, *vide* MRL.

Robin: Usual few wintering in SE corner of Minn but of special interest were huge numbers wintering in NE corner of our state. RK reports peak of 40 at Two Harbors, MAF reports "hundreds" at Schroeder and a new all-time high of 570 seen on Duluth XC. But the greatest number reported was on 12-13, on Hwy 61 between the "Ely cutoff" and Grand Marais, when K. Denis estimated about a **thousand** Robins. Other localities of interest, Morris, Stevens Co, entire period, 1, RAG and Mora, Kanabec Co, 1 on 2-24, RHJ.

Golden-crowned Kinglet: Scarce. 11-20 to 12-26, St. Paul, 1 or 2. Peak of 4 on 11-20, ACR; 12-1, Colledgeville, Stearns Co, 6, RPR.

Bohemian Waxwing: Dec, Blackduck, Beltrami Co, small flock, MG; 1-2, Duluth, 1, PBH; 1-3 Hennepin Co, 1, MAS; 1-8, Winona, 27, AS; 2-4, Anoka Co, 1, TEM; 2-9, Anoka Co, 2, MAS; 2-12 to 2-14, Kanabec Co, 16, peak of 25 on 2-13, RHJ; 2-17 to 2-24, Hennepin Co, 1, EWJ; 2-19, Duluth, 22, PBH; 2-25, Minneapolis, 1, MHM; XC period, 1, Fargo-Moorhead.

Cedar Waxwing: Numerous reports from SE Minn (N. to Washington, Hennepin, Anoka Co's) from late Dec to present, all small flocks or individuals except 93 on the Afton XC. A few wintered at Duluth and on 2-12 JCG noted 200 there. RK noted 2 at Two Harbors from 1-25 to 2-11. In late Feb, very noticeable northward movements took place. JO noted 100 in Washington Co on 2-27, EMB counted 300 in Minneapolis on about 2-27, and a few appeared in Wright (EC), Stearns (RPR), Kanabec (RHJ) and Cook (MOP) Co's. Only records from western Minn were a few on the Willmar and Fargo-Moorhead XC's.

Northern Shrike: Reports of 1 to 3 birds from many observers reflect a very interesting distribution east of a diagonal line from NW to SE corners of state. Western marginal localities: Beltrami (MG, JAM), Crow Wing (MSB), Sherburne (EAH), Hennepin (MEH, MHM, MAS), Ramsey (EMB), Dakota (BL, ACR), Wabasha (DGM), and Winona (XC period) Co's.

Eastern Meadowlark: 1-21, Washington Co, 1, JO.

Western Meadowlark: 1-2, Dakota Co, 1, ACR, MIG; Hennepin Co, 4, RG, RBJ, RLH.

Meadowlark, species? 12-23, Rice Co, 1, OAR; 1-20, Rice Co, 1, OAR; 2-6, Hennepin Co, 2, MAS; 2-25, Nobles Co, 7, EHW; 2-27, Hennepin Co, 3, MAS; Wabasha Co, 1, DGM; all winter, at feeding station, St. Paul, Mrs. Leslie Hodum.

Red-winged Blackbird: Scarce. 12-3 Stevens Co, 1, 12-26, Mpls, 12, XC; 12-26,

Washington Co, 6, DH; 12-30, Wabasha Co, 30, DGM; 1-2, Fargo-Moorhead, 1, XC; 1-3, Winona Co, 10, XC; 1-5, Wabasha Co, 42, XC; 1-17, Stevens Co, 25, John Scharf **fide** ES; 1-23, Mpls, 2, MEH; 2-5, Mpls, 1, VS; 2-9, Hennepin Co, 1, MAS; 2-9, Washington Co, 8, BL; 2-11, Mpls, 2, MEH; 2-20, Wabasha Co, 1, DGM; 2-26, Hennepin Co, 150, MAS; 2-27, Kanabec Co, **fide** RHJ.

Rusty Blackbird: 1-1, Afton, 2, XC; 1-6, Washington Co, 1, BL; 1-23, Mpls, 2, MEH; 2-13, Mpls, 6, EMB; 2-21, Mpls, 2, MEH.

Brewer's Blackbird. 12-26, Washington Co, 4, DH; 1-17 and 2-13, Mpls, 2, EMB.

Common Grackle: Scarce this winter. 1-2, Dakota Co, 2, ACR; 1-1, Mpls, 1, MEH; 1-2, **Hibbing**, 4, XC; 1-3, Winona, 4, XC; 1-10, Hennepin Co, 1, EWJ; 1-19, Winona Co, 1, GD; Goodhue Co, 10, TEM; 2-23, Wabasha Co, DGM; 2-26, Dakota Co, 1, BL; 2-27, Watonwan Co, 1, RLH; 2-27, Washington Co, 1, ACR; three records for feeders all winter: Cottonwood Co, 1, MMM; Olmsted Co, 1, to 3, JPF; Crow Wing Co, 1, Dale Saunders.

Brown-headed Cowbird: Scarcest in 6 years; 1-8, Pickwick, Winona Co, 1, PW.

Cardinal: Usual reports from SE Minn N. to Washington (MRR, BL, DH, DS), Ramsey (ELC, ACR, BL), Anoka (TEM, LJ), Hennepin (RDT, EMB, MHM, FN, VS, EWJ) and Wright (EC) Co's. Numbers up very noticeably, many reports of 5-20 in a given area. Of special interest, 1 at feeder all winter in Crow Wing Co, Dale Saunders; 12-8 to 2-14 Collegeville, Stearns Co, 3 to 4, RPR; week of 1-10, Two Harbors, pair reported to RN; Jan, Duluth, 1, ED; 2-10, Mille Lacs Co, 1, WJH.

Evening Grosbeak: Very numerous in St. Louis Co, with peaks of 728 on Duluth XC (new state high) and 264 on Hibbing XC. 100 reported in Lake Co (1-11, RK) and flocks of 25-50 reported in Cook Co (HH, MAF, MOP, LS). Farther west and south, Beltrami Co, 12 to 48, MG,

JAM; Hubbard Co, 2, LJ; Crow Wing Co, 50-100 daily, MSB; Morrison Co, 21, CW; Kanabec Co, 40, RHJ; Pine Co, 15, BL; these few Twin Cities reports: 12-12, Mpls, 1, EBM; 12-19, Hennepin Co, Mrs. Case; 1-15, Anoka Co, 1, LJ; 1-15, Washington Co, 1, WHL; 2-11, Washington Co, 12, **fide** DH; 2-19, St. Paul, 1, BL, ACR. Most interesting report was one seen during XC period at Fargo-Moorhead.

Purple Finch: Reported by almost every observer except in western part of state where only recorded on Willmar XC. Wintered in small numbers throught NE diagonal half of state. By mid-Feb they arrived in large numbers in Lake Co (100, MIG). Most observers reported definite increase from 2nd to 3rd weeks in Feb. Peaks noted: Morrison Co, 2-22, CW; Virginia, 2-24, 40, VFB; Kanabec Co, 2-25, 41, RHJ; **Hibbing**, 2-24, 44, SM; Duluth, 2-28, 32, JCG; Two Harbors, 2-17, 43, RK; Duluth, 2-15, 75, AKA;; Anoka Co, 2-15, 20, LJ; Ramsey Co, 2-8 30, ACR; Washington Co, 2-19, many, JO.

Pine Grosbeak: Restricted almost entirely to NE "Arrowhead Country." Most observers reported 10 to 20, a few 25 to 50. Peaks noted: 12-22, Finland, Lake Co, 250, DU; 1-10, Lutsen, Cook Co, 300, LS; 1-31, Tofte, Cook Co, 360 plus, MOP. Only records away from NE: 12-20, Shotley, Beltrami Co, a few, MG and 1-23, Lake George, Hubbard Co, 3, RG, RO, RLH.

Hoary Redpoll: 2-13, Schroeder, Cook Co, RBJ; 2-14, Mpls, 2 with flock of 20 Common Redpolls, EMB.

Common Redpoll: Erratic in numbers and generally confined to NE corner of state, except small flocks of 20 to 50 in Carlton (RPR, BL, RLH), Aitkin (RPR), Beltrami (MG, RLH), Cass (RG, RO, RLH), Sherburne (EAH) and Hennepin (EMB) Co's. Only peaks, 12-31, Kelsey area, St. Louis Co, 100 plus, DP, LJ; 1-7 to 1-12, Lutsen, Cook Co, 280, LS. One reported during XC period at Fargo-Moorhead.

Pine Siskin: Erratic, restricted mostly to NE corner of state except a very few in Stearns (XC, RPR), Winona (12-3, 1, Emil Liers) and Hennepin (RDT, EMB) Co's. Most NE observers reported 5 to 25 birds, a few 30 to 50. Only peaks, 194 on Duluth XC (new state high) and thousands in Carlton Co, 12-22, JCR.

American Goldfinch: Reported on all XC's except Willmar and Hibbing. Late Dec and early Jan, reported N. to Washington (DH, DS), Anoka (MAS, LJ), Stearns (RPR, NH, XC) Co's. Isolated reports in Duluth (BL, AKA, JCG) and Two Harbors (RK). Peak 12-26 Anoka XC, 500 and 1-2, Dakota Co, 120, ACR. Mid-Jan movements to Pig Stone (RAG), Stevens (ES), Kanabec (RHJ), St. Louis (Ely, BL) and Beltrami (JAM) Co's. Early and mid-Feb brought another movement with 100 in Mpls (MEH), "many" in Washington Co (JO), 200 in Crow Wing Co (MSB) and a small increase at Two Harbors, (JCG). Other isolated reports: a few all winter in Nobles Co (EHW) and 1 during XC period at Fargo-Moorhead.

Red Crossbill: Scarce this winter. 12-7 (14) and 1-30 (10), Gunflint Trail, Cook Co, HH; 2-20, N. shore of Lake Superior, 2, EMB.

White-winged Crossbill: Did not get as far south as Twin Cities. Most observers reporting them saw flocks of 20 to 40 in Carlton (RPR, JCG), Lake (RK), St. Louis (Duluth XC), Stearns (RPR), Cass (RG, RO, RLH), Beltrami (RG, RLH), Anoka (LJ, MAS, DP, FL)) and Washington (XC, DH) Co's. Smaller flocks of 5 to 15 reported in St. Louis (AKA, NJH, VFB, Hibbing XC), Cook, (LS, AEA, HH, MAF), Stearns (*fide* NH) and Beltrami (MG) Co's. No definite peaks.

RUFIOUS-SIDED TOWHEE: 12-8, 1 banded, (ad male, not *arcticus*) Mendota Heights, Dakota Co, MRL; late fall to 1-15, 1 ad male (not *arcticus*) at feeder of Mrs. Ray Lewis, Lotus Lake, Carver Co, BL, RBJ, RG, RLH.

Slate-colored Junco: Usual winter records from SE Minn, N. to Twin Cities, with peak of 333 on Winona XC. Two separate XC's in Washington Co totalled 448 birds. Other areas: Nobles Co, 1, EHW; Stevens Co, 2, all winter, ES and 1-23 to 2-13, 4 to 6, RAG; Kanabec Co, 1 on 1-12, RHJ; Wright Co, 1-20 to 2-28, 1 to 6, EC; Mille Lacs Co, 1-9 to 2-16, 2 to 4, WJH; Stearns Co, 12-1 to present, about 20 except 150 on 12-3, RPR; Cook Co, 12-10 to 2-28, 1 or 2, MAF; 12-10, Duluth, 1, HEP; 12-16 and 1-25, Duluth, BL; 1-2, Duluth, 1, AKA; 1-2, Hibbing, 1, XC; 12-28, Willmar, Kandiyohi Co, XC; 1-1, St. Cloud, Stearns Co, 20, XC; 1-2, Fargo-Moorhead, 4, XC.

Oregon Junco: More reports than I can recall in six years. Those lingering at feeders for some time: 12-2 to 2-26, Mpls, 2, MAM, EWJ; 12-3 to 2-28, Collegeville, Stearns Co, 3 to 6, RPR; 12-18, Mpls, 2, TEM; 1-4 to 2-23, Rochester, 1, FBB; Dec to 2-28, Mpls, 1 or 2, WJB; Singles and transients: 12:10, Mpls, 1, EMB; 12-25, Mpls, 1, DB; 12-25, Ramsey Co, 1, BL; 12-26, Anoka Co, 1, XC; 12-26, Ramsey Co, 2, ACR; 12-27, Cedar Creek Bog, Anoka Co, 1, XC; 12-28, Willmar, Kandiyohi Co, 2, XC; 1-1, Afton, Washington Co, 4, XC; 1-2, Fargo, 3, XC; 1-23, Morris, Stevens Co, 2, RAG; 1-23, Plainview, Wabasha Co, 2, DGM; 1-24 to 1-31, Motley, Morrison Co, 2 to 4, peak 7 on 1-29, CW; 2-6, Nicols, Dakota Co, 1, VS; 2-19, St. Paul, 1, BL; 2-25, Washington Co, 1, DS.

Tree Sparrow: Wintering north to Twin Cities with isolated reports from Rock (RG), Stevens (RAG), Stearns (RPR) and Kandiyohi (XC period) Co's. Peak numbers: 320 Dakota Co on 1-2, ACR; 208 on Winona XC, 175 on Plainview XC, 157 on Rochester XC.

FOX SPARROW: 11-21 to 12-6, Ramsey Co, 1, Mrs. Case.

HARRIS' SPARROW: 12-21, Rochester, 1, JPF; 12-23, Northfield, Rice Co, 1, OAR; all winter at Luverne, Rock Co, about 20 in Dec (BA) dwindling to 7

on 1-31 (RG, RO, RLH) and only 1 or 2 on 2-27 (RLH). A few all winter at Jackson, Jackson Co coming to feeders of GHC. Few winter records but several in last few winters may establish them as regular winter birds.

White-throated Sparrow: 12-9, Mpls, 1, MEH; 12-17, Ramsey Co, 1, Mrs. Case; XC period, Afton, Washington Co, 1; 12-26, Mpls. 2, XC; all winter, Mpls, 1 to 2 at feeder, WJB.

Swamp Sparrow: 1-23, Prairie Island, Winona Co, 3, DB, RBJ; 1-31 Grass Lake, Hennepin Co, 2, RBJ.

Song Sparrow: 12-23, Faribault, Rice Co, 1, OAR; 12-25, St. Paul, 1, BL; 12-26, Anoka Co, 1, XC; 1-3, Winona Co, 2, XC; 2-26, Collegeville, Stearns Co, 1, RPR.

Lapland Longspur: all winter in extreme SW corner of state; 1-24 Wheaton, Traverse Co, 4, RAG; 1-31, Nobles (100) and Watonwan (250) Co's, RG, RO, RLH. Mid-Feb saw movements in SE Minn: 2-13, Wabasha Co, 500, RG, RLH, 2-12, Washington Co, 8, WHL and 2-22 Dakota Co, 10, LJ.

Snow Bunting: Wintering S. to Traverse (RAG), Stevens (RAG, ES), Hennepin (TEM), Anoka (MAS) and Washington (BL, ACR, WHL) Co's. Only SE reports were from Winona (ER), Rice Co, (OAR), Wabasha Co (DGM) and Olmsted Co (JPF) in mid Feb during some sort of movement, apparently southward. Further evidence of this movement were larger flocks in Anoka (200, MAS; 150, LJ), Hennepin (200, TEM), Ramsey (300, BL, ACR), Washington (350, BL, ACR) Co's. MSB reports an increase on 1-24, Crow Wing Co, flock of 200 seen. Most other reports were of 5 to 50 birds. Largest number reported was 463 on Fargo-Moorhead XC.

Summary: Most of the "winter birds" stayed in the north and most of the half-hardy birds went farther south (around the Twin Cities, observers were asking, "where are the Snipe, Kingfish-

ers, Red-wings, Rusties, Grackles and Cowbirds?"). On the other hand, a few surprises like the Boreal Owl, Black-legged Kittiwake (first state record), American Woodcock, Catbird, Rufous-sided Towhee, Fox Sparrow and Harris' Sparrow compensated for the smaller-than-usual winter checklist. Perhaps the only exceptions to the general bird scarcity were the woodpeckers. Pileateds, normally rather secretive, were reported by almost every observer, the Red-headed lingered farther north than usual and in unprecedented numbers, the Red-bellied was very numerous. Yellow-shafted Flickers were widespread and best of all, the Three-toed Woodpeckers continued to turn up in unexpected places and unexpected numbers. As a result, the southernmost Minnesota record was obtained for the "Ladderback."

Errata: RAG called to my attention an error in the Fall Report for the Yellow-headed Blackbird. His late date for Stevens Co should be Nov rather than Sept.

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M.O.U. SPRING MEETING

The spring meeting of the Minnesota Ornithologists Union will be held in Hibbing on May 22 and 23, 1965. Forest Strnad, former President of the M.O.U., is coordinating the meeting. Many interesting field trips have been planned and a banquet will be held on Saturday. Mr. Sigurd F. Olson of Ely has been tentatively scheduled as the speaker for the banquet. Registration will be 50c and the cost of the banquet will be \$1.75. Reservations for the banquet should be sent to Miss Clara Lilly, 2502 East Fifth Avenue, Hibbing, on or before May 8th. Full details on motel accommodations, field trips and registration will be printed in the next issue of the NEWSLETTER.

EARLY-SUMMER BIRDLIFE OF ITASCA STATE PARK

Joseph J. Hickey¹, John T. Emlen, Jr.² and S. Charles Kendeigh³

The purpose of this paper is to present in some detail, a picture of the nesting birdlife of Itasca State Park in Clearwater, Becker, and Hubbard counties, Minnesota.

Most of the field work reported on here was carried out starting about June 10, for five-week periods in 1954 and 1959 by Hickey, in 1955 by Kendeigh, and in 1956, 1958 and 1961 by Emlen; and for most of a seven-week period in 1962 by Hickey. Our surveys of birdlife in the Park were made during the course of teaching duties at the Lake Itasca Forestry and Biological Station of the University of Minnesota, and our observations have tended, therefore, to be concentrated in the northeast corner of the Park. In June 1954, when blown-down timber blocked many of the hiking trails in the area, field work was shifted to boundary roads around the Park.

The early-morning tendency of birds to sing and make themselves conspicuous is of course well known. Our experience at Itasca Park leads us to regard the frequency of birdsong as varying in other ways:

- (a) The most consistent singers appear to be unmated males. These are not easy to recognize as being without mates, but the extralimital Ruby-crowned Kinglet (reported below) almost certainly fell into this category when it was recorded in the Park on July 10-11, 1962.
- (b) The next most consistent singers are the resident males that are found locally in relatively high densities. In Itasca Park these include such species as the Oven-

bird and the Red-eyed Vireo.

- (c) The least persistent singers are resident males that have successfully paired but are present in extremely low densities. In the Park, these would include such species as the Yellow-bellied Flycatcher and the Cape May Warbler. This last species appeared to have stopped singing in 1962 by June 15.

While these generalizations are subject to modifications inherent in species-specific song periods, we believe that they suggest a potential bias in a faunal list of the type reported here: the rarer nesting songbirds of the Park will tend to be overlooked by ornithologists whose field work takes place after June 15 in this densely wooded region.

The vernacular names cited below follow those given by the American Ornithologists' Union in its (1957 edition) **Check-list**.

Visiting ornithologists who encounter in the Park breeding species not included in the following list are urged to send their observations to **The Loon**, c/o Museum of Natural History, University of Minnesota, Minneapolis, Minnesota—55419.

We are indebted to Doctors W. H. Marshall, C. O. Rosendahl, and D. W. Warner of the University of Minnesota for assistance in the compilation and publication of this list. Its preparation is a contribution of the Lake Itasca Forestry and Biological Station.

Annotated List

Common Loon.—In 1957, 33 adults were present on 15 of the 37 bodies of water surveyed by Krause and Chambers, 22 of these birds constituting 11 pairs.

Present addresses:

- 1/Dept. of Wildlife Management, University of Wisconsin, Madison, Wisconsin
- 2/Dept. of Zoology, University of Wisconsin, Madison, Wisconsin
- 3/Dept. of Zoology, University of Illinois, Urbana, Illinois

Chambers again found 33 adults on 15 bodies of water in 1958, no pairs being present on lakes less than 9 acres in size. In 1957, Lake Itasca had 3 pairs plus a single bird, Elk Lake and De Soto Lake 2 pairs each (Krause and Chambers). Young have regularly been seen on the west arm of Lake Itasca (C. O. Rosendahl), and half-grown birds have been noted as late as August 19, 1919 (Roberts). The apparent break-up of territorial pairs has been observed as early as June 26, 1954 (9 adults noted by Hickey on Elk Lake).

[Red-necked Grebe.—Listed as rare in summer (Swanson, 1943), there is no satisfactory breeding record for the Park. Nesting pairs are regularly seen on Upper Rice Lake 10 miles to the north and on Roy Lake about 20 miles to the northwest (Emlen, Hickey).]

[Western Grebe.—Apparently a very rare summer visitor, a male was shot on Lake Itasca June 23, 1937, and brought to C. E. Mickel. Not likely to nest in the Park.]

Pied-billed Grebe.—A pair nested in 1954 on the pond just north of the east entrance of the Park on Highway 92. Apparently rare or uncommon here.

Great Blue Heron.—A large nesting colony was present for many years in red pines about 1 mile south of Elk Lake (Rosendahl). Nests seen about ½ mile south of Nicollet Cabin in 1954 (Darow). Heronry just south of northernmost Triplet Lake had 142 nests in 131 red pines on July 12, 1955, about every other tree containing a nest and no white pines being used (Kendeigh). In 1956, two colonies of 143 and 349 nests were counted in two red pine groves about 100 yards apart at the northwest corner of Whipple Lake (Emlen); in 1957, the nests totalled 734 (Piehl, Mayhew); in 1958, at least 546. The feeding herons in 1956 were estimated at 2 birds per mile of shoreline on Lake Itasca (Emlen). The Park's herons feed extensively by landing on the surface of deep water to take fish (Itasca, Elk, and Squaw lakes) and will often circle fishermen's boats for this purpose. In July

1962, a severe windstorm destroyed approximately 50 nests (Gloria Peleaux).

American Bittern.—Always present around the shores of Lake Itasca (Rosendahl), this species may be often overlooked. One repeatedly seen in the general vicinity of Schoolcraft Island in 1954 (P. W. Anderson, E. W. Orr) probably belonged to a pair from French Creek Bog where a nest with 1 young and 3 eggs was found on June 20, 1959, by Joyce H. LeFebvre. Also noted at Chambers Creek on July 2 (P. B. Hofslund) and near the Mississippi Headwaters on July 20 (Emlen). As many as 5 seen in marshes along the Mississippi River just north of the Park (Emlen).

Mallard.—The commonest nesting duck in the Park; 16 females seen in 1957 (Krause and Chambers), 13 in 1958 (Chambers). Five females on Lake Itasca in 1954 had broods of 4, 4, 7, 8, and 11 (W. F. Classon and N. Zaczkowski); other broods seen on Squaw Lake. A clutch of 10 eggs in blown-down timber near Nicollet Creek hatched after July 3, 1954 (Classon).

[Black Duck.—Reported to be local but regularly nesting, but we have no specific records of this species in the Park in early summer.]

Blue-winged Teal.—Uncommon nesting species. Maximum of 3 females observed in 1957 - 1958 (R. Chambers). A brood noted on Lake Itasca in 1954 (Orr, Classon, Zaczkowski), another on lake in northwest corner in 1956 (Emlen).

Wood Duck.—Fairly common in former years (C. O. Rosendahl), over 30 summering Wood Ducks used to be flushed along the west shoreline of Lake Itasca in a half-hour's time (Swanson, 1943). This species was a local but regular breeder in the Park during the 1950's (Marshall, Hofslund). Two broods of small young noted on July 14, 1919 (Roberts); broods of 3 and 8 on Lake Itasca in 1954 (Classon and Zaczkowski).

Ring-necked Duck.—Not mentioned in early lists from the Park, this has become the second commonest duck in the Park during the last 20 years. Broods have been seen on Lake Itasca, north

of De Soto Cabin, and in the northwest corner. Peak numbers: 13 males and 17 females in 1957 (Krause and Chambers).

[**Ruddy Duck**.—Rare summer straggler which nests beyond the Big Stone Moraine west of the Park. A pair June 24, 1939, off Bear Paw Point (C. E. Mickel).]

Hooded Merganser.—Nests locally but regularly (Marshall). Broods of 5, 8, 9, and 11 reported, the latter on June 20, 1955, on Lake Josephine (Kendeigh).

Turkey Vulture.—Numerous in 1912 and 1914; 14 regularly roosted at the south end of Lake Itasca around 1925 to 1935 (C. O. Rosendahl); roosting group of 13 noted in August, 1938 (Swanson, 1943). Nests in former years were discovered in hollow logs in the Park (W. P. Wentling), and 2 young were found in a nest in an old horse shed around 1930 (Russell Rosendahl). This is no longer a conspicuous resident, but occasional individuals can be seen almost anywhere in the Park. Seven seen over Elk Lake on June 27, 1955 (Grewe) and 9 counted at the Whipple Lake heronry on July 11, 1956 (Emlen).

Goshawk.—Size alone perhaps makes the Goshawk the most conspicuous of the Park's three Accipiters. A bird, almost certainly this species, was seen on De Soto Trail (1 mile south of Elk Lake Road) on July 2, 1956 (Emlen). In 1958, a nest with 2 young was located 95 feet up in a red pine 1 mile west of Nicollet Creek. We have no other records although we suspect that this species may be present each year.

[**Sharp-shinned Hawk**.—Noted in summer (Roberts, Mickel) and probably nests here; but no birds have been reported to us in recent years. Seen July 19, 1937 in La Salle Valley (C. E. Mickel).]

Cooper's Hawk.—Regarded as rare in summer by Swanson (1943), this species was seen in 1956 regularly at the east end of La Salle Trail and once near the Trading Post, north of Park headquarters (Emlen). The quick movements of all Accipiters and the heavy forest cover now in the Park probably obscure the true nesting-season status of these birds.

Red-tailed Hawk.—Nests regularly but can be seen only occasionally and then almost anywhere in the Park. A nest along Bohall Trail was 75 feet up in a pine (R. Grant). Three young on the wing by July 14, 1956, near Schoolcraft Island (Anderson, Orr).

Broad-winged Hawk.—This is the most commonly seen hawk in the Park. At least 6 resident pairs in 1956 (Emlen). Nests have been found with 2 downy young on July 17, 1917, (Roberts) and noted in maple-basswood (Goodman).

Bald Eagle.—A single pair (and its successors) has been in almost continuous residence in the Park during the past half century. According to C. O. Rosendahl (verbal, 1954), a white pine on the west side of the west arm of Lake Itasca was abandoned as a nest site in 1914 for a red pine on the east arm, the birds returning to a white pine on the west side in the 1920's. Another account given to W. H. Marshall by Professor Chaney has this move dated much later. The present nest (in a white pine) is above the general canopy of the forest and can be seen (against the skyline) with the aid of good binoculars: stand a few yards east of the Chambers Creek bridge on the Lind Saddle Trail and look 15° west of magnetic north. The adult birds are seldom seen elsewhere in the Park. Their young leave the nest about mid-July. Recent history of this eyrie follows:

1954	2 young
1955	No young, pair present
1956	Pair absent
1957 - 1958	No data
1959	At least 1 young
1960	2 young hatched, 1 fledged
1961	2 young
1962	2 young
1963	Pair absent
1964	One young

This pair (and its successors) may continue to use the Park for many years if visitors scrupulously refrain from approaching the nest. In 1962 the pair returned in March while Lake Itasca was still solidly frozen (Underhill, Schmidt). [**Marsh Hawk**.—Itasca Park no longer has the habitat for this species. A pair

nested in 1956 along the Mississippi River $\frac{1}{4}$ mile north of Highway 92 (Emlen), and one bird was seen entering the Park from the north on June 30, 1954 (Hickey).]

Osprey.—Two or more pairs nest regularly. Nests have been found on the west side of Elk Lake (Rosendahl), about 200 yards southeast of Nicollet Cabin (Swanson, 1943), on De Soto Trail (see Conserv. Dept. map of Park), on French Creek Marsh (Emlen), on Lake Bohall (used in 1954—Darrow; and apparently in 1956—Emlen), and on Twin Lakes in 1962 (Langford) and 1963 (D. W. Warner). The Lake Bohall pair fished on Lake Itasca from sunrise to about 10:30 A.M. and from about 4 P.M. to shortly before sunset. Small young in nest on July 16, 1919 (Roberts) and young just a-wing on August 24, 1921 (Roberts). The nest on Twin Lakes could readily be seen from the new dirt road which was constructed in the Park in the 1950's (these lakes are about 1 mile south of the turn-off to the observation tower and the Lind Saddle Trail).

Spruce Grouse.—Some birds introduced into the Park in 1935 were still present in 1936 but not seen after that (Swanson, 1943). One reported June 10, 1956, on the road going into Squaw Lake Group Camp (Rbger Bray). A female with young was seen on the Lake Alice Bog outside of the Park in 1959 (Langford), and northwest of Lake George in 1960 (R. W. Dickerman).]

Ruffed Grouse.—This species has fluctuated in the past from very scarce to very abundant (Rosendahl). It was local but regular in the early 1950's (Marshall) and somewhat more common by 1962 (Hickey). Young, little larger than quail, have been seen on July 16, 1920 (Roberts). During seven weeks of the summer of 1963 the one bird seen was an adult male, found dead on the road near Lake Hattie, outside the Park (D. W. Warner).

Virginia Rail.—Apparently a very uncommon and local nesting species. Regarded as nesting regularly (P. B. Hofs-

lund). A pair in French Creek Bog, June 1959 (Joyce LeFebvre).

Sora.—Found in sedge bogs—at three places along Highway 113 in 1954 (Hickey), along the trail into Squaw Lake Camp (Grewe), and a pair repeatedly seen in 1959 in the small sedge mat on Schoolcraft Island (Frenzel) and in French Creek Bog (Joyce LeFebvre). Probably nests in all the larger sedge bogs.

American Coot.—Reported on De Soto Lake in past years (Rosendahl). One caught on Lake Itasca in June 1955 (Ken-deigh). None known to nest in the Park.]

Killdeer.—May nest locally but there is little suitable habitat for this species inside the Park. One occasionally seen on Lake Itasca shoreline near Park headquarters in 1956 (Emlen). Pair reported June 27, 1962, on Two Spot Trail (J. L. Norman).]

Spotted Sandpiper.—Locally nesting. An apparently breeding pair repeatedly seen on the north arm of Lake Itasca in 1956 (Emlen), seen only occasionally on the Lake in other years. One at Elk Lake June 27, 1962 (J. L. Norman).

Common Tern.—Although not nesting (as far as we know) nearer than Leech Lake, this species is occasionally seen in June and July on Lake Itasca. Noted May 18, 1945 (P. B. Hofslund). White terns were regularly recorded on the lake in 1954 after July 7 (Anderson, Orr), only once in 1956 (Emlen), and were sporadic in 1962 (up to 6 in mid-June, Hickey); many but not all of these birds were identified as Common Terns on the basis of their voice.]

Black Tern.—Regularly seen on the larger lakes, this species nests quite locally. In 1954, there were 5 pairs on the pond just north of the east entrance of the Park; 3 of these began laying on July 1, a fourth on July 9 (C. J. Shontz). In 1956, there were several pairs around French Creek Marsh (Emlen).

Mourning Dove.—Our early-summer records of this species are confined to the east and south boundaries of the Park. The picnic grounds in the north part of the Park may furnish Mourning Doves

with marginal feeding habitat, but the species has been essentially squeezed out of our area by fire protection and forest succession.]

Yellow-billed Cuckoo.—Nests uncommonly. Recorded on La Salle Trail (Hickey), Demming Lake (Grewe), and Twin Lakes (Emlen). More frequently on the boundary roads (6 counted on 8 miles in 1954).

Black-billed Cuckoo.—Found uncommonly (Squaw Lake, Bear Paw Point, Hubbard Ravine, Twin Lakes, etc.) and on the boundary roads (4 counted in 8 miles). A pair nested 5 feet from the road to the Overflow Campground Area in June 1961 (Gloria Peleaux).

Great Horned Owl.—Apparently uncommon in the Park, this species is generally silent in the early-summer period and may go unnoticed at this time. Heard twice in 1954 (Hickey); seen July 6, 1956, at the Biological Station (Emlen). Heard most often in the fall (Rosendahl). The status of owls in the Park and elsewhere is still poorly understood; electronic equipment carrying the taped voices of each species remains a potential census technique that should be explored.

Barred Owl.—Recorded more often in early summer than the other owls (north-east corner and south boundary road in 1954—Hickey; Bear Paw Point and near Douglas Lodge in 1956—Emlen; La Salle Trail in 1959—Hickey).

Long-eared Owl.—One heard at the campgrounds July 1955 (Goodman), this species probably nests regularly but is overlooked.

Saw-whet Owl.—Heard at campgrounds May 31, 1955 (vide Kendeigh) and on La Salle Trail in June 1955 (Grewe). Captured in a mist net on Bear Paw Point Trail (Kuyava) in 1960. Heard July 24, 1962, at 5:10 A.M. about 75 yd. southeast of the entrance to the Biological Station (Hickey and ornithology class).

Whip-poor-will.—Quite rare. A singing male at Squaw Lake on June 24, 1954 (Coles) and on several occasions in 1956 (Emlen). Birds have been heard just outside the Park's boundaries: in 1962 just back of the Catholic Church to the

north (Bernadine) and near "Olaf's" just to the east (various students).

[**Common Nighthawk.**—Apparently breeding just to the north of the Park, this species occasionally penetrates the Park on foraging expeditions. Noted in 1954 at the Biological Station on June 16, 21, 29 and July 10 (P. B. Hofslund), on La Salle Trail June 22 and the east boundary June 29 (Hickey); regularly in the northeast corner and occasionally in July at the north end of Lake Itasca in 1956 (Emlen).]

Chimney Swift.—Nesting now confined to the few buildings in the Park. Seen regularly in 1954 in the Douglas Lodge area and near Park headquarters (Hickey) and in 1956 around the Biological Station (Emlen). A pair found nesting in a coal shed at Park headquarters (Emlen).

Ruby-throated Hummingbird.—Apparently fairly common, this species is most often seen at artificial feeders (Park headquarters building, faculty cabins at the Biological Station). It appears to frequent the special feeding trees of sapsuckers. Nests noted July 16, 1919 (Roberts), July 16, 1954 (Darrow). Diving display observed July 18 (Emlen).

Belted Kingfisher.—Found on all the larger lakes in early summer. Natural nesting sites are inconspicuous eroding banks of the larger lakes (such as the southwest side of the north arm of Lake Itasca in 1954, vide N. Zaczkowski). New borrow pits offer preferred nesting sites, but the angle of their banks inevitably deteriorates. Of 13 birds color-marked in 1958, one ranged at least 5 miles from its nesting site (Cornwall).

Yellow-shafted Flicker.—Local but regularly nesting (Park museum area, Park headquarters area, Preacher's Grove, Brower Ridge, etc.).

Pileated Woodpecker.—This species had undoubtedly increased in numbers as a result of fire protection and forest succession. More often heard than seen, its present density may be on the order of a pair per 2 square miles. Noted to cross about 1500 feet of lake in mid-June (Hickey). In 1961 and 1962, a pair had a

territory extending from the east shore of Lake Itasca through Floating Bog Bay and the spruce-fir blowdown area and thence to the dump area and the power-line cut to Park headquarters (Gloria Peleaux). Young observed to leave a nest on June 26, 1920 (Roberts). Can apparently be found anywhere in the Park.

Red-headed Woodpecker.—Rare. Generally restricted to the opened-up parts of the Park. Three birds seen the first week of June 1954 at the Biological Station (A. R. Barr) did not remain to nest. Pair (probably nesting) in old CCC area at north end 1954 (Lewis), one (probably a vagrant) at Bear Paw Point June 23, 1959 (Suthers).

Yellow-bellied Sapsucker.—By far the commonest woodpecker of the Park, this species is quite conspicuous and widely distributed in the aspen forests. Young noted still in nests late in July (Hickey).

Hairy Woodpecker.—Regularly observed throughout the deciduous forests. In 1956, resident pairs recorded at eight places (Emlen).

Downy Woodpecker.—This is decidedly less common than the Hairy (Emlen, Hickey). Seen twice in 1954 (M. B. Hickey, T. Shantz, Hansen), one pair (Station campus) in 1956 (Emlen), and not noted in 1962 (Hickey). Kendeigh estimated 25 pairs per 100 acres in aspen-birch in 1955 and concluded the Hairy was less common.

Black-backed Three-toed Woodpecker.—One or two pairs found nesting every year (Brower Ridge, La Salle Trail, etc.). In recent years (1959-62), a pair has used a living red pine on the new southeast entrance dirt road. This nest was just north of Twin Lakes, about 0.95 mile south of the turnoff to the observation tower and Lind Saddle Trail. The nest faced south on the east side of the road and generally contained young until about June 20. After this date, Black-backed Three-toed Woodpeckers are quite inconspicuous in the Park. They should be looked for in the big pineries and spruce groves.

[**Northern Three-toed Woodpecker.**—Not known to nest. A female of this species

rather regularly assisted a pair of Black-backed Three-toed Woodpeckers in feeding their young in June 1954 in a nest on the Lind Saddle Trail (J. J. and M. B. Hickey).]

Eastern Kingbird.—Although quite conspicuous along the highways of this general region, Eastern Kingbirds are locally restricted in the Park to a few open places. A pair on Schoolcraft Island in 1954 started to feed their young on July 7 (Anderson, Orr). Resident pairs seen in 1956 at the Biological Station and near the Park swimming beach (Emlen).

[**Western Kingbird.**—No nesting records in or near the Park; one seen on Schoolcraft Island on July 9, 1954 (P. B. Hofs-lund). Our nearest observed nesting pair that year was at 5th and South Main Street in Park Rapids, about 27 miles to the south (Hickeys).]

Great Crested Flycatcher.—Widely and commonly distributed throughout the deciduous forests of the Park; 11 calling on 8 miles of boundary roads in 1954 (Hickey), 30 recorded on 60 miles of trails in 1956 (Emlen); 6 - 12 pairs per 100 acres of aspen-birch in 1955 (Kendeigh).

Eastern Phoebe.—Commonly found around buildings. Scarce elsewhere; 42 nests, some of them second nesting attempts in 1956 (Arnold Peterson).

Yellow-bellied Flycatcher.—Rare and apparently restricted here to spruce-tamarack bogs: adult evidently with young on nest on July 9, 1917 (Roberts); a pair in 1955 and 1956 in La Salle Creek Bog (access by boundary road) at northeast corner of Park (Goodman, Galati). A road-killed adult found July 5, 1956, on the east boundary road in northeast corner of the Park (Galati).

Trail's Flycatcher.—Restricted to tamarack-spruce bogs and to the bog willow-alder stage in bog successions. Five males on 8 miles of boundary roads in 1954 (Hickey); resident pairs at Floating Bog Bay, La Salle Creek Bog, La Salle Trail, and two other points in 1956 (Emlen); five nests found in 1960 (J. C. Coulter).

Least Flycatcher.—Abundant and wide-

spread; 23 noted on 8 miles of boundary roads in 1954 (Hickey), 12 - 80 per 100 acres of aspen-birch in 1955 (Kendeigh); 76 on 60 miles of trails in 1956 (Emlen). John D. Goodman noted the following habitat preferences in 1955: 1st, pure jack pine; 2nd, mixed hardwoods and conifers; 3rd, maple-basswood; 4th, aspen-birch; 5th, spruce-fir; and practically absent in spruce-tamarack bogs. Nests found by Goodman were at these approximate heights: 12, 25, 30, 35, 40, and 50 feet.

Eastern Wood Pewee.—Abundant and widely distributed in the mixed forests of the Park. A count on 60 miles of trails yielded 38 in 1956, in contrast to 76 for the Least Flycatcher. The numbers of territories per mile calculated by Emlen in that year (Least Flycatcher in parentheses) were Brower Ridge 13.3 (17.8), Twin Lakes Bog 20.0 (20.0), and La Salle Trail 4 (18). Observed feeding young July 3, 1919, and September 1, 1917 (Roberts).

Olive-sided Flycatcher.—Restricted to tamarack-spruce bogs and found much more regularly (i.e., 3 - 4 pairs per year) than the Yellow-bellied. Reported just west of Nicollet Creek (Swanson, 1943; Cole, in 1954); La Salle Creek Bog near north boundary road (Swanson, Emlen), west of north tip of Lake Itasca, northwest of Bohall Lake, Bog D, etc. We have not succeeded in recording this species consistently from year to year in the same bogs, and it must be rated as rather uncommon.

Tree Swallow.—Quite local and currently restricted to nesting sites in trees and tree stumps. Elk Lake in 1954 (Classon and Zaczkowski); apparently a resident pair on Chambers Creek in 1956 (Emlen).

Bank Swallow.—Occasionally seen on north arm of Lake Itasca, where colonies north of the Park appear to forage; a nesting colony in 1954 was in the gravel pit at the east end of LaSalle Trail (Hickey); in 1963 a large colony nested at the north end of the Buffalo Pen (Gloria Peleaux).

Rough-winged Swallow.—Usually restricted to single pairs nesting in low

eroding banks; near Biological Station boat house in 1954 (Hickey) and 1956 (Emlen); near Park swimming beach in 1956; Schoolcraft Island; gravel pits on north boundary road ½ mile from headwaters and near La Salle Creek in 1959 (Morin); about 3 pairs in the masonry of Chambers Creek Bridge in 1962 (Hickey); and a few pairs nesting in 1963 in the Bank Swallow colony at the north end of the Buffalo Pen (Gloria Peleaux).

Barn Swallow.—Occasionally seen in the open spaces and over the larger lakes of the Park. Two or more nests in the Park headquarters buildings (Emlen).

Cliff Swallow.—Noted nesting at the Buffalo Pen in 1955 (Kendeigh); 6 active nests "in and near" the Park in 1959 (D. L. Morin).

Purple Martin.—Has nested regularly at Douglas Lodge where young leaving the nest in mid-July were reported (Roberts) in 1902. Small tree-nesting colonies are occasionally found on the shores of lakes, each consisting of a few pairs: Squaw Lake and north end of Elk Lake in 1956 (Emlen), a stump on Chambers Creek in 1962 (Underhill).

Gray Jay.—Rather scarce or local, this species has been seen in practically all parts of the Park (Rosendahl), family parties being noted as late as August 2, 1902 (Roberts). In the early 1940's, almost invariably seen in the vicinity of Nicollet Cabin (Swanson, 1943), in 1954 regularly at Douglas Lodge (Hickey), in 1956 small groups at the Biological Station and Park headquarters (Emlen), in 1959 - 62 at the picnic grounds (Hickey, Warner).

Blue Jay.—Quite generally distributed. Noted at 18 locations in 1956 in numbers up to 1.2 per mile of trail (Emlen).

Common Crow.—Sparsely but widely distributed in the Park; 6 seen on 8 miles of boundary roads in 1954 (Hickey). [The nearest nesting Common Ravens that we have seen are west of Lower Red Lake.]

Black-capped Chickadee.—This fairly common species is widely distributed in virtually all the forest types of the Park.

Boreal Chickadee.—This species in re-

cent years has been restricted to the spruce-tamarack La Salle Creek Bog in the northeast corner of the Park, a pair being repeatedly seen in 1955 and 1956 (Kendeigh, Emlen) and a nest found 12 feet up in a dead tree (Galati). In previous years, reported also near southwest tip of Lake Itasca and 1 mile north of Park at Iron Springs Bog (Swanson, 1943). Rare.

White-breasted Nuthatch.—Rather local; resident pairs noted at Preacher's Grove, headquarters picnic area, Bear Paw Point, and Twin Lakes Bog Trail in 1956 (Emlen).

Red-breasted Nuthatch.—Quite generally distributed (Emlen, Hickey) and far more common than the White-breasted; 34/100 acres of red and white pine (Kendeigh). Pair with 4 - 5 fledged young on June 21, 1954 (G. Robinson).

Brown Creeper.—Uncommon and found in virtually all forest types. Noted in jack pine (La Salle Trail), mature maple-basswood (Highway 113), aspen-birch north of Elk Lake, mixed forest, and on Roberts Trail (near Douglas Lodge) in 1954 (Hickey); in red and white pineries in 1955 (Kendeigh) and at Whipple Lake and Twin Lakes Bog Trail in 1956 (Emlen). Dispersal after the nesting period evident by July 5 (Hickey).

House Wren.—Locally but widely distributed not only around Park buildings but also in wind-falls. Up to 3 per mile of trail (Emlen) and 1 per mile of boundary roads (Hickey). One nest found in an abandoned automobile at the Trading Post (Galati). Young have fledged as late as August 16, 1920 (Roberts).

Winter Wren.—Rare. Found by Swanson (1943) only in the wild tangles of the sphagnum bog across Nicollet Creek from the cabin. In 1954 a singing male in wind-thrown spruce-fir where Nicollet Creek crosses Lind Saddle Trail (Hickey, Hofslund); in 1955 one between La Salle Creek Trail and entrance to Biological Station (Kendeigh). No subsequent records.

Long-billed Marsh Wren.—Rare. Said to have occurred in a spruce-tamarack swamp north of La Salle Trail (Ahlquist

and Knapp) and once in a cattail marsh near Squaw Lake (M. Boyer). Nest found on Lake Itasca near headwaters in 1962 (Tester, Susan Hickey).

Short-billed Marsh Wren.—Quite local: 2 pair in 1954 on a sedge meadow at north end of Park (Hickey) and others in 1955 along the south boundary (Kendeigh); in 1956 at French Creek Bog (Emlen). Observed along north boundary road in 1955 (Nelson).

Catbird.—Locally restricted to the bushy stage of plant succession in clearings, bog willows around bogs, and around buildings; noted on 1.6 miles of boundary roads in 1954 (Hickey) and 1 per 7 miles of trails within the Park in 1956 (Emlen).

[**Brown Thrasher.**—Only two early-summer records: large young seen June 21, 1921 (Roberts); a bird in the old CCC clearing at north end of Park turned up on July 10 or 11, 1954, and remained for some days (Lewis).]

Robin.—In 1956, 10 pairs near buildings and 5 in woods; about 1 per 7 miles of trails within the Park (Emlen).

[**Wood Thrush.**—Rare; observed by R. W. Dawson (Swanson, 1943). Singing male June 21, 1954 in clearing on Brower Ridge about 1 mile from Lind Saddle Trail (R. E. Cole).]

Hermit Thrush.—Scattered pairs noted mainly on Brower Ridge and Lind Saddle Trail; about 1 per 7 miles of trails (Emlen).

Swainson's Thrush.—Uncommon; this species has been noted in or near tamarack bogs and along Roberts Trail (Hickey), along La Salle Trail (1 in 1955—Kendeigh), and at Bear Paw Point and the ridge north of French Creek Bog (Emlen).

Veery.—Abundant and widely distributed; about 3 per mile of boundary road (Hickey); 34 - 80 per 100 acres of aspen-birch (Kendeigh), and almost 1 per mile of general trail (Emlen). Full-grown young in flight on July 10, 1919 (Roberts).

Eastern Bluebird.—A single pair at the Park bathing beach in 1954 (J. R. Young, W. F. Classon). Observed twice at the Biological Station and one near the Trad-

ing Post on the north boundary in 1956 (Emlen).

Golden-crowned Kinglet.—Locally restricted to spruce. The La Salle Bog on the north boundary has been the most consistent place for this species (2 pairs located there in June 1956), 4 other pairs in the northeast corner (Galati). Nests found at the Biological Station in 1954, 1955, 1960 (Galati).

[**Ruby-crowned Kinglet.**—Migrants (4) noted as late as May at the Biological Station (Galati). A singing male at Bog D on July 10 - 11, 1962 (Hickey) had a much larger home range than Golden-crowns normally have here; it was not heard on July 18 and must be regarded as a straggler at this season.]

Cedar Waxwing.—Thinly scattered in the Park; 1 per 4 miles of boundary road in 1954 (Hickey), 1 per 5 miles of general trails inside the Park in 1956 (Emlen).

[**Starling.**—Not known to nest in the Park. A flock seen the first week of June in 1954 at the Biological Station (A. R. Barr), others early in summer are obviously young birds that are dispersing.]

Yellow-throated Vireo.—Uncommon; about 1 per 6 miles of general trails (Emlen); 3 along La Salle Trail in 1955 (Kendeigh); 2 singing males along the power-line cut east of the Biological Station in 1961 (Gloria Peleaux).

Solitary Vireo.—This species is somewhat more numerous and more widely distributed in the Park than the last. Five pairs were located in red pine and white spruce in 1955 by Evelyn Barbig; up to 14 per 100 acres of pine (Kendeigh); none noted on Park boundaries in 1954 (Hickey). About 1 per 9 miles of general trails in 1956 (Emlen).

Red-eyed Vireo.—Abundant and widely distributed, being recorded even in spruce-tamarack. About 8 per mile of general trails in 1956 and 20 per mile on special trails (Emlen); most abundant in aspen-birch—60 per 100 acres (Kendeigh).

Warbling Vireo.—This is the least common of the four vireos in the Park, about 2 - 6 males being heard every June most-

ly along the boundary roads. A pair opposite Park headquarters in 1954 (Hickey).

Black and White Warbler.—Two or three pairs reported every year in the Park by Biological Station personnel. Noted on Roberts and La Salle Trails in 1954 (Hickey); south boundary and campus in 1955 (Kendeigh, Cox); the station campus, Hubbard Ravine, and east boundary in 1956 (Emlen).

Golden-winged Warbler.—A fairly common species in the early forest succession of the Park, this warbler is now restricted to the vicinity of clearings and to brushy right-of-ways. Recorded at 4 points on the south boundary, one on the east boundary and one along Nicolet Creek in 1954 and at 18 places in the northeast quarter of the Park in 1956. General trail count: about 1 per 4 miles.

Tennessee Warbler.—Rare breeding species: nesting pair at northeast corner of Park in 1957 (Galati, Cox). Migrant males seen on campus in 1961 (Emlen) and on June 12, 1962 (Hickey). A bird observed July 15, 1955, on La Salle Trail presumably was a vagrant (George Cox). [A vigorously singing male heard on July 9, 1961, about 9.2 miles north of Lake Itasca P.O. in a bog just south of the road to Upper Rice Lake (Hickey).]

Nashville Warbler.—Common in alder and tamarack bogs, much less so in the uplands. About 1 bird per 3 miles of general trails in 1956 (Emlen). Hatching dates to July 17 (Roberts).

Parula Warbler.—Regularly found in tamarack and spruce bogs. About 1 per 3 miles on general trails (Emlen); 21 per 40 acres of spruce-fir (Kendeigh).

Yellow Warbler.—Fairly common along the edges of ponds and lakes. In 1954, 13 on east and south boundary roads (Hickey); in 1956, about 1 per 7 miles on trails in the Park (Emlen).

Magnolia Warbler.—Rare. Male feeding young in nest on July 10, 1919 (Roberts); singing male June 23, 1954, in open stand of red and white pine with understory of balsam and some aspen (Hickey).

Cape May Warbler.—Rare nesting species; a male noted singing at the Biolog-

ical Station daily from June 11 to 15 was not heard there again (Hickey) but was found feeding one young on July 4, 1962 (Vincent Heig et al.). The known foraging area of this bird was confined to the upper parts of white spruce and had a diameter of about 109 yards in mid-June. Another male also heard singing July 3, 1962, in La Salle Creek Bog (Hickey et al.). It may or may not be significant that in the year 1962 more migrant birds were noted on the station campus during June 11-15 than in other years.

[Black-throated Blue Warbler.— No known breeding records. Vagrant male seen during the nesting period on the Biological Station campus in 1954 (G. Robinson) and on trail above Bog D in 1956 (Lois E. Webster et al.).]

Myrtle Warbler.—Uncommon but well distributed. Noted in jack pine 50 - 75 years old, in spruce bog, and in balsam-spruce; general trail count—1 per 9 miles in 1956 (Emlen). Adult seen feeding a young Brown-headed Cowbird on July 16, 1954 (Hofslund).

Black-throated Green Warbler.—Uncommon; most frequently recorded in the upland stands of balsam-spruce; general trail count 1 per 4 miles (Emlen); there are relatively few in the white pines of the Park as compared to those in the eastern United States. Hatching date on July 4 and fledging on July 13, 1927 (Mrs. and Miss Wentling, vide Roberts).

Blackburnian Warbler.—Common, especially in spruce-fir and to a lesser extent in pines; general trail count 1 per 2 miles (Emlen); 35 - 91 per 100 acres (Kendeigh). Nests noted at heights of 56 feet in black spruce and 64 feet in white spruce (Galati); young out of nest being fed July 9, 1917 (Roberts).

Chestnut-sided Warbler.—Locally common, being principally restricted to wind falls, forest clearings, and power-line right-of-ways; general trail count 1 per 2 miles (Emlen). Fresh eggs June 26, 1917 (Roberts).

[Blackpoll Warbler.—No nesting records; a singing male on June 14, 1962, on the

Biological Station campus was probably a migrant (Hickey).]

[Bay-breasted Warbler.—Pair evidently with nest or young July 4, 1917 (Roberts); no recent records.]

Pine Warbler.—Common breeding species being found mostly in jack and red pines; general trail count 1 per 2 miles (Emlen); 26 - 34 per 100 acres of pines (Kendeigh). Young ready to leave nest June 27, 1902 (Roberts).

[Palm Warbler.—No positive breeding records. A singing male in a thick spruce swamp on June 18, 1902, was not found on subsequent visits (Roberts) and must be regarded as a nonbreeding vagrant.]

Ovenbird.—Abundant throughout the forests of the Park except in bogs and open areas; general trail count about 4 per mile (Emlen); 10 - 33 per 100 acres of aspen-birch and mixed forests (Kendeigh). Hatching date June 27, 1917 (Roberts).

[Northern Waterthrush.—No positive breeding records; a singing male reported July 7, 1919, at a beaver pond in "a white cedar swamp" on the west shore of the west arm of Lake Itasca (Kilgore and Roberts). We know of no such swamp in the Park and have not recorded this species in the breeding season.]

[Connecticut Warbler.—Very rare and not known to nest in the Park in recent years. Pair seen carrying food in a bog July 5, 1919 (Roberts and Kilgore). A singing male on the Biological Station campus July 1, 1937 (C. E. Mickel) may have nested elsewhere; another on the campus June 13, 1962 (Hickey) was almost certainly a late transient; one observed in the gravel pit-dump area east of the Biological Station in July 1962 (Gloria Peleaux). Has been found in the breeding season north of the Park on Highway 71 (Emlen).]

Mourning Warbler.—Common in dense herbaceous cover in open forests; general trail count 1 per 1.5 miles (Emlen); most abundant in aspen-birch—42 per 100 acres (Kendeigh); young out of nest July 5 (Hickey).

Yellowthroat.—Common, especially around the brushy margins of bogs, and

noted in wet fields reverting to brush, in cutover areas, and in spruce-tamarack; general trail count about 1 per mile (Emlen); 40 per 100 acres of bogs and bushy openings (Kendeigh).

Canada Warbler.—Rare; adult seen feeding young on La Salle Trail June 22, 1955 (Kendeigh). Roberts found only one male (July 2, 1917) in several summers' work in the Park; singing males noted on on June 20, 1955 on trail near Highway 113 (Kendeigh), on June 25, 1956 at edge of Hubbard Ravine (Emlen), and on Lind Saddle Trail near Elk Trail June 26, 1962 (J. L. Norman).

American Redstart.—Common in hardwood forests, especially in young stands; general trail count 1 per 2 miles (Emlen).

Western Meadowlark.—Noted singing June 21, 1941, in a tree nursery that has long since closed over, near the Biological Station (C. E. Mickel).]

Yellow-headed Blackbird.—In the many marshes outside of the Park, we have not recorded this species as nesting east of the Big Stone Moraine; one seen flying over Lake Itasca June 24, 1939 (C. E. Mickel); two males were observed on 5 days between June 10 and 17, 1959, inclusive, at French Creek Bog in the Park by Joyce LeFebvre during the course of an intensive census of that area extending into July.]

Red-winged Blackbird. — Common in marshes and bogs and along lake shores.

Baltimore Oriole.—Common around clearings; general trail count 1 per 5 miles (Emlen).

Common Grackle.—Not known to nest here; one at the Biological Station on June 28 and another near the east entrance of the Park on June 30, 1954 (Hickey); seen flying over in 1955 (Kendeigh).]

Brown-headed Cowbird.—Commonly seen around the Buffalo Pen, but scattered in all habitats in the Park; general trail count about 1 per 2 miles (Emlen).

Scarlet Tanager.—Common in the older aspen stands and a few in pines; about 1 per 2 miles on general trails (Emlen); 11 - 16 per 100 acres (Kendeigh).

Rose-breasted Grosbeak. — Common;

about 1 per 3 miles on general trail counts (Emlen); most abundant in mixed aspen-birch and pine (25 per 100 acres) (Kendeigh).

Indigo Bunting.—Restricted in our experience to about 6 pairs, all on the east and north boundary roads.

Evening Grosbeak.—Not yet recorded as nesting here, a rather fat road-killed male was picked up on Highway 71 on July 26, 1962, 3 miles south of the Park, the testes of the bird averaging 5 mm. in diameter (Margaret B. Hickey, who with Gloria Peleaux unsuccessfully searched the surrounding area for another bird on July 27).]

Purple Finch.—Rather local; about 1 per 7 miles of general trails (Emlen); 15 - 23 per 100 acres of conifers (Kendeigh). Abundant near the Buffalo Pen in 1961 (Gloria Peleaux); apparently fairly common in much of the Park in 1962 (Hickey).

Pine Siskin.—Apparently erratic in numbers; one pair at the Biological Station consistently seen in 1954, none elsewhere (Hickey); none recorded in 1955 or 1956 (Kendeigh, Emlen); abundant in 1962 throughout June and July (Hickey).

American Goldfinch.—Irregularly common in the opened-up areas of the Park; about 1 per 7 miles of general trails (Emlen); more frequently seen on the Park boundary roads.

White-winged Crossbill.—Occurs erratically and is not known to nest in the Park; male with 3 fully grown young spent an entire afternoon at the Biological Station July 8, 1954 (P. B. Hofslund, Guy Marshall, et al.); seen once in early June 1955 (Kendeigh); a flock of about 35 on July 16, 1962 at the Station campus (Vincent Heig et al.) was very noisy in flight but utterly silent when feeding in the upper 6 feet of tall cone-bearing white spruce trees and was reduced to a few birds there by July 19 (Penelope Storms).]

Red Crossbill.—Rare; seen repeatedly at the Biological Station in 1955 when an adult was observed feeding young on June 4 (Kendeigh); no other early-summer records; small flocks seen 3 or 4

times in August (Swanson, 1943); a singing male June 21, 1941 on the Station campus (C. E. Mickel).

Rufous-sided Towhee.—Uncommon; restricted to the brushy stage of forest succession; 4 - 5 pairs noted each year, especially on boundary roads. Young observed out of nest July 8, 1919 (Roberts).

Le Conte's Sparrow.—Unreported except for about 8 pairs found in the sedge mat of French Creek Bog in June and July 1959 (Joyce LeFebvre, who showed some of the birds to Hickey).

[**Vesper Sparrow.**—With forest-fire protection, this species (common outside of the Park) is no longer found within the Park boundaries; nest with young recorded June 18, 1902 (Roberts).]

Slate-colored Junco.—Uncommon; prefers less disturbed areas and has been recorded along Bohall Trail and along Nicollet Creek (Swanson, 1943); two singing males noted near Whipple Lake in 1956 (Emlen) and nest found near the Park graveyard June 18, 1958 (J. Carlson, C. Jerde); singing male in gravel pit-dump area east of Biological Station in July 1961 and 1962 (Gloria Peleaux). Adults feeding fledged young June 28, 1920, to July 29, 1920, just out of nest (Roberts.)

Chipping Sparrow.—Common and generally distributed wherever conifers are present; general trail count 1 per 4 miles (Emlen); 29 - 89 per 100 acres of pine (Kendeigh); hatching dates of about June 14 to July 25 (Roberts). Abundant around lawns.

Clay-colored Sparrow.—This species was presumably much more common in the Park during the period of extensive fires and lumbering. Two pairs noted on cut-over areas recently incorporated inside the north boundary of the Park; a singing male in 1962 in a young pine plantation north of Park headquarters. Like the Vesper Sparrow, which has already done so, this species can be expected to disappear from the Park as forest succession takes over. It is moderately common just outside of our area.

White-throated Sparrow.—Very common in spruce-tamarack bogs, this species ap-

pears to have been nearly wiped out in the Park by an 11-inch snowfall early in May 1954. Up to 6 or 8 heard singing simultaneously in 1962 where none were present in 1954 (Hickey). The 1954 storm resulted in the death of some 5 - 6 Purple Martins at Douglas Lodge but did not have noticeable effects on species of Fringillidae other than the White-throated Sparrow. Nests with 4 eggs June 3, 1920, and June 30, 1917 (Roberts).

Swamp Sparrow.—Commonly found in the sedge-mat stage of bog succession, resident pairs are widely dispersed in this area.

Song Sparrow.—Common along lake shores, scarce elsewhere in the Park; 17 noted on the south boundary road in 1954.

Summary

In this northwestern Minnesota area of forests, lakes and bogs, 111 species of birds are regarded as breeding in recent years. Well-represented groups include the woodpeckers (7 species), flycatchers (8), swallows (6), and wood-warblers (18). The two most abundant species are the Red-eyed Vireo and the Ovenbird. Faunal changes in the present century have probably been quite marked as a result of fire protection and forest succession. Wood Ducks appear to have been importantly replaced by Ring-necked Ducks. Recent additions to the breeding list include Le Conte's Sparrow and Cape May Warbler. Migratory vagrants, nonbreeding birds, and unsubstantiated breeding birds involve 30 additional species, one of these being an Evening Grosbeak recorded 3 miles south of the Park in July 1962.

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THE CANADIAN LAKEHEAD

A. E. Allin

The temperature for the late summer and early autumn of 1964 was below normal. Due to mild weather, during the first half of the month, November had a mean temperature above normal. December was the third coldest in 40 years with a mean 6.4° below normal; the temperature dropped below zero on 19 days. January was 5.0° below normal and a minimum temperature of -36° was experienced on January 14. February was also a very cold month with sub-normal temperatures. The low precipitation of September and October continued throughout November, December and January. The total snowfall to mid-February was about normal.

As indicated previously, there was a very heavy crop of fruit on the Mountain Ash and an abundance of seeds on the Black Ash and White Birch. The conifers generally bore a good crop of cones. As a result, bird life has been abundant. For some reason Pine Grosbeaks have been scarce in the cities but very common throughout the surrounding country. Robins and Purple Finches appeared in unprecedented

numbers in mid-December. Snow Buntings, Common Redpolls, Pine Siskins and a few White-winged Crossbills were reported. The seeds on the White Birch probably attracted American Goldfinches seen on various occasions. Unusual numbers of Common Ravens are present, feeding at open garbage dumps, and more Common Crows remained than ever before. How does one explain the absence of both Cedar and Bohemian Waxwings and the scarcity of chickadees and Red-breasted Nuthatches. An absence of open water, except in a few rapids, reduced the duck population to a few Common Goldeneyes. The abundance of fruit does not explain the presence of Red-winged Blackbirds, of a Brown-headed Cowbird seen in December, nor the Oregon Junco present at a Port Arthur feeder since November 28, 1964.

The overall picture of our winter bird life was reflected in the results of the Christmas Bird Census taken on December 26. The 23 participants observed 7,404 individuals of 29 species. This total far exceeded the previous 5,505 individuals recorded in 1958. The

29 species compared favorably with the 31 seen in 1954 and again in 1962. The Oregon Junco was new for our Christmas census lists. Goshawk and Pigeon Hawk had been seen on only two and three previous censuses respectively. Purple Finches totalled 36. This species had been reported on only four previous censuses with a high of 16 in 1948. The 18 Red-winged Blackbirds were unexpected. The only previous census report was the 15 seen in 1960. New high counts were made for Blue Jays (65), Common Ravens (283), Common Crows (101), Robins (229), Northern Shrikes (4), House Sparrows (2,818), and Evening Grosbeaks (670). Ducks were conspicuous by their absence due to waters in the census area being frozen. Ruffed Grouse, Boreal Chickadees, and Red-breasted Nuthatches were not recorded.

Ducks: With the local harbor closed to shooting, ducks remain later than formerly. As late as November 15, we identified 23 Black Ducks, four Mallards, a pair of Hooded Mergansers, one Common Merganser and five Ring-necked Ducks loafing along the waterfront. Soon the harbor was frozen and these ducks were driven out. Subsequently the only ducks reported were a few Common Goldeneyes on the Kaministiquia River. Generally numbers of these birds winter on the Nipigon River but none was seen there on February 7. A Mallard caught in a beaver trap at Atikokan on May 1, had been banded on January 31, 1963 at Blackwater National Refuge, Maryland.

Hawks and Falcons: A Rough-legged Hawk given to C. E. Garton on December 7 was unable to fly. Subsequently it recovered and was released. As usual, one or more Pigeon Hawks are wintering here and are frequenting the feeders. To date they have not been seen catching an Evening Grosbeak but the latter are well aware of the little falcon's presence when it per-

ches for long periods in trees near a feeding station. The grosbeaks quit feeding, fly as a group into adjacent trees and freeze there although they are plainly silhouetted against the sky. Mrs. Peruniak saw a Goshawk at Atikokan on December 29, and a Goshawk was seen capturing a Rock Dove in Neebing Township in early February.

Grouse and Partridge: As reported in our previous article, the Ruffed Grouse is still relatively scarce although at least one bird is wintering in Chippewa Park. Gray Partridge persist in the immediate Lakehead area. One covey, seen on December 26, contained 26 birds. Mrs. Peruniak reports a few Spruce Grouse are present near Atikokan.

Owls: L. Maki saw a Boreal Owl at Pigeon River on December 13. Snowy Owls appeared in late October but were not regularly seen in the cities until after mid-November. We saw three on December 26 but they were not reported by the other participants in the census. At least two were picked up in early December too weak to resist capture. When one of these birds was brought into a warm room, so many lice collected on the feathers of its head that the latter appeared gray in contrast to an otherwise almost white plumage. On November 22, we watched two Common Crows mobbing a Snowy Owl in Fort William. A Hawk-Owl was reported at Marathon in December, one at Dorion in January, and one in Fort William in mid-February.

Woodpeckers: At least one Pileated Woodpecker is wintering in Chippewa Park. The 18 Hairy and 13 Downy Woodpeckers recorded on the census compare favorably with their numbers in recent years. Three-toed Woodpeckers have been conspicuous by their absence locally but Mrs. Peruniak reports both species at Atikokan.

Jays to Creepers: Gray Jays are present in their usual numbers locally

but are more common at Atikokan where 22 were seen on December 29. Blue Jays seem to be wintering locally in greater numbers than was once the case. Perhaps this can be correlated with the increasing number of feeding stations. From 1939 to 1948, a maximum of 12 Blue Jays was seen in 1947. Subsequently the least number seen on a census was ten in 1952 and again in 1961. No less than 62 were counted in 1953 and 65 on the 1964 census. Similarly, Common Crows usually winter here in very small numbers. A maximum of 15 was seen on the 1946 census but this year no less than 101 were reported. This was despite the fact 283 Common Ravens were also seen. Mrs. Peruniak found two dead Black-billed Magpies at Atikokan on November 9. A magpie was probably present in Fort William in early December. This undesirable species is being reported with increasing frequency in western Ontario, at least during winter months.

Black-capped Chickadees are less common locally than usual and only one Boreal Chickadee has been noted. Red-breasted Nuthatches are also very scarce. However, Mrs. Peruniak's group saw 23 Black-capped Chickadees, six Boreal Chickadees and five Red-breasted Nuthatches on December 29 at Atikokan. A White-breasted Nuthatch is occasionally seen at Mrs. Cryer's feeder in Paigoonge Township where an adult was seen feeding a young bird in 1964. A Brown Creeper was seen by the Muries in Chippewa Park on November 26.

Robins: In the December issue of *The Loon* we referred to the apparent absence of Robins in November and early December. We noted that in previous years they sometimes appeared later in the winter. This was true of 1964. About mid-December the occasional Robin was seen at local feeders. On December 11, large flocks were reported in Chippewa Park. Two days later a flock of 50 was seen feeding on

Mountain Ash berries at Pigeon River. K. Denis reported at least 1,000 along Highway 61, south of Grand Marais on the same date, a phenomenon which I later learned continued south towards Duluth. A week later we saw several hundred in Fort William; about the same time some 200 were counted in Port Arthur. No less than 229 were recorded for the Christmas Census. Many years, the Robin is missing from our census list although 37 and 25 respectively were recorded in the censuses of 1958 and 1960, and 107 in 1954.

Waxwings to Starlings: If the abundant crop of berries on the Mountain Ash is the explanation for the unusual numbers of wintering Robins and Purple Finches, why have neither of the waxwings been reported this winter? Starlings are present in large numbers, feeding on these berries. Four Northern Shrikes were seen on December 26; these northern visitors have been uncommon this winter locally. Mrs. Peruniak saw two at Atikokan on December 29.

Blackbirds, Grackles and Cowbirds: No member of the *Icteridae* is expected here in winter although Rusty, Brewer's, and Red-winged Blackbirds have each been listed on one Christmas Census and the Common Grackle on three such occasions. This year Red-winged Blackbirds are attempting to winter in at least two areas, three at the Empire Elevator and 15 in Neebing. Completely new to birds known to winter here, was the Brown-headed Cowbird which Dorothy Allin and I saw feeding with House Sparrows on grain-car waste on December 20 in Fort William.

Fringillidae: Evening Grosbeaks are very common. Mrs. Taylor had only two at her Dorion feeder when she was putting out sunflower seed which she believes was musty. When a new supply was available the flock increased to some 35 birds within a few hours. This may have been a coincidence but

she noted that the Purple Finches feeding there increased from two to 14 at the same time. Evening Grosbeaks have fed on the Mountain Ash to a greater extent than we have previously observed. We have also seen them feeding on the seeds of the Manitoba Maple, a Persian Lilac, and rarely, on the dried, frozen, berries of Coton-easters. Purple Finches are unusually common. They were first reported in Fort William and at Pine River on November 22. On December 13, they appeared at local feeders. It is interesting to note that they remain at the feeders later in the day than do the Evening Grosbeaks. They were still feeding at 6:00 p.m. February 21. On two occasions we have seen them eating the seeds of the Black Ash, never considered a favored food by wintering birds.

Pine Grosbeaks were first reported on November 19, along the Trans-Canada Highway and in Chippewa Park. By mid-December they were very common along the highways about the Lakehead. Peculiarly they have been relatively uncommon in the Lakehead cities proper. Of course there has been an abundant supply of Mountain Ash berries throughout the surrounding forests where their competition this year

was from the immense flocks of wintering Robins. Moderate numbers of Common Redpolls but no Hoary Redpolls have been reported. Pine Siskins are rather scarce. These small finches feed largely on the seeds of the White Birch. One of the winter phenomena has been the presence of American Goldfinches, a species recorded in winter on only one previous occasion. Mrs. Rydholm saw four on January 4, we saw 20 on January 10, and one on February 7. W. Rosser has also seen them in Fort William on several occasions. They were also seen at Sault Ste. Marie in late December.

There have been no reports of Red Crossbills but White-winged Crossbills have been seen on several occasions locally, and Mrs. Peruniak saw 15 near Atikokan on December 29. Slate-colored Juncos have been reported on five Christmas Census lists and must be considered uncommon winter residents. Four have been seen regularly at a Port Arthur feeding station. They are accompanied by a male Oregon Junco. This is our first winter record for this visitor from the west. Snow Buntings have been seen on a very few occasions.—*Regional Laboratory, Ontario Department of Health, Fort William, Ontario.*

BOOK REVIEWS

THE WORLD OF THE RED-TAILED HAWK by G. Ronald Austing, many black and white photographs, 128 pages, J. B. Lippincott Company, East Washington Square, Philadelphia, Pennsylvania. 1964. \$4.95.

This is a delightful little book about the authors many years of experience with captive and wild Red-tailed Hawks. The book contains a wealth of information about the Red-tailed Hawk, survival, raising its young, migration, food and banding. The most satisfying feature of this book are the black and white photographs which

are contained on almost every page. The author is an excellent photographer and the photos are a credit to his skill. The photographs not only depict Red-tailed Hawks in various habitats and at nest sites but photographs of other birds such as Peregrines, Goshawks and Marsh Hawks. The photos of young Red-tails just hatching in various stages of development on pages 53 to 57 are especially good. The only criticism that can be made of this book is that the author tends to be quite anthropomorphic in many of his descriptions of Red-tail habits. Also on

page 91 the author refers to the hibernation of birds and states that the Whip-Poor-Will was recently found in advanced torpor. This is incorrect and should refer to the Poor-will. These minor criticisms however detract little from the general value of this fine book.

Editor

THE STRANGE WORLD OF BIRDS by John Wakefield, 151 pages, illustrated, Macrae Smith Company, 225 S. 15th Street, Philadelphia, Pennsylvania. 1964. \$4.95.

Mr. Wakefield has put together a most interesting little book. Chapter titles include such interesting topics as, The First Birds, Birds in Legend, A Foot for Every Purpose, Fine Feathers, Vanished Birds, Vanishing Birds etc. These chapters include information on birds from all over the world and as the title of the book suggests many strange and interesting facts about birds are brought together. The black and white drawings by the author included with each chapter are very good and add much to the text. Also included are eight pages of black and white photographs.

In this reviewer's opinion the short two page preface of this book is one of the most interesting and refreshing bits of information written recently on the hobby of bird-watching. This should be read by everyone with a mild or enthusiastic interest in birds. These few words make this book a very worthwhile addition to a persons library.

Editor

BIRDS OF THE WEST by Ernest Sheldon Booth. 413 pages, 8 full color illustrations, many black and white drawings and photographs. Outdoor Pictures, Box 1326, Escondido, California 1960. \$5.00.

The author in the preface to this

field-guide explains that he wrote this book with only one thing in mind: to teach the beginner the names of the birds in a way which will be self explanatory, in a way which will require a minimum of effort and no help at all from someone else. He has devised a key to the Orders and Families of Birds in the first section and a key to the Genera and Species in the rest of the book. The author stresses the importance of taking notes on birds observed, not only plumage but habits as well. This is a most commendable idea to instill in the beginner. The illustrations in the book are mediocre at best and some of the color plates are misleading. For the amateur photographer there is an interesting section on bird photography and also included is information on migration, nesting habits, reference books and bird clubs.

This book is recommended only for the beginning student of birds. The author states several times that one of the main features of this book is that it can be used without help or guidance from anyone with experience. The beginner, however, should remember that the best way to learn birds is with the help and guidance of an experienced observer supplemented by a good general field guide containing accurate illustrations of as many plumages as possible and at least a checklist of the birds of his specific area. These three things plus a desire to learn will go a long way to assure a most rewarding hobby.

Editor

THE BIRDS OF ARIZONA by Allan Phillips, Joe Marshall and Gale Monson. 220 pages, 12 color plates, 64 full color photographs, many maps. University of Arizona Press, Tucson, Arizona. 1964. \$15.00.

The book will no doubt in future years join, *The Birds of California*, *The Birds of Massachusetts* and *The Birds of Minnesota* as classic state

works. The superb nature of this book attests to the authors devotion and interest in the birds of Arizona. The text treats over 400 species of birds recorded in the state. Maps accompany many species showing some interesting features of the birds distribution in the state. Birds occurring throughout the state are not mapped, a feature which lends more importance to the other maps. The twelve color plates by George Sutton are magnificent. The color photographs are beautifully reproduced and enhance the text considerably. Anyone interested in the birds of the Southwestern United States or a birdwatcher intending to move to this area should certainly have this book among his possessions. The book will provide many hours of enjoyment and the color plates alone are well worth the \$15.00 price tag.

Editor

LOUISIANA BIRDS by George H. Lowery Jr, 568 pages, 13 full color plates, 27 two color plates and many black and white photographs and text illustrations. Louisiana State University Press, Baton Rouge, Louisiana. Second edition, 1960. \$7.50.

This excellent regional work can be of as much value to the birder outside of Louisiana as to the one within the state. The color illustrations are generally good and the black and white photographs and text illustrations are excellent. Treated in the book are 387 species of birds occurring in the state. The author has created a new kind of state bird book, a guide to the sport and science of bird study written from the regional point of view. This coupled with the large number of species covered in the text makes it a valuable book to the general bird-watcher no matter where his home base. Of special interest is a section in the back

of the book containing 12 pages of bar graphs showing seasonal distribution of all 387 species of birds treated in the text. At the low price of \$7.50 this is a great buy among the many recent books on birds.

Editor

OUR BUTTERFLIES AND MOTHS by William H. Howe. 208 pages. 25 full color illustrations, 70 black and white illustrations. True Color Publishing Company, North Kansas City, Missouri. 1963. \$10.50.

With the growing interest in butterflies, especially among bird watchers, there is a need for more books on these interesting insects. Mr. Howe has been called by some to be "the Audubon of the butterflies." His book shows the deep interest and love he has for butterflies and moths. His color illustrations are excellent and can be readily used for field identification purposes. One only wishes that there were more color illustrations. Also this reviewer had hoped that more of the illustrations would be on North American species of butterflies and moths. Included among the color illustrations are plates on South American and Indo-Australian species. The author has covered a wide variety of topics in this book. It is divided into four main sections: Introduction, The Butterflies, The Moths and Digressions and Quotations. The latter section contains many short chapters which include stories mainly about butterflies. The author is no doubt very capable in his field and it is hoped that he will continue writing books on butterflies. A new inexpensive field guide containing good illustrations and hints on capture and identification would be most welcome. The authors present work, excellent as it is, is too high priced for the general collector.

Editor

NOTES OF INTEREST

SIGHT RECORD OF A POSSIBLE MACGILLVRAY'S WARBLER—On May 20, 1964 while birdwatching in Lake Harriet Refuge, Minneapolis, Hennepin County I had the opportunity to observe an unusual warbler. The time was approximately 7:00 a.m., the day was clear. I was using 9 x 35 binoculars. A small warbler appeared along the path in a low bush. It was of the Genus *Oporonis* and at first glance it appeared to be a Mourning Warbler in fall plumage. The following plumage characters were noted: suggestion of a grayish hood, an incomplete eye-ring broken in front and back. The lower throat showed a very slight darkening, a gray mottled effect. The underparts were dull yellow, the upperparts slate gray. It is generally known that three species of the Genus *Oporonis*, Mourning, MacGillvray's and Connecticut Warbler are difficult to separate in the field. One of the chief distinguishing features of spring plumaged male birds is the eye-ring. The Mourning completely lacks the eye-ring, in MacGillvray's the eye-ring is broken front and back and the Connecticut has a complete eye-ring. Bent (*Life Histories of North American Wood Warblers*) states of the Mourning Warbler "prenuptial molts occur in late February and March, before the birds come north." Also this statement is made, "the molts and plumage of MacGillvray's Warbler parallel those of the Mourning Warbler." Thus by the time the Mourning and MacGillvray's Warbler reach the latitude of Minnesota during the spring migration they normally should be in full spring plumage. However, Mueller (*Passenger Pigeon 15:176*) reports from banding activities in Wisconsin "that some Mournings have virtually complete eye-rings in spring and therefore reports of non-singing Connecticut in spring may be suspect." The above adds further confusion to the field separation of the Mourning and MacGillvray's Warbler in this area. It is possible the bird I saw was an 1) incompletely molted Mourning Warbler 2) an intergrade Mourning-MacGillvray's or 3) a nearly completely molted MacGillvray's Warbler. Because of the season (late spring) and the plumage characters noted in the first part of this report, especially the broken eye-ring and darkening on the throat it was felt that this bird was an almost completely molted male MacGillvray's Warbler. The female and immature plumages of the MacGillvray's Warbler lack the dark area on the throat. There are two specimens in the collection at the University of Minnesota, Museum of Natural History which are considered by Dr. Breckenridge to MacGillvray's Warblers even though one is labelled as an aberrant Mourning Warbler. These birds were both taken at Madison, Lac Qui Parle County, one in May and the other in early June, by Mrs. C. E. Peterson. Both birds appear very similar and match closely the bird described above. *Robert B. Janssen, 1817 W. 59th Street, Minneapolis, Minnesota.*

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GREAT GRAY OWL IN BECKER COUNTY.—Despite its "regular" appearance (Meyer, *Loon*, 1964:108), Green (*Flicker*, 1963:44,) reviewing records over a twelve-year period, 1950-1961, considers the Great Gray Owl as a "very unusual species" in Minnesota. Though taken in several southern counties (Roberts, *Birds of Minnesota*, 1936, 1:624), its appearances seem to be confined to the northern tier of counties. Oehlenschlager (*Flicker*, 1963:46) includes it in his list of hypothetical species for Wadena County. I am not sure that the bird has occurred in neighboring Becker and Ottertail counties. Thus it may be of interest to report its appearance southwest of Detroit Lakes in

Becker County, very near the Ottertail County line. We were driving north December 29, 1964, on U. S. Highway 59 when in the heavily wooded area about eight to ten miles southwest of Detroit Lakes we saw a large bird with a conspicuous tail perched about thirty-five feet up. The tree was about 20 feet from the edge of the pavement. With 7 x 35 binoculars at a distance of about 200 feet we had no difficulty in observing the grayish bird with the white horizontal markings on its back and the longish tail. We drove past and observed it frontwise to see the vertical streakings, the large facial discs, the yellow eyes and the black chin spot. Disturbed by a passing car, the bird flew across the road, its wingspread appearing unusually wide and its flight rather heavy, to perch again. It paid little attention to us, but appeared to direct its eyes upon a snow-covered trail below, probably searching for the incautious movement of a rodent. It was still perched when we left after a fifteen-minute observation.—*Herbert Krause, English Department, Augustana College, Sioux Falls, South Dakota; Wayne Duenow, Fergus Falls, Minnesota.*

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RUFOUS-SIDED TOWHEE WINTERS IN HENNEPIN COUNTY.—On January 1, 1965 Ray Glassel and I observed an adult male Rufous-sided Towhee at the feeder of Mrs. Ilene Lewis, Lotus Lake near Chanhassen, Carver County. Mrs. Lewis had informed us of the presence of the bird, for the past three or four weeks, in her yard. The bird feeds on the ground near the feeder scratching for grain thrown about the area. It normally comes to the feeder every day at various times, mainly early morning and late afternoon. *Robert B. Jansen, 1817 W. 59th Street, Minneapolis, Minnesota.*

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SIGHT RECORD FOR A LITTLE BLUE HERON.—On April 25, 1964 while enroute to Salt Lake, Ruth Broman, F. V. Ogren, Terry Myllenbeck, Jerry Schliep and I observed an immature Little Blue Heron. The location of this observation was along highway 40 just after it crosses the Minnesota River in Lac Qui Parle County. The bird was seen in a backwater area about 250 to 300 feet off the highway. We spent 25 minutes watching the bird with binoculars (6 x 30, 7 x 50 and 8 x 40) and a 30 power scope. The observation was made in full sunlight and overcast skies. The bird was first observed feeding and wading in about six to ten inches of water. The feather pattern first appeared to be totally white but after a few minutes of observation the bird turned and a slight "blue-silver" color could be observed on the folded wings. This same color was noted in a small area on the center of the bird's back. The bill was a greenish-gray with the tip being the darkest. The feet were the same color as the legs, a dark greenish-gray color. The feathers were very smooth over the birds body. *Ben Thoma, 333 N. 17th Street, Willmar, Minnesota.*

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BLUE GROSBEAKS EXTEND RANGE IN MINNESOTA.—The Blue Grosbeak seems to be penetrating farther into Minnesota. On July 4, 1964 a sub-adult male was observed near Mound Springs State Park, Rock County, about four miles northeast of Luverne. This area is about 15 miles from the area along the Minnesota-South Dakota border where they are usually seen. Perhaps these birds move into the state from the Sioux River system. Earlier we followed the Little Sioux River south to Canton, Iowa and found Blue Grosbeaks to be relatively common. Since the Little Sioux River is within a few miles

of the Minnesota border it seems probable that this river could be the source of our Minnesota population. *Bertin W. Anderson and Peter Getman, Museum of Natural History, University of Minnesota, Minneapolis, Minnesota.*

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HYBRID INDIGO BUNTING X LAZULI BUNTING FROM ROCK COUNTY

—Two hybrids of the Indigo Bunting and Lazuli Bunting were collected in riparian vegetation along the Rock River about one and one-half miles south of Luverne, Rock County. The first collected on May 16, 1964 was a subadult which was about 67% Lazuli Bunting and 33% Indigo Bunting. The Lazuli characters were the presence of wing bars and the presence of rather typical Lazuli Bunting colors on the crown and rump. The second hybrid, an adult, was collected July 4, 1964 and was about 25% Lazuli Bunting, the only Lazuli characters being in the color of the rump and crown. In addition to the two collected another hybrid was seen in the area. Their call notes were indistinguishable from Indigo Buntings. Dr. Breckenridge collected an adult hybrid at Warren, Marshall County, Minnesota in 1929. This bird was about 67% Lazuli Bunting. The percentage of Lazuli and Indigo Bunting characters in the hybrids discussed above was determined from a table prepared by Sibley and Short (1959 Auk 76:443-463) after an exhaustive study of hybrids in the zone of overlap of the two species. *Bertin W. Anderson, Museum of Natural History, University of Minnesota, Minneapolis, Minnesota.*

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POSSIBLE SIGHT RECORD OF BARROW'S GOLDENEYES—Nov. 13, 1964 was a bright, warm, clear and quiet day. Not having been at Frog Lake (south of Alberta, Stevens County) for several weeks, I forgot about farm work temporarily and packed up my Questar and tripod and took off for the lake.

The Questar was first set up along the south shore near the west end, so as to first scan the west end and then the north shoreline. Then, working gradually eastward toward the 'point', I had the lens pointed in an east-northwesterly direction and saw about half way across the lake two ducks that I could not identify. One was definitely gray-brownish in general tone, but the other had a quite blackish back, with irregular white spots. Both had the big 'puffy' heads of the goldeneye-bufflehead type. The blackish individual, in certain positions, showed a very high iridescence on the head—of a purplish violet color. But with no white spot showing on the cheek, I didn't call it a goldeneye till it dived and showed the bright yellow-orange feet. Then closer examination revealed a very dim and faint suggestion of the white cheek area, not a roundish spot, but a nearly straight up and down line. The brownish bird I took to be the female, and concluded I'd probably just seen a couple of off-colored Common Goldeneyes, probably in partial eclipse.

Working my way then up to the 'point' itself, I suddenly saw two more of the 'brownish' individuals, one of which soon worked its way up to within about 150 yards of the telescope. This individual I studied through the glass for about $\frac{3}{4}$ of an hour (at 40 power). It had orange feet and legs. In general color it resembled a female of either species, though possibly browner. But on the cheek, and beginning above the eye, was the definite beginning of what was to become the white cheek patch of a drake, and it was not a round or triangular spot below the eye level, but an irregular up and down mark beginning from well above the eye, very like that observed on the blackish backed

bird a little earlier. The bill was about half dirty-orange in color, the rest blackish.

On arriving home in the evening I first organized my notes and rough pencil sketches and then started to read up on goldeneyes. After searching Bent, Forbush, Delacour, Kortright and other books, I concluded that I must have seen four young Barrow's Goldeneye drakes—one of which was slightly further advanced in its plumage development than the other three. The whitish beginnings of the cheek patches, as I saw and sketched them, almost exactly match the picture found in figure D, plate no. 21, by T. M. Shortt in *Ducks, Geese and Swans of North America* by Kortright. Being young birds accounted for the grayer breasts. But I could find nothing in my printed literature to account for any drake, young or old, having partially orange-yellow bills. That still puzzles me.

The next day, Nov. 14th, Ken Haag of St. Paul and I searched the lake again, but we turned up only one goldeneye, and that was a well-marked drake of the commoner species. Nov. 15th we made one more attempt to locate the four ducks, when Delmar Holdgrafer of Donnelly and Dick Grant of Morris were also at Frog Lake. But the Questar uncovered no Barrow's Goldeneyes this day either. Apparently they had left the area, or else the much rougher water of Nov. 14th and 15th made them harder to locate, or had driven them to cover among the bulrushes as it did several other species.

I regret that I didn't have my camera with me on the 13th. There was a chance that, with a little luck, I might have obtained a fair record shot at least of the bird that came up quite close. But its too late now. I only hope if there's any next time, that I'll be better prepared with both cameras and eye-witnesses. *Ernest H. Strubbe, Alberta, Minnesota.*

(Editorial note: As the author points out this observation is inconclusive because of the plumage that the birds were in and the difficulty of separating them from Common Goldeneyes. Also the head shape and details of the back pattern of the almost full plumaged drake were not noted. However, this good description does indicate a possibility although it cannot be used as a definite record.—J. C. G.)

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CATBIRD IN LATE DECEMBER.—As the result of a brief note in the St. Paul newspaper, I telephoned Mrs. Ramby Rasmussen of Newport (Washington Co.), Minnesota about a Catbird that was wintering at her feeders. She seemed to be a knowledgeable woman and gave me these details: The Catbird had arrived at her feeders in late October or early November of 1964. It and a Robin were the two noteworthy visitors to her feeders until December 27, 1964 when both disappeared very suddenly. Mrs. Rasmussen assumed that both had fallen prey to one of the many cats that roamed the neighborhood. She noted that the Catbird showed a definite preference for raisins and of course it also ate suet. Throughout the period of observation, the Robin and the Catbird seemed strong and outwardly healthy, and both could probably have survived the entire winter. *Ronald L. Huber, 480 State Office Bldg., St. Paul, Minnesota 55101*

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LARK BUNTING AND DICKCISSEL IN COOK COUNTY.—May 9th, 1964 was cloudy and windy at the mouth of Cross River on Lake Superior. Two hardy but over-optimistic men were trying for smelts along the shore. In the

lakes were grebes and mergansers but otherwise it didn't seem a very promising morning. As I went down the bank on an old wooden set of stairs, a black bird with white patches flew from an alder bush to a smaller shrub near a green cabin—a Lark Bunting? It couldn't be—on it flew beyond the old warehouse. Finally a black oval rock on the lava flow attracted my eye—and there it was just twenty feet away: dark, conical bill, short tail and white wing patches! I drew closer as I watched and suddenly I was trespassing so on it flew to a birch tree—and then on down the shore. I looked around wildly for some help of confirmation—King, the cocker, wagged his stub; and I finally decided against asking the smelt-fishermen if they had seen a black bird with white wing patches, and trotted on home very excited. We checked back in less than an hour but had no luck.

Sunday, May 10th was clear and cool; as we washed dishes, we talked about the bunting—with a strong east wind, how had a western Lark Bunting blown in and there feeding with the Chipping Sparrows and a few White-throats was a Dickcissel. It came back on Monday several times and the last time was 7:10 p.m. (DST). *Marie Aftreith, Schroeder, Minnesota.*

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BLACK-BACKED THREE-TOED WOODPECKER IN WASHINGTON COUNTY—At 10:00 A.M. on Wednesday, October 28, 1964, I was attracted to the large windows in the front of the house by a thud of a bird striking the windows. The bird in sight was clinging to the side of a large Scotch Pine which is ten feet from the windows. The bird was about five feet from the ground. It was a woodpecker about the size of a Hairy Woodpecker but had a solid black back. It was obviously a new species for our yard so I studied it more closely. It's head had more black on it than a Hairy Woodpecker and there was a faint striping on the side of the breast. There was no color on the head.

The bird stayed clinging to the tree apparently stunned from striking the window while I studied it and got my copy of Peterson to positively identify it. It was a female Black-backed Tree-Toed Woodpecker. Since it was stunned, I had visions of catching it by hand and banding it. When I got outside and approached it, it climbed up the tree out of my reach and then flew out of the yard after a brief stop high in an oak. We have looked for it since within a radius of a half mile but have not seen it.

Our home is located on the St. Croix River a mile south of Marine-on-St. Croix. The house lot is a mixed woods of pine, spruce, oak and a smattering of other deciduous trees.—*Mrs. Dean A. Honetschlager, Rt. 2, Stillwater, Minnesota.*

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BALD EAGLE ATTEMPTS TO KILL JACK RABBIT—About 7:45 a.m. on September 25, 1964. I noted a large bird swoop towards the ground about 3 miles northeast of Lewisville, Minnesota. Immediately I stopped my car and with binoculars observed an immature Bald Eagle strike at something on the ground. The eaglet, apparently unsuccessful in making a kill, then flew away. I then searched the area of attack and noted several patches of fur which I later identified as coming from a jackrabbit. I did not, however, find the rabbit.

Bald Eagles have occasionally been seen in the vicinity of Lewisville in
March, 1965

recent years. A local farmer shot a Bald Eagle in 1962 after the eagle had carried a chicken from the barnyard and had returned for the second chicken.—*Earl D. Kopischke, Game Biologist, Vernon Center, Minnesota*

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ROUGH-LEGGED HAWK ATTEMPTS TO KILL PHEASANTS—Don Wester and I were hunting pheasants about 4 miles northwest of Fairmont, Minnesota on November 17, 1964. We flushed a hen and a cock pheasant from a wild hay meadow and observed them flying into an adjacent picked corn field. We watched the cock land about 500 feet away. Immediately an unidentified hawk plummeted from the sky and struck at the cock's back. The cock ran about 6 feet and crouched. The hawk again struck down. Again the cock ran a short distance and crouched. The hawk again struck at the cock's back. Meanwhile we moved closer to get a better view since we lacked binoculars. The hawk then noticed us and flew away. We noticed that the hawk had a white rump so we assumed that it was a Marsh Hawk. We quickly went to check the fate of the cock. Our dog noticed the cock and went to fetch it. The cock was unable to fly although it could run and jump. The dog brought back the cock. Although the dog had inflicted wounds on the cock's back, it appeared that the hawk had repeatedly struck the cock in the small of the back for the feathers were missing and several talon marks were evident. It is probable that the hawk would have succeeded in killing the cock if we had not interfered.

On November 21, while in the same area, I noticed a Rough-legged Hawk obviously hunting for food. With my binoculars I observed the hawk suddenly swoop towards the ground in a picked corn field about 500 feet away. Two cock pheasants flushed from the location and flew into a plum thicket. The hawk followed and hovered but continued on its way in several seconds. Since this second observation of a hawk attacking pheasants occurred within three-fourths mile from the first observation, I assume that it was the same Rough-legged Hawk who has developed a taste for pheasant.—*Earl D. Kopischke, Game Biologist, Vernon Center, Minnesota.*

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BIRDS OBSERVED AT THE SUGAR BEET LAGOON IN MOORHEAD AREA—The lagoon system of the American Crystal Sugar Company located a mile north of Moorhead, Clay County, Minnesota afforded me fascinating birding this fall. This system of six diked, interconnected settling ponds covers 217 acres. The millions of gallons of water used in the sugar beet washing process enter the system at a temperature of about 85 degrees. Generally, the pond water is considered to be from 2 to 5 degrees warmer than the air.

This lagoon became my prime birding area on August 12, 1964, after seeing ducks flying over three ponds. It was more than worth the steep climb to the pond to find Greater and Lesser Yellowlegs, Pectoral Sandpipers, Wilson's and Northern Phalaropes, two Semipalmated Plovers, a dowitcher and peeps I could not at that time identify. Beth (Mrs. George A.) Anderson of Fargo joined me that afternoon at the bottom of the bank and we watched these birds for some time at very close range.

Numbers of Lesser Scaup, Blue-winged Teal, Mallards, American Coots and a Bufflehead were observed in another deeper pond off and on during the entire period.

The following week when Prof. O. A. Stevens of Fargo and I checked the area, there were but a few yellowlegs and Pectorals remaining. On September 27th I found Killdeers, a Solitary Sandpiper, Lesser Yellowlegs and Pectoral

Sandpipers.

On October 15 the fun began. From that time until November 20 on all but five days I checked the lime purifying pond which covers 34 acres and averages about 7 to 8 feet in depth, being very shallow at the edge of the flats. (This depth reached 10-11 feet by Nov. 20.) This pond is considerably warmer than the rest because of the suspended solids in the water.

I walked on the spongy flats and could easily observe the birds as they stayed close to the edge of the pond, but when the water was released and crept up onto the flat the birds were in isolated little islands of water and weeds. They often paid no attention to me at all when I approached them there. They seemed to be much more interested in food than they were in me; the peeps especially allowed me to get within 6 to 8 feet of them.

The Black-bellied and the American Golden Plovers were first observed October 21. Dr. J. Frank Cassel and Prof. O. A. Stevens accompanied me on October 23 and identified the American Golden as well as the Savannah Sparrow which first appeared in a flock of about 100 on October 15 along with the same number of Water Pipits. The pipits stayed until November 5 and the Savannah Sparrows left on October 30. Both the pipits and sparrows, sometimes accompanied by a Horned Lark, came very close to me swirling around my head when I sat on the dike. The Black-bellied Plover numbered 15 or more at times and on November 17 the last one left. There were as many as 15 American Golden Plovers during this period and the last two left on November 18.

OTHER DATA:

Name	Most	When Seen	Last Seen	No.
Killdeer	2	10/15	11/16	1
Greater Yellowlegs	15	10/2	11/14	1
Lesser Yellowlegs	12	11/1	11/14	1
Pectoral Sandpiper	10	11/1	11/17	1
Semipalmated Sandpiper	1	10/17		3
Baird's Sandpiper	3	10/25	11/9	2
Dunlin	1	11/6	11/9	1
Wilson's Snipe	12	11/8	11/17	1

The lagoon is a haven for about 200 Snow Buntings that twitter constantly as they swoop over their special pond, sometimes fluttering above the ice barely touching it, upending to peck at it with their bills. They pester a Snowy Owl I often see on a little scraggly tree high up on the embankment, but he only changes position and fluffs his feathers. The Horned Lark and Lapland Longspur also visit the lagoon in large numbers. During this latter period about 100 Rusty Blackbirds and several Ring-billed Gulls hobnobbed with the shore birds. . . . And on November 7 a frightened red fox which I flushed from the weeds on the flats presented a view in his head-long flight I will not soon forget. . . . On November 16 one lone Snow Goose dropped in for the day. Four Mallards hung around from November 15 to November 20 and an American Widgeon, in company with a Ring-necked Duck, swam toward me at the edge of a pond as I sat in my car. On November 17 the widgeon was joined by three others and they stayed until the 20th, but the Ring-necked Duck left on the 18th.

This whole study was vastly interesting to me and I'm looking forward to what spring "might" bring.—Mrs. Leslie Walter, Jr., P.O. Box 579, Moorhead, Minnesota.

RUBY-THROATED HUMMINGBIRD ATTRACTED BY COOKING JAM—September 8th, 1964, we were cooking gooseberries for jam. Thru the back screen door wafted the heavy aroma of ripe gooseberries. We became aware of a squeaking outside—and there flying up and down the screen was an immature Ruby-throated Hummingbird and squeaking in apparent exasperation! So we ladled some of the juice on a small branch of a Mt. Ash tree and smeared it along the wood. Back to the screen door came the hummingbird performing its same up and down flight and still squeaking. It did this for three hours in the afternoon—long after the jam was all packed away. From our observation it never went near the branch which was less than ten feet from the door. A sense of smell in birds should diminish with size—but what else could have brought it to the screen and why didn't it "smell" the jam juice on the branch? *Marie Afreith, Schroeder, Minnesota*

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UNUSUAL MINNESOTA RECORDS—*The following quotations are from the field notebooks of Nestor M. Hiemenz and are about species accidental in Minnesota. Therefore, these excellent descriptions merit this late publication.*

BLACK RAIL (?)—May 25, 1934—While at the north end of Little Rock Lake (Benton Co.) with the ornithology class of the St. Cloud State Teachers College, a small, very dark rail ran right between my legs as we tramped through the rank grass on a small islet. Several members of the class had seen this bird as we tramped all around but it was not seen again. I only caught a glimpse of the bird when it ran between my legs but it was definitely a rail and not a downy young bird either. When I was pressed for identification I told the students that I could not be positive but all indications pointed to a Black Rail."

WHITE-EYED VIREO—"July 31, 1941—While walking along the river near the dump grounds (about 2 miles south of St. Cloud) I came upon a vireo in the lower branch of a small red oak about ten feet from me. I examined the bird carefully through my glasses, rather puzzled as the bird was new to me. What made my pulse race was the fact that the bird had white eyes, outlined by pale yellow spectacles much like those of the Yellow-throated Vireo and with prominent wing-bars to match. The underparts began with a whitish throat, shading into a dingy yellow on the flanks. The upperparts were yellowish-green, shading into darker toward the tail. The bird was rather deliberate in its actions, moving slowly about in search of food. I watched the bird for some time as it moved from tree to tree. It did not utter a sound and did not seem to mind my presence; in fact it completely ignored me until I tried to get too close when it flew across the stream of the river to an island and was lost from view."

KIRTLAND'S WARBLER—"May 22, 1944—The prize of the day was the sight of a male Kirtland's Warbler in Tourist Park (St. Cloud). I was standing on the steps leading down to the river, watching the warblers in the tree-tops (low bur oaks), when I spotted this bird. At first glance I thought it was a Magnolia Warbler (which was common today) but it puzzled me by its deliberate movements and tail wagging, as though it was an oversize, yellower Palm Warbler. The black face patch was very noticeable as was the yellow underparts, sharply streaked along the sides only. The bluish striped upperparts were also noted. The white in the tail wasn't very noticeable in contrast to the flashy white of the Magnolia Warbler. After watching the bird for about five minutes I turned to my car and got out my field guide to check for certain, and watch-

ed the bird again for a few minutes before I had to leave."

LAZULI BUNTING—"June 24, 1943—While walking along near Ray's (a farm along the east side of the Mississippi River, in Sherburne Co., about five miles south of St. Cloud) I heard a strange song, resembling that of the Indigo Bunting, which is common in this area, yet decidedly different. As I tried to locate the singer I heard a worried 'chip' as I flushed a little brownish bird just ahead of me. Just then the male appeared and both birds continued 'chipping'. I had an excellent view of the birds as they remained about 15 ft. from me, the female with her bill full of nesting material. The male resembled the male Indigo Bunting in size, shape and actions, but not in color. The blue of the head and upperparts was of a very light shade, as different from that of the Indigo Bunting as the blue of the Mountain Bluebird from that of the Eastern Bluebird. The underparts were also a light blue, except for a broad area of brownish-red across the breast and down along the sides. There was one broad white wing-bar. I thought of the Lazuli Bunting but I knew that that species was white below and had two wing-bars. As this bird combined the characteristics of both species I concluded that it must be a hybrid, but even so it resembled the Lazuli more than the Indigo. The female had two whitish wing-bars and in addition a small area of grayish-blue at the bend of the wing, otherwise it resembled the female Indigo Bunting. I watched the birds for some time before I looked down at the half-finished nest, 2 ft. above the ground in a black-capped raspberry vine. As I did not wish to disturb the birds too much I left, determined to come back later and collect them with the nest. Later in checking my observations I find that the female is probably a typical Lazuli Bunting while the male is a hybrid or aberrant bird but more closely resembles the Lazuli than the Indigo Bunting."

"July 8, 1943—In the afternoon I drove back to Ray's to collect the pair of buntings found nesting here on June 24th. I approached the nest cautiously as I wanted to collect the bird from the nest but when I saw the nest it was torn down and deserted. The nest had been completed before being destroyed. I searched all through the entire area but was unable to find the birds again. Next time I'll collect them at once!"—*Nestor Hiemenz, 705 18th Avenue South, St. Cloud, Minnesota.*

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GYRFALCON RECORD—Our home is on a heavily wooded ridge about a mile south of Ely, Minnesota. During the winter and early spring we keep several small feeders filled with sunflower seeds, cracked corn, suet, and peanut butter. On the morning of April 30, 1964, my wife and I were breakfasting, and watching a throng of Red-winged Blackbirds, Evening Grosbeaks, Purple Finches, and Slate-colored Juncoes, some of the birds at the feeders, others on the ground and in the surrounding trees.

Suddenly my wife said, "You're missing it! There's a big white bird out there!" When I went to the window, all I saw at first were the flashes of scores of songbirds arrowing away, all in the same direction, to the west. Then I saw the intruder circle in from the east, swing around to the south of the house, and come back for another pass at the feeders.

It appeared to be all white, a clear, clean white without any other hue or tone. The tail was rather long and narrow, and the wings looked long and were pointed. The head was rounded and seemed to be set right on the shoulders, with no apparent neck. The action was that of a predator; it seemed definitely to be searching for prey, attracted by the large and noisy group of feeding birds.

After lunch on the same day I was outside doing some chores, when the

same bird came in for another look at the feeders. I got another look, too, and this time saw that the wing tips were a light grey tone. Although the sky was rather bright, the clean white of the birds body, tail, and wings, was outstanding. It was about the size of a large crow. Part of the time it beat its wings at about 100 to the minute, and part of the time it soared with wings held still. At no time did I hear it utter any sound.

After the first sighting, I consulted our "*Birds of Minnesota*," and also Peterson's "*Field Guide*." Both books seemed to me to confirm the appearance and actions of the Gyrfalcon. I had two good, clear sightings in broad daylight, with unobstructed view from distances of 50 to 100 feet, as the bird circled low around and among the trees near our house. Both sightings were with the eye alone, as my binoculars were not at hand. Both were brief, probably less than a minute each.

The books state that similarly appearing species are gulls, Snowy Owl, and Marsh Hawk. I think all these may be eliminated. Our bird was slimmer than the gulls common around here, and did not have the obvious neck and long yellow bill. Although a large flock of Herring Gulls stays around the city dumping grounds all year, I have never seen one near our house. It was certainly not an owl; the difference in shape were very plain. The flared wingtips and broader wings and tail of the Marsh Hawk were also not evident. Our bird had neatly pointed wings, with no flared out feathers when soaring.

On May 2, 5 and 9, my wife saw what she is certain was the same bird come in for the same quick, searching look around our feeders. It never attacked, but circled briefly and went away. She saw the bird for the last time on May 19. *Miles W. Murphy, P.O. Box 569, Ely, Minnesota.*

* * *

OUR VIRGINIA RAIL—The first week-end in October, 1964, was very windy, probably accounting for our rare visitor—a juvenile Virginia Rail. When first seen it was feeding under the Savin Junipers near the house with some of the ever-present Starlings and a few of the welcome White-throated Sparrows which stop here every spring and fall.

For six weeks this bird of the marshes chose to live in our yard which is on the West River Road, half way between the Lake Street and Ford bridges in Minneapolis. His right wing drooped a bit which made us wonder if he would be able to continue his journey southward.

At first he was very cautious, slipping into the shrubbery at our slightest approach. Gradually he became bolder and wandered out in our open yard, and then into our neighbors.

We put out crumbs and bird feed near the house and then water in my large pyrex cake pan. My husband called this the "Rail Sauna" What a movie he would have made, with his tall spindly legs, his little white, chicken-like tail, and his splashing wings, trying to get down into the shallow water. He did not seem to favor his injured appendage. We hoped it was getting stronger.

On the sunny afternoon of November 12, I was watching it about four o'clock. It stepped into his glass bath tub and ducked and splashed. I counted—128 times in quick, rhythmic succession. Then he went to the edge of the window-well and fluffed and preened himself for twenty minutes. Had he been getting ready for his long trip south? After November 13, we saw him no more. The next day the thermometer dropped sharply! *Mrs. L. H. Dahl, 4754 Edmund Boulevard, Minneapolis, Minnesota.*

EARLY SNOW BUNTINGS— On September 14, 1964, we were driving out to the job around Mountain Iron, St. Louis County, for the day in the company truck. In the truck were the Surveyor and driver of the truck, Mr. Robert Tomassoni, Rodman William Rynes and myself. At the Pilotac plant tailings dam, a cold north wind was sweeping across the barren, sad-looking land which once was a beautiful birch forest before the taconite operation began. There had been snow flurries in the area on Sunday and on this Monday morning it really felt like winter was around the corner.

As we drove across the dam and came to the end of the dam, there in a large field of weeds and hay, we saw four white objects skimming close to the top of the weeds. The driver slowed down and then stopped the motor since I have everyone bird-conscious. We saw that they were birds but we were not sure what kind of birds. I took out my 6x15 field binoculars. They are not too large a glass but have good lens and are a convenient size to carry while working. I use them for sighting work in surveying too.

As I watched, the birds circled the field and came back toward the truck. They landed about in the center of the field and I lost sight of them. The driver started the truck motor again, and as he did so, the birds rose from the field and again came toward the truck. They flew right in front of us and landed on the trail in front of the truck. Bill Ryness said, "My gosh, they look like snow birds!"

Well, I couldn't believe my eyes for as they again rose in flight I could plainly see they were Snow Buntings. I said to the other fellows, "They sure came early this year." We watched them circle the field again and then they disappeared. *William Martin, P. O. Box 142, Virginia, Minnesota.*

* * *

POSSIBLE OBSERVATION OF A VARIED THRUSH—One morning the first week of November, 1964 I looked out the window toward our bird feeder and saw a bird under the feeder that looked like a Robin. I called my wife's attention to the bird. Its back was toward us at the time and she said it was a Robin. Soon, however, it turned around and we saw it was not a Robin. We had never seen a bird like it before. While from the back it was similar to a Robin, when it turned around it had a wide black bib, orange eye stripe, and two orange bars on the wing. The bird feeder is about ten feet from the window. We were able to observe the bird in an area of from ten to thirty feet. We watched him for about fifteen minutes after which it flew away. We looked through all our bird books, but were unable to identify the bird. We also talked to several people who are experienced in identifying birds, but they were unable to give us any help. The latter part of January, I was told there was a Ross' Goose at Silver Lake in Rochester, Minnesota, and I could see a picture of it in *Peterson's Field Guide To Western Birds*. I secured a copy from the Public Library and as I was looking through the book, on page 248 of the second edition I came across a picture of the bird we had seen in November. I identified it as a Varied Thrush.—*Frank Worley, 1520 West 35th Street, Minneapolis, Minnesota 55408.*

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THE LOON

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FRONT COVER

Black-legged ittiwake photo by Janet C. Green. See article on page 59. Ross' Goose photo by Harding Huber. See Notes of Interest page 79.

PRESIDENT'S PAGE

The spring migration is now over and many of us go into a summer hiatus as far as bird watching is concerned. This is a shame, because the summer is the time when we can learn more about birds than any other season. Why not spend a little time with the birds in your yard, or perhaps a nearby vacant lot, and find out a bit more about the habits.

There's a dandy little book called *Bird Study in a Garden* (Puffin Picture Book No. 106) by E. A. R. Ennion. Although written for British bird watchers, it's appropriate for any place in the world. It costs 85c and I think your local book store (a paper back specialist, probably) may have it. If not, perhaps he will order it for you. This will give you several ideas, but two strike me as being especially worthwhile.

First, why not map out your garden and yard then keep track of one or two pairs that nest in the area. Watch for signs that indicate territorial boundaries; threat displays, fights, chasing, etc. Song posts are often at the boundaries of territories. By using symbols on the maps, you can plot a day by day movement of the birds. You may be surprised just how limited the area is that birds live in during the breeding season. You will get to know the individuality of your nesting birds by the end of the summer, and you may have a fine story to write up for your summer's effort.

Still another idea is to show your garden in profile instead of a flat map emphasizing the height of your trees and bushes. Again do some recording by using symbols, but this time the vertical position of the birds. You may find that the Yellow Warbler that nests in the yard does not roam freely at all heights. When he's feeding you may find him in a very restricted range, when he's singing perhaps he is usually found at a different level. Do the Catbird and the Cardinal occupy the same levels?

The tape recorder you have at home could add something else. I set my microphone by the feeder on an early April day and again in early May and just let it run. The April day had almost nothing but Evening Grosbeaks, the May day White-crowned and Harris Sparrows were the stars. What will it be like in early June? Incidentally, for the affluent A.O.U. members, the new Uher 4000 Report S portable recorder (very fine quality, but \$400 plus in cost) has a set-up where the recorder turns on only when a loud enough sound will activate it.

Have fun this summer with the birds, take part in the nest census, and we'll see you at the annual hawk count.

Sincerely,
P. B. Hofslund,
President

IN MEMORIAM - ROBERT HANLON

Robert Hanlon, 39, former president of the M. O. U. died Saturday morning, December 26, 1964, at his home in Nassau, Bahamas BWI. Mr. Hanlon's early life was spent in Fari-bault, Minnesota, where he graduated from Bethlehem Academy. He then attended St. Johns University where he received his B Sc degree in 1946. In college Mr. Hanlon, Bob to everyone who knew him, was primarily interested in the lab sciences such as physiology, anatomy, and embryology. It was not until he began teaching in Benson, Minn., that he became interested in the various fields of Natural History and bird study. In the summer of 1964 while he was talking with a group of beginning bird enthusiasts he confided that at the beginning of his first year of teaching in Benson, in 1946, he classified all birds into four groups: Sparrows, Robins, Pigeons and other birds.

In the five years he spent in Benson a great deal of his seemingly boundless energy was channeled into the study of birds, the study of their habitat as well as the identification. Bob felt that there should be a list available of all the birds known to exist in Swift County. About 1948 he started on this project, but before he had really accomplished much he became interested in a side project. The effect of the extensive drainage in the area at that time on the bird populations, especially the shore birds and waterfowl. This was a very ambitious project and before he could gather enough data to make any valid conclusions, except that the birds were rapidly decreasing in numbers, he accepted a position in the biology department at the new Senior High School in Mankato, Minn. This first real ecological problem he had encountered was the challenge he needed to spur him on to a deep and lasting interest in the field of nature study.

While in Mankato Bob became very active in bird club work and in the M. O. U. He was Vice President in 1955 and President in 1956. He was Presi-

dent of the Minn. Science Teachers Assn. in 1955, and received an award from the Minn. Natural History Society as an outstanding teacher of science.

Bob did graduate work at the University of Mexico, University of Miami, Cornell University, The University of Minnesota and received his Master's Degree at Mankato State College. In 1954 Bob went to the Bahama Islands on a research project to study the wild-life of the Islands. He liked it so well there that he decided to go back as soon as something could be arranged.

In 1956 he accepted a position on the science staff of St. Augustine College which had opened the previous year. During his eight years in the Bahamas, Bob was instrumental in establishing one of the largest known collections of fauna and flora of the Bahamas, as well as an outstanding collection of Marine Life of the Bahamas.

Shortly before his death he completed a text book on "The Natural History of the Bahamas", for the Ministry of Education. Bob added much to the cultural life of the Islands. He was instrumental in getting Audubon Screen Tours to the Islands. He was instrumental in founding "The Bahamas Society", an organization dedicated to the encouragement of scientific research in the Islands. He was the first President of this organization.

In recent years Bob's main contact with the people, nature activities and the bird life of our area was in connection with the very fine Audubon Camp of Wisconsin of which he was the director the past four years.

Anyone who knew Bob Hanlon, as a fellow teacher, as a fellow member of the M. O. U. or other organization, as director of the Audubon Camp, or just as a friend, knew also that to know him was to like him. To accept Bob as your friend, you had to accept his friends as your friends. *Earl W. Orr, Benson, Minnesota.*

FIRST KITTIWAKE FOR LAKE SUPERIOR

Janet C. Green

Since the weather forecast for the next day was heavy snow followed by an intense mass of cold, arctic air, I decided on the morning of December 15, 1964, to take my usual weekly survey of the gulls along the shore of Lake Superior that day. When I stopped at Knife River, Lake County, there were about 150 Herring Gulls accompanied by 2 immature (first year) Glaucous Gulls resting on the water; this was the only concentration of gulls I saw all day from Duluth to Two Harbors. Two of the three active fishing boats using the harbor were out fishing on the lake. Returning from Two Harbors in the afternoon, I again stopped at the harbor at Knife River about 3:00 p.m. The weather had deteriorated by then and there was a strong easterly wind off the lake, driving the light snow that had begun to fall. The only sheltered water was behind the breakwater and in the slip where the fishing boats tie up. One of the boats had returned and there were many gulls hovering over it and on the floating cakes of ice beside the boats. These cakes of ice filled about half of the slip. I stopped the car beside the boats and watched the gulls without getting out (the car makes a good blind as well as windshield in a situation like this). In a minute or so my attention was caught by a smaller gull with spots on his head that was flying over the open water further along the slip. At first glance I thought it was a Bonaparte's Gull and I moved the car up opposite it to get a closer look. When I put the binoculars on it again, I saw that there was too much black on the back and the pattern was wrong for a Bonaparte's Gull. Not being sure then which one of the other small gulls it might be, I quickly searched Peterson's Eastern field guide and one brief look at the page of immature gulls told me it must be a kittiwake. I had seen kittiwakes before at their breeding colonies along the North Atlantic Ocean but not in this immature plumage. Not wanting to

prejudice my observations by the drawing in the field guide, I put the book away and began to take notes on the appearance of the gull. Comparing my notes later with field guide descriptions, I found that I had seen an immature Black-legged Kittiwake.

In spite of the snow, which cut visibility to about one half mile, the conditions for observing the bird were very good. It clung to the open water of the slip where it hovered into the wind, lower than the Herring Gulls, and occasionally alighted on the water for a moment. It often was at eye level or below and when it flew along the near side of the slip, it was only about 20 feet from the car. From time to time I moved the car to keep opposite the spot where it was currently hovering. It was never more than several hundred feet from me and I watched it for about half an hour only losing it from view when it was so close to the edge of the near side of the slip that it was hidden by the bank. It hovered over the water usually at 30 feet or less, occasionally dipping its bill into the water without alighting or dropping onto the water for a moment or two. When the third fishing boat returned, after I had been there about twenty minutes, the kittiwake ignored it and did not fly down the slip to circle around it as did the Herring Gulls.

By this time I had finished taking notes on the plumage and was trying to get a picture with a 350 mm. telephoto lens before the light became too dim. But the brief moments it was motionless on the water were too frustratingly short to focus properly. Fortunately, however, after the boat passed, the gull dropped onto the water and began to preen. I moved the car again and managed to get one picture before it was airborne. (See front cover). I watched for several minutes more, but since it didn't seem about to alight again, I decided to

drive back to Two Harbors and get Ruth Kuchta, hoping she would get a chance to see the bird before it got dark. When we returned, dusk was already falling and although there were still quite a few Herring Gulls around, we could not find the kittiwake. We waited for about ten minutes, constantly searching the circling gulls and watching them leave and fly one by one out toward the lake. When there were only a few left and the light had gotten quite dim, we left.

The following is a description of the bird from my field notes. A small gull, decidedly smaller than a Herring Gull (its size in relation to a Herring Gull seemed greater than a Bonaparte's but smaller than a Ring-bill's, but of course these two species were not present for direct comparison); underparts all white except for solid black tip to primaries and with all black feet and legs; forehead and crown white, occiput light gray grading into black nape; eye and bill were all black and there was a vertically elongated black spot on the side of the head posterior to the eye; the mantle was medium gray interrupted by a heavy black mark along the forward edge of the primaries and slanting back across the secondary coverts to the trailing edge of the wing; the rest of the trailing edge of the wing was margined with white; the gray of the mantle enclosed in the obtuse angle of the heavy black mark seemed lighter than the back and appeared almost white at the point of the angle; the tail was white with a black margin along its slightly forked end.

The next day Bill Litkey of St. Paul phoned me from Duluth and I told him about the bird. He wrote me as follows: "On December 16, 1964, I went up to the Knife River harbor upon

hearing your report of an immature Black-legged Kittiwake there the day before. As I arrived at the harbor around noon, I noticed that there were just a small number of Herring Gulls. Also I was fortunate to have excellent visibility with the sun shining brightly through clear skies. These two conditions made it easier for spotting anything unusual. I began looking out on the lake with binoculars and immediately saw a rather small white bird flying low over the water just off shore. I watched it fly around the harbor area, observing it from all possible angles. Twice it slowly flew directly over me at about 30 feet; otherwise the farthest observation distance was 100 yards. The characteristics I noted were: size of Bonaparte's Gull, black bill, pure white underparts, black rear edge of slightly forked tail, black band across the entire nape, black on the end of the wings, and a distinct dark diagonal band on the wings. In my opinion, this fits the description of an immature kittiwake. I never was able to see the bird's legs, however, as they were pulled inside the belly feathers and the bird never did alight during this time. Because of the cold wind that was blowing, I could only watch the bird about 10 minutes."

There are other records of the Black-legged Kittiwake from the upper Great Lakes but this is the first observation of one from Lake Superior. Specimens have been collected from the Wisconsin, Illinois and Michigan sides of Lake Michigan and there are sight records from Lake Huron. Dr. A. E. Allin of Fort William, Ontario and W. Earl Godfrey of the National Museum of Canada at Ottawa both stated that they know of no records from the Ontario side of Lake Superior. *1923 Grey-solon Road, Duluth, Minnesota.*

The Spring Season article is not being included in this issue. Because of the number of unusual records, very unusual weather conditions and a change in format for reporting your records the editorial staff felt it was necessary to hold the report until the September issue. A short summary of the spring migration and the summer nesting season will be made in the September issue by Mrs. John C. Green.

Editor

JEREMIAH, THE ORPHAN FLEDGLING

June E. Iverson

Ever since I can remember, I have been watching over sick, injured, orphaned or abandoned creatures. I've cared for land and water birds, lambs, piglets, kittens and puppies that have been dropped along the highway, bunnies plowed up from their field nests, gophers, chipmunks, mice and even moles.

My greatest challenge, though, was presented to me on July 20, 1964, when my children, Bruce and Susan, and I were going to the mailbox for the daily mail. As we walked across the yard, we noticed a tiny brown speckled egg lying in the grass. How it happened to be there or how long it had been lying there in the hot sun, I couldn't say, but of course I picked it up to investigate further.

The egg had a large crack in it and exposed a tiny beak and one needle thin leg. As we peered into the shell, we were amazed to see the baby was still breathing.

We returned to the house with our discovery and placed the egg into a cotton lined quart jar cover; setting it in my oven where the pilot light keeps the temperature a consistent 80 degrees.

While we waited to see if it had the strength to pop itself out of the egg we investigated to see what kind of a bird it could be. Going to the encyclopedia we looked at pictures of bird eggs and found it could be a House Sparrow, Rose-breasted Grosbeak or a Cardinal; all of which live in abundance in our wooded area.

Returning to the oven, we again checked the egg and found the baby had made no progress. We decided to chip it free. With a tweezers we carefully chipped it from its fragile shell.

What an ugly baby it was! Tissue thin pink skin, stubby bare wings, needle thin legs, with a twisted neck which positioned its head under its

naked body, just as it had lain in the egg. How could we help it live, a creature no larger than your thumb nail? Not knowing what else to do, we placed it back into the oven to rest. I despondently returned to my household duties, feeling defeated.

Later my work brought me near the oven door, Did I hear a faint "peep-peep"? As I opened the oven door, the spring on the hinge rasped forth a protesting squawk, but to our baby's ears it was its' mother's voice, signaling she had its' first meal. With all the strength it could muster, it raised its' wobbly head high, beak open, waiting for the food.

Of course, we had none; but you should have seen us scramble to find some tasty insect! The children looked for its' meal as I ran for the tweezers with which to feed it. Bruce came with a small house fly which I grasped with the tweezers. Again we opened the rasping oven door, again the fledgling raised its' head and this time it was rewarded. With the tweezers I placed the fly far back into its' throat and the fledgling swallowed its' first food.

But now came the greatest spectacle of all! The baby was so transparent you could watch the fly go down its' throat, along the pulsating main artery in the neck, which was the size of fine sewing thread, disappear behind the lungs ribboned with hairlike veins, past the rib bones, that were hollow so they looked concave and convex because you were seeing both the outside and the inside of the bone at the same time, into the gizzard positioned close to a very large liver. Soon the fly worked into the intestines and you could watch the muscles push the waste on through. A truly marvelous lesson on the wonders of nature! We continued out the day feeding it flies and mosquitoes frequently, watching its' organs working at digestion.

By evening we knew it had not eliminated any waste. I know the mother

bird assisted in that matter for every time she enters her nest with food, she leaves with waste, dropping it outside the nest. Being the fledgling was transparent we could see waste gathered near the vent.

But how to help it? We discussed this and decided on a plan. We lubricated the fine end of a toothpick and inserted it very carefully into the vent. The fledgling felt pressure, strained to remove it, completing the elimination perfectly!

The next morning the hungry baby greeted us. We continued the feeding schedule, leaving it in the oven between feedings to keep it warm. By noon we knew how hard a mother bird works to find food for several babies when we had so much trouble finding food for only one!

Friendly neighbor children volunteered to bring flies from around their homes. Soon I had little visitors, rapping at my door, bringing jars of freshly swatted flies. The older children brought dozens. The smallest offer was from a three year old — it contained two flies! But all donations were appreciated, whether they were many or few.

During the second day we gave the fledgling two grains of grit, to aid in digestion, and of course the regular flies and mosquitoes. It was also given one drop of water, with an eye dropper, occasionally. The suggestion to name it was presented and Jeremiah was chosen. By evening we noticed he was sprouting a fine growth of tail and wing feathers.

By the fourth day he could help himself in his own elimination process although he would wait until I held him out of his makeshift nest before he would relieve himself. If I was not quick enough to lift him out of the nest, he would thrash wildly about; my signal to hurry, but he never made a mistake and dirtied his nest. I was amazed at this strong instinct.

The fifth day Jeremiah commenced to grow feathers on his head and body, one strip on the back, one on each side,

below the wings, running horizontally with the body. I also noticed a fine crease appear where the eye would soon open. Up until now the skin was completely smooth with only a gray color beneath the skin suggesting where the eye would be located.

The sixth day dawned and I found he had fallen out of his "cover" nest had lain on his back for some time in the box where the cover was placed. He was sick and slow to eat. I thought our fledgling would surely die! We constructed another nest of a plastic cup lined with a deserted Chipping Sparrow nest and Susan's "Barbie Doll" fur stole. Jeremiah loved the fur and snuggled into its softness. By nightfall he had improved.

By the end of the first week, I discovered he could recognize voices. Sound fantastic? I thought so too, but several instances proved this to be true. Jeremiah had no sight as yet so the credit is due to his excellent hearing alone. I always talked to him when I came to feed him and he would open his beak at the sound of my voice but this day I was in a hurry and didn't speak. The radio was on and a man was singing. I picked up his plastic nest and he snuggled low into the nest, refusing to eat. I said, "What's the matter, Birdie?"; as soon as he heard my voice he raised his head for the meal. The next day my mother came in as I was feeding him. He had been eating but when he heard her voice he hid deep in his nest. When I spoke, he again raised his head to eat.

During the second week he could lift himself out of the nest for an elimination. His eyes also opened, watery and blurry looking at first, but they developed into excellent sight. By this time, Jeremiah had achieved a better sense of balance and didn't fall over if he wasn't braced on all sides. The feathers were growing well too, although we still didn't know what kind of a bird he was.

The third week was by far the most trying. His appetite was unsatisfiable so we changed to feeding him small grasshoppers, soaked bread, and cooked sweet corn. He chirped loudly

all day; then we knew he was a House Sparrow. No longer willing to stay in his nest, he would hop up and down, flapping his wings, exercising the muscles needed for flight.

I was also being teased for having raised "just a sparrow" and "how can you teach him to fly?" was the saying around the house. Fortunately, he learned to fly by himself, all down hill at first, but he improved. I'm afraid flying is one thing I could not have taught him to do!

We could not have him flying loose about the house, so for two days he lived with Penny, our parakeet.

That didn't work well either so when he was four weeks old we put him on the sun-deck. There he roosted on some driftwood that hangs on the table for decorative purposes, and flying to the railings and nearby trees. When we called "Birdie, Birdie" he would fly down to our shoulder or hand to eat the food offered him.

I worried lest he may get eaten by a cat, or stepped on, as he had no fear. He would perch on Banjo, our dog, and Samson, our little pig. When Susan rode on Tonka, her pony, he would ride along on the pony's mane. As time progressed though Jeremiah became more afraid, for which I was grateful.

In the evening he would always return to the driftwood to roost. We have placed a covered box there with an opening cut into one end for him to enter and leave at will: Inside there is a pencil for a perch and he is so content there! He sings a little sing-song tune to put himself to sleep, just

as a baby chick or turkey does at dusk.

Now Jeremiah is seven weeks old and finds much of his own food. He goes with the other sparrows but returns often during the day for a "hand-out", to rest, or just to be held and loved. If you cup your hand he will snuggle down in it, gently picking and pulling your fingers over his back to keep him warm and secure. If he sees an opening in your clothes, he will crawl in there, turn himself around and peek out at you or maybe crawl into your collar on the back of your neck. There our Jeremiah will sit, eyes closing sleepily, singing his silly sing-song tune, and outwardly displaying his contentment.

I know the day will come when he will not return to us. Perhaps he will find a mate; I hope so, for this is as it should be. Maybe he will get shot by a boy with a BB gun, a farmer with his rifle, or some predator of birds may claim his life. This I can not change nor control as he is on his own now. It would not be right to keep him caged, depriving him of freedom, which is rightfully his.

Some people say I am a fool to waste my time and effort on such a thankless task. My reward is seeing these beings respond to care and attention; to be returned to the way of life that they were destined to live. I find great satisfaction being a caretaker of the Lord's creatures whether their value be great or minute. For it is written in Matthew: chapter 10, verse 29 "Are not two sparrows sold for a farthing? yet one of them shall not fall to the ground without your Father". *Rural Route No. 4, Glenwood, Minnesota.*

LARK BUNTING OCCURRENCE IN SOUTHWESTERN MINNESOTA

Bertin W. Anderson and S. Peter Getman

In the past 75 years the Lark Bunting has been an erratic visitor and occasional breeder in western Minnesota. During the

summer of 1964, however, we observed a large breeding population in Rock and Pipestone Counties in the extreme southwestern corner of Min-

nesota. The purpose of this report is to offer some discussion of the occurrence of breeding populations of Lark Buntings in southwestern Minnesota. In addition, a few data are presented on observed body weights, gonadal sizes and molting conditions.

We first observed Lark Buntings on June 20, 1964, in the southwestern corner of Rock County. We counted 12 breeding pairs in a hilly field which had apparently been plowed at the end of the preceding summer. The vegetation was quite sparse and bare ground was visible in many patches. The next day, June 21, we found several breeding pairs in an area seven to ten miles north of Luverne. This area, the most elevated area in the county, is located near the eastern edge of a quartzite ridge occupying the northwestern $\frac{1}{4}$ of Rock County and the southwestern $\frac{2}{3}$ of Pipestone County (Winchell 1884). The agriculture in the area is confined largely by the grazing of cattle. On July 18, the authors flushed a female from a nest containing two eggs. On the same day we observed many juveniles in the area. On several occasions in August the authors found molting adults and estimated that as many as a thousand juveniles were in the general area.

Andrewartha (1961) lists four major categories of the environment which can be recognized by the way that they influence an animal's chance to survive and multiply. These categories are: (a) weather, (b) food, (c) other animals and pathogens, and (d) a place in which to live. The right combination of these categories constitute a favorable breeding environment. Agricultural practices have eliminated much of the Minnesota prairies, hence Lark Bunting habitat (Roberts 1932). The quartzite ridge in Rock and Pipestone Counties is still prairie and only grazing is done in the area because of the rocks. Even in this prairie area Lark Buntings are not present every year. We have investigated the possibility that precipitation may influence the suitability of the area as Lark Bunting habitat.

Roberts (1932) reports that Lark Buntings were common breeders in

the southwestern corner of the state in 1895, 1897, 1900 and 1927. Our observations indicate that 1964 can be added to this list of years. Roberts also reports that they bred in Minnesota, but in smaller numbers in 1901 and 1929. Records from *The Flicker* (1936) indicate that Lark Buntings nested in small numbers in southwestern Minnesota during the summer of 1936. Because 1964 was very dry in southwestern Minnesota we checked the files of the Minnesota Weather Bureau for the past 75 years (1) and found that there seemed to be a correlation between the occurrence of breeding Lark Buntings and below average precipitation. (See figure I.)

We found that in the years in which Lark Buntings were common nesters in southwestern Minnesota, the total rainfall from January to June averaged 10.74 inches. The average rainfall in May and June during these years was 2.70 and 2.80 inches respectively. In 1901, 1929 and 1936, the three years in which Lark Buntings were rare breeding birds, the six-month average from January to June was 11.69 inches, the May average was 3.12 inches and the June average was 3.69 inches. In the 63 years prior to 1964 in which Lark Buntings were not known to breed in southwestern Minnesota the sixth-month average was 12.19 inches, the May average was 3.43 inches and the June average was 3.76 inches. Since the absence of Lark Buntings since 1950 is more certain because of more accurate records, the average precipitation for the years 1950 through 1963 was checked and found to be 3.85 inches for May, 4.07 inches for June and 12.47 inches for the six-month period. The mean precipitation in the years in which Lark Buntings were common breeders in southwestern Minnesota and the years in which they were not known to breed in Minnesota are significantly different at the 90 - 95% confidence levels. On this basis we hypothesized that Lark Buntings are most likely to occur as

1. This figure was chosen because this is as long as records of precipitation from that part of the state have been kept.

breeding birds when there is significantly less rainfall than normal in southwestern Minnesota.

Since the rainfall for the first six months of 1927 was 15.87 inches, which is more than normal, this year does not seem to conform to our hypothesis. The rainfall in the month of June was only 2.31 inches; this figure is considerably below the 4.65 inches average for the years in which Lark Buntings were absent. In May 5.08 inches of rain fell, although, it is unknown whether this precipitation was evenly distributed throughout the month or whether it all fell during the first part or the last part of the month. At any rate, since the precipitation in June was below average we hypothesized that the rainfall in June and/or May might be critical in determining the suitability of the habitat.

Rainfall per se is not responsible for the presence or absence of Lark Buntings in southwestern Minnesota. Precipitation has some effects on the vegetation which may be essential for food, nests and the presence or absence of competitors. These aspects all need further investigation.

Furthermore, the ability of the soil to hold water, drainage and the effects of grazing also need investigation. We are attempting to show that precipitation is a fundamental factor and, after this is established, further studies can be conducted to interrelate other factors.

Of the 63 years since 1895 in which this species was not known to have bred in southwestern Minnesota, there was well below the 12.19 inch average precipitation in 17 years of these; however, the potentially critical months of May and/or June showed above average precipitation in eight of the 17 years. This still leaves nine years in which seemingly optimal conditions existed as far as precipitation is concerned. This is not unexplainable. This absence of Lark Buntings might be explained by:

- 1) a relatively low population on the normal range, thus a small pioneering population segment;

- 2) low temperature in June and July;
- 3) Water saturation of the soil the previous fall, hence relatively high soil moisture in the spring;
- 4) a relative absence of observers to report the presence of the species.

In 1901, 1929, and 1936, Lark Buntings were known to nest in limited numbers in southwestern Minnesota. This could be explained by larger populations than the normal range could accommodate, forcing yearling birds and other less successful intraspecific competitors to pioneer. Finding fair nesting conditions in scattered areas in Minnesota, some were able to establish territories while others were forced to roam the countryside in nomadic flocks. In years in which breeding Lark Buntings were absent in Minnesota and in which there was a large pioneering segment from the normal range, they probably failed to nest here because of the complete unsuitability of the area as nesting habitat.

A brief review of some factors which help explain the periodic occurrence of animals in areas outside of their normal ranges is in order. Sub-optimal conditions within the normal range is known to be the cause of erratic movements. Marshall (1959) has summarized evidence showing that the presence or absence of critical environmental factors may delay or completely inhibit reproduction in birds. Among ducks and other marsh birds water level is of critical importance (Johnsgaard 1958, Mendall 1958, Rogers 1964, Welter et al. 1958). In Australia the Pink-eared Duck and the Grey Teal do not breed at times of drought and often wander about and breed when they find suitable water levels (Frith 1959). Rogers (1964) has shown that if there are low water levels on the breeding grounds of the Lesser Scaup breeding is much reduced or does not take place. Bary (1962) and Marshall (1958) have presented similar data for the Atlantic Brant and the Ring-necked Duck, respectively. Gunderson and

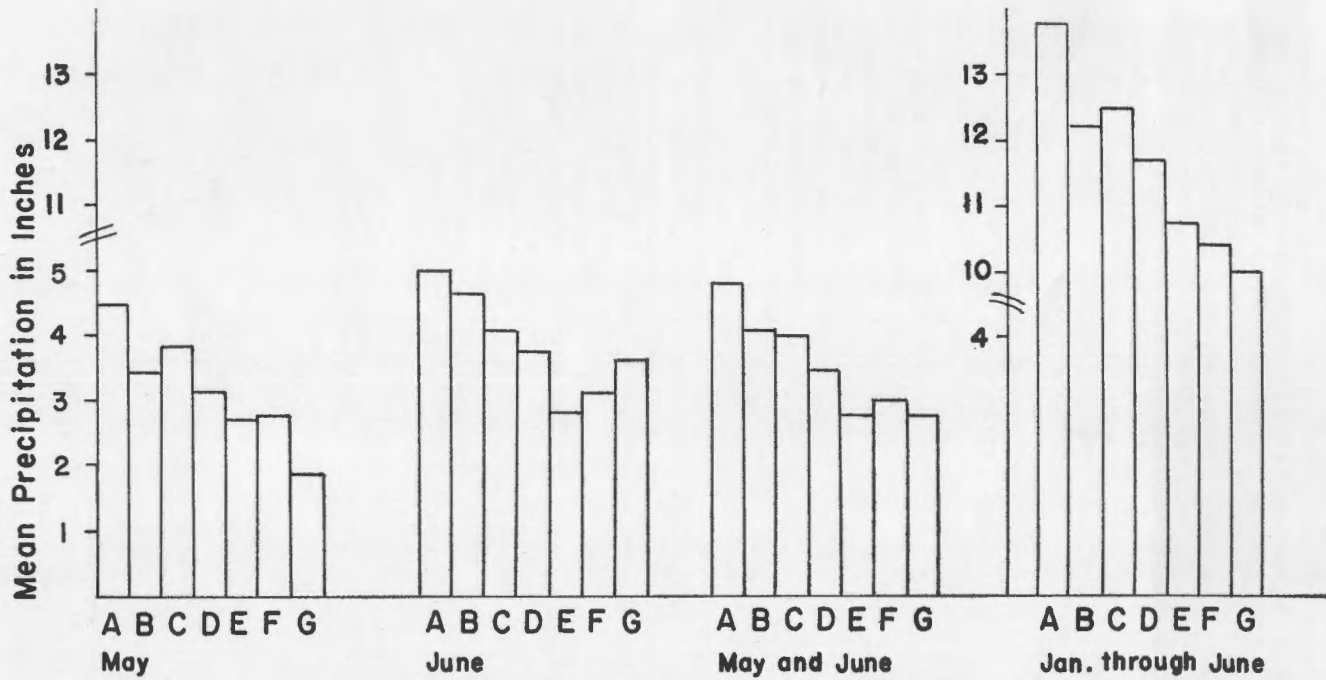


Fig. I.

- A) Mean precipitation in an area of Minnesota in which Lark Buntings are nearly always absent (19 yrs., so. Rock Co.)
- B) Mean precipitation, years in which Lark Buntings were rare or absent as breeding birds in southwestern Minnesota (63 years since 1895).
- C) Mean precipitation, years of absence of breeding Lark Buntings since 1950 to show the rainfall in a period in which more observations have been made (1950-1963).
- D) Mean precipitation, years in which Lark Buntings were known to breed in small numbers in southwestern Minn. (3 yrs.)
- E) Mean precipitation, years in which Lark Buntings bred in large numbers in southwestern Minnesota (5 yrs.).
- F and G) Mean precipitation in Hyde (21 years) and Jones Co. (19 years), So. Dak. These represent areas in which Lark Buntings breed annually.

Beer (1953) report that the Richardson's Ground Squirrel occurs in Minnesota during years of drought and retreat westward when normal rainfall occurs. Hansen and McNight (1964) have presented evidence showing that when the prairie potholes are struck by drought, ducks normally found on the prairie are found in Alaska. This movement is presumably a search for suitable unoccupied breeding areas. Hansen and McKnight report that some species of dabbling ducks nest successfully far out of their normal ranges in times of drought. Emigration under natural conditions occur when there is overcrowding in the Migratory Locust, lemming, grouse, Snowy Owl (Grass 1947), Snowshoe Rabbit (Cox 1936), Arctic Fox (Braestrup 1941), Gray Squirrel and occasionally in other species (Dymond 1941, Heape 1931). Overpopulation may be related to the lack of food in most of these examples.

Similarly, the sporadic occurrence of Lark Buntings in Minnesota could be explained by the unsuitability of habitat in normal range and by population pressure. When there is a large amount of rainfall in certain areas within the normal breeding range of the species and they find nesting conditions unsuitable, they may move to nearby suitable areas. Even in South Dakota, where the Lark Bunting is a common nester (A.O.U. 1957), certain areas may be acceptable one year and unacceptable the next. For example, in 1906 the precipitation in Hyde County, South Dakota, was higher than average. Perhaps this factor caused the birds in this area to search for more adequate nesting sites in southwestern Minnesota where rainfall was below average. In years in which a large Lark Bunting population occurs within their normal range and when southwestern Minnesota experiences normal or above normal precipitation the species is probably prevented from nesting in the state because of their inability to compete with local dominant species already adjusted to a

habitat created by the relatively greater precipitation. Competition in this sense has been eloquently reviewed by Mayr (1963). A list of potential competitors would probably include the Dickcissel, Bobolink and the Savannah Sparrow, among others. Further investigation is needed on inter-specific competition.

The second portion of this study concerns the birds that were collected. Data from Table 11 includes the weight, size of testes, and per cent of molt of Lark Buntings on two June dates and two July dates as opposed to these measurements on two August dates. The June and July data are a reflection of the breeding condition of the birds. At that time of year they are under considerable stress from the rigors of setting up territories, courting, and defending their territories. These activities require energy and this is indicated by the lower weight of the June and July specimens as opposed to the August specimens. The increase in weight of the birds in August is also due to the deposition of fat in preparation for migration.

The size of the testes averaged about 13x8 mm for our June and July specimens and about 4x3 mm for our August specimens. This decrease in size of the testes from July to August indicates a cessation of the breeding season between these months. Through July 18 none of the adult males collected had begun to molt. By August 1, however, the males collected were estimated to have completed 10—58% of their molts. The lone male collected on August 22 was estimated to have completed 78% of its molt (see figure II). Males were seen, however, which seemed to have completed less than 10% of their molts on August 1, and less than 73% on August 22. Our samples of adult females and juveniles were not sufficient for us to make any comparisons or valid conclusions about weight differences, reproductive conditions, or percentages of molts.

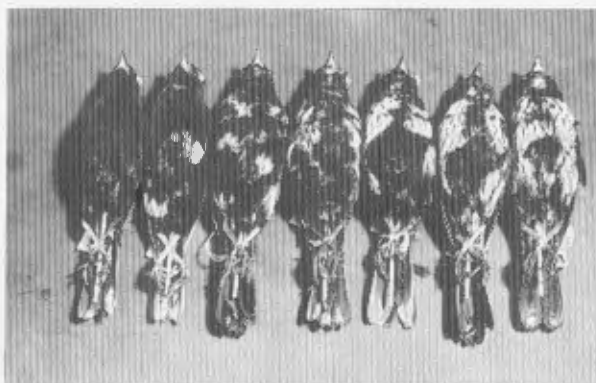


Fig. II. Successive stages of molt in adult males from July 18 to August 22

ADULT MALES

Table I	No.	Weight (grms.)	Size Testes (mm)	% molt completed
20 June	1529	37.5	13x8=104	0
20 June	1532	37.7	12.5x8.5=106	0
21 June	1543	37.4	12x8=96	0
5 July	1574	36.7	11x8=88	0
18 July	1600	40.0	14x9=126	0
18 July	1601	38.6	14x8=112	0
18 July	1603	37.3	15x8=120	0
Mean		37.9	107	0
	No.	Weight (grms.)	Size Testes (mm)	% molt completed
1 August	1613	40.1	7x4=28	10
	1614	46.4	3x2=6	23
	1616	40.1	4.5x3.5=16	10
	1623	38.7	3x2=6	58
	1627	40.7	4x3=12	40
	1629	41.1	5.5x4=22 0	23
	1628	42.1	3x2=6	40
22 August	1708	40.5	4x3=12	73
Mean		41.2	14	40

SUMMARY

1. During the summer of 1964 many nesting Lark Buntings were observed in the two southernmost counties of the western border of Minnesota, and some were collected.
2. Data gathered from the Minnesota Weather Bureau and from records of the presence of the species in Minnesota indicate that precipitation may be an important environmental factor in determining the acceptability of the habitat for nesting populations of Lark Buntings.
3. From June through August Lark Bunting males show an increase in weight, a decrease in testes size, successive degrees of molt.

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COMMENTS ON THE DISTRIBUTION AND ABUNDANCE OF THE LARK BUNTING AND OTHER PRAIRIE FRINGILLIDS IN MINNESOTA AND NORTH DAKOTA

Edmund A. Hibbard

While driving north June 1, 1960, on Highway No. 75 approximately five to ten miles north of Breckenridge, Minnesota, two male Lark Buntings were seen to fly from a roadside fence which bordered a grainfield. In 1962 I became curious about the present status of this bird and other prairie species in Minnesota and reviewed issues of *The Flicker* back to 1956 in an attempt to find out how commonly it had been seen here in recent years. In this six year period this species was reported only five times for Minnesota; three times for western Minnesota (Lac qui Parle County—1956, 28:167, and 1962 34:57 and Mahnomen County—1960, 32:78), and twice from eastern Minnesota where it should probably be considered accidental (Cass-Wadena county line—1961, 33:118 and Rice County—29:115). In the past two summers, however, there have been a number of Minnesota sightings of the Lark Bunting reported in *The Flicker* and *Loon*. These include a nesting record from Lac Qui Parle County for May 31, 1964 (1964, 36:88-89) and records from northeastern Minnesota at Schroeder and Two Harbors (1964, 36:58). In addition there have been a number of sightings along the western border of Minnesota from Rock County northward through Lac Qui Parle and Traverse counties. This Lark Bunting irruption is discussed at some length in the Audubon Field Notes for 1964 (Vol. 18, No. 4 and 5; Vol. 19, No. 1) in the reports from the western Great Lakes and Northern Plains Regions.

In the light of the above recent information on the status of this bird in Minnesota, I would like to comment on some observations made in North Dakota between 1952 and 1961. During this period the writer was either living in North Dakota or spending most of

his summers there and he did extensive field work in various parts of the state, living in three different areas (Bismarck, near Jamestown and Riverdale at the site of Garrison Dam). In the springs of 1952-1954 considerable time was spent in the range of this species west of the Missouri River. The springs and summers of 1955 and 1956 were spent largely in the Missouri Coteau area in the Cleveland-Medina vicinity. Six weeks of the summer of 1957 were spent collecting mammals in various parts of the eastern half of the state and all or most of the summers of 1958-61 were spent in the Missouri Valley area, especially in the Riverdale vicinity.

Information gained from these experiences led me to consider this an abundant bird in most years west of the immediate valley of the Missouri River. In this west river country my earliest spring arrival dates for this species were May 7, 1952 (vicinity of Beach) and May 12, 1955 (Glen Ullin). Usually a week or more later this bird might be seen in very large numbers (ie. notes for May 13 and May 21, 1953 indicate that it was abundant and an occasional road tally might log as many as 5-20 birds per mile. In the immediate vicinity of the Missouri River this bird was seldom seen in such large numbers but was often quite common, some years more so than others. One such year was 1960, when the writer was making breeding bird censuses in the Riverdale area. This work included censuses of two prairie areas not far from Garrison dam. There were large numbers of these birds that year in the prairie about the town of Riverdale. One often saw flocks of 20-40 early in the season. The density of breeding pairs on a 25 acre "high, dry, rolling prairie" study

area the writer had under observation indicated that there was a population of approximately 20 pairs per 100 acres and several nests were located. This breeding density was exceeded only by one other species on the study area, the Chestnut-collared Longspur, whose estimated population per 100 acres was 32 breeding pairs. My information on the abundance of this bird in 1960 is substantiated by comments of personnel from nearby Snake Creek Refuge which appeared in the Audubon Field Notes ("they were nesting everywhere — with approximately 10,000 to 15,000 birds on the refuge" —Audubon Field Notes, 14:458).

Eastward, between the Missouri and James rivers this species occurs sporadically and is never as abundant, although it may be seen more frequently as one nears the Missouri River. In 1955 I saw only a few pairs during a whole summer spent in the Missouri Coteau area near Cleveland and Medina. The next year (1956) it was somewhat more common. Scattered males were seen in the Driscoll, Gackle and Streeter areas and several pairs were seen in June and July on my Cleveland waterfowl study area. On July 16, 1956, I listed it as fairly common in the Chase Lake area northwest of Medina which at that time had a large amount of the ideal short grass habitat preferred by this species. In this area, however, it was never as ubiquitous a bird as I had found it in earlier years west of the Missouri River or as I found it along the Missouri River in the Bismarck-Riverdale areas. I doubt if the population in 1955 and 1956 in the Missouri Coteau area approached five percent of that found in more western areas in 1952-1954 and in 1958-1961.

From considerable field work done in the early 1950's and again in 1957 in southeastern North Dakota, I would consider this bird rare east of a line from Oakes to the Lisbon-Enderlin area and I have never recorded it from the Lidgerwood-Hankinson-Wahpeton area. I'm sure it must occur here in certain years but I spent considerable time in this area and never observed it. Much of the grassland here tends

to be more of the taller type favored by such species as the Bobolink. Considering the foregoing, I was rather surprised to see the Lark Bunting in western Minnesota and then read a number of reports it had been rare or absent in adjacent parts of North Dakota. Historically, of course, it was originally quite common in southwestern Minnesota as Roberts 1932, *Birds of Minnesota*, Univ. of Minn. Press, p. 381-385) found this bird a common resident in this region prior to 1900.

Interestingly enough the distribution of the Chestnut-collared Longspur in North Dakota seems to quite closely parallel that of the Lark Bunting. This species which also is abundant from the Missouri Valley westward scarce east of the James River. I never looked specifically for this species in extreme eastern North Dakota but can recall seeing this species in this area only while landing or taking off in airplanes from mowed landing strips which were excellent duplications of the type of habitat normally found further west. In this highly agricultural area this may be one of the few available habitats remaining.

In July of 1961, I was surprised to find another prairie species that I had previously considered rather scarce in my home area of northern Sherburne County near St. Cloud. This was a Lark Sparrow recorded July 12, 1961, approximately 10 miles southeast of St. Cloud. I had seen this species only once before in the St. Cloud area (June, 1950) although I had been largely absent from the state in summer months since 1950 so I had little opportunity to observe it. It was again recorded May 20, 1964 while on a field trip with a St. John's natural history class. This record is from the Sand Dune State Forest area in central Sherburne County and was from a typical prairie area that was largely surrounded by a bur oak and jack pine forest. This area also appears to be suitable for Field Sparrows and they are occasionally heard in this and similar habitat in northern Sherburne County.

According to records listed by Dr. Roberts (op. cit. p. 402), the Sherburne County area may lie near the

northern range for this species in the east-central part of Minnesota. He cites records for the Lark Sparrow in this largely wooded eastern part of the state from only as far north as Elk River (Sherburne County) and from Isanti County. Recent reports in *The Flicker* are nearly all from south or west of the Twin Cities region except for one record by Brother Theodore from "east of Anoka" June 13, 1959 (31:73, '9), where it is reported not uncommon in the Anoka Sand plain area. Since I began this write-up in 1962 an additional sighting for Sherburne County has been published. This was a bird seen by W. R. Pieper and R. Huber June 17, 1962, also in the Sand Dunes State Forest (1962, 34:85). A preliminary breeding distribution map for this species which appeared in the Audubon Field Notes (1947, 1:133) also shows the St. Cloud area to be on the northeastern edge of this bird's breeding range in this portion of the state.

A check with some of the St. Cloud State College biologists also indicate that this species has been seen but rarely in this area. Dr. Harry Goehring lists one record in his files (Which

goes back 17 years), also from Sherburne County near Clear Lake, while Mr. David Grether stated that he had seen it only once in the prairie area around Little Rock Lake north of St. Cloud. Mr. Nestor Heimenz, an active bird expert in the St. Cloud area, informs me he has found this species nesting only very locally and sporadically in past years. He has on older nesting record for Sherburne County from just southeast of St. Cloud and another for Stearns County near the town of St. Augusta. I suspect that this bird and other prairie species may gradually pass out of the picture in Sherburne County areas as much of the remaining grassland to be found in this oak savannah region is being rapidly converted to pine plantations. There are a few remaining prairie areas in the Sand Dunes State Forest area where this bird, along with many distinctive plant species, may continue to thrive. I have made suggestions to people concerned with this area that at least some of these small local areas remain as they are and not be subjected to tree-planting.—*St. John's University, Collegetown, Minnesota.*

HINTS ON IDENTIFICATION*

Robert B. Janssen

The longspurs as a group are most difficult to identify both spring and fall because of their shy nature and the difficulty in approaching them. In the fall this problem is even greater be-

cause the birds are very similar in plumage.

**This is the first in a new series of articles that will appear in THE LOON at various intervals. In this section there will be discussions on the problems of identifying certain species that are difficult to separate in the field. The articles will also summarize the occurrence or possible occurrence of these species in Minnesota. Future articles will deal with gulls, loons, and certain shorebirds and sparrows. Your suggestions and contributions will be appreciated.*

Of the group the Lapland and Smith's Longspur in the fall plumage are the most similar in actions and appearance. The Lapland Longspur is by far the more common of the two species. Large flocks of these birds pass through the state during the spring and fall migration, especially in the western part of the state. On the other hand very little information is available on the Smith's Longspur. Roberts in *Birds of Minnesota* listed it as an uncommon spring and fall migrant in the extreme western part of the state. The only dates listed are three for the spring in April and May from Jackson and Marshall Counties

and three fall dates for September and early October, all in Kittson County. In the last ten years there have been a few observations made by Avifaunal Club members, mainly in November, indicating that the birds still pass through the western part of the state in limited numbers.

The breeding range of the Smith's Longspur is in Alaska, the Yukon and northwestern Canada. The wintering range is from Kansas, Iowa and Indiana south to Louisiana and Texas. If one looks at a map encompassing the above areas it becomes apparent that this species should migrate thru western Minnesota on a regular basis. It would appear that this species is either being overlooked during migration or because of a peculiar migration route it jogs around Minnesota to get to its wintering range. The later explanation seems hard to comprehend. No doubt because of similarity of plumage, close association with the Lapland Longspur in fall, difficulties of observations, and lack of interest in the western part of the state the Smith's Longspur is being overlooked. The lack of records in the spring is more difficult to explain but the same set of facts would offer a partial explanation even though the two species appear quite different in full spring plumage.

On October 24, 1964 I had an opportunity to study a mixed flock of Smith's and Lapland Longspurs. This observation took place 5½ miles north of Elbow Lake, Grant County in a large stubble field along the Pomme De Terre River. I immediately noticed

among the Lapland Longspurs several different looking birds. These birds were approximately the same size and gave the same call note as the Lapland Longspur. However, their underparts were very buffy, the outer tail feathers were white (very similar to the Slate-colored Junco) and most striking. There was a small white patch on the forewing. I identified the birds as Smith's Longspurs but I found no references to the white wing patch in Peterson's *A Field Guide To Birds*. Further checking revealed that this field mark is not mentioned in other books with the exception of Peterson's, *A Field Guide To Western Birds*.

The number of birds in the flock of longspurs was difficult to estimate because they were constantly milling about but I estimated 100 to 200 birds of which 20 to 30 were Smith's Longspur's. On October 25, late in the morning, I returned to the same area but found only a few Lapland Longspurs and Water Pipits. A heavy migration of longspurs had been noted passing over head earlier in the day.

A possible conclusion to be drawn from the above observation is that Smith's Longspurs should be looked for in flocks of Lapland Longspurs. The white wing patch combined with the buffy underparts and large amount of white in the tail feathers should separate them quite easily from the Lapland Longspur. It is possible the Smith's Longspurs passes very quickly through the state and this also contributes to the lack of records for Minnesota. 1817 W. 59th Street, Minneapolis, Minnesota.

THE CANADIAN LAKEHEAD

A. E. Allin

The winter of 1964-65 was very severe. Temperatures of 6.4°, 5.0°, 8.0° and 4.3° below the mean average were registered for December, January, February and March. December was the third coldest in 40 years and February the second coldest since 1886-87. In April the Lakehead ex-

perienced the fifth consecutive month with a sub-normal temperature, 1° below the 25.8° average. Snowfall to the end of April was 90.4" compared with an average of 90.2" for an entire winter. Relentless cold however prevented the usual thawing and there was a false impression that we had

a very heavy snowfall. Both precipitation and mean temperature were average for the first 24 days of May.

Some concern was felt for the deer herd but it is believed they wintered relatively satisfactorily. Heavy crusting of the snow on one or two occasions may have had a deleterious effect on the still-small population of Ruffed Grouse. Early formation of ice on lakes and streams resulted in few wintering ducks. They were even scarce on the swift-flowing waters of the Nipigon River where Common Goldeneyes usually winter in fair numbers. A few Mallards, Black Ducks, Common Goldeneyes and Common Mergansers wintered as usual on the open spring ponds at Dorion Fish Hatchery. The early winter status of *passerines* was discussed in these columns in *The Loon* for March, 1965. It is difficult to understand why Pine Grosbeaks were so scarce in the Lakehead Cities, where there was an abundant crop of fruit on the Mountain Ash when they were so common throughout the surrounding country. Some observers reported hundreds of these birds feeding along the Highway between Fort Williams and Grand Marais, Minnesota, particularly in the stretch through Cook County. They were last seen on April 4, in this District.

It is always difficult to determine when migration commences, as our first migrants include species which may also winter here in small numbers. On March 7, many flocks of Common Redpolls and Pine Siskins were reported between Pigeon River and Grand Marais. A few Purple Finches mingled with the smaller birds. However, this condition did not extend into Ontario and it was somewhat later that Pine Siskins appeared at our feeders where Purple Finches had fed with great flocks of Evening Grosbeaks since mid-December. N. Denis reported two Killdeers on March 16, weeks before they were expected. It may be recalled we had very early Killdeers several years ago when Lake Superior was also largely frozen over as it was this past winter. Common Crows were seen and heard on March 20, a few days later

than the average. Herring Gulls were also slow in making their appearance. We saw our first gull on March 28.

Heavy migration did not begin until the week of April 11. Black Ducks, Common Mergansers and Marsh Hawks were reported on April 11. The next day, Yellow-bellied Sapsuckers, Hooded Mergansers, and Great Blue Herons were seen. These were followed by Tree Sparrows, Slate-colored Juncos, Common Grackles and the first regular movement of Killdeers.

Migration lagged for the next fortnight. There was evidently a good movement of White-throated, White-crowned, and Harris' Sparrows during the first week of May and the Myrtle Warbler arrived on May 1. Migration continued in a steady but non-spectacular manner until May 16 when there was a marked movement of warblers at Whitefish Lake. There was no obvious wave, however, along the shore of Lake Superior. Rain fell during the night of May 18 and trees and shrubbery were full of warblers, and thrushes, particularly Swainson's, the next morning. By noon a stiff wind had arisen and practically the entire flight disappeared. It rained again during the early morning of May 21, and there was a spectacular migration of warblers that day. Two of us identified 16 species. None was unusual. It would be interesting if we could correlate these flights with reports of some movement through Minneapolis during the first week of May and the very heavy migration at Old Frontenac on May 8-9. Perhaps Duluth observations can help round out the picture?

Phenological data which indicated the overall weather conditions may be of interest. The ice went out of Whitefish Lake on May 8 but did not leave Lake Nipigon until May 16. A Mourning Cloak was seen on April 24 and a Milbert's Tortoiseshell on April 29. A hairy caterpillar of the Isabella Tiger moth was seen crawling over snow on March 29. Chorus Frogs were heard singing on April 25 and Wood Frogs on April 28. We heard an American Toad trilling on May 22 and Leopard Frogs were active on the same day. Crocuses were in bloom on April 1

and botanical tulips on April 29. Although hillsides were becoming green with opening leaves on the forest trees, it was a week later before White Birch trees in the Lakehead Cities turned green. By May 23, a few Serviceberry bushes were in flower.

Loons and Grebes: The Common Loon was late in arriving. It was first reported on May 16. Horned Grebes were seen on Whitefish Lake on the same date. These are regular but not common migrants despite their abundance off the shore of Lake Superior from Duluth to Hovland. I suspect their line of spring migration must take the majority across Minnesota, south of the Pigeon River border. They are relatively common locally in the fall. An early Pied-billed Grebe was picked up on land on April 7 when only patches of water were open on the rivers.

Pelicans to Bitterns: No White Pelicans and no Double-crested Cormorants have been reported. Great Blue Herons arrived on April 11, a few days behind schedule. Several American Bitterns have been seen.

Swans, Geese and Ducks: The first Whistling Swan was reported on April 18. Three were still present on the Pine River and two at Pays Plat on May 17. Canada Geese were reported migrating in numbers in early May. We saw a small mixed flock of Snow and Blue Geese in Neebing Township on May 10.

The migration of ducks was very poor. Probably most species were represented that we should expect but only in limited numbers. In the local harbor where hundreds to thousands of ducks are expected, there were very few. The first migrants were Mallards on April 10 and Black Ducks on April 11. Particularly, Pintails were not seen until April 30 when Blue-winged Teal also arrived. Hooded Mergansers were seen on April 16 and Red-breasted Mergansers and Green-winged Teal on April 29. As usual, American Widgeons were late arrivals; we saw our first on May 2. The diving ducks were also late. We saw Buffleheads and Lesser Scaup on April 25 and Greater Scaup on May

12. A few Ring-necked Ducks arrived on May 2.

An exception to the general scarcity was the Wood Duck, ordinarily one of our rarest ducks. We saw a pair on April 24 and possibly the same pair a week later. Subsequently two more pairs were reported in widely separated areas. On May 23, the Allins saw a male on a small creek in a wooded area; a female appeared from out of the woods, possibly from a hole-ridden dead Balsam Poplar. This requires further investigation as there is no record of the Wood Duck breeding in Thunder Bay District.

Hawks, Eagles and Falcons: Since Pigeon Hawks regularly winter at the Lakehead, and were reported on several occasions this past winter, it is impossible to determine a migration date for this species. The one seen on March 29 may have wintered here. The first migrant hawk was a magnificent male Marsh Hawk. Subsequently we were to see many more of these beautiful birds. Sparrow Hawks were not reported until April 14. Red-tailed, Rough-legged, and a Cooper's Hawk were seen on April 17. We saw an Osprey on April 16. A Bald Eagle was reported west of Whitefish Lake on March 28; C. E. Garton saw one at Dorion on the same date. We saw one in Cook County, at Mineral Center, on April 18.

Grouse to Coots: Biologists did not feel winter conditions were favorable for Ruffed Grouse. We have seen few this spring. A few Gray Partridge survived the winter. A Ring-necked Pheasant was seen by Mrs. Hogarth. A Sora was seen on May 8; the occasional American Coot has been seen.

Shorebirds: The water level of Lake Superior seems to be elevated in Thunder Bay and no beaches suitable for shorebirds are locally available. Many fields are flooded but are void of waders. Lesser Yellowlegs and Common Snipe were seen on April 29 and a Greater Yellowleg on April 30. We saw a Marbled Godwit on May 12. On May 22, C. E. Garton reported Pectoral, Baird's and White-rumped Sandpipers and we saw Semipalmated Plovers.

The absence, at least until May 26, of Ruddy Turnstones and Dunlins is difficult to explain. Sanderlings are accidental visitors in this area. American Woodcock have not been seen for several years but on May 19, we heard one, possibly two, in a new area near Loch Lomond Ski Jump. Common Snipe were winnowing in the same area. A pair of Upland Plover was seen on May 22.

Gulls and Terns: Herring Gulls are present in usual numbers but only a few Ring-billed Gulls have been seen. J. Lowcock reported two Bonaparte's Gulls on Whitefish Lake on May 22.

Mourning Doves to Owls: No Mourning Doves have been reported. (We had two reports in April for Cook County, one near Mineral Center, the other south of Lutsen). A Short-eared Owl was seen on April 27 and two more on April 28. The last Snowy Owls were reported on April 3, 8 and 9.

Whip-poor-wills to Woodpeckers: Whip-poor-wills returned to one area in mid-May. Mrs. R. M. Beckett reported a group of Common Nighthawks, at Chippewa Park on May 12. This is an unusually early date for this species; they were again reported on May 22. I. Browne saw a very early Ruby-throated Hummingbird on May 14. Chimney Swifts arrived the same day. Several Fileated Woodpeckers have been seen but no Three-toed Woodpeckers. Yellow-shafted Flickers are very common. The Red-headed Woodpecker has become one of our most uncommon summer residents. We were delighted to see 2 Red-headed Woodpeckers south of Fort William on May 23. A third was seen west of the city on May 24.

Flycatchers, Horned Larks and Swallows: The Eastern Kingbird seems relatively common. Eastern Phoebes are again seen about many bridges. A few Least Flycatchers were reported on May 21. We heard a Traill's Flycatcher on May 24. We have no reports of Horned Larks. Ordinarily Hoyt's and Northern are seen during migration. We anticipate the day when Prairie Horned Larks move into this region.

Tree Swallows returned on April

29. Barn Swallows are present in their usual numbers. A few Bank Swallows have been seen but this species remains scarce. Two colonies of Cliff Swallows were seen on May 22-23.

Jays to Wrens: Common Crows returned a few days later than usual and Common Ravens then moved back to their breeding grounds. Black-capped Chickadees were scarce all winter; we found a nest containing 4 eggs, in a fence post on May 16. The White-breasted Nuthatches wintered in the Paipooonge area where they nested in 1964. House Wrens returned on May 12, earlier than usual. We heard the tinkling call of a Winter Wren on May 24.

Mockingbirds to Thrushes: No Catbirds have been seen but Brown Thrashers have been reported on four occasions. These species entered this area about two decades ago. At first, the Catbird was seen more often than the Brown Thrasher, but in recent years the Catbird has been very scarce whereas the Brown Thrasher has become established as a regular summer resident.

Robins are very common. Usually there is a flight in early May after local birds are breeding. We did not see such a movement in 1965 unless this was the explanation for unusual numbers of Robins locally on May 20. This phenomenon was sufficient to cause comment. I did not see a Gray-cheeked Thrush, and Veerys and Hermit Thrushes appear scarce. There was a very heavy movement of Swainson's Thrushes on May 19, 20, 21. In early May we drove from the Canadian Lakehead south to Rochester, Minnesota, returning by Highway 61. We did not see an Eastern Bluebird, and only one had been seen locally in the first half of May. On May 15, a pair returned to a Neebing Township nesting box, and a few days later to one in Paipooonge Township. On May 23, 24, mates were seen in three other areas. For some reason their arrival this spring was delayed and possibly their overall status is better than believed earlier.

Kinglets to Starlings: Both kinglets returned in small numbers but no Water Pipits were reported. I do not

believe any Bohemian Waxwings have been seen in 1965. A few Cedar Waxwings have already returned. Few Northern Shrikes were reported returning to their summer homes. We have looked in vain for Loggerhead Shrikes where they nested in 1964.

Vireos and Warblers: To date the movement of vireos has been very poor. A few Red-eyed Vireos, only, have been reported.

As usual the first warbler to be seen was the Myrtle. A heavy movement of Warblers was reported at Whitefish Lake on May 15 and 16, including at least 8 species. There was no evidence of any movement at the Lakehead at that time. It was not until May 18 that Mrs. Blake reported a major movement of warblers of several species. Palms and Magnolias were particularly common. She identified one Parula, never a common migrant locally. On May 20 there was another wave of migrants and Mrs. Blake and I identified 16 species in Vickers Park. Female American Redstarts were abundant but only the occasional male was seen. If this is the major warbler movement, it preceded the hatch of minute *Diptera* on which the migrating warblers frequently feed. This hatch was not pronounced until May 25.

Bobolinks to Tanagers: Bobolinks had returned to two local stations by May 24. A few flocks of migrating Rusty Blackbirds were seen on May 2. We saw our first Brewer's Blackbirds on April 29. This species is now well established as a summer resident. Brown-headed Cowbirds are present in their usual numbers. On April 29, four males and 2 females appeared at

our feeders and spent the day probing the lawn deeply in the area where feeders had been established. It was impossible to determine what was attracting them but they were obviously probing deeply into this localized area of lawn. Two Scarlet Tanagers were reported on May 15 and two more on May 22. Baltimore Orioles are rare spring visitors. Possibly half a dozen have been reported in the past 25 years and with one exception, all have been males. A male was seen in Neebing Township on May 21 and another in the same general area on May 24.

Cardinals to Snow Buntings: As usual no Cardinals have been reported. It is a mystery why these birds have penetrated this area so rarely. Evening Grosbeaks remained at feeders in great numbers until May 1, when most "hosts" decided these winter residents could seek their natural food.

A few Pine Siskins are present. The Oregon Junco seen at a feeder in late November, successfully wintered there. Slate-colored Juncos and Tree Sparrows appeared on May 1, and White-crowned and Harris' Sparrows in the following days. Late Harris' Sparrows were seen on May 20 and 21 and a White-crowned Sparrow was still present in Rosslyn on May 22. The occasional Clay-colored, Swamp, and Lincoln's Sparrows have been seen. For the first time in many years, no Fox Sparrows were reported by Club members, nor were Lapland Longspurs. Snow Buntings were reported in February and March in small numbers. We saw a few on April 4 but none subsequently.—*Regional Laboratory, Ontario Department of Health, Fort William, Ontario.*

REQUEST FOR INFORMATION ON BLACK-CROWNED NIGHT HERONS AND GREEN HERONS

In connection with a research project concerned with the summer and year round distribution of the Black-crowned Night Heron and the Green Heron, I would like to solicit the help of persons in reporting sightings of specially marked birds. The birds under study will be marked in one or more of the following ways: U. S. Fish and Wildlife Service numbered leg band, colored leg band, and in some cases a "back saddle" and/or dyed feather patches. Please observe care-

fully all birds of these species seen, and report the marked birds in the following manner:

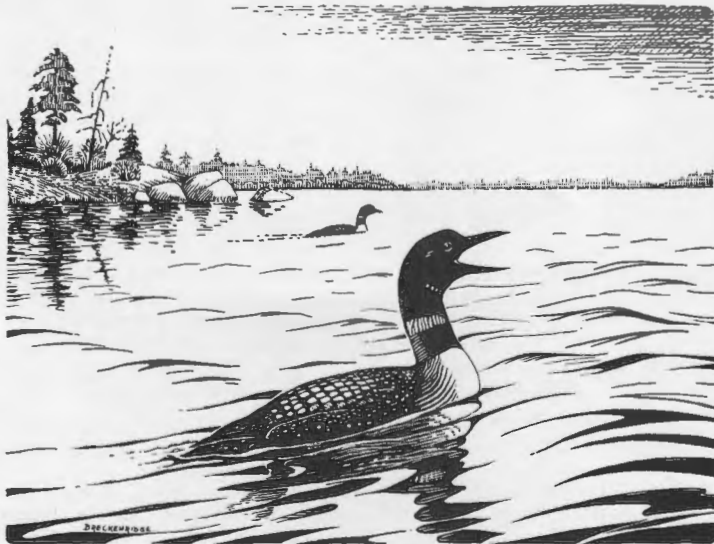
1. exact location of sighting: from nearest town so that I can find the precise spot myself, or give range—township—section, etc.
2. habitat: land (woods, field, etc.), water (lake, creek, etc.).
3. behavior: flying, feeding, sleeping, etc.
4. exact time of observations: i.e., 11:00 A.M., or 2:47 thru 3:34 P.M., etc.
5. number of bands on legs, and colors of bands (if any), and if at all possible the number showing on the colorband (only if number was **positively** identified by use of binoculars).
6. unusual coloring visible on body: colors and patterns used, and parts of body colored.
7. age of bird if known: immature or adult.
8. if bird is not alone, how many other herons (marked or unmarked) is it with?
9. species of bird: Black-crowned Night Heron or Green Heron.
10. observer's name and address.

I am interested in learning of the locations of all known Black-crowned Night Heron rookeries (nesting areas), their size, associated species, and age. Please send all information to:

Robert C. Paulson, Jr.
2504 College St.
Cedar Falls, Iowa 50613

LOON NOTE PAPER AVAILABLE

The Federated Garden Clubs of Minnesota have made available for sale, note paper with a beautifully reproduced picture of our state bird, the Loon. The illustration is done by W. J. Breckenridge, as pictured below. Each box contains 15 notes with envelopes. They are available at \$1.25 per box from the Federated Garden Clubs of Minnesota, 6633 First Avenue South, Minneapolis, Minnesota 65423.



NOTES OF INTEREST

ROSS' GOOSE AT ROCHESTER—On October 29, 1964, a single mature Ross' Goose (see front cover) was observed at Silver Lake, Rochester, Olmsted County by myself and Dr. Harold C. Hanson of the Illinois Natural History Survey, who made the actual identification and age determination. This same goose had been observed by myself from a distance nine days earlier, although it was not identified as a Ross' Goose at that time.

One other authentic observation of a Ross's Goose in Minnesota was made at the Round Lake Waterfowl Station in Jackson County on November 18, 1962. (Smart, G. 1963 *Flicker* 35:94-95).

Unlike a lone Blue Goose at the lake which is continually being harassed by the Canada Geese, the little Ross' Goose moves about freely and at will amongst them without being harassed and pestered. When leaving Silver Lake for feeding purposes, the Ross' Goose "adopts" a family group of the Canadas and proceeds to stay with them until their return to the lake. *Nick Gulden, Area Game Manager, Minnesota Department of Conservation, Rochester, Minnesota.*

Editor's Note: Many people had the opportunity to observe the Ross' Goose at Rochester before it left the area. It was last seen by Mr. Gulden on January 8, 1965.

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RING-BILLED GULL NESTING RECORDS FOR MINNESOTA—The recent Minnesota nesting record of the Ring-billed Gull (Hiemenz, 1964, *Loon* 36:133) has increased value because it represents a second (verified) and perhaps a third (unverified-sight) record for the state (c.f. Dickerman and LeFebvre, 1961, *Flicker* 33:23). The precedence of these observations is of lesser importance compared to the interesting questions and increasing significance provided by such repeated records. For this species, the 5th AOU Checklist (1957) does not list Minnesota as part of the breeding range, and southern and central Wisconsin is listed only as formerly within the breeding grounds. Accordingly valid nesting records for these regions may indicate range extensions. The questions arise: is former range being reoccupied; does this represent population pressure from more optimal breeding areas to fringe areas; is physiological adaptation resulting in absolute range extension for the species; is ecological alteration providing suitable nesting habitat not previously available; do these records merely indicate spotty nesting populations always present but undetected; how extensive is nesting of this species within the state; is the nesting population stable, growing, or decreasing? Future data may answer directly some of these questions and enable us to deduce the answer to others.

We can increase the value of future observations on this species by surveying all likely nesting habitat in one's region and maintaining records of these surveys. Further records of nesting will have enhanced significance if estimates or censuses of the population can be obtained. Perhaps we are witnessing the beginning of a southward extension of the nesting range for the Ring-billed Gull analogous to the northward range extension now apparent in the Cardinal. This possibility will add interest to bird observation in north-central Minnesota.—*Eugene LeFebvre, Museum of Natural History, University of Minnesota, Minneapolis, Minnesota.*

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POSSIBLE RING-BILLED GULL BREEDING AREA—From a letter to Raymond E. Naddy (reporter for the Duluth newspaper), dated December 21, 1964.

"I was interested in your article about a foreign sea gull being seen at Knife River (the Black-legged Kittiwake). Early in July of this year I noticed four strange gulls at our place in Big Bay at Hovland (Cook County). They are a dark mottled grey with sort of a tan tinge. They are not as timid as our local gulls . . . They are smaller than our gulls and have a smaller more graceful head and neck. We are located across the bay from a local fisherman and have dozens of gulls. They come when I call them to be fed and recently I counted four strangers. We know they aren't the young ones of this year's hatching as the difference is very definite . . . There is no picture in my bird book (Roberts) that looks like this gull so I haven't been able to identify it." Mrs. O. W. Sundquist, Hovland, Minnesota.

EDITOR'S NOTE: I would say that these four gulls were young Ring-billed Gulls and may possibly have been locally hatched. There are several sandy or gravel beaches in this part of Cook County that could provide the proper habitat. Any M. O. U. member who is in this area during the breeding season should check these beaches for possible Ring-billed Gull colonies so the expansion of the breeding range of this species in the state can be accurately determined.

Janet C. Green

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SURF SCOTER RECORD, NORMAN COUNTY, MINNESOTA—On October 4, 1964 a juvenile, female Surf Scoter was collected on the Agassiz II Wildlife Management Unit (T. 146N., R.45W., Section 21—10 miles northwest of Gary) Norman County, Minnesota. This bird was picked up as a cripple on the marsh by duck hunter Richard Weber and given to the author.

The positive identification was made with the aid of *Ducks, Geese, and Swans of North America* by F. H. Kortright and *The Birds of Minnesota and Neighboring States* by T. S. Roberts. Characteristics of the birds are: 1) bird dark brown, 2) entire wing brown—greater than 7 inches, 3) feathers of the forehead extending forward on top of bill nearly to level of nostrils, 4) dull white patches at base of bill and on side of head, 5) tail feathers—14, and 6) feet dull yellow—webs dusky. The sex was obtained by a cloacal sexing method. Age was determined using the tail feather method.

The bird was placed in the Minnesota Department of Conservation Collection.—Gerald H. Maertens, Asst. Area Game Manager, Section of Game & Fish, Route No. 3, Crookston, Minnesota.

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YELLOW-CROWNED NIGHT HERON IN THE ST. CLOUD AREA—A recent review of *The Loon* for records of the Yellow-crowned Night Heron in Minnesota indicates that this species has recently extended its range beyond southeastern Minnesota (see Huber, R. L., *The Flicker* 35 (3):102-103. It has been recorded as nesting in the St. Paul area (Huber, R. L., *The Loon* 36(4):134-135) and was reported from Morris in September (*The Loon* 36(4):120). This indicates that it may be worthwhile to record a sighting of this species near St. John's University. On May 21, 1963 a single bird was discovered by former biology student Joel Marshik and a friend. It was standing at the edge of a woodland pool approximately 40 yards from an abandoned road which runs through the St. John's woods. This was at a point approximately one half mile east of the campus. Marshik recognized it as an unusual bird and left immediately in order to locate someone who could verify his find. He was able to contact Mr. Nick Zaczkowski, biology professor at St. Benedict's College, who obtained a good look at the bird before it grew dark. Marshik took the writer to the area the next morning and the bird was still in the same pond. After carefully noting the differences between this heron, which I had never

seen before, and the Black-crowned species (with which I was well acquainted) I moved closer to the bird but it soon flew deeper into the woods in the direction of other woodland ponds. As final exams were then imminent, we returned to the campus. I looked for the bird again several days later but was unable to locate it. Nor was it seen by any of the other observers that spring.

In the spring of 1964 biology student Robert Russell and I checked out several areas where this species might be expected but we were unable to obtain any positive identifications. Russell did obtain a poor look at a medium-sized heron which flew from a lake shore near campus that could possibly have been this species. He was quite sure it was not a American Bittern and Black-crowned Night Herons are also locally scarce here, for none have been seen in the vicinity in the seven years I have been teaching here.—*Edmund A. Hibbard, Biology Dept., St. Johns Univ., Collegeville, Minnesota.*

* * *

YELLOW-CROWNED NIGHT HERON IN STEVENS COUNTY—On September 27, 1964 at about 4 o'clock in the afternoon, while looking over shore birds and waterfowl in a small slough one mile southeast of Morris, in Stevens County, Minnesota, I observed an immature Yellow-crowned Night Heron. The bird was observed with the sun at my back, in good light, through 7x50 binoculars and a 25x50 spotting scope at a range of 250 down to 100 yards.

I had it under observation for a total of about 40 minutes as it threaded its way in and out of cattails and grass on the far side of the slough. It walked very deliberately, keeping just above the waterline, most of the time, and frequently pausing in full view for a minute or two at a time. The bird immediately struck me as an immature Yellow-crowned Night Heron but as there have been few or no Yellow-crowned Night Herons recorded from central western Minnesota, I studied the bird carefully looking for characteristics which might be identifying. Its legs were distinctly longer than those of the Black-crowned Night Heron, a common bird in western Minnesota, and its body plumage was distinctly slatey throughout, with less streaking than that shown by the other species. The back in particular was slatey gray, finely speckled with white, not at all like that of the Black-crowned Night Heron.

I felt quite confident in making the identification, because I had had opportunities to observe immatures of both species feeding side by side in the salt water marshes of Long Island, New York hardly a month earlier.—*R. A. Grant, 111 E. 9th Street, Morris, Minnesota.*

* * *

WREN OBSERVATION—On July 22, 1964, while walking along a foot trail between Burntside Lake and Slim Lake in St. Louis County, I heard the typical song of the Winter Wren. The first thing which struck me as being unusual was that it seemed to be issuing from the lower branches of a deciduous tree rather than from the summit of a spruce or balsam fir, which is the usual perch used by a Winter Wren in song. Soon I caught sight of the wren, and to my amazement, both its appearance and its actions were those of a House Wren rather than of a Winter Wren. The bird hopped about from branch to branch rather deliberately, not with the extra-quick mouse-like activity of a Winter Wren, and I watched it at close range (about 15 feet) while it sang repeatedly, each time a perfect rendition of the Winter Wren's song, with which I am very familiar, having heard it many hundreds of times. Although I had my binoculars with me, it was so close that I could observe it much better with the naked eye. The bird was much larger than a Winter Wren, had a longer tail, and a much longer bill. I could clearly see that the lower mandible was a light flesh color. Also, the plumage was that of a House Wren, being a dull medium brown rather than a rich chestnut brown. All

in all, it was a perfectly typical House Wren in appearance and in habits, but sang like a bona fide Winter Wren, with all the fine, high-pitched trills that the Winter Wren is capable of pouring fourth.

Was this bird a hybrid, or was it a House Wren which had imitated and adopted the song of the Winter Wren?—*Alden F. Risser, Stewartville, Minnesota.*

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LARK BUNTING IN LAKE COUNTY—On the afternoon of May 24, 1964, my husband and I were driving down the Stanley Road, 2 miles west of Two Harbors. As we approached the intersection of the Stanley Road, and Highway 61, I saw a black and white bird in a sumac bush about 50 feet away. My husband stopped the car as I excitedly pointed to the bird and babbled something about a Lark Bunting. We both reached for our 7x35 binoculars, and observed the bird for a few minutes in excellent light and with the bird perched in such a manner as to give us a perfect profile view of it. He was entirely black with the exception of white patches on the wings, and he had a finch-like bill; in size he could be compared with a Bobolink. I hurriedly looked in the *Peterson Field Guide* to further confirm my identification and was very pleased to see that our bird looked exactly like the pictured male Lark Bunting in breeding plumage. During my perusal of the book he flew away and perched on a nearby chimney. We took off in hot pursuit, but he flew again and we lost him. We returned home and I put in a call to Jan Green in Duluth, but since it was a Sunday, I was unable to reach her, and we never saw our Lark Bunting again.

About ten years ago, I saw my first male Lark Bunting in the same general area, confirming my sighting at that time with the *Audubon Eastern Land Bird Guide* and being a beginner at birding, I did not realize at the time how unusual the sighting was for northeastern Minnesota.—*Ruth Kutcha, West Star Route, Two Harbors, Minnesota.*

* * *

BREEDING LARK BUNTINGS AND AMERICAN AVOCETS IN LAC QUI PARLE COUNTY—Among the approximately 140 species observed during the M.O.U.'s spring field trip of May 23-24, 1964 in central western Minnesota were Lark Buntings. Two were observed by T. Jelga and others on May 23 just north of Artichoke Lake in Big Stone County and on the following day, May 24, T. Jelga, the writer, and others found eight more (seven males and one female) scattered over a tract of weed-grown soil bank about one-quarter mile north of Salt Lake, Lac Qui Parle County.

With Ernest Strubbe, I returned to Salt Lake one week later on May 31 to look for certain evidence of breeding and after some search we located a nest containing four only slightly incubated eggs. (I took, blew, and have retained one as evidence of the find.) The nest was about three-quarters imbedded in the earth at the base of an alfalfa plant, was lined with grasses, and was in an area of rather sparse vegetation, immediately adjacent to a freshly plowed strip. The female was twice started from the nest within a few feet of us, appeared agitated during our inspection of the nest and returned to it fairly promptly after we withdrew. On that day we observed a minimum of seven male and three female Lark Buntings over an area of perhaps sixty acres. They appeared to be confined to the soil bank land. In the same habitat we also found numerous Dickcissels and Grasshopper Sparrows. One week later, when Ernest Strubbe returned to photograph the Lark Bunting nest, he found that it had been deserted and that but one egg remained.

As a second object of our trip of the 31st had been to observe and photograph the nesting American Avocets on Salt Lake, after checking the Lark Buntings we went on over the rise to the lake where we found that the three pairs of the previous week had diminished to two. Both of these were

nesting and each nest contained a clutch of four black spotted olive eggs. The nests were about 150 yards apart at either end of the sand bar on the south side of Salt Lake, were within 10 or 20 yards of the water, but on dry ground amidst very sparse grass. They consisted of slight depressions in the muddy sand, with a token lining of a few sticks. Although the American Avocets remained in close attendance, calling, engaging in distraction display, and flying about from point to point within 100 yards of us during our inspection of the nests, the incubating birds proved very shy and hesitant about returning to the nest even after we had withdrawn to a distance of about 200 yards.

It might be added that on a mid-August visit to Salt Lake I found the lake all but dry and could find no traces of either the American Avocets or the Lark Buntings.—*R. A. Grant, 111 E. 9th Street, Morris, Minnesota.*

* * *

WINTER PLUMAGED EARED GREBE SEEN IN MAY AT DULUTH—On May 6, 1965 I observed an Eared Grebe in Lake Superior off Lester River at Duluth. Seeing an Eared Grebe in this location is unusual enough (there are eight other observations from northeastern Minnesota) but this bird was doubly unusual since it was in winter plumage. The *Handbook of North American Birds* (Vol. 1, 1962) states that the breeding plumage is acquired by a "molt (which does not include wing), beginning Feb. and usually completed March or early April, exceptionally (younger birds?) not until May" (p. 80). The supposition that this was an inexperienced young bird helps explain its presence on Lake Superior hundreds of miles from its breeding range in the western part of the state. I watched the bird, which was about 100 yards off shore, for five minutes using a 10-60 power spotting scope. It was late afternoon and the sun was at an oblique angle to the lake whose surface was slightly choppy. I made the following notes on the appearance of the bird: small grebe with a short, slender black bill; brown back; buffy neck, slightly darker in back, contrasting fairly sharply with the white chest that just showed above the water; side of head quite light (buffy?), darker buff or brown on throat and top of head; eye gleamed red in the sun. Although I have never seen a winter plumaged Eared Grebe before, I am quite familiar with winter plumaged Horned Grebes and feel quite sure it was not this latter species.—*Janet C. Green, 1923 Graysolon Road, Duluth, Minnesota.*

* * *

COMMON GALLINULE AT AGASSIZ REFUGE—On August 4, 1964, a Common Gallinule was sighted by the undersigned and Mr. Donald Hammer (Wildlife Aid) during a waterfowl census. The bird was observed with 7x35 binoculars at a distance of 50 feet for approximately four minutes. The cover type included open water and cattail of medium density. Light conditions were excellent. The sky was clear and shadows did not interfere with the observations. I have previously observed the Common Gallinule as a common breeding species on the Shiawassee Refuge in Michigan. Not realizing this bird was rare to northwestern Minnesota, no field identification notes were recorded, although Mr. Hammer referred to Peterson's, *A Field Guide to the Birds* and verified the observation at the time of the sighting. There is no doubt in our minds as to the species of bird we had observed.

A description of the bird as it appeared in the field is as follows: The observed bird supported a red bill and was slate-gray in color with a strip of white feathers on the flanks. The bird's appearance and actions were similar to the American Coot.—*John H. Ellis, Agassiz National Wildlife Refuge, Middle River, Minnesota.*

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PEREGRINE FALCON IN WESTERN MINNESOTA—The recent elimination of the Peregrine Falcon as a breeder in eastern United States and the

relatively few recent records of the species reported for the state of Minnesota prompts me to put on record details of several recent observations of Peregrines in western Minnesota, where it appears to be an uncommon but regular migrant. As will be seen from the following comments all five of the individuals which I observed were found in close association with prime waterfowl and shore bird habitats.

On May 5, 1961 a large mature Peregrine was observed on the ground feeding on what appeared to be the carcass of a duck on the grassy sandbar in the midst of Salt Lake, Lac Qui Parle County. This bird was also seen by R. L. Huber the following day.

On May 7, 1963 L. K. Grant and I observed a mature Peregrine perched on a clod of earth about 100 yards from a shallow slough full of godwits and smaller shore birds, at Mud Lake, Traverse County.

On May 1, 1964, a half-mile from Frog Lake, Stevens County, but immediately adjacent to a small slough filled with ducks, I observed a mature Peregrine with a very full crop perched in an isolated tree.

On May 31, 1964, Ernest Strubbe and I watched a small mature Peregrine unsuccessfully chase shore birds at Salt Lake, Lac Qui Parle County. We had waded out into the middle of the shallow but very soft-bottomed slough in order to photograph from a sufficient distance two pairs of American Avocets on and around their nests. Suddenly we heard a sound like the crack of a whip and the sound of rushing air, and turned to see a Peregrine go by very fast within a foot or two of the water, putting up flocks of small to medium-sized shore birds as it went. The hawk continued on, crossing perhaps half a mile of water in what seemed to be only a few seconds, altering its direction to start up and pursue flocks of peeps, plovers, and the like. On reaching the far end of the lake, the hawk rose rapidly in great circles until it vanished from sight several hundred yards in the air. While lost from sight it must have drifted back at a considerable altitude to a point over our end of the lake because we next noticed it swooping with half-closed wings from a point high in the sky directly toward us. The bird again passed within 50 or 100 yards of us and roused flock after flock of shorebirds from the water in its passage. Again it rang up in large circles until lost from sight. On neither occasion was the Peregrine observed to strike at any of the birds it was pursuing, although opportunities did not appear to be wanting. Curiously, of all the shore birds present, only the American Avocets held their ground, merely freezing as the hawk passed.

On September 3, 1964 while observing an assemblage of American Coots and gulls on Lake Minnewaska, Pope County, L. K. Grant and I startled from the ground a small immature Peregrine. It rose from a plowed field within 50 yards of us and not 100 yards from the water, carrying with difficulty a Franklin's Gull, the dangling wings of the latter considerably impeding the hawk's flight, and apparently causing it to land again further out in the field. After about five minutes the Peregrine rose and circled to a great height, and flew away southward. We did not walk into the field to check the hawk's kill but did observe another Franklin's Gull, wounded by a blow which had nearly severed one wing at the base, fluttering in the grass at a point near the spot from which we had originally started the Peregrine. As this spot was also immediately beside a paved well-traveled highway the second gull may have been hit by a passing car rather than by the hawk—*R. A. Grant, 111 E. 9th Street, Morris, Minnesota.*

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BARROW'S GOLDENEYE—On April 13, 1965 Bill Litkey phoned me from the western part of Duluth and said he had been watching a male Barrow's Goldeneye in the St. Louis River at Fond du Lac. I agreed to meet him at the spot where he had been watching the bird (in the river along Highway 23

opposite Perch Lake) and immediately drove out there. The duck was still present, diving and preening with a group of Common Goldeneyes. I watched it for about 15 minutes with the sun at my back, using a zoom-lens spotting scope of 10 to 60 power at a distance of about 300 yards (estimated from U. S. Geological Survey 1:24000 map). During this time it was diving and swimming with a small group of Common Goldeneyes and occasionally made courting motions (head thrown back) at one (or possibly two) of the female goldeneyes present. Since the bill of this female was yellow only at the tip and since she was also being courted by male Common Goldeneyes, it was probably a female Common Goldeneye. The following description of the Barrow's Goldeneye is from notes taken in the field.

A Goldeneye type duck, definitely slightly bigger than the male Common Goldeneye. White patch on side of head between the eye and bill crescent shaped (more bulbous at bottom and concave posteriorly) in definite contrast with the circular patch of the Common Goldeneye. Head shape triangular and flat, not pointed, on top; head color appeared black. Sides and breast white; back black. Scapular markings quite distinct from those of Common Goldeneye: the slanting black and white bars were bordered across the bottom heavily with black and the black bars seemed thicker than those of a Common Goldeneye, giving an overall darker effect; posteriorly to the black bars were two white triangular areas, bordered by black, with the posterior one the larger. There was also a black shoulder marking between the side and the chest.—*Janet C. Green, 1923 Graysolon Road, Duluth, Minnesota.*

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BREWSTER'S WARBLER IN MINNEAPOLIS—On May 18, 1965 at the east entrance to the Robert Sanctuary, I believe I saw a Brewster's Warbler. I had lagged behind our Audubon group but when I caught up and reported the bird, they mentioned a student had just talked to them and said he thought he had seen either a Brewster's Warbler or a female Golden-winged Warbler. The bird that I saw was rather high in a tree, but the leaves were still small and I had a few minutes to observe it. It had the distinct yellow patch and yellow wing markings of the Golden-winged Warbler but no black at all. The throat and underparts were quite clear and white with only a faint wash of yellowish on the sides. There was a distinct line through the eye. I checked the bird in Peterson's Field Guide and then looked at the bird again, and except for the lack of as much yellow on the breast it agreed with the Brewster's Warbler. I ruled out the female Golden-winged because of the brightness of the crown and the clear white throat and underparts.—*Mrs. William H. Lender, 2817 Robbins Street, Minneapolis, Minnesota.*

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HYBRIDS—On May 6, 1965, south of Cannon Falls cemetery, Goodhue County, Emmett Hermanson and I observed several warblers. Time: about 5 P.M., weather: partly cloudy, temperature: about 72°. We saw a warbler which apparently was a Blue-winged except for the wing bars. These bars were as yellow as the color of true Golden-winged Warblers. The wing bars were spaced about as far apart as those of a Blue-winged Warbler. It had light blue-grey wings and a yellow breast. We believe this bird to be a hybrid, mostly Blue-winged. No singing was heard by us. Emmett's binnoculars are 9X35 B&L, mine are 10X40 WA.

On May 11, 1965, Emmett Hermanson, my son, Alison, and I went to old Frontenac. We arrived about 7 A.M. The sky was clear, temperature about 60°, and the wind northwest. We saw many warblers near the dump including several Golden-winged, a Prothonotary, and a Cerulean. Then a bird Alison called to my attention perched overhead briefly. I noticed the clear, white belly and underparts; then the light grey wings and the yellow wing bars. This bird did

not have the dark cheek patches of other Golden-winged Warblers that I have seen in the past. Alison saw the yellow crown. We did not hear this bird sing, but we did hear other Golden-wings in the vicinity. We called this bird a Brewster's warbler except for the absence of a yellow patch on the belly. Binoculars, 8X50 and 10X40 WA.—*Don Bolduc, 4211 Blaisdell Avenue, Minneapolis, Minnesota.*

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YELLOW-THROATED WARBLER NEAR LA CRESCENT—The Yellow-throated Warbler was observed on Pettibone Island, Wisconsin on May 30, 1964. Pettibone Island lies *entirely* within Wisconsin in the Mississippi River west of LaCrosse. The west side of the island where the bird was seen is separated from Minnesota by a 75 yard channel of the river. The bird was spotted about 20 feet up in an elm tree along the western shore of this island. After about 10 minutes it flushed across to the Minnesota side. Subsequent checking of the Minnesota side proved fruitless. At this time I was unaware of its status in Minnesota, presuming it was a rare migrant as it is believed to be in Wisconsin. Weather was mostly cloudy, 56-68 degrees, and the wind W-WNW at 8-12 m.p.h.

I was first attracted to the bird by its song which was quite infrequently rendered, only two or three times a minute. It at first reminded me of a White-eyed Vireo in that it was loud and had several accented syllables. The song was written down in the field as to-whee, ta-whee, to-whee, teew; just three double notes and a slur at the end.

The only field notes I marked down in the field were the dark gray back and side streaks. I also had noticed the yellow throat and breast which ran about half way down the front. From the distance I was at I only noticed one wing bar, not the normal two which are usually quite obvious on this bird.

The warbler migration appeared to be mostly over at this date. Yellow-throated Vireos were both seen and heard on this island shortly after I observed the warbler removing any confusion with this bird. Normally I know this bird as soon as I see it, having seen it often is coastal North Carolina, Georgia and Florida; however this one did not strike me as being a Yellow-throated Warbler at first. I could not and still can not figure out what else it may have been. Perhaps this was the Mississippi River subspecies (sycamore race) which is supposedly less strongly marked than the southeastern race although there is little in the literature about this rather uncommon race.

Based on my previous experience and the field marks noted I would say this was a Yellow-throated Warbler. However, due to the distance from the bird and there being only one observer, I advise this to be a quite hypothetical record. I also believe that for a first state record the observer should know it is new for the state.—*Robert P. Russell, Box 11, Collegeville, Minnesota.*

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POSSIBLE KIRTLAND'S WARBLER—I first saw the bird on Thursday afternoon, May 13, 1965. I observed him through my den window on the second floor, facing south. He was in an oak tree, flitting from branch to branch, nipping at the dangling acorn buds or "flowers." As he didn't quite fit the description of any familiar warblers (except the Magnolia) I wrote down his description as I watched. While he was still in the same tree, I got Peterson's Field Guide, and checked him point by point. Conditions were good: my range to him varied from 10-25 feet, mostly about 12-15 feet. He was there a total of about 15 minutes (that I saw him). I used 7x binoculars through an un-screened window most of the time.

I was 75% sure by now that it was the Kirtland's Warbler, though after reading the detailed write up in both Peterson's and Robert's books this per-

centage decreased considerably. I could remember no twitching of the tail, and the size in relation to other warblers was in question as he was alone. I heard no song or note. On the positive side were the brilliant yellow breast, streaked only at the sides, faint white wing bars, black masking about the eyes, and the lack of the white spot above or below the tail.

On Sunday, May 16, he was back in the same tree, and I observed him through the same window under similar conditions as to range, lighting, etc. This time my wife was home and we watched him for about six to eight minutes. We had the book handy, and traded the binoculars back and forth. As my wife watched, I asked her to describe key points; the breast, streaking, wing bars, mask, tail, etc. I could see these clearly myself, but I wanted an objective description from her, without telling her what to look for. Our observations matched, and this eliminated the possibility of me seeing what I wanted to see.

This time he was with a group of four to six Black and White Warblers, and he was noticeably larger. The most distinctive thing was the streaking of the breast, as it did not continue across the chest, but was limited to the two sides, and extending clear under the belly. It was especially clear when he opened his wings.

I could detect no tail wagging; and again, heard no note or song, though I was especially watching and listening for these things.

The conclusions are for you to draw, though the following points are clear. His features point to the Kirtland's. Nothing that was *observed differed* from the Kirtland's. Point by point comparison eliminated all similar *normal* species. The logical alternative is a hybrid or a mutant coincidentally similar to the Kirtland's.—*David P. Galbraith, 1807 W. 49th Street, Minneapolis, Minnesota.*

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LOGGERHEAD SHRIKE SEEN ON MARCH 7, 1965—Fortunately, I was aware, even at the time of observation, that this particular sighting might be somewhat unusual; and, for that reason I actually took some notes at that time and looked afterwards in Peterson and Pough just to make sure that I hadn't overlooked something. This, of course, was the earliest I have ever had the Loggerhead, the previous earliest was on April 13, in Hennepin Co., which is nothing remarkable.

The sighting was at Dorer Ponds, Wabasha County on the north side of the pond area on a hilly slope covered with bare, mature sumac. The bird, when first sighted was about thirty feet up the hill from the road perched on the highest branch of a small tree about twelve feet above the ground. When the car stopped the bird flew parallel to the road about thirty feet and came to rest on another small tree. We got out of the car and watched the bird for about five or six minutes at a distance at no time of more than thirty-five or forty feet as it changed perches twice more before flying up the hill to a point where it could no longer be observed. Viewing conditions could not have been better, one of those bright sunny March days with the temperature in the mid-thirties at eleven in the morning and the sun behind us.

The observers were my wife Jane, my brother Roger, and his wife, Ann, all using identical seven power wide angle binoculars. About half the time the bird was about 30 feet away and could be seen very clearly with the naked eye in that bright sunshine. There was some question at the time about the bird being so fearless and wondered if it had some food supply near that we couldn't see.

The first characteristic noted was the white breast of the bird with no faint trace at all of any barring or lines. This led to a look at the bill (dark) and to the mask that extended over the bill. I made no note of the size of the

bird at the time since I find that when it comes to an inch or so, even at a short distance, I find that I would rather have had something with which to compare directly. I feel certain, as does my brother, that what we observed was a Loggerhead and that the observational conditions were such that there could be no mistake.—*E. M. Brackney, 5025 - 12th Avenue South, Minneapolis, Minn.*

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RUFFED GROUSE CACHED BY RAPTOR¹—The evening of March 9, 1965, while making a routine survey of feeding activity by Ruffed Grouse on the Cloquet Forest Research Center, Carlton County, I found a grouse hanging, as shown in the photo, 46 feet above the ground, in a 54 foot tall, male, big-toothed aspen, having a 34" circumference (or 10.9" d.b.h.). The grouse had been placed in this tree during the 27 hour period prior to my discovery of it, since this tree had been searched for feeding grouse during the afternoon of the preceding day.



From the colored band combination (Gullion, Jour. Wildl. Mgmt., 29 (1): 109-116, 1965) the carcass in the tree was identified as being that of an adult hen, trapped on her nest about 1120 feet west of this location on June 5, 1964, and released carrying a miniature radio transmitter, which remained on-the-air until the morning

of June 25, 1964.

Upon recovery of the carcass the next morning it was found that the bird had been fed upon to a considerable extent, with most of the meat stripped from the breast and abdominal region. This type of feeding, leaving the sternum and most wing and leg bones intact is typical of the Goshawk which we have already recognized as being a major source of fall, winter and spring predation upon Ruffed Grouse here on the Cloquet Forest (Eng and Gullion, Wilson Bull., 74 (3):227-242, 1962. Schnell (Condor, 60 (6): 377-403, 1958) documented caching of prey items by Goshawks during his study of this raptor in the Sierra Nevada of California and while the predator was not seen in this instance, it seems very probable that this grouse was killed and cached by a Goshawk.

As shown in this photo, the grouse was securely hung on the tree branch, with one wing over the branch, and its head bent back to form a secure hook. As long as air temperatures remained below freezing, this grouse was securely in storage for the raptor placing it there.—*Gordon W. Gullion, University of Minnesota, Forest Research Center, Cloquet, Minnesota.*

¹/Paper No. 1218, Misc. Jour. Series, Minn. Agricultural Experiment Station, St. Paul, Minnesota.

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1964 FALL HAWK MIGRATION, DULUTH—This year 86 hours in 20 separate days from September 10 through October 19 were spent hunting hawks at Duluth, the majority of them by P. B. Hofslund. This is a smaller amount of time than for the previous three years but total number of hawks was still greater than in 1963 but did not approach the 27,000 of 1962 or the 33,000 of 1961. These totals not only reflect the total hours spent watching but also primarily the magnitude of the Broad-winged

Hawk migration. In 1964 a migration of thousands of this species in a single day was again witnessed, bringing the total number of hawks up to nearly double the 1963 total. Since the weather is the prime factor influencing the amount of the migration through Duluth and since the counting is not continuous throughout the migration period, the totals recorded for each species will vary, sometimes greatly, from year to year, and should be used with great caution in postulating any significant variations in total migration. However, the twenty fold drop in Goshawk numbers from 1963 probably does show that the invasions of this boreal predator that occurred in the autumns of 1962 and 1963 have come to an end.

Species	Total	Date of greatest number	Greatest number on single day	Hours observed on date in column two
Turkey Vulture	138	9/27	60	4¼
Goshawk	37	10/18	7	4¼
Sharp-shinned Hawk	1648	9/28	322	3½
Cooper's Hawk	54	9/10	9	7
Red-tailed Hawk	1170	10/18	322	4¼
Broad-winged Hawk	10875	9/11	6622	8
Rough-legged Hawk	29	10/4 & 10/19	7	5¾ & 2¾
Golden Eagle	2	10/3	2	5
Bald Eagle	9	9/11	4	8
Marsh Hawk	99	9/12	35	7½
Osprey	16	9/14	4	6
Peregrine Falcon	3		1	
Pigeon Hawk	11	9/13	3	7½
Sparrow Hawk	195	9/10	78	7
Unidentified	92			
Total	13,390			

Janet C. Green, 1923 Greysolon Road, Duluth, Minnesota

NORTHWESTWARD EXTENSIONS OF THE KNOWN RANGE OF THE OPOSSUM—Several reports of the Opossum may be of interest as an indication that this animal appears to be further extending its range northward and westward. The first record stems from a remark I made in a biology laboratory at St. John's University that we had as yet been unable to obtain an Opossum specimen. Then early in 1960, one of my students, Norman Lorsung, brought us a mounted female Opossum. Subsequent inquiry revealed that the animal was taken October 20, 1957 by Jerome Hagedorn of Evansville, Minnesota. It was caught in a trap set for Raccoon at the base of a hollow tree. The location was in the northwestern part of Douglas County, four and a half miles southwest of Millerville at the south end of Lake Moses. Mr. Hagedorn wrote (May 16, 1960) that the former local game warden, Mr. Fred Johnson, knew of only one other ever taken in that area, "about 13 miles west of here, nine years ago." This Douglas County specimen is now part of the St. John's University collection.

The other recent local record I have is that of an Opossum trapped November 27, 1961 by Ted Wolf of Albany, Minnesota. This animal, an adult female, was taken five miles southwest of Albany in Stearns County. An attempt was made to obtain the animal but both skin and skull were being utilized to make a mounted specimen. It is presently on "exhibit" at the Buckhorn bar in Avon, Minnesota.

Gunderson and Bear (1953) have no records of specimens this far north but do list reports from St. Cloud and Hutchinson. Further details on this St. Cloud report may be of interest. This was a specimen taken sometime in June, 1942 (or possibly 1941) approximately four miles north of St. John's University

at collegeville by the late Al Bohmer of rural Avon (Stearns County). It was shot from a tree after his attention had been drawn to it by the barking of his dogs. Mr. Leo Lauer of St. John's University examined the specimen and showed it to the late George W. Friedrich, former biology teacher at St. Cloud State College who verified the identification.

In a more recent summation of known Minnesota information, Gunderson (1961) cites several more specimens including one taken as far north as Anoka County. However there are indications that these records do not mark the limit of the occasional range of this species in Minnesota for a recent note by Hazard (1963) describes an Opossum taken near Hackensack, Minnesota in Cass County.

There is some information that this species has also been moving northward in the neighboring states of North and South Dakota. Twenty years ago in South Dakota it had already been taken occasionally as far north and west as Sanborn and Brookings counties in east-central South Dakota (Over and Churchill, 1954), although it was still largely confined to the extreme south-eastern corner of the state. There are recent indications that it has subsequently moved further north. In 1957 the writer obtained a record of one taken in the Sisseton Hills at the extreme northern edge of Marshall County, South Dakota and in 1954 one of the writer's former biology students at St. John's University, Kenneth Kessler, observed a road-kill one half mile west of Aberdeen in Brown County.

The writer also has several records from North Dakota that indicate a further range extension into the southern most tier of counties in the south-eastern part of that state (unpublished notes). Most of this information was obtained while he was a game biologist there in the 1950's and indicate that the species may casually be met with along the southern border of North Dakota. Two marginal records, however, indicate that it may occasionally reach as far north as Jamestown in Stutsman County (a specimen taken by Roy Baker five miles west and one mile south of there on December 18, 1954 and in the author's possession) and as far west as Temvik in Emmons County, only 15 miles east of the Missouri River (a specimen trapped by Fritz Beck in February 1961 and reported in the North Dakota Outdoors (Anonymous, 1961).

In some instances lone individuals of certain mammal species taken far outside their known ranges may be the result of escaped individuals, especially when these animals are taken in areas of high human population or near major highways or railroads. Such may be the case with the 1942 Stearns County Opossum record. It was found not far from Highway #52 and also near a major railroad. The Jamestown, North Dakota, animal could possibly be of this type also. It was taken some 60 miles further north than any previously known specimens and only a file away from U.S. Highway #10, the major automobile artery across North Dakota.

However when a number of verifiable records of this species appear north of its previously known range (such as given above for western Minnesota and the Dakotas) it indicates to me that the species may have been present in small numbers for some time but that no one has bothered to record their presence in print. The writer feels that many biologists are inclined to disregard what they feel to be impossible occurrences of an animal in a given area. He has investigated a number of reports of appearances of "odd" or unusual mammals and while many such reports have been unverifiable, a number of others have brought forth good, authentic specimens. Probably with a little effort and publicity a number of specimens could be secured from the central and western portions of Minnesota where the Opossum undoubtedly occurs sparingly at present. What is needed most are actual specimens rather than just "reports". These should be of the whole animal if possible or at least a skin or skull. I am sure the Minnesota Museum of Natural History would be glad to obtain additional specimens from outside the known range of this species.—*Edmund A. Hibbard, Biology Dept., St. John's Univ., Collegeville, Minnesota.*

BOOK REVIEWS

STUDIES IN THE LIFE HISTORY OF THE SONG SPARROW, Margaret Morse Nice, Dover Books, Chicago, 1964, Two volumes. \$3.50 the set.

Mrs. Nice's study of the Song Sparrow, first published by the Linnaean Society of New York in 1937 and 1943, has often been termed the best life history ever written. It has for years been all but impossible to find a copy on the second-hand market and when found, copies fetched fantastic prices. This Dover reprint is most welcome. In addition to studying in rich and illuminating detail population problems and the behavior of the Song Sparrows. Mrs. Nice introduces, regularly and relevantly, corroborative or contrasting data on other passerines. Perhaps even more importantly, she adopts, adapts, and further develops techniques of bird study worked out by others; pioneers a number of other techniques of her own; and constantly and explicitly comments on methodological problems.

For example, in Part Two of her study she reviews the growing literature of ethology — a wedding of biology and psychology concerned with the behavior of species in their natural environment, largely developed on the continent by men like Lorenz, Von Uexkull, and the Tinbergens; introduces and defines certain operating concepts and methods from that field; and then brings these concepts and methods to bear upon her own study in a most suggestive way. Mrs. Nice was in fact one of the chief agents in the introduction of European behavior studies to this country. She has contributed steadily and plentifully to the literature of bird behavior in the years since her Song Sparrow study was first published, and recently co-authored a considerable and important work on the behavior of precocial birds (available from the Linnaean Society of New York). It may be said without exaggeration that no one should attempt an avian life history or study of bird behavior without having carefully consulted Mrs. Nice's

Song Sparrow study. One is grateful to Dover Books for having taken it upon itself to reprint these indispensable volumes. *R. A. Grant, 111 E. 9th St., Morris, Minnesota.*

LIFE HISTORIES OF NORTH AMERICAN BIRDS, Arthur Cleveland Bent, Dover Books, Chicago, 1961ff. Twenty volumes. \$2.35 per volume (\$2.80 for later volumes).

To anyone interested in North American birds, this reprint is a godsend. Bent's compilation (originally published by the U. S. National Museum between 1919 and the present and all now out of print) is easily the most extensive and complete survey available up to the inception of Palmer's A.O.U. sponsored *Handbook* in 1962. Although only marginally concerned with the plumages and taxonomy, and scarcely at all informed by modern research into bird behavior, Bent's volumes are a mine of raw (and usually reliable) facts about the life histories of all birds found within or north of the borders of continental United states. These photographic reprints reproduce the many plates as well as the texts (with some loss in the clarity of the former) at a fraction of what the originals cost on the second hand market, are printed on good paper, and, although paperbacked, are durably sewn in signatures. Every ornithologist has his set and no serious student of birds any longer has an excuse to be without them. Dover has just completed reprinting all 20 volumes.

Bent died before completing the series but the concluding volume (or volumes), which will cover the fringillids, is being carried to completion by a committee of ornithologists and should appear under the sponsorship of the U.S. National Museum in due course. *R. A. Grant, 111 E. 9th St., Morris, Minnesota.*

BIRD SONGS by Norma Stillwell, 16 pages of black and white photographs, 194 pages, Doubleday and

Company, Inc, 277 Park Avenue, New York, New York 10017, 1964. \$4.95.

The following words contained on the last page of this exciting book are an excellent summary of this work by Mrs. Stillwell: "Twelve strenuous but happy springs of recording bird songs! More than 180,000 leisurely miles along country byways. Three long-playing records published! Memories of the finest scenery in all the country, and many out-of-the-way places not found by tourists who follow only the main highways. Numerous friendly folks along the way. Many congenial birders. And new friends via microgroove! Letters from strangers who had heard our records. Some of the letters gave glimpses of the writers' life stories, of their personalities or their own viewpoints on our mutual interest in birds." This book is an account of the Stillwell's travels, the people they met and the bird songs they recorded in every corner of the United States. A wonderful story of two retired people who enjoyed and pursued their hobby to the fullest. The technical information, given throughout the text, on recording will be of great interest also.

Editor

BIRDS OF THE WORLD IN COLOR by Hans Hvas, 1,100 birds illustrated in full color, 216 pages, E.P. Dutton and Company, Inc., 201 Park Avenue, New York, New York 10003. 1964. \$4.95.

Recently birdwatchers have almost been deluged by books dealing with all the birds of the world or certain groups of birds of the world such as birds of prey. "Birds of the World in Color" is another addition to this growing list. Most of the other books have been large, monumental works

containing expensive color plates, fancy bindings and a high price tag. This book is done on a less stupendous scale and the price of \$4.95 makes it available to more people. When trying to cover a field as large as the birds of the world in 216 pages, description and commentary must be brief and illustrations of 1,100 birds must be small and crowded by necessity. The color illustrations are fairly good and will give the reader a general idea of what the birds look like in the field. This book would be recommended to the birdwatcher who has a general interest in all birds and wants an inexpensive volume in his library on world birds.

Editor

THE OXFORD BOOK OF BIRDS by Bruce Campbell, 96 color plates, black and white illustrations, 208 pages, Oxford University Press, 417 Fifth Avenue, New York, New York 10016. 1964. \$10.00.

This book covers all of the birds which have ever been recorded in Britain. Any bird which is seen regularly in any part of the British Isles is illustrated in full color. The book begins with a section on classification and at the end there are sections on Flight, Anatomy, Behavior and Breeding, and Migration. The color illustrations are excellent and one of the points which make these plates stand out is that many juvenile and female plumages are illustrated. Many American species of birds are illustrated. This book is a highly recommended addition to a bird library. It is a joy just to look at good illustrations of many species of unfamiliar birds.

Editor

PRESIDENT'S PAGE

The hawks are flying, the swallows have left, the shorebirds are on the Point, the chill is in the air; all reminders that the summer is over. It seems that it has sped by at a much too rapid rate. I never did get the chance to do the life history work I intended to do, nor the gull banding I had hoped to resume. I did get a chance to attend both the Wilson Society and American Ornithologists' Union meetings. Perhaps it is worthwhile to leave with the M.O.U. some impressions that I received during these meetings.

The meeting at Sylvan was attended by 21 registered Minnesotans, the greatest number from any state except of the host, South Dakota. I'm sure that the gorgeous setting, the Dusky Flycatcher that posed on its nest for all to see and photograph, the White-winged Junco nest just below the steps of the Lodge, the Dipper which was most obliging, and the White-throated Swifts, so beautiful in plumage and flight left lasting impressions on others as they did on me. Worrisome notes appeared too. Nelda and David Holden talked on the disappearance of the prairies and their associated birds; Roger Tory Peterson spoke on the rapid destruction of the forests and consequently the birds of the richest (at least formerly) avian culture in the world, Columbia in South America, and Mrs. Charles Hartshorne told of the dangers of extinction of the Golden-cheeked Warbler in Texas because of real estate developments.

The A.O.U. meetings are a little more austere, with perhaps more papers on taxonomy, physiology and anatomy, but again I was struck with the large number of papers that presage difficulties for birds from one part of the world to another: *Factors in Mortality and Survival of the California Condor*; *Effects of the Albatross Control Program in Midway Atoll*; *Ecological Investigations and Conservation of the Giant Pied-billed Grebe of Guatemala*; *Ecological Comments on the presence of DDT and its Metabolites in Adelie Penguins in the Antarctic*; *Reproductive Success in DDT-contaminated Population of Herring Gulls*; *DDT Residues in the Food Chains of Birds*.

Statements like this appeared: "the Midway part of the Laysan Albatross will be virtually eliminated in the next 30 years at the present rate of destruction caused by humans," "the Giant Pied-billed Grebe may be extinct within five to ten years," "the California Candor has declined to about 40 birds," "the eastern resident population of the Peregrine Falcon has virtually disappeared, a general decline shown in Europe also, and now to some extent in western United States," "pesticides have been found in the fat and liver of Adelie Penguins from the most southerly breeding places on earth. This is the first time that pesticides have been reported in Antarctic fauna and confirms the world-wide distribution of DDT," "the reduced productivity of a Herring Gull population in the Green Bay area of Wisconsin was with little doubt the result of insecticide consumption," "DDT can be stored up to at least 22 weeks in earthworms, and elm buds in the spring following fall spraying still maintained DDT in their tissues."

On the other hand, blackbird populations have exploded in the eastern half of the nation. We watched the operation of the banding station near Columbus, Ohio where Dr. Maurice Giltz and his associates are studying blackbird ecology with the prime hope of discovering means of destroying the population. The farmers are up in arms and have demanded that the State eliminate this problem. I heard suggestions of everything from destroying marshes, spraying the roosts, bombing the roosts, poisoning the land, and even veiled suggestions that it might be the fault of the bird lovers of America.

Where does the answer to these problems come from? To me it seems a chain of events, ill-advised spraying programs destroyed the checks of one
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population which in turn led to even more serious problems, pollution has destroyed natural breeding areas and has led to movements of adaptable species to areas where they become destructive, greed and the theory of getting while the getting is good has led to temporary wealth and long-term poverty. I wonder if such things are really solvable. It seems to me that education is the only answer, if there is one. Conservation must become an integral part of every facet of public education from kindergarten through college. The type of conservation I'm talking about is the type that brings about an ecological conscience and an ecological consciousness. Organizations such as ours must take a firm stand in this matter. Such a committee as that under the direction of Bill Bryson must be helped. You'll hear more about this at the winter meeting.

Incidentally, you'll have a good chance to sit in on a major convention and listen to the people who are spending a major part of their lives trying to find out the answers. In September of 1966 the American Ornithologists' Union will hold its 84th stated meeting in Duluth. Set aside the week of September 12-16 so that you can attend.

Sincerely,
P. B. Hofslund
President

DECEMBER MEETING OF THE M.O.U.

Our Vice President and program Chairman, Fred Leshner, has planned an outstanding program for the general meeting and paper session. The meeting will be held on December 4, 1965 at the Museum of Natural History, University of Minnesota, Minneapolis. Registration will begin at 9:00 A.M. People from all areas of the state are on the agenda, Mrs. Helen Hoover, author and resident of the Gunflint area of Minnesota, Mrs. Mabel Goronson from Red Lake will talk on the birds of Northwestern Minnesota. Many other interesting papers, films and slides will be part of the program.

As an extra added attraction plans have been made for an M.O.U. banquet in the Junior Ballroom of Coffman Memorial Union, University of Minnesota at 5:45 P.M. immediately following the afternoon session. Please send your reservations and check for \$3.00 per person to Mrs. Fred Cruzen, 1441 Angelo Drive, Minneapolis, 55422 by Monday, November 29. At this banquet Dr. Breckenridge will give his program on "Alaska Notebook - 1965" and the T. S. Roberts Award for 1965 will be made. This program is being planned early so that those who want to return home the same day can do so and still have the opportunity to attend this wonderful presentation by Dr. Breckenridge.

BANDING EVENING GROSBEAKS AT CHISHOLM, MINNESOTA

Forest V. Strnad

For two winters I had tried to see the Evening Grosbeak when we lived at Kasson, Dodge County, in southeastern Minnesota. During the winter of 1960-1961 I had heard reports of Evening Grosbeaks being in the Rochester area, but failed to see any of these birds. The next winter I tried to see them at bird feeding stations in the Winona area, but again I failed to locate any birds of this species.

After moving to Chisholm, St. Louis County, in June 1962 I was to have more success in seeing this species. I saw my first Evening Grosbeak at Becker's Hilltop Acres Bird Sanctuary near Whipholt, Cass County on August 21, 1962. Two days later seven birds of this species showed up at my new bird feeding-banding station in Chisholm. I did not see any more birds of this species until November 28 at which time I banded 12 birds at the home of Mr. and Mrs. Oscar McCracken just south of the Chisholm-Hibbing airport, 10 miles south of my banding station and about six miles east of Hibbing, Minnesota.

One lesson I learned in a hurry about Evening Grosbeaks was never put more than one bird in a gathering pail at one time. They will bite one another and may do severe damage to each other.

I banded four more grosbeaks on December 4, one on December 8 and one on December 13 at the McCracken's. On December 15 I had my Japanese mist nets set up at the home of Dr. and Mrs. W. H. Parker in Chisholm. Their bird feeding station is located approximately six blocks northwest of my home banding station. The first bird I took out of the net that day had a band on its leg. The report from the U. S. Fish and Wildlife Service office stated that Harold R. Hanson of Walker, Minnesota had banded this male bird on May 13, 1962, seven

months before I trapped it. Eight birds were banded that day at the Parker's. Five more birds were banded at the McCracken's on the 19th before I caught the first Evening Grosbeak at my home banding station on the 20th. That day I banded two female and four male birds. Another bird banded on the 21st at my station made an even 40 birds banded in 24 days. Fifteen were female, 23 males and two unlisted. All the birds caught away from my home banding station were taken in mist nets, while those taken at my home banding station were taken in all-purpose or figure-8 traps.

Banding operations were resumed on January 8, 1963. Eighty-five Evening Grosbeaks were trapped or netted and banded in January, with 37 being females, 47 males and one unlisted.

Most of the birds were banded at my home station. Of the 85 birds banded, seven were banded at a feeding station six blocks north of my home banding station at the home of Mr. and Mrs. George Pospichal. Fourteen others were banded at the McCracken's station and the other 64 were banded at my station.

A tunnel trap took seven of the birds, an all-purpose trap caught 54 birds and the other 24 were caught in mist nets.

During February 1963 I trapped and banded 47 Grosbeaks, 26 were females and 21 males. Nineteen birds were caught in an all-purpose trap, 25 in mist nets and one in a tunnel trap. Two were hand-caught because they had broken wings. This no doubt was caused by fighting among the birds over the sunflower seed at the feeder. Dr. Parker caught these birds and kept them in a cardboard box until the wings were healed. They were banded and released on February 17, 1963.

During March 1963 I netted and banded 45 evening Grosbeaks, 27 were females and 15 were males and two unlisted.

During April 1963 the banding picked up with the migration on and I trapped and banded 321 Evening Grosbeaks. 120 were females and 192 were males and six were unlisted. Three hundred and eight of these birds were caught in mist nets, eight in tunnel traps and five in Potter-type treadle traps. My biggest day's catch was on the 8th when I trapped 23 females and 39 males for a total of 62 birds. I also caught six foreign banded birds. I caught 15 females and 16 males on the 12th and 11 females and 16 males on the 22nd, another good day.

May 1963 was ushered in on 30 degree temperature at 6:00 a.m. and it was clear. I banded eight females and six males on that day. On May 3 I banded 14 females and 12 males. On May 5 ten of each sex. On May 13 I banded seven of each sex and failed to note the sex of another bird. On May 14 11 females were banded and six males. The last day in May that I banded Evening Grosbeaks was the 19th and that day I banded seven females and six males for a total of 89 females and 80 males and 1 unlisted for the month.

A look at the number of birds trapped or netted from January 7 through May 19, 1963 shows that the majority were trapped and netted during April and May. There are a number of high points, but the largest number occurred on April 8. Of course all of this banding is not consistent. By that I mean if the birds came in early in the morning, which they usually did, I was able to do some banding before I had to go to the office. I have kept no record of the number of hours the nets and traps were activated.

A review of the winter of 1962 - 1963 shows that there were large flocks of Evening Grosbeaks in the Chisholm-Hibbing area from November through the latter part of May. The large influx of migration came to my banding station between April 2 and May

19. After the latter date not a single Evening Grosbeak showed up at my feeder in 1963.

In addition to the number of Evening Grosbeaks banded in the early part of 1963 I banded 1 female and 3 males on November 20 at the Pospichal feeding station six blocks north of my own station.

During 1964 the pattern of numbers of Evening Grosbeaks was entirely different from the previous winter. One flock stayed in the northwest part of Chisholm at the Parker-Propotnick feeders. They were seen daily at these feeders and only occasionally fed at some of the other feeders in Chisholm where they were common the previous winter. Many people in Chisholm, who had fed grosbeaks the winter before commented on the scarcity of the birds this year.

On February 6, 1964 a male and a female Evening Grosbeak were caught in a tunnel trap at the Propotnick's bird feeding station. On February 20 two females and a male were trapped and banded in Dr. Parker's yard. The first Evening Grosbeaks banded in my yard in 1964 occurred on April 3 when a male was caught in a mist net. Two males and a female were netted on April 20 and the rush was on. From April 20 until May 22, 448 Evening Grosbeaks were netted or trapped and banded in my back yard, 167 were females and 273 were males and eight were unlisted. Of the 448 birds 61 were taken in a figure-8 trap, 24 in a Potter-type treadle trap of either two or three cells, 103 in tunnel traps and the other 260 were caught in mist nets. On May 5 it was 46 degrees at 6:30 a.m. I went outside to check my traps and found, when I had finished banding, that I had 33 Evening Grosbeaks in my figure-8 trap at one time. It took 20-25 minutes to band them.

A look at my records show that not many of the birds repeated, that is, returned to my traps or nets within ninety days. Of those birds I banded in 1962 a male banded on November 28 was re-trapped on December 8 at McCracken's. A male banded at McCracken's on November 28 was caught

at Pospichals on February 8. A male banded at Parker's on December 16, 1962 was caught at my station on March 19, 1963 and again on April 16, 1963. A male and a female banded at McCracken's on December 19, 1962 were caught at my home banding station on January 7 and May 17, 1963. A female banded at my station on December 20, 1962 was re-taken at McCracken's on January 9, 1963.

During 1963, of the 673 birds banded only 46 were re-trapped at my station or at McCracken's, Parker's or Pospichal's. A male banded at Pospichal's on January 17 was caught at my station on April 22, 102 days later. A male banded at my station on February 25 was re-trapped there on May 5, 1964. Of two males banded April 2, 1963 one was found dead by Dr. Parker's dog in their yard on April 30 and the other found dead on May 6 by Evans Lindgren in Chisholm.

Of the 457 birds banded in 1964 twenty-five repeated at least once. A male banded on May 10, repeated on the 11th, 12th, 13th, 14th, 16th, 19th, 20th, 21st, 22nd, 23rd and 25. This bird's record will show up again in the weights section.

A female banded on May 10 and a male banded on May 15 were killed by a cat and found crippled in a field in northeast Chisholm by the Tyminsky children. This field had several reports of Evening Grosbeaks being found on it. I never did investigate the field, but I think the birds roosted in a tree and cats preyed on them there.

One of the major reasons for banding birds is to learn where they come from and where they go after you band them. Birds banded by other banders are called "foreign banded birds," not because they were banded outside the United States but by another bander.

As I stated previously, the first banded bird I caught was banded by Harold R. Hanson of Walker, Minnesota. To date I have caught 11 birds he has banded at Walker making "his birds" the ones I most frequently recover at my station.

I have caught banded Evening Grosbeaks from 16 other banders representing five states: Minnesota, Wisconsin, New York, Pennsylvania and Michigan. Also two Provinces of Canada; Manitoba and Ontario, representing four different Canadian banders. The most distant point away from my home banding station is Watertown, New York which is located on the east shore of Lake Ontario. Watertown is approximately 875 miles nearly due east of Chisholm.

On April 8, 1963, when I caught five foreign banded birds at my home banding station, the reports from U. S. Fish and Wildlife Service office show that two of the birds were banded by Mrs. Ernest Lund of Marinette, Wisconsin; one each from B. Wescott, Toronto, Ontario, Canada, R. C. Leberman, Meadville, Pennsylvania and H. R. Hanson of Walker, Minnesota. This was very interesting to me to see how these birds banded in four locations had all gathered at my feeding station on a given morning.

The longest time between banding and my trapping of a bird at my home banding station goes to a male bird which was banded on January 17, 1960 at Cloquet, Minnesota by Gordon Gullion. I trapped this bird on April 29, 1964. A lapsed time of four years, three months and 12 days. Cloquet is approximately 55 miles southeast of Chisholm across country.

The shortest time between banding and my trapping the bird at my home banding station is for a male banded by D. R. M. Hatch of St. Vital, Manitoba, Canada, on March 25, 1964, and taken by me on May 13, 1964. This is a lapsed time of 49 days. St. Vital is a suburb of Winnipeg and is approximately 255 miles across country northwest of Chisholm. An interesting thing to note about this bird is that it migrated south (as did another bird banded at St. Vital on March 21, 1964 and trapped at Chisholm on May 11, 1964), instead of north or west as did most of the other birds, except those Hanson banded which came east approximately 85 miles across country to Chisholm.

Birds banded in the Chisholm area were later trapped or found dead or injured in eleven different places in Minnesota outside of the Chisholm area, four different places in Wisconsin and two different locations in the Province of Manitoba, Canada.

Four birds that I banded were recovered in Chisholm. One, a male, was banded April 2, 1963 and found dead in Chisholm May 5, 1963 by Evans Lindgren. A male banded April 2, 1963 was found dead in Dr. Parker's yard by his dog on April 30, 1963. A cat was known to have killed a third bird, a female banded May 10, 1964 and killed May 12, 1964; a fourth bird, a male, banded May 15, 1964 was found crippled in the north part of Chisholm on May 17, 1964. It died later.

The first bird recovered outside the Chisholm area but the shortest distance from Chisholm, was a male. It was found by Mrs. F. Sopp of Eveleth, Minnesota which is about 13 miles southeast of Chisholm. This bird was one of several taken from a gathering pail to band at the McCracken's station on November 28, 1962. When I removed the bird from the pail its leg was broken and it was very bloody. There was no notation about the condition of this bird when Mrs. Sopp found it, on her report to the U. S. Fish and Wildlife Service office, so I take it the leg had healed all right.

The shortest time lapse between banding and recovery on an adult bird, sex unlisted, banded April 15, 1963 and recovered by D. Ross at Pengilly April 25, 1963. Time between banding and recovery was 10 days.

The longest lapsed time between banding and recovery was for a female bird, which was banded March 26, 1963 and recovered May 22, 1964 by Mrs. G. H. Brant of International Falls, Minnesota. Lapsed time was one year, two months and four days.

A new dimension was added to my bird banding activities this May (1964) when I was able to borrow an Ohaus scale. Three different weighing bars permit me to weight up to 10 grams on the forward bar; up to 100 grams on the back bar, and up to 500 grams

on the middle bar for a total of 610 grams.

In the beginning I weighed the birds without the bands but when I discovered that the scale showed no difference in weight, when the band was attached on the leg of the bird, I banded the bird before weighing. The birds were placed in a cloth bag with tie-strings at the top. Every two or three birds I re-weighed the bag to be sure that proper adjustments were made to allow for any difference in the weight of the bag.

The first bird was weighed on May 13, 1964. It was a male Evening Grosbeak and weighed 53.1 grams. One of the outstanding birds weighed was a male, which was banded on May 11, retaken on the 12th, 13th, 14th, 16th, 19th, 20th, 21st, 22nd, 23rd and 25th. I first weighed it on the 16th and again on the 19th, 20th, 22nd and 25th. It varied from 60.9 grams to 66.0 grams, which averaged out to 62.6 grams. This bird weighed more at 8:05 a.m. on the 22nd than it did at 9:30 a.m. on the 20th or at 12:15 p.m. on the 22nd. It would seem that he ought to weigh more as he ate more during the day but my weights for him do not prove this to be true. Too little information has been gathered to date to make any definite conclusions about the weight of these birds.

The lightest female weighed 49.8 grams. The heaviest female was caught on May 13, 1964 in a mist net.

The lightest male weighed 48.4 grams when taken in a mist net at 5:25 p.m. on May 16, 1964. The heaviest male, taken in a mist net at 4:42 p.m. on May 19, 1964 and weighed 72.8 grams.

Seventy-two birds were weighed between May 13 and May 22, 1964. The average weight for the 47 males, counting each time they were weighed, was 57.8 grams. The average weight for the 35 females was 59.8 grams.

In summary 1,170 Evening Grosbeaks were banded in the Chisholm, Minnesota area between November 28, 1963 and November 23, 1964. 487 were females, 670 were males and 13 were unlisted as to sex.

Foreign banded birds were trapped in Chisholm in 1962, 1963 and 1964. They were banded in five States and two Provinces of Canada, by sixteen different banders.

Birds banded in the Chisholm area were trapped or found dead or injured in eleven different places in Minnesota outside the Chisholm area; four places in Wisconsin and two different places in the Province of Manitoba, Canada.

Weighing of Evening Grosbeaks shows they vary considerably during the day in their weight.

The movement of the birds banded at Chisholm and recovered elsewhere, and recovered birds at Chisholm which were banded elsewhere show a definite crescent-shaped pattern running from Watertown, N. Y. to Tyndall, Manitoba, Canada, and that birds move both north and south in the spring migration 21 S.W. Third Street, Chisholm, Minnesota.

THE SPRING SEASON ARTICLE

Ron Huber, the seasonal report editor, spent over 100 hours compiling spring migration information sent in by over 90 observers. Eighteen typewritten pages were ready for the printer but unfortunately before they reached the printer they were accidentally destroyed. As a result no seasonal report article will appear in this issue. A brief summary of the spring migration and a full report of the summer season will appear in the December issue. We hope that all those contributing records for the spring season will lend their understanding to this unfortunate incident and will bear with us. Please continue to send Ron Huber, Room 480, State Office Building, St. Paul, Minnesota 55101, your records as you have done in the past. The deadline for material for each period are as follows: The Winter Season (Dec, Jan, Feb) due first week of March, The Spring Season (March, April, May) due first week of June, The Summer Season (June, July, Aug) due first week of September and the Fall Season (Sept, Oct, Nov) due the first week of December. Thank you for your cooperation.

The Editors

THE SPORT OF BIRD LISTING

Robert B. Janssen

The pros and cons of bird listing have been argued back and forth by many people. My aim in writing this short article is not to bring up all these old arguments, but to bring to the attention of the readers of *The Loon* the status this most interesting 'sport' in Minnesota.

I firmly believe in this worthwhile 'sport' whether it be in keeping a life list, year list, monthly list, yard list, state list, United States list, or whatever kind of list it may be. As long as keeping these lists provides enjoyment to the lister they are worthwhile. It is not necessary to justify the keeping of a list on its present or future scientific value. Most lists people keep will never reach the hands of the ornithologist. The above statement, however does not mean that we should not use scientific accuracy in keeping our lists. If this is not done the lists are meaningless and certainly will not give joy to the one keeping the list... You cannot fool yourselves no matter how hard you try!

Members of the Avifaunal Club have always been avid listers, to the point of making a list of their lists. We do

this first and foremost because it keeps us in the field in all parts of Minnesota at all times of the year. What can be more fun to a confirmed birdwatcher than being in the field where the birds are?

The idea for writing this article came to me after reading an article in the December 1964' "Jack Pine Warbler," by L. A. Ryel entitled "The Michigan Bird Listing Record, A Second Look." Mr. Ryel lists the top 10 yearly bird lists for the state of Michigan. The highest number of birds recorded in one year in Michigan is 247 by M. B. Trautman in 1934. A more recent high is 237 by E. M. Hargan in 1963. These figures seemed suprisingly low when compared with yearly figures gathered in Minnesota. I would doubt that the birdwatchers in Minnesota are that much better than those in Michigan. Maybe we are out in the field that much more. Could this be the answer to the totals?

The chart below gives the total Minnesota yearly lists for six Avifaunal Club members during the last seven years.

	R. Huber	B. Theodore	B. Janssen	H. Huber	R. Glassel	W. R. Pieper
1958	253	221	224	251	254	201
1959	275	256	259	272	255	223
1960	260	274	260	256	223	220
1961	274	278	261	271	236	264
1962	277	276	272	257	239	259
1963	290	256	268	250	263	279
1964	279	268	267	224	268	211
Average	272	261	259	254	248	237

The record by Mr. Huber in 1963 of 290 species is amazing when one considers the fact that the regular occurring species in Minnesota total 290 and the State list is 358. In the month of May 1963 alone Ron totaled 234 species. I do not know the regular list for Michigan, but is in the area of 300 and their total State list is 375.

Several questions come to mind again when one considers a comparison of the above figures, are Minnesota birdwatchers in the field more than their counterparts in Michigan, is Minnesota a better birdwatching state, does Minnesota have more individual birds than Michigan, etc. These questions are interesting and again add in-

terest to the 'sport' of bird-listing.

My own personal conclusion is that the size of any ones list depends on how often he exposes himself to the birds, thus at the present time it would appear that Minnesota bird-watchers interested in listing are more active in the field than those in Michigan.

In conclusion I would say bird listing is fun and can be a part of ones

birdwatching hobby whether he is a beginner or one who has pursued the hobby for many years. The most important thing to remember is keep your lists scientifically accurate, so that they may bring personal satisfaction and lead to other interests within the fascinating hobby of birdwatching. —1817 West 59th Street, Minneapolis, Minnesota.

THE CANADIAN LAKEHEAD

A. E. Allin

The mean temperature rose above normal in May for the first time in six months. The mean of 60.6° was two degrees above average. However, a cold spell at the end of the month undoubtedly caused frost damage. At Armstrong the temperature fell to 22° on May 29. Precipitation was slightly below normal. June had a nearly average mean temperature of 57° but the rainfall of 2.40" was much below the average of 3.44". July was a very cool month with a mean temperature of only 59.7 compared with an average 63.5°. Precipitation was slightly below normal. The first half of August was relatively warm and dry, but the second half was cool with very heavy rains during the last week.

Bird-watching at the Canadian Lakehead during the summer of 1965 was average. The only outstanding observation of bird species was the sighting of a **Lark Bunting**. No unusual nesting records were reported. Shorebird migration was very poor in the spring and southward migration has been very slow in August. In general the fruit crop can be considered as fairly light throughout the district, some regions reporting an abundance, others a scarcity.

Loons and Grebes: Loons seemed to be scarce. One pair were reported nesting, as they have for many years, at Fork Bay in the Sibley Peninsula. A

Pied-billed Grebe was captured on April 8, a very early date. We were unable to check the Red-necked Grebe colony at Whitefish Lake. However, the water level was lowered there to favour the Wild Rice and this should have provided satisfactory breeding conditions for these grebes.

Cormorants and Pelicans: No White Pelicans were reported but they are rare visitors to the Lakehead. We again failed to see a Double-crested Cormorant and there is little doubt that there numbers have seriously declined during the past few years.

Swans, Geese, and Ducks: A very late flock of 9 Whistling Swans fed in Thunder Bay on June 7. A single bird was seen in the local harbor on July 14. It is difficult to explain the presence of swans locally in mid-summer but one or two are reported almost yearly. Two Canada Geese spent the summer near a small island in Thunder Bay. There is no report of young being raised. A male Shoveler was seen on June 7 suggesting the possibility this species nested locally. On July 4 we saw 5 drake Green-winged Teal, possibly our first summer record for this species. A Mallard was seen with a partly-grown duckling on August 11. On July 22 we saw 4 ducklings only a few days old. No adult accompanied them so we were not sure to which pond-duck species they belonged. We

saw two broods of very small Red-breasted Mergansers on July 14 in the local harbor. O. Merritts had a female successfully hatch 7 of 8 eggs under an upturned boat in his boat house at Arrow Lake in very late July. At Atikokan, Mrs. Peruniak saw a female Common Merganser accompanied by 21 young on July 3 and another female was still incubating on July 9.

Vultures, Eagles and Hawks: Turkey Vultures rarely visit the Lakehead but are not uncommon west of Thunder Bay District. Mrs. Peruniak again recorded their presence at Atikokan. We saw 3 outside Kenora on June 30. We have had no summer records of Bald Eagles although a few were seen some 50 miles southwest of the Lakehead in the spring. Mrs. Peruniak saw an adult and three immature birds on April 10 near Atikokan. Sparrow Hawks seem as common as they have ever been in the past. One cannot travel in any direction outside the Lakehead without seeing numbers of these handsome little falcons. Numerous fully-grown young were seen on August 22. Marsh Hawks have been seen frequently this summer.

Grouse: It is too early to be certain, but it would seem Ruffed Grouse were more common than for many years. Numerous broods containing many young have been seen in all parts of the district. Numbers of Spruce Grouse have been seen in an area some 150 miles northwest of Fort William.

Shorebirds: The spring migration of shorebirds was very poor. Dunlins were still present on June 6. Upland Plovers failed to return to their usual fields but were seen in three other areas. No American Woodcock were reported. Fall migration has been poor to date. The first migrants were 4 Least Sandpipers seen at Grand Marais, Cook County, Minnesota, on July 25. We did not see returning shorebirds locally until August 14 when we saw Greater and Lesser Yellowlegs in Paipoonge Township.

Gulls and Terns: The Herring Gull is possibly less common than usual and there have been no complaints of their presence at the airport this season. C.

E. Garton reports Ring-billed Gulls again nested successfully on Granite Island, Black Bay, Lake Superior.

Doves, Cuckoos and Owls: Mrs. Peruniak saw a Mourning Dove near Atikokan on June 22 and a few have been seen locally. This bird is now definitely a scarce summer resident, breeding in suitable areas west of the Lakehead. We probably have collected sufficient information to record these as the eastern form. Many years ago, in September, I shot a Ringed Turtle Dove in Neebing Township and heard of one being seen in Port Arthur. We suspected they had escaped from a local circus. It is of some interest to note that this August the same circus had a pair of these birds in their menagerie. Mrs. Peruniak heard a Barred Owl at Nym Lake on April 10. Black-billed Cuckoos have been scarce; Mrs. Peruniak saw 3 on June 22 but none were reported locally.

Woodpeckers: Pileated Woodpeckers have been more common than usual. Three-toed Woodpeckers appear to be uncommon residents. Our only record this season was a Black-backed Three-toed Woodpecker which we saw east of Nipigon, on July 17.

Flycatchers to Swallows: No unusual flycatchers have been reported. We have only one report of an Eastern Wood Pewee which is an uncommon summer resident. We saw a Rough-winged Swallow in O'Connor Township on June 12. This is another rare summer resident for which we have only one breeding record. Bank Swallows continue to be scarce but we found one large colony near the mouth of the Big Pic River on July 17. Cliff Swallows continue to increase and we found them breeding in four areas this summer. A single nest at Silver Islet was being built by at least six birds! Their soft notes were quite unusual, suggesting two portions of soft leather being rubbed together.

Jays to Wrens: Mrs. Peruniak saw 3 adult and 3 young Gray Jays near Atikokan on May 9. We saw two families east of Upsala on August 22. Common Ravens continue to increase in numbers near the Lakehead Cities

where until recently they were rarely seen in summer. We have written on many occasions of the varied notes of the Common Raven. In June, in Lybster Township, we heard a Common Raven emitting quite unfamiliar sounds as it flew towards a high cliff in the distance. We wondered whether these were directed towards a waiting mate or possibly young. In 1964, Mrs. M. Cryer observed White-breasted Nuthatches feeding a young bird near her Paipoonge Township home. This pair wintered at her feeder. In June she observed an adult carrying food to the nest, a hole 18 feet from the ground in a Black Ash. Mrs. Peruniak saw a Long-billed Marsh Wren on May 6 at Atikokan and Mrs. Vibert studied a Short-billed Marsh Wren at Rosslyn on June 2.

Mockingbirds to Bluebirds: No Mockingbird has been reported to date although we have come to expect at least one report each summer. Catbirds have been recorded on only two occasions, but Brown Thrashers have been seen on numerous occasions locally and at Atikokan. Robins have been very common. At night we frequently heard the songs of Veeries but both Hermit and Swainson's Thrushes were present in reduced numbers. Early in the season, Eastern Bluebirds were very scarce but subsequently there were numerous reports and I believe more Bluebirds were present in 1965 than for many years. M. Hogarth again found their eggs destroyed in a bird house on their tree farm. This has happened frequently in previous years. The culprit has never been detected. During the same period the nests of Tree Swallows in the same area have remained undisturbed. Early in the spring we found a nest with four eggs of Black-capped Chickadees in a hollow fence post. Later in the year the cavity held four eggs of the Eastern Bluebird.

Kinglets to Starlings: Ruby-crowned Kinglets still occur in their usual numbers but Golden-crowned Kinglets seem to be much scarcer than I believe they

were two decades ago. Broods of Starlings seemed late and small. However, the flocks now present throughout the area are as large as in former years.

Vireos and Warblers: No definite movement of warblers or vireos had been reported by mid-August and no unusual breeding records had been made for members of this group. A Red-eyed Vireo was still calling cheerily in Fort William on August 17, long after most species had ceased singing.

Bobolinks to Cowbirds: Bobolinks are now well established; at least four colonies were present this summer. A Yellow-headed Blackbird was seen by M. Perrons at Shebandowan on July 5. This is a rare visitor to this region. Baltimore Orioles were reported locally on May 21, 24, and 29, and on June 6. All were males and we still have no evidence this species breeds locally. Mrs. Peruniak saw a Baltimore Oriole at Atikokan on June 22.

Cardinal to Sparrows: M. Hogarth reported a Cardinal in Neebing Township on June 1. This is a very rare visitor to the Lakehead. Indigo Buntings are probably slowly increasing as summer residents. In 1965, they were reported in four local areas between May 30 and July 6, and one was seen near Atikokan on June 7.

Evening Grosbeaks spent the summer at English River and in Paipoonge Township. Young were seen in the latter area in July. No nest of this species has been found in Thunder Bay District. The occasional Pine Siskin has been seen throughout the season. The only crossbill reported was the Red Crossbill seen at Rosslyn by Mrs. Vibert on June 22. On May 23, Paul Inksetter observed a male Lark Bunting in Sibley Provincial Park. There is one previous, unauthenticated, fall record for this western species. Sparrows were generally present in their usual numbers. A possible exception was the Clay-colored Sparrow which has evidently declined in numbers during the past few years.—*Regional Laboratory, Ontario Department of Health, Fort William, Ontario.*

BALD EAGLE STATUS REPORT, 1965 CHIPPEWA NATIONAL FOREST

John Mathisen

A Bald Eagle nesting inventory was completed on the Chippewa National Forest for the third consecutive year. Field personnel continued to demonstrate their interest in the bald eagle project by reporting nests observed during routine field activities and aiding in the determination of nesting success. A reported nest was not considered authentic unless observed by the Forest Biologist, or some other qualified observer.

An attempt was made to observe all nests in April and May to determine activity status. Active nests were then observed again in July and early August to determine nesting success. A nest was considered active if adults were present, or if droppings indicated substantial use of the nest tree. If young were present in July, the nesting attempt was considered successful.

New Nests and Nest Losses

Twenty-two nests were reported and

authenticated in 1965. One nest had blown down and was removed from the record. This brings the total number of known eagle nests on the Forest to seventy-six. An additional thirty-six reports have not been authenticated.

Nesting Success

Fifty-eight of the seventy-six nests were observed in 1965. Thirty-nine were considered active. Of these, twenty-two (56%) were successful in bringing eagles to an advanced stage of development. The twenty-two successful nests produced twenty-nine young, or 1.3 per nest. This is the highest nesting success recorded since the study was initiated. The data can be projected to the twenty-eight nests that were not observed to estimate the productivity of all known nests. This would increase active nests to fifty-one, successful nests to twenty-eight and number of young to thirty-six.

A summary by Ranger Districts appears in the following table:

District	Known Nests	Possible Nests	Observed Nests ('65)	Active Nests	Successful Nests	No. of Young
Bena	23	7	17	9	6	6
Blackduck	5	3	4	4	2	2
Walker	5	5	5	4	2	2
Remer	1	4	0	0	0	0
Marcell	9	5	6	5	4	6
Dora Lake	2	4	2	2	0	0
Cass Lake	16	4	12	5	4	6
Cut Foot	15	4	12	10	4	7
Forest Total	76	36	58	39 (67%)	22 (56%)	29
Projected Total ..				51	28	36

With three years of data it is now possible to make some comparison between years.

Year	Known Nests	Observed Nests	Active No.	Nests %	Successful No.	Nests %	Young Per Nest
1963	48	31	20	64	6	30	1.7
1964	55	46	30	65	12	40	1.2
1965	76	58	39	67	22	56	1.3

The percent of nests that were active remained constant for the period. The number of active nests observed, however, has doubled. Nesting success has increased from 30% to 56%.

Discussion

It now appears likely that the number of eagle nests on the Chippewa will exceed 100. In order to comply with the protection and management of nest sites as outlined in F.S.M.4, it is essential that we have records of all nests. A continuous effort shall be made to locate new nests. The Chippewa appears to be the major breeding area of the species in the Lake

States region. An aerial survey would be helpful in locating additional nests.

A nestling was removed from a nest and sent to the Bronx Zoo for research on plumage changes. This was accomplished by Frank Ligas of the National Audubon Society.

Osprey Nests

The locations of Osprey nests were also recorded, however time did not permit a detailed examination. A total of twenty three osprey nests are known. This probably represents a small proportion of the total nesting population on the Forest.—*Bemidji, Minnesota.*

M.O.U. BIRD STUDY TOUR TO EUROPE

Plans are being made for an organized bird study tour to Europe during the spring of 1966. Dates of the tour have been set from May 9 to May 30, 1966. The first two weeks of the tour will be spent in Spain and Portugal and the third week in Holland with return from Paris on May 30. Portugal, Spain and Holland are excellent birding areas in Europe. Tour cost will be \$795.00 per person. Early reservations are required. If you are interested in this tour and would like further information please drop a line to the editor, Robert B. Jansen, 1817 W. 59th Street, Minneapolis, Minnesota 55419. Full details will be available in the December and March issues of *The Loon* and in *The Newsletter*. Also a brochure, explaining in detail the tour, will be printed.

NOTES OF INTEREST

COMMON GALLINULE RECORD FOR STEVENS COUNTY—On the evening of May 14, 1965, while out on a short drive with his entire family, my brother Paul Strubbe spotted a strange bird in a slough only a short distance from home—"A pint-sized mudhen with a red bill." That evening Gary—my nephew—called to consult my bird books in an effort to identify the new bird. It had to be a Common Gallinule.

The next day, Saturday, was too dark and rainy for much photography, but I did locate the bird, and notified Delmar Holdgrafer, of Donnelly, who also came and saw it.

Sunday morning was quiet and with good light, so I was parked down by the cattail slough from 6:30 a.m. until about 11:30 a.m., during which time the gallinule was most cooperative. About every 15 to 25 minutes it would emerge from the cattails, feeding in the shallow and more open water, near the road. Each time afforded opportunity for anywhere from 2 to 6 good shots with the telephoto camera. (See front cover). The bird was quite bold, several times swimming right up to the road bank below my car. About 10:30 a.m. it swam into the cattails for the last time, and to the best of my knowledge it hasn't been seen since.—*Ernest H. Strubbe, Alberta, Minnesota.*

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NORTHERN THREE-TOED WOODPECKER OBSERVATION—On February 28, 1965, as I walked along a path near the northwest corner of the Eloise Butler Wild Flower Garden in Theodore Wirth Park, Minneapolis, I was attracted by the sound of chipping and pecking from a tree alongside the path. The bird, slightly smaller than a Hairy Woodpecker, was almost directly overhead, and first appeared very sooty dark vaguely interspersed with white. As he worked his way about the trunk, I noticed black and white barring on each flank and the same obvious ladder barring on the back, between sooty black wings. The throat and upper breast were white, and a broad black "beard" extended laterally and slightly downward from the base of the bill, which was heavy and probably a little more than an inch long. Above and below the "beard" were white areas.

Several times I thought I noticed a flash of yellow as the bird pecked, but not until I climbed up the hill about ten yards to the height of the bird did I definitely see the yellow forehead. When I was certain I had noted the distinguishing marks, I checked my Peterson field guide and concluded that I was looking at a male Northern Three-toed Woodpecker. The obvious field mark distinguishing it from the Arctic or Black-backed Three-toed was the barred black and white or "ladder-back."

Having identified the bird to my satisfaction, I drove to a near by phone and phoned Bob Janssen, who arrived in about 20 minutes and verified my identification. Other birders were phoned, one of whom also came to the park and observed the bird.

The bird was a vigorous feeder and worked intensely on each tree for 10-15 minutes before flying on. I was able to see that the bird indeed had only 3 "toes" of bluish color. The head movements were powerful and deliberate. The head was moved often in a somewhat lateral blow, aimed at striking off a large piece of bark. Often the bird took a backward hop down the trunk. It worked on both vertical trunks of about 1½ foot diameter and on horizontal fallen trunks of about the same size. Height of operation varied from the base of a medium sized elm to the upper limbs of a white birch. The bird worked on limbs of the birch which were about two inches in diameter, and often probed apparently into old borings. While on the trunk of the birch,

he peeled back several strips of old bark which extended into fresh, live bark.

During the period I constantly observed the bird, from 2:00 p.m. to 3:15 p.m., he had moved less than 100 feet from the tree in which I first saw him. During the entire period of observation he was silent, even when a Hairy Woodpecker landed within 5 feet of him. He allowed several people to work within 6 feet—*Fred Lesher, 2812 Bayshore Drive, La Crosse, Wisconsin.*

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NORTHERN THREE-TOED WOODPECKER IN MINNEAPOLIS—May 12, 1965. Rachel Tryon, Josephine Herz and I were birding in the Roberts Sanctuary in Minneapolis. All at once Jo said, "Look at that woodpecker," and look we did. The bird was on a bare tree trunk not over 30 feet from us, in full view with bright sunshine directly on him. The yellow on his head, the bars across his back and the junco-like white feathers of the tail told us we were looking at a male Northern Three-toed Woodpecker. Rachel could even see the white spots on his wings which he stretched out several times.

After about ten minutes he flew to another area of the sanctuary where he was observed by another group of bird-watchers. Young Alison Bolduc, dashed home, got his camera, came back and photographed the bird. Considering the bird is rare and was in this part of the state in late spring, it was fortunate so many birders got to see him.—*Mrs. E. D. Swedenborg, 4905 Vincent Avenue South, Minneapolis, Minnesota.*

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OBSERVATION OF AN INCOMPLETE ALBINO BONAPARTE'S GULL—

The newly black-topped runway and adjacent sandy flats at the small airfield on Minnesota Point, Duluth are a favorite loafing place of the gulls in the Duluth-Superior harbor. The barren sand and gravel upland next to the airfield is also the nesting area of a small colony of Common Terns. On the evening of June 6, 1965 I was lured by the shining mass of white on the runway, representing hundreds of gulls, to walk the half-mile down the Point from the recreation center and investigate. Using the dunes along the beach as cover, I managed to get opposite the gulls and set up my scope on the top of a dune overlooking the runway, 500 feet away. On the runway were about 400 Ring-billed Gulls (mostly in adult breeding plumage), 160 Herring Gulls (mostly immatures showing wing molt), and 6 Caspian Terns; on the adjacent sandy shoulder to the runway and on the beach there were two groups of Bonaparte's Gulls (all immatures as far as I could see), totalling about 250 birds, and a large group of terns (about 250 Common Terns and 20 Black Terns) in addition to the Common Terns sitting on nests in the upland. There were also 6 adult Franklin's Gulls with the Bonaparte's Gulls (this is the second record of Franklin's Gulls for Duluth; they were seen both flying and sitting and their larger size, black head and grey mantle with black wing tips were noted). In the middle of one of the flocks of Bonaparte's Gulls I spotted a small all-white gull. I was too far away to be sure of anything about the white gull, except that it was the same size as the Bonaparte's Gulls. Knowing that if I showed myself all the gulls would fly, I decided to take a chance and walk out to the runway to see if I could get a better look at the white gull.

When I left the top of the dune, all the gulls and terns took off but fortunately the Bonaparte's Gulls are tamer than the Herring or Ring-billed Gulls. The latter species left the area completely but the Bonaparte's Gulls, after circling in a flock for a while, came back to rest in the same area. They (and the terns) did this several times as I slowly walked across the barren gravelly area toward the runway, stopping every 100 feet or so to set up the scope and look at the white gull again. I managed to get within about 100 feet of the Bonaparte's Gulls before they took off permanently. During the first part of the stalking the sun was behind the clouds but as it sank toward

the horizon, it came to an opening in the clouds and shone obliquely on the gulls for about 15 minutes. After watching the white gull for about a half an hour and after getting close enough to it to clearly see the color of the soft parts, I came to the conclusion that it must be an incomplete albino Bonaparte's Gull (see Gross, "The incidence of albinism in North American birds," *Bird Banding*, April, 1965 for terminology). It was pure white in plumage but the eye was black, the bill was completely black and the legs were pink. It was an integral part of the Bonaparte's Gull flock and in comparing it with them on the ground and in the air (it flew over my head twice), I could detect no difference in size nor shape (of the body, head or bill) or in method of flight from the Bonaparte's Gulls. All observations were made through 7 x 35 binoculars and through 10-60 power zoom-lens spotting scope.—*Janet C. Green, 9773 North Shore Drive, Duluth, Minnesota.*

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RAPTOR PREDATION UPON RAPTORS—Although on the Cloquet Forest Research Center we have found evidence of a certain amount of predation upon raptors year after year, the winter just past (1964-65) was noteworthy in the heavier than normal raptor predation upon other raptors.

Up to the first of June, 1965 the scattered remains of four Barred Owls and one Goshawk had been reported on this five square mile research forest. Three of these remains were reported by forest management students who found them while pursuing field course work.

Inasmuch as these same students found only 11 of 200 stimulated "predator-killed" Ruffed Grouse remains scattered at random over the forest, (for which a reward of one dollar was paid) and found only 3 of an estimated 40 to 50 natural kills of grouse, we believe that the finding of the 4 owl remains could represent a kill somewhere in the order of 10 to 15 owls on this forest area. We base this estimate on the observation that the feathers of plucked owls are somewhat more conspicuous than those of Ruffed Grouse.

While specific figures are not available it has been apparent this spring that raptor predation upon Blue Jays was heavy. Normally the remains of jays are infrequently encountered in the forest, but this spring (1965) they were numerous enough to be considered commonplace and not worth recording.

This picture of abnormal predation is probably the result of the deep snow which provided ideal wintering conditions for Ruffed Grouse, one of the major prey species for our wintering raptors. Not only were the grouse unavailable to predators by virtue of their being able to remain buried in snow for periods of 18 to 24 hours at a time, but there was also a marked scarcity of snowshoe hares and red squirrels both of which are normally taken by raptors in about the same frequency as Ruffed Grouse. In desperation the raptors evidently turned upon one another, and especially upon Blue Jays.

An apparent scarcity of Great Horned Owls on the Forest this spring is not surprising. Normally there is at least one pair of Great Horned Owls per square mile on the Cloquet Forest in the spring, but this year our field observations indicate no more than two, or possibly three pairs, on the five square mile area. However, the usual one pair of Goshawks nested on the Forest again this season, for the tenth successive season that we know about.—*Gordon W. Gullion, Forest Research Center, Cloquet, Minnesota*

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IMMATURE HARRIS SPARROW ATTEMPTS TO WINTER AT CLOQUET—On November 28, 1964, following the first significant snowstorm of the 1964-65 winter, a young Harris' Sparrow appeared at our back-yard feeder-trap in Cloquet, and was promptly captured and banded. Daily thereafter this banded

sparrow visited our feeder at least twice, and often during especially cold weather it snuggled up against one side of the covered feeder and spent most of the day on the feed tray. Having survived for about 75 days it vanished shortly after February 10, 1965, following a 12 inch snowfall. During the period of this bird's survival here at Cloquet it endured at least 43 nights when ambient air temperatures fell below 0°F, including at least 6 nights of temperatures lower than -30°F. Records of wintering Harris' Sparrows are not unique in Minnesota (see P. H. Eggena, *Loon*, 36 (1):26, 1964; and P. Getman, *Loon*, 36 (2):63-64, 1964) but I believe this record is of interest because of the climatic conditions which this bird endured for over two months.—*Gordon W. Gullion, 605 Slate Street, Cloquet, Minnesota.*

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LARK BUNTING RECORD FOR THE NORTH SHORE—I have recently noted one or more published references concerning the occurrence of the Lark Bunting along the North Shore of Lake Superior and would like to report another.

In the late afternoon of May 11, 1965 several friends and I saw a male Lark Bunting feeding on the lawn of the East Bay Hotel in Grand Marais, Cook County. The bird was in view for at least fifteen minutes. There was no doubt of its identity. Two of us, having lived in the Great Plains, were familiar with this species.—*Bernard A. Fashingbauer, Chief Curator Biology and Education, The Science Museum of the St. Paul Institute, St. Paul, Minn.*

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FERRUGINOUS HAWK SIGHT RECORD FOR MORRISON COUNTY—On the morning of April 24, 1965, Dr. Edmund Hibbard, Kim Eckert and I observed a very probable Ferruginous Hawk about five miles west of Buckman, Morrison County in central Minnesota. This area is prairie country characterized by sandy soils, few trees, and a small Greater Prairie Chicken booming ground evidently not in use that day. The weather was cloudy and just above freezing with a moderate northeast wind. We first spotted the bird from 300 yards as it flew over the road in front of us. Its large size, light underparts, white tail, and rufous coloration on back, wings, and on the underside of the wings, were easily seen. Although the literature does not mention this rufous underwing mark, a specimen examined at St. John's University clearly shows this characteristic. The bird flew low and quite swift to a small knoll where it perched in an oak. Approaching to within 200 yards of the hawk, we could see the completely white underparts. As it flushed away from us a light red area on the upper tail was seen in the position of a subterminal band although not actually dark enough to call a band. The bird then soared above us for several minutes showing no trace of a dark V formed by the legs and led us to believe it was an immature. The phase of this hawk which shows neither the V nor the windows on the wing yet shows white tail with red tinge and rufous coloration is, according to the sparse literature on hawk plumages available, a probable third year light phase Ferruginous. Later that morning several rough-legs of both phases were seen and few similarities to our bird were noticed. The other bird resembling a Ferruginous, the Krider's Red-Tail, would not have the rufous wings and back and would be much lighter appearing.—*Robert P. Russell, Collegetville, Minnesota.*

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GREATER SCAUP—On April 26, I was in my photo blind at Frog Lake, Stevens County, during which time scattered groups of scaup were observed all over the lake. I just took for granted they were all Lessers, until 3 (2 drakes and 1 hen) moved in toward shore, right in front of my blind. They filled the entire frame of my view-finder (on a 25 power telephoto). The rich oily-green gloss on the heads of the 2 drakes told me at once that they were Greater Scaup, but I also took note of the heavier, rounder shape of the heads. The

flanks also appeared almost white, but without a close-by Lesser for comparison, I didn't depend on this mark. Seen head-on (got one excellent shot on color film), they appeared to be a thicker, heavier duck, especially in the neck and head, than the Lesser. Like comparing a battleship to a cruiser. The 2 photos I got on color film, due to some stroke of luck, do not show the green gloss as it appeared in the view-finder. It faded out to a neutral sheen. Otherwise one shot was perfect.—*Ernest H. Strubbe, Alberta, Minnesota.*

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A WHITE EMPIDONAX AND MUTANTS OF THE COMMON GRACKLE AND THE HOUSE SPARROW—On May 10, 1965, in a little pasture near Coon Lake, Anoka County, Minnesota, I watched a peculiar white Empidonax flycatcher. It was strikingly bright, and on close inspection glowed with a soft yellow except on the wings and throat. Some dark feather shafts were visible on the wings. The eye was black without a suggestion of a ring. The feet were black. The bill was flesh-colored except brownish on the central third of the upper nib.

This flycatcher called at frequent intervals much like a Trail's flycatcher which joined him when he moved to the edge of the alder-tamarack swale. Neither bird appeared unusually conscious of the other's presence though they approached within inches of each other.

Other mutants recently observed in the town of Forest Lake were a House Sparrow in February, 1965, and a Common Grackle on October 19, 1964. Both of these were in normal plumage except for white wing feathers which, in flight, flashed a pattern much like that of the Rose-breasted Grosbeak.—*William H. Longley, Forest Lake, Minnesota.*

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GOSHAWK FEEDS ON A BARRED OWL—On March 22, 1965, Walter Rohl shot a Goshawk as it fed upon a Barred Owl on a road in the Carlos Avery Game Refuge, Anoka County. Apparently the hawk had killed the owl.—*William H. Longley, Forest Lake, Minnesota.*

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ABERRANT PLUMAGED WILSON'S (?) WARBLER—On May 9, 1965, my wife and I stopped by at Frontenac, Minnesota to see how the warbler migration was progressing. The woods were ringing with the songs of eighteen species of warblers and vireos (all confirmed by sight observation) plus three other species (Orange-crowned, Palm and Wilson's) which were seen but not heard singing. All of these were recorded in less than half an hour. Things seemed too good to leave just yet, so we stopped just north of the Methodist Camp to check on a small dried-out stream gully. A Lincoln's Sparrow and several Wilson's Warblers came immediately into view. With the Wilson's Warblers was a strange-looking individual that held my attention for about five minutes. The back was typically a dull olive-gray color and the black cap was present. However, the cap was quite extensive, covering the entire crown in width and stopping just above the eye, almost touching it. When I viewed the bird from the side, at eye-level, I was even more surprised. The underparts, from beak to vent, were a dirty white with a pinkish-buff flank mark exactly like that of a Tufted Titmouse. To the uninitiated, this bird would certainly have passed for a Black-crested Titmouse with its crest tightly depressed. The thin yellow beak, small size and perpetual movement clearly labelled it a warbler, however. I finally concluded that it must have been an unusual Wilson's Warbler. Strange plumages hold a special interest for me and I think our editor would welcome notes from others of you who have had similar experiences. These oddities seem to have appeared rather suddenly in the short scope of my birding tenure, and I can't help but speculate that perhaps chemicals used in our modern insecticide sprays may be, in some very discrete way, influencing the pigmentation controlling

mechanisms in birds and possibly other fauna. It might be an interesting project for all of us to meticulously record and report such oddities to *The Loon*.
Ronald L. Huber, 480 State Office Bldg., St. Paul, Minnesota 55101.

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EARLY SPRING DATE FOR THE EASTERN WOOD PEWEE—On April 27, 1963, William R. Pieper and I were birdwatching in the T. S. Roberts Sanctuary, Minneapolis, during the late afternoon. We were somewhat surprised to hear the call of an Eastern Wood Pewee, since neither of us had ever recorded that species in April before. We located the singing bird and got a good view of it at less than 100 feet. Faint wing bars, no eye-rings and a yellow lower mandible were all clearly evident. The light was behind and to the left of us. Bill had 9 x 35 and I had 8 x 30 binoculars. We watched the bird for several minutes as it repeated its distinctive call. As we proceeded through the bird sanctuary, we heard a second Eastern Wood Pewee calling and still farther on we heard a third. Thinking that a small wave of this species must have hit, we sought out the third one for a look. Again we observed an Eastern Wood Pewee, under optimum conditions, and noted the distinctive characters listed above. However, this last individual had a strong yellow wash on the underparts, suggesting a Yellow-bellied Flycatcher. The larger size, lack of a definite eye-ring and less-prominent wing-bars eliminated the Yellow-bellied Flycatcher, in addition to the fact that the two have different calls. We believe these to be the first (and only?) April dates for the Eastern Wood Pewee in Minnesota.—*Ronald L. Huber, 480 State Office Bldg., St. Paul, Minnesota 55101.*

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WHISTLING SWAN SUMMER RECORD—The bird was first sighted by Mr. and Mrs. Lawrence LaPatka on the morning of July 11, 1965 on the Virginia Sewage Disposal lagoon west of Virginia, St. Louis County. The pond has not been receiving any sewage this season. On the 14th Mrs. LaPatka contacted Mr. Nels Hervi in regard to his possible identity. On the same day Mr. Hervi and I confirmed their tentative identification. A large white bird of that size, with black feet, straight black bill, and long erect neck could be nothing else than a Whistling Swan. There are two Mute Swans on Silver Lake but it was not one of those.

Up to the present only one bird has been seen although at one time Mrs. LaPatka observed something white but she was unable to positively identify it as a second swan. This bird appears to spend its time resting on the sandy shore or swimming on the pond. It has remained in the area and was still present on July 26th.

The question naturally arises: is this a lone bird that has drifted in, or is it one of the pair that visited Silver Lake earlier in the season. Did the pair remain in some outlying area and was the mate killed somehow? Or is the female on a nest somewhere in the neighborhood? But then she should appear occasionally. Maybe time will tell. *Vera F. Barrows, Virginia Minnesota.*

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CARDINAL OBSERVATION—When I first saw my lady Cardinal the skies were overcast and she looked like a ball of clay on a tree limb with a red spot in the center. It was the flitting movements of her gay mate that brought my attention to her. The date was April 18, 1965, and the occasion an exploratory walk alongside Shingle Creek close to its junction with the Mississippi in Minneapolis. After I had stared at the grey ball for a while the male bird apparently thought staring could be a two-way game. He coaxed his mate to a vine clad tree at stream edge and the two sat there near the path and looked me over. The next day in brilliant sunshine my eye caught the lady in all her delicate beauty as she was making her way through vines at creek bank level. Soon I spotted her on her nest in the vines draped over that

creekside tree. It was bent away from the water toward the path. She was just above the precipitous 10 foot bank, so that I looked down on her. The male bird was singing not far away.

Each day thereafter, if possible, I walked down that path to take a peek at the lady Cardinal. The vine ropes and tree branches were bare. Even so, until I learned to look first for the red beak or rosey tail, I sometimes passed by and thought I must be looking into the wrong tree. For several days the male was not seen. On April 30, 1965 at 10 a.m. he flew in and perched near the nest. There was still no signs of leaves on vine or tree. The female seemed never to leave the nest. Maybe she felt as I did that with so many grackles about it would not be safe. I had a feeling the grackles were keeping an eye on that nest.

On May 3rd, at 3 p.m., I saw the male fly directly over the creek from up stream, coming in like an arrow to light at home base. A few tiny leaves were appearing. All was well. On May 5th, the male was sighted again. My notes on the lady bird from day to day read: "Still sitting." Even on May 6th most of the vine was utterly bare.

At 11 a.m., on May 7th, the morning after the devastating wind storm and a nearby tornado, I took my daily walk with alternating hope and fear. Hope died as I looked down on the empty nest. It was slightly tipped and seemed to be darkly stained within, but I could not see clearly. (There were no eggs.) *Fay Cuzner, 4253 Webber Pky., Apt. 19, Minneapolis, Minnesota.*

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FURTHER OBSERVATIONS OF THE BLUE GROSBEAK IN ROCK COUNTY—On the morning of July 3, 1965 Carrie Schafer and I left from Worthington and arrived over at the boundary road about 8 a.m. Temp. 52°. CDST. Much to my delight and surprise we saw a male Blue Grosbeak on the wire on the South Dakota side singing. He flew over into a dead tree in the grove of the Clark Helgeson farm, and continued to sing as we watched. With the sun in the east on this beautiful morning his color was highly discernable as well as the brown wing patches. We ate our breakfast along the road and continued south. About two miles farther on we observed another male and heard him singing—also on the South Dakota side. A companion bird which I supposed to be the female jumped down into the grass. We continued on over to Newton Hills State Park.

On the morning of July 18, 1965 Orpha Barnes and Carrie Schafer went over to this area (I was unable to leave this morning to accompany them). They reached the road about 7:30 a.m. and spent nearly four hours on this six mile stretch of road and saw no grosbeaks. When they returned to Worthington, we decided to take our supper and go over to Mound's Park and possibly later to retrace their morning trip. This was a cloudy day with temperatures in the seventies and nice to be out. On our slow trip over to Mound's we observed a family of Western Kingbirds, Orchard Orioles in chokecherry shrubbery, some swallows flocking, young Eastern Kingbirds, and 2 to 12 Dickcissels per mile. We also saw a male Orchard Oriole in the park, and my friends had seen Orchard Orioles along the state line road in the morning. After our supper we started west about 7 p.m. and then traveled slowly down to Highway 16, and then to the state line road. About 8 p.m. CDST we saw a pair of Blue Grosbeaks on a fence just south of the Helgeson grove. As we stopped the car to put binoculars on them they both flew down in the road in front of the car where they stayed long enough to get a good view, then flew into a field on the Minnesota side. The male then flew up on the wires and sang. Two miles farther down we heard a male singing and observed him on the wires. Then we heard a second male singing a little distance down on the Minnesota side at the edge of a farm shelter grove. By now it was getting dark and the nearest grosbeak looked very black as he sat on the wire.

I looked for Lark Buntings but did not see any. I observed one south of Adrian in Nobles County in May, but have looked and never seen him again. We have had many Bobolinks in the county this year. *Mrs. Helen Hatlelid, Box 173, Worthington, Minnesota.*

The above information was contained in a letter to Ronald Huber. The following was received later by Mr. Huber. Excerpts from Mrs. Hatlelid's second letter to me, dated August 3, 1965:

We went out in the western part of Rock County again on July 25. Saw a pair of Blue Grosbeaks one mile north of Highway 16 at the state line and 0.2 miles East. They were a nesting pair, I am sure, because they were so alarmed when we got out of the car. They flew around giving the alarm notes. They were on the edge of a cornfield near a farm grove. We also saw the grosbeaks (a pair) at the Clark Helgeson farm in the lilac bushes at the front of their home. I found a nest there which I'm sure was theirs but the birds were so nervous and disturbed that I did not examine the contents (it was just high enough so I would have had to get something to stand on). The Helgeson's were much interested and we pointed out the birds to them and they used our binoculars so I hope they will continue to observe until we make another trip out later this summer. This of course is the South Dakota side of the road. We also saw two singing males again farther down the road. *Helen S. Hatlelid.*

* * *

FIRST SUMMER TANAGER BANDED IN MINNESOTA—Last year Mrs. Arthur Wright, who lives in the Lakeside area of Duluth, had a male (first year?) Summer Tanager at her feeder from May 12 through 16. This was the first record of this species for Duluth and many colored photographs were taken of the bird (see *The Loon*, June, 1964, p. 63.) This spring when Mrs. Wright phoned me on May 19, 1965, I jokingly asked her if she had another Summer Tanager. Much to my astonishment she replied that a female had been coming to her feeder since noon that day. I went out that afternoon and briefly saw the bird. Since I hadn't been able to take photographs of it, I decided to try and catch it in one of my mist nets so I could measure it and take pictures of it. The next day, May 20th, I set up my net by Mrs. Wright's feeder and was most fortunate in catching the Summer Tanager five minutes after I got the net set in place. I took the bird to the University and Dr. P. B. Hofslund helped me to measure and photograph it. He confirmed the identification by comparing the live female Summer Tanager with study skins of female Scarlet Tanagers which it closely resembles. I then took the bird back to Mrs. Wright's house, banded it and released it. Mrs. Wright last saw the Summer Tanager on May 24th. The coincidence of two Summer Tanagers in the same yard in consecutive years may be partly explained by the fact that Mrs. Wright has several bee hives to which this species is attracted.—*Janet C. Green, 9773 North Shore Drive, Duluth, Minnesota.*

* * *

SPRING RECORD OF SMITH'S LONGSPUR—As spring records of Smith's Longspurs seem to be very few in Minnesota (Roberts records only the following: April 18, 1894 and April 27, 1895, both in Jackson County, and May 6, 1911 in Marshall County), it seems worth noting that on May 2, 1965 I saw a small group about two miles southwest of Beardsley, Big Stone County, at the edge of a sheep pasture. I was out tracking down some old records of Burrowing Owl breeding sites and had actually found one a mile to the north, when I noted a small bird with a rich orangey breast sitting on a telephone wire by the road. I stopped the car beneath the bird and not fifteen yards from it and my wife and I observed it through 7 x 50 Bausch and Lomb binoculars. As your editor has remarked in a recent article, occasions for careful study of Longspurs are few indeed, but on this occasion the bird sat in full view and good light for

perhaps two or three minutes. We studied it carefully, noting the breast color at that very close range, the unmistakable head pattern—black triangle on white cheek, and the profile of the beak and body. Due to our position in relation to the bird, we were unable to note whether it had the white shoulder patch mentioned in Peterson, nor did we note the tail pattern as distinctive, although when the bird suddenly flew we did notice that the tail was white-bordered.

I have observed Smith's Longspurs on two or three previous occasions but as all of these were in the fall or winter, I had never seen it in the breeding plumage before. Nonetheless, I have no doubt as to the identity of this bird, so clearly marked is the species. After a few minutes the bird flew from its perch on the wire and when it did so three or four other buffy breasted birds arose from the grass hardly ten yards from us and flew away with it. On the basis of the one certain observation, I assumed that I had seen a small flock of Smith's Longspurs.—*R. A. Grant, 111 E. 9th Street, Morris, Minnesota.*

* * *

KENTUCKY WARBLER AGAIN SEEN IN ANOKA COUNTY—On May 19, 1965, I observed and heard a Kentucky Warbler below the Coon Rapids Dam, Anoka County. It was in exactly this same location I observed a Kentucky Warbler between June 3 and July 14 in 1964. This bird was more than likely the same individual as it exhibited the aberrant plumage in which I last saw the bird of the previous summer. (See *Loon* Vol 36 #3). The song as well was identical to that of 1964 and Peterson's bird recording. I last observed the bird on June 30, 1965. The two primary dates of observation, June 3, 1964, and May 19, 1965 are not a true indication of the birds arrival as they were both the first days of the year that I had been in this area.—*David Pearson, Pacific Lutheran University, Tacoma, Washington.*

NEST CARD PROGRAM

The North American Nest Card Program is winding up the 1965 nesting season, and many cards have already been returned. There are still many cards in the hands of the individual recorders, however, and these should be returned to us as quickly as they are completed. We are preparing the data for transferral onto IBM cards, and a large bulk of material is needed for the first run, to be started soon.

Regional Centers may determine for their members whether their cooperators should return the cards to the center first, in order to complete local records, or whether they may be sent directly to us as they are completed. Laboratory of Ornithology, 33 Sapsucker Woods Road, Ithaca, New York.

BOOK REVIEWS

BIRDS OF PREY OF THE WORLD, Mary Louise Grossman, John Hamlin, and Shelly Grossman: Clarkson and Potter, Inc., New York, 1964. 496 pp.+ 48 pp. color plates. \$25.

The cover tells us that this large heavy quarto contains, in addition to the color plates, 283 duo-tones, 646 silhouettes, and 425 range maps. The volume covers Vultures, Eagles, Hawks and their allies, and also covers all Owls. With respect to the diurnal birds of prey, it supplements and brings up to date the standard monograph by Swann and Wetmore, published in 1924-1945 in 16 parts, but as it is written on a much more popular level and in certain respects is less full and detailed, it will not replace the Swann and Wetmore work. The volume is divided into two parts: in the first are a series of chapters dealing with (1) the paleontology of birds of prey, (2) birds of prey and men, (3) ecology and habits of birds of prey, (4) what the authors call "designs for survival," and (5) conservation. While a great deal of information is packed into the approximately 180 double columned pages of this section, there is much that seems to me of a very peripheral importance to one interested in the birds of prey. I note, for example, some five pages devoted to describing the rather slight role which birds of prey played in the mythology and folklore of the Indians of South and Central America. I, for one, would have appreciated in this part of the volume less on the pre-history of these birds and their functions in various religious and mythologies, and more on their living habits. The second part of the volume runs to almost 200 pages and comprises a systematic key to raptorial birds. These are described by species and for each species we are given a fairly full description of the typical adult plumage and, usually, a less full description of juvenile plumage although in the case of certain genera with many species, juveniles are not described at all. There are also small range maps for each species and in most instances flight silhouettes. Finally, each genus has a

section entitled "Habits" where are described, sometimes very briefly and sometimes more fully, the habits of the species included in the genus.

In the section of the key devoted to Owls, a considerable proportion of the species are not illustrated at all but otherwise the features of the key to the hawks recur here.

Naturally, in any volume of limited scope devoted to a large number of species, the authors are obliged to select from a much larger body of data than they can possibly include. However, so far as I am able to discern, the authors have selected for emphasis the most important facts, are economical in communicating them to us, and even for very obscure and rare species furnish us with at least enough information to whet our curiosity. It is hardly to be expected that so large and comprehensive a volume will be free of misprints and small errors of fact. However, few of these are of much importance and of the twenty or so which I noted, I mention just one: on p. 101 a photograph of the Merlin or Pigeon Hawk is miscaptioned American Kestrel. The index occupies twelve closely printed four-column pages and includes vernacular names as well as Latin names. There is also a fairly full bibliography of thirteen pages, which, however, in the sections devoted to species, somewhat confusingly alphabetizes the genera and species, instead of following the Wetmore order used in Part Two of the text.

The full-page plates, color and duo-tone, are all in Part One, but there are a number of smaller plates in Part Two. Also in Part Two are flight silhouettes of hawks and line drawings of perched owls. The silhouettes and drawings are adequate for identification but rather schematic and stiff. The photographs are generally good to superior although often somewhat worn zoo specimens. There are few action photographs and those few mostly of familiar American species—most birds are shown perched, presum-

ably in aviaries. It is a pity that the publishers did not include, in place of some of these, a more plentiful selection of the excellent photographs of birds of prey taken in the wild by Eric Hosking, Loke Wan Tho, and others.

This is a volume which few will buy and many will consult in libraries. Either group can read it with pleasure or refer to it with reasonable, if not absolute confidence.—R. A. Grant

WILD PARADISE, Guy Mountfort, Boston, 1958. 240 pp. + 59 b. & w. plates, end paper maps. \$7.00 (In the English edition about half the plates are in color.) *WILD DANUBE*, Boston, 1936. 207 pp. + 56 b. & w. plates + 1 color plate, end paper maps. \$6.00 (The English edition, entitled *PORTRAIT OF A RIVER*, London, 1962, is somewhat cheaper: 35 shillings—\$4.90.) *PORTRAIT OF A DESERT*, Boston and London, 1965. 192 pp. + 56 b. & w. plates + 12 color plates. \$10.00, but from England, 36 shillings—\$5.04.

Like other stay-at-homes, I enjoy reading travel books in my spare time. But as bad travel books abound, and good ones are rare, I find that almost as much time is spent searching for the latter as in reading. If good travel books are rare, good ornithological travel books are even rarer. Nonetheless the three books under review here are good ornithological travel books and can be recommended to anyone interested in the genre.

The author, Guy Mountfort, is a prominent British amateur ornithologist, who has published monographs and articles in the field. Between 1952 and 1963, Mountfort organized and led the several expeditions to little visited parts of Eurasia which are described in these three volumes. Each of the expeditions included a diversified staff: photographers, ecologists, and expert field naturalists. Some of these wrote articles based on the findings of the expeditions, which have appeared in scientific journals over the last decade. It fell to the leader of the expeditions to write the popular accounts which are contained in these three volumes.

WILD PARADISE is subtitled "The Story of an Ornithological Expedition

to the Coto Donana," a region of about 100 square miles in southwestern Spain, fronting on the Atlantic Ocean, and backing on the delta of the Guadalquivir River. The narrow strip of land thus enclosed has been kept as a private hunting preserve for over half a millenium and has thus retained, as have few other places in Western Europe, its primeval flora and fauna. As it is situated at the southwestern extremity of Europe and on one of the great avian migration routes, it boasts a phenomenally rich avifauna. Three expeditions under the leadership of Mountfort visited the Coto Donana during the breeding seasons of 1952, 1956, and 1957. All together they recorded over 220 species of birds and almost 50 species of mammals. Included were nests of such spectaculars as the Spanish Imperial Eagle, the Bee Eater, the Azure Winged Magpie, the Hoopoe, and the Roller. In addition they found rookeries of Herons and Egrets, the nests of which numbered in the thousands. They saw wildcats, lynxes, wild boars, two species of deer, and numerous smaller mammals. They recorded several species new to Europe and turned up a number of other species which are almost never seen in Europe. They had some lucky breaks and some almost disastrous mishaps. They traveled many miles on foot and horseback over the unpeopled marshes, dunes, and oak and pine forests of the Coto Donana.

All this is recorded in delightful detail by Mountfort, supplemented by excellent photographs by the prominent bird photographer Eric Hosking, and by full lists of all the mammalian, avian, and reptilian species observed, with notations as to their status in the region. There are also sections on the flora, the insect life, and the ecology of his fascinating untouched wilderness. The book is all that such things should be: get a copy and read it.

The remaining two books listed above can be dealt with more quickly, as they follow rather exactly the plan and format of the first, and like it are profusely illustrated with photographs. The subtitle of the second volume reads "The Wild Life of the Danube from the Black Sea to Budapest" and the

book describes the results of expeditions undertaken in 1960 and 1961. One would suppose that so thickly and anciently settled a region as the Danube valley would offer few surprises but it is the case that there are few competent ornithologists working in southeastern Europe, and in consequence much remains to be done in exploring bird life of that vast region. The results of the expedition, however, were not nearly as exciting as those of the previous expeditions to the Coto Donana, and it is perhaps for this reason that Mountfort spends considerably more space in this volume describing the people, the cities visited, the red tape of officialdom, and the amenities or difficulties encountered by the party. Nonetheless, the expeditions once again ran up an avian species total in excess of 220, and the book makes interesting reading, especially for those who like their ornithological meat heavily salted with notations of people and places.

The third volume under review is subtitled "The Story of an Expedition to Jordan," and to my mind it is much the least interesting of the three. We might expect that a desert would offer a limited fauna, avian or other, and so it is with the desert of Jordan, although the country is not without its concentration points—certain oases and relatively less arid areas where, on occasion, a considerable number and variety of bird species may be seen. Moreover, since Jordan has been rather infrequently explored by ornithologists, includes considerable areas of very sparse population, and has been altered by man very little over the centuries, it is natural to expect that a well mounted expedition would turn up in Jordan some rare and unusual species. Some were indeed found, but they were fewer than had been expected and the reason for this seemed to be the extensive and unchecked hunting by desert Bedouins and western visitors since the introduction of modern rifles some fifty or more years ago. During this period certain species of antelope and certain large game birds have been all but exterminated in Jordan. As a result of these and other factors, the expedition to Jordan was

somewhat disappointing and our disappointment as readers is doubled by the fact that Mr. Mountfort seems to feel it his duty to spend an inordinate amount of space paying his respects to his Jordanese hosts, from King Hussein on down to the driver who wrecked one of their cars. Effusions of this sort intrude themselves every few pages and sometimes, indeed, take up whole pages. However, there are the usual photographs, lists, and as these are done in the same exemplary way that they were in the preceding volumes, this volume may be recommended to those who are interested in reading about Jordan and would like something with an ornithological flavor.—
R. A. Grant

THE FIRST WATER COLORS OF NORTH AMERICAN BIRDS. Edited by Thomas P. Harrison. University of Texas Press, Austin. 1964? (year not shown. 59 pp., col. plates of the paintings of John White and Edward Topsell. \$5.00.

This book reproduces for the first time ten water colors of birds from Virginia copied from the originals by John White, Artist for the Sir Walter Raleigh expeditions of 1585-1586, that are contained in the Sloane portfolio in the British Museum. As Prof. Harrison explains in the first half of the book entitled "Backgrounds," the Sloane portfolio is an album of drawings of plants, fish, etc. as well as birds that was discovered in the White family about 1707 and contains copies of White's originals probably made by a relative about 1610. The originals of these drawings have never been discovered although there is another portfolio in the British Museum of undoubted originals by John White. In the second part of the book entitled "The Bird Paintings," nine of the White drawings are paired with those by Edward Topsell from his unpublished work on birds, *The Fowles of Heaven*, done in 1613-1614. Prof. Harrison has determined that these nine paintings of North American birds, the only ones from that continent in Topsell's treatise, were undoubtedly copied from White's originals. The painting of the two sets of drawings shows the crudeness of Topsell's illustrations compared with

White's work. Each pair of illustrations is accompanied by a commentary that includes a listing of the Indian names for the birds and a translation of them, and a discussion on the identity of the birds including the opinion of Roger Tory Peterson. The nine paired paintings are of a female Red-eyed Towhee, male Red-eyed Towhee, Eastern Bluebird, Yellow-shafted Flicker, Blue Jay, Red-wing, an oriole, Common Loon, and Sandhill Crane; and the tenth drawing from White, which was described but left unillustrated by Top-sell, is of a Common Grackle. This slim volume represents an excellent bit of scholarship and would make a valuable addition to anyone's collection of illustrations of North American birds.—Janet C. Green

THE GULLS WAY. By Louis Darling. William Morrow and Company, New York. 1965. 96 pp., many photos (col. and bl. and wh.) and bl. and wh. drawings by the author. \$6.50.

I don't know whether or not one has to be brought up on the island-studded, rocky coast of Maine, as I was, to be thrilled by the opening sentences of *The Gull's Way*: "The island is a small one, only a little more than thirty acres at high tide. Its backbone of rock ledge tilts up out of the sea. Rising to the northwest, the ledge breaks off abruptly into low cliffs with a jumble of broken slabs of rock, glacial boulders, and driftwood at their feet"; but I suspect that the appeal is universal. Islands have a special charm and Louis Darling has so completely captured the flavor of this one that one need not even have smelled salt air to be captivated. And though Minnesota's Lake Superior can't produce the smell of the ocean, it does provide rocky shores, crashing waves, fog and the cries of the gulls.

It is the Herring Gull colony that gives Darling's island a good dash of its flavor and he focuses on the gulls as he tells his story. Besides being the tale of an island, *The Gull's Way* is the breeding history of a pair of gulls which are followed by an observer in a blind from their courtship until the chicks are almost ready to fly. The story is related by the "watcher" who

records what he sees and then tries to figure out the gulls' behavior. A special sensitivity and imagination plus infinite patience are needed to do this, but the result is not fiction or anthropomorphic writing. Darling is as good a scientist as he is a nature writer, and he conveys the fascination of the student of animal behavior as he observes and attempts to unravel the actions of the gulls. Besides being beautifully written, the book is illustrated with many excellent colored photographs, black and white photographs and drawings, all by the author. It is a truly fine piece of scientific as well as poetic nature writing and is highly recommended for all who have seen a gull or a rocky shore or who have ever dreamed of them.—Janet C. Green.

THE WORLD OF THE WHITE-TAILED DEER. By Leonard Lee Rue III. J. B. Lippincott Company, Philadelphia and New York 1962. x + 134 pp., bl. and wh. photos. \$4.95.

THE WORLD OF THE BOBCAT. By Joe Van Wormer. J. B. Lippincott Company, Philadelphia and New York. 1963. 125 pp., bl. and wh. photos. \$4.95.

THE WORLD OF THE BEAVER. By Leonard Lee Rue III. J. B. Lippincott Company, Philadelphia and New York. 1964. 155 pp., bl. and wh. photos. \$4.95

THE WORLD OF THE COYOTE. By Joe Van Wormer. J. B. Lippincott Company, Philadelphia and New York. 1964. 150 pp., bl. and wh. photos. \$4.95

THE WORLD OF THE RACCOON By Leonard Lee Rue III. J. B. Lippincott Company, Philadelphia and New York. 1964. 145 pp., bl. and wh. photos. \$4.95

One of the volumes in the Living World Books, edited by John K. Terres, has already been reviewed in this section. *The World of the Red-tailed Hawk* by G. Ronald Austing in the March, 1965 issue of *The Loon*. The titles listed above are other volumes in the series and all follow the same format. They are very abundantly illustrated with good black and white photographs, by their respective authors, chosen to complement and augment the text. For example, the dis-

cussion of the kinds and the growth of the antlers of the White-tailed Deer is accompanied by many photographs showing these changes. Because the photographs are chosen to illustrate points made in the text and are not intended to be just nature pictures, many photographs of tame animals, especially those of the Coyote and Bobcat, are used. The text in all the books follows the same organization. The first chapter discusses the animal itself: its physical appearance, eating habits, range, etc. The life of the animal is then followed through the seasons: spring, summer, autumn, winter. The concluding chapter tells of the relationship of the animal to man. There is also a section describing the geographical races of each animal and there is an ample bibliography and index.

Although the text is simply written and does not presuppose any biological knowledge outside the realm of common information it does not assume just a casual interest on the part of the reader; and therefore, discusses the animal from a biological rather than an anthropomorphic point of view. The facts concerning the life of each animal are presented in detail and there is much information that will enlighten the knowledgeable woodsman or nature student. Because of the many illustrations and the straight-forward text, they will also interest enthusiastic children. The volumes by Joe Van Wormer use the dry, open country of the west as a background, and those by Leonard Lee Rue III use the predominately deciduous woodland of the northeast.—*Janet C. Green.*

PESTICIDES AND THE LIVING LANDSCAPE. By Robert L. Rudd. University of Wisconsin Press, Madison. 1964. xi + 320 pp. \$6.50.

The most common criticism levelled against Rachel Carson's *Silent Spring* was that the author was emotional and biased and did not present enough scientific evidence to back up her claim that man, through his indiscriminating use of chemicals, was doing great and potentially disastrous damage to his environment. For anyone interested in acquiring the facts that Miss Carson may have left out, this book by Robert

L. Rudd is a must. As the author states in his preface, "This book is an attempt to evaluate only one of many avenues to man's mastery of his environment. It rests on the question—How can we control the many thousands of plant and animal species that compete with us for food, fiber, and timber or in some way threaten our health and comfort and at the same time recognize, preserve, and enhance the productive, cultural, and spiritual values that the living environment gives to us?" This is a question that anyone (that is everyone) who looks around him and enjoys nature needs to contemplate; and the answer is not just a simple "yes" or "no" toward the use of chemicals in environment control. Making such a simple answer, which for bird-watchers is usually "no," to this complex question really indicates a lack of knowledge and represents a defeat of rational judgement as much as indiscriminant spraying does. Man's position as a dominant and controlling organism in the world is a fact that cannot be reversed, but the effect and methods of his dominance and control can be judged and varied.

Although Prof. Rudd comes down hard on most programs of pest control through the use of chemicals, his judgment is arrived at by a careful consideration of all the evidence. The presentation of this evidence comprises the bulk of the book, chapters six through twenty-one, where the response to chemical control of all types of animals and their environment as well as the relationships between them (ecology) are discussed in detail. Besides giving a clear picture of the hazards to all elements in the biological community, including man, of various types of pest control, this section also provides the reader with a clear understanding of the ecological principles involved—the predator-prey relationships, food chains, etc.

The first chapter is a general statement of the hazards and conflict of values in pest control as currently practiced, and the last chapter is a proposal for changes in this practice along

the lines of "ecological management" and how this can be brought about. There is also a very useful section, chapters two through five, on the types of pesticides, the economics of their use, and the current legislation governing their applications.—*Janet C. Green.*

BIRDS OF THE BLACK HILLS by *Olin Sewall Pettingill, Jr. and Nathaniel R. Whitney, Jr.* 139 pages, heavy paper cover. *Special Publication Number 1, Cornell Laboratory of Ornithology, 1965. \$2.50.*

Minnesota's serious birders have read with enthusiasm about the Black Hills in various issues of *Audubon Field Notes*. A lucky few have journeyed west to add some Black Hills birds to their lifelist. Now, for a very modest price, anyone contemplating

The Big Trip (or who just likes to read about those "foreign" birds) can own this where-to-find it guide. Topography, geology and vegetation of the Black Hills are discussed. Prime habitats are suggested and seasonal movements, when known, are listed. The birder thus knows the what-when-and-where of the area so he can add new birds to his list from this isolated "island" of Rocky Mountain flora and fauna. Both authors are ornithologists of the first-order and their book is a reflection of this fact. Moreover, the book is a promise of things to come from the resident naturalists of the prairie state that transient naturalists have long considered "virgin territory." It is hoped that the eventually forthcoming *Birds of South Dakota* will exhibit equivalent workmanship.—*Ronald L. Huber*

THE PRESIDENT'S PAGE

It is difficult to pick an appropriate subject to write about for this final "President's Page." It is my 12th one since I became president, and in many ways it is the hardest one. I think of three ways in which I could tie the three years into a neat package: (1) thank everyone who has helped; (2) list all of the accomplishments that have been made in the present regime; and (3) give a little pep talk to the incoming president with a thorough list of the bright ideas that have never quite made the light of day.

To thank everyone and to list those plans which never quite got going would fill the entire December issue, while to list the accomplishments would hardly fill a paragraph. So maybe a touch of this and that, a sort of a miscellanea, would do just as well.

There have been some gains I'm sure: our membership has risen to its highest point; we bill annually rather than individually; we have a state bird chosen by the organization; we have a well-established newsletter; we are now incorporated; we have a functioning education committee; we now have the Thomas Sadler Roberts award; the annual meeting seems to be progressing; a publication and research and records committee is not only established but is producing; and the M.O.U. has been accused of being a pressure group with some power where heretofore it has been treated with indulgence and condescension.

The above list sounds impressive enough until you look back on those goals you had set three years ago and realize that: we never did get an organized publicity campaign going; although incorporated, nobody has yet indicated a willingness to bequeath or donate any money or property; we have no visible income beyond the receipt of dues and, therefore, of course, no endowment fund; the Salt Lake Conservation Project fell through and no other similar effort has been made; the "Enjoying Birds in Minnesota" booklet never became a reality. I could go on, but this becomes depressing.

Everybody I approached for the Publicity, Book Sales, and Conservation Committee heads turned me down. They never made the first step. But the two editors, Eleanor Tyler and Bob Janssen did a terrific job; Helen Lien, Harry Goehring and Fred Leshner did superlative jobs at organizing our annual meeting; Walter Pratt did all the work of seeing that we were incorporated; Gloria Peleaux, Evelyn Cruzen and Elizabeth Campbell straightened out the membership lists; Forest Strnad took on more than once the noxious job of getting officers to accept; Bill Bryson got the educational committee functioning; Jan Green with help from Bob Janssen and Ron Huber have gotten system into our record taking; Boyd Lien arranged the field trips; Karen Eastman, Harvey Gunderson and Mary Elwell headed the Roberts Award Committees. To every one of these plus the many they had helping them, I can only say I appreciate your efforts.

As I look back on all of this, the one thing that stands out is what I personally have gained from three years of presidency far overshadows the efforts I had to put in.

A Good New Year to All of You
P. B. Hofslund

Will Trumpeter Swans Return to Minnesota?

Robert E. Turner

Most birdwatchers in Minnesota probably think of the Trumpeter Swan as one of those glamorous species that disappeared from our area before 1900, never to be seen here again.

But that attitude is unwarranted. The huge, graceful, and still-rare Trumpeter exists in a small but thriving breeding population not far from us in neighboring South Dakota. Wanderers from that population (or from other Trumpeters in Manitoba or Saskatchewan) may turn up in Minnesota anytime. Indeed, they may be here already. Or, if Trumpeters do not return to Minnesota under their own power, I believe that we of the Minnesota Ornithologists' Union might influence the U. S. Fish and Wildlife Service to establish a Trumpeter breeding population here.

In connection with my speculation that Trumpeters may be here already, consider the report of Vera F. Barrows in the most recent issue of *The Loon* (Sept., 1965). From July 11 through July 26, 1965, near Virginia, Minnesota, Vera Barrows and other persons observed a swan several times. The bird definitely was not a European Mute Swan escaped from a zoo; it was therefore reported as a summering Whistling Swan.

But was it really a Whistler? Actually, its presence here in Minnesota during the breeding season is the strongest evidence possible that it was probably a Trumpeter. For Whistling Swans have never spent the breeding season anywhere near Minnesota. They migrate on northward and nest far up in northwestern Canada and in Alaska. In my opinion the swan at Virginia could have been a Whistler only if it was a cripple which was incapable of completing its normal trip northward.

In that same September 1965 issue of *The Loon*, Dr. A. E. Allin's article on "The Canadian Lakehead" describes birds of southern Ontario, adjacent to

northeastern Minnesota. "A very late flock of 9 Whistling Swans fed on Thunder Bay on June 7," he writes. "A single bird was seen in the local harbor on July 14. It is difficult to explain the presence of swans locally in midsummer but one or two are reported almost years." I submit that it is not difficult to explain if we consider that these birds may be Trumpeters.

These are not isolated instances. Robert Janssen, editor of *The Loon*, has been pulling together scattered reports on all species as he works on his forthcoming book on Minnesota birds. And he finds that over the years a few native swans have been seen in Minnesota in summer. Of course, they were reported as abnormal occurrences of Whistlers. But I feel that it is logical to believe that many (perhaps most) of these summer swans are actually Trumpeters.

Why not? In olden times Trumpeters traveled over most of the continent. There is no reason why they cannot nowadays wander to Minnesota from the Yellowstone area, where they are overpopulated, or from much closer spots where they occur in South Dakota, Manitoba, or Saskatchewan. Such wanderers must have reached here in 1937 when B. J. Shaver saw a pair of Trumpeters that spent the summer on a small marsh lake in Beltrami County, Minnesota. Mr. Shaver, an employee of the U. S. Fish and Wildlife Service, was familiar with Trumpeters, and we must assume that his identification was correct.

Let's review some points on swan identification. All swans native to the Northern Hemisphere have all-white plumage (though head and neck often become stained a rusty color). Snow Geese, White Pelicans, and Whooping Cranes have black wingtips, which set them apart from all swans.

European Mute Swans (which are not actually mute) are the most com-

mon captive swans in parks and zoos. Escapees have become established as feral populations of breeding Mute Swans along the New York-New Jersey coast and in and around Grand Traverse County, Michigan. Presumably no feral Mute Swans exist west of Michigan, though of course escapees could turn up anywhere anytime. A Mute Swan has a *yellow* bill surmounted near its base by a large black knob. Except when flying, a Mute Swan never seems to hold its neck straight, and it almost always holds its bill angled downward.

Whistling Swans (inappropriately so-named by Lewis and Clark) and Trumpeter Swans (appropriately named) are the only two swan species native to North America. During migration when both occur together south of Canada, Whistlers and Trumpeters may be difficult to distinguish from each other. In general, Trumpeters are much larger, but observers find estimates of size unreliable in the field. Big Whistlers may weigh 18 pounds, big Trumpeters double that; but in the range of 15 to 20 pounds there is some overlap in weight of big Whistlers and very small young female Trumpeters.

Some, but not all, Whistling Swans have a bright yellow or orangish lores region (just in front of the eye and at the base of the black bill). That is, a swan with bright yellow lores is definitely a Whistler; but a native swan with dark lores may be either a Whistler or a Trumpeter. Both Whistlers and Trumpeters have black bills, legs, and feet.

During migrations, when both species might be here, voice is by far the best (and almost the only) distinguishing feature. Trumpeter Swans have a loud, sonorous trumpet call which I consider one of the most stirring sounds of nature, for it speaks of faraway wilderness and of early America. On the other hand, Whistling Swans have a relatively soft, cooing call that is much higher-pitched than the call of their larger cousins. By the way, Whistling Swans never whistle. Unfortunately, voice is no help in identification when

swans remain silent, as often happens. I have found Trumpeters very quiet when they have eggs or young.

When on water or land, both Trumpeters and Whistlers often hold their necks vertically, and ramrod straight. I consider this their alert posture. At such times the black bill is held horizontally at a right angle to the vertical neck. Illustrations in bird books might lead you to believe that native swans always hold their necks stiffly erect; actually, during feeding, preening, and so on, Whistlers and Trumpeters arch their necks as gracefully as any Mute Swan.

Let me review the earlier records of Trumpeters in Minnesota as compiled by the late Dr. Thomas S. Roberts. Giacomo Constantino Beltrami, an exuberant Italian, roamed the Minnesota Territory long ago searching unsuccessfully for the source of the Mississippi. But he managed to enter in his journal the earliest known nesting record for Trumpeters. "In the evening we halted near a little wood which lies along the banks of Lake of Swans," he wrote on July 13, 1823. "It was the season at which these beautiful birds can not fly—the old ones, because they are changing their feathers; the young, because they have yet only a soft down." Beltrami's Lake of Swans is well known to present-day birders and gunners as Swan Lake, in what is now Nicollet County near where Mankato now stands.

The earliest known record of commercial sale of swan skins also comes from pioneer Minnesota. In 1825 a geologist noted that at Lake Traverse (on the Minnesota-South Dakota border) two packs of 60 swan skins were worth 120 Spanish dollars. (Later on the popularity of swan skins for the adornment of European ladies grew, and eventually it brought Trumpeters to the verge of extinction. I know of no other species that has come so close to extinction and then made a good comeback.)

More than a century ago a government naturalist, Dr. George Suckley, spent some time near Fort Snelling, which is now well within the Twin

Cities metropolitan area. Of this area he wrote: "I obtained a fine trumpeter swan on Pike lake Minnesota, in June 1853. They are quite common in that vicinity in summer, breeding and raising their young."

Nowadays Heron Lake in southwestern Minnesota is a favorite spot for observing water birds. Through the 1850's and perhaps a bit later, settlers near there made extra money by capturing preflight Trumpeter cygnets on Heron Lake and selling them to parks and zoos. (Years later, settlers at Red Rock Lakes, Montana, earned money the same way, often selling the birds for several hundred dollars a pair as they became rare.)

In his famous *Life Histories*, A. C. Bent gives April 4 (which seems late) as a spring arrival date for Trumpeters at Heron Lake. Oddly, Bent also lists a fall migration record of Trumpeters at Spicer, Minnesota, October 8, 1913. That record is odd in that it was in 1913 at a meeting of the American Ornithologists' Union that leading bird experts agreed that the Trumpeter Swan was extinct, or practically so.

Another record mentions Trumpeters at Everson Lake, Meeker County, Minnesota, in 1884 or 1885.

The comeback of Trumpeters from the verge of extinction dates from 1915, when a few of the magnificent birds were discovered in that remote wilderness, Yellowstone Park, Wyoming. After that, naturalists who looked for Trumpeters found a few more each year in and near Yellowstone, particularly in an out-of-the-way spot, the Red Rock Lakes area of Montana about 50 miles west of Yellowstone. Trumpeter numbers really began to grow encouragingly after the establishment in 1935 of the Red Rock Lakes Migratory Bird Refuge by the Bureau of Biological Survey (now called the Fish and Wildlife Service).

Soon it became evident that one of the best ways to increase Trumpeters and distribute them more widely would be to transplant them to other federal refuges within their former breeding range. So in 1938 some Trumpeters

were transplanted to the National Elk Refuge just south of Yellowstone near Grand Teton National Park. In 1939 some more of the great birds were shipped to Malheur National Wildlife Refuge in southeastern Oregon. And in 1949 Trumpeters were put in Ruby Lake National Wildlife Refuge in southeastern Nevada. All these transplanted birds have prospered and increased.

The establishment of the Red Rock Lakes Refuge and the first transplantings from there were vital to the survival and increase of Trumpeter Swans. Now we have nearly 1000 Trumpeters south of Canada. (I believe that this number includes about 80 captive birds that are on loan to zoos and parks, including one Trumpeter at Como Park, St. Paul.) About 1000 more Trumpeters live north of the border—a few just across from Montana in southernmost Alberta and Saskatchewan, but most of them farther north in Alberta, British Columbia, and Alaska.

Canadian Trumpeters on the western slope of the Rocky Mountains overwinter in parts of British Columbia where waters remain unfrozen all winter. Canadian Trumpeters on the eastern slope of the Rockies move southward in winter to the Yellowstone-Red Rock area, where warm springs keep certain waters ice-free all winter. Trumpeters that breed south of Canada have ceased making any very great migration in the fall because they all live in or near refuges that have open water all winter.

To those of us in Minnesota, the most interesting transplanting of Trumpeters began in 1960 when 20 birds were moved to Lacreek National Wildlife Refuge near Martin, in south central or southwestern South Dakota (south of the Badlands National Monument and close to the Nebraska border). Seventeen more Trumpeters were transplanted to Lacreek in 1961, and 20 more were taken there in 1962.

Some of the first Trumpeters at Lacreek wandered off—perhaps to Minnesota—but a permanent breeding population has now been established there. In 1963 only three pairs spent

the summer within the refuge, but two of these pairs nested successfully, and they produced the first cygnets known to have been produced in the Midwest in 68 years. In June, 1964, I photographed adults and cygnets at Lacreek and saw another bird sitting on eggs. According to a report by James Monnie, Lacreek manager, in 1964 three pairs nested within the refuge. Another pair nested 18 miles away. A fifth pair nested 60 miles away on an artificial stock-watering pond near the Badlands. And a sixth pair nested in an unknown spot and brought their cygnets back to Lacreek in the fall. The 1963-64 Lacreek Trumpeters produced 28 young, 19 of which survived to flying age. Undoubtedly they continued to increase in 1965.

Trumpeters seem to have no inborn urge to migrate, but in olden times most of them were forced southward by the freezeup; they ranged northward again as soon as thawing opened the waters. So they traveled far. Nowadays Trumpeters from Yellowstone, Red Rock Lakes, or Alberta and Saskatchewan should have no great difficulty in getting to Minnesota. And Minnesota is certainly within easy reach of the Trumpeters at Lacreek, South Dakota, or those at the Delta Waterfowl Research Station, which is only 50 miles from Winnipeg, Manitoba. So, as I stated at the beginning of this article, some of these Trumpeters should reach Minnesota almost anytime, and they have have done so already.

Much of the information in this report comes from Winston Banko's monograph *The Trumpeter Swan* (1960). In that book Banko urges that additional transplantings of Trumpeters be made to suitable areas within the former Trumpeter breeding range, and he recommends Minnesota for such a transplanting.

Do you know of some swan-worthy waters in Minnesota where Trumpeters could be reintroduced? Such a spot must be an extensive area of ponds or marshes where breeding pairs of Trumpeters could be separate from other pairs, for a breeding pair of

Trumpeters cannot stand other Trumpeters nearby. Each pair needs a pond of 15 or 20 acres or more, or a much larger area within a big marsh shared by several pairs.

This future Minnesota Trumpeter refuge must be a federal waterfowl refuge or some similar area where the U. S. Fish and Wildlife Service would be willing to place some Trumpeters and manage them. Unlike many federal refuges, it must not become a public shooting ground in the fall; it must remain a true refuge all the time.

Naturally or by management, the water level must remain relatively constant, and in particular the eggs must not be flooded by rising waters in May or June. (On the Yellowstone River I once saw Trumpeter eggs under six inches or more of icy water owing to a late thaw in the surrounding mountains. Doubtless the likelihood of such fluctuations of water level accounts for the unwillingness of Trumpeters to nest on rivers unless they are forced to do so by lack of better nesting areas.)

Cultivated farmlands should not closely surround our proposed Trumpeter refuge because of difficulties caused by silting and by DDT and other poisons. Also, Trumpeter waters must not have been heavily hunted in recent years, for if the bottom mud contains quantities of lead shot, the great birds may die of lead poisoning (to which they seem susceptible).

Emergent vegetation must grow in the margins of our ponds or marshes to furnish food for the Trumpeters; even so, they will probably need to be fed grains and rabbit pellets in winter. And these Trumpeter waters must have small islets or muskrat houses on which huge nests can be built. Predators other than man are no problem for adult Trumpeters, but for the sake of the cygnets the area should be relatively free of Otters, Great Horned Owls, and Snapping Turtles.

Our Trumpeter area must not have stagnant, oxygen-deficient water where botulism can develop and kill the birds. Also, the waters should be fed by

springs which keep at least some of the surface ice-free throughout every winter. Year-around open water is essential because the birds must be prevented from leaving the protected area of the refuge, particularly during the hunting season. After all, the Trumpeter is a relatively fearless, slow-flying, low-flying, all-white bird, and it is the largest bird in North America and the largest flying bird in the world. What a target!

Perhaps there is a suitable area for a Trumpeter refuge in our state.

Perhaps a Trumpeter breeding population can thrive here. If enough of us want such a refuge and make our wants known, perhaps such a refuge will be established in Minnesota. If not—well, perhaps unaided the big birds can re-establish themselves here as breeders. One way or the other, I hope that soon you and I can have the pleasure of seeing these magnificent birds here in their old homeland. *Shafer, Minnesota.*

1965 Fall Hawk Migration, Northwestern Minn.

Janet C. Green

This fall there was coverage of the hawk flight from the "Hawk Lookout" on the Skyline Blvd. in Duluth intermittently from August 19th through November 14th with parts of 36 days covered in all—one in August, 17 in September, 14 in October, and 4 in November. All of the counting was done by Dr. P. B. Hofslund and two of his students, Donald W. Higgins and Jere N. Mossier. They totalled 153 hours of observation and recorded 22,223 hawks which is the second highest total of hours and the third highest total of hawks since the counting began in 1951. In addition I spent 11 hours on 9 days from August 31st through September 24th counting hawks from various observation points 60-80 miles from Duluth on the North Shore of Lake Superior between Little Marais, Lake County and Tofte, Cook County. In the discussion below totals, migration extent and peak counts for individual species seen in Duluth will be given together with some counts from the North Shore for comparison. The North Shore counts are usually small, but it should be kept in mind that this may be partly due to the lack of good observation points; most of the counting was done right on the shore or else 1½ miles inland where a gravel pit provided an opening in the forest along Lake County Highway 6.

Turkey Vulture. The first migrant seen at Duluth was on September 2nd

and the last one was on October 8th. The best days were September 23rd when 34 were counted in 6 hours and September 25th when 20 were counted in 3½ hours. The total for the season was 143.

No Turkey Vultures were seen while hourly counting was done on the North Shore but one was seen flying southwest over Little Marais on September 10th.

Goshawk. The beginning of the Goshawk migration in Duluth was on September 10th when 3 were seen. On the last day of observation, November 14th, ten were counted and the migration most likely continued for several weeks after that. The highest daily counts as well as the greatest hourly totals were on October 23rd (95 in 8½ hours) and October 31st (50 in 4½ hours). Counts of two or more per hour were obtained intermittently from October 10th through November 14th, but the above two dates for the highest counts were the only ones when ten or more an hour were recorded. The total number of Goshawks tallied was 291. Although this is the third highest total, it does not compare with the flights in the fall of 1962 and 1963 when counts of up to 50 an hour were made in the last week of October (J. C. Green. *The Loon*, v. 34, p. 121-124, and v. 36, p. 30-31.). On the North Shore

the only migrating Goshawk was one on September 24th.

Sharp-shinned Hawk. The first migration noted was on August 19th when one was seen in 2½ hours of observing. The last one seen from the hawk lookout was on October 24th although one was seen flying southwest along the new Highway 61 near French River on November 28th by my husband and me. The peak of the Sharp-shinned flight was on September 23rd-24th (232 counted in 6 hours on the 23rd and 562 in 5 hours on the 24th), on October 1st-2nd (245 in 3½ hours on the 1st and 592 in 6 hours on the 2nd), and on October 8th (176 in 1¼ hours). Counts of ten or more an hour were made from September 2nd through October 10th. A total of 3,114 was recorded in Duluth.

On the North Shore Sharp-shinned Hawk migration was seen in both Little Marais and Tofte; most of the hawks seemed to follow the shoreline about one-half a mile inland. The highest count was on September 10th when 65 were counted from 10:00-11:00 C. D. T. from Sugar Loaf Cove, Cook County. In Duluth on September 10th, 190 Sharp-shinned Hawks were counted in 7½ hours. The only other day when comparisons can be made with Duluth is on September 24th: 112 Sharpies were counted per hour in Duluth and 27 were counted on Lake County Highway 6 between 11:00-12:00 C. D. T. The total number of Sharpies counted migrating in Lake and Cook Counties was 149 during the 11 hours covered.

Cooper's Hawk. The first Cooper's Hawk was seen in Duluth on September 2nd and the last one on October 24th. The greatest number counted in a single day was 9 on September 9th and again on September 10th (in 4¼ hours of observing on the 9th, 7½ on the 10th). The highest hourly count was 8 seen in 3½ hours on September 25th. A total of 75 Cooper's Hawks was recorded in Duluth. Four were seen migrating in Lake and Cook Counties.

Red-tailed Hawk. On the first day that observations were made, August 19th, one individual of this species was seen and one was seen the last day

observations were made from the "Hawk Lookout" on November 14th. In addition two birds were seen migrating along the shore of Lake Superior near French River, St. Louis County on November 28th by my husband and me. This species has the longest span of migration of any of the hawks seen at Duluth. Counts of ten or more an hour were made intermittently from September 25th through October 31st. The peak day was October 12th when 348 were counted in 5 hours. A total of 1,329 was tallied at Duluth for the second highest total since 1951.

Only three were observed on the North Shore while counting was done, giving added evidence that the *buteo* migration does not occur along the shore this far north as discussed under Broad-winged Hawk below.

Red-shouldered Hawk. This species is the rarest of the hawks seen regularly in northeastern Minnesota; some years none are seen at all during the hawk count. This fall six were reported: two on September 25th one on September 11th, two on September 25th and one on October 3rd.

Broad-winged Hawk. The bulk of the hawk flight at Duluth is made up of this species and this year was no exception, although no records were broken. The first day of observation, August 19th, yielded 22 Broad-wings in 2½ hours. The last one was seen on October 12th. Counts of ten or more an hour (also of 100 or more an hour) were confined to some of the days from September 10th through 26th; the best day was September 13th when 8,458 were counted in 4½ hours in the afternoon. There were two other days with totals of over one thousand: 1,977 in 7½ hours on September 10th and 3,899 in 4½ hours on September 15th. The grand total of 16,254 Broad-winged Hawks tallied this year is the third highest count, falling below the 20,600 of 1962 or the 23,600 of 1961.

On the North Shore relatively few Broad-winged Hawks were seen. The total recorded was 33 and the best count was on September 24th when 17 were seen from Carlton Peak, Cook County from 3:00-4:00 C. D. T. On that

day in Duluth the hourly count was 75. The only other day when comparisons can be made was September 10th when 8 were seen in 1½ hours on the North Shore and 1,977 in 7½ hours in Duluth. It would seem that the massive Broad-winged Hawk flight does not closely follow the shore of Lake Superior as far north as the Lake-Cook County line.

Rough-legged Hawk. The first migrant was seen on October 2nd and the last on November 13th, although migrants undoubtedly continued after that; one was seen near the "Hawk Lookout" on November 23rd by John Green. The peak day was October 22nd when 18 were counted in 7 hours; counts of two or more an hour were made from October 19th through November 13th. The total for the period covered was 78. None were seen during September on the North Shore.

Golden Eagle. Three Golden Eagles were seen from the "Hawk Lookout," one each on October 10th, 15th, and 22nd. In addition some were present in the eagle migration discussed below.

Bald Eagle. The first one was seen on September 13th and the last one was noted from the "Hawk Lookout" on November 13th. A total of eleven birds was observed, nine of them October 23rd and later. Daily counts of more than a single bird were made on October 23rd (two), November 7th (three), and November 13th (two). The big eagle migration occurred after observing had been discontinued at the "Hawk Lookout" and will be discussed below.

No Bald Eagles were seen while counts were being made on the North Shore in Lake and Cook Counties but two adults were seen moving together southwest from the Sawmill Creek valley, two miles inland in Lake County on September 23rd.

Eagle species. On November 27th Marvin Broman, who lives below the "Hawk Lookout" in Duluth, counted 19 eagles going over his house in 4 hours of discontinuous observation (11:00-3:00 C. S. T.). At 3:30 that same day P. B.

Hofslund saw one adult and one immature Bald Eagle go over his house in Duluth. Raymond Naddy also reported three eagles seen that day from his house in Duluth. In Two Harbors, Lake County, Dr. Gerald E. Church saw 6 eagles in two groups of three within 15 minutes that same day. These fragmentary observations indicate that this was the best eagle migration ever reported from Duluth. Most of them were probably Bald Eagles but undoubtedly some Golden Eagles passed through the same day. The migration continued on November 28th when my husband and I observed one adult Golden Eagle, two adult Bald Eagles, and three immature Bald Eagles in one hour in the morning while driving along County Highway 161 (old Highway 61) between French River, St. Louis County and Knife River, Lake County. All of these birds were moving southwest,, following the shore of Lake Superior.

Marsh Hawk. The first migrant noted was on August 19th and the last one was on October 31st. The peak days were September 14th (5 in 1½ hours) and October 2nd (17 in 6½ hours). A total of 100 was counted for the season.

Three Marsh Hawks were seen while counts were made on the North Shore in Lake and Cook Counties, all on separate days.

Osprey. The first Osprey was noted on September 2nd and the last one on September 24th. The only day when more than one an hour was seen and also the day of the highest count was September 13th when 12 were seen in 4½ hours. Thirty Ospreys were recorded in all.

The counting on the North Shore produced six Ospreys: two seen in two hours on September 4th, two seen in one hour on September 10th and two seen on September 24th in two hours. These few observations indicate that the Osprey migration is as good, if not better, along the shore near the Lake-Cook County line as it is along the "Hawk Lookout" bluff in Duluth.

Peregrine Falcon. A total of eleven Peregrines were seen in Duluth, most

of them from September 9th through 24th although one was reported after that on October 22nd. The only days when more than one was seen was four on September 23rd in 4 hours and two on September 24th in 5 hours.

Peregrine migration was also noted along the North Shore on September 24th (no birds were seen on other days; no count was made on September 23rd). From 11:00-12:00 C. D. T. two were seen from Lake County Highway 6, 1½ miles inland from the Lake Superior shore, and from 3:00-4:00 C. D. T. one was seen from Carlton Peak, Cook County.

Pigeon Hawk. The Pigeon Hawk migration at Duluth is something of a puzzle since one would expect them to be much more common than the figures show. It may be that their migration path follows the shoreline so closely that they are not observed from the "Hawk Lookout" bluff which is a mile inland. Only 18 were counted this year, the first one on September 9th and the last one on October 2nd. The only days when more than one or two were seen was September 18th (three), September 24th (four) and October 1st (three).

The only Pigeon Hawk counted on the North Shore was one on September 4th.

Sparrow Hawk. This species too is not seen in as great numbers as one might expect at Duluth. This fall 258 were counted. Four were seen on August 19th in 2½ hours and were the first migrants noted; two were seen on October 12th in 5 hours and were the last migrants noted. Counts of five or more an hour were made sporadically from September 2nd through October 2nd and the best day was September 9th when 28 were counted in 4½ hours.

During the first few days of observation on the North Shore it became apparent that Sparrow Hawks were moving through the area in good numbers. From August 27th through September 24th a total of 709 birds were seen. Of these 268 were counted in the 11 hours that were spent just watching for migrating hawks. The rest were

observed while driving along Highway 61, Lake County Highway 6, and from our cabin on the shore at Little Marais. Most of these birds were perched on the telephone poles and wires along the roads, although some were observed in migration following the topographic features that trend toward the southwest. Two local migration paths were found. One was right along the shoreline and includes Highway 61 which is usually one quarter of a mile or less from the shore in this part of Lake and Cook Counties. The other was along a segment of the Sawmill Creek valley in Lake County. This creek is two miles inland and flows southwest toward the Baptism River; it is separated from Lake Superior by a southwestward trending ridge that rises a thousand feet above the lake. Unfortunately this ridge is heavily wooded and does not provide good observation points.

By far the best day that actual migration was observed was September 4th, although the weather conditions that day were opposite to what experience at Duluth has taught us to expect for a good migration. It was cloudy with fog limiting visibility to eight miles and the wind was about 10 m.p.h. from the northeast. Shortly after 7:00 a.m. C. D. T. Sparrow Hawks were seen going over our cabin on the shore at Little Marais, flying almost directly down wind and following the shoreline. Our cabin was on a point and they flew out over the water, heading SW or SSW. Those that kept on a SW heading would have hit land again in 6 miles; those that headed more toward the SSW, if they kept that direction, would not have hit the shore until the head of the lake at Superior, Wisconsin. The birds were still flying over the water when lost from view at Little Marais. I did a one-hour count, 7:30-8:30 C. D. T., and tallied 117 Sparrow Hawks plus one Osprey, one Marsh Hawk and one Pigeon Hawk. The flight was quite low, usually 100-300 feet high. Later that morning my husband and I did another count at Sugar Loaf Cove, Cook County and saw 104 Sparrow Hawks and one Osprey in one hour, 10:00-11:00 C. D. T. The shoreline there is straighter than

at Little Marais and the hawks flew right along the edge toward the southwest.

If these conditions are typical for the big Sparrow Hawk migration every fall it is no wonder it has been missed at Duluth. The early date and north-east wind probably would mean that no watch was kept at Duluth, and the flight path right along the shore or out over the water would mean that they could not be seen from the "Hawk Lookout" bluff even if a watch was kept. The only days this fall when comparisons can be made with Duluth are on September 10th, 22nd and 24th. Counts on the first date produced 8

Sparrow Hawks in 1½ hours on the North Shore and 19 in 7½ hours at Duluth; on the second date, 4 in 1 hour on the North Shore and none in 2 hours at Duluth; and on the third date 9 in one hour on the North Shore and 18 in 5 hours at Duluth.

Unidentified Hawks. The greatest number of unidentified hawks occurred in October when it is difficult to separate the Red-tails from the Rough-legs when they are at a distance. There was a total of 51 unidentified accipiters, 145 unidentified buteos, 2 unidentified falcons and 314 other unidentified hawks for the season. 9773 North Shore Drive, Duluth, Minnesota 55804.

The following issues of *The Flicker* and *The Loon* are completely gone and out of print. If anyone has any of them we would appreciate receiving them.

- Vol. 9, No. 1, March 1937
- Vol. 9, No. 3-4, December 1937
- Vol. 10, No. 3-4, December 1938
- Vol. 26, No. 1, March 1954
- Vol. 29, No. 1, March 1957
- Vol. 36, No. 2, June 1964

Vol 37, No. 2, June 1965

We only have a few of the following issues left and would appreciate copies of these also.

- Vol. 33, No. 1, March 1961
- Vol. 33, No. 4, December 1961
- Vol 35, No. 4, December 1863
- Vol. 36, No. 1, March 1964
- Vol. 36, No. 3, September 1964

1964 CHRISTMAS COUNT IN MINNESOTA

Raymond Glassel

The sixteen groups submitting Christmas counts counted 34,258 individual birds representing 76 species. Total for the previous year was 37,004 individuals and 90 species. One new area was added—Orchard Lake in Dakota county. One new bird was added to the count all time species list: the Ross' Goose at Rochester.

Duluth produced three new state high totals including an amazing 570 Robins, also 728 Evening Grosbeaks and 194 Pine Siskins. Other state high totals were 3 Goshawks (Cedar Creek), 500 American Goldfinchs (Anoka), 744 Common Crows, 19 Red-bellied Woodpeckers and 141 White-breasted Nuthatches (NE St. Paul).

Due to low temperature and fog at Rochester, the best count of Canada

Geese was 4,000. This was at mid-day when many of the geese were not on the lake. Two counts taken earlier in the month by area game management personnel were 6,600 and 8,000. The Rochester reporters feel this is a more accurate mid-winter count.

Only 7 species of ducks were seen during this count as compared to 13 in 1963. Ruffed Grouse totaled 17 as compared to 7 for 1963 the all time low for the last 14 counts. Northern finches were scarce in southern Minnesota while American Goldfinches were much more common than usual. Wintering blackbirds were down in numbers. The two Bobwhite on the NE St. Paul count and the Rufous-sided Towhee on the Excelsior count deserve special notice.

	Hibbing	Moorhead	Duluth	Willmar	St. Cloud	Anoka	Cedar Creek	Excelsior	Mpls. - North	NE St. Paul	Afton	Orchard Lake	Plainview	Winona	Rochester	Northfield	Total
Great Blue Heron														1			1
Canada Goose								40							6600		6640
Ross' Goose															1		1
Mallard						11		500	10	46	238		19	18	350		1192
Black Duck								4	5	14	14		2	1	1		41
Common Goldeneye			30		39	21			153	1	95		30		22		391
Bufflehead			1														1
Oldsquaw			32														32
Common Merganser			3										5		1		9
Red-breasted Merganser			9														9
Goshawk			1				3						1				5
Sharp-shinned Hawk										1		1					2
Cooper's Hawk								1					1		1		3
Red-tailed Hawk						1		2		4	2		2	7	4		22
Red-shouldered Hawk											1						1
Rough-legged Hawk			1				1	2		1			1	2			8
Bald Eagle											1		2	1			4
Sparrow Hawk								4		1					1		6
Ruffed Grouse			6				3			2	2			4			17
Bobwhite										2							2
Ring-necked Pheasant		21	10	9		11	62	83	38	161	12	1	1	3	22	3	437
Gray Partridge		15															15
American Coot															2		2
Killdeer										2				3			5

	Hibbing	Moorhead	Duluth	Willmar	St. Cloud	Anoka	Cedar Creek	Excelsior	Mpls. - North	NE St. Paul	Afton	Orchard Lake	Plainview	Winona	Rochester	Northfield	Total
Common Snipe								3		9	1		1	4			18
Herring Gull			88														88
Mourning Dove								4		3				29		12	48
Great Horned Owl			1					3		3				2	1	1	11
Snowy Owl		1	4					1									6
Barred Owl						1		1	1					1	1		5
Belted Kingfisher									2		1			1	1		5
Yellow-shafted Flicker				1			1										2
Pileated Woodpecker				1	1		1	6	1	4	4			2	1	2	23
Red-bellied Woodpecker				1		2		14	1	19	16	1	1	2	3	5	65
Red-headed Woodpecker						5	8	4		16	17			20			70
Hairy Woodpecker	6	10	8	2	1	4	7	37	8	32	11		5	24	9	4	168
Downy Woodpecker	4	8	33	11	11	7	5	70	7	49	21	1	2	52	19	4	304
Horned Lark				7										10	4		21
Gray Jay	2																2
Blue Jay	19	1	33	5	23	75	183	302	55	248	65	7	15	159	31	20	1241
Common Raven	7		7														14
Common Crow		1		2		14	44	88	38	774	97	1	9	23	26	25	1142
Black-capped Chickadee	34	36	45	22	32	40	26	308	55	248	65	7	15	159	161	25	1278
Boreal Chickadee	1																1
Tufted Titmouse				3				5	1	12	5			7	6	1	40
White-breasted Nuthatch	9	9	5	21	6	12	14	107	1	141	47		10	54	17	15	468
Red-breasted Nuthatch	6		7		1												14
Brown Creeper								6		2	1		2	2	3	1	17

Robin			570	12	1				2	20			1	1		607	
Bohemian Waxwing			1													1	
Cedar Waxwing	3		49	2							93			16		163	
Northern Shrike			1			3	1		2		1					8	
Starling	46	236	770	2	2	150	25	441	62	301	333		27	45	426	60	2926
House Sparrow	391	498	746	90	100	120	414	1585	864	1595	1001	12	312	2006		100	9834
Meadowlark species																1	1
Red-winged Blackbird								4	12	6	5		42	10			79
Rusty Blackbird								1			2						3
Common Grackle	4							6						4	3		17
Brown-headed Cowbird								1									1
Brewer's Blackbird										4							4
Cardinal				3	2	8	1	116	7	99	41	3	20	169	23	10	502
Evening Grosbeak	264		728			3		2									997
Purple Finch	10		72	5	1	12		111	10	58	79		2	3	5		368
Pine Grosbeak	10		38														48
Common Redpoll	14		96		7			4									121
Pine Siskin			194		12												206
American Goldfinch			13		36	500	20	247	20	62	70		8	55	9	30	1070
White-winged Crossbill	45		53							29							127
Rufous-sided Towhee								1									1
Slate-colored Junco	1		1	11	20	100	183	260	114	211	237	5	28	333	32	35	1571
Oregon Junco				2			1	4	1	4							12
Tree Sparrow						2	34	221	73	287	51	125	175	208	159	10	1345
Harris' Sparrow																1	1
White-throated Sparrow								1	2								3
Song Sparrow						1		1						2		1	5
Snow Bunting	85	110	4		12						126						337
Total individuals	958	949	3360	212	307	1103	1037	4602	1543	4453	2776	164	738	3427	7962	366	34258
Total species	19	13	34	20	18	23	21	42	26	37	34	11	27	37	34	22	

M.O.U. WINTER FIELD TRIP

The February North Shore trip of the M.O.U. and Thunder Bay Field Naturalists Club will be held on the weekend of February 12th-13th in Grand Marais. There will be a smorgasbord dinner from 5-7 on the 12th in the dining room of the East Bay Hotel. **Reservations are necessary for the dinner and must be honored.** Make dinner reservations by writing to the East Bay Hotel, Grand Marais by **February 5th**. The cost of the dinner will be about \$2.00. It is not necessary to pay in advance but reservations must be made. There will be an evening program in the social room of the Grand Marais High School at 8:00 p.m.

Hotel reservations for the week-end are necessary and should be made individually or through your designated club representative. The Shoreline Hotel, East Bay Hotel and Hub Motel are open as are other motels in the area.

SPRING MORTALITY in INSECTIVOROUS BIRDS

Daniel W. Anderson

This spring (1965) while I was conducting a study at Agassiz National Wildlife Refuge in Marshall County, I observed an apparently large die-off of Cliff, Bank, Tree and Barn Swallows, Flycatchers, Eastern Kingbirds and warblers seemed to be affected, also. Apparently a "cold snap" on May 26-29 resulted in a lack of insect food for these birds and many starved. I checked seven dying swallows, and all were badly emaciated; none survived for more than 12 hours after I picked them up and brought them into the warmth of a building.

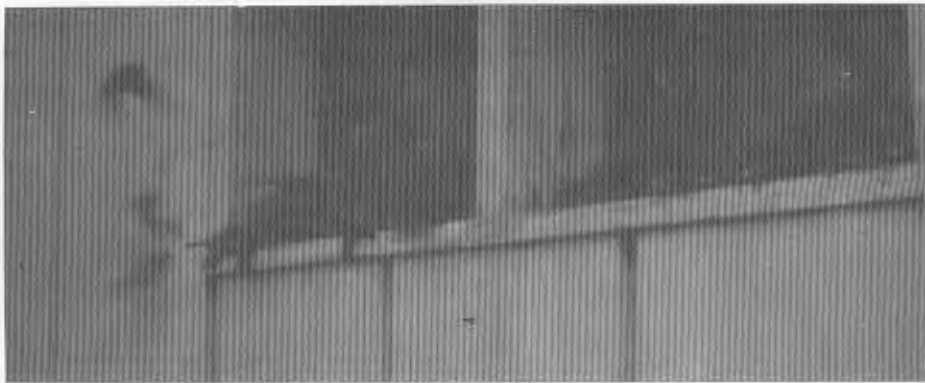
For the duration of the cold snap, the swallows bunched on roads, in window wells, and on the roofs of buildings. Figures 1a and 1b show Cliff, Bank and Barn Swallows huddled into a window well. Many birds fell to the wet ground from their concentration points and soon died. Many of the weakened birds on the roadways were also killed by traffic (figure 2). After the cold snap while travelling with John Ellis, I observed hundreds of dead swallows floating in the ditches on either side of most bridges in this area.

Rough estimates concerning some of the groups of swallows I observed more closely indicate a considerable loss of birds, at least locally. One flock on the road started out with about 300 birds (mostly Bank and Cliff

Swallows) and by the second day, had lost 100. I estimated about 400 or more swallows around refuge headquarters, but by the third day, there were only about 200 left. All the Tree Swallows I observed (about 5) disappeared by the third day, and a dozen Barn Swallows in the area were reduced to four. I initially estimated about a dozen Eastern Kingbirds in the area, with three observed dead by the third day. On one road, I saw 4 out of 10 Eastern Kingbirds dead.

During the cold snap, also, the swallows were kept moving by Common Grackles who would "crash" into a group and snatch a weak or slow bird. Then the heads (probably brain and eyes) and part of the breasts were eaten. The remains were then left lying on the ground while the grackles flew to another group and repeated the process. The grackles did not seem to pick up dead birds on the ground, although there were plenty there.

During the next few weeks while travelling in North Dakota and Manitoba, I questioned several people in reference to such a die-off during the same general period of May 26-29. Many people did remember a die-off around the end of May in these areas. Perhaps this die-off was not confined to northwestern Minnesota.—*Department of Wildlife Management, University of Wisconsin, Madison, Wisconsin.*



Two window wells partially packed with Cliff and Bank Swallows, May 27, 1965
Fig. 1a



A packed window well from the inside showing Barn, Bank and Cliff Swallows,
May 27, 1965.

Fig. 1b



Roadside with about 50 dead Bank and Cliff Swallows in the foreground. In the
upper portion are live and dead birds. May 26, 1965.

Fig. 2

THE SPRING SEASON

Ronald L. Huber

Due to the inadvertent loss of the Spring Season manuscript somewhere between our editor and the printer, it was thought advisable to salvage some of the more pertinent data from the 100-plus hours that went into said report. Well over 100 observers snowed me under with their data, providing the most comprehensive coverage I can recall in the past sixteen Seasonal Reports. It is regretted that I cannot use everyone's initials in this digest, but time and space limitations necessitate the "skeleton-form" used here. All contributors will, however, be listed at the end of the report in the usual fashion.

Common Loon; earliest 4-1 Dakota Co, FN, EWJ.

Red-necked Grebe: earliest 4-8 St. Cloud, NH.

Horned Grebe: earliest 4-14 Rice Co, OAR.

Eared Grebe: More reports than usual, and eastward drift noted, even in Wisconsin. 4-11 Duluth, PBH; 4-14 Rochester, JPF; 4-21 Belle Prairie, LSR; 4-22 Holt, DLO; 4-27 Hennepin Co, MHM; 4-29 Lake Andrew, OP and Rice Co, OAR; 5-1 Cass Co, WJH and 5-6 Duluth, JCG.

Western Grebe: 4-27 Traverse Co, EHH, DB; 4-30 Cook Co, MAF and Holt, DLO; 5-1 Stevens Co, ES; 5-2 Traverse Co, RAG; 5-14 Fargo, LWJ and Grant Co, VFB.

White Pelican: More reports than usual; 4-8 Willmar, TQ; 4-15 Traverse Co, RAG; 4-16 Villard fide NH; 4-19 Rice Co, CE, PE, JB; 4-20 White Rock, LWJ; 4-27 Traverse Co, DB; 4-28 Lake Andrew, OP; 5-2 Grant Co, RPR; 5-10 Holt, DLO.

Double-crested Cormorant: earliest 4-10 Salt Lake, RAG.

Great Blue Heron: earliest 3-31 Rice Co, OAR and St. Cloud, fide NH.

Green Heron: earliest 4-23 Weaver, KK.

Common Egret: earliest 4-4 St. Cloud, NH; one northerly record of interest on

5-9, about 12 miles N. of Aitkin, Jim Kimball.

CATTLE EGRET: On 5-16 and 5-17, two birds were seen at Winona by many observers. This is the fifth Minnesota record and compares nicely with two Wisconsin reports and a nesting as far north in the Mississippi Valley as Arkansas.

Black-crowned Night Heron: earliest 4-7 Stillwater, DH.

Least Bittern: There are rarely many reports of this secretive little heron. 5-8 Hennepin Co, DB, RBJ; 5-31 Dakota-Scott Co line, JRR.

American Bittern: earliest 4-8 Douglas Co, MVS; next record 4-21 Cokato, EC and Collegeville, RPR.

GLOSSY IBIS: 5-28 Holt, Marshall Co, DLO. Of added interest, another was seen two days earlier at the Horicon marshes in Wisconsin. Perhaps extending its range northward again?

Whistling Swan: earliest 4-4 Dakota Co, EMB and Willmar, CR; latest 5-29 Wisconsin Point, PBH. See also the Summer Season and Notes of Interest for Summer record in Virginia-Hibbing area (and also Fort William, on the Lakehead).

White-fronted Goose: 4-10 Two Harbors, RK; 4-13 Rice Co, CE, PE, JB; 4-15 Stevens Co, RAG and 5-11 Holt, DLO.

Blue-Snow Goose: earliest 3-11 Cook Co, several Snows seen by Barbara Savonen, very exceptional record, but good details given; next record 4-6 Hennepin Co, WJB, TEM; latest 5-29 Duluth, JKB.

Gadwall: earliest 3-31 Dakota Co, EMB.

Pintail: earliest 4-1 Cold Spring, NH.

Green-winged Teal: earliest 4-3 Dakota Co, RBJ, FY.

American Widgeon: earliest 3-6 Dakota Co, RBJ (exceptional); next record 4-3 Dakota Co, EMB, DB.

Shoveler: earliest 4-3 Dakota Co, RBJ,

FL, EMB, DB.

Wood Duck: earliest 4-5 Howard Lake, EC.

Redhead: earliest 4-1 Dakota Co, EWJ, TEM.

Ring-necked Duck: earliest 3-31 Kellogg, DGM.

Canvasback: earliest 4-2 Winona, KK and St. Paul, ACR.

Greater Scaup: earliest 4-13 St. Paul fide ACR; latest 5-16 Lake Co, RG, RLH, HFH, and 6-1 Lake Co, DP, WRP, RLH.

Lesser Scaup: earliest 3-27 Olmsted Co, RBJ.

BARROW'S GOLDENEYE: 4-13 Fond du Lac, (south edge of Duluth), JCG, BL, RLH. (See Notes of Interest in previous issue.

Bufflehead: earliest 4-1 Dakota Co, FN; latest 5-26 Knife River, RK.

Oldsquaw: latest 5-2 Encampment River, MEP.

White-winged Scoter: 5-16 Duluth, RG, HFH, RLH and 6-1 Duluth, DP, WRP, RLH.

Common Scoter: 4-17 King Lake, Willmar area, SH, (details?).

Ruddy Duck: earliest 4-4 Hastings, MIG.

Hooded Merganser: earliest 3-31 Howard Lake, EC.

Turkey Vulture: earliest 4-10 Wabasha Co, RBJ, Dakota Co, ACR, St. Cloud, NH, Rice Co, CE, PE, JB and Hastings, MIG.

Broad-winged Hawk: earliest 4-13 McGregor, CEP and Rice Co, CE, PE, JB.

Swainson's Hawk: more records than usual; eastward movement also noted in Wisconsin; 4-15 Big Stone and Lac Qui Parle Co's, RAG; 4-17 Rice Co, PE, JB, CE; 4-18 Traverse Co, RAG; 4-22 Eyota, FGD; 4-24 Chippewa Co, PL; 4-25 Morris, RAG and 5-1 Goodhue Co, RBJ.

Rough-legged Hawk: latest 5-9 Hastings, AEA and 5-19 Two Harbors, RK.

FERRUGINOUS HAWK: 4-24 Morrison Co, RPR, et. al.; See Notes of Interest in previous issue for details.

HARLAN'S HAWK: 4-10 St. Cloud, NH

and 4-24 Alberta, Stevens Co, RAG, (good details). Because of the high incidence of melanism in the western subspecies of the Red-tail, the occurrence of the Harlan's Hawk in Minnesota has aroused some controversy.

Golden Eagle: 3-6 Anoka Co, FN; 4-11 Holt, DLO; 4-7 Morris, 1 imm, RAG; 4-23 Hennepin Co, 1 imm, FN, TEM; 4-25 Warroad, JLR, PEB.

Marsh Hawk: earliest 3-31 Cokato, EC, Kellogg, DGM and Washington Co, DH.

Osprey: earliest 4-10 St. Cloud fide NH.

Peregrine: 4-7 Collegeville, RPR; 4-13 Rice Co, PE; 4-15 Duluth, RBH; 4-26 Collegeville, RPR; 4-29 Isanti Co, RHJ and Collegeville, RPR; 5-2 Grand Lake, NH; 5-7 Holt, DLO; 5-18 Duluth, PBH; an encouraging number of reports.

Pigeon Hawk: earliest 3-11 Twig, JCG and 3-22 Minneapolis, RBJ; both quite early.

GYRFALCON: 4-30 Schroeder, Cook Co, MAF (details?).

Spruce Grouse: 3-15 Cook Co, HH.

Sharp-tailed Grouse: 3-16 Meadowlands, JWG; 3-18 thence into April, Mountain Iron, NJH; 3-27 Biwabik, VFB; 4-3 Two Harbors, RK; 11 observations throughout period, at Rice Lake refuge, CEP.

Bobwhite: 4-29 Kellogg, DGM; 5-30 Anoka Co, RLH.

Gray Partridge: many more reports than usual, mostly in March; Wabasha Co, DGM, DB; Dakota Co, RBJ, FL; Hennepin Co, RBJ, FL, TEM; Eyota, FGD; Stevens Co, RAG; Sherburne Co, EAH, RPR.

Sandhill Crane: more reports than usual; 4-7 Hennepin Co, RDT; 4-9 Anoka Co, WHL; 4-12 Warroad, JLR; 4-14 McGregor, CEP; 4-16 Warroad, 16, JLR; 4-20 McGregor, CEP; 4-20 Holt, DLO; 4-28 Cass Lake, (15), JAM; 4-30 Holt, DLO; 5-8 (1) and 5-10 (9) Two Harbors, RK.

Virginia Rail: earliest 4-8 Olson Lake, DS and Hennepin Co, EMB, RBJ.

Sora: earliest 4-19 Anoka Co, WHL.

Common Gallinule: 5-5 Hennepin Co, TEM; 5-7 Holt, DLO; 5-10 Hennepin Co,

MHM and Duluth fide RN; 5-15 Alberta, ES; 5-25 Hennepin Co, FN, TEM. Northward strays are especially noteworthy.

Semipalmated Plover: earliest 5-8 Salt Lake, RAG; latest 5-29 Hennepin Co, DB, Winona, WRP, Wabasha Co, WRP and Wisconsin Point, PBH.

Piping Plover: 5-14 Fargo, LWJ; 5-29 Duluth, PBH.

American Golden Plover: earliest 4-24 Swift Co, RAG; latest 5-23 Stevens Co, RAG.

Black-bellied Plover: earliest 5-19 Willmar, DW; latest 6-1 Holt, DLO.

Ruddy Turnstone: earliest 5-11 Fargo, LWJ; latest 6-1 Duluth, WRP, DP, RLH.

American Woodcock: earliest 4-12 St. Cloud, NH, DHG.

Whimbrel: 5-20 (1) and 5-28 (2) Duluth, PBH.

Upland Plover: earliest 4-18 Grant Co, RAG.

Spotted Sandpiper: earliest 4-15 Grant Co, RAG.

Solitary Sandpiper: earliest 5-1 Sauk Centre, RPR, Vasa, RBJ, FL and Moorhead, LWJ; latest 5-20 Ramsey Co, ACR and 5-22 Lac Qui Parle Co, EMB.

Willet: 5-6, Hibbing, HM, SM; 5-8 Moorhead, LWJ and Breadsley, RAG; 5-13 Moorhead, LWJ; 5-25 Duluth, PBH, JCG.

Greater Yellowlegs: earliest 4-9 Stevens Co, RAG; latest 5-29 Duluth, PBH.

Lesser Yellowlegs: earliest 4-10 Stevens Co, RAG and Rice Co, JB, CE, PE; latest 5-29 Winona, WRP.

Pectoral Sandpiper: earliest 4-20 Hennepin Co, TEM; latest 5-29 Winona, WRP.

White-rumped Sandpiper: earliest 5-1 Dakota Co, FN; latest 5-30 Stevens Co, RAG, ES.

Baird's Sandpiper: earliest 5-1 Dakota Co, FN; latest 5-31 Moorhead, LWJ and Ramsey Co, TEM.

Least Sandpiper: earliest 5-1 Dakota Co, FN; latest 6-1 Duluth, WRP, DP, RLH.

Dunlin: earliest 5-9 Stevens Co, ES; latest 6-1 Duluth, DP, WRP, RLH.

Dowitcher, species: 5-8 Stevens Co, RAG; 5-11 Rochester, JPF; 5-12 Kellogg, DGM; 5-15 Wales, RK; 5-22 Anoka Co, ACR; 5-25 Duluth, JCG; 5-29 Superior, PHB.

Short-billed Dowitcher: 5-15 Dakota Co, FL; 5-16 Stevens Co, RAG (both records had call-note identification bases).

Stilt Sandpiper: 5-29 Superior, PBH; no other reports! Truly scarce this spring.

Semipalmated Sandpiper: earliest 5-7 Moorhead, LWJ; latest 6-1 Duluth, WRP, DP, RLH.

Buff-breasted Sandpiper: 5-18 Holt, DLO, only report. Scarce this spring.

Marbled Godwit: earliest 4-16 Roscoe, Stearns Co, JIM.

Hudsonian Godwit: 4-24 Swift Co, RAG; 5-9 Stevens Co, ES; 5-11 Moorhead, LWJ; 5-15 Dakota Co, FL; 5-16 Stevens Co, RAG; 5-17 Lac Qui Parle Co, DB; 5-21 Moorhead, LWJ.

Sanderling: earliest 5-18 Wisconsin Point, PBH; latest 6-1 Duluth, WRP, DP, RLH.

American Avocet: 5-17 White Bear, ELC, RLH; 5-18 St. Cloud, DHG; also reported from Thief Lake Refuge (Bud Garrish) and Roseau Refuge (Jack Jensen) but no dates given.

Wilson's Phalarope: earliest 4-29 Montevideo, PGK.

Franklin's Gull: earliest 4-6 McGregor, CEP.

Bonaparte's Gull: earliest 4-19 Hennepin Co, TEM; latest 6-1 Duluth, WRP, RLH, DP.

Forster's Tern: earliest 4-6 Dakota Co, FN.

Common Tern: earliest 4-16 Rochester, JPF. (early!?).

Caspian Tern: earliest 5-18 Wisconsin Point, PBH; latest 6-1 Duluth, WRP, DP, RLH, and Ramsey Co, TKS.

Black Tern: earliest 4-9 Stevens Co, 80, ES (early!); next record 4-25 Lake Andrew, OP.

Yellow-billed Cuckoo: earliest 5-25 Washington Co, DH; scarce this spring.

Black-billed Cuckoo: earliest 5-9 Minne-

apolis, TKS; not as many as usual?

Snowy Owl: latest 5-4 Duluth, JKB.

Burrowing Owl: 4-21 Grant Co, RAG; 4-27 Traverse Co, DB; 5-2 Big Stone Co, RAG and Rochester, JPF; 5-22 Traverse Co, EMB.

Great Gray Owl: 3-11 Lutsen, Cook Co, LS; 3-16 Beltrami Co, DB; 3-26 Warroad, JLR; also, one found dead about 10 mi S. Williams, Lake-of-the-Woods Co, no date, DLO.

Short-eared Owl: 4-4 Sherburne Co, EAH; 4-14 Warroad, JLR; 4-19 Fargo, MGA; 4-24 Grant Co, RAG.

Whip-poor-will: earliest 4-12 Warroad, JLR (exceptional); next record 4-29 Mpls, MEH.

Common Nighthawk: earliest 3-20 Chipewewa Co, PL (unbelievable!); next record 4-15 Duluth, LTM and 4-18 Solomon Lake, TM. All other reports were in May.

Chimney Swift: earliest 4-19 Rice Co, PE, CE, JB and 4-22 Minneapolis, RBJ.

Ruby-throated Hummingbird: earliest 5-2 Stevens Co, RAG.

Red-shafted Flicker: on 4-15, 4-18 and 4-24, RAG observed flickers in Lac Qui Parle Co that had reddish wing-linings, but he was unable to get good looks at the head patterns. This ties in nicely with several hybrid specimens collected this spring in southwestern Minnesota by Minnesota Museum of Natural History staff members.

Black-backed Three-toed Woodpecker: 3-16 Beltrami Co, DB; one seen during period, no date(s) given, Hibbing, HM.

Northern Three-toed Woodpecker: 3-26 Lutsen, Cook Co, LTM; the southern most state record at Minneapolis on 2-28 by FL, RBJ, HFH was equalled this spring when another adult male (possibly the same bird?) was seen in the T. S. Roberts' Sanctuary on April 19 by Art Bogen and again on 5-12 by Jo Herz, Rachel Tryon and Minnie Swedenborg. Excellent color-photos taken by Alison Bolduc. A fitting climax to the southward invasion of last winter!

Eastern Kingbird: earliest 4-18 Rochester, JPF (exceptional); next records 4-25

Danube, PGK, 4-20 Duluth, LTM plus three records for 5-1.

Western Kingbird: has swept eastward across our state to breed in southeastern Minnesota and Wisconsin. Earliest 5-5 Stevens Co, RAG and 5-6 Royalton, DHG.

Great Crested Flycatcher: earliest 4-26 Washington Co, WWL; next 5-4 Hennepin Co, MHM.

Eastern Phoebe: earliest 4-8 Dakota Co, FN, Anoka Co, FL and St. Cloud, NH.

SAY'S PHOEBE: Although this species has not yet been recorded in Minnesota, the initial event cannot be far away. Numerous observers saw one at Fargo on 5-10 (LWJ, MGA, et. al.) and it breeds regularly in northwestern Iowa.

Yellow-bellied Flycatcher: earliest 5-14 Rochester, JPF, Hennepin Co, DB, EMB and Douglas Co, MVS.

Traill's Flycatcher: earliest 5-5 Rochester, JPF.

Least Flycatcher: earliest 4-29 Cass Co, JAM and 5-1 Stevens Co, RAG and Rice Co, CE, PE, JB.

Eastern Wood Pewee: earliest 4-10 Hennepin Co, MEH (fantastic; no details); next records also very early: 4-17 Roscoe, JIM and 4-22 Rice Co, CE, PE, JB; next record 5-5 Hennepin Co, MHM (more normal arrival date).

Olive-sided Flycatcher: earliest 5-7 Hennepin Co, WJB. Good migration with good numbers this spring; a few lingered in southeastern Minnesota and out on the prairies until about the first part of June!

Tree Swallow: earliest 3-22 Hibbing, SM (exceptional; details?); next record 4-8 Rice Co, OAR.

Bank Swallow: earliest 4-21 Rice Co, PE, CE, JB; 4-23 Lasota Lake, RB; next record 4-29 Collegeville, RPR.

Rough-winged Swallow: earliest 4-20 Hennepin Co, RDT.

Barn Swallow: earliest 4-17 Winona, KK.

Cliff Swallow: earliest 5-6 Hibbing, HM.

Purple Martin: earliest 4-7 Winona, KK and Willmar, VFO.

Black-billed Magpie: 3-9 Kelliher, MG; 3-24 Pope Co, WH; 3-10(1), 3-26(1) and 3-29(4) Warroad, JLR, PEB.

House Wren: earliest 4-18 Minneapolis, MEH and 4-19 Faribault, OAR; next records 4-22 Eagle Lake, GP and 4-29 Minneapolis, RBJ.

Winter Wren: earliest 4-7 Shotley, Beltrami Co, MG.

Bewick's Wren: 4-24 to 4-29 Minneapolis, one bird, MEH, RDT.

Carolina Wren: 5-9 Frontenac, AEA, BHL, PST, TST, excellent details; 5-21 Minneapolis EWJ (details?); this species is slowly coming back as a breeder in Iowa after several years of extreme scarcity there, so it should be looked for in southeastern Minnesota.

Long-billed Marsh Wren: earliest 4-29 Duluth, JCG. Very few reports.

Short-billed Marsh Wren: earliest 5-5 Hibbing, HM. Very few reports.

Mockingbird: more reports than usual: 4-6 Minneapolis, WRP; 5-1 Goodhue Co, 2, RBJ, FL, photographed by DB; 5-4 Duluth, PBH; 5-8 Shotley, MG and Tofte, MOP; 5-9 Grand Lake, NH.

Catbird: earliest 4-28 Bald Eagle, ELC and 4-29 Aurora, VFB.

Brown Thrasher: earliest 4-10 Minneapolis, FN; next record 4-16 Willmar, LSZ.

Wood Thrush: earliest 4-11 Solomon Lake, DMH (unbelievable! almost certainly a Hermit Thrush); next record 4-30 Washington Co, WWL (details?); next 5-5 Hennepin Co, EMB.

Hermit Thrush: earliest 4-5 Willmar, Cloud fide NH.

Swainson's Thrush: either this species has broken all its own arrival date records or there are some misidentifications at hand; reported from the Willmar area on 4-3, 4-10, 4-11, 4-12, Duluth on 4-11 and Encampment Forest on 4-14, all exceptional records: next record 4-28 Hennepin Co, DB, EMB.

Gray-cheeked Thrush: earliest 4-10 Rice Co, JB, CE, PE (details?); next record 4-26 Washington Co, DS and 4-27 Duluth, AKA; latest 5-29 Frontenac, RBJ, 5-30

Moorhead, LWJ and 6-2 Collegeville, RPR.

Veery: earliest 4-8 Benson, MES (unbelievable! almost certainly a Hermit Thrush); next record 5-7 Bald Eagle, ELC.

Eastern Bluebird: earliest 4-1 Rice Co, CE, PE, JB and 4-4 Rushford, FV; many reports — situation hopefully improving.

Blue-gray Gnatcatcher: more reports than usual: 5-2 Chisago Co, EMB and Minneapolis, FL; 5-4 Minneapolis, EWJ, MHM, FN; Winona Co, DB; 5-9 Washington Co, DH and Collegeville, RPR; 5-16 St. Cloud, NH. May prove to be a regular resident in the St. Cloud area.

Ruby-crowned Kinglet: earliest 4-8 Washington Co, JO; many reports on 4-10.

Water Pipit: earliest 5-7 Holt, DLO and 5-8 Sherburne Co, EAH; latest 5-17 Stevens Co, DB and 5-22 Hibbing, LWJ; these were the only four reports!

Bohemian Waxwing: 3-24 St. Paul, ACR; 3-25 Ironton, Joe Perpich; 3-27 Minneapolis, EWJ and 3-31 Lake Arrow, OP.

Northern Shrike: latest 4-7 Tofte, MOP, 4-8 Kellogg, DGM, 4-11 McGregor, CEP and 4-19 Minnewaska, EAN (details?).

Loggerhead Shrike: earliest 3-7 Wabasha Co, EMB (exceptional; see Notes of Interest in previous issue); next record 4-10 Red Wing, FL, RBJ.

Bell's Vireo: 5-28 Winona, FV; 5-29 Dorer Pools, Wabasha Co, WRP.

WHITE-EYED VIREO: A singing adult male was seen on 5-23 at Wacouta, Goodhue, Co, by Dr. Dwain Warner and his ornithology class. Second Minnesota record. See Notes of Interest elsewhere in this issue.

Yellow-throated Vireo: earliest 5-4 Minneapolis, FN, MHM.

Solitary Vireo: earliest 4-29 Minneapolis, RBJ.

Red-eyed Vireo: earliest 5-1 McGregor, CEP.

Philadelphia Vireo: earliest 5-5 Rochester, JPF.

Warbling Vireo: earliest 5-5 Rochester, JPF and Hennepin Co, MHM, RDT.

Black-and-White Warbler: earliest 4-25 Hennepin Co, WJB and 4-28 Hennepin Co, DB, EMB.

Prothonotary Warbler: 5-8 Frontenac, AEA; 5-11 Goodhue Co, DB and **Collegeville**, RPR; 5-15 Houston Co, EMB; 5-17 Washington Co, DH; 5-19 **Fargo-Moorhead** area, many observers (MGA, LWJ, et. al.); 5-28 "abundant" at Winona, KK; northward strays are noteworthy.

Golden-winged Warbler: reported by 17 observers over most of the state, which must tie in with the high incidence of hybrids reported; Winona Co, 5-16, KK; Rochester, 5-17, JPF; Rice Co, 5-11, JB, PE, CE; Goodhue Co, 5-11, DB; Washington Co, 5-14, WWL; Hennepin Co, 5-5 to 5-19, MHM, RDT, JRR, TEM, FN, FL, WJB; Sherburne Co, 6-2, RPR and Kim Eckert; Stearns Co, 5-9, 10 birds, NH; Crow Wing Co, 5-29, MSB; Hibbing, 5-18(HM) and 5-23(JCG). Note that the records are scattered over ten different counties.

Blue-winged Warbler: reported by 7 observers; Winona, 5-16, FGD, KK; Goodhue Co, 5-15(FL), 5-19(EWJ) and 5-25 (RDT); **Nicollet Co**, 5-15, MHM; **Cokato**, 5-17, EC; westward strays are noteworthy.

Golden-winged X Blue-winged Hybrids: these were the "talk of the Season" this Spring, and were also noted in Wisconsin; the most frequently occurring hybrid, "Brewster's Warbler", was reported on 5-11 Frontenac, DB, 5-18 Hennepin Co, EMB and 5-20 Minneapolis FN; the less frequently occurring "Lawrence's Warbler" was reported 5-16 Vasa, Jo Herz, 5-23 Vasa, BDC, 5-25 Goodhue Co (Vasa?), RDT, 5-29 Frontenac, RBJ and 6-3 Vasa fide FN; The reports from Vasa were all undoubtedly of the same bird; prior to this year there were, I believe, two Minnesota records for the "Lawrence's" and four records for the "Brewster's". Still another hybrid, not falling in either of the above categories and thus probably even more rare, was seen on 5-6 at Cannon Falls by DB, who astutely noted an otherwise normal Blue-wing that had **yellow** wing-bars.

HOODED WARBLER: a summer record for Madison, Wisconsin makes this record of special interest: on 5-17 Mrs. Gordon Bergquist of the Willmar area sent these

details to Ben Thoma: "... bright yellow all over with a black head and bib-white streak on its head." Although the description leaves much to be desired, the bird could have been the Hooded Warbler or, possibly, one of the hybrids mentioned above?

Tennessee Warbler: earliest 4-30 Bloomington, JRR.

Orange-crowned Warbler: earliest 4-22 Hennepin Co, EMB; latest 5-24 Moorhead, LWJ.

Nashville Warbler: earliest 5-1 Rice Co, CE, PE, JB.

Parula Warbler: earliest 4-30 Duluth, LP (details?); next record 5-4 Minneapolis, FN.

Yellow Warbler: earliest 5-1 Fargo, fide MGA.

Magnolia Warbler: earliest 5-1 Washington Co, DS and Rice Co, CE, PE, JB.

Cape May Warbler: best migration in at least eight years; earliest 5-2 Orr, NJH; next record 5-5 Minneapolis, MEH, RDT; two reports of large numbers: 5-16 Osseo, about 60 birds, LB and 5-17 Washington Co, 75 birds, DS; these concentrations may be without precedent in Minnesota?

Black-throated Blue Warbler: 5-22 Anoka Co, ACR; 5-29 Fargo, fide MGA; no details on either.

Myrtle Warbler: earliest 4-11 Minneapolis, DB.

Black-throated Green Warbler: earliest 4-29 Rice Co, PE, CE, JB.

Cerulean Warbler: earliest 5-7 Grand Lake, Stearns Co, 3 singing males, NH; besides the usual reports from southeastern Minnesota, there were two other reports from the St. Cloud area: 5-12 Collegeville, RPR and 5-14 Collegeville, EAH; may prove to be regular breeders in that area.

Blackburnian Warbler: earliest 4-27 Washington Co, WWL (details?); next record 5-5 Rochester, JPF and Hennepin Co, EMB; 5-6 Virginia, VFB (early up there?).

Chestnut-sided Warbler: earliest 5-5 Washington Co, WWL, Rochester, JPF and Hennepin Co, VS.

Bay-breasted Warbler: earliest 5-5 St. Paul, MIG; next 5-9 Isanti Co, MMP.

Blackpoll Warbler: earliest 4-24 Washington Co, DS (details?); next 5-3 Bald Eagle, ELC and 5-4 Hennepin Co, FL; latest 6-1 Duluth, WRP, DP, RLH.

Pine Warbler: earliest 4-20 Hennepin Co, MEH (details?); next 4-29 Washington Co, WWL and 5-5 Washington Co, DS; all other records 5-11 to 5-22; one of our most misidentified warblers.

Palm Warbler: earliest 4-23 Hennepin Co, TEM, FN and Morrison Co, LSR; many by 5-5.

Ovenbird: earliest 5-2 Minneapolis, VS; many reports from 5-3 to 5-9.

Northern Waterthrush: earliest 4-28 Minneapolis, FL; many by 5-9.

Louisiana Waterthrush: 5-13 Minneapolis, FN; 5-16 Anoka Co, LB and 5-22 Anoka Co, ACR; these were the only reports.

Connecticut Warbler: earliest 5-11 Anoka Co, WHL (details?); this shy, elusive species is one of our latest spring arrivals; only other records: Rochester, 5-22, JPF; Goodhue Co, 5-26, WRP; Hennepin Co, 5-25(DB), 5-30(DB, FN) and 5-31(TKS); Moorhead, 5-30, 5-31, LWJ; Hibbing, 5-23(JCG) and 5-26(HM).

KENTUCKY WARBLERS: 5-16 near Osseo, one or possibly two males, LB; 5-19 Coon Rapids, aberrant singing male, (apparently same bird as last summer) took up residence again, DP et. al.; see Notes of Interest in previous issue.

KIRKLAND'S WARBLER: 5-13 to 5-16 Minneapolis, D. P. Galbraith; see Notes of Interest in previous issue for very interesting details of this observation!

Mourning Warbler: earliest 5-7 Anoka Co, WHL; next 5-10 Schroeder, MAF (early up there?).

Yellowthroat: earliest 5-2 Bald Eagle, ELC; many records on 5-5 and 5-6.

Yellow-breasted Chat: 5-2 Rochester, JPF (early; details?); 5-8 Rice Co, JB, PE, CE; 5-29 Wabasha-Winona Co line (Dorer Pools), WRP.

Wilson's Warbler: earliest 5-5 Rochester, JPF; interesting late date of 5-31 at Moorhead, LWJ.

Canada Warbler: earliest 5-1 St. Cloud fide NH (details?); next record 5-11 Hennepin Co, DB, EMB.

American Redstart: earliest 5-5 Rochester, JPF.

Bobolink: earliest 5-1 Rice Co, PE, CE, JB; next records 5-6 Skull Lake, OP and 5-7 Plainview, DGM.

Eastern Meadowlark: earliest 3-29 Goodhue Co, EMB; many from 4-1 to 4-4.

Western Meadowlark: earliest 3-7 Rice Co, OAR; 3-16 Sauk Rapids, DHG; two records for late March and many by 4-4.

Yellow-headed Blackbird: earliest 4-10 Big Stone Co, RAG; one unusual record, 5-30 Two Harbors, fide RK.

Red-winged Blackbird: six reports in March from southern Minnesota; some may have been of wintering birds.

Orchard Oriole: 5-9 Dakota Co, MRL; 5-11 Goodhue Co, DB; 5-14 Kellogg, DGM; 5-15 Willmar, DG; 5-19 Dakota Co, EWJ; 5-31 Morrison Co, NH.

Baltimore Oriole: earliest 4-14 St. Paul, MIG (early! details?); next 4-28 Hennepin Co, EMB and 4-30 Red Wing, HFH.

Rusty Blackbird: earliest 4-1 Minneapolis, MEH; latest 4-30 Ramsey Co, ACR and Schroeder, MOP; two May dates: 5-3 Hennepin Co, RDT (details?) and 5-18 Moorhead, LWJ (exceptional; details?).

Brewer's Blackbird: earliest 4-1 Collegeville, RPR and 4-4 Pope Co, WH.

Common Grackle: earliest 3-7 Willmar, DG; 3-14 Cook Co, AEA (early up there); 3-21 Virginia, NJH.

Brown-headed Cowbird: earliest 4-3 Hastings, FL, RBJ.

Scarlet Tanager: earliest 4-29 Wilmar, LSZ (details?); next 5-1 Hennepin Co, TEM and 5-6 Minneapolis, RBJ and Washington Co, WWL.

SUMMER TANAGER: 5-19 to 5-24, female banded by JCG at Mrs. Arthur Wright's feeder in Duluth where JCG took photos of adult male last year. See Notes of Interest in previous issue. Probably fourth or fifth record for Minnesota.

Rose-breasted Grosbeak: earliest 4-14 Ramsey Co, WWL (exceptional; details?);

next 5-1 Rice Co, CE, PE, JB and 5-2 Minneapolis, VS.

Indigo Bunting: earliest 5-6 Goodhue Co, DB.

PAINTED BUNTING: 5-12 to 5-16, **Schroeder, Cook Co, MAF, JCG, RG, RLH**, photographed in color by HFH. Second Minnesota record. See Notes of Interest elsewhere in this issue.

Dickcissel: earliest 5-1 Dakota Co, FN; next 5-6 Princeton, WJH.

Evening Grosbeak: latest in non-breeding areas: 4-29 Mora, RHJ and 5-3 Motley, CW.

Pine Grosbeak: latest 3-16 Duluth, LTM and 4-7 Duluth fide JCG. Very scarce.

Hoary Redpoll: latest 4-3 Knife River, with Common Redpolls, FN, TEM.

Common Redpoll: latest 4-20 Duluth, LP and 4-27 Two Harbors, RK.

Red Crossbill: only reports: 3-14 Duluth, JGH; 4-18 Hibbing, SM and 4-28 Cook Co, HH.

White-winged Crossbill: except for one unusual report on 4-1 Kellogg, DGM, all other reports were from north of the Twin Cities: Anoka Co, 3-7, FL; Mora, 3-10 and 5-14, RHJ; Collegeville, 4-3, RPR; Duluth, 4-16, PBH; Marshall Co, 3-10, DLO; Lake Co, 3-18(SM) and 4-4 (TEM); Cook Co, 5-31, HH.

Rufous-sided Towhee: earliest 4-5 Duluth, AKA, (details?); next 4-23 Ramsey Co, ACR and 4-29 Fargo, MGA.

Lark Bunting: retreated westward again this year and no nests noted in eastern Dakotas; in view of this, these two records are of special interest: May (exact date?), Nobles Co, near Adrian, HSH and 5-11 **Grand Marais**, BAF (see Notes of Interest in previous issue).

Savannah Sparrow: earliest 4-6 Cook Co, HH (early that far north; details?); next record 4-12 Moorhead, LWJ and 4-13 Rice Co, CE, PE, JB.

Grasshopper Sparrow: earliest 4-24 Northfield, OAR; next 5-2 Beardsley, RAG.

LeConte's Sparrow: 4-29 Cook Co, MOP (details? Savannah?); 5-22 Hibbing, LWJ, JCG, RLH; these were the only reports!

Henslow's Sparrow: 5-11 Hennepin Co, RDT.

Vesper Sparrow: earliest 4-8 Anoka Co, FL; many by 4-18.

Lark Sparrow: earliest 4-24 Sherburne Co, EAG, RPR; 5-10 Fargo, LWJ and one exceptional record on 5-7 at **Schroeder**, MOP (details?).

Oregon Junco: at least 7 April records; latest 4-29, Washington Co, DS.

Tree Sparrow: many reports for last 10 days of April! latest 5-1 Schroeder, MOP.

Chipping Sparrow: earliest 3-31 Lake Andrew, OP (exceptional; details?); next 4-10 Frontenac, FL, RBJ, and St. Cloud, NH.

Clay-colored Sparrow: earliest 4-27 St. Louis Co, VFB, and 4-30 Minneapolis, FL.

Field Sparrow: earliest 3-11, Pope Co, MVS (too early, too far north — almost certainly a Tree Sparrow); next 4-9 Rochester, JPF and 4-10 Washington Co, DS.

Harris' Sparrow: earliest 4-7 Ramsey Co, ACR; next 4-24 St. Louis Co, VFB; latest 5-23 Hibbing, SM.

White-throated Sparrow: earliest 4-17 Minneapolis, RBJ.

White-crowned Sparrow: earliest 4-16 Benson, PGK (details?); next 4-24 Murdock, PL; latest 5-23 Duluth, AKA.

Fox Sparrow: earliest 3-30 Minneapolis, FN and 4-3 Morrison Co, LSR; latest 5-1 Morris, RAG, Two Harbors, RK and Shotley, MG.

Lincoln's Sparrow: earliest 4-2 Duluth, AKA (details?); next 4-13 Bald Eagle, ELC and St. Cloud, NH.

Swamp Sparrow: earliest 4-11 Hennepin Co, DB, EMB; 5 more reports on 4-12 and 4-13.

Song Sparrow: earliest 3-10 Whitewater Park, DGM (wintered?); 3-26 Saum, MK (early that far north; details?); 4-4 Dakota Co, EMB.

Lapland Longspur: earliest 3-7 Alberta, ES; latest 5-29 Duluth, PBH.

SMITH'S LONGSPUR: 5-2 Beardsley, Big Stone Co, RAG (See Notes of Interest in previous issue).

Snow Bunting: latest 4-23 Shotley, MG and 4-29 Two Harbors, RK.

Summary: The strays and rarities that showed up this spring can't hold a candle to the very early and strange dates that were reported! Some of the species involved are not easily misidentified, but a look at some of the outlandish flycatcher and thrush dates indicates a strong need for the tutoring of our inexperienced observers. Despite complaints by many observers that the cold, wet spring resulted in a disappointing migration, 132 observers (count 'em!) rallied to boost the species total to approximately 292 this spring. Due to the superabundance of material received, I have resorted to a brief form of reporting. If the format used in this report seems satisfactory to the reader, indicate this on the questionnaire that will accompany the forms sent to you for the next season.

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THE CANADIAN LAKEHEAD

A. E. Allin

Following a cool July, the temperature for August was 3.3° below normal. The rainfall of 3.97" exceeded the normal 3.53". September was also cool, the mean temperature of 47.2°, being the lowest September since 1877, and 5.6° below the 30-year average. Rainfall of 6.54" was double the normal precipitation. Some frost damage was reported in outlying areas on August 28 when the official temperature at the Airport was 36°. The low of 30° on September 11 ended a frost-free period of 105 days, four more than the 24-year average of 101 days. In general, however, killing frosts did not occur until September 25 when the minimum temperature was 24°.

The temperature for October was a near-average 42.5°. The precipitation of 0.95" was less than half the average 2.12". Nevertheless, the heavy September rains and the precipitation in October prevented the usual harvesting of grain and much remained, uncut, or otherwise unharvested, at the close of the month. For the first time that I can recall, there were reports of crop damage by ducks, principally Mallards but including some Black Ducks. There was also an interesting report of Pine Grosbeaks and Common Redpolls feeding on unharvested flaxseed. The first week of November continued to be mild and on November 5, Fort William was the warmest place in Canada with a maximum temperature of 57°. The temperature dropped sharply to 15° on November 7 and ponds and quiet stretches of streams were frozen and hillsides white with snow a few days later.

Leaves were falling by September 25, in fact some Balsam Poplars had lost their foliage by that date. Few leaves remained on deciduous trees on October 10, although many Tamaracks were still yellow at the end of the month. In mid-October, Autumn Willows were conspicuous throughout wet areas as their seed pods opened to expose their plumed seeds. On Novem-

ber 5, a few Pussy Willow buds had already lost their protective scales. Strawberry-blite and Stinking Chamomile in the fields, and Autumn Crocuses and Michelmas Daisies in the garden bloomed until November 7.

While increasing numbers of clubs have been reporting heavy kills of birds at ceilometers, television towers and lighthouses, the Lakehead has been conspicuously free of such disasters. Locally, kills have been limited to birds striking picture windows. Several years ago, in heavy fog, hundreds of birds, many probably Myrtle Warblers, were reported grounded in Fort William by a policeman on night duty but no casualties were recorded. On September 25, Mrs. Peruniak reported some 50 birds were killed on a clear night when they struck a large lighted sign. These included a Swamp Sparrow, American Redstarts, Yellowthroats, Tennessee and Magnolia Warblers.

The fall migration, 1965, at the Canadian Lakehead was not an exciting one. The migration of waterfowl was about average. Few shorebirds were seen at any time. As usual, hawk-watching was unproductive. The movement of passerines was generalized. There was a movement of sparrows on September 12. There was a heavy movement of sparrows, warblers and thrushes on the foggy morning of September 11 and continuing until September 25. Sandhill Cranes were reported on two occasions, and Mockingbirds from three stations. Thrushes were generally common with more Eastern Bluebirds seen than was anticipated. Robins moved through in great numbers. A **Wheat-ear** was collected on September 28.

Loons to Cormorants: A Common Loon with one young was seen on September 5. Another pair nested successfully in the Sibley Peninsula. We saw our last Common Loon of the season on October 10, on Cloud Lake. Two Horned Grebes were present at the Seaway Terminal on October 2.

The Double-crested Cormorant was unreported in 1965. This species has been decreasing in numbers during the past few years. Mr. Murie was unable to visit the island in Lake Superior southwest of Fort William, where he had found small numbers breeding in previous years.

Hérons, Egrets, Bitterns: November 5 and 6, a bird meeting the general description of a Cattle Egret was seen in Neebing Township. Unfortunately no picture was taken and this species must remain on our hypothetical list.

Swans to Mergansers: A belated report of three swans at Caramat, 200 miles northeast of the Lakehead has come to our attention. Three birds appeared in late summer and remained on a small lake for several weeks. A good color picture clearly shows these three birds to be Mute Swans! The nearest nesting grounds of these exotics must be many hundred miles from Caramat. There was no indication that they nested.

M. Hogarth saw two Canada Geese in the harbor on September 10 and we saw 12 in Neebing Township on September 17. In the next few weeks, numerous flocks of migrating "geese" were reported, but without specific identification. Five flocks were seen on September 23 which may indicate the peak of migration. A flock of 50 was seen on October 5. K. Denis reported Blue Geese at Geraldton on September 24; M. Servais saw 6 Snow Geese on Lake Marie Louse on September 29 and the Allins saw a mixed flock of 40 Blue and Snow Geese on October 3. We saw 2 Canada and 4 Snow Geese in the local harbor on October 27. This is about as late as geese are to be expected locally.

Press of work precluded making a satisfactory study of duck migration. It would seem there was a good movement of Lesser Scaup and Ring-necked Ducks throughout October. Several Buffleheads were seen on October 11 and October 24. The seven Gadwalls we saw at Chippewa Park on October 2 were unexpected. October 24 was a late date for 12 American Widgeons we saw on Lake Superior. A female

Ring-necked Duck was still present on November 7.

Black Ducks and Mallards were not common in the local harbor during October. Mallards, however, appeared in great flocks at the end of October and were still present in early November. Each night, flocks of several hundred Mallards with a few Black Ducks fed on unharvested grain in Pai-poonge Township.

Turkey Vultures to Sparrow Hawks: Another fall migration passed without us observing any major migration of hawks. There is reason to believe from radar work that the movement is to the west of the Lakehead rather than along the shoreline, though in previous years minor flights have occurred over Port Arthur and other large flights have passed over Thunder Bay. W. Rosser saw about 300 hawks, in several flocks southwest of Fort William on September 29. These were likely Red-tailed Hawks but were possibly Rough-legged Hawks. We saw our last Red-tailed Hawks on October 11 and October 18. K. Denis reported 6 Rough-legged Hawks over the Red Lake Road on October 22 and we saw several locally on October 31. The occasional Pigeon Hawk was reported throughout October. A. Addison saw a Sharp-shinned Hawk in Sibley Provincial Park on October 11. A Goshawk was shot on October 21, and we saw one on November 6. A Goshawk was seen pursuing a Black-backed Three-toed Woodpecker in Port Arthur. The woodpecker attempted to escape by flying through an open window of a school and was killed by striking a wall. Sparrow Hawks have been present in their usual numbers. Eagles have been conspicuous by their absence.

Grouse to Partridge: Ruffed Grouse have increased greatly in some areas but are still scarce in other regions. Of 12 we examined, 9 were males. A few Spruce Grouse have been reported in outlying forests where Spruce and Jackpine predominate. Several large covies of Gray Partridge have been seen. No Sharp-tailed Grouse have been reported from the immediate Lakehead area for several years.

Cranes to Coots: Four Sandhill Cranes were seen along the Mattawin River, west of Fort William on September 11. Mrs. Peruniak reported 4 near Atikokan on September 20. One was injured in unknown fashion and had to be destroyed. The skin is now in the National Museum of Canada. Rails and American Coots have shown no unusual movements.

Plovers to Terns: This has been a very poor year for shorebirds. We saw two American Golden Plovers on September 25 and 5 on September 26, near the Airport. W. Rosser reported large numbers near South Gillies on October 3. The Addison's saw 4 American Woodcock in Sibley Provincial Park on October 10. A few Greater and Lesser Yellowlegs were the only other shorebirds reported. Herring Gulls evidently had a successful breeding season as many juveniles have been seen.

Doves to Kingfishers: The last Mourning Dove was seen on September 2. We were shown a Black-billed Cuckoo on September 25. The only owl recorded to date was the Snowy Owl seen in Fort William by V. Murie on November 12. Her observation of a Ruby-throated Hummingbird on September 27 was late. We saw a Belted Kingfisher on October 10.

Woodpeckers: Yellow-shafted Flickers migrated in their usual numbers. We saw our last flicker on October 10. It is evident that Pileated Woodpeckers are gradually increasing. Relatively few Downy and Hairy Woodpeckers have been seen. The Northern Three-toed Woodpecker has not been reported but the Black-backed has been seen in widespread areas.

Flycatchers and Larks: The Eastern Kingbird is one of our earliest migrants. They were common on August 21 but only 2 were seen a week later. We saw our last Eastern Kingbirds (2) on September 23. The Least Flycatcher we saw in our garden on September 23 was a late record.

A. Addison reported well marked Northern Horned Larks at Silver Islet on October 12. The palefaced Horned

Lark we saw on October 24 was probably a Hoyt's.

Jays to Nuthatches: Gray Jays were particularly common from September 25 to October 18. We actually saw one in Fort William on the latter date. They were less common in the latter part of October and early November. It is evident there was a marked southerly movement of this species. Common Ravens have been present all fall. The many Moose kills must provide much food for these birds. Crows were present in large flocks through most of October. Red-breasted Nuthatches were reported migrating the second week of September. There has been no heavy movement of this species. Black-capped Chickadees are very common. A movement of this species was evident on September 26.

Wrens to Bluebirds: Few years pass without Mockingbirds being reported; 1965 was no exception. Mockingbirds appeared at feeding stations September 1, October 24 and November 3. More Eastern Bluebirds were seen than anticipated with reports for September 5 (4), September 6, and October 3. Robins were present in great numbers, feeding on open fields throughout the farmlands in the latter half of September and the first few days of October. Only the occasional Robin was seen in the later half of October.

On September 26, the Perrons reported the presence of a Wheatear in Chippewa Park. We collected this bird under permit and the skin is now in the Royal Ontario Museum, Toronto. It is the third Wheatear to be collected in Ontario and the eighth sight record for the Province.

Kinglets to Starlings: Kinglets were conspicuous by their scarcity. We had no reports of Water Pipits. No Bohemian Waxwings have been seen. Before migrating, Cedar Waxwings took their share of a poor crop of berries on the Mountain Ash trees. The rest of the crop was largely consumed by the gregarious Starlings. A flock of 500 was seen on September 26 and very large flocks were seen on October 11. To mid-November Northern Shrikes have been scarce with reports for Oc-

tober 5 and 23 and November 14. The last bird was pursuing with great agility a Common Redpoll. The outcome was not determined.

Vireos and Warblers: I failed to witness the heavy movement of vireos and warblers usually seen in the White Birch trees lining our streets. However, Mrs. Beckett stated there were many of these birds in her garden on the foggy morning of September 19 and they remained for a week. More Northern Waterthrushes than usual were seen. The Palm Warblers were the most abundant species. Mrs. Beckett also observed Orange-crowned and Black-poll Warblers. V. Murie saw Wilson's Warblers on September 27. One of the Yellowthroats killed on September 20 at Atikokan had deep sulphur-colored underparts, unlike any of the specimens in the National Museum of Canada collection.

Bobolinks to Tanagers: The Lemays reported a Baltimore Oriole at Geraldton in August. Yellow-headed Blackbirds were seen at White River on September 24 and at Ignace on September 26. We saw 2 Red-winged Blackbirds in Pardee Township on the late date, November 11. Rusty Blackbirds appeared on September 26. We saw a flock of 50 on October 24. Common Grackles have been very common this fall. Hundreds were seen in Fort William on September 22.

Fringillidae: Evening Grosbeaks were heard calling, beginning in early September. M. Smith reported they had stripped the keys from her Manitoba Maples by September 11. Pine Grosbeaks appeared in the Sibley Peninsula as early as October 12 and soon were widespread throughout the Lakehead Cities and surrounding country. They did not become common and by early November few remained. There is probably a shortage of preferred food. No fruit remains on the Mountain Ash. They were seen feeding on High Bush Cranberry, buds of White Spruce, and

on flaxseed. There is still food available in the samaras of the Black Ash, seeds of Lilacs and an abundance of numerous forms of Crabapples. K. Denis observed a Hoary Redpoll on October 31 at Port Arthur. Common Redpolls have been abundant since mid-October. There is a marked variation in the coloring of these birds, some being quite dark but others are so pale they suggest Hoary Redpolls in the field. A few Pine Siskins have been seen.

There was a fairly heavy migration of sparrows, including Vesper, Song, and Savannah on September 12. Slate-colored Juncos were evidently migrating in early September and migration continued through October. They were never abundant but were fairly common from mid-September to mid-October. The Allins saw a well-marked Oregon Junco in their garden on October 3. Were these western visitors overlooked years ago or are they steadily moving east? V. Murie reported a Harris' Sparrow on September 19. White-throated Sparrows were never abundant but drifted through the region. We had no reports of White-crowned Sparrows. Tree Sparrows were present in small numbers throughout October. Single Fox Sparrows were seen on September 25 and October 20.

Lapland Longspurs appeared in small numbers in mid-September. Snow Buntings were first reported on October 11 in various areas and a few were still present at the end of the month. If one postulates as to why a Wheatear should be here on September 28, the possibility must be considered it came down with Lapland Longspurs, although it was alone when collected. It definitely did not accompany the Snow Buntings. It is probable it was blown off course by strong winds from the far north which occurred prior to its Fort William appearance.—*Regional Laboratory, Ontario Department of Health, Fort William, Ontario.*

NOTES OF INTEREST

WHITE-EYED VIREO IN GOODHUE COUNTY. On May 23, 1965, Dr. Dwain Warner, professor of ornithology at the University of Minnesota, observed a singing male White-eyed Vireo near Wacouta, Goodhue County. The song prompted a short search which led to the sighting of the bird. Dr. Warner and several of his class members heard the bird sing repeatedly and clearly saw the white eye of the bird. (About 10 years before on the MOU spring field trip, he and his wife Dorothy, heard one singing in the dense vegetation adjacent to the dry stream bed at Villa Maria school near Frontenac. That bird was not seen.)

That evening, I learned of the observation and the following morning, after very explicit directions from Dr. Warner, I climbed the same steep, rock-strewn ravine to look for the bird. The hardwood forest was so rich here that dampness prevailed and very little sunlight reached the forest floor. Moss covered the dolomite rocks over which I climbed, making them shin-scrapingly slippery. Such a Carolinian woods makes one expect to flush a Wild Turkey at any moment. When I finally reached the top, I walked westward along the edge of the open plowed field facing Highway 61, I heard what I believe may have been the same singing male. The foliage here was so heavy that I was unable to see the bird. I knelt to wait, hoping to get a look at him. My forward advance was halted by a sheer drop some 20 feet ahead of me. The bird sang about a dozen times in several minutes. The song was not as mellow as the Red-eyed Vireo and might be rendered as **chick-parma-LEE-chick**. On several occasions, the first syllable was uttered twice, **chick-chick-parma-LEE-chick**. When I finally decided to inch forward, a small bird resembling a grayish Tennessee Warbler darted through the foliage and no further song was heard. A prolonged search in the direction in which the bird had flown revealed nothing. Although I stopped and listened several times, no further singing was heard. Despite my inability to see the bird, I felt that I had heard my first White-eyed Vireo. Several days later, other Avifaunal Club members combed the area but to no avail. The sudden disappearance of the vireo is a mystery since the bird was singing as if on territory and the habitat seemed perfect. There seem to be no other reliable records of this species for Minnesota than the two reports by Dr. Warner, et. al.—*Ronald L. Huber, 480 State Office Building, St. Paul, Minn. 55101.*

* * *

ANOTHER PARASITIC JAEGER RECORD FOR MINNESOTA—A large number of the delegates to the sixth meeting of the Prairie Grouse Technical Council at Warroad, Rosau County, were treated to a look at one of Minnesota's less frequent avian visitors, a Parasitic Jaeger shortly after commencing a field tour of Minnesota Department of Conservation's Sharp-tailed Grouse research areas. This bird was first encountered resting on a gravel road about one-half mile southwest of Warroad by a procession of two buses and six automobiles containing seventy-four research biologists at 8:30 a.m. (CST), September 16, 1965.

The jaeger flushed immediately ahead of the first bus, clearly showing its coloration and short, forked tail to Dr. G. A. Ammann and Harold Dykema of the Michigan Conservation Department, Lester Magnus and Keith Evans of the U. S. Forest Service, and the authors plus several others in the lead bus. After flushing, the jaeger flew alongside the roadway permitting, at least, Harry Lumsden of the Ontario Department of Lands and Forests and Dr. Fred Hamerstrom of the Wisconsin Conservation Department in the succeeding vehicles to observe it well enough to identify it.

After the tour ended about 5 p.m., Mr. Keith Evans and his wife returned to the site and found the bird near where it was first seen. They examined it thoroughly with a 10X spotting scope, confirming the early identification by

point for point matching with Peterson's description in his *A Field Guide to the Birds*. Paul E. Bremer, Minnesota game biologist, likewise observed this jaeger two days later on September 18 at 2:30 p.m. on the same gravel road one-half mile east of the earlier observation site. A subsequent check by James Ruos on September 19 at 2:00 p.m. did not reveal the presence of this visitor.

Since only one or two of the tour participants commented that they had seen this species previously, this sighting must have established some sort of record for contributing the largest number of firsts to life lists representing in aggregate several hundred man-years of bird watching.—*Gordon W. Gullion, University of Minnesota, Cloquet, Minnesota, and James L. Ruos, Minnesota Division of Game and Fish, Warroad, Minnesota.*

* * *

PAINTED BUNTING PHOTOGRAPHED IN COOK COUNTY. On May 12, 1965, Marie Aftreith found an adult Painted Bunting at her feeder in Schroeder, Cook County. She reported her discovery, with pertinent details, to Janet Green, who relayed the information to me. On May 15, when Mrs. Green stopped by to see Miss Aftreith, she learned that the bird was lingering in the area. A prompt phone call followed and on May 16, Ray Glassel, Harding Huber and I took a chance that the bird would still be there. The day was cold, windy, rainy and overcast, but the bird was soon found. The rich blue head, bright red breast and yellow-green back were captured on color-film by my brother Harding. Despite the gray skies and poor light, the bird is easily identifiable from the resulting slides, thanks to a telephoto lens.

The only previous Minnesota record of a Painted Bunting was a worn female taken in Lac Qui Parle County in May of 1893. The wear on said specimen led Dr. Roberts and others to believe that it was an escaped cage-bird. The bird at Miss Aftreith's feeder was in such fresh, clean plumage that we assumed it to be the first *natural* stray into Minnesota.—*Ronald L. Huber, 480 State Office Building, St. Paul, Minnesota 55101.*

* * *

JUNE RECORD FOR THE GREAT GRAY OWL: On June 27, 1965, Ray Glassel and I were bird-watching in Cook County, north of Tofte, in hopes of locating the Black-throated Blue Warbler (see Note of Interest elsewhere in this issue) found about ten days earlier by Jan and John Green. We overshot the site she had reported and ended up about one mile southwest of Marsh Lake before we decided to turn back. Just before we turned around, in a forest spot with some large White Pines, we flushed a Great Gray Owl (from our county map, the spot appears to be the section line between Sections 4 and 5, T61N, R4W). The long tail and wings and grayish color were noted as the bird flew diagonally away from us and landed in a large tree to our right. The bird had flushed from about 25 to 40 feet ahead of us and its identity was obvious while it was still in flight. We stopped quickly and had another good look at it while it was perched. The rounded head, concentric gray-and-black facial disks and *bright yellow eyes* all confirmed our identification. Our look was brief, however, because the wary bird flew off again in the direction from which it had come. Ray was using 6 x 30 binoculars and I had 7 x 50's. The sun was shining brightly through the trees to our right and we had an excellent (albeit short) look at the bird. Both of us are quite familiar with this species, having seen it before on several occasions near Red Lake (Beltrami County) during previous winters. This record is of special interest because it appears to be the seventh summer record for Minnesota.—*Ronald L. Huber, 480 State Office Building, St. Paul, Minnesota 55101.*

EARLY WOOD DUCK NESTING—I should like to correct an error of long standing at this time. I refer to *The Flicker*, Vol. 31, No. 2, June 1959, pg. 42:

"Mrs. Nubel and Mrs. Thompson observed a Wood Duck and 8 young on Lake Harriet on May 5."

It should read: "Mrs. Nubel and Mrs. Thompson observed a pair of Wood Ducks and 7 young on Lake Harriet, April 28, 1959."

Because this date was unusually early, and at Mrs. Thompson's suggestion, I telephoned the Superintendent of Lakewood Cemetery to inquire about the Wood Ducks. He said they had not raised them and knew nothing of them.

We were certain of our identification. The "family" was not more than 15 feet off shore, near the south west corner of the lake, along West Lake Harriet Blvd. The light was good, sun was shining. The time was about 3 p.m.—*Frances Nubel, 2000 Cedar Lake Road, Minneapolis, Minnesota.*

* * *

JUNE RECORD FOR THE BLACK-THROATED BLUE WARBLER. On about June 17, 1965, Jan and John Green of Duluth were embarking on a geology research trip from the Honeymoon Lookout area some twelve miles north of Tofte, Cook County. They recognized at once the song of the Black-throated Blue Warbler despite the fact that they hadn't time to search for the bird. A hastily-written post-card explained the situation and on June 27, Ray Glassel and I decided to try for the bird that had eluded our Minnesota lifelists for twenty and eight years, respectively.

Shortly after dawn had brought us a Great Gray Owl (see Note of Interest elsewhere in this issue) we located the Honeymoon Lookout Tower. As per instructions from Mrs. Green, we stood at the base of the tower and listened. Just to our north a very thin, weak song, suggesting the proper syllables but definitely of the wrong quality, invited us into the damp, rich maple forest. Ferns dotted the humus-littered forest floor and bloodthirsty mosquitoes hungrily ignored our repellent. No wonder there are so few summer records for this rarest of our regularly-occurring warblers!

Then a strong, husky song, complete with buzzing inflection, drowned out the monotonous drone of the feasting mosquitoes. The song was brand new to me, but absolutely unmistakable. Locating the bird proved quite difficult, however. We listened and followed, and he led us in a great circle until finally Ray saw him against the white trunk of a birch tree about 100 feet away. Before I could move in to get a look, the bird was off again, leading us through the sun-shafted forest. Several times his song was followed by the song of a nearby Black-throated Green Warbler for comparison. Although the quality of both songs was very similar, the Black-throated Green had a higher-pitched, weaker, less deliberate song, as well as the different arrangement of syllables. Then the Black-throated Blue stopped singing as suddenly as he had begun. We searched for another blood-letting ten minutes but found no further trace of him. We never did find or identify the thin, weak song that had led us into the forest initially. Perhaps it was the first attempt at noise-making by a nestling of some species breeding in the area? Now that the Black-throated Blue Warbler has been located, who will find his nest?—*Ronald L. Huber, 480 State Office Building, St. Paul, Minnesota 55101.*

* * *

NOTES ON NESTING EVENING GROSBEAKS AT LOON LAKE, CASS COUNTY.—May 17 Female grosbeak carrying rootlets for nest building.

Nest no. 1. June 10. A nest with birds in a very high and slender Jack Pine, near the top. Both parents feeding the nestlings. June 18th, 10 a.m. The young birds left the nest—1 male and 1 female.

Nest no. 2. June 17 The female starts to build a nest near the top of a young Norway Pine (about 40 feet up), nest in a very large and strong Norway Pine. The female is the mother bird of nest no. 1. She continues to feed the young in nest no. 1, while building nest no. 2.

June 20. Birds copulating near nest.

July 5. Young seemingly being fed though we never saw the young.

July 7. Last time adult birds were seen apparently feeding young and were not seen around the nest again.

It rained all the next morning and when it was almost dark we saw a small bird doing the strangest thing. He would be in the trees near the nest, seemingly gathering food, then fly to the nest and stay a short time, then fly away. He did this 19 times. It was too dark to identify the bird positively, but I thought it was a Red-eyed Vireo. Real early the next morning he did the same act over, but it was still too dark for identification. When any other bird would come in the vicinity he would drive it way. After it got light we did not see him again.

Nest no. 3. In Jack Pine about 30 feet up, on branch about 4 feet from trunk.

June 18. Pair gathering nesting material.

June 19. Saw male feed a young female a few feet from where female was working on nest.

July 5. Saw both male and female feeding young.

July 6. Nest destroyed. Blue Jays and Common Crows were in the neighborhood.

Aug. 29. Male feeding 2 young females sunflower seed at feeder.

Nesting materials:

Rootlets

Dead needles from Jack Pine

Live needles from Norway (Red) Pine.

In the early part of July, the male grosbeak was observed feeding sunflower seeds to a young Brown-headed Cowbird at the feeder.

The greatest number of young Evening Grosbeaks seen in the vicinity of the feeder at one time was nine.

Information and notes compiled from notes of Rita and Robert Dzilna, with additional material added by Mrs. E. D. Swedenborg.—*Mrs. E. D. Swedenborg, 4905 Vincent Avenue, South, Minneapolis, Minnesota.*

* * *

TOWNSEND'S SOLITAIRE AT NORTHFIELD.—On November 11, 1965, as I drove into my yard, a bird flew from one of our red cedars and came to rest about five feet above the ground in a nearby birch. My first impression from the brief glimpse was that I had a straggler Catbird in my yard. From where I sat in the car, the bird was partially concealed by a branch. The tail was clearly visible and displayed a white outer tail feather on each side. I allowed the car to roll back a few feet to bring the entire bird into view, and I was then able to identify it as a Townsend's Solitaire. It seemed disinclined to leave its perch, and I stepped from the car and approached to within ten or fifteen feet from where I observed it for some ten minutes in full sunlight at noonday. Planning to get a photographic record of this accommodating subject, I went for my camera; but as I raised the garage door, it flew to the top of a large elm. The next two mornings it was observed to feed on the juniper berries near the house and to perch rather regularly in the lower branches of a large spruce. Because of the early hour and inclement weather at the time of these observations, no endeavor was made to photograph it. The solitaire was observed about the yard

on a number of occasions, but it was never seen to go to the feeder or feed on anything but berries. The bird was observed by one of my neighbors on two successive days feeding in her cranberry bush; another neighbor observed it in her bittersweet vine, although it was not seen devouring any of the berries. The eye-ring, which is noted as a field mark in Peterson's guide, is certainly not a prominent ring and is to be observed at close range only. The buffy areas of the wings are clearly displayed and conspicuously so during preening. As the solitary perches, the white outer tail feathers may or may not be evident. No sound was ever heard from this individual. The last sighting of the Townsend's Solitaire was on November 24.—G. N. Rysgaard, Northfield, Minnesota.

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As you all know the editor's job is a voluntary one and to make this job a little easier and less time-consuming I would like to make a few suggestions to authors when they submit articles and notes for publication in *The Loon*.

As editor I would like to encourage people to send articles, notes and observations to me. If possible all articles and notes should be type-written and double-spaced on one side of the paper. This is the only way they can be submitted to the printer. The more material received the better the magazine will be. When submitting observations of birds, either rare, accidental, or difficult to identify please try and follow the suggestions made by Janet C. Green in her article "What Constitutes an Acceptable Bird Record," (*The Loon*, Vol. 36, No. 1, pages 4-6). If photos are submitted with articles they should be clear, *black* and *white* prints. If the author of an article would like reprints please let me know when the article is submitted. Reprints will be furnished at the author's expense. Cost of reprints depends on length of article and number wanted.

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