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The Flicker

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THE FLICKER

VOLUME 15 MAY, 1943 NUMBERS 1, 2

Winter Bird Count, 1942

By Wm. H. Longley

Winter bird-watching in Minnesota is never a very fruitful profession. Interesting birds do turn up now and then just often enough to keep the watcher contented; but 10 or 12 "old reliables" constitute the bulk of winter lists. Such dependables are the downy and hairy woodpeckers, the white-breasted nuthatcher, the blue jay, the chickadee, the junco, the tree sparrow, and some others which may be found on most winter trips. Yet, there are more than 60 species which may be expected during any winter.

For various reasons, probably resulting from the war, fewer censuses were taken, and fewer participants were able to find time and opportunity for the Winter Bird Count this year. Approximately 30 persons took part and recorded forty-seven species between December 20 and January 2. Very cold weather added to the difficulties of the observers and probably accounts for the smaller number of species than was seen during the 1941 season. Reports were received from Saint Paul, Minneapolis, Saint Cloud, Spring Valley, Palisade and Duluth. Some correspondents have sent in notable records of casual observations which cannot be included in the census for lack of certain data or because they do not fall within the time limits.

Lack of uniformity in the lists complicates the preparation of the data and reduces the comparative values of the censuses. Though rare finds or casual observations any time during the winter are welcome indeed, the counts should last at least six hours on any one day between December 21 and January 1, or on the dates prescribed each year by the National Audubon Societies for their Winter Bird Count.

Here is a resume of the rules to be followed:

1. Diameter of the census-area should not exceed 15 miles.
2. Six hours should be the minimum length of any day's census. If any less time is allowed, the count ceases to be a census and becomes a mere bird-list.
3. Do not count birds found outside the census-area limits. Any species found going to or returning from the area should be added as additional information at the end of the report.
4. Count all birds of every species, pheasants and English Sparrows included. Report exact figures or label estimates as such. Do not use words such as "common" or "abundant" to indicate numbers.
5. Describe the type of area, as "Deciduous woods and adjacent fields along Mississippi River, Camden Park

to Fridley, 8 miles distance."

6. Time spent observing (8 A. M. to 6 P.M., etc.), sky conditions, snow on ground or falling, wind direction and velocity, extremes of temperature, total hours afield (? by foot, ? by auto), total miles (? by foot ? by auto), number of observers, whether in one party or split up, and their names; total of species, total of individuals.

7. List the species according to check-list order.

The idea of the Christmas Census was originated by Dr. Frank M. Chapman in 1900, and the National Audubon Societies have accumulated a great mass of data since then. Of those data. Wing and Jenks wrote, "Nowhere else in the world of biological science does there exist a body of data comparable to the Christmas Censuses. Among the activities of amateurs none is a greater contribution to science than the taking of Christmas Censuses." We suggest that any one wishing to improve the value of his efforts consult the article, "Christmas Censuses: The Amateurs' Contribution to Science," *Audubon Magazine (Bird-Lore)*, 1939, pp. 343-350 by Dr. Leonard Wing and Millard Jenks. Some of their suggestions are well worth repeating here for those unable to locate the article.

"With few exceptions, censuses should always be taken on foot. The area selected should be representative of the region, not merely the area that will give the most species. The same area should be taken each year, and the route picked with great care to include all representative types of area in your territory. An accurate census of the regular winter birds is of far greater scientific value than a long list of accidental species."

The Duluth Bird Club, represented

by Hulda Adams, Mary Elwell, and Dr. Olga Lakela, covered Congdon Park and the North Shore on December 20, Minnesota Point on December 23, Chester Park on December 25, and Duluth Harbor and Fond du Lac on January 1. All of the trips were short, two and three hours duration; they were taken alone by Dr. Lakela except on the 23rd. Members of the Lakeview Branch of the Duluth Bird Club, Susan Lovald, Katherine Lieske, Betty Watterson, Mrs. Wm. Wernowsky, and Mrs. W. C. Olin, censused Lester Park and the mouth of the Lester River on December 26. Mrs. Olin and Richard Bateman made the same trip on December 23rd.

The Minneapolis Bird Club's annual trip along the Mississippi River from Camden Park to the vicinity of Fridley was taken on January 2. The participants were Severena Holmberg, Helen Towle, Milton D. Thompson, Florence Nelson, John S. D. Clark, Amy Chambers, Preston Haglin, Ruth Hopkins, Ruth Linder, Byron Harrell, and Wm. H. Longley. Harrell and Longley again followed the Mississippi River from Inver Grove to the Pine Bend Scout Club on December 20. Harrell took the census alone along the Minnesota River through Fort Snelling to the Cedar Avenue Bridge south of Minneapolis.

The nine members of the St. Cloud Bird Club who took the trip on the west side of the Mississippi and on the Teachers' College Islands met with very few birds of only six species, pheasant, mourning dove, blue jay, black-capped chickadee, English sparrow, and goldfinch. The date of the trip was December 29. The members of the Cloquet Bird Club found twelve species at Spring Valley, and four at Palisade where the temperature stood at -20° (No dates given).

A summary of the birds seen by the various Bird Clubs is given in the following table. The numbers of birds

seen in the several localities are listed opposite the species. St. Paul, Minnesota.

	Lakeview 23rd	Lakeview 26th	Mpls. B. C.	Duluth B. C.	Invergrove	Longmeadow	Springvalley
Mallard						85	
Black Duck						1	
Goldeneye	9	15	23	21	4		
Red-tailed Hawk					1		
Red-shouldered Hawk					1		
Ruffed Grouse	2	3					
Pinnated Grouse				1			
Ring-necked Pheasant			40		7	69	x
Wilson's Snipe						1	
Herring Gull	15	5		225			
Glaucous Gull				5			
Great Horned Owl					2		
Belted Kingfisher						2	
Pileated Woodpecker		1			1		x
Red-bellied Woodpecker					1		
Hairy Woodpecker	2	1	4		3	4	x
Downy Woodpecker	24	8	2	13	4	8	
Canada Jay				2			
Blue Jay	5	2	8		17	19	x
Crow			2		2		x
Black-capped Chickadee	20	50	14	53	30	31	x
Hudsonian Chickadee	1	1					
White-breasted Nuthatch			4	2	8	7	x
Red-breasted Nuthatch	3	3		8			x
Brown Creeper		1			2	3	
Robin	5	5		5			
Bluebird		1					
Golden-crowned Kinglet	3	1		1	2	2	
Bohemian Waxwing and Cedar Waxwing	12	45		10			
Starling	8	24	10	7	2	3	x

May, 1943

English Sparrow	1	1	155	50	115	70	x
Red-winged Blackbird					1		
Cowbird					1		
Cardinal			6		7	2	x
Evening Grosbeak		10		50			
Purple Finch			1				
Pine Grosbeak	33	150		64			
Redpoll	1			14			
Pine Siskin	12	20					
Slate-colored Junco			38		4	27	x
Tree Sparrow			36		4	37	x
Lapland Longspur and Snow Bunting					67		

On Saturday, May 22, the Duluth Bird Club had a most enjoyable and satisfactory field day. Thirty-two members attended, which included five from the Lakeside Branch and five from Cloquet Bird Club.

The weather was perfect, temperatures ranging in the seventies. Saturday followed five warm sunny days which were advantageous for the arrival of birds. Members were on Minnesota Point from six until noon, when we cooked coffee and eggs for the crowd. On leaving the Point our list of birds seen and heard totaled 74.

During the afternoon, one carload went to Lester Park and the North Shore while my carload went to the area around Arrowhead Bridge and along the St. Louis River. Later we went along the boulevard and out to the Conservation Pond near Woodland. Our list then reached a total of 92 species.

The following day several kinds of vireos were seen and heard. Saturday morning, waves of bluebirds seemed to be migrating overhead on the Point, as they did last year.

We were sorry the rest of the state clubs couldn't be with us. We are all looking forward to peaceful pursuits again in the future for more of our population.

At our last indoor club meeting, we presented three of our four memorial memberships to Junior High Boy Scouts who have shown an unusual interest in birds and nature. They are Donn Larson of West, Einar Dahl of Lincoln, and Charles Taylor of East. The fourth went to Arthur Scott of the State Teacher's College. I wish to explain that these student memorial memberships are in memory of a student charter member, June Wentlandt. Two other Junior High boys who joined are Dale Garney, Lincoln, and William Roberty, West. Evelyn Jones, Duluth, Minnesota.

Observations on the American Golden-eye

By Kern Baylis

American golden-eyes have been known to use the same nest in a tall Norway pine on Star Island, Cass Lake for the past 12 years. The tree is on a path in daily use and is about four rods from my cottage door and about five rods from the lake. In June 1937, a golden-eye brought off a brood of 11 active black and white young. On July 24, 1940, a tornado broke off the top of the tree containing this nest, taking the upper half of the nest to the ground. We found bits of down, scraps of egg shell, (green on the outside) pieces of knots broken from the inside of the tree—and a horrible odor. In May of that year we found a large hard-shelled, green egg on the dock where the ducks habitually devoured their crayfish, leaving the claws and shells as evidence.

The following year, 1941, we found that the loggers had cut the fifty-foot 'stump', containing the lower half of the four-foot nest. The bottom was solidly packed with sand, and had some bits of shell, down, and debris similar to that found in the upper half of the nest. Fearing the Island might lose its ducks with so many of its nesting trees "gone with the wind", we secured a man-made nest, suspending it from a tree nearer the cottage, so that it might be under almost constant observation. The nest is about twenty-five feet above ground. It is made of rough pine boards stained brown, is hexagonal in shape, with top and bottom of similar boards, and a round entrance near the top.

On April 22, 1941, we heard the first scout, and three days later several golden-eyes were flying about the

shore, inspecting this nest and also other possibilities nearer to Lake Windigo. In a day or two one pair had flown over our nest many times, finally taking up a position in the lake from which they could keep a watchful eye on it. Late one afternoon as I stood below the nest inspecting the growth of the wild rose, this pair flew directly toward the nest until they saw me, then circled, returning as I withdrew. The duck entered the nest and remained, establishing residence. Throughout the summer this duck accepted my presence with utter unconcern, and when feeding with her mate, maintained the same acceptance of a friendly presence. The pair displayed unmistakable mutual confidence and fidelity. At daybreak each day the same call to breakfast "Quack, quack", came from the lake under the dock, and was answered by the whistling wings of the duck as she joined her mate. One day as I sat cutting string and thread for the orioles, yellow warblers, and several other species which gather it for nest making, the female rose to the nest entrance several times and paused, puzzled as she observed me, the center of all this miscellaneous gathering.

One day in early June, sounds within the nest indicated that the eggs had hatched. At this time as the duck rose to make observations, she saw a red squirrel and a ground squirrel in the grass and me at the door. After a few minutes she dropped back into the nest, where all became quite for a time. Five days later, June 19, we were away from the cottage all day. The next day we saw

a duck and eight young in the bay. The duck herself returned to the nest and when she left the next day, she paused long in the entrance as I talked to her, turning her head from side to side as if to listen with one ear, then the other, showing gratification rather than fear. Was she proud of the safe unobserved launching of her tiny debutantes into the sea of life?

The observations of these several years past, indicate that the courting party of golden-eyes takes place on the first open water about April thirtieth, and that the duck appropriates her chosen nest about May first. The drake invites her with a soft "quack, quack" to his breakfast table, set with crayfish and clams. The duck responds at once on whistling wings. They feed together daily throughout May, after which the drake is no longer in evidence until about mid-June, when he reappears, flying excitedly about the nest. Do the young go into his keeping as the duck returns to the nest to take final inventory?

There have been distinct differences

in the personalities of the various golden-eyes that have nested in our tree along our shore. One duck was playful and coquettish, one a staid matron, and a third, a watchful mother, allowing not one duckling to loiter behind in the sheltering reeds. In 1942, a young, less confident duck occupied the nest and brought off two young. On June 8 she was heard calling and seen running about in the tall grass below the nest. One black and white ball of fluff rose to the entrance and dropped to the ground. A second, looking still damp, rose and dropped, hitting the ground with a thud. It remained still until the mother and the first duckling started for the lake.

As we were prepared for a swim, we reached the water about the same time as the ducks did. The two downy young followed the mother over the rippling waters up the lake until we could no longer distinguish them.

Three new nests made of slabs have been placed in suitable localities near our cottage. We hope to make further observations in 1943. Star Island, Cass Lake, Minnesota.

Records of Nest Destruction

By Charles Reif

The majority of nesting records are based on but one visit to a nest. Very few records relate to nestings which have been successfully completed, and only occasionally are there reports of nest destruction. These few records of destruction are sufficient to make one wonder how many unreported nests meet with failure. Undoubtedly many nests are broken by storms, robbed by marauders, or encounter other accidents. In this destruction, the ornithologist himself is not without guilt, for often he beats an inviting pathway to a nest.

During the summer of 1942, I encountered what I thought was an unusually large number of disrupted nestings, resulting from one or another of the causes suggested above. The very first nest that I found during the spring was a failure. It was a phoebe's nest built about May 21 under the eaves of a cabin near Lake Minnewasta. Five days later it had tumbled to the ground. No eggs had been laid, and the phoebes were rebuilding. Two more dislodged nests of this species were discovered later in the season at Hillaway on Ten Mile Lake, near Hackensack.

The second nest of the season, in this series of disrupted nestings, was found on Memorial Day at Hillaway. It belonged to a ruffed grouse and was shrouded in mystery. Arthus B. Eustis and I flushed the bird from the nest about 9 a.m. in the morning. We counted 13 eggs then but did not disturb the nest. At 11:30 a.m., we stealthily returned to the spot hoping that other members of the party might see the bird on the nest. However, we did not see the bird in the vicinity,

and upon approaching the nest we found it to contain only three eggs. Careful inspection revealed no disturbance in the area of the nest.

Eustis returned to the lodge for his equipment, planning to hide near the nest to observe what might ensue. When he returned to the site at 11:55 a.m., he found the nest completely empty. During a period of three hours the entire clutch of thirteen eggs had disappeared without a trace.

Six days after the disappearance of the eggs I placed four small hen's eggs in the same nest. They remained untouched for five weeks. Finally one of them was moved about three feet from the nest, but all four were left unbroken.

On June 21, three weeks after the disappearance of the clutch of grouse eggs, I found a second grouse nest which had but recently been successfully hatched. The shells of twelve eggs were certainly found, but an exact count was difficult because some of the fragments were small. The second nest was only fifty yards from the first evacuated nest. It has been suggested that the grouse moved the eggs from the first to the second nest, but such seems very doubtful.

A colony of 14 nests of common terns was discovered on a narrow sand spit in Ten Mile Lake on June 18. Of these two contained eggs which had been broken and sucked. A broken egg in which the yolk had coagulated was found three feet away from a third nest. Several rods from the tern colony was a loon's nest with a single egg. A loon's egg, apparently the mate of the one in the nest, was found on the beach about fifty feet away. It

had been sucked clean.

A visit to a back bay of Birch Lake, on which Hillaway also has frontage, on June 19, revealed the nests of 21 redwings, a loon, and an American bittern. Three of the blackbirds' nests had met with tragedy. The eggs in one had somehow been smashed before incubation had proceeded very far. Those from another were found dumped into the lake. The four fledglings in a third nest apparently had drowned during a heavy rainstorm five days before. Their odoriferousness testified that they had been dead at least that long.

On June 20 at Camp Hillaway a Forester's tern was seen shaping a small mound of debris in the bay. Closer inspection showed that no eggs had been laid. When the site was visited two days later no trace could be found of the nest.

A catbird's nest situated four feet from the ground, was observed daily over a period of four weeks. Since it was within ten feet of a building, its inspection was easily accomplished without disturbing the surrounding foliage. In the fourth week following my discovery of the nest the three eggs vanished. A search for traces of the blue-green shells failed to reveal how they had been taken. While it is true that the eggs were in the nest an unusually long time and may have been incapable of hatching, the continued visits to the nest careful as they were probably aided some animal in discovering it.

The one yellow warbler nest which I observed during the summer also came to a sad end. When the fledgling warblers were about three days old, the pendant nest was broken from one of its supporting twigs. It hung at

such an angle that one of the little birds had fallen out before the situation was discovered. My attempt to repair the nest was to no avail, for it sagged again and the second fledgling was also lost.

Cowbirds caused the desertion of several nests. Two vacated vireo nests were found, each of which held a single cowbird egg. Another had a huge, nearly full-grown cowbird in it which was all but suffocating the two young vireos as well as taking all their food. I have on other occasions known vireos to abandon nests in which a cowbird had deposited eggs, before the vireos had laid their own. On the other hand, I have seen vireos hatch cowbirds along with their own brood, or even a day before since the cowbirds are canny about where and when they lay their eggs, and defend the impostors with all their might. Similar cases came to light during the summer in which cowbirds had parasitized veeries. One veery's nest had a large cowbird fledgling which crowded the young veeries most selfishly. Another veery's nest had one unwanted egg, but apparently it had been left to addle.

One has only admiration for the industry and courage of birds as they set about their nestings. The skill exhibited in the construction and concealment of a nest is followed by a wonderful patience during incubation and tirelessness during the feeding period. To see these creatures endure storm and vandalism, sustaining as many losses as they do, and still perpetuating their kind, is one of the greatest thrills granted an ornithologist.

Bucknell University Junior College,
Wilkes Barre, Pa.

NOTES OF INTEREST

A BIRD'S PARADISE, THE FOREST LAKE REGION—Recent complaints against cormorants in Forest Lake bring that entire area up for study of its bird life. The position of that area in the state is such that almost all classifications of Minnesota birds find excellent feeding and nesting conditions. Dr. T. S. Roberts map of Minnesota life zones shows Forest Lake to be at the meeting point of three of the four life zones. Forest Lake itself is in the typical Alleghanian zone. Just to the south is the pseudo-Carolinian zone. And just to the north is the Canadian zone, thus bringing together ideal conditions for two-thirds of Minnesota's nesting birds.

The many lakes in that region provide homes for water birds such as gulls, kingfishers, loons, grebes, cormorants, and ducks. Shore birds like the killdeer and spotted sandpiper also make their homes around these lakes. There are several swamps in that neighborhood where the observer may find herons, the American bittern, and marsh wrens. The district is not thickly populated so that there is much field and woodland to attract the many birds that prefer such conditions. It is probably because of these diversified land conditions that half of all the birds which nest in Minnesota have been found in just this one region.

For many years now the Boy Scouts of Minneapolis troop 33 have kept field lists and notes on bird observations made at their Camp Ajawah at Linwood Lake just northwest of Forest Lake. Records kept by Dr. C. C. Prosser, leader of the Scouts' field trips, show that 110 birds have been observed at Camp Ajawah, and the nests of 60 birds have been found. Nests of two fairly new residents of Minnesota are among those found at Camp Ajawah, the one of the cerulean warbler being the first of its kind in Minnesota. The cerulean warbler lives high among the tree tops, nesting in May from 25 to 60 feet above the ground. Until a few years ago this bird was very rare in southern Minnesota, but recently has become a more common resident. The same is the case of the red-shouldered hawk, a welcomed eater of mice and grasshoppers, whose nest has also been found at Camp Ajawah.

Following is a complete list of the birds that have been found by Dr. Prosser and the Scouts at Camp Ajawah. Those whose nests have also been found are marked with an asterisk.

Loon, pied-billed grebe, double-crested cormorant, great blue heron, green heron, black-crowned night heron, American bittern, *mallard, *blue-winged teal, ring-necked duck, lesser scaup, *Cooper's hawk, *red-shouldered hawk, *broad-winged hawk, *marsh hawk, sparrow hawk, ruffed grouse, ring-necked pheasant, coot, killdeer, *spotted sandpiper, lesser yellow-legs, herring gull, ring-billed gull, common tern, *black tern.

Mourning dove, *yellow-billed cuckoo, black-billed cuckoo, great horned owl, barred owl, whip-poor-will, nighthawk, chimney swift, *ruby-throated hummingbird, *belted kingfisher, *flicker, *pileated woodpecker, red-headed woodpecker, *yellow-bellied sapsucker, *hairy-woodpecker, *downy woodpecker, *kingbird, crested flycatcher, *phoebe, *least flycatcher, *wood pewee, *tree swallow, *black-capped chickadee, *white-breasted nuthatch, *house wren, *long-billed marsh wren, *short-billed marsh wren, *catbird, *brown thrasher, *robin, *willow thrush, *bluebird,

ruby-crowned kinglet, *cedar waxwing, migrant shrike, *yellow-throated vireo, *red-eyed vireo, *warbling vireo, *black and white warbler, golden-winged warbler, *yellow warbler, myrtle warbler, *cerulean warbler, Blackburnian warbler, *chestnut-sided warbler, bay-breasted warbler, black-poll warbler, pine warbler, *oven-bird. *northern yellow-throat, Wilson's warbler, *redstart, *English-sparrow, eastern meadowlark, western meadowlark, *red-winged blackbird, *Baltimore oriole, *Brewer's blackbird, *bronzed grackle, cowbird, *scarlet tanager, rose-breasted grosbeak, *indigo bunting, evening grosbeak, purple finch, redpoll *goldfinch, grasshopper sparrow, vesper sparrow, slate-colored junco, tree sparrow, *chipping sparrow, *clay-colored sparrow, *field sparrow, white-throated sparrow, *swamp sparrow, *song sparrow. Kathleen Orr, Wayzata, Minnesota

MAY BEETLE GRUBS AS BIRD FOOD—During the summer of 1941 an outbreak of white grubs (*Phyllophaga*) plagued the Highland Park Golf Course in Saint Paul. The half-mile square area was infested to such an extent that in large sections where grubs were thickest, the sod could be rolled back, as all the roots of the grass were eaten off just below the surface. Two men digging with nothing but their hands collected more than a thousand of the larva within an hour. Robins flocked to the feast in increasing numbers through June and until the last days of August. The Brewer's blackbirds nesting in a loose colony in and near the golf course naturally took advantage of the abundant insect food and fed to a great extent upon the grubs. Eastern and western meadowlarks and starlings were present at all times in small numbers. English sparrows and the starlings obtained most of their grubs by plundering from the robins and blackbirds.

Robins were everywhere on the golf course, concentrated about the brown patches of dying grass, and they perforated the ground with their digging. Not many of the larvae developed into adult May Beetles, and credit should be given to the tireless birds for their efforts in suppression of the outbreak. The beetles that did emerge were soon eaten. No huge flights, in fact no flights at all, of May Beetles were noticed as were seen during the two previous years.

The starlings showed a great capacity for eating grubs, but unfortunately most of them were taken from the robins and the blackbirds. Purposefully alighting near one of those birds, the starling kept its bright eyes intent upon the activities of the other bird, and when it began to dig out a grub, the voracious starling rushed suddenly and threateningly at the bird, with wide-open beak, lowered head, and wings held in threatening display. The startled robin or blackbird always gave way, and the foreign bird finished unearthing and eating the prey. It was easier for the starling to watch and steal from the other bird than to search for the grub himself.

Many parent starlings were followed by three or four grown young which seemed to be learning the pirate trick. They were evidently apt pupils. When the parent attacked, the young protected the flanks, presenting the victim with a picture of four or five wide-open, dangerous beaks much like bayonets charging at him. The young ones may have known they were pirates, but it is very possible that they looked upon the robin or the Brewer's as another parent and merely rushed up to be fed. The victim usually jumped backward, (if a robin, with excited squeals) and after a few seconds ran off unconcernedly and continued its

search for grubs. Some robins were pursued so persistently, that they gave up and with a squeal of anguish flew far away.

The English sparrow resorted to sneak-thief methods rather than outright attack. A sparrow would hop innocently behind a robin and wait until the robin finished digging up the grub. As the robin paused to rest for a moment, leaving the grub on the ground, the sparrow quickly darted in to seize it, and dashed away, either stopping a few feet away to dine or continuing on to feed its young. The robin with a dumb look and an indignant scream again returned to probing and testing for more grubs. The Sparrows were never seen to annoy a Brewer's blackbird, and neither the sparrows nor the starlings ever were seen to bother a meadowlark. The blackbird offered no more defense against the starling than did the robin. Wm. H. Longley, Saint Paul.

BLUEBIRDS WINTER IN DULUTH—In the winter 1943, several Eastern bluebirds were reported from various localities in East Duluth. From 2 to 20 individuals were noted on the campus of the State Teachers College at different times from January to about the middle of March. The occurrence is notable because there is but a single previous winter record of bluebirds in Duluth, and that of twenty years ago, according to Dr. T. S. Roberts, in *The Birds of Minnesota*.

Almost daily for several weeks two bluebirds were seen about the College Buildings and the trees on the south terrace. Their favorite shelter was the cornice of the building in the leeward southeast exposure. Apples, raisins, peanuts, and sunflower fruits, placed on window ledges directly below the cornice, failed to tempt their appetites. The birds were never seen to take the offered food. On the contrary, they were seen to capture flies, that revived from dormancy in the warmth of the sun. The walls of the building are highly infested with cluster-flies which began to work their way into the building early in February. It is probable that even in colder weather in the warm chinks of the wall the hibernating insects attracted the bluebirds. After the severe snow storm of March 14, 16th, one dead bluebird was brought to the writer. Olga Lakela, State Teachers College, Duluth, Minn.

GOLDEN PLOVERS, MAGPIE, PRAIRIE FALCON, AND BUTEOS AT LAKE TRAVERSE—While hunting Hungarian partridge on October 18 and 19, 1942, on the prairies north of Wheaton, Minnesota, my father and I did some birding on the side. Of the 51 species that we recorded, the two most common were the golden plover and the American coot. We saw approximately 1000 of each species. Next in abundance were the *Buteo* hawks and the pheasant. The only rare birds seen were a prairie falcon and an American magpie. I am reasonably sure that the falcon was not a duck hawk, but the record is not a positive one.

About 200 Buteos were seen, averaging about two to the mile, although nine were perched in the trees of one small woodlot. Only a few were studied closely, but we judged that about 95 per cent were red-tails. Six Swainson's, four broad-wings, and two rough-legs were identified. Only three bird hawks were observed, two of which were identified as Coopers and the other as a sharp-shin.

Of even more interest than the hawk migration was the exceptional concentration of golden plovers—concrete proof that for these birds protection was given in time. Almost every plowed field and suitable burned-over area had its

flock of plover. Unfortunately, they would not allow a close approach, but would be off over the prairie, their rapid wheeling flight soon carrying them out of sight. The perfect co-ordination and timing—a flock of 50 always behaving as one bird—is one of the marvels of bird flight and group behavior.

About 35 flocks, averaging approximately 25 birds to the flock, were seen near Wheaton on October 18 and 19. The largest flock was on the mud flats at Lake Traverse—about 150 birds. Unfortunately I was unable to recall any fall field mark except the color of the axillaries, to distinguish the golden from the black bellied plovers, and distance prevented seeing this characteristic in most cases. The great majority of the birds identified, however, were golden plovers.

The present generation of hunters fortunately, considers the plover as just another little bird not worth killing, and it is doubtful if any appreciable number are killed in Canada and the United States. Of course the meat hunters of South America and storms at sea will continue to take their toll. But if the golden plovers in the fall of 1942 were as common in the prairie states to the west as they were on the plains of Minnesota, there should be a substantial breeding population returning this spring to the unchanged and unmolested breeding grounds in the Arctic. Let us hope that both the black-bellied and the golden-plover will pass through Minnesota in ever-increasing numbers in future years. **R. M. Berthel, Cottage Park, White Bear, Minn.**

SOME UNUSUAL MINNESOTA BIRD OBSERVATIONS—Loon. An atypical sub-adult loon was seen on the flood-plain lake at Fort Snelling. The entire bill was bright yellow, and the front of its neck and breast was pure white sharply contrasting with the uniform black of the rest of the plumage. The normal second and third year plumages of the common loon do not have the definite demarcation between the black and white as did the bird described; neither do they have the entire bill yellow. Normally the bill is horn-colored, occasionally with a small amount of dull yellow on the lower mandible. Although the sub-adult of the yellow billed loon, an arctic species, apparently corresponds with this description, such a record would be of no value unless the bird were collected. The loon was seen on the following dates: April 26, May 3, 10, 17, in 1941 and on April 19, 1942.

Black Duck. A pair was flushed from the Long Meadow marshes, Hennepin County, on June, 1941. Whether or not the pair nested is questionable since no other evidence of breeding was found.

Flicker. We carefully watched a flicker, yellow-shafted, with red malar stripes, one day during the summer of 1939 in St. Paul. We have assumed that it was a hybrid between the yellow-and red-shafted flickers.

Ruby-crowned Kinglet. On or about July 10, 1939, a pair frequented a few Larch trees (*Larix*) in the residential district of Hastings, Dakota County. (B.E.H.)

Hudsonian Curlew. Twenty-three large shore-birds identified as this rare species were encountered in Renville County on October 18, 1942. Two flocks, of 17 and 5 birds, flew overhead in V-formation appearing much like ducks as they passed over sixty feet above. A low, mellow whistle, useful in identifying the birds, was heard as each flock passed over. **Wm. H. Longley and Byron E. Harrell, Saint Paul.**

BIRD TRIANGLE—At our cabin on Woman Lake, fifty miles north of Brainerd, we made an hour's observation, on Wednesday and Friday, June 18 and 20, 1941.

A robin had built her nest on a shelf by the back door. She hatched her second brood of four on June 14. One left the nest the evening of June 23, the others the following morning. A pair of yellow warblers had built their nest about 25 feet almost directly above the robins, in an overhanging oak tree. Our attention was attracted by an unusual amount of scolding and fluttering about the robin's nest, on the part of Mr. Warbler, for a couple of days. Then our suspicions were aroused to a grave social scandal going on almost under our very roof. So, to confirm our mistrust, with pencil, pad and watch in hand, we took our reporter's seat (if not the judicial bench), by the service berry bush, some 15 feet away, to observe these strange goings on. At 3:15 p.m., Mrs. Robin fed the babies, and stayed on the side of the nest for five minutes. During this time Mr. Warbler fluttered about the nest, scolding loudly, seven times. At 3:20 Mr. Robin fed his offspring. At 3:22 Mr. Warbler sat on the side of the nest. At 3:24 Papa Robin again fed the babies. At 3:24½ Mr. Warbler fed them, and again at 3:25. At 3:30 Mrs. Warbler went to her own nest, paying no attention to her robin neighbors. At 3:33 Mother Robin fed her babies, and remained on the edge of the nest for 17 minutes. During this time Mr. Warbler fluttered about the nest 61 times, scolding vociferously. Twice he pecked at Mother Robin, and four times he rested on a perch less than a foot away from her. Four times he sat on a branch about five feet away, and sang. At 3:52, 3:54, 3:55, 4:1 and 4:3 Mr. Warbler fed his neighbors' children. A funny sight—when he stretched to his utmost height to place a tiny aphid, spider or other small insect into those great gaping gullets. Meanwhile Mother Robin sat preening about 35 feet away. At 4:7 a great fluttering, squeaking and scurrying occurred as Mother Robin chased away "Gi me" chipmunk, when he attempted to go under the back step. (We called him Jimmy—till he became such a teaser for peanuts. Now he is Gi' me). At 4:8 Father fed the babies and Mr. W. flew at him ferociously. Apparently Daddy R. did not have the patience of his spouse, and turned on the intruder and tried to chase him off. But, nothing daunted, at 4:12 Mr. W. again inspected the nest, and at 4:15 again fed his irate neighbor's babes.

Summarizing: we note that during the hour Mrs. R. returned to the nest but twice; Mr. R. three times; while Mr. W. made 78 calls, feeding the young robins some tiny morsel on eight of them. Mr. R. fed them each time he called, but left almost at once. Mrs. R. remained about 20 minutes, and each time fed more than one baby a substantial amount. Again, on Friday, I kept a similar record, with much the same results, except that there was more singing on the part of the raskish warbler. This performance continued at the same rate for seven days, or until the young robins left the noisy nest. Mrs. L. L. Smythe, Minneapolis, Minn.

CONCENTRATION OF SNOW BUNTINGS NEAR SHAKOPEE—ON March 20, 1943 after a severe snow and sleet storm, I was driving toward Shakopee. At the top of a high hill two birds flew across the highway. The little horned larks had been here during the storm, and I was interested to see if they had survived, so I stopped to investigate. The fields on both sides of the highway were full of birds, and as they flew overhead, their underparts gleamed as white as the snow beneath them. After a good look at them on the ground, I saw to my delight that they were snow buntings. As I had never seen more than a dozen at a time I was thrill-

ed, and, wandered up and down the highway observing them, unmindful of the screams of bus sirens and the scowls of the drivers. Like many bird students, I have been considered a little mad at times, and that day was not an exception. The buntings fed on the weeds, and every few minutes the whole flock rose, wheeled and settled back on the snow, the last of the birds passing the first and dropping down beyond them. Those that flew across the road from one flock to the other gave a sweet little call that sounded like *teer*. It had the pitch and tone of the bluebirds call, but there was just one note. From the feeding snow buntings there came a faint murmur as if they were whispering to one another. At the time it seemed an unusual and rare experience to find so many snow bunting; but later, upon inquiry, I found that these winter visitors do sometimes gather in large numbers in the spring preparatory to their flight to the far Arctic to nest.

Mary Lupient, Minneapolis, Minnesota.

MORTALITY DUE TO ECTOPARASITES—In August, 1942, some boys called me to see a chimney swift fluttering about on the ground. I picked it up, but was so shocked at the amount of parasites that came out on my hand that I set it down immediately. I then put it in an empty aquarium jar to view. Nothing seemed broken, but the underpart of the bird was entirely bare of feathers. It would neither eat nor drink, but often called when it heard the birds overhead. We forced some water down its throat, and kept it two days, but finally I chloroformed it to put it out of its misery. Some of the insects, large flat ones and small ones, were still running around in the box when I buried the bird. Evelyn Jones, Duluth, Minnesota.

DESERT QUAIL OF CALIFORNIA, ARIZONA, AND NEVADA—When I first came to live on the desert I soon discovered a small bird that was called by inhabitants, "the desert quail." I travelled many miles in California, Arizona, and Nevada, and always I could see coveys of this same "desert quail."

One day, while visiting Sheffers' live tropical bird aviary, I learned of another desert quail found only in the southern most portions of California and Arizona, being rather abundant in Yuma County, Arizona. After seeing the new desert quail, I could readily distinguish the two. The scaled quail (*Callipepla squamata*), or more often called the Mexican quail, is slightly smaller than our bobwhite, has a characteristic white tuft of feathers on the head and its breast has a white scaled appearance. It is sometimes referred to as the "white quail!" This quail is found only in the southern portions of Arizona and California.

Gambel's quail (*Lophortyx gambeli*) is very common in California, Arizona, and Nevada. It is bluish in color, with a brownish top on its head and a characteristic black plume rising from its forehead. In some cases this black plume has several red feathers. I found this quail to be very numerous, but always the number of coveys depended on the amount of water present. As an example, I visited a large spring in the Piute Mountains of California. This spring was flowing at a rate of two hundred gallons per minute. There I counted 50 coveys of Gambel's quail. At another spring, one flowing at the rate of one gallon per minute, I saw a single covey of about 25 quail. Gambel's quail is very small and when dressed weighs about one-quarter pound. Two quail would make one serving, of which I can attest to. Since the rationing of meat, these quail are having a tough time of it.

Both Gambel's quail and the white quail are very wary when someone approaches. Both prefer to run along the ground instead of flying. The alarm call of the Gambel's quail consists of three short whistles. This call sometimes gives away their location. I have found it possible to creep up to rocks behind which the quail are hiding. The quail stay within one-half mile of a water supply. I do not know what food these quail live on, but I suppose the seeds of a desert shrub called the greasewood and the ironwood trees furnish some subsistence. High in the mountains obtaining food no longer is a problem. I would like to mention the splendid work that the sportsmens' clubs and the Department of Agriculture are doing in erecting water holes for the wildlife in the desert. These watering places are supplied from wells. Warrant Officer (jg) Edwin Dery, Camp Young, California.

OLD-SQUAW DUCKS STARVE AT DULUTH—Old-Squaws in Minnesota winter chiefly in Lake Superior. During 1942 the lake bay remained open throughout the winter. In February large flocks of old-squaws were observed from time to time among the wind-driven ice-floes. During the more severe winter of 1943, however, the ice formations closed in the bay, extended far out into the lake, and thus stranded old-squaws without suitable feeding areas. Consequently, some perished probably due to starvation, despite the efforts of the members of the Conservation Club of Duluth, who tried to feed the ducks, and who opened the ice in Lester River area for natural feeding. However, the old-squaws did not feed on the offered grains, and the hole made in the ice of the river soon filled in with drifting snow in subfreezing temperatures. The tragedy recalls the greater one of 1903-04 when thousands of Old-squaws were known to have died of starvation. (*The Birds of Minnesota*, T. S. Roberts, Vol. 1. p. 272).

According to Mr. H. E. Furo, U.S.E. Office at the Duluth Canal, about 25 old-squaws arrived at the open waters of the canal in latter part of February. After several days of activity, diving and swimming, the ducks were noticeably weak and many were dying. He noted 12 dead afloat in the current of the canal.

The writer first learned of the situation on March 14 through a telephone message received from Miss Harriet Larrabee. A blinding snow storm prevented immediate investigation. On the abatement of the wind two days later the writer made her way to the Duluth Harbor and walked up and down the crusted drifts which surpassed the house tops. Partly buried in the snow near the canal pier was a frozen male old-squaw. No other ducks could be found, but two live ones, male and female were swimming along the edge of the open water at the west end of the canal. The dead duck was promptly mailed to Dr. T. S. Roberts, and later another one, a female, found by Miss Evelyn Jones on Highway 61, near Two Harbors. As reported by Dr. Roberts, the ducks were found to be emaciated and died of probable starvation.

Mr. John Ekman, a local Game Warden, knew of two other dead old-squaws, one of which had been killed by an ambulance as the duck alighted on Superior Street, weak and bewildered, during the storm. At French River, a fisherman brought two weak ducks from the lake ice. They died later. According to Miss Evelyn Jones, school boys at Morgan Park reported six dead long-tailed ducks on the shore of the St. Louis River Bay near the Steel Plant, thus increasing the

known dead to 24. Olga Lakela, Duluth Teachers College, Duluth, Minnesota.

GREEN HERONS AT GOOSE LAKE— Goose Lake is 12 miles from St. Paul and near White Bear Lake, with which it was formerly connected. When bank full, as it is at present, it covers an area of about 400 acres. It was practically dry during the drouth years, but has now come up to the 1915 level, as near as we can remember. During the dry years cottonwoods and willows up to eight inches in diameter grew up around the east and south shores on the former lake bottom. In 1942 these trees were standing in from three to four feet of water. Many of the larger trees were appropriated as nesting sites by green herons in the spring of 1942.

From shore there appeared to be an unusual number of nests, so on June 10, a short preliminary examination of the rookery was made by boat. Fourteen nests were found from three to 15 feet above the water, in an area of about an acre in extent. According to Dr. Roberts (*Birds of Minnesota*, vol. 1, p. 181) the green heron nests "in bushes or small trees. . . usually only a single pair but occasionally two or three pairs loosely associated." On June 23 and 30, trips were made to the colony for the purpose of banding the young. Twenty-three nests were found and 54 young were banded, as shown in the following table.

Nest number	Number of young	Height of nest above water	Number banded	Remarks
1	4	4'	3	Willow. One runt too small to band.
2	5	3'	4	Willow*.
3	4	2'	4	Willow, fallen over, almost parallel to water.
4	3	4'	2	Willow.
5	5	7'	3	Cottonwood.
6	2	6'	2	Cottonwood.
7	5	4'	4	Willow.
8	3	5'	2	Willow.
9	4	8'	1	Willow.
10	5	5'	5	Willow. All young same size.
11	4	5'	2	Cottonwood.
12	4	7'	2	Willow.
13	5	3'	5	Willow. All young same size.
14	5	3'	5	Cottonwood.
15	3	4'	3	Willow. Two young smaller than others.
16	4	8'	1	
17	5	7'	1	Willow. One runt.
18	4	5'	3	Willow. One runt.

19	2	10'		} Willows. Trees too small to climb, too large to shake down young.
20	4	9'	1	
21	3	15'		
22	4	12'	1	
23	2	15'		
Av. 3.91		Av. 7.4 ft. Total 54		

*Nest No. 2. This nest was first examined on June 10, when it contained five eggs, four uniform in color, and one several shades lighter. On June 23, there were four young about six days old, all the same size, and one young very weak and half the size of the others. Perhaps another heron at a later date laid the off-color egg that hatched into the weak young. There was no proof of this, however.

Young herons, when over one-fourth grown, swim and climb extremely well. Only six, out of the 54 banded, regurgitated at the bander. All 54 attempted to escape by climbing. It was a surprise to the writer that there was no claw on the spurious wing of the young green heron.

Up to the present time, May 22, 1943, no returns have been received. We hope to band additional young in the colony this summer. R. M. Berthel, Cottage Park, White Bear, Minn.

For the sixth consecutive year "Adventures in Birdland", or a short course in bird identification is being given at the Museum of the Minneapolis Public Library. This course has always been taught by Milton D. Thompson, the Executive Secretary of the Museum Society, but since he is now in active service with the United States Navy, the course is being given for the first time, by the members of the Minneapolis Bird Club. The Club members give talks calling attention to the most outstanding field marks of the birds. Skins, mounted birds, and slides are used to make the work more concrete. The six lectures and three field trips will be followed by an examination on May 4. The latter is being given especially for the boys who are working for Scout badges.

Originally the course was designed for Scout Leaders and for beginners, but many persons have taken it almost every year as a refresher course preceding the spring migration. It is a good example of adult education, since most of the people taking the course are adults.

The attendance has ranged from 80 to 117 at each lecture, indicating a keen interest in birding, and also that the Club is doing a splendid job of living up to one of the purposes of its constitution, i. e., promoting the study of birds and the bird life of our own community. Severena C. Holmberg, Minneapolis, Minn.

Your Contribution To Ornithology

An Editorial

Most of us as members of the Minnesota Ornithologists' Union have a desire to seriously study birds, or failing in that, we merely observe and enjoy watching the birds. We haven't all the time necessary, or we just do not go into it that deeply. The desire to study, however, is there in varying degrees in all of us, and it may be fulfilled by following the suggestions put forth herein.

To often bird-watching is relegated to the rank of a mere pleasurable sport. But you can enjoy this sport as much as ever, and still contribute measurably to the science of ornithology by making note of some of the many things which you are bound to observe when looking for birds.

The migrations and nestings of birds are among their most evident and easily studied activities, are of great practical importance, and will probably take less time than life history studies. Even if you are interested only in seeing the birds and identifying them, still it will take but a moment and detract none from your pleasure to write down certain facts, such as dates of migration and data about nests or nesting activity. It does not require an expert to make observations on nesting and migration, but it does require certainty. You must know without any doubt what bird you have seen or what bird's nests you have found.

In the December 1942 issue of "The Flicker" appears the annual report on nests found in the state. Many more nests must have been found than those reported here, but unless such discoveries are mailed to the editors of "The Flicker" or to the Museum of Natural History who will ever know of them? Do not think that your discoveries are not important enough. No matter what kind of bird's nest you may find the correct information supplied by you will be of interest and of value to some one individual or to many individuals, either in the way of establishing averages or of showing extremes, in pointing out what is usual or what is unusual. Rare finds are very interesting, but they are not important in the long run: Normality is strangely less evident and necessitates more study to bring out and is more useful to ornithology. If you report on migration or on nesting, your records will be placed on file at the Museum of Natural History, and many of the nesting items may be published in "The Flicker". All nests on which you collect suitable data should be included; nests of the robin, the English Sparrow, and all other birds should be mentioned. The data should be written in your notebook while you are in the field; leave nothing to your memory. For permanent recording a columned sheet is best, keeping the species in check-list order, i.e., from loon through to snow bunting as on field cards. The columns should be headed:

Species; Date; Status, whether the nest is being built, has eggs, or young; Location, showing the height of the nest in tree or bush or if it is on the ground (this is not so necessary as the other columns but is sometimes of much value); Place, county, or city, and state, or sometimes more specific—Fort Snelling, Theodore Wirth Park, etc. If the nest is revisited, any additional notes should be included. Evidence of nesting such as seeing young ducks or other precocious young birds is also valid information and very acceptable; young of other birds seen out of the nest can be counted.

Migration reporting requires more time to be spent in the field, and preparing the report means much more work. For the birds which remain in the state through out the summer, you note as follows: Date first seen; when next seen; when common; when last seen in the fall. Birds which remain just in the winter will require the same treatment except that the first seen date will be for the fall, while, the last seen date will be in the spring. For species passing through in both the fall and spring you will need two sets of reports: Date first seen: date next seen; when common, date last seen for the spring, and the same for the fall. The "next seen" date is optional. It is used by the United States Fish and Wildlife Service, but is not used by the Minnesota Museum of Natural History.

These two phases of bird-study, migration and nesting, can be incidental to bird-watching. They make bird-watching more interesting, more valuable, and scientific. Any person who is apt at identification can thus contribute to the science of bird-study if he will take a few moments to jot down his findings. We are especially interested in having more people send in their nesting records in 1943. William H. Longley, St. Paul, Minnesota.



MEMBERSHIP LIST OF THE MINNESOTA ORNITHOLOGISTS' UNION

Number after names indicate membership in the various clubs:

1. Minnesota Bird Club
 2. Minneapolis Bird Club
 3. Duluth Bird Club
 4. Cloquet Bird Club
 5. St. Cloud Bird Club
 6. Minneapolis Audubon Society
 7. T. S. Roberts Ornithology Club
 8. Lakeview Branch of Duluth Bird Club
- * Members in the U. S. Armed Forces.

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Angell, Miss Betty, 10½ 12th St., Cloquet, Minn. 4.
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Summer Birds of Itasca Park

Gustav Swanson

To many of its thousands of annual visitors Itasca State Park is the most interesting spot in Minnesota. The grandeur of its stately pines, the beauty of its 300 lakes, the charm of its historical background, and the abundance of its wildlife make Itasca Park cannot fail to be pleased with The student of birds who visits the Park one of our proudest possessions. Park cannot fail to be pleased with the richness of its birdlife, but some parts of the Park are more likely than others to yield interesting birds, and it is the aim of this account to make the time of the Park visitor interested in birds as fruitful as possible.

The Park was created in 1891 by action of the state legislature, but no funds were appropriated to acquire the designated lands until years later. In 1892 Congress granted nearly 7000 acres of vacant government land for the purpose, and from time to time additional lands have been secured until now the park is approximately 7 miles square, or nearly 32,000 acres. It lies chiefly in Clearwater County, 225 miles north by west from the Twin Cities.

The historical and geographical significance of the Park had much to do with its establishment and deserve mention. The source of the Mississippi River was naturally the object of much early exploration, and after several others had failed to find it, Henry R. Schoolcraft succeeded in 1832, being guided by an Indian, Ozawindib. The name, Itasca, was coined

by Schoolcraft from the latin words *veritas caput* meaning truth and head, referring to the true head or source of the Mississippi, by simply dropping the first and last syllables to obtain a suitable euphonious title. The words had been supplied by Rev. W. T. Boutwell, who accompanied Schoolcraft on the discovery expedition.

William Morrison had apparently visited Itasca Lake in 1804, but since he did not report his trip until years after the Schoolcraft discovery, and no scientific or historical purpose was accomplished by his visit, Schoolcraft is adjudged the discoverer of the Mississippi's source.

Those important in the early exploration of the area, and in its establishment as a park, are recognized in the place names now used in the Park. Thus there are Schoolcraft Island, Boutwell Creek, and Morrison Lake among others. It is ironic that J. V. Brower, who more than all others worked to secure the establishment of the Park, is recognized only by "Brower Ridge," an unprepossessing hogback followed by the Lind Saddle Trail for a distance and by a little island in DeSoto Lake. The name "Brower Ridge" was suggested by Dr. Elliott Coues, the celebrated ornithologist turned historian, who in 1894 visited the Park in his studies of the Zebulon M. Pike explorations.

The natural beauty of Itasca Park depends much upon its forests. It has stands of virgin white pine and Norway or red pine unrivalled in the state

and possibly in the nation. In addition there are extensive stands of jack pine, balsam, aspen, white birch, white cedar, tamarack, black spruce, white spruce and hard maple. This is by no means a complete list of its forest trees, others occur in smaller quantities. The park is predominantly northern coniferous forest (Canadian Zone) in its character, but the prairie lies only 20 miles to the westward, and there are many farms on the cleared land surrounding. Because of the adjacent prairie and farm land, many of the birds and the plants seen in the park are not characteristic evergreen forest forms, but are intrusions from without.

There are a number of spots in the Park which are unusually favored with birds. Those which we have usually found especially productive have been the following: the trail from the highway to LaSalle Springs; the spruce-tamarack bogs near Garrison Point and along LaSalle Creek especially near the north Park boundary; Bohall Lake and DeSoto Lake which are fine for shore birds during years when mud flats are exposed; Bohall Trail; the Lind Saddle Trail from Chamber's Creek to Nicollet Cabin and south to DeSoto Lake; and finally, for ducks, Floating Bog Bay and the entire west shoreline of Lake Itasca. Along this shoreline we have flushed over 30 wood ducks in a half hour's time.

Maps on which may be located the places referred to are widely available in and near the Park in the summer, or may be secured free upon request from Harold Lathrop, Director of State Parks, St. Paul.

From the date of its establishment in 1891 onward Itasca Park has been a game refuge and some of the wild-life found in the Park certainly exists only because of this protection. Among the birds which are encountered regularly in the Park, but which are rarely seen elsewhere in the state, are the bald eagle, osprey, and turkey vulture. A pair of *eagles* has reared young successfully for several years in the same nest on the west side of Lake Itasca's southwest arm, and all summer long the young or old birds may be seen near the nest.

The *osprey* fishes regularly on Itasca Lake and several of the other lakes in the Park, and undoubtedly more

than one pair is present. Many visitors are thrilled by the spectacular plunges of the osprey after fish, and the birds are so tame in the Park that they may be observed with ease. The only occupied nest that I have watched for several years is about 200 yards southeast of Nicollet Cabin, and this nest has usually contained young until about August 1, each summer.

The *turkey vulture* undoubtedly nests in the Park also, for it is seen each summer. In August, 1938, I saw 13 vultures perched in a single dead tree on Itasca Lake.

The bird student from farther south visiting Itasca in summer is most likely to be interested in those birds which are characteristic of the northern coniferous forest; therefore, I shall confine my attention chiefly to those birds, with suggestions as to where they may be found most easily.

Ruffed grouse are widespread over the Park, but not as common as might have been expected in recent years. The **spruce grouse**, formerly found in this part of the state, has been absent for many years from the Park. In 1935 the National Parks Service made an unsuccessful attempt to re-establish the species. Dr. Dawson saw one **spruce grouse** the summer following the release of these birds.

Pileated woodpeckers are fairly common but more often heard than seen. We have observed them most often on Bear Point, northwest of Itasca Lake, and in the northeast corner of the Park. Our few recent records of the **Artic three-toed woodpecker** have been in the region south and west of Itasca Lake.

The **olive-sided flycatcher** prefers tamarack-spruce bogs in summer. We have found it most regularly in the bog at the northeast corner of the Park and the bog just west of Nicollet Cabin.

The **Canada jay** is almost invariably found in the Nicollet Cabin vicinity. One trick of ours has been to throw some food on the roof of the cabin when visiting this vicinity. The jays usually find the food within an hour, and while they return again and again until the food is gone they may be observed at close range.

The **Hudsonian chickadee** has been seen feeding young at Garrison Point near the southwest tip of Itasca Lake, and at Iron Springs, a mile north of

the Park. The red-breasted nuthatch is widely scattered, but the brown creeper is most often found in the deep, undisturbed woods as around Nicollet Cabin. The winter wren also prefers solitude, and the only place I have seen it and heard its bubbling song in the Park is in the wild tangles of the sphagnum bog across Nicollet Creek from the cabin.

The lovely evening song of the *hermit thrush* may be heard in several places during June and early July, sometimes later. Around the edges of Floating Bog Bay, and along the road to La Salle Springs have been our favorite spots.

The golden-crowned kinglet we have found regularly at the spruce bog along LaSalle Creek near the northern boundary of the Park.

Warblers are well represented in the Park, and so widely scattered that detailed localities need not be given. We have seen 22 species during July and August in the Park, and while most of them are breeding birds, often well defined migrations are in progress by August 15 or 20.

The purple finch is quite often seen in the Park, sometimes on the University campus. The *pine siskin* is a less frequent visitor. Equally unpredictable in its appearances is the red crossbill, which we have seen three or four times in August, at which time it was probably a wanderer, especially since small flocks were observed. Dr. Dawson saw a flock of white-winged crossbills in July one summer, but they are less regularly observed than their relatives.

The slate-colored junco and white-throated sparrow are two characteristic north woods birds seen every summer. They prefer the less disturbed areas, and we often find them along the Bohall Trail, along Nicollet Creek, and near the Eagle's nest.

A complete list of birds seen in Itasca Park during June, July, and August of 1929 to 1943 follows. Eight species seen by Dr. R. W. Dawson and eight seen by Dr. C. E. Mickel but not by me are included and marked (R. W. D.) and (C. E. M.) respectively. Those only rarely seen are marked "r". A number of the birds listed do not nest in the Park, but are seen merely as migrants during August.

Loon.
 Holboell's Grebe. r
 Western Grebe. (C. E. M.) r
 Pied-billed Grebe.
 Great Blue Heron.
 American Bittern. r
 Mallard.
 Black Duck
 Blue-winged Teal.
 Wood Duck.
 American Golden-eye.
 Ruddy Duck (C. E. M.) r
 Hooded Merganser.
 Turkey Vulture.
 Sharp-shinned Hawk. (C. E. M.)
 Cooper's Hawk. r
 Red-tailed Hawk.
 Broad-winged Hawk.
 Bald Eagle.
 Marsh Hawk.
 Osprey.
 Duck Hawk. r
 Spruce Grouse (R. W. D.) r
 Ruffed Grouse.
 Virginia Rail.
 Sora.
 Semipalmated Plover. r
 Killdeer.
 Spotted Sandpiper.
 Solitary Sandpiper.
 Greater Yellow-legs. r
 Lesser Yellow-legs.
 Pectoral Sandpiper.
 Baird's Sandpiper. (C. E. M.) r
 Least Sandpiper.
 Stilt Sandpiper. r
 Semipalmated Sandpiper.
 Herring Gull.
 Common Tern.
 Black Tern.
 Mourning Dove.
 Black-billed Cuckoo.
 Great Horned Owl. r
 Barred Owl.
 Saw-whet Owl. (R. W. D.) r
 Eastern Whip-poor-will. (C. E. M.) r
 Nighthawk.
 Chimney Swift.
 Ruby-throated Hummingbird.
 Belted Kingfisher.
 Flicker.
 Pileated Woodpecker.
 Red-headed Woodpecker.
 Yellow-bellied Sapsucker.
 Hairy Woodpecker.
 Downy Woodpecker.
 Arctic Three-toed Woodpecker. r
 Eastern Kingbird.
 Arkansas Kingbird (R. W. D.) r
 Crested Flycatcher.
 Phoebe.

Alder Flycatcher.
Least Flycatcher.
Wood Pewee.
Olive-sided Flycatcher.
Tree Swallow.
Bank Swallow.
Rough-winged Swallow.
Barn Swallow.
Cliff Swallow.
Purple Martin.
Canada Jay.
Blue Jay.
Crow.
Black-capped Chickadee.
Hudsonian Chickadee.
White-breasted Nuthatch.
Red-breasted Nuthatch.
Brown Creeper.
House Wren.
Winter Wren. r
Prairie Marsh Wren. (C. E. M.) r
Short-billed Marsh Wren.
Catbird.
Robin.
Wood Thrush (R. W. D.) r
Hermit Thrush.
Olive-backed Thrush.
Willow Thrush.
Bluebird.
Golden-crowned Kinglet.
Cedar Waxwing.
Migrant Shrike (R. W. D.) r
Yellow-throated Vireo.
Blue-headed Vireo.
Red-eyed Vireo.
Philadelphia Vireo. r
Warbling Vireo.
Black and White Warbler.
Orange-crowned Warbler.
Nashville Warbler.
Parula Warbler.
Yellow Warbler.
Magnolia Warbler.
Cape May Warbler.

Myrtle Warbler.
Black-throated Green Warbler.
Blackburnian Warbler.
Chestnut-sided Warbler.
Bay-breasted Warbler.
Black-poll Warbler.
Pine Warbler.
Western Palm Warbler.
Oven-bird.
Grinnell's Water-Thrush.
Connecticut Warbler. (C. E. M.) r
Mourning Warbler.
Northern Yellow-throat.
Wilson's Warbler.
American Redstart.
English Sparrow.
Western Meadowlark. r
Yellow-headed Blackbird.
Red-winged Blackbird.
Baltimore Oriole.
Brewer's Blackbird. (R. W. D.) r
Bronzed Grackle.
Cowbird.
Scarlet Tanager.
Rose-breasted Grosbeak.
Indigo Bunting. (C. E. M.) r
Dickcissel (R. W. D.) r
Purple Finch.
Pine Siskin.
Goldfinch.
Red Crossbill. r
White-winged Crossbill. (R. W. D.) r
Red-eyed Towhee.
Savannah Sparrow.
Vesper Sparrow.
Slate-colored Junco.
Chipping Sparrow.
Clay-colored Sparrow.
White-throated Sparrow.
Swamp Sparrow.
Song Sparrow.

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Unusual Pheasant Nests From Minnesota

By C. Edward Carlson

During the course of a nesting study of the ring-necked pheasant (*Phasianus colchicus torquatus*) in 1940, several nests of such unusual character were found that a record of them seems desirable. The study was carried on principally in Martin County, southwestern Minnesota, as a cooperative project between the State Division of Game and Fish and the University of Minnesota.

Perhaps the most unusual of these nests was located in a black mulberry tree twenty-one and one-half feet above the ground. It was discovered by two farm boys and brought to the writer's attention through Dr. G. H. Luedtke, a Fairmont ornithologist. The boys had been searching a farm grove for bird's nests, and in one of the trees they found a very large nest which aroused their interest. Climbing the tree to investigate, they were much surprised to flush a hen pheasant which had been incubating nine eggs. The nest, which proved to be an old crow's nest, was first examined by the writer on June 19. Eight of the eggs had hatched the preceding day, and the ninth was infertile. Five chicks were found dead at the base of the tree, and these had been almost completely devoured by bronzed grackles and ants. Three chicks were unaccounted for. Possibly they survived and left with the hen, but because there was nothing on the ground to break the fall, it is more probable that they also died and were quickly removed by scavengers.

A search of the literature revealed eight tree nests all of which occurred in England. Six were reported by Tegetmeier (1873 and 1897) and one by Scott in 1892 as quoted by MacPherson (1895). The other tree nest was found in 1894 and reported on by Wickham and Lord Lilford. These nests contained from eight to thirteen eggs and were from six to twenty-five feet above the ground. In most cases, the descriptions indicated that previously constructed nests had been occupied by the pheasants. Two hens had used woodpigeons' nests, one an owl's nest, one a sparrow

hawk's nest, and another a squirrel's nest. In two of those listed by Tegetmeier, it was stated that the nests were made by the pheasants themselves. The origin of one was not described. In only three cases was it definitely established that the chicks, or a few of them, succeeded in reaching the ground safely.

In explanation of the choice of these elevated nesting positions by pheasants, MacPherson (1895) suggested that it is "to secure their personal safety." In the nest reported here, however, a different explanation seems more plausible. Pheasants were in the habit of roosting in the black mulberry trees, and one of them may have actually used the crow's nest as a roosting place. Possibly the hen laid her eggs in it simply because it was so accessible. An observation made in the pheasant region of South Dakota lends credence to this theory. A willow tree containing an old crow's nest was used by pheasants as a refuge from the midday sun. When the birds were scared out of the tree, it was seen that one had been resting in the nest.

Other nests studied were unusual not because of their position but because of what they contained or the activities of the incubating hen. In direct contrast to certain hens which deserted their nests after the least disturbance were two hens which exhibited extreme persistence in their incubating duties. Both sat on dead eggs long over the normal incubation period despite continued disturbance.

One of the hens located her nest in an alfalfa field. The field was mowed on June 17, and the farmer on seeing the nest, lifted the hen off and allowed her to fly away to avoid killing her. She returned the following day, but it is believed that the embryos had died in her absence. On June 22, she was flushed when the nest was checked. At this time, a cracked egg in the nest contained a well developed dead embryo. She was flushed accidentally on June 27, but again returned and continued to sit until the 26th of July when the

eggs were broken by a large mammal. The hen was observed on the nest over a period of thirty-nine days. In addition she must have incubated for at least a week before mowing took place.

A hen nesting in a roadside ditch was even more persistent. She was under observation over a period of 74 days and spent a total of 85 days or more in trying to hatch the clutch. Her nest was mowed over on June 13. The next day she was flushed, and a cracked egg containing a living embryo revealed that incubation was approximately twelve days along. She was flushed again on the 17th and did not return until two days later. It is felt that in this period the embryos died of exposure. On July 14, she moved her eggs six inches lower into the ditch where the grass offered more concealment. The nest was mowed over for a second time on August 12, but even then she returned and did not finally give up until August 26. Although the bird was not marked in any way to permit of individual recognition, her habits each time she was flushed were so invariable that it seems likely that the same bird was under observation during the entire period.

Hamerstrom (1936) in his study of the nesting habits of the pheasant in Iowa reported that a hen pheasant sat for more than 30 days on infertile eggs, and Stoddard (1931) reported one case of a bob-white quail incubating for 56 days.

Many cases of bird parasitism involving the pheasant have been observed in the course of study. Pheasant eggs were found in combination with chicken, turkey, and guinea hen eggs. One nest containing chicken eggs was incubated to a certain state by a hen pheasant, but the nest was abandoned before the chicks hatched. Though none of the eggs in the nests under observation hatched, farmers in the vicinity have reported pheasants hatching with chickens and turkeys. Game birds' nests in which pheasant eggs were found included mallards, blue-winged teal, Hungarian partridge, and bob-white quail. Some of these nests merit description.

In the case of the blue-winged teal nest, a pheasant chick hatched out with twelve teal ducklings. Both Hamerstrom (1936) and Bennett (1936) reported similar instances. As Bennett remarked, "One can imagine the situation that must have arisen when the duck took her brood to the marsh!"

Of eight Hungarian partridge nests found during the past year, all save one contained pheasant eggs. One of the nests contained 17 partridge eggs and three pheasant eggs; it was mowed over but the partridge came back and six days later hatched 15 partridges and three pheasants.

Another Hungarian partridge nest contained 16 partridge eggs, six pheasant eggs, and one guinea hen egg. The nest was mowed over just after the pheasant chicks had hatched and the partridge deserted with them. One of the pheasant chicks was killed by the mower within five feet of the nest. The partridge eggs had not yet begun to pip, and all the embryos were dead the following day. The guinea hen embryo, several days from hatching, was still living although the shell of the egg was badly cracked.

Pheasants outnumbered Hungarian partridge by six times in this region. The fact that partridge nests are heavily parasitized by pheasants requires consideration in a game bird management plan.

The last nest to be described adds one species to the 238 recorded by Friedman (1934) as parasitized by the common cowbird. On June 1, a pheasant compound or "dump" nest was found which contained 19 eggs. Five days later, the nest contained the 19 pheasant eggs and in addition, one cowbird's egg. Several days later the cowbird's egg was missing. In accord with the general rule, the "dump" nest was not incubated and the eggs represented the loss of so many potential pheasants.

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Corrections in names and / or addresses in the membership list of the Minnesota Ornithologists' Union as given in "The Flicker," Volume 15, Numbers 1, 2, should be sent to the editors so that they may appear in correct form in the next list. Members should send notice of change of address to the secretary of the club to which they belong. Secretaries of the various clubs are urged to send in the names and addresses of new members for inclusion in the next membership list.

Members of the several affiliated societies of the M. O. U. should plan to conduct winter-bird censuses again this year around Christmas time. Census data should be sent to the editors at the Minnesota Museum of Natural History, for publication in the The Flicker.



We Raise A Cedar Waxwing

By Evelyn P. Wenting

On July 15, 1943 I went with two friends to lunch with another friend on the River Drive. As we crossed the sidewalk to the lawn, I saw a tiny bird huddled in a corner of the step. He was bedraggled, quite feeble and much too young to be out of the nest. By his faint, beady call, and the barely discernable tinges of yellow on the tips of his tail feathers I knew him for a waxwing. Thinking the parent birds must be somewhere near, I placed him on top of the hedge for them to find, and we went in to lunch.

That was at one o'clock. I had forgotten all about the bird until we came out, a few minutes before five o'clock. There he was, his beak wide open, too far gone to peep at all. My companions thought he was dying. We took him around the house, and while one of my friends turned the hose on just a little, I held his head under. He gasped and swallowed a little water; then as he revived a bit, we gave him a crumb, and not knowing what else to do with him I brought him home. Immediately I fed him a bit of peach and some water, and he revived more.

When the different members of the family came home, they registered interested surprise, this being the first time we had had a baby waxwing for a visitor. They took over the feeding for the evening. Before dark the little bird was beginning to preen himself a bit and take quite an interest in life. My daughters named him Dennis Day because he had a high sweet voice; and from then on he was known as Dennis, not only to us, but to the neighbors who came to see him. On our front porch, which is of average size and well screened, I have a number of avacados ranging in size from two to five feet. Some have grown in a twisted fashion, and their curved branches made grand perches for a tiny bird.

It is almost impossible to describe the waxwing call, which is very individual. But it comes nearer to a "b" note than anything, and when Dennis was hungry he would call *b*, *bb*, *bbb* and

then expect us to find him among the leaves and feed him. When Sue fed him he always hopped onto her finger and sat there while he was fed. For a few days he could only edge himself from one branch to another, but he soon learned to take short, circular flights when he wanted a change of position. From the first we took him out every day and let him sit for a while on a limb in the sunshine. On the third day my husband started his baths by placing him in a fine spray on the lawn, and how he loved it! He preened himself properly after his baths and soon began to look like a real waxwing. He had a sweet disposition and seemed to develop affection for us. He especially liked my husband. He would edge himself sidewise up his arm to his shoulder where he would perch proudly. He loved to ride on one's finger, and as he perfected his flying he would land neatly on one's shoulder or arm.

One evening, when we had had him about a week, the girls came in the back door. The windows between the porch and living room were closed. Dennis saw the girls coming and flew to meet them. He came to grief against the glass that time and was hurt enough to make his head bleed. Another evening during the second week of his captivity, when we had guests for dinner, Dennis flew in from the porch and around the table to the amusement of all.

He became quite fastidious about his food. We fed him hard-cooked eggs, bits of peach or apricot, cherries, raspberries, and honeysuckle berries. We used a toothpick, sticking it lightly into the bits of fruit or egg, and as he opened his beak the food was dropped in. After a few days he began to help himself from the end of the pick. If he saw a hardcooked egg or cherry on the saucer, he would have none of the honeysuckle berries. Cherries were his favorite food. One day to test him I pushed a honeysuckle berry as far down his throat as I was able, but he wiggled and twisted until he discarded

it. Then he cocked his head at me in a comical fashion, and, of course, I fed him on cherry. One day I went out and found him on the table eating out of the saucer, but he preferred being fed and talked to.

On July 24, when we had had him ten days, Sue took him out for his usual airing, and he surprised her by flying into the top of a tall tree. She thought he was surely gone for good, but in a couple of hours he began calling **b, bb, bbb, bbbb**—the four notes always seemed to mean “here I come”—and he flew to a bough beside my husband. He seemed quite tired that time. After his lunch he tucked his head under his wing and took a nap. A couple of days later when I went into the garden to cut flowers, Dennis came calling **b, bb, bbb, bbbb**. He flew towards me so rapidly that I thought he would fly right into my face, but he halted suddenly about a foot away holding himself in an upright position by fluttering his wings rapidly and keeping himself as nearly stationary as possible. He kept that up for a few seconds, then flew to a bough beside me acting quite pleased with himself. He got an extra good lunch for that performance.

After the 24th he was allowed to go out every morning unless it was storming. He would fly away, usually coming back every hour or so to be fed, but later staying out half a day at a time. No matter what I was doing when I heard his **bbbb** I would stop to let him in and feed him. Of course, he fed on honeysuckle berries when he was out. One day my husband heard him calling and fussing. Dennis was in a tall

honeysuckle bush next door where the berries were out of his reach. My husband took a rake and pushed a bough laden with berries down in front of his face so Dennis could help himself. If he were not on the porch when Peg came home, she would go out and call “Dennis,” and he would answer and come flying.

As he grew bigger and stronger he would fly away every morning over the tops of the tallest trees, and each time I would think perhaps that this time he will not return. Once he stayed out all night, but the next morning early he was calling us and begging to come in. One day it stormed badly. I went to the porch to see if Dennis was all right. He had taken care of himself. He was hiding in a corner, perfectly protected from the wind and the rain. He grew into a lovely bird, a real aristocrat, as I think all waxwings are. His crest was showing up nicely, and on his wings small beads of red appeared, like miniature drops of wax. His tail feathers were tipped with red, too, before he left us. August 3rd was a dark day, and Dennis was restless. He would no sooner go out than he wanted to come in. He kept that up all the forenoon. Then at noon he decided to take a nap and was quiet for a couple of hours. At 3 o'clock he wanted to go out again. I opened the door for him, and out he went, flying away over the tree tops until he was lost in the distance. That was the last we saw of Dennis. I hope he met a flock of friendly waxwings and was adopted into the clan. It was several days before we were used to an empty porch again.

St. Paul, Minnesota.

All nesting data gathered during the 1943 nesting season should be sent to the editors at the Museum of Natural History, University of Minnesota, Minneapolis, Minnesota, as soon as possible. An article on the 1943 nesting season will appear in the December 1943 issue of "The Flicker."

NOTES OF INTEREST

SHORE BIRDS IN THE DULUTH AREA—The returning shore birds reached Duluth during the last few days of July, 1943. They came to the marsh on the bayside sandfill of Minnesota Point. Throughout the summer copious rains and wave action created shallow ponds where stagnating water promoted the development of a luxurious algal flora and aquatic fauna. To these marshes, in ever increasing numbers, the birds returned to feed.

Among the earliest arrivals on July 28, were a flock of sanderlings, greater and lesser yellow-legs, and one American knot. In a flock seen on July 31, some of the smaller waders were identified with reasonable certainty—least, semi-palmated, pectoral, and Baird's sandpipers. They were feeding in marsh vegetation on the shores of the ponds while the sanderlings in compact flocks wandered along the bay and the lake beaches. A single Hudsonian curlew was sighted, and thereafter seen several times by different observers through the first week in August. Whether or not it was the same individual, is not known. One piping plover was seen on the bay shore. Formerly the species was a summer resident on the bare sandfills of the Point. During the last two years no successful nesting has been observed. One regrets that the developing vegetation and probably other interfering factors caused the birds to seek more congenial nesting grounds. They are now seen only in migration.

The occurrence of the buff-breasted sandpiper is a notable local record. Seven individuals were seen on August 1, feeding on the grassy, recently-mown recreation grounds. On the following day nine were seen in the same area feeding without concern of the people, passing cars, and a group of merry children bathing in a near-by, rain-filled depression of the field. They were silent and seemed unsuspecting of any danger. Misses Mary I. Elwell, Hulda and Mabel Adams with the writer studied them at close range. The birds were noted to cover the area systematically by walking rapidly while seemingly feeding on small insects on the cut grass of the rain-soaked ground. They were last seen on September 9.

The occurrence of the stilt sandpiper is another new local record. Several of these sandpipers were seen on August 1, in a flock of yellow-legs feeding in the marsh.

Black-bellied and golden plovers are commonly seen in the spring and fall migrations. On September 9, the writer's earliest opportunity to observe them after an absence from the city, a flock of 20 individuals, 12 golden and 8 black-bellied, was found on the recreation grounds of the Point. About the same number was seen on September 11, with a lone ruddy turnstone and a semi-palmated plover among them. On September 19, the plovers were more or less scattered along the bayside boulevard due to passing cars. The majority of them seemed to be black-bellied plovers, but at least two golden plovers were identified in the group and one turnstone. **Olga Lakela, Duluth Teachers College, Duluth Minn.**

GRACKLES DESTROY MALLARD'S NEST--The bronzed grackle added another black mark to my list by its act of rapine on a mallard's nest. On April 4, 1943 on one of our hikes through Ft. Snelling, near the duck pond, we heard the raucous calls of several grackles such as they make when they attack other birds, and soon we counted ten of them dashing at a mallard duck on her nest. She was snapping with her beak and striking with her wings. She finally left the nest for the water, and the grackles started to eat the contents of the already broken eggs. The duck apparently had knocked four or five eggs out of the nest in her struggle and broke them. Three of the eggs had been pecked open by the grackles. The contents of the broken eggs were nearly all disposed of, and the others were about half empty. The eggs had been incubated for about one week. On another hike we found several duck's nests with the shells of a few eggs about. There were no small young anywhere about. **Brother Hubert Lewis, Cretin High School, St. Paul, Minn.**

RED-TAILED HAWKS AND GARTER SNAKES—Speaking of balance in nature we had a singular surprise after climbing 60 feet up a basswood tree hoping to get pictures of young red-tailed hawks. Things looked favorable, for when we were about ten feet below the nest the old hawk flew in with a fair-sized garter snake dangling from her talons. After spending a short time on the nest, she looked over the edge at me. She now held the snake grasped about the head, in her beak. A few moments later she flew away, giving the red-tail's peculiar squeal. After much maneuvering with the linesman's spikes and the camera, I succeeded in getting to a position where I could look across the nest. Instead of three hawks there were five garter snakes, all dead, spread over the nest which was now a flattened eating platform. Parts of some of the snakes were picked clean. None of them had been dead very long as there was no bad odor from the nest, and the weather was hot. The young hawks were in the woods near the nest. We could hear them answer the old birds. This nest is in a tree in the boy scout camp on the St. Croix River above Stillwater. When first observed on April 4, 1943 it was being rebuilt. One young, two eggs, and a mouse were in the nest on May 22, and the garter snakes were on the nest July 8. Brother Hubert Lewis, Cretin High School, St. Paul, Minn.

TUFTED TITMOUSE NESTING IN MINNESOTA—On July 22, 1943 I found the nesting site of a pair of tufted titmice which had spent the winter at my feeding station from November, 1942 to late April, 1943. The nest was in a hole in the dead part of a living ash tree about 25 feet up and behind a dead branch which partly concealed the hole. The nest was first located by seeing one of the birds alight near the hole, carrying insect food, and then disappear into it. On July 25, I watched both birds carry worms to their young which could be heard faintly squeaking. The pair of titmice whistled a good deal and were almost as noisy as they had been in the winter when they got very tame and came regularly for peanuts and walnuts. In May they had started to excavate in a dead butternut tree and also were seen going in and out of a bird house. They did not, however, locate in either place and left our property in June only coming back occasionally. They may have nested at this time in some woods south of us. Marjorie Edgar, Marine on St. Croix, Minnesota.

NIGHTHAWK MIGRATION AT WHITE BEAR LAKE—The first nighthawks, five in number, were seen at White Bear on May 24, 1943.

On May 26 at 7:40 p. m. I went out on the end of the dock to feed the pet sunfish. The temperature was 65 degrees F. In the northwest a storm was brewing and there was a slight breeze from the same direction. Nighthawks were observed flying in a direct line from the south-southeast to the north-northwest. The fact that they were not circling made it possible to keep an accurate count of their numbers. From 7:50 to 8:30 p. m. a tally was kept of all nighthawks passing over an east-west line about 300 yards long. About 100 birds passed over every five minutes during this forty minute period or a total of 927 birds which is an average of 23.17 per minute.

This migration started to increase about 8:40, but a few, perhaps five per minute were still flying over when darkness came. Only one bird was seen to fly in the opposite direction—and that one only for a short distance. About 25% of the nighthawks were flying at a height of 25 to 40 feet, about 65% at about 130 feet and about 10% almost out of sight. Only six called bingt, bingt, and no dive booming was heard. R. M. Berthel, White Bear, Minn.

WINTER FEEDING AT CLOQUET AND SPRING OBSERVATIONS AT FORESTVILLE—Last winter (1942-43) members of the Cloquet Bird Club enjoyed the decorating of several little Christmas trees for the birds, choosing a tree in three different places in Cloquet. The trees looked quite gay, with a golden star of cheese at the top of each, strings of bright cranberries, snowy threaded popcorn, colorful baskets of orange shells filled with suet, bread crumbs, and seed balls. Birds find their feeding places for the winter sometimes as early as October and November, and if one would be assured of guests to make the Christmas scene complete, one must start placing food before the cold days of the Christmas season.

On June 18, 1943 Mrs. A. J. Trainor and Miss Eunice Grebin, members of the St. Cloud Bird Club, and my sister and I of the Cloquet Bird Club, spent the afternoon at the Forestville Picnic Grounds, a spot on the Root River not far from Preston, Minnesota. Here is a beautiful stand of virgin timber, said to be the largest area of deciduous woods remaining in Minnesota, and it is an excellent place for bird observation. We followed a little trail up one of the hills in an effort to discover a wood thrush, for one usually finds the thrush at Forestville. Just as we were ready to turn back, a cardinal whistled above our heads. We had an amusing time with him. We answered his whistle and he kept answering back. He followed us all the half mile back to the road. When we finally left the spot, he was still at the edge of the wood calling insistently.

Our check list for the day included the following: red-tailed hawk, sparrow hawk, mourning dove, black-billed cuckoo, chimney swift, ruby-throated hummingbird, belted kingfisher flicker, pileated woodpecker, red-bellied woodpecker, red-headed woodpecker, kingbird, crested flycatcher, phoebe, chebec, wood pewee, bank swallow, purple martin, blue jay, crow, black-capped chickadee, white-breasted nuthatch, house wren, brown thrasher, robin, veery, bluebird, cedar wax-wing migrant shrike, yellow-throated vireo, warbling vireo, yellow warbler, oven-bird, northern yellow-throat, redstart, eastern meadowlark, red-winged blackbird, Baltimore oriole, bronzed grackle, scarlet tanager, cardinal, rose-breasted grosbeak, indigo bunting, dickcissel, goldfinch, chipping sparrow, field sparrow, and song sparrow.

Fern Zimmerman, Cloquet, Minnesota.

NESTING OF THE THISTLE BIRD—That the thistle bird is no misnomer for the goldfinch was found to be true in another sense by Brother Pius and me. After noticing several goldfinch nests in the tall thistle, *Cirsium altissimum*, we decided to make a nesting survey of the Highland Park district of St. Paul to determine how extensive their thistle nesting was. To date, August 1943, we have found 45 nests with eggs or young and 15 nests from which the young have already departed. All nests were built in this year's thistles. We tried to investigate every thistle which we thought a suitable nesting place. We soon concluded that the only thistles selected were, with one exception, well protected from the wind by other thistles or plants. This choice of nesting in a protected thistle was later vindicated when we found but one nest destroyed by a sixty mile gale, though many other exposed thistles were blown over. The young that we found in the one nest in an unprotected thistle were exposed to the sun most of the day. They left the nest on the tenth day whereas other young remained from 12 to 14 days in the nest. The goldfinches' avidity for thistle nesting reached its climax when we found a nest in the fork of a last year's old stalk. This thistle stalk, later overgrown by bind weed, fell over spilling two of the young out of the nest. They were dead before we propped up the nest. The other three young left the nest on the fourteenth day.

In connection with the concentration of nests, we consider it significant that about 300 acres in the district studied have been turned into victory gardens or devoted to raising soy beans. All of this land had been overgrown with thistles, weeds, and shrubs for several years. The cultivation of these plots forced the birds to concentrate on the surrounding growth. The large number of thistles in this neighborhood can, in part, be accounted for by the goldfinches which undoubtedly helped disseminate the seeds in previous years.

As a further observation, there is evidence of a limit of toleration of goldfinches for one another. We found but two nests within 100 feet of another nest. One was about ten feet from an incubating bird. The linings of this nest and of another about 50 feet from an incubating bird were torn, apparently by these incubating birds, but before any eggs had been deposited in them. No attempt was made to repair either nest. Apparently the only enemy who dares to enter the bristly castle of the goldfinch seems to be man. We found three of our recorded nests removed with the young which were ready to leave the nests. We did not find a cowbird's egg in any nest. We noticed also that all fresh goldfinch eggs are nearly flesh-colored. They gradually turn to a decided bluish tint before hatching. We investigated thistles in three other directions from St. Paul to a distance of eight miles and found but one nest, close to the Milwaukee Railroad round house. The eggs and birds were soot coated.

As a by product of our search among the thistles we found three indigo buntings' and five clay-colored sparrows' nests, all late records. The clay-colored sparrows were hatched on or about August 14, August 24, August 28, and on August 28 there were two young about a week old. A nest with two eggs was abandoned after I bumped into it. The bird was incubating at the time of the accident. One nest of indigo buntings hatched August 4, and on August 29 the last brood hatched. On August 11, a brood of young left the nest. This nest was in sweet clover near some thistles. **Brother Hubert Lewis, Cretin High School, St. Paul, Minn.**

A SAINT PAUL FEEDING STATION VERSUS GRAY SQUIRRELS— We really don't have a bird feeding station any more. The gray squirrels have outwitted us at every turn.

In the late fall of 1942, I saved fat scraps from chicken, mutton, beef, etc., and sewed them together, making a compact little ball about the size of a small grape fruit. I hung it by a string from a very slender willow branch outside the kitchen window, the one toward the garden. I thought the branch much too slender to hold a squirrel, and I believed the food would be safe. The birds loved the mixed fats, and we never before had such numbers. There were as many as 12 to 14 chickadees in view at one time, and as many as four of them at one time clinging to that small ball of suet or fats. There were 8 or 9 nuthatches at one time, instead of the usual 3 or 4 during the winter months, and several downies and hairies as well as the jays and the brown creeper, of which we have never seen more than one at a time and never actually eating the fat.

My husband decided that the fat was not enough for such numbers of birds. He strung a very fine rope from the willow to an elm outside the bedroom window. From the middle of this rope a second rope was suspended, to the end of which was tied a large piece of suet. The cord was more like heavy grocery string than rope, and my husband said it was certainly squirrel-proof. For three weeks before Christmas the squirrels were trying every way to reach the ball of fat and the suet. The suet was a very large piece, three pounds of it. Sticks were thrust through the suet in several places, making resting places for the birds, and they liked it a lot. There was not a time of the day that we could not go to the window and watch the birds there.

Two days before Christmas one squirrel succeeded in reaching out and pulling toward himself the small branch from which hung the ball of fats causing the string to swing. He caught the fat, bit it off, and raced to the ground with it and away. The birds were quite upset. On the 28th I was in front of the house when I heard such a commotion among the birds that I ran to the kitchen to find out what was the matter. The string from which the large ball of suet was suspended was swinging. The lower end had been cut off, and the squirrels were feasting on the suet on the ground. I watched and soon one squirrel came back for more. He climbed out onto the string, curled himself up like a ball and slid along with the claws of both front and back paws around the horizontal string. Finally he reached and then pulled up the string from which the suet had been suspended. The tufted titmice never came back after that, and since then we have had few birds. It is possible that they became discouraged or were killed during the cold spell that followed.

But my husband tried again. This time he strung a fine wire from the birch to the house, and we placed a small piece of suet in a tray which he suspended from the wire. He said: "Now, this is squirrel-proof." In a couple of days at least two squirrels were sitting in the tray at different times. I never saw them reach the tray, and I never saw them try to slide along the wire. I suspect that they ran out onto a limb of the birch and jumped, but I'm not sure. I have tried tying small bits of fat to the ends of the willow twigs, but the squirrels go as far as they can and nip off the twigs. I have seen them do it. I still feed the birds on the ground. The cardinals come occasionally and some chickadees and even nuthatches. they all like rolled oats.

Our only hope seems to be to get another permit to kill off the squirrels. We had one last summer and got about 11, which are buried in the back yard. I believe that for each one killed three have come. I really don't like to have them shot, but I fear it is the only way if we are to have the birds.

Mrs. Evelyn P. Wentling, Saint Paul, Minnesota.

THE GOLDFINCH LIKES CHARD—I made a discovery last summer. There were always dozens of goldfinches in my garden, and I thought that they were after the seeds of the columbine and other flowers. I had Swiss chard growing in the vegetable section, and the leaves were being eaten up, often nothing left but leaf skeletons. I never could find any kind of bug on the chard, but it continued to be eaten. Then one day I noticed about 20 goldfinches in the chard, and they were eating it greedily. I think they must have listened to the radio and heard about the vitamins they should have. Well, anyway, I have already planted some for them. Their liking for such food was new to me. Mrs. Gertrude Magney, Scandia, Minn.

EDITOR:—The attractive little goldfinch, aside from being Minnesota's state bird is one of our most valuable weed-seed eaters. Its taste for the leaves of succulent garden vegetables is its only bad habit, and this rarely leads to any considerable damage.

TUFTED TITMOUSE AND HUDSONIAN CHICKADEE IN SAINT PAUL—When the week before Christmas, 1942, my daughter called me to come and see a tufted titmouse, I thought she was fooling. The bird she pointed out to me was so dirty and drab looking that except for its tuft it looked more like a very dirty English sparrow, but before the day was over there was another one, a beautiful clean little bird, showing all its lovely colors. We had never seen them here before, but these were in almost constant evidence for over a week when they disappeared December 28. On January 31, 1943, a Hudsonian Chickadee came to the feeding station. Mrs. Evelyn P. Wentling, Saint Paul, Minn.

MORE SUMMER GOSHAWKS IN MINNESOTA—Mr. Marius Morse's article, "Breeding Goshawks," *The Flicker* 14(2,3): 30, 1942, established the nesting of the species in St. Louis County. As to its occurrence in the county in summer, it is interesting to add another locality record. In the summer of 1943, Mr. and Mrs. Arthur Roberts and their son, Henry Roberts, reported a pair of goshawks from their woods at Denbigh, Gnesen Township, 16 miles north of Duluth. From early summer on, the Roberts had observed the birds during week ends at their cabin. On July 23, the writer saw the hawks. They were in the streaked plumage. If size is indicative of the age of goshawks, the ones under observation were first year adults. They appeared as large as the full-plumaged adults. A large nest high up in a tall poplar was discovered too late in the season to determine its ownership. At no time were the hawks seen to occupy it. Therefore it is not known whether or not they nested. The Cloquet Valley State Forest where Mr. Morse found the nest in 1935 is only 20 miles north of Denbigh. Goshawks in summer may be encountered in other localities in southern St. Louis County. Olga Lakela, Duluth Teachers College, Duluth, Minn.

MIGRATION CASUALTIES—The following birds have been found dead on the Campus of the Duluth State Teachers College. They obviously died from injuries resulting from flying against the windows of the buildings. The record is for the two-weeks period, September 6-19, 1943. Brown creeper, 3; olive-backed thrush-2; catbird, 1; Tennessee warbler, 1; yellow warbler, 1; black and white warbler, 1; ovenbird, 2; Wilson's warbler, 1; slate-colored junco, 2. Miss Evelyn Jones donated a pectoral sandpiper that she found dead near the Morgan Park area. Olga Lakela, Duluth Teachers College, Duluth, Minn.

BREEDING OF THE RED-BREASTED MERGANSER—A family of ten young red-breasted mergansers was raised on Perch Lake 23 miles north of Hibbing this summer, 1943. I spent the week of August 7-15 there. The ten with the mother, 11 in all, appeared daily in the late afternoon and usually settled down on the diving dock for the night. On September 4, I was out on an errand and saw them again but could count only eight. Although I had no glasses with me, I could see they had become better looking—more definite in colors and markings. A neighbor, an Isaac Waltonian, had been watching the mergansers since the ducklings first came out onto the water. Apparently the drake was never with them. Fay Cuzner, Hibbing, Minnesota.

ANOTHER MINNESOTA RAVEN RECORD—At the annual 4H Club Conservation Camp held this year at Esquagama Lake near Eveleth from September 16 to 19, Dr. Gustav Swanson and the writer were invited to speak and conduct field trips. A fine Norway-jack pine woods surrounded the lodge, and an excellent sphagnum-black-spruce bog lay only a few hundred yards away. In these surroundings all the typical northern plants such as the pitcher plant, creeping snow-berry, pipsissewa, and trailing arbutus were common. Birds were not abundant during this period, and much of our attention was centered on the botany of the area. However, we did have opportunity to renew our acquaintance with the red-breasted nuthatches and Hudsonian chickadees. One day the nuthatch was pointed out to a group of club members. The little fellow, far from being shy about becoming the center of interest, flitted right down onto some jack pine branches only a few feet from the class and demonstrated his contrasting face stripes and brownish belly very nicely. One evening one of the club members called our attention to two shore birds on the narrow sand beach which turned out to be black-bellied plovers in their very light fall plumage. Enroute home, near Rutledge, a raven left the road ahead of our car and alighted on the railroad tracks paralleling the highway. We backed up opposite the bird where we could easily make out its rounded tail, pointed throat feathers, and enormous bill, recognizably larger than that of a crow. The bird did not seem shy; so Dr. Swanson stepped out of the car and slowly approached it from behind some tall weeds until, to his surprise, he got within 25 feet of it before it rose and flapped and sailed away to alight on a tall stub 200 yards from the highway. We sincerely hope this particular raven did not place the same confidence in the hordes of duck hunters that took to the field here in Minnesota shortly after this observation was made.
W. J. Breckenridge, Museum of Natural History, University of Minnesota.

SONG OF THE LEAST FLYCATCHER—At our cabin on Woman Lake, Cass County, we were interested in a least flycatcher. The greater part of the day he sat on a small limb of a birch tree and chebeced so vigorously clear from the tip of his tail that he was almost as annoying as the whip-poor-will. For fifteen minutes I sat and made a dot for each time he chebeced—315 times in all. The asterisks indicate a slower tempo and the longer dashes a longer time between spasms. One minute I counted 27 times that he said chebec, another 32, and another 53.

Below is given 15 minutes of the least flycatcher's song.

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Mrs. L. L. Smythe, Minneapolis, Minn.

"GOING TO BED" OF THE CHIMNEY SWIFTS—St. Cloud bird lovers have a real treat in store for them each spring when the chimney swifts return. Upon their arrival in May, the swifts immediately make their home in the Ladner chimney in downtown St. Cloud. Each evening, just after the street lights go on, one can see clouds of swifts circling through the air over the huge chimney; and finally, as if at a signal from the leader, the birds, with wings uplifted, begin dropping into the chimney by the hundreds. This continues until the leader has rounded up all the birds and then he, too, drops in for the night. According to bird books, this dropping in is called "going to bed." To see these black birds silhouetted against the bright sunset is indeed a weird and interesting picture.

In early July, when the swifts begin to nest, the males find other smaller chimneys for their homes. However, after their families are raised, they and the young often return to the larger chimney to again join the "going to bed" ceremony.

The swifts remain in the joint chimney home until fire building time arrives and they become smoked out; but, as surely as the swallows return to Capestrano each spring, so will these swifts again return to the Ladner chimney next spring; for this has been going on for years. Miss Regina Martini, St. Cloud, Minn.

RED-BELLIED WOODPECKER IN ST. CLOUD---The first findings of the red-bellied woodpecker were reported by Mrs. Fred Stark. As with the cardinal, the red-belly is either extending its range northward, or more people are taking an interest in the feathery tribe in this area and make their findings known. Mrs. Stark, who has been interested in birds for a number of years, saw the bird as it hopped about her yard on March 12, 1943. It stayed in this vicinity for several days. The bird's characteristics were carefully checked with the description as given in Robert's *The Birds of Minnesota*. For years it was listed by St. Cloud ornithologists as a likely bird to add to their lists. This bird though generally much more southern in its range, could be expected occasionally as far north as St. Cloud since it is a resident in the southern part of the state. This is the first authentic record for the St. Cloud region. George W. Friedrich, St. Cloud, Minn.

MISCELLANEOUS OBSERVATIONS FROM ST. CLOUD—March 31, 1943 was a dark cold day with the temperature about 40 degrees F. above zero. A pair of purple finches were observed from the dining room window at the home of Mrs. A. J. Trainor. They were feeding in the yard and were busily exploring the fallen leaves under the hedge, and cracking seeds of an ash tree. Melting snow provided small pools from which the birds drank frequently.

On June 18, 1943 Mrs. A. J. Trainor and her sister, Miss Julia Grebin, of Preston, Minnesota, found a yellow warbler's nest in a ninebark bush. Upon closer observation it was found to be a double nest, one nest built directly above the other. After the egg were hatched and the birds had flown away, the nest was examined to see why the second nest had been built. It was found the lower nest contained a cowbird's egg plus one warbler's egg.

On June 30, 1943 a group of bird lovers at the Herber summer home at Watab Lake had a chance to observe wren's eating habits and discovered they, too, have likes and dislikes about the food they eat. Wrens evidently like grubworms, but do not like earthworms. A large grubworm was placed near a mother wren. She took the grub and beat it severely on the ground several times before attempting to feed it to her young. An earthworm was then placed in the same place as the grub had been, but the wren disregarded it, although she flew over to see what had been placed there. Edited by Miss Regina Martini, St. Cloud Minn.

FEEDING GROSBEAKS IN WINTER—There is hardly a more beautifully colored bird in Minnesota than the male evening grosbeak. A flock of them seen on a fresh fall of snow in the bright morning sun present a picture of contrasting colors that is a joy to the eyes. The brilliance of their plumage is intensified when viewed from indoors, where the relative darkness keeps the pupils of the eye from contracting as they would outside.

During the winter of 1941-42 I fed evening grosbeaks in Duluth, directly in front of my window which is on a level with the ground. Maple seeds and mountain ash berries provide them with food for only the first few months of winter. When the heavy snows come, any food put out attracts them. Almost any day last winter there were 15 to 25 of these beautiful yellow, black, and white birds waiting to be fed. If I had fed them all they could have consumed, it is hard to say what my food bill would have been for the season. Sunflower seeds is one of the preferred foods of this bird, and at twenty cents a pound it gets to be an expensive hobby. Oats mixed in gets only mild attention, and then only after all of the sunflower seeds are gone. Pine grosbeaks never came to the feeding station although they were around eating mountain ash berries. No bands were seen on the legs of the grosbeaks.

This spring I observed evening grosbeaks at Duluth as late as June 6th. Duluth Bird Club members are on the lookout for nesting evening grosbeaks, and hope by feeding the birds to keep them the year around. Henry Gilbert, Duluth, Minn.

Minnesota Ornithologists' Union

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Wildlife of Itasca Park By Gustav Swanson

The Mammals

Itasca Park contains all of the forest types associated with the northern coniferous forest of Minnesota and as a result has a fine representation of the typically forest-inhabiting mammals. The Park has numerous lakes and water ways which provide homes for such aquatic forms as mink, otter, beaver, muskrat, and water shrew. It has considerable areas of deciduous trees which add to the variety and are probably responsible for the occurrence of an animal like the gray squirrel, and finally, some of the mammals present are there solely because of the developments for which man is responsible. The few buildings in the Park, which are necessary to assure proper park administration and use by the public, and the associated openings around the buildings have all made a change in the habitat which has naturally influenced the distribution of some mammals. Several of these are drawn to the vicinity of man's activities because they have learned to scavenge. Some, including the ground squirrels and meadow mouse, were undoubtedly rare until a few openings had been created in the forest and grass grew up as ground cover. All in all, the great variety of habitat types in Itasca Park has made it very rich in mammalian life.

Mention of the changes man has made in the Park may cause some to wonder to what extent the natural wild

character of the area has been or is being spoiled. The Park is so large, however, and the portion is so small which has been developed to make it more easily enjoyed by the public, that little alarm is necessary. Of the total area of about 32,000 acres only a few hundred acres are occupied by the roads, picnic grounds, camp grounds, Douglas Lodge, the University Forestry and Biological Station, Superintendent's headquarters, etc. I think it is safe to say that 95 per cent of the Park is a relatively wild area which shows but slightly, if at all, that man has caused any changes directly.

The one real danger to the Park, its forests and minor vegetation, is one for which man is indirectly responsible—the overabundance of deer which for 20 years has completely prevented any natural reproduction of many of the most valuable and beautiful forest trees in the Park. Unless the size of the deer herd is greatly reduced the Park will continue to suffer a progressive deterioration, because as long as such an enormous number of deer is present there can be no survival of the seedlings of such trees as white pine, Norway pine, white cedar, balsam, jack pine, and several others. Each winter all seedlings of these trees are browsed back to the snow line.

The State Conservation Department has attempted to ameliorate the situation, but the only practical way of

reducing the deer herd on an area the size of Itasca Park is by hunting, and the law expressly forbids this. The Department is helpless until the law has been changed and the law will not be changed until the public has come to realize the facts of the situation. It is another conservation problem which can be solved only by educating the public.

Because it shows how the Conservation Department, which administers the Park, regards the area, and because the wildlife of the area is certainly influenced by the administrative policy, I would like to quote the definition of a state park from the official Bulletin "State Parks of Minnesota" prepared by Harold W. Lathrop, Director of the Division of State Parks, and his colleagues: "A state park is a typical portion of the state's original domain of adequate size, whereby a small portion may be provided for concentrated use, and the remainder preserved in a primeval condition, accessible only by a system of foot trails and water ways, by which the present and future generations may study the flora, fauna, and geologic structure of a beneficent nature, unspoiled, unimproved, and unbeautified by man's attempt to improve on the work of the Master Engineer."

Following the brief comments on the mammals or groups is a complete list of those which we have observed or had reported in the Park, and scientific names are used there with the common names because the latter are not thoroughly standardized as bird names are.

Moles. — I have never actually seen a mole in the Park, but their characteristic runways just under the raised sod are found occasionally, an easily recognized sign of their presence. The De Soto Lake area has had such mole "sign" in late summer. State Game

Warden Custer Smith reports star-nosed moles also.

Shrews. — We have found four shrews in the Park area. The common long-tailed shrew has been commonest, quite a number usually showing up each summer in the mouse traps. The short-tailed shrew, a common form in some parts of Minnesota, has been quite scarce in Itasca Park the past few years, but a few have been taken. The handsome water shrew has been taken only along the headwaters of the Mississippi, but several specimens were taken in a short time so it seemed fairly common there. The pigmy shrew, one of the rarer Minnesota mammals, has been taken in the Park just once.

Bats. — The little brown and the big-eared little brown are the two species of bats most often seen in the Park. The first of these is quite common, and the second moderately so. Both may be seen flying over the lake in the evenings, and both are frequently found resting under the eaves or in the chinks between logs of old buildings in the Park. The only other bats recorded are the silver-haired and hoary bats, both solitary forest-loving species, each recorded only once. Two other species of bats known from Minnesota may be expected to be found in the Park sooner or later.

Bear. — The black bear is still found in and around Itasca Park, but is certainly not common. Evidences of its presence are more often seen than the bear itself. Overturned old logs and stumps clawed in a search for insects, and the characteristic dung which in summer almost invariably reveals a diet consisting largely of wild fruits and berries, are seen not infrequently; but only once in a great while does some lucky soul actually see a bear. Within the last two years bear have

killed some sheep east and south of the Park, according to Forestry Supervisor Frank Pugh and Custer Smith.

Raccoon. — The raccoon is common all over the Park, and being so bold and conspicuous, is quite likely to be seen by the visitor, especially in the evening or at night along Park roads where sometimes the auto headlights will pick out a whole family of four or five crossing the road or waiting patiently for the interruption to pass. The coons in the Park have become scavengers wherever they can depend upon finding scraps, so they police the picnic grounds, camp grounds, and University campus nightly, turning over garbage cans or breaking into cabins after food wherever they can. Many a luckless tourist foolish enough to leave foodstuffs with no more protection than a tent at the camp ground has unwillingly fed the coons. They are interesting and attractive and we are certainly glad of their presence, but they can be a downright nuisance.

Weasels. — Weasels are not often seen, but Frank Pugh reports that both the long-tailed and the short-tailed weasels are present in the Park. The only one we have seen, one killed on the road just west of the Park, was the short-tailed species.

Mink. — The mink is seldom actually seen, but its burrows, remnants of crayfish or fish it has eaten, or its scats along lake shores or streams indicate that it is fairly common and widely scattered through the Park. In winter mink tracks are often found and almost anywhere in the Park.

Otter. — From the amount of "sign" which may be found the otter is relatively common in the Park, even on Itasca Lake itself, which is so widely used by man that a seclusive animal might be expected to be frightened

away. Otter "slides" may be found either in winter or in summer on steep banks of several of the lakes, and their scats are easily recognized by their large size and the fact that crayfish usually predominate in them.

Skunk. — The striped skunk is fairly common in the Park region. Occasionally one is run over on the Park Rapids-Bemidji road along the east side of the Park, and once in a while a skunk is seen. The characteristic scats and diggings indicate that skunks are found all over the Park.

Red fox. — The red fox is quite common in the Park region according to Frank Pugh, who reports seeing them occasionally both in and north of the Park. The only one I have seen nearby was three miles west of the Park in August, 1942.

Coyote or brush wolf. — The brush wolf or northern coyote may be present fairly regularly, but it is an animal very seldom observed even though common, except in winter when its tracks give it away. In previous years they were trapped for bounty in considerable numbers in and near the Park, and there are many places within 40 or 50 miles where this is still true. Frank Pugh reports that there are some in the Park this winter (1943-44).

Timber wolf. — Even the timber wolf, wilderness wanderer that he is, may occasionally occur in Itasca Park. Small timber wolves are easily confused with 'brush wolves'; but size alone should be sufficient to distinguish any large ones, because while the 'brush wolves' usually weigh between 20 and 40 pounds, the timber wolf usually exceeds 50 pounds when grown, and there are many records of wolves a hundred pounds or over. For those who might by the merest chance see either brush wolf or timber wolf the

characters to note may be paraphrased from Seton: the coyote or brush wolf is smaller and more slender, has a relatively slender muzzle, and carries its tail low; the timber wolf is larger, heavier in build, has a much heavier muzzle, and carries its tail held high. Any footprints 4 inches long or more may be timber wolf, but they cannot be distinguished certainly from those of a large dog.

The timber wolf is a great traveler. The same individual may travel regularly between points 30 to 50 miles apart or even more. An area so small as Itasca Park would not be sufficient to harbour a wolf permanently. Those which have entered the Park always do so merely in passing, though it may be one of their regular visiting places. In past years wolves were, of course, regularly found in this area, but recent records have been rare. The last wolf which visited the Park at all regularly was trapped early in 1938. The account in the St. Paul Pioneer Press for February 13, 1938 describing its capture carries a photograph and states that the animal weighed 80 pounds. Even if the weight as given was not accurate, the photograph leaves no doubt but that this animal was a true timber wolf. It had, of course, killed many deer in the Park from time to time, but the real reason for the persistence with which it was hunted was its ravages upon the livestock of farmers in Clearwater and neighboring counties.

Another wolf which had killed many sheep in the vicinity was trapped in the spring of 1941 in Becker County only about 20 miles west of the Park. This animal undoubtedly had visited the Park in its travels since it spent so much of its time nearby. Its capture is described by Gil Gistead in the *Conservation Volunteer* for Oct. 1941.

Woodchuck. — The woodchuck or ground hog is very common in Itasca Park, particularly near those places along the roads which have been developed for human use, but also back in the woods. Woodchuck burrows are very commonly found. Those occupied at the time can usually be recognized by the fresh earth which has been thrown out. The woodchuck throws out some earth almost daily in the burrow he is using. Very often woodchucks live under cabins or other buildings in the Park.

Ground squirrel. — Two ground squirrels are fairly common in the vicinity of the Park, but since neither is a forest species they are restricted to those limited areas of open grassland such as the picnic grounds and buffalo pasture. Both are usually called "gophers" which is regrettable, because the misnomer causes them to be confused with the pocket gopher. The Franklin Ground Squirrel (gray gopher) is less common than the familiar striped ground squirrel (striped gopher). In hayfields around the Park both are more likely to occur than within Park boundaries.

Chipmunks. — Both the little western or long-tailed chipmunk, and the larger gray or eastern chipmunk are found in the Park, but the first is by far the commoner. They are widely scattered through the woods, but are more likely to be seen near wood piles in which they seek shelter, or near buildings, the picnic ground, or any place where they may find a crumb of food now and then.

Tree squirrels. — The red squirrel is probably the most characteristic mammal of the Park. Common, saucy, noisy, it is seen on every hand both in the wilds and in the areas developed for recreational use. The gray squirrel

is seen but rarely and then usually in hardwood areas rather than in the conifer stands preferred by the red squirrel. The fox squirrel has been seen once by Dr. C. O. Rosendahl.

Flying squirrels. — The flying squirrel is nocturnal, usually resting during the day in a favorite cavity of some hollow tree, and so it is seldom seen. If one cultivates the habit of giving a sharp resounding tap to each hollow tree he passes sooner or later he will hit one occupied by a sleeping flying squirrel which, disturbed so unceremoniously, will usually come out and show himself. That is about the only way of finding a flying squirrel in the Park even though they are tolerably common.

The northern flying squirrel, a larger species, has not yet been identified from the Park even though it may be expected. On several occasions flying squirrels have been seen, but the only ones caught and identified were two southern flying squirrels, reported by Hatfield (1938).

Pocket gopher. — The presence of pocket gophers is always evident by their conspicuous mounds, but they are not very common right in the Park since they prefer more open areas. Where such open areas occur this species usually turns up sooner or later. Several have been taken right on the campus of the University Forestry and Biological Station.

Beaver. — Beaver had undoubtedly occurred in abundance in the region of the Park in primeval times, but through excessive trapping they were extirpated. None had been seen in the vicinity for many years at the time the Park was established. When an opportunity arose to secure some alive for releasing there it was seized eagerly, and in 1901 three young beaver were obtained from the Canadian government. They were

released on Schoolcraft Island, but apparently made their way to Nicollet Creek, because Dr. T. S. Roberts found 2 small dams there the next summer. It seems clear that descendants of these beaver repopulated the Park and surrounding area, because by 1917 almost every suitable body of water in and around the Park was occupied.

Deer mice. — The two species of deer mice are abundant in all types of upland forest. They are so very similar that it is almost impossible to distinguish one from another. In both the juvenile coat is bluish gray; in both the adult coat is reddish brown above. The most consistent external differences are that the Canadian white-footed mouse has larger ears, a longer tail, and a more definitely bicolored tail (white below) than the northern white-footed mouse.

In Itasca Park, as elsewhere, mice and shrews are very seldom seen, and the only practical method of learning which are present is to trap either with ordinary mouse traps or livetraps. This has been done from time to time with the permission of the Director of State Parks, so that in addition to learning which species are present we have determined in a general way which are most abundant. The deer mice, *Peromyscus*, are by far the most common mammals in the Park. On an island with typical mixed forest cover the deer mouse population (2 species considered together) was determined as 24 mice per acre, which is probably about right for the mainland too. Lumping all of the mouse trapping records together from 1937 through 1942 (a total of nearly 8,000 trap-nights) gives an approximation of the relative abundance of the commoner small mammals. If we consider the deer mouse catch as 100, the other 4 forms taken in any numbers stand as

follows: meadow mice, 17; red-backed mice, 15; jumping mice, 5; and common long-tailed shrew, 4. On this trapping scale no other species would rank as high as 2.

Voles. — The Park has three species of the short-tailed, short-legged mice that we class collectively as voles. The red-backed mouse is quite common almost anywhere in the forested portions of the Park, and the field mouse or meadow mouse is common wherever grasses or sedges predominate. The third vole, the lemming mouse, we have found only in the tamarack bog near the northeast corner of the Park; but it is probably found in all of the muskeg bogs, and to a lesser extent on the upland forest types too. It is seldom taken or seen, but this may be more because of its seclusiveness and its habit of living much of the time in sub-surface runways in the sphagnum moss than because of any real rarity.

Muskrat. — The muskrat is widely scattered over the Park but is not particularly common. It is actually more at home in the prairie lakes and sloughs than in the woodland lakes which abound in the Park.

Jumping mouse. — The jumping mouse is usually common in the Park, commoner than I have seen it anywhere else. It seems especially fond of the low grass and sedge areas around streams and marshes. The valley of Nicollet Creek has a good many, and since this species is active by day as well as by night it may often be seen there, usually trying to escape by leaping away two or three feet at a bound.

Porcupine. — Porcupines, while not common, are widely scattered over the whole Park. In summer their feeding habits are innocuous enough, because they are content with eating leaves, but in winter they may kill considerable

numbers of trees by girdling the bark. These girdled trees remain quite conspicuous for a year or two afterward. According to Frank Pugh porcupines work on Norway and white pine and tamarack most often in the winter. A few years ago they were so numerous and killed so many trees that some control was found necessary and some were killed, but their numbers are by no means excessive now. Many a visitor who sees his first porcupine in Itasca Park is so thrilled by it that the "porky" must be considered one of the really important natural attractions of the area.

Rabbits. — Both cottontails and snowshoe rabbits are found in the Park, but the snowshoe is by far the commoner and more widely distributed. The cottontail is usually found around the developed portions of the Park, but the snowshoe or varying hare is everywhere—that is, unless it is at the low point of one of its periodic population declines. Right now (1944) it is quite common, but for several years (1936-1940) it was really quite scarce.

Moose. — Moose were formerly found in this region, but none has been recorded in recent years except captive ones, the last of which died in 1942 in its enclosure near Twin Lakes.

Elk. — The few elk which remain in the Park are the remnant of a much larger number once kept in the fenced enclosure of about 160 acres just east of headquarters. Two carloads of elk were imported from Wyoming in 1914-1915 for the purpose of reestablishing elk in Minnesota, where this species had been exterminated. Through the years the elk gradually increased (see Conservation Volunteer, Vol. 1, No. 2, pp. 1-5, Nov. 1940 for details), and from time to time a few would escape from the enclosure and two or three

would be shipped out and released. In November 1935, 28 animals were shipped to the western part of the Red Lake Game Refuge, where they thrived astonishingly well for several years until they numbered over a hundred. Eight animals were left in the Park elk pasture and these also increased. Fifteen were seen in one herd in 1940. Since then the fence has been allowed to deteriorate, and what few animals remain wander in and out at will. Frank Pugh and Custer Smith report that there are 4 still around as of January, 1944, and that at least 3, possibly more, were killed near the Park by deer hunters during the 1943 season.

Deer. — The white-tailed deer is exceedingly abundant in Itasca Park, probably more so at this time (1944) than in any other area of the same size in Minnesota. Actual censuses were taken by the "deer-drive" method when CCC labor was available, and the results indicated that the peak population was about 4000 deer in the Park, which is certainly 3 or 4 times as many as there should be if a normal reproduction of the trees and other vegetation is to occur. The reason for the large population is simply that natural enemies such as wolves and bobcats have been virtually exterminated in the area and hunting by man has not been permitted since 1891.

There is probably some movement of deer into the Park from outside in the early winter if a normal snowfall occurs. The population is probably nearly as high in the summer, and the summer visitor is likely to wonder where all the deer are—and be skeptical of their abundance after driving 20 or 30 miles along Park roads without seeing a deer. He does not stop to think that deer feed in the evening, at night, and early in the morning, and are usually quiet during the day in summer. The visitor who wants to see

deer should drive slowly for the one-half or three-fourths hour before dark in the evening or after daybreak. He is certain to see deer then, especially if an extra observer is along to watch the swales and look off through the woods while the driver concentrates on his driving and the areas near the road straight ahead. Among the best routes are the highway from the main Park entrance to headquarters, the LaSalle Springs trail, and the Lind Saddle trail south to Nicollet Cabin. Another excellent and certain way to find deer is to paddle a canoe along the shores of Lake Itasca (west shore is best) in the evening. The deer are often in the water during the day too, but most will be observed in the evening.

The best proof that there are too many deer in the Park is provided by the numbers which starve each winter when a normal snowfall occurs. In the fall of 1942 the population was about 4000 for the Park. During the following winter over 1000 deer starved to death in the north half, which is most heavily populated. Any summer Park visitor who gets off the roads and beaten trails, finds here and there the grisly remains of the deer which starved the preceding winter.

• LIST OF MAMMALS OF ITASCA PARK •

(Those represented in the collection at the University Forestry and Biological Station by specimens from in or near the Park are marked*.)

Common mole (*Scalopus aquaticus*)

Star-nosed mole (*Condylura cristata*)

*Common long-tailed shrew (*Sorex cinereus*)

*Water shrew (*Sorex palustris*)

*Pigmy shrew (*Microsorex hoyi*)

*Short-tailed shrew (*Blarina brevicauda*)

*Little brown bat (*Myotis lucifugus*)

*Big-eared little brown bat (*M. keenii*)

septentrionalis)

- *Silver-haired bat (*Lasionycteris noctivagans*)
- *Hoary bat (*Lasiurus cinereus*)
- Black bear (*Euarctos americanus*)
- Raccoon (*Procyon lotor*)
- *Short-tailed weasel (*Mustela cicognanii*)
- Long-tailed weasel (*Mustela frenata*)
- Mink (*Mustela vison*)
- Otter (*Lutra canadensis*)
- Skunk (*Mephitis mephitis*)
- Red fox (*Vulpes fulva*)
- Brush wolf (*Canis latrans*)
- Timber wolf (*Canis lupus*)
- *Woodchuck (*Marmota monax*)
- *Striped ground squirrel (*Citellus tridecemlineatus*)
- *Franklin's ground squirrel (*C. franklinii*)
- *Western Chipmunk (*Eutamias minimus*)
- *Eastern Chipmunk (*Tamias striatus*)
- *Gray squirrel (*Sciurus carolinensis*)
- Fox squirrel (*S. niger*)
- *Red squirrel (*Tamiasciurus hudsonicus*)
- Flying squirrel (*Glaucomys volans*)
- *Pocket gopher (*Geomys bursarius*)
- Beaver (*Castor canadensis*)
- *Canadian white-footed mouse (*Peromyscus maniculatus gracilis*)
- *Northern white-footed mouse (*P. leucopus noveboracensis*)
- *Lemming mouse (*Synaptomys cooperi*)
- *Red-backed mouse (*Clethrionomys gapperi*)
- *Meadow mouse (*Microtus pennsylvanicus*)
- *Muskrat (*Ondatra zibethica*)
- *Jumping mouse (*Zapus hudsonius*)
- *Porcupine (*Erethizon dorsatum*)
- *Snowshoe rabbit (*Lepus americanus*)
- Cottontail rabbit (*Sylvilagus floridanus*)
- *White-tailed deer (*Odocoileus virginianus*)
- Elk (*Cervus canadensis*)
- Moose (*Alces americana*)

• REPTILES AND AMPHIBIANS •

Reptiles are quite scarce in the Park both in number of species and individuals, but amphibians, because of the large amount of water, are common. The six reptiles include the black-banded skink (*Eumeces septentrionalis*) the red-bellied snake (*Storeria occipitomaculata*), the common and red-sided garter snakes (*Thamnophis sirtalis* and *T. s. parietalis*) and two turtles, the snapping turtle (*Chelydra serpentina*) and the painted or mud turtle (*Chrysemys bellii*). Only the last species is at all common, but all are widely distributed in the Park.

Three salamanders have been found, and all of them prefer the more humid habitat in maple or basswood types to the drier conditions of the pine or balsam types. The newt (*Triturus viridescens*) and Jefferson's salamander (*Ambystoma jeffersonianum*) have been found almost exclusively in the hardwoods with the tiger salamander (*Ambystoma tigrinum*) showing a less restricted habitat.

The common toad (*Bufo americanus*) is the only representative of its group, but frogs are more numerous, with seven species present. Three are tree frogs, all fairly common in suitable places. The swamp tree frog (*Pseudacris nigrita triseriata*) is most numerous, and one observation on this species may be worthy of note. In August 1938 it was much more common than any summer since, and hundreds of specimens were examined alive. They were typical of the species in every way except that the background color of the living frogs showed much more variation than I have found described in the literature. Many were bright green, some reddish chestnut, some golden brown, and, of course, many were the more somber brown

shades which are more normal. The spring peeper (*Hyla crucifer*) and the common tree frog (*H. versicolor*) are less common. The latter is often heard singing toward evening from up in the trees even in mid or late August.

The wood frog (*Rana sylvatica cantabrigensis*) and the leopard frog (*R. pipiens*) are both very common while the green frog (*R. clamitans*) and the mink frog (*R. septentrionalis*) are quite scarce.

● REFERENCES ●

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- Swanson, Gustav A. 1940. The American Elk in Minnesota, *Conservation Volunteer*, Vol. 1, (2): 4-7. (Transplanting the elk from Itasca Park.)
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Birds Feeding on Forest Insects

By A. C. Hodson

Once during the summer of 1937 the author and an assistant were driving on a two-rut road near the north boundary of Itasca State Park. The road called "Easy Street" by the local residents, led to study plots where intensive observations on the forest tent caterpillar outbreak were being carried on. This road was traveled twice a day for several weeks without anything unusual occurring to attract attention until one afternoon about the middle of June. As the car hit the crest of one of the numerous humps in the road, a large flock of from 30 to 50 crows flew up ahead and came to rest a short distance away in the woods. Only an occasional crow had been seen in this area before; consequently such a large flock was in itself interesting, but something in the ruts ahead attracted our attention more. The ruts appeared white for a distance of about 400 yards, littered with what looked like patches of cotton. A closer examination showed that the white patches really were accumulations of empty cocoons of the forest tent caterpillar with crow tracks in the dust around them. The area was kept under observation for several minutes from the shelter of a clump of hazel brush. The crows soon returned and flew into stands of young aspen and hazel brush bordering the trail. They removed cocoons from the leaves in which they were spun, carried them to the road, and after tearing the cocoons open devoured the contents. This activity continued at a feverish rate for over 15 minutes and the piles of cocoons increased in number and size rapidly.

After the crows finally left the scene, the site of their feeding was examined further. There were from 25 to more than 100 cocoons in piles which extended down the road for about one-fourth mile. Fortunately, cocoon counts had been made in this particular stand of timber a few days before. Cocoons were very numerous, there being from 50 to 85 in each cubic yard of brush. A second count was made the day after the crows were observed, and it showed that they had destroyed about one-fifth or 20 per cent of the cocoons present. Considering the large number of cocoons, the reduction caused by the crows was spectacular but of little real importance, particularly for the added reason that about 80 per cent of the larvae and pupae in the cocoons were already parasitized by the flesh fly, *Sarcophaga aldrichi*, and to a lesser degree by ichneumon-flies.

The area was visited regularly for about three weeks after this experience without either a repetition of the cocoon destruction or sight of more than one or two crows at any one time.

Last winter (1942-43) while studying the effect of low temperature on winter survival of the introduced pine sawfly, the writer and a companion visited the Lake Vадnais pine plantation near St. Paul, Minnesota to collect samples of cocoons. This sawfly had been very abundant the previous summer, and cocoons were plentiful in the fall. Many of them were spun on the bark, twigs, and needles of white pine and other host trees in very exposed positions. The samples were needed to get information on natural mortality caused by low winter temperatures. A

search was continued all afternoon without finding more than one cocoon which had not been attacked either by birds or parasites. Bird damage accounted for better than 90 per cent of all the cocoons examined. Both the black-capped chickadee and the white-breasted nuthatch were numerous in the area; however, only the latter actually was seen puncturing a cocoon with its beak.

Judging from the number of cocoons opened by birds, it would seem that they were very effective in the natural control of the sawfly. Unfortunately, the great majority of the sawfly larvae drop to the ground and spin their cocoons just under the surface litter of needles. There they are free from attack by birds and injury from cold, although mice and shrews do have some beneficial effect. In this case a superficial observation would lead to a very incorrect opinion regarding the value of birds as a natural control agent. When the pine sands were examined again in the summer of 1943, there was a much larger population of sawfly larvae and considerably more damage than was seen the previous summer.

A third observation of birds feeding on a forest insect pest is based on reports sent to the writer by Mr. Clinton Converse of the State Division of Forestry. An outbreak of the walking

stick has been developed near Brainerd, Minnesota for several years. These curious insects have become so abundant that several hundred acres were completely defoliated by them in 1943. In one of the first areas to be defoliated, on the west side of Gull Lake, the trees near a small farm were the only ones not defoliated for some distance. When Mr. Converse investigated, he found that the farmer's chickens had been gorging themselves on walking sticks and had the situation under control in that one small area. Later during the grouse season, ruffed grouse were shot which had their crops crammed with walking sticks. Because the chickens are locally distributed and the ruffed grouse are not particularly abundant, there is little chance of either of them bringing the outbreak to an end.

Paper No. 491 Miscellaneous Journal Series, Minnesota Agricultural Experiment Station, St. Paul, Minn. Division of Entomology, Univ. Minn.

Editor's Note: It now seems well established that after insect outbreaks occur, only the weather or the parasites preying on the insects are sufficiently wide spread in their effects to check the outbreaks. The real value of birds feeding on insects comes while the insects are not overly abundant, when such destruction is effective in maintaining them at low population levels. W. J. B.



All Natural History Books published by The University of Minnesota Press may be purchased by M. O. U. members from Mrs. I. A. Lupient, 212 SE. Bedford, Minneapolis, Minnesota, under the conditions indicated in the circular recently sent to members.

NOTES OF INTEREST

OBSERVATIONS ON GOLDFINCHES---About the middle of August, 1943 a large group of goldfinches, both adults and young, frequented our neighborhood. The parent birds spent much of the day flying back and forth among the young birds feeding them and singing the familiar *per-chic-o-ree*. It was apparent that the males were doing their share in this matter as well as the females, and they both looked their parts. They no longer were the trim well-groomed birds of the early summer, but instead now looked most ruffled and worn.

The young, like all young birds, were always hungry and welcomed the adults with most unusual, sweet, melodious calls.

During the day the birds drank frequently from a stream of water which trickled over rocks in a lily pool. After the pool had been remodelled, the birds still frequented the pool; but now they rested on the lily pads from which they drank as well as bathed. As many as twelve birds were seen in the pool at one time.

Mr. and Mrs. A. Mahawald, St. Cloud, Minn.

AERIAL DANCE OF THE HUMMING BIRD-- One of the greatest thrills a bird lover can experience in early spring is to observe the aerial dance of the ruby-throated humming bird. It was my good fortune on June 15, 1943 to have the pleasure of observing this dance for the first time this spring. I was first attracted by a male humming bird flying in a perfect arc of about 15 feet. After he had swiftly flown back and forth in this arc several times, he suddenly darted down to the awaiting female and the two fluttered about together in an excited manner close to the ground and among the low bushes. Then the male again flew into the air and repeated the aerial dance. This time when he flew down they both darted off together. Mrs. A. J. Trainor, St. Cloud, Minn.

A BROWN THRASHER FEEDING THREE YOUNG COWBIRDS---On the morning of July 1, 1943, I observed a rare bird event. While returning to the office from the Fair Grounds, a commotion caught my eye at Midway Parkway and Pascal Street, St. Paul. Investigation showed three young cowbirds clamoring for food and a brown thrasher supplying the demand. As I drove near, the cowbirds disappeared into a small elm, but the thrasher was much too busy to be wary of a car and continued to hunt food in the open. Subsequently I learned of the rarity of this event, but I saw the actors sufficiently well to be entirely satisfied as to their identity. Tilford Moore, St. Paul, Minn.

NESTING OF THE YELLOW-BREASTED CHAT—For some years I have been interested in the yellow-breasted chat which I have seen from time to time at Ortonville, Minnesota. I believe the first one I saw was at Mile Park in 1923, just north of Ortonville. Every time I have seen a chat it has been in that same locality. I did not succeed in finding a nest. Three years ago (1941) a pair nested in my sister's garden in Ortonville. The pair raised a family of four. The same year a pair nested at the Geir cottage near Mile Park. Two years ago (1942) a nest was

found near a cottage on the peninsula. In July of this year I saw one chat in Mile Park; in August two were seen on the peninsula, but no nest was found.
Alma H. Chesley, Duluth, Minn.

WARBLERS IN LESTER PARK, DULUTH—The members of the Lakeview Bird Club of Duluth are especially fortunate in living within walking distance of Lester Park, one of our city's largest natural parks. Here two fair sized streams, thickets of spruce and balsam, some old stands of white pine, and groves of deciduous trees—poplar, birch, willow, and ash—naturally attract large numbers of birds.

In this park we have always observed many warblers during the spring migration. This year we were impressed with the number of warblers seen late in the season. On June 16, Mrs. Olin, Betty Watterson, and I watched a Blackburnian warbler flitting about in a stand of white pine, while in a grove of second growth poplar and birch we saw several mourning warblers and a Nashville and a magnolia warbler. Near the river we spied a Canada warbler while redstarts were singing nearby in some old white pines.

On June 20, Susan Lovald and I observed a Canada warbler, two mourning warblers, four chestnut-sided warblers, and one black and white in the same second growth poplar where we had seen so many warblers on the 16th. We also heard the northern yellow-throat and oven bird singing but were unable to see them in the heavy fog which enshrouded the woods that morning.

On July 14, Mrs. Olin and I again saw the Nashville, magnolia, mourning, red-start, and chestnut-sided warblers. We tried hard to find the nest of at least one of these birds but were unsuccessful. We are hoping that next season we will be able to get some definite nesting data on a few of these warblers which reside in Lester Park. Catherine E. Lieske, Duluth, Minn.

NOTES FROM CLOQUET—The Cloquet Bird Club is a small but enthusiastic group of high school teachers and students. The latter, admitted because they have shown keen interest over a period of time, are Alice Buird, Annie Musto, Rex Jacobson, and Donald Schantz-Hansen (now in the Armed Forces). The teacher members are the Misses Alice Zimmerman (Modern History), Fern Zimmerman (Social Studies), Edith Sanford (Math.), Louise Stender (Biology), Gertrude Hanson (Physical Education), Marie Kennedy (school librarian), and Ellen Wilson (Commercial).

Again this year the Club project has been to establish three feeding stations at different locations in Cloquet. These are periodically replenished with suet balls, apples, doughnuts, sunflower seeds, and chicken feed. At each station we also placed a jar of salted sand.

At each meeting of the Bird Club some member presents a book review or a paper on such topics as bird migration, feeding habits of birds, bird banding, etc. The rest of the time is devoted to a systematic study of birds and their identification under the guidance of Fern Zimmerman and to reports of field trips and bird observations.

Last spring Alice Buird and Annie Musto recorded the dates on which they first saw 70 different species of birds in the vicinity of Cloquet. Their biggest thrill was the sight of two woodcocks and an ovenbird at the University Forestry Station on June 19.

On September 10, Fern and Alice Zimmerman and Edith Sanford saw an eagle

which had been shot by a farmer near Palisade, Minnesota, after having carried off some turkeys. They describe the eagle thus: "Its wing spread was 57 inches. Its length was 25 inches. The bill was blue. The head and upper-parts were dark brown, and on the neck the feathers had a golden-brown color. The under-parts were light with brown markings." They think it may have been a golden eagle.

On September 25, a field trip to the University Forest Experiment Station yielded quite a lot of observations. Outstanding in our memories was a goshawk and a curious-looking chickadee—one with no black cap. Fern Zimmerman reports: "There was no doubt that he was a chickadee in spite of his snowy white head; for he stayed with the flock of chickadees, looked like them in every other respect, and sang the chickadee song again and again."

An unusually early and heavy fall migration of birds was reported this year. A possible explanation may be the abundance of box-elder seeds here and the scarcity of mountain-ash berries on the North Shore of Lake Superior. Possibly the birds left the North Shore early in search of food.

Other observations of some interest are as follows:

Pine Warbler. They were much in evidence September 25 and gone the following week.

Purple Finches. These birds were first reported September 25.

Black-billed Cuckoo. One was seen October 2.

Evening Grosbeak. The first flock (30) was reported on October 11 in the city park.

Pine Siskin. A flock was seen on October 16 in the brush along the St. Louis River.

Red-poll. A flock of common red-polls, including one hoary red-poll, was seen November 6 on the edge of the swamp just south of town.

Northern Shrike. One flew from among the redpolls and perched characteristically on a prominent branch to make a survey of possibilities for mischief.

Pine Grosbeak. The first one was seen on November 16, although many reports have come in since then.

White-winged Crossbill. On November 16, Alice and Fern Zimmerman saw one from the window of their home in Cloquet.

Robin. There have been several reports of a lingering robin since Thanksgiving. The last was the day these notes were written, December 13. This bird had a white ring about his neck and was believed to be one of a family of mottled robins seen here last summer in which each had some peculiar white markings. Edited by Miss Ellen Wilson, Cloquet, Minn.

OCURRENCE OF RUFFED GROUSE IN SOUTHEASTERN MINNESOTA—The unusual occurrence of a flock of 14 ruffed grouse (*Bonasa umbellus*) was noted by the author during a wildlife census on the Prairie Creek soil conservation demonstration project 12 miles northeast of Faribault, Minnesota, on January 23, 1940. The birds were flushed from a thick clump of snowberry (*Symphoricarpos racemosus*) in a lightly-grazed open bluegrass pasture at a distance of 15 yards. Six birds flushed first, followed by seven, and then a single. They all flew west and disappeared over a hill toward a dense 70-acre woods about a half mile away. The nearest woodland was a 30-acre tract about one-fourth mile east. At the spot from which they were flushed, there were many tunnels in the snow, which was about 10 inches deep. They apparently were feeding on the fruit of the snowberry.

The incident is unusual, for rarely is the species seen in the open or in such a large flock, especially in this part of its range. No reference could be found which mentioned this unusual behavior occurring before in Minnesota. There was no doubt as to the species. The rounded tail marked with a black band easily distinguished the birds as ruffed grouse. Inquiries disclosed that several farmers in that area had seen the birds previously.

Records of early history indicate an abundance of ruffed grouse in this area before the hardwood forests were cleared for cultivation. Hatch (1892) reported "Nowhere was the ruffed grouse more abundant than in all of our deciduous forests." During the Game Survey of the North Central States, Leopold (1931) found the above fact to be the case. His investigations led him to believe that the center of the north central region was also the nucleus of the species' range.

At the present time there are only a few birds scattered throughout the larger ungrazed woodlots of southeastern Minnesota. Soil Conservation Service technicians had found no actual evidence of the presence of ruffed grouse during the four years of soil conservation operations on the project. It is possible, however, that a few birds do live in the Nerstrand Woods, a 1300-acre remnant of the "Big Woods", which is two miles southeast of the point where the birds were seen. They also occur as scattered individuals in the more secluded woodlands of Rice, Le Sueur, and Scott counties. Lansing A. Parker, St. Paul, Minn.

FLIGHT SPEED OF A FLOCK OF MALLARDS—On August 23, 1943, while in the southern part of the state, the opportunity for clocking the speed of some flying mallards luckily fell my way. I had just left Luverne, Minnesota, and was about a mile out of town when a flock of ducks approached the highway from the north and turned and flew parallel to the car all the way to Adrian, a total distance of 11 miles. The only deviation they made from their eastward flight for the entire distance was to swing out a short distance to go around the taller farm groves. Because of the mileage restriction in force at the time, my speed for the entire distance was 35 m. p. h.; and the flock of ducks averaged exactly the same speed for the entire distance. The long flight which they made enabled me to determine that there were 27 birds in the flock, all mallards. These birds were not being pursued, and this seems to me a rather authentic record of the flying speed of mallards. Thomas Schrader, Division of Game and Fish, St. Paul, Minn.

OBSERVATIONS AT BURNTSIDE LAKE—The herring gull, as perhaps you know, has been used as a model for a bomber. (See the cinema "Spitfire"; also one of our own designers has used the inverted gull as a model).

This summer (July, 1943) while canoeing on the North Arm of Burntside Lake, about 18 miles east of Ely, Minnesota, we had personal experiences on the effectiveness of the gull as a bomber! Each time our canoe would reach a certain spot in the lake, generally near the middle, from nowhere, it seemed to us, one gull would appear, swooping down close to our canoe. Because we continued on our journey, the gull would send out a call, or go for reinforcements, for soon there would be at least four, and sometimes more, gulls darting at us. They would make queer sounds and come very close to our heads, trying to drive us from the lake. As soon as we reached the large lake, the gulls would disappear. On our return trip we would have the same experience. No matter how many times we took the trip, the gulls were always there to defend, undoubtedly, a nest, which we were not successful in locating.

One afternoon while canoeing on the South Arm of Burntside Lake, we saw along the shore, Mrs. American Merganser and eight half-grown young sitting on a log. We tried to get as close as possible, but undoubtedly she heard us and one by one each duckling slipped into the water and followed "mama" in single file. We turned our canoe around and followed hoping to secure a picture of them. Just as we were about to snap the picture at 15 feet, "mama" gave a whistle, and all of them fanned out in one long line and scooted across the lake, until they thought they were out of our reach. We tried to get near them, but they repeated the performance and escaped. Amy Chambers, Minneapolis, Minn.

A SWAINSON'S HAWK NEAR STURGEON LAKE, MINNESOTA—On September 21, 1943, while driving south on U. S. Highway 61 near Sturgeon Lake, Minnesota, I saw an adult Swainson's hawk. This hawk is a bird of the prairies and its presence in the eastern wooded portion of Minnesota, even during migrations, is questioned by Dr. Roberts (1932). I would therefore hesitate to make the field identification except that the bird was flying low and was a well marked specimen. The chestnut breast band was very clear, the throat was white, and the belly, light. When I first saw the bird, the white lateral tail coverts reminded me of the Swainson's hawks I have frequently seen on the plains of Texas, New Mexico, and western Minnesota. Kenneth D. Carlander, St. Paul, Minn.

LONG EARED OWL NEAR CASS LAKE, MINNESOTA—At about 10:30 p. m. on July 27, 1943, near Norway Beach, Cass Lake, I heard a shrill whistle which I first thought must have been made by some boys. As the whistling continued at intervals, I investigated. The whistle sounded somewhat like the call of a hawk. Finally I found two long-eared owls in the top of a couple of Norway pines whistling back and forth to each other. The calls were the least owl-like sounds that I had ever heard come from an owl. Kenneth Carlander, St. Paul, Minnesota.

BLACK-THROATED BLUE WARBLER—He lit on a twig before my surprised and delighted eyes and for several seconds looked at me as if to say, "Hello, how are you?" Unlike other warblers he was too polite to eat while making me this short visit, but soon he dived playfully at a redstart, displaying his startling white patches in the afternoon sunlight. Several times he flitted and perched and then flew away down the lovely glen in the wild flower garden at Glenwood Park. Entranced, I watched him go, my first black-throated blue warbler, September 10, 1943. Mary Lupient, Minneapolis, Minnesota.



An Opportunity For Minnesota Bird Students

Through the generosity of Dr. T. S. Roberts the Minnesota Ornithologists' Union is able to offer its members and friends the remaining copies of Dr. Roberts' "Logbook of Minnesota Bird Life, 1917-1937" at the truly remarkable price of \$1.00 per copy. Dr. Roberts has agreed to autograph the books, and a share of the proceeds from their sale will go to the MOU treasury to aid in the publication of "The Flicker".

Every two months since 1917 Dr. Roberts has prepared a summary of the bird life in Minnesota from his own observations and those of his many correspondents in the state and published them in "Bird-Lore." The "Logbook" contains these summaries for the 20 year period indicated. Each begins with a brief account of the weather for the two month period, especially as it might have been expected to affect birds. These summaries of the weather alone, for a 20 year period, form a valuable reference, for there is information in them which one cannot glean from official Weather Bureau records. Then follows an account of the highlights of Minnesota bird observations for the period: unusual bird records, early or late migration dates, nesting records, and a great many notes on other natural phenomena of interest to the bird student, such as the first appearance in the spring of certain hibernating mammals, frogs, flowers, and some of the conspicuous insects.

Have you ever wondered how to determine or recall just when that unusual emigration of willow ptarmigan occurred in Minnesota? Or when we have had snowy owl migrations? Or what year the Bohemian waxwings came down in such numbers? Or when the Canada jays invaded southern Minnesota? Or when and how often we have had storms which killed much wildlife? Or when the ruffed grouse were scarce, when abundant? All such questions may be quickly and easily answered by the "Logbook", because its index is detailed and complete, and any subject may be found without difficulty. No active Minnesota bird student can afford to be without the "Logbook" because it gives a good account of what may be expected each season, and makes it clear how one year of the bird calendar differs from another.

The "Logbook" is a handsome volume of 355 pages, richly bound in green and tan buckram, and illustrated with 22 delightful black-and-white drawings by Dr. W. J. Breckenridge, one of them a full page reproduction of an etching of the duck hawk. The book was published in 1938. Less than 100 copies remain, so orders (accompanied by your remittance) should be sent promptly to Mrs. I. A. Lupient Treasurer, Minnesota Ornithologists' Union, 212 Bedford St. S. E. Minneapolis, Minn.—Gustav Swanson

The Minnesota Ornithologists' Union

The Minnesota Ornithologists' Union, formed in 1938 by three local bird clubs representing Duluth, St. Cloud, and Minneapolis, now (1944) has 8 affiliated local clubs and a total membership of 193 individuals. The activities of the M. O. U. are designed to stimulate interest in the study and conservation of Minnesota birds. It publishes a quarterly magazine, "The Flicker", which all members receive, and holds its annual meeting in mid-May, when an interesting field trip can be combined with the indoor afternoon and evening program. The annual meetings have rotated thus far between St. Cloud, Duluth, and Minneapolis, where the majority of members are located.

The M. O. U. sponsors an annual Christmas bird count and an annual survey of birds nesting in Minnesota, the results of which are published in "The Flicker". It is represented on the Board of Directors of the Minnesota Conservation Federation together with other statewide organizations interested in conservation in this state.

The M. O. U. invites the membership of all individuals and of all Bird Clubs in the state, and correspondence to that end may be addressed to the secretary, or simply to the University of Minnesota Museum of Natural History, from which it will be properly forwarded. An individual may join through an affiliated club, or directly as a member-at-large. In either case, annual dues are one dollar. Those living near one of the affiliated clubs are urged to join through one of them, and take part in its activities, because it is through its affiliated clubs that the M. O. U. gains strength.

A club does not lose its identity in any way through affiliation with the M. O. U. It is simply afforded an opportunity for becoming acquainted with bird students in other parts of the state and what they are doing, and it is afforded also a magazine in which to publish items of interest. The treasurer of each affiliated club remits 75¢ a year to the M. O. U. treasurer for each person who wishes to belong to the M. O. U. and receive "The Flicker". Most affiliated clubs charge \$1.00 for membership in the local club and the M. O. U., retaining 25¢ of each membership for local expenses. The M. O. U. invites affiliation of all local bird clubs in the state, and encourages the organizing of clubs in areas where none is now present. The hope is to be truly representative of the bird students and bird lovers of Minnesota.

The present 1944 officers of the M. O. U. and the affiliated clubs as of January, 1944 are listed inside the cover of this issue of "The Flicker".

Minnesota Ornithologists' Union

Treasurer's Report December 31, 1943

Receipts

Received of Mary I. Elwell, Former Treasurer, Dec. 1, 1942	53.20
Dues	161.65
Extra Copies of The Flicker	2.50
Books	66.73
Exchange	.05

Disbursements

Publishing The Flicker	107.88
Books	57.25
Expense Books	10.18
Stationary and Postage	1.98
Banking Expense	1.50
Book for Membership List	.15
Total Receipts	<hr/> 284.13
Total Disbursements	178.94
Cash on Hand Dec. 31, 1943	105.19
	<hr/> 284.13
	284.13

Cash on Hand Dec. 31, 1943	105.19
Investment in Books	7.20
	<hr/> 112.39

Respectfully submitted,

Mrs. I. A. Lupient, Treasurer, M. O. U.

Minnesota Ornithologists' Union

Affiliated Societies

CLOQUET BIRD CLUB

Officers: President, Miss Marie Kennedy; Vice-President, Miss Annie Musto; Secretary-Treasurer, Miss Louise Stender; Editor, Miss Ellen Wilson.

Meetings are held the first and third Thursdays of each month in the Cloquet High School at 7:30 p. m.

DULUTH BIRD CLUB

Officers: President, Miss Alma Chesley; Vice-President, Mrs. Lee Taylor; Secretary, Miss Francis Riddle; Treasurer, Miss Hulda Adams.

Meetings are held the second Wednesday of each month at 7:45 p. m. at the Duluth State Teachers College.

LAKEVIEW BRANCH OF THE DULUTH BIRD CLUB

Officers: President, Mrs. W. C. Olin; Vice-President, Mr. John Thomas; Secretary-Treasurer, Mrs. Wm. Wernowski.

Meetings are held the fourth Wednesday of each month at 8:00 p. m. in the homes of the members.

MINNEAPOLIS AUDUBON SOCIETY

Officers: President, Mrs. I. A. Lupient; Vice-President, Mrs. E. D. Swedenborg; Treasurer, Mrs. W. B. Young; Recording Secretary, Miss Anna Klint; Corresponding Secretary, Mrs. F. W. Brown; Field Secretary, Mrs. J. A. Thompson; Auditor, Mrs. Stuart Green.

Meetings are held the first Friday of each month at 2:00 p. m. at the Walker Branch Library. Field trips during April and May on Tuesdays, Wednesdays, and Fridays.

MINNEAPOLIS BIRD CLUB

Officers: President, Miss Amy Chambers; Vice-President, Mr. Luther B. Gilbert; Secretary, Miss Severena C. Holmberg; Treasurer, Miss Helen Towle; M. O. U. Representative, Miss Florence Nelson.

Meetings are held the first and third Tuesdays of each month at 7:30 p. m. at the Minneapolis Public Library.

MINNESOTA BIRD CLUB

Officers: President, Arnold B. Erickson; Vice-President, Kenneth Carlander; Secretary-Treasurer, W. J. Breckenridge.

Meetings are held the second Thursday of each month, except in June, July, August, and September, at 8:00 p. m. at the Minnesota Museum of Natural History.

ST. CLOUD BIRD CLUB

Officers: President, Mrs. A. J. Trainor; Vice-President, Miss Regina Martini; Secretary-Treasurer, Mrs. Geo. W. Lehrke.

Meetings are held the first Wednesday of each month October through March at 8:00 p. m. in the Central Junior High School.

T. S. ROBERTS ORNITHOLOGICAL CLUB

Officers: President, Leon Schertler; Vice-President, Dorothy Brown; Secretary-Treasurer, Genevieve Lehn; Advisor, Prof. G. W. Friedrich.

Meetings are held bi-monthly February through May at the St. Cloud Teachers College.

Minnesota Ornithologists' Union

Affiliated Societies

CLOQUET BIRD CLUB

Officers: President, Miss Edith Sanford; Vice-President, Miss Marie Kennedy; Secretary-Treasurer, Miss Louis Stender; Editor, Miss Ellen E. Wilson.

Meetings are held the first and third Thursdays of each month in the Cloquet High School at 7:30 p. m.

DULUTH BIRD CLUB

Officers: President, Miss Alma Chesley; Vice-President, Mrs. Lee Taylor; Secretary, Miss Frances Riddle; Treasurer, Miss Hulda Adams.

Meetings are held the second Wednesday of each month at 7:45 p. m. at the Duluth State Teachers College.

LAKEVIEW BRANCH OF THE DULUTH BIRD CLUB

Officers: President, Mrs. W. C. Olin; Vice-President, Mr. John Thomas; Secretary-Treasurer, Mrs. Wm. Wernowsky.

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