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# *The Passenger Pigeon*

Summer 1979  
Volume 41, No. 2



**A MAGAZINE OF WISCONSIN BIRD STUDY**

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Cover: Watercolor by Elva Paulson, Great Gray Owl. The original is available for sale for \$50.00 unframed. Write Editor.	

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*Photo by Ray Tuokko, May 1978, Lac du Bonnet*

## **A Probable Breeding Record of Great Gray Owls in Wisconsin**

**By Don G. Follen, Sr.**

Current literature contains no indication that the Great Gray Owl has ever been known to nest in Wisconsin (A.O.U., 1957). Rather, this species was listed by Kumlien and Hollister (1903) as a "rare winter visitor" and A.W. Schorger in his revision of that work in 1951 even states that "no recent records are known." According to Gromme (1963) it was "rare before 1900; no recent records." Hamerstrom (1972) mentions that of "8 or so state records in the 20th Century most have been in the northwestern part of Wisconsin." One could infer from her further comments that she thought it may once have nested there: "it was commoner in the days of big timber. Few trees have holes big enough to accomodate such a big bird, this latter statement is misleading and there is no good reason to believe that there is a lack of suitable nesting opportunity in this region.

In recent years, Great Gray Owls have appeared in Wisconsin more frequently, sightings usually corresponding with winter influxes of birds in adjacent northwestern Minnesota. My first sighting of this magnificent bird, for example, was on February 19, 1966 near my home at Arpin, Wood Co., Wisconsin. That same winter (1965-66) a major invasion of Great Gray Owls occurred in Northeastern Minnesota (Green 1966). Another invasion



occurred in the same general area in winter 1968-69 (Green 1969). In that same period, unusual numbers were recorded in extreme southeastern Manitoba (Nero 1969). Sergej Postupalsky reports (pers. corres. R.W. Nero) that more birds were seen in Wisconsin in winter 1968-69 than in any other period (a complete documentation of Great Gray Owl records in Wisconsin is planned for a later report).

A concentration of Great Gray Owls in the Duluth area in winter 1977-78 (Eckert 1978a) coincided with further Wisconsin sightings. For example, a bird was seen by Pat Caldwell (pers. corres. R.W. Nero) on December 8, 1977, about 8 miles north of Solon Springs, Douglas Co. on Hy. 53. This is about 23 miles from the Minnesota border and approximately the same distance south of Lake Superior.

Owls from the 1977-78 winter "invasion" movement apparently stayed to breed in Douglas Co., in extreme northwestern Wisconsin, and that is the subject of this article. The site of our observations near Moose Junction, Douglas Co., consisted of mixed-hardwood with scattered tamarack, black spruce and balsam fir. There was an understory of tall grass or sedge in most of the immediate area. The site is adjacent to two spruce-tamarack bog areas of nearly 70 square miles. Tamarack bogs, according to Bob Nero, are prime Great Gray Owl nesting habitat, at least in parts of Manitoba and adjacent Minnesota.

On July 18, 1978, Bernard Klugow (Brule, WI) telephoned my residence to tell me that Art Clarke, head ranger at the Brule DNR station, had observed a Great Gray Owl on July 17 a mile north of Moose Junction, Douglas Co., 7 miles east of the Minnesota border (and 19 miles from Solon Springs). Earlier, I had made several weekend trips to the Solon Springs area in hopes of seeing an owl, but without success. A July sighting was exciting news, for it suggested the possibility of nesting, something I had been thinking about ever since hearing Bob Nero's presentation on the subject of Great Gray Owls at the May W.S.O. annual convention.

Unfortunately, I was unable to visit the Moose Junction site until August 18-19. My wife and I arrived at the designated place, a wayside rest area adjacent to Hy. 35, about 7:30 p.m. in the evening of August 18. Remarkable as it may seem, considering the length of time between Clarke's observation and our visit, as soon as we stopped and opened a window I could hear young Great Gray Owls calling from nearby. I had studied a tape of female and young owl begging vocalizations obtained from Nero, and there was no doubt in my mind that I was listening to the same species. I played the tape and my wife agreed that the sounds we could hear out in the woods were identical.

I immediately got out of the car and, carrying a zoom-60 power Balscope, walked north along Hy. 35. I went about 100 feet and then saw two juvenile Great Gray Owls at approximately 40 feet in the top of a spruce tree. After looking at the two calling birds with the scope, I estimated their age to be from 6 to 8 weeks. Their facial plumage was incomplete, the sides of the rictal bristles being surrounded with a ragged-looking down. While I was watching the two young, I heard two additional birds calling in the same way. It should be noted that the adult female, according to Nero, often gives a food-begging call similar to that of the young. One of the latter calling birds, which I thought was the female parent, flew from across the west side

of the road, where I had heard the calling, to my side of the road and then went right back. Thereupon, the two young followed it to the west side of the road and out of my sight. But I was able to relocate them by their voices.

While my wife stayed in the car, I observed the birds until it was dark. I then returned to the car to get the tape recorder in hopes of luring them out with the same begging call they were giving. I walked about 150 yards north along the highway, playing the recording and listening, but nothing happened. In hopes of getting some response, I then tried giving squeaking sounds. To my delight, I heard excited, warbling sounds, the same kind of sound other young owls give when being fed; apparently this is what was happening. The feeding calls always seemed to be in the same place and I judged that four birds were now calling. Once I heard a low, distinct "Whoop!" To mark the site for further daytime exploration, I tied a strip of red bandana on a bush in the ditch.



*Photo by Robert R. Taylor*

By this time it was totally dark, but I had a large battery lantern so continued trying to call up a bird. Right after I heard one of the young birds being fed, I squeaked and almost immediately heard a swooshing sound as a large bird took flight. A few seconds later I felt the air beating over my head and could just discern a large owl in a semi-hovering fashion about two feet over my head. It flew around in a tight circle and landed on a utility pole 20 feet way. I excitedly switched on the lantern and there, staring right at me, sat a beautiful, big, yellow-eyed Great Gray Owl. I took a few steps towards it and it flew off across the road. I stayed at the site, listening to the birds until 11:00 p.m. When we left, the birds were still vigorously calling.

That night I phoned Ken and Jan Luepke (Spencer, WI), suggesting that they come up to see the birds. The next day my wife and I were up at 6:00 a.m. and on the road back to see what we could find. I parked at the wayside and we walked up the highway to the red marker, then we headed west to where the birds seemed to have been getting fed most of the time. We both got soaked walking through wet grass and didn't see an owl. We did, however, find an old stick-nest 18-20 feet above ground in a 25-foot tamarack close to where the birds had been. It seemed possible that this may have been the nest used by the owls.

In the afternoon of August 19, Ken and Jan Luepke arrived and we waited until evening, hoping to see the owls once more. At 7:30 p.m., while it was still light enough to see well, the birds began to call again, but about 100 yards farther west. Ken headed north and around the area in which the birds were calling while the girls stayed near the road. I went west across from the wayside, hoping to get Ken into position to see the birds. But I soon encountered two young and what was evidently the adult female (a larger and browner bird) approximately 100 feet away from me in a balsam fir. The adult appeared to be feeding one of the young. I stayed where I was and eventually heard Ken signal when he went back to the road.

When we got together I asked: "Were they Short-ears, or what?" He replied: "No! They were as Gray as they can get!" He went on to tell me that he had seen three young and one adult Great Gray Owl. A little later they flew out along the road where we observed them feeding until dark. They stopped calling at approximately 10:30 p.m. During this period I had heard one or more additional owls calling to the east of this spot. Later, Jan said she had heard owls calling in that direction. We all agreed the calls seemed to be coming from about a half mile east of our location.

We then left for Arpin. Ken and Jan checked the area again the next day (August 20), but could find no sign of the birds. However, on September 7, Sherri Budge and Tom Wilson (Dairyland, WI) told me they saw a Great Gray Owl a mile north of the wayside. While perched on a highline pole it swallowed a mouse. They watched it for 20 minutes. My wife and I made many additional trips to the area, but were unable to locate the birds again.

It may be asked whether this family of Great Gray Owls - three young with apparently both parents - observed within 7 miles of the Minnesota border, could have nested in the latter state and then moved eastward into Wisconsin. According to Bob Nero, that is highly unlikely. In his observations, Great Grays usually remain close to the nest site, at times keeping within a mile or less of the nest as late as September and October. As long as prey is available, the family stays on the breeding territory. On this basis it seems most likely that the family of owls we observed nested in Wisconsin. When first seen in July, they were probably close to the nest site - and perhaps the nest we saw them near in August was the actual nest they used.

Nero has found Great Gray Owls nesting almost annually (1970-77) in extreme northwestern Minnesota (1970; pers. corres. 1978). Moreover, Great Gray Owls were found nesting in 1975 near Aitkin, Minnesota, 80 miles W-SW of the Moose Junction site (Blanich 1975). Great Grays were seen in the same place by Blanich in July 1976 (pers. corres. R.W. Nero), and "one probably in breeding territory was spotted May 28 (1978) near McGrath, Aitkin Co., Minn." by R. Boehm (Eckert 1978b).

Bob Nero's comments that Great Gray Owls can be remarkably inconspicuous and seldom observed even when nesting within a hundred yards of a road supports the suggestion that Great Grays may have nested in this area of Wisconsin prior to 1978. Although it seems reasonable to conclude that the family we observed nested in Wisconsin as an aftermath of an invasion of owls into northeastern Minnesota and northwestern Wisconsin, it is possible that birds may have been resident in this region in earlier years. In this respect, note that Kumlien and Hollister (1903) stated that "If we could trust reports from hunters and residents in the Lake Superior region

we would say that it (the Great Gray Owl) is not rare in winter in that section....." It will be interesting to see whether Great Gray Owls will be found nesting in succeeding years in this area (and at other places in Wisconsin).

I am especially indebted to Robert W. Nero for rekindling my early interest in the Great Gray owl and for encouraging my efforts to carry out a search for resident birds. I wish particularly to thank him for assisting in the preparation of this report. To my wife, Mary, I owe an immense debt for field assistance and generous acceptance to my bird studies.

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*Photo by Thomas Erdman*

## Boreal Owl in N.E. Wisconsin

By Thomas C. Erdman

A Boreal Owl, *Aegolius funereus richardsoni*, was banded at the Little Suamico Ornithological Station in southern Oconto County on 28 October 1978. It was captured between 0400 and 0600 hours, being northbound when netted. The Owl was an immature (HY) and appeared in good condition, with small subcutaneous fat deposits in the axillae. Most likely it was a female, judging by its weight and wing cord when compared to published measurements in Snyder and Wiley (1976) and Catling (1972).

Wing Chord	Wing Flattened	Tail	Weight	Irides
170mm	182mm	101mm	131 g	spectrum yellow

The owl was quite tame and was held for three days in which time it greedily consumed three deer mice, *Peromyscus maniculatus*, and one house mouse, *Mus musculus*.

Documented records of Boreal Owls in N.E. Wisconsin are rare. There are no records for Door, Kewaunee, Manitowoc, Brown, Marinette, Florence or Forest counties. The last record in Oconto County was in 1902. August Schoenebeck (1939) reported that the "Richardson's" owl in Oconto County was a . . . "resident, very rare, a regular winter visitor. I have but two records of the capture of this species in this county, one on May 3, 1897 (a female) and a male on Janaury 16, 1902. Both of these are in my collection." These two specimens have apparently been lost. The Schoenebeck collection, now at UW-Stevens Point, contains only a single male which was taken in Shawano County on 22 December 1922 by Rev. Julius Chylinski. Carl H. Richter, a lifelong resident of Oconto County, never encountered this species in his more than fifty years of collecting and observation in northeastern Wisconsin (personal communications, 1975). There is a specimen at UW-Madison which was collected on 3 March 1914 at Elcho in Langlade County (Nero, R., 1950). Another bird was photographed by S.D. Fell (1952) in Oneida County on 31 March 1950. Other records for eastern Wisconsin include one for Racine by Dr. Hoy on 30 November 1850 (Kumlien and Hollister, 1903). More recent was a

sighting at Milwaukee on 3 December 1950 (Urban, 1951). Two owls were reported in the winter of 1954-55 with one in Winnebago County on 26 November and another at Milwaukee on 23 January (Besadny, 1955). Two more were reported eight years later in the winter of 1962-63. One was banded at Cedar Grove in Sheboygan County on 3 November (Kemper, 1963) and another was observed on 2 February at Milwaukee (Mayer, 1963).

The Boreal Owl, which was referred to by Taverner (1922) as "the rarest of Canadian Owls", has been noted for its irregular southward movements, traditionally referred to as "flights". These southward movements or irruptions, from its boreal breeding grounds have occurred into southern Ontario in the winters of 1922-23, 1954-55, 1962-63, 1965-66 and 1968-69 (Catling, 1972). Many of the past records for eastern Wisconsin coincide with the Ontario irruptions, although it has been 16 years since the last report in eastern Wisconsin. The fall owl migration recorded at Little Suamico in 1978 was the largest since the research station was established in 1971. A total of 141 owls were banded, of which 108 were Saw-whets, **Aegolius acadicus**. The number of Saw-whets banded was roughly double our yearly, average indicating a heavy movement of this small northern species also occurred. This October record for a Boreal Owl appears to be one of the earliest fall records for Wisconsin.

I would like to acknowledge and thank the following personnel whose efforts helped make the 1978 fall banding season at Little Suamico one of our best: John Jacobs, Debbie Branschreiber, Joel Trick and David Brinker.

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Richter Collection of Natural History  
UW-Green Bay, E.S. 317  
Green Bay, WI 54302

## Broad-winged Hawk Preys on Saw-whet Owl

By Robert N. Rosenfield

Recently, Millard (1978, Wilson Bull. 90(3):449) indicated that cannibalism among birds of prey has seldom been reported in the literature. However, Mikkola (1976, Brit. Birds 69:144-154) collated 1,165 records of owls eating or being eaten by other species of owls and diurnal raptors in Europe. Mikkola found that the Goshawk (*Accipiter gentilis*) and Eagle Owl (*Bubo bubo*) were the most important predators of owls, together accounting for 83.4% of his records. Perhaps Millard should have restricted his statements to North America. The purpose of this note is to report another occurrence of cannibalism among birds of prey in North America.

From 8-9 June 1976, in central Lincoln County, Wisconsin, I placed a blind in a tree for observation of an active Broad-winged Hawk (*Buteo platypterus*) nest. At 09:48 on 25 June, the tending female hawk arrived at the nest with prey--a Saw-whet Owl (*Aegolius acadicus*). It appeared that the hen brought only the head, some breast and one wing of the owl. The prey was then plucked by the parent and fed to the 21 day-old nestling. The next day I banded the young Broad-wing and searched for prey remains; Flicker (*Colaptes auratus*) and Saw-whet Owl feathers were found. Age of the owl could not be determined. To the best of my knowledge I know of no account of a Broad-winged Hawk feeding on carrion and it is assumed that the Saw-whet Owl was killed by either of the tending adult Broad-wings.

I would like to thank C.O. Harris for his assistance in the field.

Route 7  
Merrill, Wisconsin 54452

## A Note on Short-eared Owl Production

By Don G. Follen, Sr.

Since 1970, relatively few Short-eared Owls (*Asio flammeus*) have appeared in our part of central Wisconsin, but apparently a peak in the rodent population in 1978 brought this nomad of the grasslands back to the area.

On June 6, north of Arpin, my son Ira and I spotted an adult Short-ear carrying a rodent. We watched it go down and then arise without the mouse. Finding our way to the spot, we found one young about three weeks old. A day or two later, Ken Leupke and I found four additional young at the actual nest site. The first bird had been about twenty feet from the nest. While the adults scolded and carried on with their noisy feigned injury tactics, another adult close by paid little attention. This bird was observed several times carrying objects into some three foot timothy about a quarter mile west of this nest. I assumed from this and from the presence of a second adult that there was a nest, but I never found it.

During the course of watching the nesting birds, I observed several additional adults to the east of the known nest. On June 12, I found a second nest with two young in it in a hayfield, about a quarter of a mile from the first one. The parent birds protested, and again adults to the west and east paid little attention. One adult did loft high over the nest, however, seeming to watch the affair for a few minutes before resuming hunting.

On June 18 I found yet another nesting site with two young, about a quarter of a mile east of nest number two. We saw two additional flying young, but were unable to catch them.

By positioning by son Bud on the country road and myself on the next road to the east, I was able to determine that these four areas were in a neat line running from slightly east-northeast to west-southwest. Had this number of nests been scattered at random, it would not have seemed so unusual.

## **Long-ears or Short-ears?**

**By Don G. Follen, Sr.**

A note by Kim Eckert of Duluth on the diurnal hunting of the Long-eared Owl (*Asio otus*) prompted me to observe this species and the similar Short-eared Owl (*Asio flammeus*) more closely.

I have seen Long-eared Owls on the nest and in flight with their "ears" down, unless in a state of agitation. While I have not seen Long-ears hunting in the daytime, I now consider the possibility that owls sighted at dusk in usual Short-ear habitat might actually be Long-ears. I try to observe the birds after they have landed, for the faces will tell for sure.

The field marks of the two species in flight are nearly identical. Recent experience near concentrations of wintering Long-ears has taught me that there is a difference in flight pattern. The Long-ear has a faster and deeper wingbeat like a butterfly, while the Short-ear pumps along like a large moth!

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## **A Review of Robbie's 17 Years at the Bird House**

**(Concluded)**

**By Mrs. Henry Koenig**

### **Robbie at Six Years - 1964-1967**

Raw ground round steak continued to be Robbie's main dish. In 1965 we started to add a drop of vitamins to his beef daily. The canaries had been getting their drop for some time.

In January 1966 we learned about mealworms which we then got from Florida and were \$14 for 5,000. The worms were kept in bran in large pans in the basement and were fed raw sliced carrots for food and drink. A smaller dish of them was kept in the kitchen where Robbie could help himself. At mealtime Robbie came to the table and sat on a chair back, waiting to sample any food we had to offer. The first bug catching device made by Henry and installed outside the patio, attracted them inside too where Robbie enjoyed catching them. Later we also used a commercial device. With all the white cloths in use to protect his perching areas, we had a special weekly laundry for our bird.



A Purple Martin that had been one of the family for 2 years since his adoption as a baby, picked up many of Robbie's traits including portions of his song. There was some rivalry between these two and occasionally a battle. As mentioned before, Robbie had flown off with a cribbage peg but when he tried to snatch a slippery Chinese checker marble from the board, he was stumped and couldn't do it. It isn't often that one can devise a way to fool Robbie. He is constantly alert and on guard at all times, while he polices the house.

Robbie's song seemed to become more beautiful and varied with each passing year. We have 45 minute tape and also condensed versions of it for each year. The shorter tapes don't do him justice for it's difficult to select little themes here and there. He still composes for I might hear a new melody repeated a few times but never again hear it.

Robbie seemed to like company but didn't care to be touched by anyone, for like all birds he preferred to make the advances. Of course we regularly have to trim his claws and bill, so must catch him. He understood the meanings of many words no doubt far beyond those we realized. When visitors came he usually sat on top of a door and listened to what was being said or if this talk wasn't interesting to him he went on with his former singing to drown out the chatter.

Robbie no longer became panic stricken when occasionally a visitor wore something red. Other former fears mentioned before had also diminished. But the appearance of a Hawk in the yard in 1967 caused him to panic while in our bedroom. He dashed wildly about striking walls and furniture until he finally fell to the floor exhausted. I was thankful he had not become badly injured. Robbie was kept out of that room the remainder of the winter. (Hawks continued to come to the yard for years, thereafter.)

The summer of 1965 changed the pattern of Robbie's life for his world was invaded by many more patients and young birds than ever before. Among them were a Chimney Swift, Martin, Oriole and in 1966 a dear little baby Warbling Vireo. Robbie always tried to snatch some of Virie's meat formula before I could feed it to the baby.

For a number of years Robbie in April started to thump our heads so I again wore the small green hat which for 6 years had served me well! If I forgot to put it on he raised his head feathers while he danced around with bill open wide showing his tongue and he looked quite fierce! As soon as I put the hat on he returned to his favorite pastime of pecking and trying to knock it off. The hat had to be worn all summer for protection.

### **Robbie at Age Nine - 1967 - 1970**

I thought a male Robin took no part in building a nest, but in 1968, Robbie spent much time sitting on his shelf and other places, turning round and round and then squatting as if trying to shape a nest which wasn't there. During the summer we raised many baby Robins in which Robbie was interested -- especially in the food offered them. After their release we fed them outside the patio.

Four baby Orioles were also raised that summer of 1968. Three were from one nest and another was a bit older. All were brought on June 20 which we consider B Oriole day because we've received babies before on that date.

It was a thrilling experience and Robbie was quite excited. He now had someone besides Marty to chase. We took movies of the birds.

In April 1968 Robbie might have lost his companion, Marty, then 3 years old. We found him with the ends of a heavy cord hanging from his bill which he had chewed and swallowed double. The cord had to be cut off and it gave Marty a bad 5 days but luckily, he recovered. His next attempt at swallowing something unusual was a fatal mistake. When seven years old he chewed and swallowed double some of the plastic strap of my camera. I hadn't noticed him for I was in another room with a visitor. When I came to the kitchen I was frantic for dependable Henry was in the hospital. It was impossible to pull this loop of plastic out so it had to be cut off at both ends. This material he was unable to digest so the precious bird died 24 days later. After many of years of companionship Robbie had still attacked Marty at times and he went after our heads as usual every spring and summer - a yearly ritual.

One day strange noises were heard in the cupboard above the sink. Upon opening the sliding doors we saw that Robbie, unknown to us, had been trapped in it.

One day in March 1970 I missed Robbie. I found him on the floor of his room with his head in a most peculiar position. I thought his bill had become caught in the tangled wet feathers as he preened his breast after a bath. But this was not the case. I picked him up and found that he was unable to move his head. Henry saw that Robbie had pierced the upper breast skin with his lower mandible. He was freed unharmed but this could have been serious had we not been at home.

Great care must be taken to guard the free flying birds from harm and the many dangers in a home. We have a sign in the bathroom which says, "When not in use please put the cover down so no little bird will drown."

Nineteen seventy brought us a great satisfaction when for the first time we were able to raise a baby Mourning Dove. This bird was given a special formula I received from a pen pal in Arkansas. The dove drank the liquid from a special feeding device Henry had made. After 2 weeks she was weaned and ate small seeds. Dovie lived with us in Robbie's room about 2 months before her release.

May 1970 brought Robbie to another milestone when he became 9 years old and seemed to have perfect health except for his crippled feet. He was alert and sharp as ever. By September he had almost completed the year's molt and a few days thereafter I heard the first few soft sweet almost inaudible warbles of his appealing fall song.

When Robbie gave up his sleeping shelf his sleeping habits became somewhat irregular. The soap dish for the shower and the towel bar above the tub became favorite night perches. Sometimes when we prepared to retire with the aid of the dim night light in the bathroom, Robbie flew to the floor and became playful, following my slippered feet and he even sang a bit.

Robbie enjoyed his usual menu of ground round steak and mealworms and thrived on it. By September we had purchased 71,000 mealworms. The total since January 1966, when we first got them, was now 306,000.

### **Robbie at 12 Years 1970-1973**

Since Robbie has had an endless number of various birds as companions, some not too friendly, he might have had thoughts somewhat like these: "Where are the good old days when I was almost the only one and received my share of attention? Now the babies and the handicapped ones get the choice tender white mealworms and I have to find my own. I'm followed by every baby which expects me to feed it but I won't do it. Even now some still open their bills and I'm tired of it. At night when the others are in bed or out of the way, I wait for my bedtime snack of ground round steak which I've had all my life and like so well. Then I can go to my sleeping spot in the bathroom, the only place left for any privacy. Every room has birds in it."

Yes, Robbie would have been right. At that time we had 14 birds. A few birds from time to time had departed from this world such as the one winged Cedar Waxwing, the foundling Canary, the one legged Chickadee; Marty, the Red Crossbill, Honey Finch, and others which are still missed.

An unusual event of June 22, 1972 was the arrival of 2 tiny baby Bluebirds from Baraboo. They were only about 3 days old and had been thrown out of their house by a sparrow which had killed the other babies. One of the two had almost been killed and had a lifetime mark on his head. As they grew up in the kitchen Robbie had two new friends to chase which seems such pleasure for a Robin.

A baby Nighthawk was brought from Madison July 18, 1973, which had to be force fed a meat formula from a special tube feeder which a plunger which Henry had made. But for weeks and weeks he never gained a gram. I didn't expect the bird to live but Henry wouldn't give up. It was September 8, 1973, before we won a great victory. That evening while he was on the card table in the music room where he lived, he watched us feed crickets to an injured adult. All of a sudden Fluffie, as we called him, moved to the edge of the table and acted as if he wanted to eat. He opened his tiny bill but huge mouth and I popped in a cricket. Oh, joy, he ate it! Henry's long ordeal of force feeding him while holding him, was over. What a great relief, for it had been hard on his feathers too. He ate about 15 crickets! Fluffie developed into a normal bird with an unusual personality. It was too late to release him that fall.

A beautiful Golden Plover was also brought that fall of 1973. He was found with a broken wing in Mineral Point. He became tame and walked and walked constantly and washed his bill noisily after every meal of mealworms.

Some of our permanent residents at the end of 1973 were a male Hummingbird, a Cliff Swallow 8 years old and a male Oriole. During the summer we had as many as 23 birds at one time. Robbie had more and more competition each year.

### **Robbie at 15 Years 1973-1976**

Robbie was somewhat annoyed by a lonesome little Cedar Waxwing brought as a baby in fall of 1973. We had gotten 6 other young Waxwings which were normal and released when able to join others outside. So this little Cedie, as we called him, was the only one of his species left. We had for the first time been brought a tiny baby Goldfinch to raise late in summer. These two young birds grew up together and were such pals. They flew like

lightning through the rooms which is especially characteristic of the Waxwings. But December 18, tragedy struck again when in their playful flight Goldy must have hit the mirror in the bathroom. I don't know why I hadn't realized the danger. It was a terrible shock to find him lying there lifeless on the table. Both birds may have been in condition for release that fall but they were alone and we felt it safer to wait until spring. How I regretted this decision. We immediately hung a nylon net curtain in front of the mirror to prevent possible future accidents. As a further precaution we hung fiberglass screens at all windows in the rooms which the birds occupied.

Although Robbie was annoyed by the lonely little Waxwing, this was only a rather minor thing compared with the misery caused by his foot and leg trouble. He lost part of a toe which was no doubt caused by the injury he had when young. But he sang in spite of all this and he didn't forget to imitate the squeaky kitchen faucet as I reached for it when washing dishes. He had been doing this for years and I'm sure he hoped it would squeak again although it had long since been replaced. Robbie again caught his bill in the skin of his breast which frightened me until I could get Henry to quickly come to the rescue.

In December Robbie had his first illness. It began with a sore left eye that remained closed for a time causing him to be quiet and inactive. Next he seemed to have a cold but by year's end he had recovered and was singing again and I was so thankful.

March 1975 was a time of tragedy for the outdoor birds. We had found a few dead or dying in the yard before we realized that it was the beginning of a battle with the fatal disease of salmonella. Several hundred birds died many of which were Goldfinches. It was raging all over town for we received many reports of dead birds. I felt worried about the indoor birds but they weren't affected. There were always large concentrations of birds on the patio in winter feeding at the many feeders. They were given access to this area by removing the screens on the south side. We decided never again to feed there on account of the danger of disease.

On May 1, 1975, when Robbie reached 14 years of age we invited 14 friends to his party. When Professor Gunnar Johansen and his wife came, he handed me a tape recording he had made for Robbie. It was a lovely version of the "Happy Birthday" song played on his piano at home which sounded like birds singing. He had also composed and recorded a short but special piece for Robbie. We listened to the music while at the table. Robbie, who earlier had been singing louder than the background music, now sat perfectly still, drinking in every note and seemed spellbound. It was thrilling! Robbie had for many years heard much of Gunner's beautiful music on records and no doubt had been influenced by it. He still sang a great variety of songs he composed, going up and down the intervals of the scale, making him the only Robin Caruso of the bird world, as Gunnar said.

My heart ached for Robbie in November 1975, for we realized that he had become quite blind in one eye due to a cataract which was plainly visible. About a year later the other eye was affected too, but he usually found his yellow drinking dish which was always in a certain place, as was his small colored dish for mealworms which stood on a yellow paper towel. His daily bit of oatmeal was placed here too, as was anything else he was offered. At bedtime Robbie longed to sleep up high on top of a door as formerly but he



rarely tried to fly for he couldn't see where to land. These past months he had been falling from the top of the door and then had to spend the night on the floor. In the morning he looked for a sunny place in which to sit and soak up the warm sunshine.

December 17, 1975, a group of TV people from Channel 21 came from Madison to take color films to produce a half hour program of the birds living at the "Bird House," to be shown January 21, 1976. (It has also been shown several times since then.) It was an all day affair and by evening when the group left, everyone including the birds, was exhausted and ready for a good night's rest.

In June 1976, Robbie gave us quite a scare, for one morning we couldn't find him. After a long search in likely and unlikely places, he was finally located in the pantry where he must have gotten lost during the night and went into the back of a small freezer to sleep next to the motor. After that Henry closed the back of it with screen so this could not happen again.

As each year I became more busy than the previous one with many baby birds and injured ones, the big notebook which I'd kept all these years on Robbie, was again badly neglected. He seemed in full song by mid February. In March, Wisconsin had the worst sleet storm in history and many birds must have lost their homes and future nesting sites due to the crashing down of the trees.

That spring Robbie was again attacked by our Bluebird defending his nesting territory. The situation became tense and unbearable for all three of us and something had to be done. It was my duty to protect and care for Robbie as best I could in his blindness. So the difficult decision to release the Bluebird had to be made. She was then 4 years old and had been brought to us when about 3 days old. The bird hadn't been released because of an injury on the head by a sparrow which had almost killed her.

On April 17, 1976, a day of 80 degrees, we took the precious Bluebird to a sanctuary about 15 miles from here where there were Bluebird houses. I was not familiar with the place. It was blowing a gale which I hadn't realized before we left home. When we opened the box to free the bird, she shot out of it and a puff of wind carried her up and over some old unused buildings toward a meadow surrounded by trees. We never saw Bluebird again. It all happened so quickly and I hadn't foreseen such an explosive exit which left me quite speechless and heartbroken. I had hoped to see her perch in a tree to look the situation over. Of course freedom at last was her right but I spent many a sleepless hour, for that night the weather changed and it was no longer summer-like. A cold rain began which continued several days and nights. How I wished we had waited until May to release her but it was done and I had to live with my thoughts and regrets.

### **Robbie at 17 Years and 7 Months - 1976-1978**

This is the last chapter of this long account of Robbie with his companions and the happenings at "The Bird House". At this writing in mid November, 1978, he has reached the amazing age of 17½ years. One night recently I awakened from a dream in which I was told that Robbie was no longer living but no one would tell me what happened to him. It was hard to fall asleep again. In the morning I arose earlier than usual for the dream haunted me but Robbie was all right.

Two years have passed since I wrote for "Passenger Pigeon," about Robbie when he was 15, and now it's fall again. Since September 1976, Robbie has two new friends which live on the floor in the kitchen. They're both Nighthawks. Blackie came from Nekoosa with a broken wing which healed perfectly and young Junior came from Prairie du Sac minus too many feathers. Fluffie, now 5 years old, lived in the music room 4 years but the summer of 1977 he was moved to the kitchen at a friend's suggestion. Fluffie decided to stay there and developed an entirely new and charming personality. All visitors loved Fluffie. A fourth young Nighthawk which we called "Four," came from Washington Island in September 1977 with a hopelessly broken wing.

Both Robbie and Orie developed skin trouble in their heads which had to be treated. It may have started because neither bird could scratch due to crippled feet. Robbie has a good appetite, eating many mealworms daily. He comes to his dish about every 20 minutes or so and demands service! Junior likes to sit nearby and help himself to worms from Robbie's dish and also picks up those which Robbie drops. Junior is the only Nighthawk which has ever managed to do this for all others require complete hand feeding, whenever hungry.

November 5, 1977 brought a new species to The Bird House. It was a young Pileated Woodpecker. She lived on the breakfast nook table in a huge cage that Henry made to fit the space. We fed her crickets and mealworms but later as she improved, the bird help herself. The Pileated was found in the country at night lying on the ground under a large picture window of a restaurant where she must have fallen toward evening. After 5 weeks the bird was ready for release. On December 12, the first mild day (40 degrees) of that cold month, we took her back to where she came from between here and Lodi. It was about noon and quite an audience watched as Henry opened the box and took out the bird. She made a beautiful flight over the snow-covered field to her home in the wooded hills beyond.

A beautiful male Wood Duck with a broken wing next occupied the large cage until mid March. We enjoyed having Woody who also ate mealworms. He never regained the use of his wing but is now in good hands elsewhere.

Robbie sang softly at year's end. A friend had suggested that we give him a drop of cod liver oil daily besides his regular vitamin drop. On January 1, 1978 we started to put a drop on his oatmeal which he loved. If he wasn't there waiting I'd say, "Robbie, here's your oatmeal" and he came tripping along. It was messy so his bill and feet were washed daily and the tail and wing tips too. This he didn't appreciate. It's a big job to keep the house clean with so many uncaged birds about.

In February and March there was a wonderful change in Robbie. The cataracts were still there but somehow, he could see better. He sang and tried to fly. He again looked for the sunshine on the floor and stayed there as long as it lasted. In summer he sometimes found his way down the few steps to the patio but I carried him up when he called.

One night the male Cardinal with us over 4½ years, decided to sleep in our bedroom where a male Hermit Thrush, found in October, had lived all winter. At 5:00 a.m. both birds awakened me with their singing while Robbie sang merrily in the kitchen! What a privilege to hear this unusual trio.

Hermie had long been singing daily. He was released in April shortly thereafter out at Honey Creek Sanctuary. How I missed his beautiful song.

One afternoon we were gone an hour and upon our return were shocked to find Robbie standing in a pool of blood for his foot was bleeding. What caused it to start we don't know but he had lost a tiny bit of a toe.

On May 1st when Robbie was 17 years old he seemed in better condition than 2 years ago. He for the second time had pure white tail feathers which we taped together to prevent their breaking for he needed this support because of his poor feet.

Almost no notes were kept on Robbie all summer for we had the busiest season on record. For a time we had 47 birds including many babies which required constant feeding. We then, for several days, had to have our bird sitter from Lodi to help relieve the pressure. Long ago I had said that 25 birds were our limit but that was more easily said than carried out.

Robbie's legs had gotten troublesome due to many layers of heavy skin which had accumulated there over the years. When younger he had shed them yearly but I had forgotten to pay attention to that. I now used olive oil to soften the skin gradually and from time to time removed some of it which made quite a difference in his actions. I had been afraid the heavy skin would press too heavily on his feet and might shut off the circulation. The result was that he became much more limber and even somewhat frisky for he could walk with ease! I wished I had taken care of his legs long ago but he surely hated me to do it. Within a week in early September 1978 we were brought 4 young Nighthawks perhaps injured during migration when wires and cars are so dangerous to them and all birds. A 5th one was brought with no apparent injury. We now had a total of 9 of these large birds to hand feed. We've never had one of this species which drank water but sometimes I dipped their crickets into water, one at a time as I fed them. Even Junior preferred to be hand fed although it wasn't absolutely necessary. He happened to have the nicest easiest mouth to hand feed! Recently "Beaver" from Beaver Dam acted as if he wanted a drink so I offered him water from an eye dropper which he actually drank and I've worked on this method at times.

The last week in September tragedy again struck the Bird House. It took our darling 5 year old Fluffie after a week's illness which paralyzed him. A young Nighthawk was also stricken and died within a day.

About a month before this we switched to a different source for crickets. The company advertised them as fishing crickets and therefore probably weren't too careful with pesticides, as a cricket or two would not hurt a fish. But feeding a thousand or more a week to 9 Nighthawks could have done the damage. We at once canceled our standing order and returned to our former reliable supplier. A third bird had become lame and isn't normal yet, but we aren't sure if his condition is related to the crickets. The dead birds were taken to the Fish and Wildlife Health lab in Madison, but have heard not a word from them. I shall never cease to grieve for Fluffie and missing him. He was the difficult Nighthawk baby we struggled so hard to keep alive and finally succeeded. If I had only never heard that cricket ad and fallen for it because it was \$1.50 cheaper than our former source of crickets per 1000. Perhaps then Fluffie would still be with us. There have been many, many regrets during these years which are hard to take.

Now in November we have 37 birds in the house which really gives me a daily workout. It takes me 4 hours plus to clean the birdroom for paper is spread on the floor and during the week I change the paper in the most heavily used places. It's a full time job which is endless but the birds are so tame, adorable and individual. Three Swallows, 6 Cedar Waxwings, a Chipping Sparrow, young Robin and 2 Mourning Doves will be released in spring. We may try several Nighthawks. We tried 2 of our best ones last summer but they had no endurance outside and fortunately could be caught and brought in again so gave up on that species.

The young Barn Swallows fill the house with their cheerful songs while the Scarlet Tanager sings softly every day. The male Cardinal able to hop around on one foot cheers us with the various songs he daily sings. Even little dainty Goldy with only one food stands in front of a small mirror and recently sings to his image. The older of the 2 Mourning Doves coos now and already laid 2 eggs. The younger one of September 29 is practicing to coo. The young Robin living in our bedroom which chases every bird that flies, so must be isolated, practices singing every morning at daybreak! He brings back memories of Robbie's early days.

These days and all summer we had a standing order for 10,000 mealworms a week and 1,000 crickets weekly. Since 1966 we've bought 2,160,000 mealworms but the greatest share of them were gotten within the last 5 years. 132 birds were brought so far in 1978 but all did not live.

P.S. In finally closing I must mention that I was shocked just a few mornings ago on November 21st to find Robbie in distress. His left foot was swollen and he could not stand on it so used his wing for balance. I had noticed nothing the day before. He's now in a cage for the first time, where I prop him up and he seems contented. He is getting antibiotic drops. My heart is very heavy at this writing and I hope with all my heart that he recovers.

### **Finis**

Little did we think in mid November that my dream of Robbie's death last fall would come true. But on December 3, 1978, our dear Robbie passed away. He had reached the remarkable age of 17 years, 7 months and 3 days.

It's now December 6, 1978, and my heart is heavy with sadness. What can I say after all these years, about a dear beloved feathered friend who is suddenly gone, leaving a vacancy in my heart which can never be filled? I've been in kind of a daze since Robbie left.

On November 21, when I came into the kitchen that morning I found him with a badly swollen left foot and he had to use his wing for balance. I hadn't noticed anything wrong the day before. I called a Madison vet who said it could be gout. A few days later I also called a friend in Madison who suggested giving Robbie antibiotic drops and putting him into a padded cage to ease the foot. By November 30 his other foot was also swollen and one eye was closed. In desperation I called the vet again and we took Robbie to Madison that morning. We were told he had gout and there was no medication or cure for a bird.

Robbie had continued to eat raw ground round steak and mealworms until 2 days before his death. I hoped that when the time came, he would quietly



fall asleep and that is how it was. Just after I had told him how very much I loved him he fell asleep forever.

Every day of his life has been precious to us for he had been like a ray of sunshine in the house. I can't find suitable words to express how I feel about him. When spring comes again we'll miss his unusually beautiful song.

It's my sincere wish and hope that Henry and I will be able to keep our little flock happily together for some years to come. But everyone says - "Take it easy."

The Bird House  
215 Jackson  
Sauk City, WI 53583

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**HABITAT  
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*Mary and Charlie Nelson*

# Clutch Size Variation: A Review

By

Paul A. Harris

One of the mysteries of avian biology is the variation in clutch size: the number of eggs laid during one nesting effort. The number of eggs varies from one to twenty depending upon the species. Most penguins, albatrosses, shearwaters and petrels lay a single egg; whereas, many of the passerine species (flycatchers, swallows, thrushes, etc.), as well as many shorebirds lay from three to six eggs per clutch, with four being the common number. Most ducks and gallinaceous birds lay six to fifteen eggs. In his study of the Bobwhite (*Colinus virginianus*) Stoddard (1931), found clutches ranging from seven to twenty-eight eggs, but in the larger clutches two to three hens may have laid eggs in the same nest.

According to Amadon (1963), the evolutionary trend among birds has been towards producing fewer young. One reason for this trend is that the complex physical skills of flight and food gathering require a long maturation period, as the population of each species approaches the carrying capacity of the environment, competition for food places a premium upon endurance and food gathering skills, especially during the nesting season.

There have been six main hypotheses to explain the variation in clutch size:

1. The number of eggs laid is limited by the physiological capacity of the bird. (Wagner - 1957).

2. A bird lays as many eggs as it can cover with its brood patch. (Witschi-1956).

3. Clutch size is correlated with the mortality rate of the species; if the mortality rate is low, the clutch is reduced (Richlefs-1970).

4. The clutch size for most birds represents the largest number of young that the parents can feed. (Lack -1954).

5. Clutch size is determined by the "Principle of Allocation of Time and Energy". (MacArthur - 1962 and Cody - 1966)

6. Clutch size represents the fewest eggs that can be laid by an individual who will still contribute offspring to the nest generation. (Murray -1978, unpublished paper).

All of these hypotheses are based on consideration of a number of factors. These factors can be grouped into two categories: independent and dependent. Natural selection has determined the independent factors which in turn affect clutch size. Some independent factors are: size of bird, size of nest, number of eggs a bird can successfully incubate, number of young which can be successfully raised, number of broods per season and number of parents caring for the young. Dependent factors are not determined by natural selection, but refer to environmental conditions influencing the current physiological status of the bird, which in turn will also affect clutch size. Some examples of dependent factors are: age of bird, population density, geographic distribution, time of year, length of daylight, climate and weather, type of habitat and intensity of predation.

The purpose of this paper is to briefly describe some of the factors affecting clutch size and variation found among birds through the interaction of these factors. This paper is a brief survey and does not suggest that a complete review was undertaken.

In many species, the size of the bird is related to clutch size. Among the Falconiiformes, many of the larger species lay smaller clutches than similar relatives which are smaller. The Goshawk (*Accipiter gentilis*) lays three to four eggs per clutch while the smaller Kestrel (*Falco sparverius*) lays five to seven eggs per clutch. Another variation in the clutch size is seen in the large Black Woodpecker (*Dryocopus martinus*) and the Lesser Spotted Woodpecker (*Dendrocopos minor*). The former lays, on the average, four eggs per clutch; whereas, the latter lays six to eight eggs per clutch. In Africa, Moreau (1944) found that members of a family exhibit clutch size differences, larger birds laying fewer eggs than smaller birds.

The size of the brood patch is also associated with the size of the clutch. Precocial species have a tendency to have large clutch sizes (greater than six), but in the case of many of the Charadriiformes (Sandpipers and Plovers), they have four eggs per clutch. Sandpipers and Plovers are so small that they can only cover four eggs with their brood patches. (McClean-1972). Therefore, one of the four factors influencing clutch size is the number of eggs that a bird can successfully incubate. In 1956, Witschi stated that "the clutch size is probably regulated by the females sensing the extent to which the nest is filled by means of the tactile papillae in the skin of the breast. This sensory preception probably passes via the spinal cord and the cerebral stem to the posterior lobe of the hypophysis. There the impulse is transmitted to the secretory anterior lobe which modifies the hormone production so as to inhibit the development of the egg and of ovulation and to cause the already grown oocytes to degenerate".

A few studies of clutch size in relation to the age of the bird were undertaken by von Haartman in 1951. He found no consistent change in sixty clutches of Pied Flycatchers (*Ficedula hypoleuca*) ranging from one to four year old birds. Richdale (1949) found that two year old Yellow-Eyed Penguins (*Megadyptes antipodes*), laid 1.68 eggs per clutch, while older birds laid 2.00 eggs per clutch. Kluizer (1951) found that Great Tits (*Parus major*) lay slightly larger clutches as adults than during the first breeding season. Laskey (1943) found no differences in clutch size of a small number of yearlings and adults in the Eastern Bluebird (*Sialis sialis*). Ruiter (1941) reports that the mean clutch size for twenty-three yearlings of European Redstarts (*Poenicurus phoenicurus*) was 6.04 and for sixty-one adults, 6.51. The difference is significant at the 5% level. From these studies, it seems that in some species, clutch size increases with age, perhaps due to physiological maturation.

Nest size may limit the size of the clutch also. In an area where predators are prevalent, nest size decreases among some species, which makes them less conspicuous. Among old world flycatchers and cuckoo shrikes, nests have been reduced to such an extent that the incubating bird completely covers the nest. This factor is a hereditary control that is established in birds through natural selection. Only birds that conceal nests could successfully perpetuate the species. This had an advantage over other species that couldn't defend eggs or evolve smaller nests less obvious to predators.

Geographical variation in clutch size is known for many species. The clutch size of geographic races of a given species increases from tropics towards the poles. This has been recorded in the passerines, gallinules, gallinaceous birds, owls, hawks, rails, herons and others. Many tropical flycatchers,

tanagers and finches lay only two eggs, but their temperate zone relatives lay four to six eggs per clutch, (Skutch 1949). The European Robin (*Erithacus rubecula*), lays an average clutch of 3.5 eggs in the Canary Islands, 4.9 in Spain, 5.8 in Holland and 6.3 in Finland (Lack-1954).

The widespread increase in clutch size with the increase in latitude seems to be a result of two influential factors: latitudinal differences in mortality and the day-length period. The birds in the temperate and arctic regions are more susceptible to the hazards of the winter and migration, which must be undertaken in order to escape the harshness of the winter months. Both of these may operate to increase the clutch size in northern species. Hess (1923, 1924, 1937) observed that clutch size is larger in the temperate zones than in the tropics. Considering the short day and hot mid-day hours in the tropics, he states "there remain only eight to nine hours for the search of food. This is enough for the birds so long as they have only themselves to provide for, but the time becomes short when they also provide for their young". Lack (1947-48) again put forward the day-length as an explanation of brood size in nesting birds. Northern winters are extremely harsh and mortality is increased. In contrast, northern summers abound with food and increased daylight, so that more time can be devoted to carrying out the feeding of the young. Since birds in the tropics are never subjected to the rigors of winter and migration, the number of eggs in the clutch is fewer (Skutch-1949).

An unintentional experiment that supports the day-length to clutch size hypothesis arose from the transplanting of the European Goldfinch (*Carduelis cardialis*), to Australia about 150 years ago. Today, the species averages 3.7 eggs per clutch in Australia, but in Great Britain, the species averages five eggs per clutch. The decrease in clutch size in the Australian species is probably due in part to a shorter day-length period, which reduces the time for gathering food.

In Africa, Moreau and Moreau (1940), reported that during the breeding season, a bird's working day in supplying food for the nestlings was 30% shorter than for similar species in the northern latitudes. Predators also have a longer light period in the north for hunting their prey. Thus, northern latitude species have evolved larger clutches to offset the higher mortality rate due to the winters, migration and predation. Moreau (1950), after many years of experience in Africa, firmly stated that day-length was the critical factor, as food supply is so seldom over-exploited.

Clutch size and egg size seem to be related in a comparable fashion, but the significance of the relationship hasn't been shown. Of two goatsuckers in India, the larger species, *Batroch astroma javensis*, lays two eggs. The smaller, *Batroch monilegei*, lays one large egg, bigger than either egg of the larger species (Stresemann - 1927-34). Similar species of the same family occupying the same range may indicate that competition may be affecting the size of the egg as well as the number per clutch. As a rule, the larger the bird, the smaller the egg relative to the size of the bird. Size of eggs in precocial birds is usually larger than those of altricial birds because of the greater amount of stored food in eggs of precocial species. Larger species have smaller clutches, while smaller relatives have larger clutches which may reflect on the inability of the smaller birds to ward off predators.

Climatic influence would affect clutch size only if it would limit the availability of the food supply for the parents and offspring. Cold or humid

weather may cause a suspension of egg laying. The number of insects and other forms of food are all dependent on the optimum weather conditions that would insure growth. For example, a sudden change in the weather during many stages of insect life would probably be a disadvantage especially if a species of bird feeds primarily on the insect. In the case of waterfowl, if rain isn't sufficient enough to fill the potholes and marshes of their breeding grounds, the ability to raise successful broods would be in jeopardy and many birds wouldn't have clutches. Rensch (1938) and Grote (1939) assumed that the difference in clutch size between the tropics and temperate regions is not caused by day-length but by favorable and unfavorable climate. If the climate is fluctuating from one extreme to another, the greater adult mortality will be compensated for by increased clutch size.

More than 150 years ago, the South American explorers Wied (1830) and Schomburgk (1848) pointed out that clutch size of tropical species was smaller than the clutch size of European species. Hess (1923) was the first to attempt to interpret this phenomenon. He assumed that the length of the day light period, and hence the time available for seeking food for the nestlings, determined the clutch size. Starting with this hypothesis, Lack (1947a, 1947b, 1948, 1950) developed a whole complex of ideas by means of careful and extensive investigations. He was of the opinion that clutch size at any time is determined by heredity, and that environmental influences are of only subordinate significance. Lack (1954) theorized that the variation in clutch size was dependent on the number of young that can be successfully raised. He presented data on several species, illustrating that as the number of young per nest increases, the number of feedings per hour for each nestling decreases. Therefore, if the brood is large, the nestlings will be fed less than members of smaller broods of the same species. This feed-rate theory developed by Lack hasn't been substantiated by much evidence. Lack's theory was based on his work with the swifts (*Apus apus* and *Apus melba*), but these species were very vulnerable to food supply. When Lack further tested his theory on the Song Thrush (*Turdus philomelos*) and the Great Tit (*Parus major*), the evidence was contrary to his theory. Skutch (1949) presented evidence against the feed-rate theory in tropical species. Only the females of many tropical species feed their young, but they raise the same numbers of young as do species in which both parents feed their young. By transferring nestlings of the Song Tanager (*Ramphocelus passerinii*) from one nest to another, Skutch (ibid) found that the parents adjusted their feeding rate to the number in the nest. This suggests that in some species of birds, the clutch size is regulated by some other mechanism than just feeding rate. The relation between clutch size and day-length is more complicated than was originally realized. First, in many species, broods are maximal much before midsummer (von Haartman, 1954). Second, nocturnal birds do not, as should be expected, reverse the trend displayed by diurnal birds, but have a reduced clutch size nearer to the equator. Wallace (1963) believes that Lack did not give due attention to one important factor, the environmental conditions at the time the eggs were laid. Genetically, there is a fixed upper limit for each species; however, it is reached only under optimum conditions, particularly when the clutch size is fairly large. Lack apparently favored a genetically fixed rate in correlation with the food supply, as an explanation. Skutch, on the other hand, showed that this did not apply to neotropical birds. Wagner (1957) suggests that the upper limit



of egg production may be genetically fixed but attainable only under certain conditions, and governed by food reserves in the bird. That is, if the Snowy Owl (*Nyctea scandiaca*) uses about 25% of its reserves to lay one egg in low lemming years, then four eggs would be its limit; but in good lemming years the number would be doubled. Tropical species store little or no fat and have low reserves. Wagner's work on the theory suggests modification to include various adaptive characteristics and geographical distribution, although he agrees with Lack that the size of the egg clutch may be genetically fixed for each species. From all of the different ideas put forth, one thing can be pointed out: the theory proposed by Lack cannot be generalized for all species. Clutch size is dependent on other factors besides the ability to feed young. Another view on the number of young raised is from Royama. In a report published in 1969, Royama states that the number of young that can be reared depends on the food requirement of each nestling. He feels that this point has been neglected both by workers that are pro and those that are anti-Lack in their views on clutch size. Royama noticed that food requirements per nestling of Great Tits (*Parus major*) and Blue Tits (*Parus caeruleus*) varied inversely with the number of chicks in the nest. He attributes this situation to the result of greater heat loss by young in small broods than those in large broods. Royama believes the variation of clutch size incorporates the energy requirements of nestlings, hunting efficiency of the parents, and the time available for hunting.

In 1966, Martin Cody theorized that the temperate zone species used most of their energy to increase their reproductive rate. In the tropics, the carrying capacity of the habitat is more important resulting in a smaller clutch size. As the optimum allocation of energy differs among environments, there will be a corresponding difference in clutch size. Cody predicts that all stable environments such as the tropics, islands, and coasts will favor reduced clutches. Examples of instability of conditions result in increased clutch size. Predation-free species such as those found on some islands were examined and the clutch size of such species remained relatively unchanged with latitudinal changes. These predictions seem to be verified in all cases where they were tested.

Clutch size also varies in reference to the number of broods per season. If a bird lays several clutches in one season, the number of eggs in each successive clutch is usually smaller. For example, Turkeys (*Meleagris gallopavo*) will lay about eighteen eggs in the first clutch, twelve in the second, and ten in the third (Weiant - 1917). A possible reason for the decrease in clutch size is the decrease in availability of food as the seasons change, but more likely it is due to the physiological condition of the bird.

Among certain birds, the type of food present greatly influences the number of eggs laid that season. In some species such as eagles, territorial behavior has evolved and safeguarding the food supply during the nesting season may help to maintain or increase productivity. Hawks and owls generally have larger clutches in years when mice are abundant. Wagner (1957) reported that the corn-eating Scaled Quail (*Callipepla squamata*) of Mexico normally lays ten to thirteen eggs per clutch while the Spotted Wood Quail (*Odontophorus guttatus*) which searches all day for worms and insects has a clutch of only four to six eggs. It seems probable that the correlation of clutch size with food supply has a physiological basis. In some birds, the clutch is already laid before a large amount of food is present. This most

likely has evolved with the phenology of the area and is probably hereditary.

Mortality as the factor influencing clutch size has been accepted by Stresemann (1928-34), Rensch (1938), Kipp (1958) and Wynne-Edwards (1962). When mortality for a particular species is high for a given year, there is a tendency to increase production as long as the carrying capacity of the habitat is not exceeded.

One of the most recent hypotheses proposed for the evolution of clutch size is being advanced by Murray (1978, unpublished). Murray feels that the clutch size represents the fewest eggs that can be laid by an individual who will still contribute offspring to the next generation. In other words, clutch size has evolved to maintain the species rather than to increase the species.

**TABLE 1: Some factors and their effect on clutch size.**

Factor	Effect on Clutch Size
1. Southern to Northern Latitudes	+
2. Predation (in relation to #1)	+
3. Food Shortage	-
4. Age of Bird	+
5. Late Broods	-
6. Unstable Environments	+
7. Increased Day-length	+
8. Number of Parents Caring for Their Young	+ or -
9. Size of Bird	-
10. Health of Bird	+ or -
11. Precocial Young	+
12. Competition	+ or -
13. Genetic Pattern	Sets upper limit

### SUMMARY

For most species, clutch size is determined by heredity: an optimum number of eggs. The variation in clutch size within a species suggests that a number of environmental factors are involved with varying degrees in influence. Thus, the factors affecting clutch size one year may be quite different the next.

Table 1 lists the factors affecting clutch size and indicates whether the effect will be positive or negative. A positive effect would increase clutch size; a negative effect would decrease clutch size. Whether the factor is positive or negative is relative, since there are so many variables present that an absolute determination of the affect can't be made without exhaustive research.

Four of the hypotheses formulated to explain clutch size have one major flaw: each hypothesis relates the variation in clutch size to a single factor. Clutch size cannot be explained on the basis of one factor. It is affected by all the factors working at different levels of intensity.

The fifth hypothesis, proposed by Cody (1966), has taken a giant step toward analyzing all factors affecting clutch size. The "Principle of Allocation of Time and Energy" (Levins and MacArthur, 1962) maximizes contributions to future generations through energy transfer from one factor to another depending upon environmental conditions. Because of periodic

calamities, temperate zone bird populations are below the carrying capacity of the habitat. In that case, natural selection will favor those genetic strains which can maximize, the reproductive rate. More energy will be directed toward increased clutch size and less energy toward the remaining factors. All factors will still be acting on the population, but in lesser degrees. Those genetic strains occupying relatively stable environments are near the carrying capacity of their habitat, and natural selection will favor those strains that will increase the carrying capacity over those that would increase clutch size. Therefore, energy would be diverted from increasing clutch size to other areas such as predator avoidance, inter and intra-specific competition, and more time caring for the young.

Cody feels that such energy requirements or drains and clutch size can be depicted along the axis of a multidimensional graph. Phenotypes allocating their energy under different conditions can then be better depicted. Cody appears to be working in the right direction. One explanation of clutch size variation cannot be applied to cover all species. A mathematical solution incorporating all environmental influences needs to be developed.

The sixth hypothesis has only recently been developed. Before much can be said, it will have to pass the test of time and analysis.

Probably the fascinating mystery of why different species have different clutch sizes can never be fully explained. The complexities of environmental variations and their interaction with independent factors of varying significance indicates that there is no simple answer to the question.

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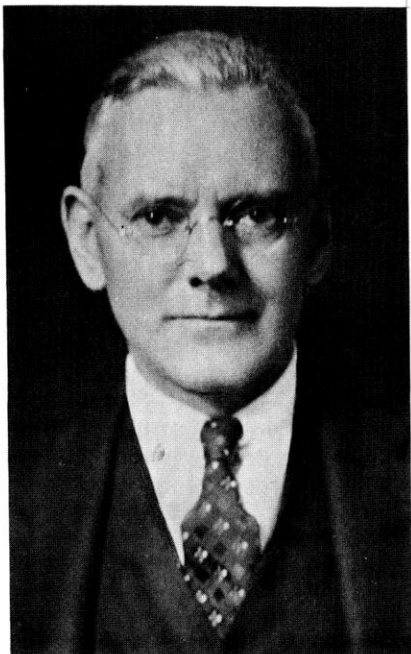
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1609 S. 28th Street  
LaCrosse, WI 54601

**In Memoriam -  
Dr.  
Alexander  
Wetmore  
(1886-1978)**

One of the Society's Honorary Members, Dr. Alexander Wetmore, died at his home in Glen Echo, Maryland, at the age of 92. He was born at North Freedom (Sauk County), Wisconsin, on June 18, 1886, and became known as the "most famous ornithologist" of the U.S. National Museum (Smithsonian Institution) in Washington, D.C. His enthusiasm for birds began when his mother gave him a copy of Chapman's **Handbook of Birds of Eastern North America**. He soon started a nature diary and field notebook at the age of 8 years with the first record an observation of pelicans at Palmetto, Florida, in November 1894. His father, a doctor, took young Alick with him when he went "bird-watching" in Sauk County, and records of these trips are in his field notebooks too. Smithsonian Secretary, S. Dillon Ripley, in his official statement after Wetmore's death, said that his field notes of observations "proved to be nearly publishable in their original form."



When Alick was 13 years old, he published his first article in **Bird-Lore** for October 1900 entitled "My Experience with a Red-headed Woodpecker." This was good enough to deserve republication today. That year and the next he also published Christmas and a June bird census records from North Freedom. On one of these winter surveys, he went along when the temperature was 2 degrees and there was a brisk northwest wind and 8 inches of snow on the ground. His June survey found such birds as the Red-shouldered and Pigeon Hawks and a Yellow-throated Vireo. Unfortunately for Wisconsin, the family soon moved to Kansas where the young bird student continued his studies. While an undergraduate at that University, he interrupted his education for field trips to California, Arizona, Alaska and Puerto Rico and worked as Assistant in the University's Museum. Even before graduation he secured employment with the U.S. Biological Survey and was promoted to



Assistant Biologist in food habits study at Washington, D.C. in 1912. He studied at George Washington University while there and received his Ph.D. in 1920. The Survey made him a Biologist in 1924 and that same year he became Superintendent of the National Zoological Park. The following year he was appointed Assistant Secretary of the Smithsonian Institution in charge of the U.S. National Museum.

Dr. Wetmore was affectionately known as "A.W." to his colleagues and accomplished a phenomenal amount of significant work in his lifetime, which included considerable field work as well as responsible administrative positions. His collections included some 26,000 animal and bird skins from North, Central and South America, more than 200 clutches of eggs and well over 4,000 skeletal and anatomical specimens. He concentrated in surveys of the 900 bird species in Panama for over two decades and published the three-volume "Birds of the Republic of Panama" shortly before his death. Two of his most popular books are "Song and Garden Birds of North America" and "A Classification of Birds of the World." He was a specialist in avian paleontology, publishing scores of technical papers in that field, as well as a "Check-list of the Fossil and Prehistoric Birds of North America." He is credited with describing 189 species and subspecies of birds new to science.

Besides serving as Secretary of the Smithsonian Institution for eight years (1945-1952), Dr. Wetmore held many other important positions such as active Trustee of the National Geographic Society. Also, special assignments in ornithology and bird protection included Presidency of the Tenth International Ornithological Congress; representative to the U.S. Inter-American Committee of Experts on Nature Protection; member of the International Committee of Bird Preservation (Joint Latin-American Study) and member, Advisory Committee on International Wild Life Protection. For many years he also worked as home secretary of the National Academy of Sciences and participated as secretary-general of the Eighth Scientific Congress.

It is no wonder that Dr. Wetmore was honored by many institutions and organizations. The Brewster Medal (1959) from the American Ornithological Union was one of several he received. Both the University of Wisconsin (1946) and Ripon College (1959) awarded him Honorary Doctorates in Science. He was elected an Honorary member by both the Wisconsin Academy of Sciences, Arts and Letters and the Wisconsin Society for Ornithology, with which he affiliated in 1943. WSO also awarded him a plaque made by Alfred Holz of Green Bay in connection with their 23rd convention at Rhinelander in 1961 (accepted by Fran Hamerstrom in his absence). In 1941 Dr. Wetmore graciously supplied the **Passenger Pigeon** Editor a list of bird specimens received by the U.S. National Museum from Wisconsin. He also published an article in the Sum-

mer Issue (Pass. Pigeon 1957) entitled "Why Bird Names are Changed."

One of Dr. Wetmore's friends observed that "circumstances made him an administrator, but those who know him best say that he long ago lost his heart to the wilderness." Smithsonian Secretary Ripley speaks of his "incessant and intensive zeal which he has single-mindedly given to the study of birds over the years, often at very considerable personal expenditure in time and energy" and states that this "will mark the career of Alexander Wetmore as one of the most memorable in the entire history of American ornithology."

Walter E. Scott



## **FIELD** **NOTES**

By Hal and Nancy Roberts

**The Summer Season**

**June 1 - August 31, 1978**

Records were set this season but the majority of them were in the area of weather statistics rather than unusual ornithological observations. It was one of the wettest summers on record, accompanied by generally cooler than normal temperatures. High water levels and flooding of nesting areas probably took a toll on waterfowl and ground nesters. The area south of a line from LaCrosse to Madison received from five to eight inches of rain on a single night in the last week of June. Eric Epstein reported that in Wildcat Mountain

Park, Vernon County, The Kickapoo River in its severe flooding of June 30 and July 1 covered nesting sites of the Louisiana Waterthrush to a depth of several feet. Hopefully the young were fledged by this time.

The season produced a number of unusual observations. A good variety of herons, egrets and gulls including Glaucous and Great Black-backed Gulls were seen. Shorebird migration proceeded on schedule with no extreme dates for spring or fall birds. A number of passerines extended their range for this season in both north and south directions. The finding of Kirtland's Warbler in Jackson County in habitat very similar to its previously exclusively Michigan range was most spectacular. It will be interesting to see if the birds are found here again in 1979. Another interesting find was the Chestnut-collared Longspur; a first summer record in at least fifteen years.

The number of observers was considerably increased with a total of 66 covering 61 counties. Brown and Portage counties had the most reporters with six each! Burnett, Jackson, Sauk, Dodge and Dane counties were next with five each.

Sam Robbins and Daryl Tessen each made observations in 22 counties; a number of observers sent records from eight counties. The excellent coverage was the best ever.

Following are the season's highlights:

**Common Loon:** Present in all northernmost counties; unusually far south was the one found in Sauk County at Devil's Lake State Park on June 13 (Randy Korotev, Wilmer Anderson and Ken Lange).

**Red-necked Grebe:** In St. Croix County, three pairs were nesting on Oakridge Lake on July 6; down one pair from last year. None were found on East Twin Lakes where they have been found yearly since 1972 (Craig Faanes). Nesting activities at Rush Lake, Winnebago County, were noted by several observers with maximum of 24 birds, 23 eggs and 5 young counted on July 6 (Thomas Ziebell).

**Eared Grebe:** Four were seen at Rush Lake on June 29 (John and Lisa Idzikowski) and two were still there on July 15 (Daryl Tessen).

**American White Pelican:** Birds were noted in the Grand River Marsh area of Marquette-Green Lake counties by a number of observers. Dates and numbers seen are: June 18, eleven (Steve Thiesson); June 26 (Korotev); June 29, twelve (Dennis Gustafson); July 2 nineteen (Ton deBoer) and nineteen on July 4 (Ed Prins). One was also reported to Joel Trick on July 4 in the Longtail Point area near Green Bay.

**Double-crested Cormorant:** Nesting activities occurred in Burnett, Brown, Marathon, Marquette and Dodge counties. Jim Evrard reported 26 nesting in Burnett County on June 13; a maximum of 200 birds was noted in Brown County on July 30 (Tessen); 90 nests and 200 individuals were in Marathon County on June 13 (Steve Krings); approximately 200 were in Grand River Marsh, Marquette-Green Lake Counties, on July 8 (Tessen) and 40 were noted in Dodge County on July 14 by Horicon National Wildlife Refuge personnel. Other observations were in Ashland County on June 18 and Bayfield County same date (Sam Robbins), six were found in Menomonee County on July 23 (Noel Cutright) and one in Milwaukee on June 14 (Gustafson).

**Little Blue Heron:** A white immature was found in Brown County on July 16. Tom Erdman is report to have seen a gray adult bird there also. A gray adult was located west of Lake Poygan, Waushara County, on July 13 (Randy Hoffman).

**Cattle Egret:** The number of observations was increased from last year; seen by many observers in Brown County where Tom Erdman indicated they were nesting on one of the Bay Islands. Nineteen were found in Dodge County on July 29 by Horicon National Wildlife Refuge staff. Four were found at Grand River Marsh on July 8 (Tessen) and on in Winnebago County on June 13 (Tessen).

**Great (Common) Egret:** The numbers in Burnett County were down according to Evrard who found two there July 20 and 21. Observations were also made in St. Croix, Dunn, Brown, Sheboygan, Marquette, Fond du Lac and Dodge Counties.

**Snowy Egret:** Present in Brown County throughout the period, dates and locations as follows: June 18, two at the Tank Farm; June 22 in Sensiba (Joel Trick); July 22, three at Atkinson Marsh (deBoer); July 26, three (Brother Columban and Edwin Cleary); four during the latter half of July in Atkinson Marsh (Tessen).

**Louisiana Heron:** Joel Trick reported finding one in the Tank Farm area on June 18 and two at Sensiba, Brown County, on June 22.

**Yellow-crowned Night Heron:** Reports came from five locations: two in Waupaca County on June 10 at the Mosquito Hill Nature Center (Jim Anderson, Larry Prickette and Paula Minkebig); June 10 at Mud Lake, Columbia County (Hoffman); June 11 at Laws Bottoms, Dane County (Hoffman); on July 20 numbers were reported to be up in Dodge County (Horicon National Wildlife Refuge personnel); on July 10, two birds, an adult and a full-sized immature were in Grant Park, south Milwaukee (Stephen Land). See the cover photo of **Passenger Pigeon**, Volume 40, No. 3.

- Least Bittern:** Northwest locations were Burnett County on June 17 (Robbins, Mary Donald and Lisa Decker); one calling in Powell Marsh, Vilas County, on June 28 (Robert Spahn); one in Burnett County on July 11 (Thomas Cogger).
- Mute Swan:** The flock which has been present in Chequamegon Bay, Ashland County, was seen by a number of observers and up to 11 adults and six young were counted. Another flock of six birds was present in Mantiwoc Harbor and was seen on June 14 (Robbins and Tessen), July 16 (Korotev) and July 23 (deBoor).
- Whistling Swan:** An apparent adult was present in Wood County in Potter's Marsh near Nekossa from mid-June until the end of the period (Don Follen, Sr.). It was seen there on July 2 by Ken and Jan Luepke.
- Canada Goose:** Nestings were reported to be normal in Burnett (Evrard) and Barron (Alta Goff) Counties. Reported absent from one area of Marathon County where they have been located previously (Luepkes), but one was found in that county on June 13 (Robbins).
- Gadwall:** Farthest from the expected north and east observations was the one in Columbia County on July 15 (Hoffman) and in Monroe County (Eric Epstein).
- Pintail:** Observations were made in Bayfield, Burnett, Barron, St. Croix, Door, Marinette, Marathon, Portage, Winnebago, Manitowoc, Columbia and Dodge Counties.
- Green-winged Teal:** Late spring migrants may have been the ones present in Adams County on June 2 (Hoffman), Jackson County same date (Epstein), Dane County on June 4 (Korotev) and 13 in Marquette County on June 13 (deBoor). Mid-June and later observations were made in Vilas, Burnett, St. Croix, Barron, Marathon, Manitowoc, Winnebago, Dodge and Ozaukee Counties.
- American Wigeon:** Located in Burnett County on June 17 (Robbins, Donald and Decker) and in Dodge County (Horicon National Wildlife Refuge staff).
- Northern Shoveler:** Three birds were in Burnett County on June 2 (Evrard) and noted there also on June 25 (Luepkes). Normal population in Barron County (Goff); in Marathon County two were found on June 3 (Luepkes); noted in Brown County (Brother Columban and Cleary); in Columbia County on June 25 (Hoffman); Dane County on June 2 (deBoor); Winnebago County on June 21 (Ziebell) and Horicon Marsh (Gustafson).
- Redhead:** Approximately 40 were present in Winnebago County on June 21 (Ziebell) where a female with four young was spotted on Rush Lake on July 15 (Tessen). Population in Horicon was reported to be down (Horicon National Wildlife Refuge). Other reports came from Bayfield, St. Croix, Marinette, Brown, Manitowoc, Oconto, Kewaunee, Monroe and Columbia Counties.
- Ring-necked Duck:** 66 were nesting in Burnett County on July 6, a normal population (Evrard). Birds were also found in Oneida (Phil Vanderschaegen), Barron (Goff, Faanes), St. Croix (Faanes), Columbia (Hoffman) and Dodge (deBoor) Counties.
- Canvasback:** Found throughout the period in Burnett County (Cogger); one pair remained all summer in Brown County (Trick) and one was in Milwaukee from July 18 to 31 (Gustafson).
- Greater Scaup:** In Manitowoc Harbor, Tessen noted about 15 birds on June 10. He and Robbins found six on June 14 and observed that males showed typical flat-rounded rather than slightly crested shape heads and had a greenish sheen. Robbins then located eight in Chequamegon Bay, Bayfield County, on June 18. Three were noted in Milwaukee throughout the period (Gustafson).
- Lesser Scaup:** A single bird was spotted in Brown County on June 20 (Trick), July 21 (Tessen) and July 31 (Columban and Cleary). Also noted in Iron County (Butterbrodt); Monroe County (Epstein); Manitowoc where there were 10 on June 10 (Tessen); Dodge, one only on July 15 (Tessen) and three throughout the period in Milwaukee (Gustafson).
- Common Goldeneye:** Present in Iron County (Butterbrodt), Door County (Charlotte and Roy Lukes) and a female in Manitowoc in July 16 (Korotev).
- Bufflehead:** A single female was observed in Manitowoc on July 16 (Korotev).
- Common Merganser:** Found in Ashland County on June 19 (Robbins) and on Cat Island on July 8 (Korotev). Noted in Iron County also (Butterbrodt).
- Red-breasted Merganser:** Found on Cat Island on July 9 (Korotev); two in Oneida County on June 26 (Paul and Louise Engberg) and Door County (Lukes).

- Turkey Vulture:** Many reports throughout the state and throughout the period including a likely nesting northwest of Hayward in Sawyer County (Bernie Klugow).
- Goshawk:** Two males and one female were seen in Vilas County at different locations (Spahn). Observed in Barron County (Goff).
- Sharp-shinned Hawk:** Two unusually far south observations; one in Grant County on June 10 (Korotev) may have been a late migrant but probably not the one found at Grand River Marsh, Marquette County, on July 11 (Gustafson).
- Cooper's Hawk:** Four young fledged from a Monroe County nest in the second week of July (Epstein). A single individual was observed in Burnett County on July 3 (Evrard), in Oneida County on July 24 (Engbergs) and Oconto County on June 12 (Tessen). Other observations were Clark County, June 8; Chippewa County, July 11 (Robbins); Portage County (Alan Beske); Waupaca County on June (Mosquito Hill Nature Center); at Castle Mound in Jackson County on June 21 (Fred Leshner) and a nest with one adult present on June 24 in Waukesha County (John Bielefeldt).
- Red-shouldered Hawk:** In Dunn County on June 3, Robbins found a pair at one location and single birds at two other locations. One was heard in the St. Croix River Valley west of Grantsburg on June 17 (Robbins, Donald, Decker).
- Swainson's Hawk:** Three pairs were present in central St. Croix County after June 20. They were observed by Wayne Horling, Wisconsin DNR, Baldwin (fide Craig Faanes).
- Rough-legged Hawk:** One was observed in Buena Vista Marsh, Portage County, on June 2 (Beske).
- Bald Eagle:** Birds were seen in Ashland, Iron, Vilas, Burnett, Price, Oneida, Forest, Barron, Taylor and Marinette Counties. A nest was located in Barron County on July 8 (Faanes).
- Osprey:** Reported in Vilas, Burnett, Oneida, Forest, Barron, Taylor, Oconto, Marathon, Portage, Juneau, Marquette, Green Lake and Dodge Counties. Burnett County had the largest number of observations; nests were noted in Oneida, Marathon and Marquette Counties.
- Merlin (Pigeon Hawk):** Noted in Price County from June 1 to July 17 (Maybelle Hardy).
- Spruce Grouse:** On June 29 one was seen flying through spruce woods three miles south of Clam Lake, Ashland County (Robbins). One was seen June 29 and 30 in Three Lakes Bog, Oneida County (Spahn).
- Sharp-tailed Grouse:** Recorded only in Burnett County where it was seen on June 17 (Robbins, Donald, Decker), nine were seen on June 20 (Evrard) and throughout the period (Cogger).
- Common Bobwhite:** There were many more than usual in south and central locations and as far north as Dunn (Robbins) and Taylor (John and Lois Fadness) Counties.
- Gray Partridge:** Numbers in Portage County were reported to be up (Harvey Halvorsen, Beske). Also noted in Brown, Winnebago, Columbia, Dane, Dodge and Ozaukee Counties.
- Turkey:** A single observation; in Juneau County on June 24 (Hoffman).
- Sandhill Crane:** Largest number reported was 14 in Winnebago County on June 13 (Tessen).
- King Rail:** One observation; in Oconto County on July 14 (Tessen).
- Yellow Rail:** Twelve were heard calling in Powell Marsh, Vilas County, on June 28 (Spahn).
- Semipalmated Plover:** Last spring migrant was noted in Manitowoc on June 14 (Robbins and Tessen). On July 23 birds had returned to Columbia County (Hoffman) and Dodge County (Tessen).
- Black-bellied Plover:** Spring migrants were in Marinette on June 8 (Harold Lindberg) and five fall birds arrived in Winnebago County on July 15 (Tessen) and one in Milwaukee on July 27 (Gustafson).
- Ruddy Turnstone:** One migrant lingered in Milwaukee until June 6 (Gustafson). Later spring birds were the five on June 10 and six on June 14 in Manitowoc (Robbins and Tessen).
- Solitary Sandpiper:** Fall birds were present in Vilas County on July 1 (James Baughman) and had arrived in Brown County by July 7 (Melvin Wierzbicki).
- Willet:** Fall migrants were noted in four locations; one on July 10 in Marinette (Lindberg); on July 13 four in Manitowoc (Tessen); one in Dane County (Hoffman); two at Schlitz Audubon Center beach, Milwaukee (Winnie Woodmansee) and an adult in fall plumage in Milwaukee harbor on July 29 (Gustafson).



- Greater Yellowlegs:** Earliest fall birds were in Brown County on July 7 (Wierzbiecki).
- Red Knot:** One in gray fall plumage was noted on the beach north of Manitowoc on June 14 (Robbins and Tessen).
- Pectoral Sandpiper:** Fall migrants arrived in St. Croix County on July 10 (Faanes); same date in Columbia County (deBoor).
- White-rumped Sandpiper:** Three observations; in Dane County on June 3 (deBoor) and three there on June 6 (Korotev); one in Sheboygan on June 10 (Tessen).
- Baird's Sandpiper:** One spring bird lingered in Sheboygan until June 10 (Tessen). Fall birds returned to Columbia County on July 28 (Hoffman) and two in Brown County on July 30 (Tessen).
- Least Sandpiper:** Spring migrants were in Marinette County until June 8 (Lindberg) and early fall migrants reached Fond du Lac on July 5 (Rockne Knuth).
- Dunlin:** Spring birds were present in Fond du Lac from June 8 to 18 (Knuth). The largest number seen was five on June 10 in Manitowoc (Tessen).
- Short-billed Dowitcher:** July 10 was the date fall migrants reached Columbia (deBoor) and Ozaukee County (Cutright).
- Long-billed Dowitcher:** Only one observation; in St. Croix County on July 9 (Faanes).
- Stilt Sandpiper:** A late spring migrant was recorded in Dane County on June 6 (Korotev); two early fall arrivals were in Walworth County on July 10 (Tessen).
- Semipalmated Sandpiper:** Lingered in Fond du Lac until June 18 (Knuth). Earliest fall birds were in Waushara County on June 13 (Hoffman).
- Western Sandpiper:** Two were located in Dane County on July 15 and 16 (Korotev) and one in Columbia County on July 22 (Hoffman).
- Marbled Godwit:** Five were present in Brown County on July 22 (deBoor).
- Sanderling:** A spring migrant was in Manitowoc until June 10 (Tessen); fall birds reached Manitowoc and Sheboygan Counties on July 30 (Korotev).
- American Avocet:** Noted in Horicon on June 9 (Horicon National Wildlife Refuge staff), one in spring plumage in Milwaukee harbor on June 19 (Gustafson) and one in a flooded field east of Fox Lake, Dodge County, on July 15 (Knuth).
- Wilson's Phalarope:** On July 15, 55 were seen in Dodge County (Tessen). Other observations throughout the period came from Burnett, Oconto, Marinette, Brown, Green Lake, Winnebago, Columbia and Ozaukee Counties.
- Northern Phalarope:** One was found in Dane County on June 6 (Korotev).
- Glaucous Gull:** One was found with a flock of gulls on an impoundment dike in Manitowoc. It was seen on July 13 (Tessen and Charles Sontag), on July 23 and 31 (deBoor) and on July 30 (Korotev). See **By the Wayside**.
- Greater Black-backed Gull:** An immature was observed and field marks noted in Manitowoc on July 13 (Tessen).
- Laughing Gull:** Three observations in Manitowoc; on June 14 (Robbins and Tessen), on July 30 (Korotev) and on July 31 (deBoor). Two were noted in Milwaukee on June 9 (Cutright).
- Franklin's Gull:** Korotev, Anderson and deBoor found one bird on July 16 in Sheboygan and one on July 30 in Manitowoc. Both were first year birds in a flock of Bonaparte's Gulls. The birds were found at both locations again on July 31 (deBoor).
- Bonaparte's Gull:** Found in eastern counties along Lake Michigan and in LaCrosse County on June 2 (Leshner).
- Little Gull:** An adult and an immature in Manitowoc on June 10 (Tessen); an adult in Manitowoc on June 14 (Robbins and Tessen) and July 30 (Korotev and deBoor); an immature in Milwaukee on July 25 (Gustafson).
- Forster's Tern:** Birds were observed in Burnett, Oconto, Marinette, Brown, Monroe, Waushara, Green Lake, Winnebago, Dodge and Milwaukee Counties.
- Common Tern:** A flock of 115 was found on an Ashland breakwater on June 18 (Robbins).
- Caspian Tern:** More than usual were reported in Portage County on June 1 (Krings).

- Long-eared Owl:** Two were present in Marathon County on June 1 (Luepkes) and one was in Wood County on July 2 (Luepkes).
- Short-eared Owl:** On June 15 a nest was located on Oakridge Waterfowl Production Area, St. Croix County, by Charles Elliott (fide Faanes) a first confirmed nesting for the county. There were at least four nests that fledged young and sightings after the young fledged indicated about 25 in a Clark County area; three young were banded from one nest. A high vole population was noted as a possible contributing factor to the high numbers (Luepkes). Birds were found at four locations in Marathon County where at least two nests fledged young (Luepkes). Approximately 20 were present in Portage County (Halvorsen, Beske). Also noted in Wood County (Luepkes) and Taylor County (Fadness).
- Saw-whet Owl:** One was found in Bear Bluff township, Jackson County, on June 15 (Leshner).
- Red-bellied Woodpecker:** Found as far north as Vilas County on June 25 (Spahn) and Dunn County on June 3 (Robbins).
- Common (Red-shafted) Flicker:** A reddish colored bird with red moustache markings was found in Iron County on July 7, far east of its normal range (Mary E. Butterbrodt).
- Black-backed Three-toed Woodpecker:** Observed in Douglas County on June 18 (rRobbins).
- Western Kingbird:** One was seen "flycatching" at the LaCrosse Municipal Airport on June 2 (Leshner).
- Scissor-tailed Flycatcher:** A male was discovered in Door County on June 28 (Charlotte Lukes and Ruth Neuman). See *By the Wayside*.
- Yellow-bellied Flycatcher:** Presumed to be late spring migrants were those found in Dunn County on June 3, June 6 in Rusk and Sawyer Counties and June 8 in Clark County (Robbins). Mid-June and later reports were from Douglas County on June 18 (Robbins); one in Baxter's Hollow, Sauk County, same date, sitting and singing in the same branch with an Acadian Flycatcher (Hoffman); one at Thunder Lake bog, Oneida County, on June 29 (Spahn); one on June 30 in Vilas County and three at the same location on July 4 (Spahn).
- Acadian Flycatcher:** Found in Monroe County (Epstein), Adams County (Hoffman), Sauk County (Robbins, Kemper, Hoffman, deBoor), a seasonal total of 12 at Kettle Moraine, Waukesha County (Bielefeldt).
- Willow Flycatcher:** A first confirmed nesting in St. Croix County found July 7 in black willow in Type II sedge meadow (Faanes).
- Least Flycatcher:** Present until July 7 in Waukesha County (Vern Aune).
- Olive-sided Flycatcher:** Found in the northernmost tier of counties and in Door County on June 17 (Lukes) and Ozaukee County on June 3 (Cutright).
- Tree Swallow:** On a Bluebird Trail of 17 nest boxes on the Buena Vista Marsh, Portage County, 15 were inhabited by Tree Swallows; of these one was destroyed by a predator, 14 produced 67 fledged young (Halvorsen).
- Gray Jay:** Two adults and four young came to a feeder in Price County (Hardy).
- Northern Raven:** Found south as far as Jackson County (Epstein).
- Boreal Chickadee:** Found in Ashland County on June 19 (Robbins); Forest County on June 17 (Baughman) and three there on July 28 (Tessen); three in Oneida County at Three Lakes bog on June 27 and four there on June 29 (Spahn).
- Tufted Titmouse:** Farthest north was one in Chippewa County on June 5 (Robbins). Other Chippewa County sightings all summer (Kemper).
- Brown Creeper:** Found to be scarce in Vilas County where only two were seen (Spahn).
- Winter Wren:** Out of the usual range was one in Devil's Lake State Park on June 24 (Leshner). Also found in Sauk County on June 13 (Korotev), June 18 (Hoffman) and July 15 (Robbins and Kemper). Also noted in Douglas, Ashland, Vilas, Forest, Oneida, Taylor and Door Counties.
- Northern Mockingbird:** Two were discovered in Brown County on June 15 (Mr. and Mrs. Lloyd Nesberg, fide Cleary). One was found in Waupaca County on July 7 (Tessen).
- Hermit Thrush:** In Jackson County, one was found on June 21 (Robbins), two on July 14 (Leshner) and one the same date (Epstein). In southwestern Clark County, Robbins found singing birds in two locations on June 7 and in three locations on June 8 which led him to

speculate that this species may be more numerous in summer in parts of central Wisconsin than he had realized.

**Swainson's Thrush:** Only observation was in Ashland County on July 8 (Korotev).

**Gray-cheeked Thrush:** Spring migrants were present in Chippewa County until June 6 (Robbins).

**Blue-gray Gnatcatcher:** A nest was located on July 6 in St. Croix County (Faanes).

**Ruby-crowned Kinglet:** On June 19 singing birds were found in three locations near Clam Lake, Ashland County (Robbins). Also noted in Ashland County (Roy Albert); Iron County (Butterbrodt); Vilas County on June 7 (Baughman) and July 4 (Spahn); in Oneida County at Three Lakes Bog (Spahn); also in Oneida County on June 1 (Engbergs) and June 5 (Vanderschaegen). One in Clark County on June 8 may have been a spring migrant (Hoffman).

**Loggerhead Shrike:** On July 9 a pair was observed on a wire east of Rice Lake, Barron County (Faanes). Five separate breeding pairs were located in the area between Hudson, Hammond and New Richmond, St. Croix County, on July 6 (Faanes). Noted in Portage County on July 5 (Krings) and in Sauk County on July 12 (Gustafson), and on July 15 (Tessen).

**White-eyed Vireo:** Three observations were reported; one singing at Wyalusing Park, Grant County, on June 10 (Korotev and deBoor); one on July 19 at Yellowstone Project, Lafayette County (N.R. Barger); one in Milwaukee on June 6 (Gustafson).

**Bell's Vireo:** On June 12 a singing male was seen in the Chimney Rock area, Trempealeau County, where one was found in 1970 (Robbins). One was present in Juneau County on June 24 (Hoffman) and one was in Green Lake County from June 29 to July 11 (Gustafson).

**Solitary Vireo:** A male was seen and heard at Castle Mound Park, Jackson County on June 21. One was present there in 1972 but none since in mid-June (Robbins). Reported in Forest County on July 28 (Tessen) and a singing male in Waukesha County on June 21 (Bielefeldt) was far south of usual range.

**Prothonotary Warbler:** Noted in Marathon County on June 13 (Krings), Outagamie County on June 15 (Tessen), LaCrosse County on June 15 (Tessen), Columbia County on June 10 (Hoffman) and Grant County on June 10 (deBoor).

**Worm-eating Warbler:** This very rare warbler was found in Sauk County on June 11 (deBoor) and June 18 (Hoffman) and in Vernon County on June 5 (Epstein). See **By the Wayside**.

**Golden-winged Warbler:** Six were found in Waukesha County on the Kettle Moraine State Forest between June 1 and 24 (Bielefeldt). See **By the Wayside**.

**Brewster's Warbler:** Five were found in the Kettle Moraine area from June 5 to 21 (Bielefeldt). See **By the Wayside**.

**Lawrence's Warbler:** One in Waukesha County on June 5 (Bielefeldt). See **By the Wayside**.

**Tennessee Warbler:** Spring migrants lingered until June 3 in Dunn County (Robbins), and in Milwaukee same date (Gustafson). Three were present in Vilas County from July 6 to 15 (Robert and Susan Spahn). An early fall arrival reached Milwaukee on July 23 (Cutright).

**Nashville Warbler:** One was present in Milwaukee on June 13 (Gustafson). Other reports came from the northern counties as far south as Jackson County.

**Northern Parula Warbler:** One in Milwaukee on June 6 was likely a spring migrant (Gustafson).

**Cape May Warbler:** Found in Douglas County on June 18 and in Ashland County on June 18 and 19 (Robbins). Noted in Vilas County from June 1 to July 6 (Baughman); Vilas County on June 27 and 30 (Spahn) and in Forest County on July 28 (Tessen).

**Black-throated Blue Warbler:** Discovered in Ashland County on July 8 (Korotev); Vilas County from June 1 to 17 (Baughman); Price County on June 22 (Hardy) and Forest County on July 3 (Baughman).

**Black-throated Green Warbler:** Unusually far south was one in Milwaukee on June 19 (Gustafson). Birds summered there in 1977 also. One in Sauk County on June 18 (Hoffman).

**Cerulean Warbler:** Farthest north was one in St. Croix County on July 13 (Faanes).

- Pine Warbler:** Unusually far south was the one spotted in Waukesha County in the Kettle Moraine State Forest on June 22 (Bielefeldt).
- Kirtland's Warbler:** Easily the most exciting find of the season was the first ever recorded observation; two individuals were found in Jackson County. One was discovered on June 10 and two on June 15 (Nancy Tilghman). See **By the Wayside**.
- Prairie Warbler:** One was located on June 11 in Laws Bottoms, Dane County (Hoffman).
- Palm Warbler:** In Oneida County, a yellow-race male was seen on June 27 and 29; a western-race pair and nest were found there on June 29 (Spahn). See **By the Wayside**.
- Northern Waterthrush:** Unusually far out of usual range were the observations in Waupaca County on June 15 (Robbins) and in Ozaukee County (Cutright).
- Louisiana Waterthrush:** In Vernon County, six were observed on June 8 with one pair carrying food. It was observed that nesting areas were several feet under water after the severe flooding of the Kickapoo River on June 30 and July 1 (Epstein). Found in St. Croix County on July 13 (Faanes).
- Kentucky Warbler:** One was found in Vernon County on June 5 (Epstein); three in Wyalusing Park on July 6 (Leshner) and in Grant County on June 10 (Korotev, deBoor). One was found in Columbia County on June 10 and one on June 24 only in Waukesha County (Bielefeldt). This is an unusual number of sightings.
- Connecticut Warbler:** In Douglas County, five were found on the Minong Breeding Bird Survey on June 18 and five east of Solon Springs in Bayfield County on June 18 (Robbins). On June 17, eleven singing birds were found north of Grantsburg, Burnett County (Robbins, Donald, Decker). A probable late spring migrant was noted in Clark County east of Humbird on June 8 (Robbins and Deborah Bua). Five singing males were located in Vilas County (Spahn) and one was observed in Forest County on July 3 (Baughman). Noted in Eau Claire County on June 2 (Robbins). The most southerly observation was of two in Jackson County on June 9 (Epstein).
- Mourning Warbler:** Farthest south were the four found in Waukesha County to June 28 (Bielefeldt). Also noted in Waukesha County by Aune.
- Yellow-breasted Chat:** A singing male was found near Mather, Juneau County, on June 15 (Leshner). One was found at Lake Geneva, Walworth County on June 9 (deBoor) and one in Kenosha County (Ron Hoffman).
- Hooded Warbler:** One was noted in a new location for the summer season; a singing male was discovered in Adams County along Roche a Cri River just east of Arkdale on June 22 (Randy Hoffman). One was heard and seen well in Devil's Lake State Park on June 13 (Korotev) and earlier there by Park Naturalist, Ken Lange. At least three males were found in Waukesha County from June 7 on (Bielefeldt) and a male was seen and heard on July 6 and 24 at Lapham Peak, Waukesha County (Gustafson).
- Canada Warbler:** One was noted in Milwaukee on June 2 (Gustafson) and a pair was observed in Waukesha County until June 11 (Aune).
- Orchard Oriole:** Out of usual range is the observation in Oneida County on June 1 (Vanderschaegen). Noted in St. Croix County on July 14 (Faanes); in Pepin County on June 3 (Robbins); Clark County on June 8 (Hoffman), Dunn County on June 3 (Robbins), Trempealeau County on June 12 (Robbins); LaCrosse County on June 2 where they were reported to be scarce (Leshner); Columbia County on July 2 (Hoffman) and one June 20 and 22 in Governor Dodge State Park, Iowa County (Gari Walz).
- Blue Grosbeak:** Observations were reported from Dane County on June 11 (Hoffman) and June 13 (deBoor). See **By the Wayside**.
- Dickcissel:** Population was noted to be up in most areas of the state where it was found. The only area not reporting sightings was the extreme northeast. Exceptions to the observation of increased numbers were St. Croix County where numbers were down (Faanes) and LaCrosse County where birds were noted to be late and scarce (Leshner).
- Pine Siskin:** Noted in Douglas, Ashland, Iron, Vilas, Burnett, Barron, Rusk, Price, Brown where ten were counted on June 7 (Columban and Cleary), Jackson Outagamie where nine came to a feeder until mid-July (Tessen), Winnebago and Fond du Lac where one was seen feeding a young cowbird on June 67 (Knuth).
- Red Crossbill:** The only reported observation was in Forest County on July 3 (Baughman).

**White-winged Crossbill:** Found in Douglas County on June 18 and Ashland County on June 19 (Robbins).

**LeConte's Sparrow:** Noted in Burnett County on June 17 (Robbins, Donald and Decker) and Burnett County same date (D. and J. Haseleu). Three were present in Powell Marsh, Vilas County, on June 28 (Spahn); in Rusk County on June 6 (Robbins) and Juneau County on June 24 (Hoffman).

**Lark Sparrow:** On June 17, three singing birds were found along Highway 70 west of Grantsburg, Burnett County, where birds have been found in 1976 and 1977 (Robbins, Donald, Decker and Kemper). Found in Monroe County on June 2 (Epstein), in Sauk County on June 18 (Hoffman) and July 15 (Tessen); in Columbia County on June 19 (Stephen Lang); two in Dane County on June 9 (Korotev) and one there on July 12 (Gustafson).

**Lincoln's Sparrow:** Observed in Ashland County on June 19 (Robbins); on several dates in Vilas County and eight individuals counted in Oneida County on June 29 (Spahn); in Forest County on July 3 (Baughman) and one there on July 28 (Tessen); and in Barron County (Goff).

**Chestnut-collared Longspur:** An observation on June 6 in Sheboygan County is documented by Cutright in **By the Wayside**.

#### 1978 Observers

Roy Albert, Jim Anderson, Wilmer Anderson, Vern Aune, N.R. Barger, James Baughman, Ida Baumann, Alan Beske, John Bielefeldt, John and Edith Brakefield, Deborah Bua, Mary Butterbrodt, Thomas Cogger, Edwin Cleary, Brother Columban, Noel Cutright, Tom deBoor, Lisa Decker, Mary Donald, Paul and Louise Engberg, Eric Epstein, Tom Erdman, James Evrard, Craig Faanes, John and Lois Fadness, Don Follen, Sr., Alta Goff, Dennis Gustafson, Harvey Halvorsen, Maybelle Hardy, Dorothy Harmer, D. and J. Haseleu, Randy Hoffman, Ron Hoffman, Horicon National Wildlife Refuge, John and Lisa Idzikowski, Charles Kemper, Mrs. Kennaman, Bernie Klugow, Rockne Knuth, Randy Korotev, Steve Krings, Stephen Lang, Ken Lange, Fred Leshar, Harold Lindberg, Ken and Jan Luepke, Charlotte and Roy Lukes, Mrs. Joseph Mahlum, Paula Minkebig, Mr. and Mrs. Lloyd Nesberg, Ruth Neuman, Larry Prickette, Ed Prins, Sam Robbins, Charles Sontag, Robert and Susan Spahn, Daryl Tessen, Steve Thiesson, Joel Trick, P. Vanderschaegen, Gari Walz, Melvin Wierzbicki, Winnie Woodmansee, Thomas Ziebell, Greg Zuberbrier.

## By the Wayside...



#### A Glaucous Gull in Manitowoc Harbor

“30 July 1978. This is undoubtedly the bird reported by others on the hotline tape. It was a second-year bird; obviously larger than a Herring Gull, very large light-colored bill with dark tip, uniformly white sprinkled with small light brown spots, no black on wings. It was seen perched on the breakwater, in the air and swimming in the water. It was observed in good light for five minutes with 20x scope. Other observer; Tom deBoor.”

Randy Korotev

4541 Crescent Road, #10  
Madison, WI 53711



### **A Door County Observation of a Scissor-tailed Flycatcher:**

"At 7:00 a.m. on June 28, 1978, we were conducting our northern Door County breeding bird survey on a clear, warm morning. At Stop Number 29, Ruth Neuman noticed an unusual bird in a young tree about 40 feet off the road to the west of our car. It was only four feet from ground level and easy to see through the open windows of the car. At first I only noticed the gray upper body and thought it was a shrike. I backed the car to get a better look and saw no black on the head and thought Mockingbird! I told Ruth to look for white wing patches when it flew. By then we were about 35 feet away and watched the bird directly out of the passenger side window. I observed it with 16 x 25 power binoculars as it sat with its back to us. I've seen Mockingbirds before and this bird looked different. It had a dark eye and more even-gray head. Then it flew a short distance to the northwest (our car faced south) and it was then that I saw the very long deeply split tail. It then landed in another small tree at the same height and faced east into the sun. Less than a minute later it flew to the northeast and that's when I saw the bright red at the sides of its breast near the wings. We watched it for a total of two minutes under excellent weather conditions and with the sun behind us."

Charlotte Lukes

P.O. Box 152

Baileys Harbor, WI 54202

### **Chestnut-collared Longspur -**

#### **One Less Hypothetical Species for Wisconsin**

Recently, I pleaded for the need of a compilation of bird photographers that would be willing to travel to document rarities (**Passenger Pigeon** 39:342-343). This situation almost came back to haunt me this spring.

As part of an extensive biological survey of a potential power plant site in Sheboygan County, I was conducting a biological reconnaissance survey on the site on June 6, 1978. While walking through a 17 acre field of oats adjacent to a steep bluff along Lake Michigan, I flushed a small bird from the ground. The oat plants were approximately three to five inches in height with bare ground very visible between rows and in a few wetter locations. The only field mark I detected during the bird's first flight was white outer tail feathers. In flight, a two-syllable tull'-lip was given. The bird made a tight circle and landed about 150 feet away. Following the third flush, I was able to identify the bird as a Chestnut-collared Longspur and to slowly approach the bird, which remained motionless between two rows. Bright chestnut collar, light brown bill and brownish streaked back. Black in front extending from wing to wing and from lower throat to leg area. Black also on crown with one stripe extending forward to eye and another stripe bordering chestnut collar and extending forward to even with the eye. White stripe above eye and below eye where it divides two black stripes; throat an off-white. Also small white area at back of head bordered by black and chestnut at base." Flight is described as bouncy and darty. On the ground it walked between rows of oats 3 to 5 inches in height and picked food from oat leaves and occasionally from the ground. Visibility was excellent; a late morning bright sun was at my back. using 7 x 35 Bushnell binoculars, I viewed the bird at a distance of about 40-45 feet for approximately three minutes while I memorized all field marks. I then continued with my reconnaissance of the area.

When I returned to my car approximately 90 minutes later, I decided to check the status of Chestnut-collareds in Wisconsin Birds (Barger, N.R., et al 1975). To my surprise, it was not included on the 370-species checklist. I hurriedly checked the hypothetical list of 26 species, which have been sighted in Wisconsin, but have not been substantiated by specimen, photograph, or tape recording. One previous record was listed, a sighting by Mary Donald on May 24, 1953 from Columbia County (**Passenger Pigeon** 16:52). I immediately became more excited and realized that I **must** obtain a recognizable photograph of the bird. To my chagrin I remembered that my camera with telephoto lens was with my wife in Florida. I had a company camera but had neglected to bring the telephoto lens. After a few futile attempts at stalking and photographing the longspur with a short lens, I realized I would have to obtain a camera with a telephoto. After unsuccessfully telephoning several Milwaukee area birders, I contacted Jack Brumer of Plymouth, who had conducted mist netting and banding studies on the study site in 1977 and 1978. Jack immediately rushed to the site and we relocated the bird. For approximately 30 minutes we stalked the bird and attempted to take slides and movies as it ran, fed, and hid between the rows of oats. After shooting all the movie film and a roll of slide film, I was hoping that we had captured one recognizable pose of this beautiful male longspur in full breeding plumage. Our efforts were successful, although the photos, as usual, seemed not to be quite as sharp and clear as the picture etched in memory. Photos were submitted to Mr. D. Tessen and additional copies will be placed in the permanent file for Wisconsin documentation records, the location of which is yet to be determined.

Photographs show the bright chestnut or rusty collar across the hindneck and the distinctive white and black markings on the head. Not visible in the photos were the white throat and the black on the abdomen that extended from wing to wing and from the lower throat to the legs. After my letter in the *Passenger Pigeon*, I am extremely relieved that a recognizable photograph was obtained. The bird was never relocated to my knowledge.

Harris (**Passenger Pigeon** 39:202) reported the sighting of a male in breeding plumage on May 27 in Ashland County. Unfortunately a photo was not obtained of this bird. It is interesting that all three Wisconsin sightings have occurred between May 24 and June 6, a time the species should be actively nesting. Chestnut-collareds are regular summer residents in the northwestern region of Minnesota; they formerly bred throughout the western prairie in Minnesota from Jackson County on the Iowa border to the Canadian border (Green and Janssen 1975, *Minnesota Birds: Where, When, and How Many*). Egg dates for 23 Minnesota records range from May 19 to June 16 (Bent 1968, *Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows and Allies*). It also is surprising that more Wisconsin sightings have not occurred since the species does nest in a neighboring state. Casual records exist east to the Atlantic coast in Nova Scotia, New Brunswick, Maine, Massachusetts, New York, Maryland, and northern Florida (Bent 1968). However, because of the plumage similarity of winter males and females among the longspurs, identification in Wisconsin of a non-Lapland Longspur in a flock of migrating or wintering longspurs is certainly difficult.

I would like to thank Jack Brumer for his photographic assistance. This experience has reinforced my feelings that a photography "hotline" would work.

Noel Cutright  
3352 Knollwood  
West Bend, WI 53095

*(Editor's Note: Unfortunately, the photograph is not sharp enough for reproduction in the Passenger Pigeon.)*

### **Worm-eating Warbler in Sauk County**

"Heard first. A high thin, extremely rapid buzzy trill. The call was too high, too thin and too rapid for any Chipping Sparrow. The bird was calling from an enclosed hillside cove which, I might add, harbored several Acadian Flycatchers, hardly Chippie companions. Although there were two pines, the bird was not found in them. Chippies had been calling since 5:30 a.m. but this bird did not until 7:15. Unpleasant a reason though it is, this is the very spot that a bird had been found in May. The bird seemed skittish, unlike a Chippie, and flew from tree to tree. In flight it appeared to be a warbler and I got a brief glimpse of a yellowish-orange underside as it moved rapidly sideways on a branch. I have heard enough Pine Warblers to know it was not that species. Seven minutes later it stopped having moved all around the dry hillside (Baxter's Hollow)."

Tom deBoor  
167 North Prospect Avenue  
Madison, WI 53705

### **A Waukesha County Search for Golden-winged, Blue-winged and Hybrid Warblers**

"An active search for these warblers and hybrids in some of the suitable habitat in the Kettle Moraine State Forest, May 31 to June 24, found 35 birds in total. All 33 of the singing birds were tracked down and visually identified: two silent birds were also detected. Identifiably-plumaged hybrids were 17 percent of the total. Many of the "golden and "blue" wings were probably of mixed blood too. Each of the "Brewster's" (June 5, 7, 12, 20 and 21) was cautiously identified in good light at close range with 7 x 50 binoculars, with care to avoid misidentifying tolighted Blue-wings in which yellow underpart colors can be washed out by strong overhead light. There is some possibility that two of the "Brewster's", one-half mile apart, were the same bird even though quite different songs were sung in the 5 to 10 minutes spent on each observation. The other three birds were one to six miles from these two and from each other, and none of them was the Lapham Peak bird seen by Safir in late May and possibly early summer. The "Lawrence's" on June 5 at Scopernong Springs Nature Trail is not doubt the same bird reported by Genrick for May 11 and glimpsed by Safir on May 21. The black bib and cheek patch on otherwise entirely yellow underparts, yellow cap and white wing bars on gray-blue wings were seen in full sunlight with 7 x 50 binoculars as the bird sang from a high dead branch at 50 feet, and when it approached to less than 10 feet in response to squeaking."

John Bielefeldt  
1706 Norman Way #217  
Madison, Wi 53705

### **Laughing Gull In Manitowoc Harbor**

"On-the-spot notes read: 'Adult in breeding plumage seen at 100 yards perched on top of breakwater in Manitowoc Harbor. Slightly smaller than nearby Ring-bills, and larger than nearby Bonaparte's. Conspicuous dark head, than those of nearby Bonaparte's. Mantle noticeably darker than Bonaparte's. Seemingly solid dark gray with blackish wing tips at rest. Bill very dark reddish. Feet dark, but exact color could not be ascertained. When flushed bird showed uniformly dark mantle except for white on trailing edge of wing, and blackish tips. No sign whatever of any white line near the tip that would be expected in a Franklin's' See for ten minutes with 10x binoculars and 30x scope before flushing. Other observer; Daryl Tessen."

Sam Robbins

Box 117

Cadott, WI 54727

### **A Dane County Blue Grosbeak**

"On June 11, 1978, at Laws Bottoms, Dane County, two males were seen from 20 to 50 feet for about 15 minutes with 7 x 35 binoculars. They were seen along the trail leading to the dike. They kept low in the brush, only once rising to lower branches of the trees. The two males had large blue-gray bills with a black patch back to the eye. The rest of the plumage was deep dark blue, almost a purple, except for the wings which had two brown wing bars and there was mush brown edging showing through the primaries. Both would hold their tails cocked up at a 45° angle."

Randy Hoffman

101 Third Street

Waunakee, WI 53597

"I noticed a movement in low brush (Indigos were already up above and singing). Looking, I saw a very deep blue bird about twice the size of an Indigo Bunting with a light bill that just 'stuck out'. It turned, revealing tan wing bars and a veining of the wings including several brown veins that were very visible as the bird turned its back. In all movements, the bird was deliberate. Then it disappeared. A short time later, I noticed a bird picking at something in a tree in back of my first sighting. It appeared black (like a cowbird) because of the light, but the wingbars stuck out like a sore thumb. (Mazomanie)."

Tom deBoor

167 North Prospect Avenue

Madison, WI 53705

### **Worm-eating Warbler in Vernon County**

"June 5, 1978, in Wildcat Mountain State Park. The rapid, loud trilling song, unlike that of Pine Warblers or Chipping Sparrows singing nearby, caused me to scour the shrubbery on the west bank of the Kickapoo River, south of the parking area. Ten minutes of leaf by leaf search of the ground layer vegetation produced only moderate to severe eyestrain and no ornithological revelations. At that time, the singer flew to the nearly denuded canopy of a diseased elm, exposed to the world and me, he continued singing. The bird was in full view, the sun behind me for about five minutes. This warbler did not jump from perch to perch as many singing warblers do. It turned on its branch a few times but that was the extent of its move-

ment. Field marks as follows: Upperparts - dull olive tan, no suggestion of back streaking or wing bars; underparts - very pale buff, legs pinkish (flesh colored, as the white folks like to say), bill - dark, thin, typical warbler bill, head - boldly striped with blackish and pale buff (crown stripe buff flanked with two black stripes, buff superciliary line, blackish eyeline). At the end of this visual observation period, the bird flew into the lushly foliated ravine just to the north and slightly upslope from the head of Hemlock Trail. From an unseen perch (more eyestrain) it continued to sing for some 30 minutes, after which I lost my stamina and left. Time; 8:15 to 9:00 a.m. total. Distance - 30 meters. Mosquito bites - 79. Wood ticks - 23. On June 8, 1978, the same bird (presumably) was heard singing from rich deciduous woods with a dense understory in the same area (around noon). Song appeared to emanate from a perch on or near the ground. Couldn't see it."

Eric Epstein  
4737 North Wilshire Road  
Milwaukee, WI 53211



## **Bald Eagle-Osprey Survey Report U.S. Forest Service, Eastern Region 1978**

This report summarizes the 1978 Bald Eagle and Osprey nesting surveys on and near national forests in the lake states. Nest surveys are normally conducted with an airplane and consist of four separate flights. Eagle nests are observed in early April to determine nest occupancy and again in late June or early July to determine nesting success. Osprey nests are checked in May and late July.

Two hundred and sixty-four Eagle territories were surveyed. Adult Eagles were present at 192 (73%) of these at the time of the first airplane flight. Numbers of territories, successful nests and young birds raised to fledging state are 264, 127 and 202 respectively; down slightly from last year's record-breaking totals.

One hundred and forty-four Osprey territories were occupied out of 193 observed. Nesting success and number of young were the lowest of any year in the past five. Heavy storms and low temperatures during the Osprey nesting season may have caused this reduction in success rates.

## BALD EAGLE NESTING STATUS

U.S. FOREST SERVICE, EASTERN REGION

Year 1978

FOREST AND STATE	VERIFIED NESTS		TERRITORIES OBSERVED	OCCUPIED NESTS	SUCCESSFUL NESTS	YOUNG PRODUCED
	<u>1977</u>	<u>1978</u>				
Ottawa	76	76	43	31	21	33
Hiawatha	16	14	11	4	1	1
Huron-Manistee	16	17	12	8	3	7
MICHIGAN	108	107	66	43	25	41
Chequamegon	22	19	17	13	8	11
Nicolet	36	39	24	22	12	20
WISCONSIN	58	58	41	35	20	31
Superior	65	70	50	34	26	38
Chippewa	194	200	107	80	56	92
MINNESOTA	259	270	157	114	82	130
REGION NINE TOTALS:	425	435	264	192	127	202



# OSPREY NESTING STATUS

U.S. FOREST SERVICE, EASTERN REGION

Year 1978

FOREST AND STATE	VERIFIED NESTS		TERRITORIES OBSERVED	OCCUPIED NESTS	SUCCESSFUL NESTS	YOUNG PRODUCED
	<u>1977</u>	<u>1978</u>				
Ottawa	15	16	14	11	7	9
Hiawatha	23	20	18	14	14	14
Huron-Manistee	None	None				
MICHIGAN	38	36	32	25	21	23
Chequamegon	4	2	3	0	0	0
Nicolet	33	29	30	20	7	11
WISCONSIN	37	31	33	20	7	11
Superior	39	35	32	21	16	20
Chippewa	146	214	96	78	19	30
MINNESOTA	185	249	128	99	35	50
REGION NINE TOTALS:	260	316	193	144	63	84

**BALD EAGLE NESTING TRENDS**  
**U.S. FOREST SERVICE, EASTERN REGION**

YEAR	VERIFIED NESTS	TERRITORIES OBSERVED	OCCUPIED NESTS		SUCCESSFUL NESTS		YOUNG		
			No.	%	No.	%	No.	Per Nest	Per Active Nest
1968	323		119		66	55	98	1.9	.82
1969	344	166	129	78	72	56	109	1.5	.85
1970	294	189	124	66	64	52	107	1.7	.86
1971	327	188	128	68	77	56	115	1.5	.83
1972	356	238	167	70	97	58	155	1.6	.93
1973	382	264	171	65	99	58	163	1.6	.95
1974	381	257	170	66	89	52	119	1.3	.70
1975	398	285	176	62	117	67	192	1.6	1.09
1976	414	260	178	68	126	71	187	1.5	1.05
1977	421	265	197	75	138	70	212	1.5	1.08
1978	425	264	192	73	127	66	202	1.6	1.05

**OSPREY NESTING TRENDS**  
**U.S. FOREST SERVICE, EASTERN REGION**

YEAR	VERIFIED NESTS	TERRITORIES OBSERVED	OCCUPIED NESTS		SUCCESSFUL NESTS		YOUNG		
			No.	%	No.	%	No.	Per Nest	Per Active Nest
1968	152		73		21	29	27	1.3	.37
1969	183		72		28	39	55	2.0	.76
1970	157	93	84	90	42	50	74	1.8	.88
1971	140		66		34	52	55	1.6	.83
1972	205	130	111	85	59	53	97	1.6	.87
1973	226	154	127	82	21	38*	36	1.7	.65*
1974	252	140	140	100	73	52	118	1.6	.84
1975	238	157	115	73	59	51	102	1.7	.97
1976	249	154	117	76	70	60	120	1.7	1.03
1977	254	197	159	81	89	56	147	1.7	.92
1978	316	193	144	75	63	44	84	1.3	.58

\*Chippewa NF incomplete data excluded from calculations.

# Letters to the Editor

Dear Dr. Kemper:

I would like to point out an error in the Spring issue - on Page 49, the B-w Hawk should be credited to Boerner and Grootmaat (Pg. 47) and the the Ross' Goose should be credited to Hoffman (Pg. 47)

Sincerely,  
Noel Cutright  
3352 Knollwood  
West Bend, WI 53095

Dear Dr. Kemper:

Am enclosing a note that you may wish to put into the "Field Notes Section" of the Passenger Pigeon some time.

## Possible Ferruginous Hawk in Wood County

On April 12, we (Don and Mary Follen, Mike Rhodes) observed what we believe to be a Ferruginous Hawk, (*Buteo regalis*) one mile north of Arpin, Wood County, Wisconsin approximately one hundred yards east of County Trunk E. Description is as follows:

Date; April 12, 1979

Place: 1 mi. N. Arpin, WI on Co. Trk. E

Length of observation: 20-25 minutes.

Habitat: Cropland and grassy field scattered with a few trees.

Distance: from 150 feet to 1 1/4 mile.

Glasses used: Bushnell 8x35, balscope zoom 60.

Light conditions: clear to partly cloudy.

While heading north of Arpin on Co. Trk. E, we noticed a very light looking Rough-legged Hawk sitting approximately fifteen feet off the ground in a dead elm snag. Upon stopping the car, we scoped and glassed the bird for ten minutes making note of the light colored bird. The head and tail were white or very light in color. The back was brown but had a bit of fusing of white and this looked like it may have been from the under coverts on the back which also shows in Red-tailed hawks. The whole under side of the head, neck, breast, belly and tail were white or light with the exception of the feathers around the anal area, which appeared to be a slight pinkish yet ochraceous color. The darkest part of the ventral surface of the bird were the rufous brown legs. To me it was obvious that it was possibly a Ferruginous Hawk, **but** - with the myriad of colors especially in younger RL's I wonder who can really say for sure. I had under observation last fall a Rough-leg that looked **exactly** like an adult Golden Eagle for two days, and this was observed from as close as 50 ft. Ken Luepke also told me of several hawks that he observed last fall that he thought were possibly Swainson's Hawks and we had the same encounter here. I don't know how the rest of the state has fared, but we have had an obvious peak in the rodent cycle here and have we had the hawks. Using only an estimate, I would say that we have made over ten thousand observations of hawks in this area from October until now and we still have many RL's in the area.

Don G. Follen, Sr.  
Rt. 1, Box 96  
Arpin, WI 54410

Dear Dr. Kemper,

Presently I am assembling a slide set on Wisconsin raptors for use by the Northwoods Wildlife Hospital and Rehabilitation Center. I need good slides of the following species:

Rough-legged Hawk  
Sharp-shinned Hawk  
Red-tail Hawk  
Swainson's Hawk

Peregrine Falcon  
Merlin  
Broad-winged Hawk  
Osprey

Short-eared Owl  
Hawk Owl  
Snowy Owl  
Turkey Vulture

Of course I will pay copying costs and postage. Please feel free to call (715) 356-7400 or write the Northwoods Wildlife Hospital and Rehabilitation Center regarding slides on any of the above.

I certainly appreciate any help anyone could give.

Thank you very much for your consideration.

Respectfully,  
R.C. Foster, D.V.M., President - Board of Directors  
Northwoods Wildlife Hospital and Rehabilitation Center  
Highway 70, West,  
Minocqua, Wisconsin 54548

Dear Dr. Kemper,

The observation of the Marbled Godwit reported in the spring 1979 Passenger Pigeon for Ashland/Bayfield Counties should be May 18 rather than April 18.

Some interesting observations again this year, a Piping Plover (April 25,26) and 3 White-fronted Geese (April 26), even though the lake is still frozen over.

Sincerely,  
Richard L. Verch  
Ashland, WI 54806

Dear Dr. Kemper,

While I myself have never been successful in having Purple Martins nest in my martin house, I am in contact with several Purple Martin landlords who let me know how large their flocks are year after year. I do see them around my home on Plum Lake but they nest down the shoreline from where I am situated.

Today, I spoke with a friend in Boulder Junction who usually has 30-35 pair and she was so disappointed to say she has only one female around this year. There was a male but just after the first martins came back to northern Wisconsin, we had a snowstorm and she found the male dead in her back yard a few days later.

Her brother from Madison has an established colony of martins, or should say has had, because this year he has none. They were both wondering if perhaps this year when the birds were migrating back north they may have been wiped out by some storms or tornadoes, or hurricanes somewhere in the southern states. Do you know of any place where many birds perished from storms? All the birds are not gone here in Northern Wisconsin but there sure is a decline in the Purple Martins.

Sincerely,  
Linda Thomas  
West Plum Lake  
Sayner, WI 54560  
WSO Historian

*(Editors Note: This has been the third consecutive difficult winter and spring. Not only Purple Martins, but Bluebirds and Western Meadowlarks seem to have been hurt severely. Would welcome any other comments or observations.)*

Dear Dr. Kemper,

I regret to inform you of a mistake in the 1978 spring field notes (Volume 41, page 29). The mistake, I believe, was mine. I didn't see any Red-necked Grebes in Dane County. The dates listed under my name were for Horned Grebes.

Embarrassed,  
Steve Thiessen  
4913 Whitehore Pl.  
McFarland, WI 53558

**ADDITIONS AND CORRECTIONS TO EXTREME  
ARRIVAL AND DEPARTURE DATES, Pass. Pigeon, Vol. XXXII, No. 3**

**Cattle Egret:** P. 88, under Summer Status Column, delete "occasional", insert "regular".

**Louisiana Heron:** P. 88, under Summer Status Column, insert "June 18-22, 1978, Joel Trick".

**Whistling Swan:** P. 88, under Summer Status Column, insert "occasional".

**Bufflehead:** P. 92, under Summer Status Column, insert July 16, 1978, Randy Korotev.

**Turkey Vulture:** P. 94, under Summer Status Column, delete "occasional", insert "regular".

**Swainson's Hawk:** P. 96, under Summer Status Column, delete "2 summer dates", insert "occasional wanderer".

**Willet:** P. 103, under Fall Arrival Column, delete "July 12, 1965, Ed Prins", insert "July 10, 1978, Harold Lindberg".

**Red Knot:** P. 102, under Spring Departure Column, delete previous entries, insert "June 14, 1978, Daryl Tessen, Sam Robbins".

**Baird's Sandpiper:** P. 102, under Spring Departure Column, delete "June 9, 1967, Richard Bernard", insert "June 10, 1978, Daryl Tessen".

**Long-billed Dowitcher:** P. 105, under Fall Arrival Column, delete "Aug. 9, 1969, Daryl Tessen", insert "July 9, 1978, Craig Faanes".

**Stilt Sandpiper:** P. 104, under Spring Departure Column, delete "May 31, 1965, Richard Bernard", insert "June 6, 1978, Randy Korotev".

**Marbled Godwit:** P. 105, under Fall Arrival Column, delete previous entries, insert "July 22, 1978, Tom deBoor".

**Glaucous Gull:** P. 106, under Summer Status Column, insert "occasional".

**Greater Black-backed Gull:** P. 106, under Species Column, change "Great" to "Greater". Under Summer Status Column, insert "July 13, 1978, Daryl Tessen".

**Franklin's Gull:** P. 106, under Summer Status Column, insert "occasional wanderer".

**Common (Red-shafted) Flicker:** P. 112, under Summer Status Column, insert "July 7, 1978, Mary Butterbrodt".

**Chestnut-collared Longspur:** P. 136, under Summer Status Column, insert "June 6, 1978, Noel Cutright. P. 137.





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P.O. Box 699, 733 Maple St., Chippewa Falls, WI 54729  
(715—723-3815)

**Assistant Editor:** Linda L. Safir,\*

18925 Lothmoor Dr. Lower, Brookfield, WI 53005 (414—782-0805)

**Circulation Manager:** W.D. Brown,

225 W. Lakeside St., Madison, WI 53715 (608—256-2287)

**Associate Editor:** Daryl Tessen,\*

2 Pioneer Pl., Elgin, IL 60120 (312—695-2464)

**The Badger Birder Editor:** Mary Donald,\*

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\*Member Board of Directors