

The passenger pigeon. Volume 27, Number 4 Winter 1965

Madison, Wis.: Wisconsin Society for Ornithology, Winter 1965

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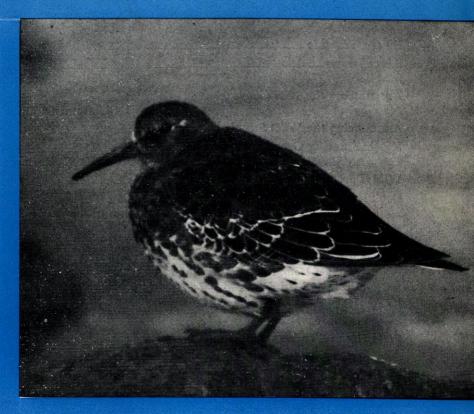
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A MAGAZINE OF WISCONSIN BIRD STUDY

Passenger Pigeon=



Winter 1965

VOLUME 27 NUMBER 4

PURPLE SANDPIPER
PHOTO BY EDWARD PRINS

PUBLISHED QUARTERLY BY

THE WISCONSIN SOCIETY FOR ORNITHOLOGY, INC.

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THIS ISSUE WAS PUBLISHED ON FEBRUARY 15, 1966

THE PASSENGER PIGEON, official publication of the Wisconsin Society for Ornithology, Inc., is published quarterly at 646 Knickerbocker Street, Madison, Wisconsin 53711. Classes of membership and annual dues: Active \$3.00 (Students \$2.00). Husband-and-Wife \$4.00. Sustaining \$5.00 or more. Life \$75.00. Patron \$100 or more. Library \$2.00. At least \$1.75 of each annual membership (\$1.50 in case of a student membership and Wisconsin Library subscriptions) is set aside to cover subscription to The Passenger Pigeon. Send membership dues to the membership chairman, Mrs. LeRoy Mattern, 404 Fern Lane, Wausau, Wisconsin 54401. Send change of address to the membership chairman. Manuscripts are invited. Send them to the editor, Nils P. Dahlstrand, 814 Birch Street, Rhinelander, Wisconsin 54501.

BARN SWALLOW OBSERVATIONS

By MARY HAVEN NELSON

Years ago I remember saying, "Someday, when I have time, I intend to make some nest studies." At that time I never intended, though, that it would be Barn Swallow nests. But when a bird is so obliging that one is able to observe it from inside the house, and thus avoid the terrible heat of a makeshift blind or the aching bones from sitting too long on damp ground—when one can sit inside during the noon hour, for instance with sandwich, ice tea and a notebook at hand, and no mosquitoes or flies—one easily settles for Barn Swallows rather than Least Bitterns or Cerulean Warblers.

Spring Arrival Dates

In the first years of our owning a farm in Ottawa township, Waukesha county, I only kept a record of spring arrival dates of the Barn Swallow along with the other birds. From my field notes the first spring arrival dates on the farm are as follows: 1954—April 18; 1955—April 19; 1956—April 15 (This is the earliest date, which is surprising as my spring wild flower dates are late for that year); 1957—May 1; 1958—April 22; 1959—April 25; 1960—April 24; 1961—May 2; 1962—May 7; 1963—April 17; and 1964—April 30.

In 1954 we noticed that the Barn Swallows were building nests directly over the electric light fixtures in the barn. This seemed quite ingenious, since the bulb socket gave each nest proper support and yet the cats belonging to the tenant farmer could not walk along the wires to reach the nests.

We built our home and moved to the farm in 1956, but it was not until 1959 that the Barn Swallows made an attempt to nest at our house. I noticed on May 30 of that year that Barn Swallows were flying into the corner of the front porch where there was a mud daubers nest. This "nest" had been there for two years. A mud dauber was busy adding another chamber to it. On May 31 a Barn Swallow egg, broken, lay on the floor under it. It appeared that the swallows must be in great need of a nest. On June 1, the swallows brought mud and began plastering it on the top and sides of the mud dauber's nest. On June 2, they were adding dry grass as well as mud to the nest. They came in quick succession, sometimes one having to wait for the other. The waiting bird flew out, circled around and came back to place its mud. They came to the nest with mud 43 times in one hour. A third swallow appeared but was driven away. When putting the mud on the nest and pressing it in with their bills, they curled around the nest and vibrated their wings and tail while maintaining their balance. In watching nest building in other years, when there was a firm foundation under the nest, I never saw them do this vibrating. The pair worked for about two hours and then sat on the roof preening. When I looked out to check on their progress later I found that the mud dauber nest and all had fallen to the floor! The swallows started to work frantically trying to get mud to stick to the

wall but it kept falling off. I have seen Barn Swallow nests without any support under them, but perhaps they were against unpainted walls. The next evening Charlie nailed a shelf seven inches from the ceiling for them but they did not accept it and disappeared.

Every year since then, however, they have used this shelf, and in other years two shelves placed on the lower porch. In 1961 they began incubating eggs on the upper porch on June 12 and successfully reared four young in it. The adults kept coming back after the young left to inspect and sit on this nest but never laid eggs a second time. I cared for an injured Barn Swallow found in the garage at this time. It was an adult bird with paralyzed legs. I fed it hundreds of flies and moths every day plus some hamburger. Even after it reached the point of satiation on hamburger it never refused a fly, once accepting 125 flies and moths between 5 p. m. and 9 p. m.

The first shelf placed on the lower porch is 3¾ inches deep and 9 inches from the ceiling. A pair looked it over on May 21, 1961, and started bringing mud the next day. This nest reared five young. On July 24 the same year, Barn Swallows started incubating again in the same nest. The three young reared in this nest left August 25. At 5 p. m. that day I saw all three sitting on the window sill being fed by a parent. At least 30 Barn Swallows were swooping around or sitting on the roof. Numbers of Barn Swallows had been doing this for the last week as if attracted to the nest or waiting for the young to leave the nest. Much to my surprise the young were back in the nest at 9 p. m. and spent that night and the next in the nest. No young were seen in the nest after 8 a. m. on August 27.

In 1962, Barn Swallows began bringing mud on May 15 to add to last year's nest on the upper porch. On May 17 they were still adding mud when another pair flew in and fighting occurred. On May 21 one egg was in the nest. The last of the five young that were raised in this nest left June 29. I noticed two young back in the nest at 8 a. m. on July 3. Three days later Barn Swallows started laying eggs again in this nest. Six young were successfully reared in this sescond nesting. My notes indicate that most of the young left the nest on August 10, but there were at least three back in the nest by 10:30 p. m. that night, all facing the wall.

On May 11, 1962, Barn Swallows flew around and sat on last year's nest on the lower porch. For some reason this old nest or site did not suit them and they kept trying to stick mud to the sides of the wall at another spot on the porch. Finally we put up a new shelf for them, 41/4 inches from the ceiling and only 2 inches deep. These dimensions proved satisfactory, and four young were successfully reared in this nest. On July 2 I had feared they would die when it rained all day and I did not see the parents feed them. Two young left the nest on July 17 and the other two July 18. One young was back in the nest at 8:00 a. m. on July 20 and from the droppings on the floor had been there all night. There was no second nesting on this porch in 1962.

In 1963, although swallows flew in to inspect both of last year's nests on April 17 and began work on the upper porch nest on April 27,

no young were successfully raised. One egg was in the upper porch nest on May 11 but incubation was done only about half the time, and in the first week in June one new young and eggshell was found on the floor and another egg which appeared infertile was found in the nest. The nest was deserted. I believe the male had disappeared previously.

I decided that in 1964 I would keep more detailed records of Barn Swallow activities, and as I was particularly intrigued by the young returning to the nest, I would study that feature.

1964 Observations

Upper porch: We removed the old nest from the upper porch shelf. It was a high nest since the birds in 1962 had built on top of the 1961 nest and a bit more was added in 1963. We thought it should be removed and the birds should start over to remove danger of a build up of parasites from the previous years. We also wondered if, as part of the bond formation, the birds need to carry mud to build a nest. There was little room to add mud in 1963 and we wondered if this might possibly have caused the male to desert his nest.

May 7, 1964. A pair at upper nest carried some mud today.

May 24. Five eggs in nest; incubating bird flies off every time we go out on porch.

June 24. Four well-feathered young in nest. When we go outside the parents call and the young respond by crouching low in the nest. Three leave the nest between 9:00 and 9:45 a. m. but by 10:15 a. m. all four are in the nest. They spent the night with heads all facing the wall.

June 26. At 7:20 a. m. all four young are in nest, two are flapping their wings. The adults swoop in and around porch pillars calling as if trying to get young out of the nest. At 7:30 a. m. only two young are left in nest, one clings to outside of nest flapping wings. At 11:45 a. m. only one young left in nest, but while I was watching one returns to nest and then I see a third one return to nest. It flies well and settles into nest. A parent comes and feeds them in the nest. I watched for 45 minutes between 12:00 and 12:45 p. m. In this time the three young in the nest were fed 19 times, sometimes in rapid succession. During this time the parents also swooped in and out 6 times without feeding (perhaps trying to urge them off?). The young preen, look around for insects on the wall, two back off the nest to defecate, the third clings to side of nest and exercises its wings. I see the fourth young in the oak which is about 30 feet from the nest. By 3 o'clock this young has also returned to the nest and the parents are feeding. At 5 o'clock only three young are in the nest, at 5:22 p. m. only one young remains in the nest, but at 7:40 p. m. all four young are in the nest. The voices of the young are on a lower key than that of the adults.

June 27. The nest is empty at 7:30 a. m. but at 9:30 a. m. two young are back in the nest. The adults swoop in and out but do not feed. The young stay only ten minutes, and I see no young in the nest the rest of the day. The adults, however, often swoop in and out as if to check. At 10:30 p. m. at least three young are back in the nest.

June 28. 6:50 a.m. Nest empty, adults still calling and swooping in. 11:00 a.m. Two adults and three young are sitting in the oak. The parents do not scold or dive at me when I walk under the tree as they did when the young were helpless in the nest. It seemed that the older the nestlings were the more zealous the parents became in their attacks. No young return to the nest at night.

June 29. Adults swoop in to check on nest. In afternoon I see a parent feed a young in mid air. The young, flying, approaches an adult, flying, and the adult feeds young. They are about 20 feet from the ground.

June 30. Three adults swoop in to nest, repeating this several times. One leaves, two perch in oak, then one goes to nest and stands on it for a moment.

July 1. 9:40 a. m. Adults flew in to nest. One stood on nest for a moment and picked at it. Later in the morning I found a broken swallow egg under the nest.

Was this the fifth egg in the nest, perhaps infertile? And if so, did the swallow intentionally remove it from the nest? It must have been freshly laid, as I must admit that, unless I eat it, I can't tell a fresh egg from an old one.

First nest on lower porch: My notes for this nesting are sketchy. We left the old nest in place on the inner platform and the swallows built it up to double its height—four inches. It has several strands of white cow hair hanging from it. From May 7 through May 12 I noticed that at night both birds stand on this nest as if guarding it. The night of May 13 one bird sits down on the nest and incubation starts. On May 15 I find only two eggs in the nest. On June 7, however, there are three tiny heads sticking up in the nest. Incubation obviously started before the last egg was laid. I find no mention of this in Bent's Life Histories of Swallows. Unfortunately, we were away from June 18 to June 22 so we do not know just when the young left the nest.

Second nest on lower porch: July 2. Barn Swallows are starting a new nest on the outer shelf which is only 13 inches from the edge of the porch. This shelf has one flaw for Barn Swallows in that it is too wide—3¾ inches, so that droppings of the young do not fall to the floor of the porch but stay on the shelf. I would recommend a two inch shelf. If droppings on the floor are objectionable a piece of cardboard could be placed there while the birds are in the nest. The swallows are bringing mud and have less than ½ inch done. A long white cow hair is hanging from it.

July 3. The swallows are now getting into center of nest to work on it. One is placing a straw on the edge when the other flies in with a big mud pellet which it places on the rim. The part of nest attached to house is higher than outer rim. This shelf is not as well protected from view or rain as the old nest which is still in excellent condition.

July 4. The nest is now an inch high, higher near the wall.

July 5. The nest is now about two inches high. The birds are molding it, getting down into it so that they can scarcely be seen. Sometimes they put the mud on in a hurry and sometimes they take a full minute to arrange it and pound it into place. Wherever they are getting the mud, undoubtedly along the edge of the pond, it takes them about two minutes for the round trip. They can make the round trip in a minute and a half. Sometimes they move in and out so fast that I fear I will miss a bird by looking down at my notes. I see a bird bring a long piece of dry grass and bend it around the inside of the nest.

July 6. 7:48 a. m.: A swallow comes to the nest without mud, crouches down in it for two minutes, leaves and comes back and repeats it. 8:09 a. m.: Female gets into nest and works on rim, turning all the way around in nest as if molding it. She does this for six minutes. Her head is down a good deal of the time as if smoothing the inner surface. 8:16 a. m.: Female comes to nest, male arrives and gets on her back, then they both leave. 8:25 a. m.: Swallow comes to the nest with white feather. I feel that this is a sign the nest is complete as the feathers are the lining for the eggs. Later in the morning the female sits on the nest for several minutes while the male stands on the bench and sings. No birds were at the nest for an hour at noon and no birds were at the nest at night.

July 7. Female on nest for 15 minutes from 7:45 a. m. until 8:00 a. m. During this time the male swoops in and out, then stands on bench. I check on nest six times during the day and again at night and always find a bird on it. It looks like incubation has started.

July 8. 7:00 a.m.: No bird on the nest. I climb a stepladder and find two eggs, white with brown speckles. Again it is evident that the Barn Swallow incubates before all the eggs are laid. It is a foggy morning, 70 degrees, and no bird sits on the nest for 50 minutes. Then the female comes to the nest, settles down on the eggs so that only top of head is visible. The male comes in and sits on bench, a fly alights on bench, he chases it off, catches it and returns. Several times during the next ten min-

utes he leaves and then returns to bench. I check several times during the day and again at night and always find a bird on the nest.

July 9. The eggs are incubated almost constantly. When the birds change places it is done so quickly the eggs are uncovered only an instant. One clocked incubation period was 20 minutes today.

July 10. With this pair I finally feel that I can tell the difference between the male and the female. The male is brighter in color, has dark maroon under tail coverts and has a deeper maroon on the forehead and throat. This male also has a badly worn left tail feather. The female's under tail coverts are light buffy. As I am sitting below them this is easily visible if the birds sit on the nest facing away from the house. While the female is on the nest a chipmunk climbs flowering crab about four feet from the porch. I see him stuffing his cheeks with the little green apples and carrying them away for storage. The male swallow swoops at the chipmunk until the latter moves away from the area. One clocked male incubation period was ten minutes today. There are now four eggs in the nest.

July 11. Five eggs are in the nest.

July 12. The male swallow repeatedly swoops down on a grackle in the yard some distance from the nest. He swoops so close that the grackle jumps and moves a bit. I doubt the grackle knows what it is all about, and he doesn't fly away, but by making him jump a foot at a time the swallow succeeds in getting him further from the site of the nest.

July 14. During the noon hour I find the male on the nest 13½ minutes, then the female 11 minutes, then the male 14½ minutes, and the female 20 minutes, making a total of 28 minutes for the male and 31 for the female. When I watch again at 6:15 p. m. I find the female on the nest for 14 minutes, relieved by the male for only 5 minutes and back on the nest for 16 minutes. Occasionally the male perches on a clematis vine growing near the porch. At 6:52 p. m. the female leaves the nest and the male leaves the vine and they are gone for two minutes, leaving the eggs unguarded. This is unusual. Then they return to their former positions. A Robin is very close to the porch but they pay no attention to it. Does this mean they know the harmless from the harmful?

July 15. Between 6:26 and 7:30 p. m., 64 minutes, the female was at the nest without relief. It is 80 degrees and she is restless, getting up on the rim of the nest several times to preen. As she does I see that the base of the dark back feather is white and the base of the rusty breast feather is dark. She stretches her wings and spreads her tail and scratches her head with a foot above the wing.

July 16. It is 92 degrees and the birds are very restless. They get up on the rim of the nest often, are actually guarding the nest now rather than incubating. In a 50 minute period they change places eight times, the female being at the nest 32 minutes and the male only 18 minutes.

July 17. 10:30 a. m.: In spite of the heat the female is sunning herself on the hot window sill! It is 92 degrees again at noon. The birds have their beaks open and sometimes raise their wings a bit when at the nest as if to cool the body. During the noon hour the female is at the nest 48 minutes and the male only 22. The female had one 33-minute period but was up on the rim most of the time.

July 18. It is a rainy cool day, only 70 degrees at noon. The female crouches low on the nest so that she can scarcely be seen. The male perches on the clematis getting wet in the rain. When it stops raining, both birds leave and the eggs are unguarded for seven minutes.

July 19. It is 90 degrees again at noon. During a 24-minute period the birds change places five times, the male being at the nest $7\frac{1}{2}$ minutes and the female $16\frac{1}{2}$. The male, however, sits down on the eggs more of the time. A Catbird in the crabapple tree does not disturb the swallows.

July 20. It is 94 degrees by noon and the same procedure occurs as on the other hot days with the birds getting up on the rim of the nest much of the time during the middle of the day. While the female is at the nest, three swallows fly in. The mate settles on the nest with the female, and the other two fly in and out and go to the other nest shelf. They stay only a minute, and when they leave the male also leaves.

- July 21. Other adult swallows fly into the porch several times during the day. A strange male alights on the nest shelf with the female. She pecks at him and he leaves. The female then turns the eggs and cleans the bottom of the nest.
- July 22. It is 94 degrees at noon. The female is again cleaning and nibbling at something in the bottom of the nest.
- July 23. At noon I see the adults bringing food to the nest. Counting July 7, the day the first egg was laid, this is the 17th day. The parents bring food and then sit down on the nest until the other parent comes with food. At 8:43 p. m. both adults are standing on the rim of the nest, one on one side, one on the other.
- July 24. There are three tiny fuzzy gray young in the nest. Twice I see the male parent pick up and eat a dropping. The female, like a human mother who insists on giving her children castoria every night, pounds down into the nest, comes up with a dropping and eats it. She does this again and again. When strange swallows fly in, the mate again gets on the nest with the female.
- July 25. The same procedure as day before, both adults feeding and then sitting down on the nest.
 - July 26. I see male carry away droppings for first time.
- July 27. 7:25 a. m.: The adults are feeding very rapidly, coming three times in one minute. They are coming so fast I haven't the time to see the sex. I can see heads of the young today without getting on ladder.
- July 28. I see four heads of the young. The edges of their bills are white. The female feeds and then stays on the rim to preen. Although their eyes are closed, the young apparently feel her presence as she moves and keep opening their bills. She is a fussy housekeeper and spends a great deal of time picking parasites off the heads of the young, pounding into the nest for droppings, and cleaning her own feathers. The young are fed 24 times in an hour at noon today, 14 times by the female and 10 times by the male.
- July 30. 6:50 a.m.: 62 degrees and the female is on the nest covering the young. Both adults dive bomb a grackle in crabapple tree until he leaves, but later when the lawn is filled with grackles they give up. During a 30-minute period at noon today the young are fed 12 times, equally divided between the male and female. There are now five young visible. Probably because it rained a good part of the day the parents are feeding again heavily at 8:20 p. m. I turn on the outside lights to help the birds. In a 10½-minute period the young are fed 10 times! For the first time no adult stays at the nest at night.
- July 31. During a 20-minute period at noon the young are fed 13 times. There are droppings on the floor under the nest now which means that some of the young are able to back off the nest to defecate.
- August 2. It is 99 degrees at 2:30 p. m. The young are hanging their heads over the edge of the nest with bills open. A neighbor tells me a brood on their front porch which is on the west side all died during the 90 degree weather. She believes they died of the heat. The top of the nest was only $1\frac{1}{2}$ inches from the ceiling. Her porch has a tar paper roof.
- August 3. With the sun on the thermometer it is 100 degrees at 3:30 p. m. The parents are often inactive at this time of day, and today the young are only fed once in 15 minutes. The female, perching on the clematis, does not even fly at a chipmunk directly below her.
- August 4: Two of the young are preening and their eyes are open. At 8:00 p. m. they are up on the rim of the nest being fed.
- August 5. 8:20 a. m.: Today for the first time the adults feed the young while on the wing without taking time to put their feet on the nest or shelf. They are feeding every minute now.
- August 6. The young are again up on the rim of the nest, and one is stretching its wings. Their backs are dark now and breasts dull rusty. There are still downy tufts on their heads.
- August 8. 7:45 a. m. Ten Barn Swallows are sitting on the bedroom awning bars singing. This is on the same side of the house as the lower porch. One of these birds

gets into the nest on the other shelf for five minutes. Then the strange swallows start swooping in and around the porch pillar. When I look again, one young has left the nest. This is the 17th day since the adults started feeding. The four remaining yond the nest, the droppings have built half way up on the outside of the nest. they are fed by the adults only four times.

August 9. There are still four young in the nest. Because the shelf protrudes beyond the nest, the droppings have built half way up on the outside of the nest.

August 10. At 7:30 a. m. I see only three young in the nest, but at 9:30 a. m. when I check again I find three live young in the nest plus a dead one hanging out of the nest with its head on the shelf. Did it fly out and then back to the nest and injure itself in some way? Or was it in the bottom of the nest early this morning, and, with the movement of the other young, is being worked out of the nest?

August 11. Three young ones are in the nest at 6:53 a.m. but by 9:00 a.m. there are only two left. The dead one is still hanging there. I am afraid to remove it lest all the young, at their advanced stage of development, leave. Many swallows are flying around the porch again. In August, when young are ready to leave a nest, additional swallows seem attracted to it.

August 12. At 7:25 a. m. there are two, so one has returned. I see two young with white bill rims on the roof with a group of swallows.

August 13. The dead young hanging by one foot to the nesting material finally falls off. At 6:50 a. m. the parents are feeding two young in the nest. At 8:45 a. m. only one young is left. Many swallows are now flying close to the nest as if to encourage the remaining one off. One year I thought perhaps other swallows were coming in to help feed the young, but when I watch closely I see that although they are very close to the nest they do not feed. At 11:25 a. m. I see one young on the window sill being fed. The parents are also feeding the one in the nest. By noon, two young are in the nest, and two are in the nest at night.

August 14. In the early morning two young are in the nest. One leaves and goes to the window sill where it is fed. It returns to the nest, touches the bill of the nestling still there, leaves and returns again, touches the bill of the nestling again and gets into the nest with it. This young leaves and comes back several more times. All this time many swallows are flying in and out close to the nest. This goes on for two hours. The remaining nestling begs, flaps wings, walks back and forth in the nest but can't seem to take off. Finally at 9:06 a. m. he goes and the nest is empty! The first young left August 8 and the last six days later. In an hour one young is back in the nest and at night two are in the nest, facing the wall with tails sticking out. I found another dead young in the grass about five feet from the porth. It looked as if it had been dead many days, perhaps as long as the other dead one.

August 15. At 8:30 a. m. two adults and one young are on the window sill, another young on the ground below, begging for food. The parents feed the one on the sill but not the one on the ground. The young on the ground joins the family and a third young also appears. The adults feed in rapid succession. Two other young of the year (from first brood perhaps?) with shorter tails than adults but dark bills are on the trellis and flying around. At night two young are back in the nest facing the wall.

August 16. The nest is empty in the morning but one young in the early evening is in the nest and being fed.

August 17. Two young are on the window sill and the nest is empty.

August 18. At night two young are in the nest facing the wall.

August 19. At 6:40 a. m. two young are in the nest facing out and a parent is feeding them. This amazed me that they were still being fed in the nest. This is five days after the last young took his initial flight. The nest is empty at 7:00 a. m. but two young are back again by 9:00 a. m. They only stay ten minutes. Two are in the nest at night.

August 20. Two young in nest at night.

August 21. No bird in nest at night.

August 22. I forgot to check.

August 23. One young is in the nest at night. This is surprising when it must have spent at least the night of August 21 elsewhere. The last young to take his initial flight from the nest did so on August 14. This is ten nights later and there is still one young in the nest. The inevitable conclusion is that swallows love their nest. The adults started bringing mud for this nest on July 2 and one young spent the night in the nest on August 23, 53 days in all.

August 24-25. I check and find the nest empty. I see three young on the awning bars with white on the bill.

Barn nests: August 9. Charlie reports a Barn Swallow nest with five young, fully developed, in the barn in the usual place over the electric light fixture.

August 15. Two young are still in the nest. The farmer says two left August 14, and one left August 15 in the morning.

August 16. The farmer reports that there were three young in the nest early this morning when he went out to milk. Then one left while he was in the barn. 7:45 p. m.: Charlie reports no swallows in their own nest, but three young are in a partially finished nest, also built over a light fixture, and closer to the barn door, and two young are sitting on the wire next to this nest.

The farmer tells me that he has been fogging the barn every other day with a product called Kwik-Kil made by the Harrison Oil Co. I was most interested in the fact that the Barn Swallows, particularly the young in the nest, were able to survive this repeated spraying. I note there is no DDT in Kwik-Kil. Fortunately the farmer cannot use DDT around dairy cattle. I wrote the Harrison Oil Co. in Milwaukee, asking which of the 10 or more ingredients listed on the can killed the flies without apparently harming the birds. As I have had no reply I wonder if it was a matter of luck. I hope to check more closely on the effect on nestlings next year.

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Are Christmas Bird Counts Accurate?

By KARL E. BARTEL

Christmas bird counts, as they are taken now, are only accurate for the day on which the counts are taken. They do not show the exact species and individuals that are present in any prescribed area during the count period. The census reports acknowledge this by stating, "Seen in area during count period, but not on count day."

I spent four days—December 31 through January 3, 1965—at my five bird banding stations. The stations are located in a straight line with the two extreme ones three miles apart. I drove this distance and tended each station at approximate half-hour intervals on each of the four days. This was done from 8:00 a. m. to 4:30 p. m. each day. Each station was checked at exactly the same time on all four days. Sixty miles were driven each day.

Birds were recorded at the stations and also between them. No birds were counted twice (the crow count may be the exception). The largest number of individuals seen at any certain spot was tallied. Many of the birds were banded and the numbers checked, so there was no duplication.

Weather conditions for the four days can be summarized as follows:

December 31: partly cloudy, temperature 32° to 36°.

January 1: light rain or drizzle, temperature 34° to 38°.

January 2: cloudy, temperature 31° to 35°.

January 3: sunny, temperature 32° to 40°.

I saw and recorded 22 species during the four days (see Table 1). The highest on any one day was 15. Thus, seven more species were seen because the count covered four days. Note on Table 1 that only eight species were seen on all four days. Also note that the most individuals

Table 1.

Number of Birds Observed

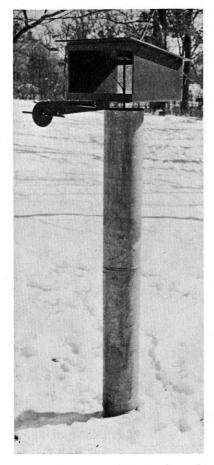
	Number of Birds Observed				
	December 31	January 1	January 2	January 3	
Red-tailed Hawk	2	2	2	1	
Red-shouldered Hawk	1	1			
Sparrow Hawk	1	1	2	1	
Ring-necked Pheasant		5		1	
Herring Gull		1	9		
Ring-billed Gull			1		
Rock Dove		44			
Mourning Dove			1		
Red-bellied Woodpecker				2	
Hairy Woodpecker		1	1	1	
Downy Woodpecker		3	3	4	
Blue Jay		1		2	
Crow		37	25	28	
Black-capped Chickadee		9	14	12	
Tufted Titmouse				1	
White-breasted Nuthatch	3	1	4	1	
Starling	13	7	16	. 7	
Common Grackle			1		
Cardinal			2	2	
Goldfinch	3				
Slate-colored Junco	4	11	5	2	
Tree Sparrow		14	3		
Total Species (22)		. 15	15	14	
Total Individuals		138	89	65	

were seen on the day of light rain (January 1), while the least number of individuals and species were seen on the sunny day (January 3).

If Christmas bird counts are to be accurate, every bird seen during the count period should be recorded. Thus, if a species is seen at a feeding station within the prescribed area, it should be recorded by the compiler. This should be done even though the person seeing the bird was not with the bird count group as long as it was observed during the bird count period. This may involve a bit of correspondence, but it is the most logical way of having an accurate Christmas bird count.

2528 W. Collins Street Blue Island, Illinois

SQUIRREL-PROOF BIRD FEEDER



R. H. Wolff, of Franklin in Sheboygan county, squirrel-proofs his bird feeders by enclosing the support in sheet metal with a diameter of 6 inches or more. An air duct from a scrapped gravity furnace works fine.

Mr. Wolff says that after a week of trying, frustrated squirrels give up the idea of climbing the slippery sheet metal that is too wide to "hug."

Although he runs a duct all the way from the ground up to the feeder, Mr. Wolff believes a 3-foot section placed just below the feeder would do the job if the bottom were plugged to keep squirrels from going up the center.

Of course, feeders have to be kept away from trees, otherwise squirrels will jump from them to the feeders.—From Wisconsin Conservation Bulletin.



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Notes on the Winter Birds of the Apostle Islands

By JAMES R. BEER and BURTON L. DAHLBERG

In 1957 and 1958 Edward Beals spent over two months on the Apostle Islands and subsequently published his notes on the summer birds of the area (Beals, E. 1958. Notes on the summer birds of the Apostle Island. **The Passenger Pigeon** 20(4):151-160). During the winters of 1954 through 1960 we spent several days on Stockton Island, one of the larger islands in the Apostle Island group, searching for signs of marten which had been planted on the island (Table 1). In all, some 54 man-days of obser-

·Table..1. Date of observations, number of observers and number of species seen each year.

Date Obs	servers	Miles traveled	Species seen
March 15, 1954	7	33.0	9
March 1-2, 1955	10	19.5	4
February 20, 1956	8	17.5	5
February 27, 1957	7	20.7	8
February 21, 1958	8	20.5	10
March 18, 1959	8	24.0	5
March 18, 1960	6	20.0	5
Total	54	155.2	

vations were made with about 155 miles of travel on snowshoes. For a description of the area see Beals (op. cit.). Since a list of the summer birds of the area has been published it is appropriate to supplement this with the list of winter birds observed by us.

Observations

American Goldeneye. A group of about 30 were seen in open water off the north shore of Stockton Island in 1957. This species was not reported by Beals and is thus probably only a winter resident.

Bald Eagle. In 1954 we observed two, in 1957 three, and in 1958 one of these majestic birds. Beals reported this species as nesting on the islands in small numbers. The birds are probably permanent residents. Sharp-tailed Grouse. While this species is no longer present on Stock-

Paper No. 1225 Misc. Journal Series, Minnesota Agricultural Experiment Station, St. Paul, Minnesota 55101.

ton Island the notes of one of us (Dahlberg) are of historical interest. In October of 1940 a week was spent on the island. There were two or three flocks of Sharptailed Grouse on the island. The central portion of the island was burned in the late 1920's and again in the early 1930's and provided habitat suitable for Sharptailed Grouse. The grouse habitat was rapidly deteriorating by 1940 and in 1946 we found no Sharptails on the island.

Herring Gull. This gull was identified during the visits in 1954, 1958, and 1960. Gulls which may have been this species were also seen in 1957. This was reported to be the most common summer bird by Beals. It is a permanent resident and leaves only if open water is absent in the vicinity.

Great Horned Owl. On March 3, 1954, George Curran and Ray Vallem reported seeing this owl while cruising deer yards on Stockton Island.

Pileated Woodpecker. Individuals were seen in 1954, 1957, 1959, and 1960. These also are permanent residents.

Hairy Woodpecker. This woodpecker was seen in 1954, 1956, 1957, and 1958. It is a regular winter resident although found only in small numbers. In 1956 only two were seen. In 1954, 1957, and 1958 it was reported but the numbers were not recorded.

Downy Woodpecker. This is one of the most common winter birds, being much more abundant than the Hairy Woodpecker. It was seen each winter and in 1956 25 were seen. Since only one bird was seen by Beals it is probably mainly a winter resident.

Blue Jay. An occasional Blue Jay was seen in 1957, 1958, and 1960. It was by no means common. This contrasts with Beals summer observations that it was common everywhere.

Raven. Ravens are regular permanent residents on the area. We saw eight in 1956, ten in 1957, five in 1958, and they were reported but not counted in 1954, 1955, 1959, and 1960.

Black-capped Chickadee. Seven chickadees were seen in 1956 and it was reported but not counted in 1954, 1955, 1958, 1959, and 1960. It is found at all seasons of the year in limited numbers.

Red-breasted Nuthatch. This species was reported by one observer in 1956. It is apparently rather uncommon in both winter and summer.

Pine Grosbeak. In 1955 a flock of 15 and another listed in the notes as 2, of this erratic migrant, was seen.

Redpoll. Small flocks of redpolls were observed in open areas in 1954, 1957, and 1958. These are winter visitants only.

Pine Siskin. A flock of Pine Siskins was seen by one observer in 1954 and 1958. Again a winter visitant.

Red Crossbill. A small group was seen by one observer in 1958.

Discussion

Only 15 species of birds were observed during our stay on Stockton Island. This is in contrast to the 102 species seen in the summer by Beals (op. cit.). Of the fifteen, only five—American Goldeneye, Pine Grosbeak, Redpolls, Pine Siskins and Red Crossbills—were not seen in the summer

by Beals. This list can by no means be considered complete but it should indicate the species that one would be most apt to see during the winter. Stockton Island, like most northwoods areas, is not a bird watcher's paradise in the winter. The number of species present is small and the populations of these are low.

Department of Entomology, Fisheries, and Wildlife University of Minnesota St. Paul, Minnesota 55101

and

Wisconsin Conservation Department Spooner, Wisconsin 54801



A Comparison of Two Christmas Bird Counts

By DONALD J. HENDRICK

Data from Christmas bird counts for interpretive studies, especially concerning population changes, have been employed for many years. The use of these data in Wisconsin has been made with some apparent success, while at the same time their use has been severely criticized by others because of the many variables inherent in the census methods used. At best, the data gleaned from such counts certainly could have merit if caution is used and some of the more apparent variables are taken into consideration.

The following study, although simple and not entirely complete, might be used to illustrate a case in point. The study was made during the Christmas bird count for 1963, in the area around Tomahawk, in northern Lincoln county. This was the third consecutive Christmas bird count made in this area.

Similar Conditions on Counts

It was decided to make two counts this year covering the same area in both counts under the same weather conditions while varying one factor, the temperature.

The area covered in both counts consisted of 40% coniferous and 30% deciduous forest areas; 20% open field farmland with edge; 3% low brushland; 5% open water and 2% urban.

The method used during the count was as follows: (1) To count all the birds that could be identified while riding for distances varying from .3 mile to 1.4 miles and (2) to get out of the car in areas of suitable habitat for different species, stand, wait, look and listen for ½ to 5 minutes at each stop while counting all species identified during that time interval, or walking varying distances from .1 mile to .75 mile through suitable habitat. Exactly the same area was covered on both counts (84 miles by car and 2 miles on foot) including the stops and walk-ins. This was quite easily accomplished since the counts were made only a week apart so it wasn't difficult to remember where each stop was made. The walk-ins were duplicated exactly by following the foot prints made through the woods during the first walk-in. Also, each stop made on the second count was within 15 minutes of the time of day it was made on the first count.

The first count was made on December 28, 1963, and the second count was made on January 4, 1964. Both counts were made from 7:30 a. m. to 3:30 p. m. (7 hours by car and 1 hour on foot) in the areas bordering the Wisconsin, Spirit, Somo, Little Somo and Tomahawk rivers. The Wisconsin River was open for one mile below the Owens-Illinois dam, .4 mile below Grandmother Falls dam and .2 mile below King's dam. The Spirit River was open below the Spirit Flowage dam to the Wisconsin River. The Somo River was frozen over completely as were all the lakes and small streams in the area. The Little Somo River was open only in the fast water just below Somo dam, while the Tomahawk River was open .3 mile below Jersey dam.

The ground was covered with six inches of snow. There had been .15 inch of precipitation the week preceding the first count and the temperature ranged from an average high of 25.8° F. to an average low of 4.8° F. There was no precipitation in the week between the first and the second counts and the average temperature range was from 17.0° F. to 0.0° F. The weather conditions which prevailed during the two days of the counts are summarized in Table 1.

	. Weather Conditions on Da	your the count.
Weather Condition	December 28, 1963	January 4, 1964
Wind	Calm to NNW 6-8 mph	Calm to NW 8-10 mph
Temperature	5° F. to 13° F.	22° F. to 36° F.
Sky	Cloudy to clear & sunny	Cloudy to clear and sunny
Precipitation	1 hr. v. light flurry A. M.	None

It is apparent from studying the tabulations and comparisons of the two counts on Table 2 that some variable factors must have influenced the outcome of the two counts. Weather conditions other than wind velocity are generally conceded to have little or no effect on bird activity unless the velocity of the wind approaches and exceeds 20 mph.

It can be seen in Table 1 that the weather conditions which existed on the two days of the study were almost identical, or with variations so slight as to have little or no significant effect on the count of either day, with the exception of the temperature which averaged about 15° higher

on the second day. In this case then, temperature may have been an influencing factor.

There is indication on Table 2 that the activity of certain species of birds show a tendency to be quite stable under varying temperature conditions. This stability is indicated with the Downy Woodpecker, the

	No. of In	dividuals	Difference on
Species	Dec. 28	Jan. 4	Second Coun
Goldeneye	3	0	-3
Goshawk	0	2	+2
Sharp-tailed Grouse	0	1	+1
Rock Dove	10	1	-9
Hairy Woodpecker	3	1	-2
Downy Woodpecker	3	2	-1
Gray Jay	0	2	+2
Blue Jay	1	0	-1
Raven	1	0	-1
Blk-capped Chickadee	72	101	+29
Wh-br. Nuthatch	2	2	0
Red-br. Nuthatch	1	1	0
Starling	4	4	0
English Sparrow	2	30	+28
Common Redpoll	16	0	-16
Goldfinch	0	40	+40
Snow Bunting	0	45	+45

White- and Red-breasted Nuthatches and the Starling. On the other hand, the Black-capped Chickadee and the English Sparrow show a tendency to become more active during warmer temperatures and might, therefore, show greater numbers as they did in this study. This condition might well manifest itself in further studies on other species.

Still another factor, more uncontrolable and unexplainable, is circumstance or luck if you will. The three Goldeneyes just happened to be on the river where a pair of Mallards had been the two consecutive years before and just happened to be absent a week later. The Goshawks just happened to be sitting in a tall tree a quarter of a mile directly behind the elders that were being scanned for the flock of Redpolls they had contained the week before. The Goldfinches just happened to be feeding on weed seeds in a field at the time it was scanned during the second count, but not during the first count. And, the Snow Buntings just happened to be feeding on newly spread manure that wasn't present the week before.

One other important factor to be considered is the ability and zeal of the observer. This, undoubtedly, is the most elusive of all the factors that could be considered since there is no way it would manifest itself on the reports of any bird count.

This does not mean, however, that the data from censuses such as the Christmas bird count cannot be used with scientific value if the researcher retains the attitude that such counts are to be used with a positive value indicating only the presence of certain numbers of birds rather than using them to definitely identify the lack of those species of birds simply because they do not show during the count period for any one year.

If these and other variable conditions not indicated in this study are taken into consideration when evaluating census data, there is no reason why such data cannot be used to scientifically indicate changes in the status of various species of birds.

228 E. Somo Avenue Tomahawk, Wisconsin



By the Wayside ...

Dovekie in Northern Wisconsin. On November 10, 1964, Mr. Alvin Christman found a live Dovekie (Plautus alle) on his lawn in the Village of Tony, approximately 6 miles east of Ladysmith. The strange bird was brought to Postmaster Joe Peterson of Tony who kindly turned it over to me. This bird lived in my home for two days. It was very fond of



DOVEKIE

small minnows and would readily swim to catch them when placed in a bath tub half filled with water. It would refuse minnows presented to it in a small dish of water. The bird was in a weakened condition when found. Upon its death, it was turned over to the Department of Wildlife

Management at the University of Wisconsin, Madison. When autopsied, the bird proved to be an adult female, badly emaciated, and weighing 119.6 grams. The study skin, prepared by Daniel W. Anderson, is now in the Wildlife Management Department's bird-skin collection. It constitutes the third record of this species in our state.-L. C. Tiews, Game Management Division, Wisconsin Conservation Department, Ladysmith.

Northern Three-toed Woodpecker. The following is from a new member and is a model of detailed on-the-spot observations. "I had arisen about 5:30 a. m. to go bow hunting. I planned to start my hunt near a dam on the Deerskin River. Just before I reached the dam, I noticed a bird near the base of a spruce tree which had the soil eroded away from around its roots and leaned over the river at about a 30-degree angle. I could tell the bird was a woodpecker by its actions and could tell it was quite dark in color. I was able to see a patch of yellow on the crown and forehead with the aid of my field glasses. My deer hunting forgotten, I paddled quietly toward the bird. I was able to come to about 30 to 35 feet from the bird and grounded my canoe on a sand bar. I knew the bird was a Three-toed Woodpecker but I did not know what field marks were necessary to separate the two species. I had a pencil and notepad with me and began to put down a description of every field mark I could see. He was about the size of a Hairy Woodpecker, had black wings, a zebra or ladder type pattern of black and white on

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his back and sides, white under the throat and also the underbody, a lemon yellow on the crown and forehead, the two outer tail feathers were white, there was some type of facial pattern and he seemed to have a strip of white behind the neck. I watched the bird for about 20 minutes. He spent most of his time on the spruce tree but he also worked a couple of other trees and stumps and finally he disappeared back into the swamp. Later in looking up in Peterson's Guide I found that I had seen the American or Northern Three-toed Woodpecker."

Hawk Owl Comes to Wausau. The bird was first seen on December 20, 1964, perched in a lone elm tree in Wausau by Leroy and Bertha Mattern. They were able to observe it for some time, and got within 30 feet of it. They checked out all identification marks and were able to note behavior characteristics. On December 27, the day of our Christmas count, they saw it again in the same tree and had even more time to watch it. A call to Fran Hamerstrom brought her here quickly, although the bird had gone by the time she arrived. Fran observed, however, that the area was exactly the habitat which this owl prefers. We have all been making frequent trips to this spot trying to find the bird, but have had no luck. Evidently it prefers the company of the Matterns to the rest of the Wausau Bird Club members.—Mrs. Emily Bierbrauer, Wausau.

White Gyrfalcon at Shawano. On December 28, 1964, our party observed one white Gyrfalcon in a wooded area southeast of Shawano, near the southern limits of our Christmas count area. It was first noted perched in a tree and then in flight, part of the time directly over our heads. While perched in the tree, the uniform while coloring, small head and long tail were noted. When the bird took flight two things were immediately observed; one was the long pointed wings with a slight amount of gray at the tip of each wing and the second was the falcon-like flight. Its wing beats were exactly as Peterson describes them, "gull-like." The bird was observed for several minutes around 8:45 a. m. at a distance of 75 feet in good light despite the generally cloudy conditions by all three members of the party. We are absolutely positive of the identification!—Daryl Tessen, Appleton.

An Injured Golden Eagle. The Golden Eagle I am reporting was an injured bird found in November, 1964, by Errol Schlueter just west of Waukesha. He immediately contacted the Hamerstroms, who arranged permission for him to keep and care for it. Charles and Mary Nelson, Paul and I were there on December 5 when the Schlueters and Dan Berger banded and released the bird. It weighed 12 pounds and had a wingspread of 87 inches. We all agreed it was a female close to being mature.

We were pleased with the care this beautiful bird got. Mr. Schlueter kept it in a very large vacant barn. One wing was injured, though it was undetermined whether or not it had been shot. It could not fly when first picked up, but the injury soon healed and the bird was made to fly several times a day. It was in good condition and flew well when released.—Mrs. Paul Hoffmann, Waukesha.

Golden Eagle Near Evansville. February 28, 1965. The Golden Eagle was first spotted sitting on a fence post near Evansville. It then

landed in a field and appeared to be feeding near some crows. The crows seemed the size of grackles in comparison. The Balscope was brought out to view the bird better, observation was for about an hour in the afternoon at about one-quarter of a mile. The bird appeared dark brown with some light marking on the tail. It had a large bill and the back of the head looked a little lighter brown than the rest of the bird. Its size was much greater than that of a hawk. We did not get to see the underwing marking.—Mrs. John Brakefield, Evansville.

Varied Thrush Winters Near Oshkosh. February 18, 1965. We just returned from seeing a Varied Thrush! Several days ago we were told this strange bird was coming to a feeder at a home several miles from Oshkosh on the south shore of Lake Butte des Morts, and we were asked to come out and identify it. The bird had been coming to the feeder of Mrs. James Clark since some time before Christmas, she told us. It is a male bird, with the orange eye stripe, black band across the chest, and orange wing bars. We saw it several times in nearby pine trees with the use of our binoculars, and when we went into the house and watched out the window, it came within ten feet of us to feed on the ground. We watched it for at least fifteen minutes. It left only when some squirrels chased it away.

Mr. and Mrs. Owen Gromme of Milwaukee and Mr. and Mrs. Nevin James as well as Ralph and myself saw the bird. As Mr. Gromme said, "There is no question of its identity."—Mrs. Ralph Buckstaff, Oshkosh.

Winter Seasonal Editor's Note: This Varied Thrush was subsequently seen at the Clark home by many Wisconsin birders and photographed by James Fuller of Oconomowoc and other persons. It remained at least through March 6, 1965.

Harris's Sparrow in Shawano County for the Winter. Here is a brief resume of our observation of a Harris's Sparrow which visited our feeding station quite regularly during the winter months from December, 1964, to April 7, 1965. The bird came a number of times early in December but we did not consider its identity established until December 15. Appearance pointed toward a juvenile as the black markings under the throat were not as full as pictured for the adult and the crest was not fully black.

He was a loner. At the feeder he was at first selfish, but later tolerated the bolder of the visiting Juncos, seemed to tolerate the Purple Finches, but deferred to the Blue Jays. From December to April his presence was recorded on 59 different days. However, as the date record was not started until January 12, and as he may have made visits when we were not present to see him, we believe he may be said to have been a daily visitor even in snowy weather and at 22° below zero. He was not seen again after April 7, 1965.—Lawrence H. Schultz, Bowler.

Blue Grosbeak Near Marinette. I was interested in the report, "Yet Another Sighting of Blue Grosbeaks" (1965 Passenger Pigeon 12).

My wife and I were about 15 miles northwest of Marinette at a place called Twin Islands on the Menominee River. It is a park and wayside. It was on May 16, 1965. We saw two male Blue Grosbeaks and one female. They were feeding in the grass near one of the large trash

collectors. I thought at first glance that they were Indigo Buntings, but with binoculars I noticed the darker wing and the grosbeak bill. The female coloring also confirmed my decision when I checked in my copy of Gromme's Birds of Wisconsin at home.

We were pleased to see birds as rare as this . . . I have never before reported any sightings of any birds before, but we are very interested. —Walter E. Pfleger, Marinette.

More About the Varied Thrush Near Oshkosh. On February 13, 1965, I observed a Varied Thrush at the feeder of Mrs. James Clark. The bird has been coming to her station for some time. She told me she had observed this bird, but was unable to find it in any bird book she had, including Birds of Wisconsin. I have it listed in that book as "accidental." The bird comes in regularly for feeding and can usually be seen around noon and again at 4:00 p. m. It would alight on the limb of a nearby spruce with feathers fluffed out, as birds do in winter, but as soon as it dropped to the ground to feed it assumed the attitude of a thrush, sleeked out its feathers and hopped in typical thrush style. Mrs. Clark has a number of feeders about her yard and has great numbers of the regular winter "boarders."—Owen J. Gromme, Milwaukee.



River Vesper

As if to give one daylight hour reprieve They taunt the Jersey bluffs from super height, Performing in the face of setting sun The ritual of the sea gull's spiral flight; And soon as darkness comes they take their leave.

Like so many winged, dancing nuns
Who vow arrest of earthy world's malaise,
They rise on thermal columns: te deuming,
Quite caught between their drudgery and praise,
Bird sisters leave the River run undone.

Deliberate, they wheel on orange-edged wings, Relieved from playing daily mendicant The moment—but as worship alternates With work (and cultus always bears the brunt) Return to marsh and fish and sea gull things.

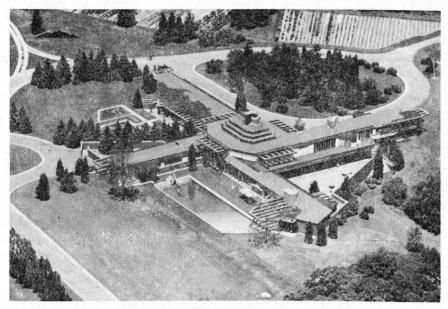
-William J. Schmidt



ANNOUNCING THE 1966 CONVENTION

The Hoy Bird Club of Racine will host the 1966 WSO convention which is scheduled for the weekend of May 20-22.

The feature speaker following the Saturday night banquet will be Chandler S. Robbins, Laurel, Maryland. Mr. Robbins will tell of the bird life on the Leeward Hawaiian Island Chain. He is Chief of the Migratory Non-Game Bird Studies at the Patuxent Wildlife Research Refuge at Laurel.



WINGSPREAD

S. C. JOHNSON & SON, INC. PHOTO

The special feature of this year's convention is a Sunday morning visit to Wingspread where brunch will be served, courtesy of the Johnson Foundation. Wingspread, the former home of Mr. and Mrs. H. F. Johnson, is now the headquarters and conference center of the Johnson Foundation. The last of the prairie homes designed by Frank Lloyd Wright, Wingspread is at Wind Point near Lake Michigan north of Racine. Birders will particularly enjoy the nature trails and bird refuge located on the grounds.

Convention headquarters will be in the new addition of Horlick High School. Convention program co-chairmen are Judge Allan Simpson

and Ed Prins. Ed Prins is president of the Hoy Club and Joy Joslyn is secretary.

Ten field trips are planned for each morning on Saturday and Sunday. Among the places to be visited are birding areas at Wind Point, Petrifying Springs and Hansche Ponds. On Sunday a trip to the Chiwaukee Prairie in Kenosha is being scheduled. This is one of the few remaining wetland prairie areas in the state and it was recently acquired through the efforts of the Nature Conservancy. The Bristol Conservation Area in Kenosha county will also be visited.

Special workshops will be offered this year for the first time covering subjects such as slide photography, tape recording and movie photography. Photographic and art exhibits as well as film showings will be featured during the weekend.

Don't miss this opportunity to view exhibits from the Hoy collection which are on display in the Racine County Historical Museum.

At a later date advance information will be sent to all members. This will include details on convention arrangements, hotel and motel accommodations. Be sure to reserve the dates of May 20-22 for WSO's 27th annual convention at Racine.—Harland N. Cisney.



ANNOUNCING THE WSO STEENBOCK SCHOLARSHIP

Objective: To promote and encourage study and research in birds.

Value: \$100.

Application deadline: March 20, 1966.

Method for application: Applicant must state in a letter (typed and double spaced) his age, present occupation, educational experience to date. The use to which the funds will be put must be clearly stated.

If for research on a bird project, indicate the beginning and termination dates, nature of project, what has already been done by others as well as by the applicant. Within two months after termination date, the recipient must submit a report to the Scholarship Committee. The recipient is encouraged (but not required) to submit the report in the form of a publishable manuscript.

If for a scholarship to an Audubon camp, outdoor workshop, biological station, etc., the candidate must indicate the beginning and termination dates of the session for which the scholarship is requested. Within two months after termination date, the recipient must submit a report to the Scholarship Committee.

Send application to: Mrs. Clara Hussong, 332 Beaupre Avenue, Green Bay, Wisconsin 54301.

Announcement of award: The winner of the scholarship for the year will be announced by May 20, 1966.



Public Hunting Grounds Program Expands

By N. R. BARGER

The public hunting grounds program of the Wisconsin Conservation Department has grown rapidly in recent years. The Game Management Division now owns nearly 300,000 acres of land.

These grounds are distributed throughout the state and may be recognized by their signs. They also may be found on county maps.

Although designed for the hunter and trapper, these lands fulfill the needs of the naturalist. Often they are better than the average because of manipulation of the habitat by the game manager. Water may be impounded, shrubs and trees may be planted, land may be cleared where needed, food patches may be put in, roads may be constructed, or other developments may be initiated as required.

Funds for this program are provided by the sale of hunting licenses, voluntary sportsmen's licenses, excise tax on arms and ammunition



GERMANIA MARSH, A 2,340-ACRE WILDLIFE AREA IN MARQUETTE COUNTY.

through the Pittman-Robertson Act, and the one-cent sales tax on cigarettes through the Outdoor Recreation Act Program.

Hiking may be done on these areas throughout the year. The only precautions needed are the usual ones—guard against fire, leave the area as you found it. In a few cases, small refuges or closed areas may be posted against trespass. Normally, there are no camping or picnicking facilities on the premises.

Public hunting grounds are located as follows:

County	Area Name	Location	Acres
Adams	Colburn	15 mi. N.E. Frien	ndship 4,849
Ashland	Hoffman Lake	6 mi. N.E. Park	Falls 5,562
Ashland	White River	3 mi. S. Ashl	land 960
Barron	Loon Lake	6 mi. N. Tur	tle Lake 160
Barron	New Auburn	2 mi. N. New	Auburn 569
Bayfield	Flag River	4 mi. S.E. Port	Wing 599
Bayfield	Totogatic Lake	7 mi. S.W. Cab	le 173
Brown	Holland	2 mi. S.E. Gree	enleaf 233
Brown	Long Tail Point	6 mi. S.E. Suar	mico 103
Brown	Sensiba	1½ mi. E. Suar	mico 450
Buffalo	Big Swamp	6 mi. W. Mor	ndovi 537
Buffalo	Tiffany		son 9,800
Buffalo	Whitman Dam	1 mi. W. Fou	ntain City 1,207
Burnett	Amsterdam Sloughs	4 mi. S.W. Web	oster 3,809
Burnett	Crex Meadows	1 mi. N.E. Gra	ntsburg24,322
Burnett	Fish Lake	5 mi. S.W. Gra	ntsburg10,791
Burnett	Kiezer Lake	41/2 mi. N.E. Web	oster
Burnett	Kohler-Peet	13 mi. N.E. Gra	ntsburg 3,369
Calumet	Brillion	1 mi. W. Bril	lion1,563
Chippewa	Hallie	1½ mi. S. Chi	ppewa Falls 80
Columbia	French Creek	7 mi. N. Port	tage1,712
Columbia	Grassy Lake	2 mi. W. Doy	destown 633
Columbia	Jennings Creek	3 mi. N.E. Rio	410
Columbia	Mud Lake	3 mi. S.W. Rio	
Columbia	Pine Island	3 mi. W. Por	tage 3,746
Dane	Deansville	The state of the s	Prairie 416
Dane	Goose Lake	2 mi. N.E. Dee	rfield
Dane	Lodi	1 mi. S.W. Lod	li 619
Dane	Mazomanie	1/2 mi. N. Maz	zomanie 2,276
Dane	Waubesa Marsh (S.)	2 mi. N.E. Lak	eview 101
Dane	Waunakee Marsh	2 mi. W. Wa	unakee 414
Dodge	Horicon Marsh	1 mi. N. Hor	ricon10,908
Dodge	Mud Lake	1½ mi. S. Ree	eseville 2,909
Dodge	Shaw Marsh	3 mi. S. Bea	ver Dam 604
Dodge	Westford	6 mi. W. Bea	ver Dam 462
Door	Gardner Marsh	5 mi. N.E. Bru	issels 582
Douglas	Douglas County	5½ mi. S. Solo	on Springs 80
Dunn	Elk Mound	2 mi. W. Elk	Mound 800
Eau Claire	Augusta		gusta
Fond du Lac	Brandon		ındon 204
Fond du Lac	Eldorado	8 mi. N.W. For	nd du Lac 4,741

County	Area Name	Location		Acres
Fond du Lac	Mullet Creek	13 mi. E.	Fond du Lac	1,123
Forest	Bog Brook	12 mi. S.W.	Wabeno	120
Forest	Little Rice	7 mi. W.	Crandon	1,528
Grant	Blue River	E. & W. of	Blue River	
Green	Albany	21/2 mi. N.	Albany	
Green	Brooklyn	7 mi. W.	Brooklyn	442
Green	Browntown	1 mi. E.	Browntown	469
Green	Liberty Creek	3 mi. N.E.	Albany	294
Green Lake	Grand River Marsh	1 mi. W.	Kingston	4,623
Green Lake	White River Marsh	3 mi. W.	Berlin	
Iowa	Avoca	2 mi. E.	Avoca	
Iron	Big Island	10 mi. S.W.	Mercer	960
Iron	Boot Lake	7 mi. S.W.	Powell	1,000
Iron	Hay Creek	12 mi. E.	Park Falls	3,534
Iron	Underwood	9 mi. N.	Mercer	1,601
Jefferson	Lake Mills	1 mi. S.	Lake Mills	664
Jefferson	Princess Point	2 mi. N.W.	Palmyra	1.037
Jefferson	Rome Pond	2 mi. E.	Rome	
Jefferson	Waterloo	10 mi. W.	Watertown	1.629
Kenosha	New Munster	1/2 mi. S.	New Munster	
Kewaunee	Kewaunee Marsh	1 mi. N.W.	Kewaunee	347
La Crosse	Van Loon	3 mi. N.	Holmen	and the second of
Lafayette	Yellowstone	7 mi. N.W.	Argyle	
Langlade	Ackley	11 mi. W.	Antigo	
Lincoln	New Wood	171/2 mi. N.W.	Merrill	
Manitowoc	Collins Marsh		Valders	
Manitowoc	Kiel Marsh	1 mi. S.	Kiel	
Manitowoc	Killsnake Creek	9 mi. S.W.	Valders	
Marathon	McMillan Marsh	21/2 mi. E.	Spencer	
Marathon	Mead	7 mi. S.W.	Mosinee	
Marinette	Amberg	4 mi. S.W.	Amburg	
Marinette	Lake Noquebay	10 mi. N.E.	Crivitz	
Marinette	Miscauno	5 mi. S.	Pembine	
Marinette	Peshtigo Harbor	7 mi. S.E.	Peshtigo	
Marinette	Town Corner	4 mi. N.W.	Amburg	
Marquette	Germania Marsh	8 mi. N.	Montello	
Marquette	Lawrence Creek	4 mi. W.	Westfield	
Marquette	Mecan	11 mi. N.	Montello	1000000000
Oconto	Pensaukee Marsh	1 mi. S.	Pensaukee	
Oconto	Peshtigo Brook	10 mi. N.	Suring	
Oneida	Thunder Lake	3 mi. N.W.	Three Lakes	
Outagamie	Mack		Shiocton	
Outagamie	Maine	7 mi. N.	Shiocton	
Outagamie	Outagamie County		Shiocton	
Polk	McKenzie Creek	31/2 mi. S.	Clam Falls	
Polk	Rice Beds Creek	16½ mi. S.E.	Luck	
Price	Kimberly-Clark	16 mi. W.	Phillips	
Price	Spring Creek	5 mi. N.E.	Catawba	
Price	Township Corners	4 mi. S.	Catawba	
Racine	Honey Creek	½ mi. N.E.	Burlington	

County	Area Name	Location	Acres
Racine	Karcher Marsh	4 mi. S. Burlington	200
Racine	Tichigan	3 mi. N. Waterford	1,174
Richland	Lone Rock	1/4 mi. W. Lone Rock	887
Rock	Avon	10 mi. W. Beloit	1,227
Rock	Evansville	5 mi. S. Evansville	335
Rock	Lima Marsh	½ mi. N.W. Lima Center	531
Rock	Storr's Lake	1 mi. E. Milton	411
Rusk	Potato Creek	10 mi. S.W. Bruce	1,024
Rusk	Silvernail	16 mi. N.E. Ladysmith	1,037
Rusk	Washington Creek	10½ mi. S. Bruce	515
Sauk	Bakkens Pond	4 mi. W. Spring Green	1,754
Sauk	Dell Creek	6 mi. N.E. Reedsburg	1,403
Sauk	Reedsburg	½ mi. S.E. Reedsburg	80
Sawyer	Chief River	22 mi. N. Radisson	1,183
Sawyer	Flat Creek	5 mi. S.W. Hayward	372
Sawyer	Kissick Swamp	2 mi. W. Hayward	941
Sawyer	Totogatic River	9 mi. N. Hayward	2,713
Shawano	Navarino	10 mi. S. Shawano	9,209
Sheboygan	Nichols Creek	3 mi. W. Waldo	361
Sheboygan	Sheboygan Marsh	5 mi. W. Elkhart Lake	262
St. Croix	St. Croix Islands	4 mi. W. Somerset	563
Taylor	Pershing	3 mi. N.W. Hannibal	5,740
Vilas	Powell Marsh	10 mi. N. Lac du Flambeau	4,104
Walworth	Clover Valley	2½ mi. S. Whitewater	201
Walworth	Turtle Creek	Adjacent to Delavan	725
Washburn	Beaver Brook	2½ mi. S.E. Spooner	1,088
Washington	Allenton	1/2 mi. S. Allenton	876
Washington	Jackson Marsh	2 mi. E. Jackson	1,210
Washington	Theresa	8 mi. W. Kewaskum	4,617
Waukesha	Scuppernong	3 mi. N. Eagle	489
Waukesha	Vernon Marsh	3 mi. N. Mukwonago	2,950
Waupaca	Deer Creek	3 mi. W. Leeman	1,490
Waupaca	Mukwa	1 mi. W. New London	329
Waushara	Greenwood	1 mi. S. Hancock	1,438
Waushara	Poygan Marsh	5 mi. S.E. Poy Sippi	
Waushara	White River	1 mi. S. Wautoma	
Winnebago	Deppe Marsh	9 mi. N.W. Omro	199
Winnebago	Rush Lake	3 mi. W. Pickett	80
Wood	Sandhill	1 mi. W. Babcock	9,494
Wood	Wood County	1 mi. W. Babcock	1,039

Wisconsin Conservation Department Madison, Wisconsin







WILD TURKEYS HAVE BEST YEAR YET!

This could be a record year for Wisconsin's growing flock of wild turkeys!

Prior to this year, the largest young turkey brood seen numbered 12. This year two broods of 15 each have been recorded!

The best average ever reported in past seasons was 7.8 turkeys per brood. This year the average (for 9 broods seen so far) is 10.4! This is almost phenomenal for turkey broods.

Clarence (Bud) Smith, Game Manager on the State's 90 square mile Meadow Valley Wildlife Area, where the Wisconsin Conservation Department's turkey project is centered, cautioned, "The year's picture isn't complete yet. We must expect some losses of young birds during the next few weeks. However, these should be small because past experience has shown that few birds are lost after August 1."

"Barring a major disease outbreak or some unusual weather catastrophe, we can be very optimistic for a good increase in our wild turkey flock this year," Manager Smith added.

Smith pointed out that the most critical period for turkey production is now past. Late winter snows, that hung on until mid-April, held back normal nesting about two weeks. The wet, cold, unsettled weather of late April would have, ordinarily, been very damaging. However, because the birds were still laying and not incubating, little harm resulted.

When incubation started about the second week in May, a prolonged warm, dry spell began and continued almost to July.

"This was almost perfect turkey weather," Smith observed. "By the time heavy rains returned to this area, most nests had hatched and poults were four to five weeks old; quite capable of withstanding wet conditions that would have been disastrous when they were one to two weeks old!"

Smith points out that a limited, controlled harvest of some of these birds must start soon if undue losses to disease are to be avoided. Such a season is proposed for 1966 but is awaiting legislative action on a bill to grant the Conservation Commission authority to limit the hunter numbers; a must to guard against any possible over-harvest of these "newest natives".—Wisconsin Conservation Department, Black River Falls.



book reviews

INTRODUCTION TO THE OUTDOORS. By Ben Osborn. Audubon Naturalist Society, 1621 Wisconsin Ave., N.W., Washington, D.C. 1965. 34 pp. (paper). \$1.00.

Any person responsible for instructing others in nature activities would do well to start his library with this booklet. Essentially a guide to reference material, this publication is almost unique in that the author uses a rating scheme to indicate his opinion of the books listed. There is some (natural) bias toward the East in the lists but this should not alter the usefulness to anyone.—F. T. Ratliff.

THE BIRD WATCHER'S AMERICA. Edited by Olin Sewall Pettingill, Jr. McGraw-Hill Book Co., New York, 1965. 441 pp. \$7.50.

Mr. Pettingill has persuaded 44 contributors to describe some of their favorite birding places in this long book of 46 chapters, a fitting companion to his **Guide to Bird Finding East of the Mississippi** and its namesake sequel covering the area west of the Mississippi. The list of contributors reads like a "Who's Who in Ornithology" but includes a goodly sprinkling of talented amateur observers and writers.

Most of the chapters are descriptive of some particular locality and the birds to be seen there. The authors have included instructions for finding the places, best times for visiting and precautions about suitable clothing and the like. Several chapters should be especially interesting to WSO members, either because the place described is close to Wisconsin or because similar habitat is found within the state. Among these are "Hawks Above Duluth," by Pershing B. Hofslund; "In Kirtland's Warbler Country," by Harold Mayfield; and "Northern Spruce Bogs," by Betty Darling Cotrille.

The Bird Watcher's America evoked a feeling of excitement about birding surpassing anything this reader has encountered since Roger Tory Peterson's Birds Over America. It will furnish hours of fascination on the first reading and years of pleasure when used to help plan vacation trips.

Each chapter is prefaced with a brief biographical statement prepared by Mr. Pettingill. These sketches themselves provide an inspiring introduction to the rewards of ornithology as a profession.—F. T. Ratliff.

STUDIES IN THE HISTORY OF THE SONG SPARROW. By Margaret Morse Nice. Dover Publications, New York. 1964. Vol. I: A Population Study of the Song Sparrow. viii + 246 pp. \$1.75. Vol. II: The Behavior of the Song Sparrow and Other Passerines. xiv + 328 pp. \$1.75.

These two volumes, first published in 1937 and 1943 by **The Linnaean Society of New York**, are the definitive work on Song Sparrow behavior. It is the only work on this species referred to in **A New Dictionary of Birds**. The Bent volume covering the Song Sparrow has not yet been published by the Smithsonian Institution.

Dr. Nice observed Song Sparrows in a 50-acre tract near Columbus, Ohio, for a period of 8 years, and reported on them in detail that may not be matched for any other species of bird. The first volume is largely statistical, the second descriptive of behavior with many comparisons with other birds. This is "a lot of sparrow" for the average reader. Relief from the detail is provided by an excellent summary at the end of each chapter. Dover has performed another excellent service in republishing these books.—F. T. Ratliff.

THE GIANT CANADA GOOSE. By Harold C. Hanson. Southern Illinois University Press, Carbondale, 1965. 224 pp., with 74 photographs, \$9.75.

A good many years ago it was generally recognized that there existed a race of oversized Canada goose, **Branta canadensis maxima**. Through some misunderstanding, professional ornithologists became convinced that this giant goose was extinct; it is not mentioned in the standard bird guides. In a general study of the observed variations in the most common Midwest Canada goose, **B. c. interior**, Dr. Hanson was puzzled by the excessive size of geese wintering at Rochester, Minnesota. This led to the rediscovery of the Giant Canada goose, and to the several years' study required to produce **The Giant Canada Goose**.

Dr. Hanson estimates that there were more than 54,000 Giant Canada geese in Canada and the U. S. in 1962-63. Breeding flocks of the giant goose have been observed at Horicon, Necedah, Crex Meadows, Goose Island, Powell Marsh, and Green Bay, Wisconsin. The geese have been seen in many other locations in our state.

Dr. Hanson studied and described the goose from the viewpoint of the biologist, constantly comparing and contrasting **B. c. maxima** with the other similar races of Canada goose. This emphasis has resulted in a book primarily intended for the naturalist or biologist. **The Giant Canada Goose** should also be of much interest to sportsmen and to bird lovers who are interested in a full description of the habits and characteristics of this spectacular American bird.—F. T. Ratliff.

BIRDS WITH BRACELETS. By Susan F. Welty. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1965. 72 pp., illustrated. \$3.50.

If you have a potential young bird bander among your acquaintances, I recommend that you make a gift of this book. Early history of this useful and fascinating hobby is described as well as some famous bird banders. Anecdotes about banding, recoveries, migration and homing, and other facts about the life of birds are recounted in interesting fashion in this Junior Research volume. Both Mrs. Welty and her husband, Prof. Carl Welty of Beloit College, are members of WSO and he has maintained banding stations there for years. John Kaufmann's sketches help materially to show details in technique as well as to illustrate various stories told. The book's attractive binding is guaranteed to last as long as the pages!—Gertrude M. Scott.



By HAROLD A. BAUERS

Winter Season

December 1, 1964-February 28, 1965

Wisconsin bird students generally regarded the winter of 1964-65 as an uninteresting season. The northern finches, upon which we depend in a large measure for our winter birding satisfaction, remained in the north, and most of the half-hardy species went on to the south. However, there were many fortunate birders who were able to enliven the season with some truly unusual avian find, and there were those in the northern counties who, late in the season at least, found their areas teeming with bird-life as a result of a delayed influx of the more erratic species. A total winter checklist of 130 species, rather above average, belies the prevalent feeling that this was a bird-poor winter. The explanation lies in the fact that the populations of many species were low or they were only locally common; no one birder could easily expect to develop a large list for the winter. The absence of birds from feeders also contributed to the feeling of birdlessness. Actually, many birds may well have been not too far afield or in the woods, where seeds and fruits were said to be abundant.

Few Northern Finches

Copious food supplies in the tundra and taiga of the far north, as reported in the fall and winter issues of **Audubon Field Notes**, was no doubt the reason for the failure of the northern finches to invade southward in search of food. The Evening and Pine Grosbeaks, the Crossbills, Redpolls and Siskins hardly touched the state; only the Purple Finch was found statewide during the entire winter and even it did not become numerous until mid-February.

We have no information on the population of rodent prey species in the north, but we can surmise that they were plentiful from the fact that only the more cyclic of the raptors—Snowy Owl, Rough-legged Hawk and Northern Shrike—were the only true invaders of the winter. Of these, only the shrike was generally well distributed over the state. The Roughlegged Hawk was common only in the southeastern quarter of the state and the Snowy Owl was confined largely to the counties bordering Lake Michigan. The Short-eared Owl, another raptor whose numbers fluctuate considerably from year to year, was infrequently seen.

Another relatively mild fall, a more than adequate supply of wild fruits and seeds, along with great numbers of well-stocked feeders, re-

sulted in a lingering or attempted wintering of many of our common summer residents and fall migrants. The Racine beaches again had their procrastinating shorebirds, while in other parts of the state Mourning Doves, Flickers, Yellow-bellied Sapsuckers and Brown Creepers were widespread and locally even numerous. An assortment of blackbirds and sparrows remained with us during the early months. While food supplies encouraged this overwintering, the weather tended to be hard on these birds and diminished their numbers as the season progressed. This was indicated in many reports. An exception was a marshy cover in Outagamie county where Daryl Tessen noted an increase in wintering Song Sparrows as time went on. Mourning Doves and Meadowlarks were thought by several observers to have withstood the rigors of the winter exceedingly well.

Lots of Robins

The big surprise of the season was the phenomenal numbers of Robins wintering throughout the state. They were found at the end of December on one-third of all the Christmas counts in unprecedented numbers. Heaviest concentrations were later determined to be in the northwestern, the south central and the eastern shoreline counties. Mrs. Janet Kozlowski mentions Robins being reported frequently in the far northwestern counties. She believes they were most plentiful in the village of Bayfield, where mountain ash and other berries were abundant and where they came to feeders for bread and raisins. She also noted Robins five miles north of her home and had reports of others from the cities of Ashland and Washburn. Alice Vincent reports several from Park Falls; two that wintered near her home liked honevsuckle berries and came to her feeder for apple slices and earthworms—the latter she obtained from her terrarium. Tessen noted at least 10 Robins in the Appleton-Kaukauna area and a few more around Neenah. The majority of these wintered successfully, he believes.

Highlight observations for the season were many; the exact order of their importance could provide many an evening's debate among ornithologists. There was, for instance, the beautiful White Gyrfalcon carefully observed on December 28 by the three members of the Shawano Christmas count party. There were the three Purple Sandpipers on the beach at Racine through November and the one that lingered on under the watchful eyes of Hoy Bird Club members until December 13. There were the Water Pipits on the same beach December 7 and 9 seen by the Robert Ericksons-only the fourth December records for this species I can find. There were the Dunlins and Sanderlings on this same Racine beach through December 12. There was that rare western visitor, the Varied Thrush, that came regularly to the James Clark feeder west of Oshkosh from Christmas time on into March. There was the Harris's Sparrow that chose to remain at the Lawrence Schultz feeder at Bowler in Shawano county. There was the rare Hawk Owl that thrilled the Leroy Matterns on several cold December days at Wausau, and the one that surprised Prof. Howard Young at Goose Island near LaCrosse on February 28. There was the Virginia Rail seen on several late December dates by Christmas census takers at Madison. There was the group of 3 or 4 Glaucous Gulls encountered by Dr. Bernard and Bernard Klugow on February 6 and 8 near Superior. There was the wintering American Bittern flushed from an open ditch in Wood county by Don Follen. There was the Harlequin Duck, first found by the Carl Fristers, that played hide and seek in the Port Washington harbor with many bird watchers through February and March. There was the injured Golden Eagle nursed back to health in November by Errol Schlueter and released in December at Waukesha, and the one that amazed the John Brakefields at Evansville late in February. There was the Barn Owl at Racine, found dead on February 3. And finally, there were the Bluebirds, the Saw-whet Owl, the Brewster's Blackbirds and all the other unusual birds that provided thrills to various enthusiastic bird students during the winter.

Weather Extremely Variable

Weather for the three months of winter was highly variable, uncommonly erratic and completely unpredictable. December ran from days that were unseasonably cold to days that were unseasonably mild. Above normal precipitation fell in every possible form, from snow to rain. The southern half of the state was without snow cover most of the month, while snow depths increased in the far north. The smaller lakes and streams had been frozen after mid-November and by mid-December the larger lakes also became closed, except for Lake Geneva. January had an unusually large number of days of fog, freezing rain and sleet for a mid-winter month. Temperatures were much above normal during the first week and then alternated between below and above normal in one-week intervals. The southern half of the state remained relatively free of snow cover. February temperatures averaged below normal, but a major part of the month's precipitation fell in the form of rain and freezing rain. Northern and central sections of the state had one of the worst glaze storms in recent years on the 9th and 10th. A major snow storm struck the north on March 1. The first movements of birds at the end of February along the southern border of the state proved to be abortive, for winter held the state in its icy grip well into March.

The Season Summary

 ${\bf Red\text{-}throated}$ ${\bf Loon:}$ The only four recorded were on the Milwaukee Christmas bird count on January 3.

Pied-billed Grebe: Six on the Lake Geneva Christmas count, January 2, were not again reported.

Great Blue Heron: Only a few on Christmas counts at Adams, Beetown and Waukesha; last noted within Grant county December 30 (Terrence Ingram); still found near Castle Rock bridge January 31 on the WSO Petenwell field trip (Ed Peartree et al).

American Bittern: One was flushed February 28 from a partially open ditch four miles east of Babcock in Wood county (Don Follen, Sr.).

Whistling Swan: One bird, injured or wounded in fall and unable to fly, spent the winter on Hansche's Pond, Racine (Mrs. Louise Erickson-Hoy Bird Club members).

Canada Goose: About 200 wintered in Brown county (Thomas Erdman, Ed Paulson) and an undetermined number in the Turtle Creek area of Walworth county; 60 wintered on Hansche's Pond, Racine (Erickson). Small flocks of from 4 to 28 birds were noted on Christmas counts in Rock, Kenosha, Waukesha, LaCrosse and Marathon counties. Others recorded in Sauk county January 3 (Tom Ashman) and until January 20 in Grant county (Ingram). Wedges totaling several hundreds were seen in the air over Waukesha county January 23 (Don Beimborn). Horicon Marsh had 3,400 until

December 7, and 200 remained there until about January 26; approximately 300 returned to the refuge on February 20 (W. D. Carter, refuge manager). Flocks were active along the lower Lake Michigan shoreline on February 20 and 21 in Ozaukee (Mark Madsen), Milwaukee (Mary Donald) and Racine (Bob Fiehweg) counties. Migrant flocks also noted in Dodge county February 20 (Bauers), Jefferson county February 26 (Emil Stock) and Racine county February 28 (Dr. B. L. von Jarchow).

Mallard: Distribution similar to previous winters except absent this season in Lincoln county (Donald Hendrick). W. D. Carter noted a concentration of about 4,500 on Big Green Lake on December 8. A few again wintered in Prentice Park, Ashland (Mrs. Janet Kozlowski), more than 300 stayed in Winnebago county (Daryl Tessen) and at least 250 wintered in Pierce county (Sam Robbins).

Black Duck: Distribution same as Mallard, outnumbering Mallard in the north, but in the minority in the south. Harold Lindberg noted an increase in winter population of this species on the upper Green Bay ports.

Gadwall: Twelve wintered at Madison (William Hilsenhoff), one was noted December 27 at Beloit (Ned Hollister Bird Club) and one at Port Washington January 30 (Beimborn).

Pintail: Individuals were found in Racine county until December 9 (Bill Weber), Dane county until January 16 (Hilsenhoff) and Ozaukee county until January 30 (Beimborn). Two females wintered successfully in Winnebago county (Tessen).

Green-winged Teal: One on Lake Geneva January 2 (C. Palmquist).

American Widgeon: A pair noted in Racine county December 2 (Dorothea Kuehnl), a male bird still there December 9 (Erickson); one in Manitowoc county December 27 (Bernard Brouchard); six in Milwaukee January 3 (Donald) and Waukesha (John Bielefeldt).

Shoveller: One in Madison December 26 (Hilsenhoff); one in Oconomowoc December 27 (Peartree); a possible early spring migrant in Waukesha county on February 27 (Bielefeldt).

Wood Duck: Single birds on three Christmas bird counts at Adams, Beloit and Madison, but no later reports.

Redhead: Six at Lake Geneva on December 26 (the Walter E. Scotts), two January 10 at Port Washington (Bauers) and 15 there by January 20 (Erickson). First spring arrivals at Racine were seen on March 1.

Ring-necked Duck: Noted in Waukesha county December 6 (Bielefeldt); one in Vernon county December 24 (Veratine Weber) and another at Stevens Point December 29 (Arol Epple); seven at Lake Geneva January 2 (Palmquist) and 2 or 3 in each of the harbors at Milwaukee and Port Washington on January 10 (Bauers); one in Ozaukee county, February 20 (Erickson).

Canvasback; Four wintered on the Fox River in Appleton (Tessen), 2 or 4 wintered at Racine (Erickson) and at least one in Adams county (Peartree). Also noted in the first half of the winter at Ephraim, Port Washington, Milwaukee and Lake Geneva.

Scaup Duck: Well distributed along the open shoreline of Lake Michigan, a few Lesser among the Greater during December, but then largely disappearing. Several Lesser remained at Madison through January 17 (Hilsenhoff). A build-up of Greater Scaup began along the coast during the last week of February (Paulson, Erickson).

Common Goldeneye: Present through the season, apparently, wherever open water was available; most numerous on lower Lake Michigan.

Bufflehead: More numerous than usual on Lake Michigan; found away from the lake in Waukesha county until December 6, after which no open water was available (Bielefeldt), and on Lake Geneva January 2 (Palmquist).

Oldsquaw: The numbers reported from lower Lake Michigan were tremendous; 4,000 were already noted at Racine on December 9 (Bill Weber, John Saetveit), and 14,260 were listed on the Milwaukee Christmas count January 3. Five were found inland on the Lake Geneva count on January 2. The Robert Ericksons found the many thousands they saw in the Milwaukee harbor on February 20 to be very noisy and restless.

White-winged Scoter: Only two reported: one at Milwaukee January 3 (Donald et al) and one found dead on an Ozaukee county beach February 20 (Erickson, Saetveit).

Ruddy Duck: A few were reported in Racine, Walworth and Rock counties during December. Later reports were all from Port Washington harbor where the number increased from 10 on January 10 to 22 by February 20 (Madsen).

Harlequin Duck: One small dark female of this rare winter resident was again found at Port Washington during February and March (Donald, Saetveit, Erickson and others).

Hooded Merganser: Present in Waukesha county until December 6 (Bielefeldt); one in Adams county December 23 (Steve Curtis); one at Wausau December 7 (Emily Bierbrauer); 10 still noted at Lake Geneva January 2 (Palmquist). Last and most northerly report was of one on the waters below the dam on the Spirit River in Lincoln county January 24 (Hendrick).

Common Merganser: More widespread and numbers apparently greater than in the past several winters both on the Great Lakes and along the state's main rivers.

Red-breasted Merganser: Reports limited to Lake Michigan, except the few found inland at Adams and Lake Geneva.

Goshawk: Fran Hamerstrom considered this an exceptionally good winter for this species. Our reports are for individuals seen through December at Whitnall Park, Milwaukee (Elmer Strehlow), on December 19 in Oconto county (Carl Richter), on December 23 in Adams county (Steve Curtis) and Outagamic county (Tessen), on December 26 in Dane county (Steve Martin), on January 2 and February 21 in Burnett county (Norman Stone), on January 9 and February 18 in Douglas county (Richard Bernard), January 12 in Brown county (Paulson), February 28 in Wood county (Follen), and March 7 in St. Croix county (Robbins).

Sharp-shinned Hawk: Few reports for this species. One December 4 in Jefferson county (Melva Maxson); one December 22 in Waukesha county (Mrs. Paul Hoffmann). Christmas counts revealed six in five counties; Milwaukee, Waukesha, Sauk, Portage and Marathon. Florence Peterson writes from Waupaca county, "On February 3 a female caught and ate a Hairy Woodpecker at our feeder. A male joined the female on February 16. The area abounds in field mice, moles and shrews, which we know they catch."

Cooper's Hawk: Rather less than the usual number of reports. Claimed throughout the winter in only three counties: Brown (Erdman), Grant (Ingram) and Waupaca (Peterson).

Red-tailed Hawk: All reports are from the usual winter range, south of a line from Polk to Kewaunee counties. Terry Ingram had the lowest winter population in 3 years in Grant county, and most birders in the state considered numbers to be below average. The exceptional counties were Waukesha and Outagamie, where observers thought the birds to be average or above average. One melanistic Red-tail is reported from Waukesha county January 24 by Art Gauerke and Don Beimborn—"Completely dark below, with a definite rusty tail as seen from above."

Red-shouldered Hawk: Most Christmas count claims surprisingly were made from the northern edge of the species' winter range. Ingram found the usual 6 or 8 along the Mississippi River in Grant county during the winter, but the only other mid-winter report is for January 24 in Waukesha county (Bielefeldt).

Rough-legged Hawk: This species was apparently largely concentrated in the south-eastern section of the state. Fran Hamerstrom considered them below normal in the central areas and all other observers to the west and north agreed with this opinion. Ingram noted very few in Grant county. Observers in Waukesha, Rock, Racine and Kenosha counties, however, found the birds common to abundant. Three to 6 melanistic hawks of this species per outing were noted by birders in Rock county between December 20 and February 14 (Mr. and Mrs. R. A. Dougan, Mrs. Bernice Andrews, Miss Frances Glenn). An early movement northward may be indicated by the nine observed in Wood county in February by Don Follen, Sr.

Golden Eagle: An injured bird was picked up in Waukesha county in November, 1964, and rehabilitated by Errol Schlueter, banded by Dan Berger, and released December 5. One again was seen at Grantsburg on January 2 (Stone). An immature was seen at close range on January 26 south of Iron River in Bayfield county by Bernard Klugow—"The first 'Golden' I have seen after years of looking for them." An eagle thought to be this species was also observed February 28 near Evansville in

Rock county (Mrs. John Brakefield). Details of this observation and the wounded bird in Waukesha county appear in "By the Wayside."

Bald Eagle: More widespread and less concentrated than in past several winters. Nine to 11 adults were seen at Prescott, Pierce county, through December (Mr. and Mrs. Boyd Lien). Ingram estimates 150 migrating southward through the Cassville area, with an average winter population of 40 there through January and February. Christmas counts revealed birds at 12 locations, the highest tally being made along the Wisconsin River near Sauk City, with lesser numbers in Adams, Buffalo and Grant counties. Individuals were also noted at this time in Burnett, Douglas, Shawano and Lincoln counties. Later reports list birds in Washburn county December 29 (Hilsenhoff), 16 adults and 2 immature on the WSO Petenwell field trip January 31 (Peartree et al), one February 14 in Oconto county (Lindberg), one February 18 on the Sugar River in Rock county (Mrs. Joseph Mahlum), two adults on open water in the city of Hayward February 24 (Klugow). Ranger Klugow obtained a large box of fishheads at this time and attempted to feed two adults which were wintering on the Brule River. where very little open water remained on the river. Donald Hendrick writes from Lincoln county, "This is the first time I have known this species to spend the winter this far north. The first bird was seen December 12 eating a snowshoe hare on Lake Mohawksin. Throughout the winter I received reports of birds from people living along the river. On January 12 one came to roost on a house across the street from the school, raising havoc among the study hall pupils as they watched it. By January 24, I had determined that two birds were present in the area, both adults, spending most of their time just below King's dam on the Wisconsin River. These are still present on February 20."

Marsh Hawk: Reported throughout the winter in only five counties: Outagamic (Alfred Bradford, Tessen), Brown (Erdman), Dane (Hilsenhoff), Jefferson (Stock) and Waukesha (Peartree, Bielefeldt, Beimborn).

Gyrfalcon: The beautiful white phase of this species was observed December 28 by all members of the Shawano Christmas census and is reported in detail in "By the Wayside."

Pigeon Hawk: This rare winter resident was seen on 3 occasions during the winter. In Wood county December 26 (Follen), during the Christmas count period in Manitowoc county (Brouchoud), and along the Wisconsin River in Iowa county February 14 (Erickson).

Sparrow Hawk: More common than usual only in Outagamie county (Bradford, Tessen). Somewhat lower in numbers and more southerly in distribution than usual elsewhere, except along Lake Michigan, where it was found up into Marinette county January 9 (Lindberg) and Oconto county February 5 (Richter).

Ruffed Grouse: All reports are from north of a line drawn through Manitowoc, Outagamie, Sauk and Pierce counties. It is certain that this winter, with its crusted and icy conditions, was hard on this species.

Prairie Chicken: Because corn feed crops on the Buena Vista marsh had been very poor the previous summer, Dr. and Mrs. Fred Hamerstrom were concerned about the wintering prospects for the "chicken" population on the marsh. Trapping of females for banding was much below the average of other winters and it was feared the birds may have moved off the marsh in search of food and thus become highly susceptible to predation. On February 27, Don Follen noted 6 birds only a few miles from his home at Arpin. This is part of a remnant population of about 25 left in Wood county.

Sharp-tailed Grouse: Reported from Price county December 29 (Hilsenhoff) and Burnett county January 2 (Stone). The Conservation Department feels that huntable populations of this species exist only in Ashland, Burnett, Douglas, Price, Rusk, Sawyer and Taylor counties.

Bobwhite: Listed only on 6 Christmas counts in Waushara, Wood, Sauk, Portage, LaCrosse and Winnebago counties. The Conservation Department calls them locally abundant in a few areas, but as the winter carryover was below par, the numbers generally throughout the range are much below the high of five or six years ago.

Gray Partridge: Best populations are in Brown, Outagamie and Sheboygan counties, but some are listed also in Rock (Dougan), Jefferson (Maxson), Waukesha (Beimborn), Milwaukee (Donald), Winnebago (Tessen), and Manitowoc (John Kraupa) counties.

Eastern Turkey: Manager C. F. Smith of the Central Wisconsin Conservation Area conducted a caravan of Petenwell field trip participants, 48 strong, on January 31 through the Meadow Valley feeding areas where 78 Turkeys were seen and photographed.

Virginia Rail: One was seen on December 22 and again on the 26th along a small open creek in Dane county. It was listed on the Madison Christmas count (Steve Curtis).

American Coot: Six wintered in Dane county (Hilsenhoff). Several hundred were in Waukesha county until December 6 and one remained to January 1 (Bielefeldt); singles were noted at Racine December 12 (B. Weber), and in Brown county December 13 (Erdman); 63 were on Lake Geneva January 2 (Palmquist), and single birds at this time in Rock, Milwaukee and Shawano (Tessen) counties. One was seen January 31 in Ozaukee county (Beimborn).

Killdeer: A lingering migrant remained in Waukesha county until December 4 (Bielefeldt).

Common Snipe: One was again present at a small spring-fed stream near Stephensville, Outagamic county, on December 23 and during January, but disappeared during the high water in February (Tessen). One was seen in Pierce county by the Rev. Norman Baxter on December 25, and one in St. Croix county January 1 (Robbins). The Christmas counts also brought to light 5 at Waukesha, 4 each at Cooksville and Lake Geneva.

Dunlin: Two remained at Racine through December 12 (Weber, Saetveit).

Purple Sandpiper: Of the three birds that were seen and photographed through November at Racine by many persons, one remained through December 13 (Ed Prins).

Sanderling: Two were still seen on the beach at Racine on December 12 (Weber, Saetveit).

Glaucous Gull: Three were seen at Wisconsin Point near Superior on February 6 by Prof. Richard Bernard, and four were seen in the same area on February 8 by Bernard Klugow. One was collected by James Palmer, the local warden, on February 17 and this specimen is now in the WSU-Superior bird collection. We believe this is the first Glaucous Gull collected in Wisconsin along Lake Superior. All were young birds with the brownish streaks on the head and body, according to Prof. Bernard. One was also noted in Port Washington from February 27 (Donald) to at least March 28 (Tessen). One again was seen on Lake Superior in Bayfield county on March 19 (Mark Baillie, Klugow).

Herring Gull: These were well distributed in all Great Lakes ports, including the northern ones, except for Kewaunee where Roy Lukes found numbers consistently low. Thirty to fifty wintered at several points on Chequamegon Bay (Mrs. Kozlowski). Bradford and Tessen found an increase in wintering birds at Appleton. Spring arrivals were noted on the Mississippi in Grant county on February 20 (Ingram) and in Dane county February 28 (Hilsenhoff). Populations were building up in the lower Lake Michigan ports by March 2 (Erickson).

Ring-billed Gull: Milwaukee still had several hundred on January 3 and a small number were scattered at ports as far north as Green Bay. Except for the few remaining through the winter at Green Bay (Erdman), there were no late winter reports.

Bonaparte's Gull: Six hundred counted at Racine on December 12 dwindled to 47 by the end of the month (Erickson, Weber, Saetveit).

Mourning Dove: An above average wintering population in most areas from Chippewa, Wood and Brown counties southward; average or below average numbers northward. Heaviest concentrations were noted in Dane, Outagamie and Waukesha counties. What effect the severe weather of late winter had on these birds is not clear from the reports.

Barn Owl: One that had been wintering in a barn on Stewart Road, Racine county, was found dead on February 3 (Erickson).

Screech Owl: Only 19 reports from 11 counties mention this species. Of interest is a report from Dr. B. L. von Jarchow telling of a bird of mixed red and gray phase plumage being found dead January 7 at Racine.

Snowy Owl: A fairly good winter for this species, though most were concentrated along the eastern edge of the state and few were seen inland. Bill Talen reports at

least 15 in the Green Bay area, 11 of them colored and banded by the Hamerstroms. Tom Erdman thinks that at least 20 passed through the Green Bay area during the early part of the winter. Tessen found 2 or 3 in the Neenah-Oshkosh area through January. Excluding those along Lake Michigan, we have reports of one only in November in Grant county (Ingram), December 1 in Lincoln county (Hendrick), December 22 in Winnebago county (Mrs. Natzke), December 26, January 4 and 16 in Dane county (Ashman, Bielefeldt, Hilsenhoff) and January 12 in Jefferson county (Maxson).

Barred Owl: An average number of reports covering the entire state. Harold Wilson heard one hooting on the evening of January 8 in Door county.

Long-eared Owl: Three were to be found in Johnson's Park, Racine, at least from December 26 to the end of the period (Hoy Bird Club members). The highest count of 10 in any one area was made on the Christmas count at Kenosha. Reports of a few individuals also came from Dane, Grant, Juneau, Rock, Sauk, Milwaukee and Waukesha counties.

Short-eared Owl: A poor year for this species. Two were found roosting in the spruces with the Long-eared in Johnson's Park, Racine (Hoy Bird Club), but only isolated observations were made in Brown, Dane, St. Croix and Wood counties, all of them before January 3. In Portage county, where they are often quite numerous, Fran Hamerstrom made only one sighting.

Saw-whet Owl: The only report is of one seen on the Christmas count at Wautoma. This species needs to be searched for more diligently, for there must be many more around in winter than the reports seem to suggest. Look in cedars and conifers situated within a woodlot or wooded area.

Hawk Owl: One was well seen and described at Wausau December 20 and 27 by Mr. and Mrs. Leroy Mattern. One was seen at Goose Island, LaCrosse county, February 28 by Howard Young.

Belted Kingfisher: Still well represented near areas of open water at Christmas time from St. Croix, Chippewa, Adams, Shawano and Kewaunee counties southward. Reported as wintering successfully in St. Croix county (Robbins), on a small spring-fed stream in Outagamie county (Tessen) and in Grant county (Ingram). Other areas provided only two mid-winter reports; January 10 in Manitowoc county (Kraupa) and January 17 in Waupaca county (Mrs. Katherine Rill).

Northern Flicker: Above average numbers started the winter within the state. They were found on 12 Christmas counts as far north as Ellsworth, Wautoma, Shawano and Manitowoc. Nine are known to have wintered in Outagamic county and one or a few in Grant, Racine and Waukesha counties. Too few followup reports were made for us to guess how well the birds reported in December survived the winter. On January 16, N. R. Barger reports seeing a flock of 10 or 12 feeding on dried fruits and berries in Sauk county.

Pileated Woodpecker: Seen in nearly all reporting areas north of a line from Grant county, where Ingram found them in good numbers, to Door county.

Red-bellied Woodpecker: This is fast becoming one of our more common woodpeckers. Most observers declare it to be increasing in their areas. It appears on most lists from Barron, Wood, Outagamie and Door counties southward. Several were seen frequently in Grantsburg (Mrs. Helen Caldwell); one spent the winter at the feeder of Dr. and Mrs. Krader in Sarona (Beatrice Bailey).

Red-headed Woodpecker: Winter distribution similar to the Red-bellied, but seen less frequently and in small numbers except in selected areas. Waushara and St. Croix counties seemingly had the best populations. Tessen found several in early December northwest of Appleton, but these decreased as the month progressed and were last seen during the Christmas count period.

Yellow-bellied Sapsucker: Found during the entire winter only in Grant county (Ingram).

Black-backed Woodpecker: Two highlighted Christmas counts at Kenosha and Washington Island; one was seen January 14 by Ranger Rottler in Douglas county (Bernard). Many southern-Wisconsin birders travelled into Illinois during January to experience the thrill of seeing the species at Honenga Park, near Rockton, just south of the Wisconsin border.

Phoebe: An early spring migrant was seen February 28 at Racine by Dr. von Jarchow.

Horned Lark: Thinly spread and uncommon until February. The first spring movement was detectable February 1 in Rock county (the Dougans, Andrews, Glenn), reached Dane county February 6 (Hilsenhoft), Winnebago county after February 2 (Mrs. Natzke), Waupaca county February 17 (Mrs. Rill) and appeared about five days early on February 21 in Marinette county (Lindberg). Peak migration was thought to have been reached February 21 in Brown county (Paulson), February 28 in Waupaca county (Peterson) and March 6 in Burnett county (Stone).

Gray Jay: For the second consecutive winter, one turned up at the Izaak Walton League farm near Stevens Point, far south of its usual haunts (John Simonis fide Epple). Also reported from the following counties: Bayfield (Hilsenhoff), Douglas (Bernard, Klugow), Forest (the Roy Lounds), Iron (Norman Pripps), Lincoln (Hendrick), Oneida (Francis Ratliff) and Shawano (F. Reinhold Link).

Blue Jay: Common to abundant in all parts of the state this winter.

Raven: Seen as far south as Jackson, Wood and Waupaca counties. Greatest numbers were in Douglas county.

Crow: Five remained at Sarona, Washburn county, all winter. Beatrice Bailey does not recall another winter in which they stayed in the area. Tessen found a crow roost in eastern Appleton which increased in numbers from 400 at the Christmas count period to more than a thousand by the end of February.

Boreal Chickadee: Reported December 25 in Price county (Hilsenhoff), December 26 in Oneida county (Ratliff), January 1 in Forest county (the Lounds) and all winter at a Vilas county feeder (Rev. Fred Babcock).

Tufted Titmouse: Appeared again as far north as St. Croix, Chippewa, Wood, Waupaca and Winnebago counties. Observers generally considered the population somewhat below previous years, except at Oshkosh, where seven were being seen.

Red-breasted Nuthatch: Very thinly spread over the state this winter with slight concentrations in Forest, Oneida, Price and Door counties.

Brown Creeper: An above average winter population in all except the northmost counties. Tessen found them especially concentrated in a wooded section in the northwest corner of Calumet county.

Mockingbird: One was seen at Racine on December 8 and again on January 4. Two were found in the same area on January 5, one lacking a leg (Erickson).

Brown Thrasher: Ten were noted in the state at Christmas time, six of them at Waukesha and one as far north as Ephraim. The only later report concerns the one at Racine, which remained through the winter near the Mardie Stoffel home.

Robin: Wintered in record numbers all over state. One-third of the Christmas counts listed the species, as many as 250 at Sauk City, 67 at Ephraim, 58 at Milwaukee, 36 at Racine and lesser numbers into the far northern counties. Reports of interest not already mentioned come from Oconto county, where 5, seen eating dried and frozen fruits on December 6, dwindled to 1 by December 30 (Richter); Waupaca county, where at least 2 wintered on a diet including staghorn sumac (Peterson); Manitowoc county, where several were seen through February 3 (Kraupa); Lincoln county, where one or two persisted through February 10 (Hendrick); Iron county, where 2 wintered through February 28 (Pripps) and Douglas county, where robins were still to be found at the close of the season (Bernard). That some birds may have moved southward during mid-winter is suggested by Ingram that they were seen in Grant county from January 20 until the end of the period.

Varied Thrush: One spent the winter at the feeder of Mrs. James Clark on the south shore of Lake Butte des Morts. It arrived around Christmas time, was seen and photographed by many people, and was still present on March 6, 1965. See "By the Wayside."

Eastern Bluebird: Four were recorded on the Christmas count at Sauk City January 1, and a flock of 7 were seen eating dried fruits and berries in the same area on February 13 (Barger, Henry Koenig). Ingram noted the first spring arrivals in Grant county on February 20.

Golden-crowned Kinglet: Less than usual and distribution very spotty. Two seen in Whitnall Park, Milwaukee county, until December 16 (Strehlow); only 30 reported

at widely scattered points on the 61 Christmas bird counts; a few noted throughout the winter only in Brown county (Erdman).

Water Pipit: Stragglers of this September and October migrant were still found feeding along the Racine lakeshore—5 on December 7 and 2 on December 9 (Erickson). Milwaukee Public Museum records show no more than a dozen sight observations for the species in Wisconsin in November and only 3 previous claims for December.

Bohemian Waxwing: Very scarce only 3 reports for the winter. Noted at Wausau late in December (no details given); 12 were seen January 1 in Sauk City (Thomas H. Nicholls); 10 spent 3 days from February 28 at Park Falls feeding on apples (Pripps).

Cedar Waxwing: Both large and small flocks appeared erratically over the state from Polk, Marathon and Kewaunee counties southward during December and January, but entered the northern counties also during February. Sam Robbins considers this one of the best winters for this species in quite some time. Nicholls thought the flocks attracted to Dane county by an abundant red cedar berry crop; in the cities Barger found them relying on ornamental fruits. Numbers increased greatly in the southern counties during February.

Northern Shrike: Numbers somewhat above average, especially in the northwest border counties from Pierce county northward and east of a line from Oneida to Grant counties. "One that appeared near our feeders in Grantsburg remained only a few minutes," writes Mrs. Helen Caldwell, "but the other birds did not come back to feed that day."

Meadowlark: Population apparently greater than in the past several winters, though confined mostly to the southern counties and the area around Appleton. Tessen observed at least 25, more than is usual, wintering successfully in Outagamie county. Those heard singing during the winter were thought to be the Eastern race, but the Westerns were heard beginning February 28. An influx of Westerns into Vernon county was noted February 18 (V. Weber).

Red-winged Blackbird: Much more numerous than usual in the southern counties and observed as far north as St. Croix, Marathon and Brown counties. An individual was also seen January 5 in Bayfield county (Kozlowski). First spring arrivals were noted in Grant county February 21 (Ingram), Rock county February 28 (Mahlum), and Milwaukee county March 2 (Donald).

Rusty Blackbird: Two successfully wintered near an open stream outside of Stephensville, Outagamie county (Bradford, Tessen). Five or less reported at Christmas time from Dane, Wood, St. Croix and Marathon counties. Noted January 30 in Waukesha county (Bielefeldt). Reports of Rusty Blackbirds in the Green Bay area prompted Tom Erdman to look for and study the birds. He judged all those found to be immature Redwings.

Brewer's Blackbird: One in Outagamic county December 23 (Tessen) and 3 in Milwaukee county January 2 (Donald); one probable Brewer's in a barn at Sarona the night of January 14, when the temperature went down to -34° (Bailey).

Common Grackle: Reported in 23 areas at Christmas time from Buffalo, Outagamie, Juneau and Brown counties southward, most commonly in the southeastern counties. Single birds were also noted at Minocqua and Wausau. Seven were present during December at several feeders in Appleton; 4 or 5 survived until the end of the period (Tessen). First spring arrivals at Sauk City (Mrs. Koenig) March 1 and in Jefferson county March 2 (Maxson).

Brown-headed Cowbird: Present through December at many points south of Brown county, followed by a month and a half in which none were seen anywhere. Reappeared February 15 in Racine county (Stoffel), Rock county February 17 (Brakefield), and Grant county February 20 (Ingram).

Cardinal: Again listed from most reporting areas south of Burnett and Marinette counties. A pair reported in past years from Sarona is believed to have been victims of poison, but those at Shell Lake are still active (Bailey). Males were heard singing during mild weather on January 19 at Racine (Erickson) and on January 26 at Waupaca (Peterson).

Evening Grosbeak: Invaded the northern counties only in relatively small numbers, north of a line through Polk, Chippewa, Marathon, Waushara, Winnebago and Mani-

towoc counties. Peak numbers did not reach even this limited area until after mid-February. Flocks of 100 or more were seen only in Burnett, Douglas and Vilas counties. Mrs. Janet Kozlowski reports only 30 to 35 at her feeders in Bayfield county as compared to the 100+ usually found. The only southern reports were of one bird seen in Grant county (Ingram), 10 or 12 noted January 28 at Racine (Prins) and about 50 there February 3 and 4 (Dick Garber).

Purple Finch: An excellent flight, statewide, but not of record proportions. Numbers were already good in December, increased after mid-January, with the buildup continuing through February, so that this became one of the most numerous birds by the end of the winter period, especially in the northern counties. The Koenigs again had hundreds at their feeders in Sauk City, Tom Erdman had up to 200 at Green Bay, and Mrs. Hunter of nearby Mill Center was feeding up to 500. Bernard and Klugow found the birds abundant along Douglas county highways and Rev. Fred Babcock reported them late in coming but plentiful in Vilas county.

Pine Grosbeak: Reports are scanty except in Douglas county, where the species was noted most consistently from December 1 to February 18. Bernard found only 2 adult males among many females in this county and Klugow noted only 3 or 4 males. Other reports were for 8 in Chippewa county December 28 (Clarence Kube); 1 at Racine December 26 (Joy Joslin); 6 in Wausau December 27 (Bierbrauer); noted in Iron county February 9 (Pripps) and during February in Waupaca county (Peterson) and Vilas county (Babcock).

Common Redpoll: Remarkably few were seen this winter, and those few were north of a line through Burnett, Price, Outagamie and Door counties, except for several noted at the end of December in Jackson county (the Harvey Putnams) and a single bird in Kenosha county December 28 (Erickson). Bernard found numbers increasing in Douglas county during the last week of February and Babcock noted the same for Vilas county.

Pine Siskin: Scattered very thinly and erratically over the whole state. Occurred in numbers only in Forest county (the Lounds) and Door county (Harold Wilson).

American Goldfinch: Fairly common throughout the state, but this was not one of this species' big winters. Numbers and distribution were spotty, tending to be more numerous in the northern counties than usual.

Red Crossbill: Scarce. 18 in Forest county January 1 (the Lounds); 2 in Menominee county January 3 (Fr. Reinhold Link); 1 in Grant Park, Milwaukee, on January 9 (Tessen); a sprinkling of them in Vilas county late in February (Babcock).

White-winged Crossbill: Fairly widespread reports from the northern counties, but not in "invasion" proportions. The southmost observations were in St. Croix, Barron, Price, Langlade, Menominee and Door counties. Hilsenhoff found them "numerous" in Price county on December 26, and Klugow calls them "very common" around the John Degerman place in Douglas county in February.

Rufous-sided Towhee: One winter report only for Waukesha county December 27 (Robert Adams). Rumor has it that other birds were seen in Milwaukee, Loganville, Watertown and Portage during the winter. However, no reports on these birds have been submitted to the scasonal editors.

Slate-colored Junco: Most observers commented that this species was much below normal in their areas.

Oregon Junco: A good number of reports. At least 32 birds were listed on 14 Christmas counts. Of the 6 found at Appleton, several wintered in the area successfully (Tessen). Found throughout the winter also in Brown county (Erdman), St. Croix county (Robbins) and Waukesha county (Peartree). Closely observed in Grant county (Ingram) and February 9 in Racine county (Stoffel).

Tree Sparrow: Observers considered this species as present in less than the usual numbers. However, it generally outnumbered the Junco in the south and was found sparingly into the northern counties.

Field Sparrow: One in Waukesha county December 27 (Adams); three in another part of Waukesha on December 30 (Bielefeldt); two in Pierce county December 31 (Robbins) and 6 in Marathon county January 2 (Don Helgerson) were all carefully identified.

Harris's Sparrow: One was present at a feeder in Bowler, Shawano county, from early December, 1964, until April 7, 1965 (Lawrence H. Schultz). See "By the Wayside."

White-crowned Sparrow: The only report was of three seen on the Milwaukee Christmas count January 3 (Donald).

White-throated Sparrow: Birds attempting to winter were reported on Christmas counts in late December from Appleton, Ephraim, Kenosha, Madison, Sauk City, Stevens Point, Waukesha and Wautoma. The one seen at Ephraim was banded on December 22 (Wilson); the two at Appleton were not seen again during the winter. The only successful wintering is reported from Viroqua, Vernon county (V. Weber).

Fox Sparrow: One was seen in Brown county until December 28 (Paulson); one remained at a feeder in Neenah during December and January (Tessen); single birds attempting to winter were also listed on Christmas counts at Appleton, Arpin, Kewaunee, Milton and Milwaukee, but no later reports were forthcoming on these.

Swamp Sparrow: Here is another species which made a start at wintering in more than the usual numbers. The 27 found at Waukesha on December 27 is most surprising for one area, but Bielefeldt is certain there were additional birds in the sector not included in the Christmas count. Censuses at Madison, Racine, Appleton, Oconomowoc and Manitowoc brought the total of wintering birds of this species to 46. The only later reports concern 4 that wintered successfully in a marshy area northwest of Appleton (Tessen) and 2 seen around a frozen pond near Ocoomowoc on January 18 (Biemborn).

Song Sparrow: The Christmas counts here again reveal a large number within the state. 130 were listed in 21 areas from Juneau, Adams and Shawano counties southward. The only bird farther north was a wounded one at Rhinelander. Later reports indicate that at least 24 wintered successfully in southern Waukesha county (Bielefeldt); that the 6 northwest of Appleton increased to 10 by the end of February (Tessen); that at least 3 remained at feeders in Racine through the winter (Stoffel, von Jarchow) and several in northern Waukesha county (Beimborn). New arrivals were noted February 28 in Jefferson county (Stock).

Lapland Longspur: Only two reports for this species: January 4 in Brown county (Paulson) and February 6 in Dane county (Hilsenhoff).

Snow Bunting: Fairly widespread reports of flocks up to 200 birds in all parts of the state, least frequently in the southern counties.







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