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A MAGAZINE OF WISCONSIN BIRD STUDY



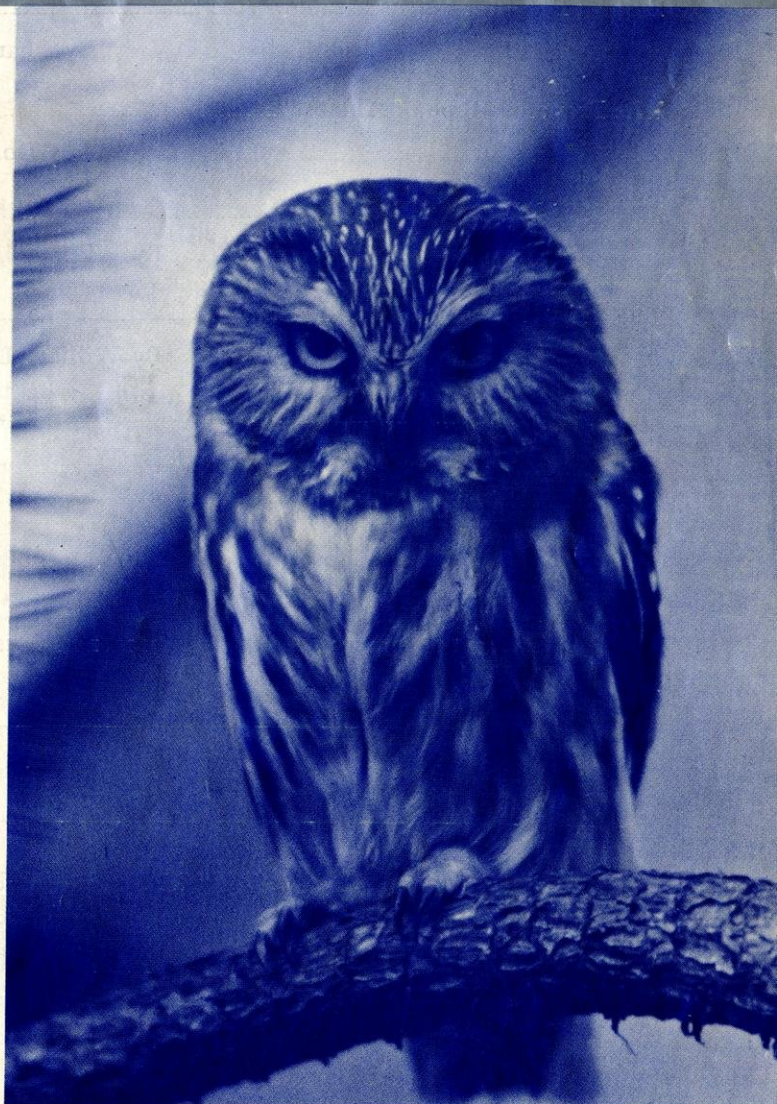
The Passenger Pigeon

Winter 1967

VOLUME 29 NUMBER 4

**SAW-WHET
OWL**

PHOTO BY
ED PRINS



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The Day I Held The Scrub-Bird

By R. H. STRANGER



The following article is an outgrowth of a correspondence between the author and the editor regarding some research on exposure to epidemic animal and bird diseases in bird banders. It occurred to the editor that it would be of interest to Wisconsin birders to hear some account of birds of faraway western Australia. The author kindly consented to submit a manuscript, which is not only of great interest, but of historical significance. He describes an adventure that most birders can only dream of, the re-discovery of a supposedly extinct species. As a result we would like to appoint Mr. Stranger as the official Australian correspondent of the Passenger Pigeon.

Australia—an ancient land. A land of primitive and interesting flora and fauna. Land of the Kangaroo and Platypus and Lyre-bird. Land of the Scrub-bird.

The Scrub-bird is unique to Australia and taxonomists classify it as the lowliest and most primitive member of the sub-order **Passeres**. So primitive that some consider it should not be included with the song-birds but placed in the lower Sub-order **Menuræ** together with the Lyrebird.

We have two species, the Rufous Scrub-bird (*Atrichornis rufescens*), which still survives in the sub-tropical scrub of coastal southern Queensland and northern New South Wales, and the Noisy Scrub-bird (*Atrichornis clamosus*) which tenuously clings to existence with one small colony at Two People Bay in the southwest. It is the latter, virtually extinct, species, that is the subject of this story.

The Noisy Scrub-bird became known to science in 1843 when John Gilbert collected 4 or 5 specimens at Drakes Brook and at King Georges Sound. Two other naturalists, George Masters and William Webb, obtained about 15 specimens at King Georges Sound and the last specimen ever to be collected was obtained at Torbay in October 1889 by A. J. Campbell, who also recorded that he heard the species calling near Wallcliffe on November 4th.

Only 19 or 20 specimens survive in the world's museums and these specimens, together with the notes of the naturalists who collected them, were all that science had. Between 1904 and 1960 intensive searches were conducted in all likely places in the southwest. But all were unsuccessful. The Noisy Scrub-bird had vanished into the obscurity of the Australian bush.

Ornithologists resigned themselves to the belief that it was extinct. Extinct! That eery cessation of existence which is the end of a species life. That grand finale of which William Beebe said, "but when the last individual of a race of living beings breathes no more, another heaven and another earth must pass before such a one can be again".

For 71 years the sun aged southwestern Australia. Ornithologists aged too, but they discovered nothing about Noisy Scrub-birds. Then one day a naturalist laid down his fishing rod on the shore of Two People Bay, situated on the south coast 20 miles east of Albany, and ventured into the tangled vegetation lining the beach in an endeavor to identify the bird producing a call which mystified him. The man was Harley Webster, an Albany schoolteacher, and later, after he had seen the bird, he remarked to his wife, "I think I have found the Scrub-bird".

He had! In December 1961 he positively identified a singing male. The Noisy Scrub-bird was re-discovered.

To me, a bird-lover since childhood and an ornithologist from my early teens, the discovery and subsequent reports were of great interest, but it was not until 1964 that this *Atrichornis* actually entered my life. And then only by chance.

I was unemployed at the time and between job-hunting used to employ myself at the local C.S.I.R.O. Division of Wildlife Research Laboratory under the guidance of Dr. Dominic L. Serventy, the Principal Research Officer. On these occasions I mostly trapped and banded birds, made observations, recorded data and continued with a project I had started a few years earlier. It was here that Dom introduced me to an Eastern States naturalist, Graham Pizzey, who had come to the west to film some of our wildlife for a television production. The same day Dom asked me if I would like to accompany him on an expedition to Two People Bay with the objective of catching a Scrub-bird for Graham to film. I was mentally taking stock of equipment we would need even before I had finished my affirmation.

During the next few days I busied myself repairing nets and packing equipment. I even packed a pair of calipers and a balance for if we caught any Scrub-birds their weight and "vital statistics" would be important additions to our knowledge. We could only guess at what size band fitted a Scrub-bird so I included a range of sizes.

My main concern was the mist nets. This type of net takes a bird quite well, the thin strands entangling the bird and holding it a prisoner without harming it. However it is intended that the bird fly into the net with some force and as Scrub-birds are flightless I wasn't very optimistic. Even less so with the larger meshed nets. I had seen Singing Honeyeaters slip through these without effort and the thought of a Scrub-bird of equal size doing the same didn't thrill me.

It was 3:30 a. m. when I eased myself from bed on the 5th of January 1964. I noticed the clear sky with its yellow stars as I sat on the

front fence waiting for Vin Serventy, Dom's brother. At Dom's place we met Harry Schugg, an officer of the local Fisheries and Fauna Department. It was 4:30 a.m. when the last of the equipment had been packed into Harry's car. Dom switched off the laboratory lights and we started on the 270 mile drive to Two People Bay.

There we met the other members of the venture. Harley Webster, Graham, Mrs. Rica Erickson and her husband Sydney. After introductions and the unloading of our sleeping equipment at a small hut, which was to be our camp, we moved off to the trapping site situated on the lower slopes of Mt. Gardner some two miles to the south of the hut.

Harley had chosen this particular site and Graham had already cut two paths through the small but dense islands of tangled vegetation. I helped Graham erect the nets, listening all the while to the mingled trilling, chirping and calling of birds far and near. The two-way radios



ACTUAL SITE OF THE MIST-NETTING AREA WHERE THE BIRD WAS CAUGHT. DR. SERVenty THIS END OF NET. AUTHOR DOING SOMETHING TO NET, OTHERS BEHIND.

were tested, their antennae noticeably out of place in this ancient environment. I swallowed a few mouthfuls of water from a seepage which had broken cover and was clamouring down a six inch waterfall.

The first trapping area looked promising. Three mist nets formed a line that divided the stunted but thriving vegetation in two and in places the shadow of the scrub walls alongside rendered the nets almost invisible. Tawny-crowned Honeyeaters flashed around, unfamiliar calls reached my ears. Syd, equipped with a radio, was stationed at one end of the line of nets. Harley positioned himself midway. The rest of us went downhill ~~from~~ the net and began to drive, beating the bushes as we went and making an awful lot of noise just in forcing our way through the scrub. The joyous notes of the birds turned to harsh calls of consternation and I was looking forward to examining our catch regardless of what we caught. Foolish me, when I eventually extricated myself from the scrub my eyes travelled the whole length of the net, and almost in disbelief, I saw that it was empty. Slowly I walked along the net looking for telltale signs that something had hit and escaped. There was nothing. Not even a loose feather.

Harley and Syd stayed by the net while the rest of us went uphill and drove down. I avoided the denser patches of scrub this time so that I could get to the net quicker. I need not have bothered. The drive was as unsuccessful as the first. Harley pointed out that we could forget this area for a while as we would have frightened any Scrub-bird well away. So we turned our attention to the other trapping site.

The second area consisted of a single standard size net dividing an island of scrub which was only waist high in the center and which gave way to grass on the edges. Syd, with his two way radio, was stationed on one end of the net. The rest of us spread out on the uphill side and commenced to drive. My position was on the extreme right but although I was only some 10 yards from the edge, the thickness of the vegetation and the rocky ground prevented rapid movement. Almost immediately Syd's voice burned from Dom's receiver "There is a bird in the net".

Frantically I struggled to the edge of the scrub and in a stumbling gallop tore down to the net. About a foot from the top a small light brown bird was vigorously struggling with the folds of the net which enveloped it. I promptly grabbed it and freed it from the tenuous strands which had worked around its beak, feet and claws, its head, limbs and feathers. As I did so I was hampered by the fine strands of net catching around the winder of my watch and the links of its band.

I didn't know what species of bird it was but was saved from this embarrassment by Dom who unhesitatingly identified it as a Bristle-bird, one of our rarest species. Glistening, silvery flecks in the plumage gave this otherwise drab bird an impressive beauty. After a brief examination, during which it struggled continuously, tried to bite and frequently uttered a harsh, angry sounding call, I placed it in a specially padded cage in the shade of a bush. We then resumed our positions uphill. This time I slipped my watch into my pocket and positioned myself on the very edge of the scrub. Someone said "Let's go".

We had advanced only a few yards when Syd's voice came over loud and clear with the same message as before. Less hastily this time I ran to the net and looked along it. At the bottom of the net, only five feet from the other end a darkish brown bird was jumping up and down and

moving along the net, closer to the end.

I still remember very clearly how that first glimpse made me think of a Scrub-Robin, one of our other ground-dwelling species. And then in that same instant of time I catapaulted down the net, flung myself to my knees and grabbing hold of the bird and the net, clutched both to my stomach. Confident now, I slid my hand in between the folds of net and gained a secure grip on the bird. Then, with the net still around it, I held it before me, almost too scared to look at it for fear it wasn't what I thought. In just a few seconds I noted its size, the beak, the legs, the wings and tail, and simultaneously made a snap decision. Then I shouted just one word "Atrichornis!"

I heard Vin repeat my cry as I turned my attention to removing the Scrub-bird from the net. It wasn't difficult. Atrichornis came out of that net as easily as an egg from a tea-towel.

Then Dom was standing over me, checking diagnostic features of the species, and citing them aloud in zoological terms that I had previously only read in books. "Yes, it definitely is" he confirmed "and judging by the plumage, a female too". The first to ever come before the notice of science as the specimens collected had all been males.

I held the Scrub-bird out for everyone to see. That she didn't have a black band across the chest like a male didn't detract from her. She was alive, this "Jee-luk" of now vanished aboriginals, and that was sufficient. No sound issued from her throat. No flutter of wings or struggle of body. Just a gentle stretching of first one leg then the other as she tried to solve the puzzle of this novel situation. She was the most docile bird I have ever handled. The light reflecting from her prehistorically patterned body began to impress itself in the emulsion of twentieth century film.



NOISY SCRUB BIRD
TWO PEOPLE BAY, WESTERN AUSTRALIA, JAN. 5, 1964

As Dom banded her I think I detected in the studious concentration of his face and two dark observant eyes a mixture of triumph and satisfaction.

In between filming I rolled a yellow plastic band on the Jee-muluk's left tarsus and sealed it with acetone. There wasn't any real value in this action as it is extremely doubtful that she will ever be heard of again, much less so anyone actually observing the yellow identity. But my bander's blood always runs hot and I couldn't resist the temptation.

Dom and I also recorded the "vital statistics" such as wing length, color of the iris, and weight. This latter being the first and only in existence. We started to examine the plumage for moult but were interrupted by the photographers wanting to continue filming. Later on I noticed the primary moult of the wing but neglected to show it to Dom and didn't mention it until after the bird had been released. He was most upset and refused to believe me. However, next morning he asked me for my notes, but I don't know to this day if he accepted them as being genuine.

I noticed that our little Jeemuluk was starting to feel the effects of the continual handling and it wasn't long before it was plainly visible to everyone. By now she was disinterested in the happenings around her. Her eyes kept closing, only opening when something startled her. Her wings drooped down, almost as if they were broken, she not caring to control them anymore. When the bird ruffled her feathers she didn't bother to smooth them again. She was almost lifeless in my hand.

Most birds don't suffer any effects from being handled but a few individuals of some species seem to find the excitement of being caught and handled rather stressing. Cage-bird fanciers, including myself, are familiar with the sometimes violent convulsion of some canaries and I have handled a few other Passerine species which had similar fits, lapsing into a semi-coma with wings and bodies quivering.

And now Jeemuluk was being affected by the same stress. Not reacting violently, just fading away. Her condition was being discussed by the other members of the group. Some wanted to let her go, others wanted to keep her for a while longer.

As a bird-lover I also wanted to let her go, to release her to the sanctuary of freedom. I was thankful for what we had already filmed and learned.

As an ornithologist I didn't like the idea of releasing her before we had recorded the maximum amount of data and completed filming. The naturalist in me won. With a confidence I didn't really feel, I issued assurances that she would recover after a rest and placed her in the padded cage after having first removed the Bristle-bird.

Half an hour of this solitary confinement showed me that she was going to be all right and within three quarters of an hour she had completely recovered. We lost no time in completing the filming and recording of information and then with cameras poised we stood back, our attention on Dom holding her, a foot or so above the rocky ground at a distance of some 10 to 15 feet from the edge of the scrub. Set for slow motion filming the cameras began to record the stage.

Dom let her go. Her wings remained folded by her sides. She hopped on both feet once, twice, a few times more, and was gone. It was

a sad moment, suddenly very empty. I closed my notebook and slowly began gathering our equipment.

* * * *

She wasn't the last Scrub-bird I saw there that weekend. I arose early next morning and in the dim dewy dawn wandered around near the hut. The bush was seeping with the trilling and chirping of silvereyes and thornbills, honeyeaters and wrens. A pair of beautiful bluish-grey rats were playing chasy around a small bush, their feet making little clicking noises on the carpet of dead gum leaves. Then I heard a "cheep-cheep-cheep-cheep-cheep-cheep" followed by a trill, come from the bush to my left.

Suddenly excited, I stood there, senses alert, eyes searching for any movement, ears straining to identify the sounds issuing from the darkness of the undergrowth. The call was repeated and I guessed the caller to be a male Scrub-bird. He was moving parallel to the trail leading from the shack to the beach so I ambled along it, keeping abreast of him and only knowing his approximate position when his call reverberated from the scrub and rushes.

He was coming closer now and seemed to have doubled back a little. I turned around and sat down on the trail facing back towards the hut. I couldn't see more than a few feet into the undergrowth but I could hear him moving around. I waited. He was very close. I could catch vague glimpses of movement, could hear the leaves and bushes rustling. A terrific commotion from the direction of the rats told me that their game of chasy was at an end. I could have believed they were trying to devour one another. But my eyes never left the green and grey obscuring my quarry.



SHUGG

SERVENTY

WEBSTER

For over a quarter of an hour I sat there, alert and observing every movement and sound. He fluttered, he rustled, he cheeped, he trilled. But not once did I see him. He was so close I could have spat on him, but blurs of movement were all I could see. I began to despair that I would see him. I felt that he would melt into the scrub and vanish.

Then, magically, he was on the path in front of me, no more than 6 feet from the rubber soles of my desert boots. He was too close for me to use my binoculars even had I dared to move. He paused there, side on, startled, a brown symmetry of stillness, his black eyes gleaming into mine. Suddenly the stillness vanished. He turned to his right, skipped some twenty feet down the path, and was gone. And I thought of the Jeemuluk of the day before.

* * * *

When I held that Scrub-bird in my hands at Two People Bay, I was holding more than just a rare species. I was holding a prehistoric link with antiquity, a messenger now poised on the verge of extinction. It was the point of a triangle whose base once spread across the width of Australia thousands of Scrub-bird generations ago, a point which the hand of man or a quirk of nature could erase forever.

It was three years ago this summer that I held that *Atrichornis*, felt the softness of its feathers, the warmth of its body, saw the gleams in its eye, the life in its limbs, removed stray feathers from the sweat of my hand. I wonder if I ever will again. Or will the species disappear into that nothingness which is beyond the hands of man for all time, or until the earth is created again?

—R. H. Stranger



Wisconsin State University
La Crosse, Wisconsin 54601
January 5, 1968

Dear Sir:

I am gathering information about the birdlife of the Pine-Popple watershed. This is part of the Wisconsin Acad. Sci. Arts and Letters project on Wild Rivers. The watershed lies primarily in Florence County.

In addition to trips to the area, I have extracted all information on this region which has been published in the *Passenger Pigeon*.

I would appreciate it if you would include a note in your next issue asking members to send me any unpublished records they have for the area.

This should include species and date, locality as precisely as possible, and any other pertinent information, such as number seen, nesting records, etc.

Sincerely,
Howard F. Young
Professor
Department of Biology

The Relative Abundance of Species Caught in Mist-Nets During Fall Migration at Cedar Grove

by

HELMUT C. MUELLER AND DANIEL D. BERGER

The relative abundance of various species of birds is of considerable interest to both the professional ornithologist and the bird-watcher. Few quantitative data exist on the relative numbers of passerine and other small birds during migration. It is particularly difficult to obtain pertinent data on autumnal transients because birds are quite difficult to observe and identify during this season. This paper presents the results of one approach to the problem.

TECHNIQUES

In the autumns of 1958 through 1963 we operated a series of Japanese mist-nets at the Cedar Grove Ornithological Station in Sheboygan County, Wisconsin. Eighteen 12 meter long, 36 mm. mesh, mist-nets were set in the identical manner in the identical localities each autumn of the six years. The nets were placed two high, and three lengthwise, in three lanes cut through dense brush 2 to 4.5 m. high. The bottom of each net was about 15 to 30 cm. off the ground and the top was about 3.1 m. from the ground. The total vertical area of the nets was about 313-sq. m. In each year we began full-time netting sometime between 10 August and 1 September and ceased nesting sometime between 11 October and 16 November. Within each trapping season nets were left up day and night except for days when severe weather, flooding or other conditions made netting impossible. Nets were up for a total of 371 full days, and 32,242 birds of 117 species were trapped and banded. An additional 3,342 birds were caught on 79 days on which the nets were functioning for only part of the day. Although some of these partial netting-days fell within the full-time netting period, most occurred before or after; a few as early as late July and a few as late as the end of November. More than 86 per cent of all birds trapped were taken on the 314 full netting-days which fell into the period between 27 August and 24 October.

The Cedar Grove Ornithological Station is located on the western shore of Lake Michigan some 64 km. north of Milwaukee. In this area a 400 m. wide strip of beaches and dunes separates the intensely farmed red-clay-glacial till from the lake. The thin soils covering the abandoned beaches and dunes support in some places a fairly dense stand of second growth forest of Poplars (*Populus*), Paper Birch (*Betula papyrifera*), Black Cherry (*Prunus serotina*), Ashes (*Fraxinus*). Much of the area, however, is covered only by a brushy growth, Red-Osier Dogwood (*Cornus stolonifera*), Willows (*Salix*), Raspberry (*Rubus*), Alder (*Alnus ru-*

gosa), or with grasses and rushes (*Juncus balticus*), and occasional blow-outs of sand occur. Agricultural use of this land is usually limited to pasturing. The elevation of the abandoned beaches and dunes does not exceed 6 m. above the level of the lake. The glacial till of the intensely cultivated hinterland terminates abruptly in a bluff which rises some 9 to 12 m. above the abandoned beaches. A small stream wanders through the station area, and the valley cut into the glacial drift by this stream has considerable brush and tree cover. The remainder of the hinterland offers but little cover for birds.

RESULTS AND DISCUSSION

The number of birds caught of each species and the per cent of the total catch which it constitutes are given in Table 1. The "status" of each species, taken from the W.S.O. Checklist (Barger et al, 1960), is also given in Table 1. We believe that the mist-netting techniques employed at Cedar Grove are an excellent method for sampling the transient populations of small to medium-sized passerines which occur with some frequency in brush or in the shrub understory of the forest. However, the shortcomings of the technique should be discussed:

(1) Birds occupying other habitats are captured only accidentally. For example, the two meadowlarks (*Sturnella*) are common birds in Wisconsin, but we have yet to capture one in our mist-nets. Six species of swallows (*Hirundinidae*) occur in migration at Cedar Grove by the tens of hundreds of thousands, yet we have captured only one Barn Swallow.

(2) Woodland birds that occur largely in the treetops are caught less frequently than birds that concentrate their activity in the shrubbery. The Blackburnian Warbler is a "common transient visitant" (W.S.O. Checklist); yet, we have captured only two individuals of this tree-top inhabiting warbler. On the other hand, we have caught 11 Yellow-breasted Chats; this brush-loving species is listed as being a rare summer resident in Wisconsin.

(3) The size of the bird affects its probability of being caught. Ruby-throated Hummingbirds, and occasionally kinglets, can pass through the net. Larger birds, such as the Brown Thrasher, Common Grackle and Rufous-sided Towhee, tend to bounce out of the net and are less likely to become entangled in the relatively small mesh of the net (see Heimerdinger and Leberman, 1966).

(4) The agility of the bird, once in the net, also affects its probability of being caught. Thrushes (*Hylocichla*), which struggle but little, rarely escape the net, but wrens (*Troglodytidae*) often escape within seconds of colliding with the net.

(5) Species which migrate largely before or after the period of 27 August to 24 October are not fully represented in the sample and may be considerably more common than our data indicate.

(6) This paper deals only with the fall migration. Some species (e.g. Yellow Warbler, Baltimore Oriole, Veery) appear to be relatively more common in the spring than in autumn at Cedar Grove.

However, the advantages of mist-netting in censusing birds for the most part outweigh the disadvantages.

(1) The data presented in this paper are from previously unbanded birds. Hence, local residents are for the most part not included in the

sample. A day-to-day observational census of birds might count the same individual on a number of days; we "count" a bird only once—on the day it is banded. A bird-watcher might find 100 individuals of species A and two of species B every day for a period of 50 days and conclude that A was 50 times as common as B. If all individuals of species A remain in the area throughout the period while individuals of species B remain for only one day, an observer employing mist-nets would capture 100 individuals of each species and conclude that the two species are equally common.

(2) Nets were usually left up day and night through most of the season. Nets were in the identical place day after day. These aspects of the technique are vastly superior to the erratic method usually employed in visual counts.

(3) Whereas we can catch many birds simultaneously, a bird-watcher can identify only one or a few at a given moment. Our data-gathering presumably operates as efficiently during the peaks of migration as it does during other periods.

(4) Drab, retiring species are caught as frequently as brightly-colored, noisy or otherwise obvious species.

(5) Every bird caught is identified and counted. A visual observer cannot identify difficult species as frequently as those which are easy to identify, resulting in biased counts.

For the remainder of this paper we propose to point out and discuss some of the significant differences between our findings and the W.S.O. Checklist. Those differences that we believe are attributable to the deficiencies in our methods of gathering data are ignored in the discussion to follow.

Saw-Whet Owl—This species should probably be considered a fairly common transient visitant, at least for the area along Lake Michigan. It is almost impossible to find in the daytime, even when it is probably present in good numbers.

Crested Flycatcher—Our data (Table 1) suggests that this species is about as common as the Eastern Kingbird and Wood Pewee during migration.

Empidonax Flycatchers—Our migration data suggest that the Yellow-bellied, Traill's and Least Flycatchers are about equally common during fall migration. The Least Flycatcher and the Traill's Flycatcher are more commonly heard during migration, and we suspect that this led to

Black-capped Chickadee—The capture of almost 900 birds obviously includes many transients. This species also can be considered a common but irregular migrant, moving in considerable numbers in mid-October once in every few years.

Red-breasted Nuthatch—We suggest that this is a fairly common, irregular fall transient.

Catbird and Brown Thrasher—In spite of some difficulties in capturing the Thrasher, the Catbird would appear to be considerably more common than the Thrasher during fall migration.

Thrushes—If any bird is to be considered abundant during fall migration it is the Swainson's Thrush. The Hermit and Gray-cheeked Thrushes occur in almost equal numbers and should both be considered common. The Veery and Wood Thrush are, by comparison,

no more than fairly common. It is interesting to note that the latter two species breed in the netting area while the other *Hylocichla* thrushes do not. It is perhaps needless to point out that the Swainson's and Gray-checked Thrushes are the most difficult to observe and identify during migration.

Vireos—Wisconsin witnessed an invasion of the White-eyed Vireo in the spring of 1962 (Soulen, 1963). The two individuals listed in Table 1 were taken on 27 August of that year. One was an adult, with a light-gray eye and in molt. The other had a brownish-gray eye and presumably was a juvenile. We suspect that this species bred in the area in the summer of 1962. The Warbling Vireo apparently migrates largely before late August. The Philadelphia Vireo should be considered fairly common during fall migration. This will come as a surprise to bird-watchers who have had difficulty finding this denizen of the undergrowth.

Warblers—Our data suggests that the Redstart, Myrtle Warbler, Magnolia Warbler, Northern Waterthrush, Ovenbird and Tennessee Warbler are the most abundant. It is interesting to note that we caught about 6 times as many Blackpoll Warblers as Bay-breasted Warblers, yet both are listed as fairly common transient visitors in the W.S.O. Checklist. We have yet to catch a Louisiana Waterthrush (*Seiurus motacilla*) in autumn and strongly suspect that any autumn reports away from the breeding localities are the result of misidentifications. The Connecticut Warbler, Mourning Warbler and Yellowthroat are reasonably similar in habits and habitat preference. The latter two species breed in the netting area at Cedar Grove. It is surprising that the Connecticut Warbler, considered a very uncommon warbler by many bird-watchers, is netted in greater numbers than the other two species.

Finches—We suggest that the Pine Siskin is a fairly common (not uncommon) transient visitor. We believe that the Towhee is more common as a transient than the Indigo Bunting. The White-crowned Sparrow should be considered a fairly common transient at least along the shore of Lake Michigan. The Fox Sparrow should probably be considered a common transient.

The most commonly caught bird was the Swainson's Thrush, which accounted for almost 22 per cent of the total catch. The 20 most commonly caught species are listed in order of abundance in Table 2. The first five species account for 42 percent of the total catch. The first 10, 59 per cent; and the first 20, 78 per cent. The majority of the species are thus relatively uncommon. Almost one-third of the birds netted at Cedar Grove are thrushes and more than 80 per cent of the total catch is composed of only six families (Table 3).

About three times as many thrushes were caught at Cedar Grove as at netting stations on the Atlantic coast (Table 3). A similar disparity exists between migration data from Cedar Grove and the results of 74 breeding bird censuses from the northern United States and Canada. Nisbet (1963) believed that the data from netting stations on the Atlantic coast and that of the breeding bird censuses were reasonably similar, particularly if the bias due to the techniques were taken into account. With the exception of the thrushes, warblers and kinglets, our data are also similar to the censuses of breeding birds.

It would be interesting to compare the data presented in this paper,

Table 1
BIRDS MIST-NETTED, AUTUMNS 1958-1963

Species	Status*	No. Caught	Per Cent of Total
Green Heron (<i>Butorides virescens</i>)	CSR	3	0.008
Least Bittern (<i>Ixobrychus exilis</i>)	FCSR	1	0.003
*American Bittern (<i>Botaurus lentiginosus</i>)	FCTV	1	0.003
Sharp-shinned Hawk (<i>Accipiter striatus</i>)	CTV	30	0.084
Cooper's Hawk (<i>Accipiter cooperii</i>)	FCTV	1	0.003
Sora (<i>Porzana carolina</i>)	FCTV	6	0.017
American Woodcock (<i>Philohela minor</i>)	FCTV	27	0.076
Common Snipe (<i>Capella gallinago</i>)	FCTV	1	0.003
Spotted Sandpiper (<i>Acititis macularia</i>)	CTV	2	0.006
Mourning Dove (<i>Zenaidura macroura</i>)	CTV	5	0.014
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	FCSR	18	0.050
Black-billed Cuckoo (<i>Coccyzus erythrophthalmus</i>)	CTV	80	0.224
Screech Owl (<i>Otus asio</i>)	UPR	3	0.008
Long-eared Owl (<i>Asio otus</i>)	UWR;RSR	2	0.006
Saw-whet Owl (<i>Aegolius acadicus</i>)	UWR;RSR	89	0.249
Whip-poor-will (<i>Caprimulgus vociferus</i>)	FCTV	19	0.053
Common Nighthawk (<i>Chordeiles minor</i>)	CTV	2	0.006
Ruby-throated Hummingbird (<i>Archilochus colubris</i>)	FCTV	75	0.210
Belted Kingfisher (<i>Megaceryle alcyon</i>)	FCTV	7	0.020
Yellow-shafted Flicker (<i>Colaptes auratus</i>)	CTV	127	0.356
Red-bellied Woodpecker (<i>Centurus carolinus</i>)	FCPR	1	0.003
Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)	CTV	2	0.006
Yellow-bellied Sapsucker (<i>Sphyrapicus varius</i>)	CTV	191	0.535
Hairy Woodpecker (<i>Dendrocopos villosus</i>)	CPR	13	0.036
Downy Woodpecker (<i>Dendrocopos pubescens</i>)	CPR	91	0.255
Eastern Kingbird (<i>Tyrannus tyrannus</i>)	CTV	12	0.034
Great Crested Flycatcher (<i>Myiarchus crinitus</i>)	FCTV	60	0.168
Eastern Phoebe (<i>Sayornis phoebe</i>)	CTV	42	0.118
Yellow-bellied Flycatcher (<i>Empidonax flaviventris</i>)	UTV	499	1.397
Traill's Flycatcher (<i>Empidonax traillii</i>)	FCTV	931	2.607
Least Flycatcher (<i>Empidonax minimus</i>)	CTV	557	1.560
Eastern Wood Peewee (<i>Contopus virens</i>)	CTV	73	0.204
Olive-sided Flycatcher (<i>Nuttallornis borealis</i>)	UTV	4	0.011
Barn Swallow (<i>Hirundo rustica</i>)	CTV	1	0.003
Blue Jay (<i>Cyanocitta cristata</i>)	APR	41	0.115
Black-capped Chickadee (<i>Parus atricapillus</i>)	APR	898	2.514
Boreal Chickadee (<i>Parus hudsonicus</i>)	UPRn	1	0.003
Tufted Titmouse (<i>Parus bicolor</i>)	UPRs, w	2	0.006
White-breasted Nuthatch (<i>Sitta carolinensis</i>)	CPR	12	0.034
Red-breasted Nuthatch (<i>Sitta canadensis</i>)	UTV	63	0.176
Brown Creeper (<i>Certhia familiaris</i>)	FCTV	630	1.764
House Wren (<i>Troglodytes aedon</i>)	CTV	29	0.081
Winter Wren (<i>Troglodytes troglodytes</i>)	FCTV	17	0.048
Long-billed Marsh Wren (<i>Telmatoodytes palustris</i>)	CTV	1	0.003
Catbird (<i>Dumetella carolinensis</i>)	CTV	1544	4.323

Species	Status*	No. Caught	Per Cent of Total
Brown Thrasher (<i>Toxostoma rufum</i>)	CTV	97	0.272
Robin (<i>Turdus migratorius</i>)	ATV	228	0.638
Wood Thrush (<i>Hylocichla mustelina</i>)	CSR	42	0.118
Hermit Thrush (<i>Hylocichla guttata</i>)	CTV	1701	4.763
Swainson't Thrush (<i>Hylocichla ustulata</i>)	CTV	7678	21.498
Gray-checked Thrush (<i>Hylocichla minima</i>)	FCTV	1553	4.348*
Veery (<i>Hylocichla fuscescens</i>)	CTV	432	1.210
Golden-crowned Kinglet (<i>Regulus satrapa</i>)	CTV	911	2.551
Ruby-crowned Kinglet (<i>Regulus calendula</i>)	CTV	1088	3.046
Bohemian Waxwing (<i>Bombycilla garrula</i>)	UWV, I	2	0.006
Cedar Waxwing (<i>Bombycilla cedrorum</i>)	CTV	494	1.383
Starling (<i>Sturnus vulgaris</i>)	APR	7	0.020
White-eyed Vireo (<i>Vireo griseus</i>)	VRs	2	0.006
Yellow-throated Vireo (<i>Vireo flavifrons</i>)	FCSR	11	0.031
Solitary Vireo (<i>Vireo solitarius</i>)	FCTV	72	0.202
Red-eyed Vireo (<i>Vireo olivaceus</i>)	CTV	1416	3.965
Philadelphia Vireo (<i>Vireo philadelphicus</i>)	UTV	407	1.140
Warbling Vireo (<i>Vireo gilvus</i>)	CSR	5	0.014
Black-and-White Warbler (<i>Mniotilta varia</i>)	CTV	210	0.588
Golden-winged Warbler (<i>Vermivora chrysoptera</i>)	FCSR	15	0.042
Blue-winged Warbler (<i>Vermivora pinus</i>)	USR	2	0.006
Tennessee Warbler (<i>Vermivora peregrina</i>)	CTV	441	1.235
Orange-crowned Warbler (<i>Vermivora celata</i>)	FCTV	102	0.286
Nashville Warbler (<i>Vermivora ruficapilla</i>)	FCTV	110	0.308
Parula Warbler (<i>Parula americana</i>)	FCTV	2	0.006
Yellow Warbler (<i>Dendroica petechia</i>)	CTV	12	0.034
Magnolia Warbler (<i>Dendroica magnolia</i>)	FCTV	683	1.912
Cape May Warbler (<i>Dendroica tigrina</i>)	FCTV	61	0.171
Black-throated Blue Warbler (<i>Dendroica caerulescens</i>)	UTV	16	0.045
Myrtle Warbler (<i>Dendroica coronata</i>)	ATV	809	2.265
Black-throated-green Warbler (<i>Dendroica virens</i>)	CTV	31	0.087
Blackburnian Warbler (<i>Dendroica fusca</i>)	CTV	2	0.006
Chestnut-sided Warbler (<i>Dendroica pensylvanica</i>)	CTV	77	0.216
Bay-Breasted Warbler (<i>Dendroica castanea</i>)	FCTV	47	0.132
Blackpoll Warbler (<i>Dendroica striata</i>)	FCTV	290	0.812
Palm Warbler (<i>Dendroica palmarum</i>)	CTV	123	0.344
Ovenbird (<i>Sciurus aurocapillus</i>)	CTV	635	1.778
Northern Waterthrush (<i>Sciurus novaboracensis</i>)	FCTV	679	1.901
Connecticut Warbler (<i>Oporornis agilis</i>)	UTV	125	0.350
Mourning Warbler (<i>Oporornis philadelphia</i>)	FCTV	97	0.272
Yellowthroat (<i>Geothlypis trichas</i>)	CTV	99	0.277
Yellow-breasted Chat (<i>Icteria virens</i>)	RSR	14	0.039
Wilson's Warbler (<i>Wilsonia pusilla</i>)	FCTV	85	0.238
Canada Warbler (<i>Wilsonia canadensis</i>)	FCTV	82	0.230
American Redstart (<i>Setophaga ruticilla</i>)	CTV	1462	4.094
House Sparrow (<i>Passer domesticus</i>)	APR	3	0.008

Table 1 (continued)

BIRDS MIST-NETTED, AUTUMNS 1958-1963

Species	Status*	No. Caught	Per Cent of Total
Redwinged Blackbird (<i>Agelaius phoeniceus</i>)	ATV	3	0.008
Baltimore Oriole (<i>Icterus galbula</i>)	CTV	10	0.028
Rusty Blackbird (<i>Euphagus carolinus</i>)	CTV	1	0.003
Common Grackle (<i>Quiscalus quiscula</i>)	CTV	5	0.014
Brown-headed Cowbird (<i>Molothrus ater</i>)	CTV	12	0.034
Scarlet Tanager (<i>Piranga olivacea</i>)	FCTV	45	0.126
Cardinal (<i>Richmondia cardinalis</i>)	CPR	84	0.235
Rose-breasted Grosbeak (<i>Pheucticus ludovicianus</i>)	CTV	331	0.927
Indigo Bunting (<i>Passerina cyanea</i>)	CTV	43	0.120
Evening Grosbeak (<i>Hesperiphona vespertina</i>)	FCTV	24	0.067
Purple Finch (<i>Carpodacus purpureus</i>)	FCTV	367	1.028
Common Redpoll (<i>Acanthis flammea</i>)	CWV, I	2	0.006
Pine Siskin (<i>Spinus pinus</i>)	UTV	115	0.322
American Goldfinch (<i>Spinus tristis</i>)	CTV	155	0.434
White-winged Crossbill (<i>Loxia leucoptera</i>)	UWV	1	0.003
Rufous-sided Towhee (<i>Pipilo erythrophthalmus</i>)	FCTV	70	0.196
Slate-colored Junco (<i>Junco hyemalis</i>)	ATV	1275	3.570
Tree Sparrow (<i>Spizella arborea</i>)	ATV	461	1.291
Field Sparrow (<i>Spizella pusilla</i>)	CTV	44	0.123
Harris Sparrow (<i>Zonotrichia querula</i>)	UTV	3	0.008
White-crowned Sparrow (<i>Zonotrichia leucophrys</i>)	UTV	104	0.291
White-throated Sparrow (<i>Zonotrichia albicollis</i>)	ATV	2243	6.280
Fox Sparrow (<i>Passerella iliaca</i>)	FCTV	716	2.005
Lincoln's Sparrow (<i>Melospiza lincolni</i>)	FCTV	115	0.322
Swamp Sparrow (<i>Melospiza georgiana</i>)	CTV	380	1.064
Song Sparrow (<i>Melospiza melodia</i>)	ATV	423	1.184

Table 1 (continued)

BIRDS MIST-NETTED, AUTUMNS 1958-1963

*Taken from Barger, et al. (1960)

PR:	Permanent Resident	A:	Abundant
SR:	Summer Resident	C:	Common
WR:	Winter Resident	FC:	Fairly Common
TV:	Transient Visitant	U:	Uncommon
SV:	Summer Visitant	R:	Rare, seen less than five times in one year.
s:	Southern Wisconsin	VR:	Seen less than once every three years.
w:	Western Wisconsin	I:	Irregular
n:	Northern Wisconsin		



Table 2

MOST COMMONLY NETTED SPECIES

1. Swainson's Thrush	11. Golden-crowned Kinglet
2. White-throated Sparrow	12. Black-capped Chickadee
3. Hermit Thrush	13. Myrtle Warbler
4. Gray-checked Thrush	14. Fox Sparrow
5. Catbird	15. Magnolia Warbler
6. Redstart	16. Northern Waterthrush
7. Red-eyed Vireo	17. Ovenbird
8. Slate-colored Junco	18. Brown Creeper
9. Ruby-crowned Kinglet	19. Least Flycatcher
10. Traill's Flycatcher	20. Yellow-bellied Flycatcher

Table 3

RELATIVE ABUNDANCE OF BIRDS SUMMARIZED BY FAMILIES

	Per Cent of Total		
	Cedar Grove	Atlantic Coast ¹	Breeding ²
Woodpeckers (Picidae)	0.8	2-3	—
Flycatchers (Tyrannidae)	6.1	3	6
Catbird, etc. (Mimidae)	4.6	9-11	1
Thrushes (Turdidae)	32.6	7-11	12
Vireos (Vireonidae)	5.4	3	7
Warblers (Parulidae)	17.0	32-34	46
Kinglets (Sylviidae)	5.6	1-2	1
Blackbirds (Icteridae)	—	3-4	—
Tanagers (Thraupidae)	0.1	—	2
Finches (Fringillidae)	20.5	30	20
others	7.3	4-5	3

¹Data from mist-netting stations on the Atlantic coast, summarized by Nisbet (1963).

²Data from 74 censuses of breeding birds published in *Audubon Field Notes* and summarized by Nisbet (1963).

species by species, with those of similar studies in areas of comparable habitat, with information from tower kills and with any other reasonably quantitative data available. We hope that this publication will prompt such studies.

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Eastern Bluebird Versus Meadow Vole

On 11 October, 1966, at about 0700 hours, I was looking west out of a window about one mile south of Waukesha, Wisconsin, watching several Eastern Bluebirds. I soon noticed two birds in particular (both males) that were acting unusual. They were dive-bombing something on the lawn, about 30 feet southwest of me. The object could not be seen, but its movement could be traced by the pattern of bluebird activity. They moved closer, to about 15 feet, where I could tell that the object in question was a small mammal. At about this point one of the bluebirds landed on the lawn several inches from the mammal and hopped toward it. The mammal then stood on its hind feet and prepared to fight. The bluebird apparently accepted this challenge and moved closer. The mammal then lunged at the bluebird and got a hold on it—for several seconds they were locked in a struggle. They then broke apart and the mammal again stood up on its hind quarters. Other bluebirds came closer and at least three (two males and one female) began dive-bombing the mammal, and it took refuge under an overturned charcoal grill. I then went out and collected the mammal which turned out to be a meadow vole (*Microtus pennsylvanicus*).

Although the entire length of this observation was at most a few minutes, the incident seems unusual enough to warrant recording.

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The Proposed Rape of Aldabra

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At the present time one of the last outposts of many rare species of fauna and flora, the Island of Aldabra, almost 230 miles directly north of Madagascar and 400 miles from the Coast of East Africa, is in danger of being lost in the name of "progress" to the march of civilization. Aldabra is one of the four islands that make up a new colony of what is known as the British Indian Ocean Territories. Apparently the British and the American governments are planning to build an airbase and erect a large broadcasting transmitter. While a few objections have been raised by several individuals and organizations, a great deal more needs to be done to make both governments aware of what a foolish and wasteful extravagance this is.

Aldabra is virtually a natural botanical and zoological garden, but one that is different from all others because of the unique combination of plants and animals that live in it. From the few accounts at hand, the island is quite difficult to walk over because it is made up nearly entirely of honeycomb coral and centrally covered with a nearly impenetrable scrub. This accounts in part for the fact that it has never been inhabited for any length of time by man. The only people on the island are something like 40 or 50 fishermen in the pay of the island lessee. He has paid the Seychelles Government for the right to fish for turtles and the fish of the waters. This, the biggest atoll in the world, is 80 miles in circumference.

It is a coral ring, 21 miles long and 69 square miles in area. There are four islands around a central lagoon that reaches a depth of about 70 feet. The lagoon has several very small islands bordering its shores. Damming the lagoon to build a harbor would adversely affect the lagoon as a very rich environment, in turn causing catastrophic effects on the marine flora and fauna inhabiting it.

It is reported that wherever one travels on the island he sees birds and Giant Tortoises (*Testudo gigantea*) in immense quantities. One traveler indicated that he had seen as many as 100 Giant Tortoises sheltering under a tree in a day. Because of the scarcity of large trees it is not surprising that every tree shades a goodly number of these animals.

The erection of a transmitter and an airfield would wreck the atoll physiographically and destroy the present status of the island as a sanctuary. It is difficult to see how aircraft could use this island because of the thousands of huge black Frigate Birds that wheel, soar and glide in the air up to about 5,000 feet at all times of the year.

Frigate Birds have a wing span of seven feet. They are long lived birds and their young are known from tagging experiments on related species to wander far and wide at sea during their several years of adolescence. Their breeding age is not yet known. In any case, if an airfield is built on Aldabra, it is practically certain that the authorities

would have to destroy these Frigate Birds in much the same way that we in the United States had to deal with the Albatrosses on Midway Island. However, Frigate Birds present a more complicated problem than Albatrosses. Since Frigate Birds fly very high and get their food at sea they would be very hard to kill; and in addition, every year from 6 to 10 years, a new group of birds would come in from the sea to nest—thus increasing the length of time before flying from the island could be accomplished in relative safety.

Aldabra has been saved from the inroads of civilization by the almost total lack of agriculturally dependable soil, drinkable fresh water, and guano, the three basic attractants of man to other large islands in the Indian Ocean. It may be this native impoverishment of natural resources that has secured Aldabra thus far from the disasters man has inflicted on these other islands: the destruction of forests, and the extinction of animals and birds including the famous dodos of the Mascarenes, the sea cows and crocodiles of the Seychelles, the flamingos of Mauritius, and the giant tortoises—now surviving only on Aldabra.

In addition to the estimated 40,000 tortoises, Aldabra supports many other unique animals and plants, many of which immigrated from Madagascar and the Comoro islands. More importantly, in addition to truly native animals there are many species of both flora and fauna on Aldabra found nowhere else on earth. These forms have been able to persist because the atoll is one of the very few islands remaining in the world where there has been no interference by the heavy hand of man, his domestic animals, his pests and his weeds. At present, Aldabra has no introduced animals.

The only other land animals in addition to the Giant Tortoises are bats, including an endemic Fruit Bat, *Pteropus aldabranus*, that flies by day and looks like a crow; lizards, of which the Green Diurnal Gecko, *Phelsuma abbotti*, is of special interest because of its habit of associating with the tortoises and feeding on the flies settling on their shells, and then skittering underneath the animal when alarmed; and a host of invertebrates of which a satisfactory survey and inventory has not yet been made.

There are 15 species of land birds on Aldabra, including the Red-footed Booby, and of these only two are not at least subspecies confined to Aldabra. The Aldabra population of a relatively rare flightless rail, *Dryolimnas cuvieri abbotti*, numbers a few hundred and is confined to the sandy beaches and the tremendous marine bird colonies of one of the smaller islands of the atoll. As Gaymer points out, "it is so tame and inquisitive that it will run to investigate any strange noise and can easily be caught in the hand." This is the only surviving species of flightless bird remaining in an area that supported the amazing but now extinct Dodo.

Although Flamingos have been reported from Aldabra by travelers repeatedly, the one verifiable collection of these birds that has been made has not been properly identified. Apparently they belong to a new subspecies of the so-called Greater Flamingo, *Phoenicopterus ruber*. The remaining flock is small, and live as a breeding colony of about 50 birds at the southeastern end of the atoll.

The Sacred Ibis, *Threskiornis aethiopica abbotti*, a bird whose fearless and incurable inquisitive young had the curious habit of poking into the shoes of visitors, live in breeding colonies near water. There are presumably about a thousand of these birds on the atoll at present. Apparently they are not as friendly as they once were, indiscriminate shooting of the roosting birds having made them shy.

Further from the shore is the beautiful and cautious Midnight Blue and Pale Gray Pigeon, *Alectroenas sganzzini Minor*. This exotic bird never is found on the ground but lives on whatever fruit there is to be found in the low woods. A corresponding seed eating ground bird of the sparse Aldabra woodland is the Turtle Dove, *Streptopelia picturata aldabrana*. This bird commonly lives in small flocks. Other relatively common land birds are a White-eye, a Bulbul, a Sunbird, and the Drongo, *Dicrurus aldabranus*—all of which as their names indicate, are endemic as subspecies on Aldabra, their closest relations living on the Comoros Islands and on Madagascar. Mention must also be made of the Aldabra Fody or Weaver, *Foudia adalbrana*, the brilliant male with its bright scarlet head and breast corresponding with equally bright yellow rump and thighs, the female dingy in comparison giving an overall dim yellowish appearance. A kestrel, *Falco newtoni aldabranus*, that lives mostly on the small green endemic lizards, is one of the less common birds of the atoll. Apparently there is a small breeding colony of the kestrels in the coconut palms along the west coast of the atoll.

The birds of Aldabra, as has been indicated above, are in many cases members of large series of related forms living on other islands—including Madagascar—in the western Indian Ocean. This makes them unusually important to evolutionists, ecologists and zoogeographers because of the unusual opportunity presently available in the undisturbed environments of Aldabra to study the adaptive significances of these differences. Opportunities such as this to study evolutionary changes in a large natural, unaltered, isolated habitat becomes increasingly rare as the world becomes older and the population of man increases virtually unabated. Oceanic Islands lend themselves particularly well for the study of evolution, especially as provider of a haven for species which for one ecological reason or another has declined on the mainland or other islands.

Not as much is known about the sea birds of the Atoll. The frigate birds, already mentioned, occupy the most important breeding colony of the island. As the name indicates, the Greater Frigate bird, *Fregata minor aldabrensis*, is an endemic Aldabra subspecies. The Grey and the Little Green Herons also nest on the island and also are endemic subspecies.

Aldabra first became well known for its tortoises, and when at the end of the last century the Mauritius government planned to put settlements on the island, Charles Darwin was one of many well known scientists who protested vehemently. When Aldabra became part of the British Colony of the Seychelles the tortoises were given protection which apparently has worked more because of good luck than by enforcement. Now it seems that Great Britain and the United States are threatening both the tortoises and the future of Aldabra as a unique environment.

Not only will the delicate balance of the ecology of the island be upset but this contemplated incursion will be an immediate danger to the survival of many plants and animals. For example the clearing of land for runways, and the cutting of the sparse woodland for fuel and building materials would mean a loss of the relatively few larger trees on which much of the wildlife depends for shelter, food and breeding sites.

Nearby Assumption Island is a good example of what happens when man takes over an unspoiled environment. This island was fairly recently exploited for its phosphate rock and guano deposit. This human enterprise reduced the island to a barren desert, and in the process exterminated all the resident seabirds (including several rare forms now extinct because of this treatment) and destroyed all species of the land birds except two.

It is felt that the worst threat to Aldabra is the destruction of its unique environment and the desecration of all facets of the island ecology by introduced plants and animals, brought in accidentally or as pets in ships and planes, and by pesticides and herbicides. Thus many species which could never normally have reached Aldabra would eventually destroy and then replace endemic forms turning the island into a collection of mixed assemblage of species characteristic of inhabited islands in that part of the world. The uniqueness and scientific value of Aldabra would quietly and quickly forever fade. The finishing touches would be provided by rubbish dumps, food stores, sewage disposal, and cultivated gardens—hosts to man's retinue of civilization camp followers: the rats, mice, insect pests—which together with feral dogs, cats, birds, sheep and goats would finish off the pitiful remnant of what was once a proud and flourishing ecological paradise.

As John Walsh so well states it, "the Aldabra issue has aroused scientists in Britain more than any recent attempt to preserve an ecosystem. The conservationists now are trying not only to save Aldabra, as the Galapagos were spared, but to drive home the point that there is no established mechanism by which the scientific community is consulted when such government decisions affecting science are made. So, as important as an Aldabra preserved is to Science, even more is at stake than whether the atoll in the 1970's is to be the home of the Flightless Rail or the F-111.

If you wish to protest the proposed rape of Aldabra it would be best to communicate your feeling in the matter with one or more of the following: Mr. Thomas L. Kimball, National Wildlife Federation, 1412-16th St., N.W., Washington, D.C.; Dr. Dael Wolfe, Editor *Science*, 1515 Mass. Ave., N.W., Washington, D.C.; Secretary, Smithsonian Institution, Washington, D.C.; Senators Fred R. Harris, Abraham Ribicoff, John L. McClellan, and Edmund S. Muskie, Senate Office Bldg., Washington 25, D.C.



THE 1966 WISCONSIN CHRISTMAS BIRD COUNT

By WILLIAM L. HILSENHOFF

The 1966 Christmas bird counts uncovered 125 species, only four less than last year's record count. Fewer observers (631) were able to participate in the 1966 counts, and the number of counts dropped to 71, 14 less than last year. This probably accounted for fewer species being seen. Two new counts were initiated in 1966, at Port Edwards and Marathon, and a count was made at Dodgeville for the first time since 1953. Another was made at Cedarburg for the first time since 1961. Counts at Shawano and Hales Corners reappeared after a one year absence.

The counts were again numbered from north to south and their exact locations are illustrated in figure 1. Species seen on 14 or more counts are reported in table 1, while those seen on less than 14 counts are reported in table 2. Details of the counts are summarized in tables 3 and 4.

In addition to the species seen on the counts, three more were seen in count areas, but not on the day of the count. These included the White-winged Crossbill at Brule, a Saw-whet Owl at Milwaukee, and a Common Tern at Racine. The latter had never been observed on a Christmas count in Wisconsin. Also, a Chipping Sparrow was reported on the Stevens Point count, but was not included in the summary because the observation was not sufficiently documented. There has never been a documented observation of a Chipping Sparrow on a Wisconsin Christmas count.

The greatest number of species was found on the Madison count (68), with counts of 50 or more being recorded at Milwaukee (56), Mazomanie (53), Oconomowoc (53), Racine (53), and Green (Bay) (50). Two overlapping counts were made in the Green Bay area, but their results were combined to produce one excellent count instead of two mediocre ones.

The highlights of the 1966 count were the five species seen for the first time on Wisconsin Christmas counts. A Barrow's Goldeneye was found on the Milwaukee count by Lee Johnson and others. It was a male in with 6 Common Goldeneyes, and was observed for 30 minutes through a 30-power scope. This is a species that has been reliably observed in Wisconsin on only a few previous occasions.

A Northern Three-toed Woodpecker was reported by Tom Soulen on the Hiles count. He was fortunate to be able to observe this bird for several minutes under excellent circumstances and provided a superb documentation of his observations.

A Phoebe made its appearance on the Green Bay count, where it first appeared at Ed Paulson's bird feeder on December 17 and was subsequently seen several times throughout the count period.

Turkeys have prospered in the Necedah Refuge subsequent to their reintroduction into that area. Ed Collins and Howard Lipke reported 85 Eastern Turkeys on the Necedah count, the first Wisconsin Christmas count record.

Baltimore Orioles showed up for the first time in 1966, and were found on two counts. One was recorded on the Wautoma count, where a male began visiting feeders throughout the town in early December and remained to be counted on the Christmas count. A second Baltimore Oriole was observed at a feeder on the Stevens Point Count.

Other rarities that appeared on the 1966 Christmas counts were: the Peregrine Falcon at Beetown (seen previously at Sauk City in 1940 and Lake Geneva in 1953), the Virginia Rail at Waukesha (seen previously at Waukesha in 1956 and Madison in 1964), the Varied Thrush at Milwaukee (seen previously at Chippewa Falls in 1961 and Grantsburg in 1963), and the Harris' Sparrow at Cornelia (seen previously at Monroe in 1953 and Beloit in 1958).

Additional highlights include the Horned Grebe at Hales Corners; Snow Geese at Green Bay; Blue Geese at Green Bay, Racine, and Sturgeon Bay; a Blue-winged Teal at Waukesha; a Golden Eagle at Chippewa Falls; Prairie Chickens at Dancy and Stevens Point; Killdeer at Cornelia, Fountain City, and LaCrosse; a Glaucous Gull at Bayfield; a Carolina Wren at Chippewa Falls; a Mockingbird at Madison; Catbirds at Green Bay and Kenosha; and Vesper Sparrows at Adams, Kenosha, Milton, and Shiocton.

Waterfowl: Except for a few deep lakes, all the inland lakes were ice-covered at the time of the counts, resulting in Mallards and Black Ducks occurring on the lowest percentage of counts in 15 years. Most of the uncommon wintering species, however, were found in about normal numbers, as was the Common Goldeneye, the most abundant winter duck. The 14,100 Canada Geese at Horicon was an exceptional total, and the Pied-billed Grebe at Fifiel was an unusual record from so far north. Both Herring and Ring-billed Gulls occurred on fewer counts than normal, reflecting the lack of open water.

Raptors: Accipiters were rarer than usual, and the Red-shouldered Hawk again was found in below normal numbers. Other species of hawks occurred in about normal numbers, and were found south of a line from Hudson to Green Bay. Bald Eagles were again very common, occurring on 20% of the counts, well above the 10-year average. Again this species was found on several northern counts, but was most abundant on the counts at Beetown (78 eagles), Mazomanie (42 eagles), Adams (24 eagles), and Alma (63) eagles.

Most owls occurred in average numbers, but there were two exceptions. Short-eared Owls were found on the highest percentage of counts since 1955, and Snowy Owls were much more common than usual, although not as abundant as in 1960 and 1964.

Pheasants, grouse, etc.: After being missed last year, Sharp-tailed Grouse and Prairie Chickens were again reported. Bobwhite numbers remained low, being found on less than 5% of the counts. Most interesting was a large upsurge in the number of counts reporting Gray Par-

tridges, all in the eastern third of the state from Green Bay south to Illinois. This may have been the result of a good snow cover that made this species easier to find, but it could reflect an increase in numbers. Mourning Doves were present in record numbers, being found as far north as New Richmond, Barron, and Peshtigo.

Woodpeckers: Red-headed Woodpeckers, after being especially common last year, were found in below normal numbers in 1966. All the other woodpeckers occurred in about normal numbers, with perhaps the exception of the Red-bellied Woodpecker, which appeared on more counts than usual.

Horned Larks—blackbirds: Horned Larks were found on a much higher percentage of counts than ever before. The mild weather in early December that induced this species to remain in Wisconsin, and the snow cover that made them easier to find, were perhaps the reasons for the numerous reports. Jays, chickadees, nuthatches, Brown Creepers, waxwings, Robins, and Golden-crowned Kinglets occurred in normal numbers. The Black-capped Chickadee had the distinction of being the only species reported on every count.

The unusual number of blackbirds was probably the highlight of the 1966 Christmas count. The Red-winged Blackbird, Common Grackle, and Brown-headed Cowbird occurred on a record percentage of counts, and the Rusty Blackbird was also unusually abundant. Although most wintering blackbirds were found in the southern two-thirds of the state, some occurred in the far north. A grackle was found at Superior and a cowbird at Hayward. Cowbirds were exceptionally common, with 160 being found at Horicon and 65 at Madison.

Finches and sparrows: Common Redpolls and Pine Grosbeaks, so abundant last year, were found on only a few counts in 1966, mostly in the northern part of the state. Evening Grosbeaks and Pine Siskins were present in slightly lower numbers, the former being confined mostly to the northern counts. The only finch to occur in above normal numbers was the Goldfinch, which occurred on a record percentage (83%) of the counts and was found throughout the state.

Sparrows and juncos were distributed in normal numbers, mostly in the southern two-thirds of the state. Snow Buntings were confined mostly to the northern two-thirds of the state. The occurrence of the Vesper Sparrow and the Rufous-sided Towhee on four counts was unusual.

Figure 1. Locations of the 1966 Christmas bird counts.



Table 1. - Birds seen on 14 or more counts.

Count Number	Bayfield ✓	Superior ✓	Brule ✓	Hayward ✓	Wyfield ✓	Hiles ✓	Hainelander ✓	St. Croix Falls ✓	Torahawk ✓	Barren ✓	Langlade ✓	Merrill ✓	Peshigo ✓	Fahraim ✓	New Richmond ✓	Jim Falls ✓	Chiconwa Falls ✓	Vancouver ✓	Varation ✓	Hudson ✓	Shawano ✓	Sturgeon Bay ✓	Lancy ✓	Ellsworth ✓	Clintonville ✓
Hallard	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Black Duck	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	500	..	..	100	..	..	..	..
Common Goldeneye	37	1	9	4	6	..	..	..	1	..	..	..	50	159	28	93	211	29	..	13	10	..	..	..	..
Common Merganser	4	..	..	..	..	..	..	..	..	..	..	..	2	51	..	..	..	..	..	..	..	..	..	..	..
Red-tailed Hawk	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	2	..	..	2	3	1
Rough-legged Hawk	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Bald Eagle	1	..	1	1	..	..	..	..	2	3	..	..	..	..	..	..	1	..	..	..	..	1	3	..	..
Marsh Hawk	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
Sparrow Hawk	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..
Ruffed Grouse	1	1	6	..	*	..	1	..	..	..	1	..	..	1	*	..	6	5	2	..	2	..	4	..	..
Ring-necked Pheasant	..	6	..	..	..	..	..	..	..	..	..	..	2	1	*	*	..	..	28	..	..	..	3	2	..
Gray Partridge	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Herring Gull	900	11	..	..	..	..	..	..	..	..	..	..	11	1806	..	..	..	..	..	..	..	..	..	..	..
Mourning Dove	..	..	..	..	..	..	..	..	..	3	..	3	..	3	2	*	..	193	..	2	*	*	..	16	5
Great Horned Owl	..	..	2	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	1	..	..	1	3	..
Belted Kingfisher	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..
Yellow-sh. Flicker	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pileated Woodpecker	..	..	2	..	1	..	..	1	..	1	1	..	..	1	..	..	2	1	..	2	..	1	1	2	..
Red-bel. Woodpecker	..	..	*	..	..	..	..	3	..	2	..	..	..	..	7	3	4	4	..	5	..	..	14	*	..
Red-head. Woodpecker	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Hairy Woodpecker	7	1	5	1	12	1	23	6	1	5	3	..	14	12	5	15	16	..	10	4	..	..	1	13	1
Downy Woodpecker	10	1	6	1	10	6	18	8	1	6	..	..	*	13	25	2	16	26	..	6	7	2	..	21	..
Horned Lark	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	..	9	..	..	..	..	..	2	..	..
Blue Jay	32	7	104	51	46	12	32	30	13	11	40	5	48	5	35	19	64	233	..	42	85	..	58	39	19
Common Crow	4	..	4	1	5	..	1	1	39	5	..	..	6	..	21	123	157	15	6	92	11	..	105	59	23
Black-cap. Chickadee	46	32	112	88	209	59	302	37	67	30	43	17	4	137	72	23	47	233	17	63	57	6	49	51	25
Tufted Titmouse	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	6	..	..	4	..	..	..	..	..
White-br. Nuthatch	1	2	10	7	7	4	21	10	..	6	3	4	..	4	18	8	18	21	..	10	15	..	6	45	3
Red-br. Nuthatch	1	..	7	3	4	1	14	..	..	1	..	2	..	12	..	..	..	5	..	..	7	3	..	..	2
Brown Creeper	..	..	..	..	*	1	4	..	..	1	..	..	..	..	..	..	..	1	..	3	..	..	..	..	..
Robin	..	..	..	..	..	..	..	..	..	1	..	..	*	1	..	..	1	*	..	..	..	..	..	..	..
Golden-cr. Kinglet	4	2	..	5	..	6	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cedar Waxwing	1	..	..	..	..	..	..	..	..	..	..	28	..	..	1	..	2	1	..	1	..	..	..	..	..
Northern Shrike	..	..	2	..	3	..	..	6	..	85	20	..	2	..	..	1	..	..	..	..	..	..	..	2	..
Starling	42	91	25	6	102	..	..	6	..	..	..	..	38	39	..	171	327	109	..	172	12	6	77	159	20
House Sparrow	1	112	54	11	60	..	100	348	*	187	235	71	93	104	1264	167	879	859	..	730	117	10	555	1255	50
Meadowlark spp.	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Red-winged Blackbird	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	1	..	..	..	..	..
Common Grackle	..	1	..	..	..	..	*	..	..	..	..	..	..	..	*	..	..	..	..	..	..	..	..	..	..
Brown-headed Cowbird	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Cardinal	..	1	..	1	..	..	6	..	14	..	..	..	*	10	30	6	23	39	1	55	4	..	3	88	7
Evening Grosbeak	9	30	65	59	527	..	91	7	106	*	7	..	..	..	..	..	30	..	..	34	..	40	..	..	..
Purple Finch	..	1	..	..	..	..	..	*	2	..	..	..	..	1	..	..	1	..	..	5	4	..	..	..	..
American Goldfinch	16	..	..	..	72	1	41	3	58	24	4	8	25	..	132	5	69	245	..	7	1	..	2	83	16
Slate-colored Junco	..	..	..	..	..	..	..	..	..	17	..	..	5	8	25	7	23	14	..	9	37	..	2	48	4
Oregon Junco	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Tree Sparrow	..	..	..	..	..	..	..	..	3	*	..	..	65	..	57	31	155	19	..	85	5	..	2	363	15
Song Sparrow	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Snow Bunting	..	..	..	4	91	..	100	50	..	425	238	..	..	..	16	..	80	..	..	2	..	..	..	..	..

Note - The counts are numbered from north to south. An asterisk indicates species seen during the count period but not on the day of the count.

Table 1. - (continued)

Count Number	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Mallard	..	419	..	..	..	..	..	463	..	..	..	21	..	100	..	..	..	86	..	..	226	..	..	..	..
Black Duck	..	980	..	..	..	..	..	419	..	..	..	..	..	205	..	..	..	33	..	..	4	..	..	..	..
Common Goldeneye	..	44	34	32	..	2	76	*	559	..	13	..	..	100	..	..	..	65	..	..	1	..	2	56	..
Common Merganser	..	48	..	6	..	..	..	1	13	..	..	..	..	45	..	..	..	17	..	..	..	..	3	..	..
Red-tailed Hawk	2	3	..	..	4	..	15	..	21	10	..	..	8	2	8	..	1	6	3	4	17	..	7	2	..
Rough-legged Hawk	2	1	..	..	4	2	..	8	13	..	..	..	..	1	14	*	1	3	..	2	..	..	..	21	..
Bald Eagle	..	..	2	..	..	..	63	..	..	..	..	..	..	..	14	..	1	3	..	1	..	..	..	..	..
Marsh Hawk	..	1	1	..	*	..	..	..	..	..	*	..	..	..	1	*	1	..	..	1	..	..	..	..	1
Sparrow Hawk	..	2	..	..	3	..	..	..	10	1	..	..	..	..	4	..	..	2	..	3	..	..	..	..	1
Ruffed Grouse	1	1	6	4	3	3	7	..	1	1	3	16	..	3	..	..	2	1	..	*	..	..	..	..	..
Ring-necked Pheasant	2	39	..	..	9	3	..	5	213	1	8	4	..	50	167	..	..	..	..	14	*	..	16	10	10
Gray Partridge	16	22	..	..	..	..	..	77	..	*	..	..	..	18	60	..	..	..	..	*	..	..	21	..	..
Herring Gull	..	34	..	1100	..	..	..	..	*	..	500	..	..	81	..	..	..	..	..	..	..	810	11	..	..
Mourning Dove	1	172	7	15	13	..	30	12	205	10	34	19	3	108	42	..	6	3	..	10	..	85	4	9	..
Great Horned Owl	..	2	2	..	1	1	4	..	*	..	..	1	..	*	..	..	..	..	..	..	1	..	..	..	1
Belted Kingfisher	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	1	..	..	..	..
Yellow-sh. Flicker	..	..	..	..	..	..	..	..	*	..	..	..	..	..	2	..	..	..	..	..	..	3	..	..	..
Pileated Woodpecker	..	..	2	..	..	1	4	..	1	..	..	2	..	..	..	..	..	2	..	..	3	..	..	..	..
Red-bel. Woodpecker	*	4	4	..	2	1	5	1	3	1	..	18	3	..	13	*	..	4	1	2	4	..	5	3	..
Red-head. Woodpecker	4	10	..	..	2	..	..	1	..	..	..	3	1	..	..	..	..	..	1	..	3	..	4	..	..
Hairy Woodpecker	3	14	9	1	15	2	12	1	16	5	4	40	3	12	6	*	1	5	6	8	3	..	4	5	*
Downy Woodpecker	5	11	9	2	19	3	17	3	30	12	12	56	10	34	29	2	1	8	7	14	17	3	10	12	13
Horned Lark	33	..	8	8	1	12	..	8	..	..	..	..	..	8	29	..	..	..	55	..	..	6	62	15	..
Blue Jay	40	57	318	4	40	19	35	18	45	36	4	157	15	35	31	6	6	219	26	21	43	2	15	17	4
Common Crow	42	40	151	10	55	18	351	19	358	56	1	81	46	47	96	*	18	255	32	47	35	5	16	17	35
Black-cap. Chickadee	14	61	115	17	118	10	71	11	111	60	46	241	9	60	133	10	9	118	11	53	37	5	27	38	15
Tufted Titmouse	..	..	4	..	..	..	..	*	..	..	..	6	..	2	..	..	..	..	2	..	..	4	..	..	..
White-br. Nuthatch	8	24	48	4	33	3	18	3	29	8	2	96	9	20	42	3	5	19	4	23	31	..	7	11	2
Red-br. Nuthatch	1	7	1	..	6	..	..	2	..	1	..	..	..	1	3	..	..	..	..	1	..	..	..	..	..
Brown Creeper	..	11	2	..	1	..	..	7	..	..	..	1	1	..	7	..	..	2	..	1	4	..	1	..	..
Robin	..	5	*	..	..	..	..	15	..	..	..	1	..	*	..	..	..	1	..	..	..	3	..	..	1
Golden-cr. Kinglet	..	..	1	..	..	..	..	..	..	..	..	..	..	13	..	..	..	20	..	..	6	..	..	..	..
Cedar Waxwing	..	14	3	..	..	..	..	27	..	..	..	..	..	*	..	..	..	..	..	*	..	..	..	..	..
Northern Shrike	..	1	3	1	3	..	1	4	4	3	..	..	..	..	..	..	2	3	..	*	..	*	..	..	..
Starling	63	315	443	85	107	..	136	24	1074	261	56	25	146	61	1290	..	21	30	27	151	647	..	149	445	77
House Sparrow	519	1136	1281	175	752	120	1049	76	973	912	202	456	248	484	3199	..	25	125	450	351	1128	..	409	2806	603
Meadowlark spp.	6	*	1	..	3	..	..	..	2	..	2	..	..	2	19	..	..	..	..	..	..	..	9	16	..
Red-winged Blackbird	1	..	..	1	2	..	1	..	7	7	..	..	2	*	4	..	..	..	..	1	983	..	..	..	4
Common Grackle	..	*	1	3	..	..	1	..	2	8	2	..	2	..	4	..	..	..	..	..	11	..	1	..	..
Brown-headed Cowbird	..	..	2	..	2	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cardinal	5	19	29	5	38	1	214	3	32	26	9	97	55	20	43	..	3	9	9	20	64	1	14	21	7
Evening Grosbeak	*	10	6	1	3	..	..	..	..	1	13	..	..	15	..	..	..	..	..	..	..	5	..	..	..
Purple Finch	2	8	..	5	*	..	..	3	5	..	*	..	..	25	..	..	5	..	..	5	..	7	12	..	..
American Goldfinch	410	*	836	7	17	50	70	175	16	703	6	56	15	7	58	..	97	1325	12	179	56	..	45	7	55
State-colored Junco	42	147	317	4	96	..	150	410	134	514	22	531	60	184	178	..	34	269	36	63	58	24	63	291	334
Croton Junco	..	..	1	..	1	..	..	..	2	2	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..
Tree Sparrow	51	122	209	3	108	20	65	..	63	274	28	42	241	36	206	7	112	184	*	107	93	..	9	1052	505
Song Sparrow	..	..	1	1	..	..	..	*	1	1	..	..	2	3	..	..	..	..	..	4	*	..	*	6	..
Snow Bunting	81	38	1	550	55	85	..	..	..	2	6	..	..	80	500	..	..	..	..	220	..	..	..	1	..

Table 1. - (continued)

[illegible]

Table 2. Birds seen on less than 14 counts.

Species	No. of Counts	Total Birds	Counts and Numbers Seen
Horned Grebe	1	1	Hales Corners 1
Pied-billed Grebe	4	5	Appleton 1, Fifield 1, Lake Geneva 2, Waukesha 1
Great Blue Heron	2	4	Adams 3, Fountain City 1
Canada Goose	9	14557	Cedarburg 15, (Freemont)*, Green Bay 290, Horicon 14100, (Lake Geneva), Madison 14, Milton 13, Milwaukee 1, (Oconomowoc), Racine 118, Sturgeon Bay 2, Wausau 4
Snow Goose	1	3	Green Bay 3
Blue Gose	3	6	Green Bay 4, Racine 1, Sturgeon Bay 1
Gadwall	2	39	Madison 37, Oconomowoc 2
American Pintail	5	6	Appleton 1, Madison 1, (Manitowoc), Milwaukee 1, Oconomowoc 2, Racine 1
Green-winged Tetol	1	1	Stevens Point 1
Blue-winged Teal	1	1	Waukesha 1
American Widgeon	5	11	Appleton 1, Hales Corners 2, LaCrosse 1, Madison 4, Oconomowoc 3
Shoveler	3	7	Madison 2, Manitowoc 1, Oconomowoc 4
Wood Duck	3	5	Madison 3, Oconomowoc 1, Racine 1
Redhead	4	20	Cedarburg 16, Oconomowoc 2, Racine 1, Two Rivers 1
Ring-necked Duck	3	11	Appleton 2, Lake Geneva 8, Madison 1
Canvasback	8	109	Appleton 2, Cedarburg 14, Green Bay 1, Hales Corners 3, Lake Geneva 75, Madison 10, Milwaukee 3, Waukesha 1
Greater Scaup	5	8004	Cedarburg 200, Hales Corners 206, Madison 2, Manitowoc 1, Milwaukee 7575
Lesser Scaup	5	66	Appleton 6, Lake Geneva 18, Oconomowoc 1, Racine 40, Sturgeon Bay 1
Barrow's Goldeneye	1	1	Milwaukee 1
Bufflehead	9	262	Appleton 1, Bayfield 1, Cedarburg 15, Hales Corners 70, Lake Geneva 5, Madison 7, (Manitowoc), Milwaukee 29, Oconomowoc 2, Racine 132
Oldsquaw	8	10725	Cedarburg 2450, Hales Corners 3, Kenosha 131, Lake Geneva 1, Manitowoc 77, Milwaukee 7515, Racine 518, Sheboygan 30
Ruddy Duck	6	30	Cedarburg 17, Kenosha 1, Lake Geneva 2, Madison 2, Milwaukee 1, Oconomowoc 7
Hooded Merganser	6	17	Appleton 1, Green Bay 1, (LaCrosse), Lake Geneva 7, Madison 4, Oconomowoc 1, Racine 3
Red-br. Merganser	9	151	Adams 9, Cedarburg 24, Hales Corners 63, Kenosha 1, Lake Geneva 5, Madison 1, Manitowoc 3, Milwaukee 9, Racine 36
Goshawk	3	3	(Madison), (Manitowoc), Shiocton 1, Stevens Point 1, Wausau 1
Sharp-shinned Hawk	4	4	Adams 1, (Baraboo), Shawano 1, (Sheboygan), Stevens Point 1, Waukesha 1, (Wautoma)
Cooper's Hawk	8	9	Adams 1, Cedarburg 1, Kenosha 1, Lake Geneva 1, Manitowoc 1, (Milwaukee), Montello 1, Oconomowoc 1, Stevens Point 2
Red-shouldered Hawk	7	8	Beetown 1, Hales Corners 2, Milwaukee 1, Oconomowoc 1, Racine 1, Shiocton 1, Two Rivers 1
Golden Eagle	1	1	Chippewa Falls 1
Peregrine Falcon	1	1	Beetown 1

Table 2. (continued)

Species	Counts No. of	Birds Total	
Prairie Chicken	2	21	Dancy 10, Stevens Point 11
Sharp-tailed Grouse	1	15	Port Edwards 15
Bobwhite	3	144	(Beloit), LaCrosse 10, (Madison), Mazomanie 54, Wautoma 80
Eastern Turkey	1	85	Necedah 85
Virginia Rail	1	1	Waukesha 1
American Coot	9	486	Appleton 3, Beloit 1, Cedarburg 1, Hales Corners 1, Lake Geneva 215, Madison 94, Oconomowoc 168, (Shawano), Sturgeon Bay 1, (Waukesha), Wausau 2
Killdeer	3	3	Cornelia 1, Fountain City 1, LaCrosse 1
Common Snipe	9	12	Adams 1, Fountain City 1, Hales Corners 1, Hayward 1, (LaCrosse), Madison 3, Mazomanie 2, Milton 1, Oconomowoc 1, Wautoma 1
Glaucous Gull	1	1	Bayfield 1
Ring-billed Gull	8	423	Cedarburg 60, Green Bay 2, Hales Corners 8, Kenosha 3, Lake Geneva 475, Madison 90, Mani- towoc 1, Milwaukee 84
Screech Owl	9	13	Alma 2, Beloit 3, Cornelia 1 (Evansville), Hales Corners 1, Lodi 1, (Milwaukee), Oconomowoc 1, Randolph 1, Shiocton 1, Waukesha 2
Snowy Owl	9	18	Appleton 1, Barron 1, (Brule), Cedarburg 1, (Cedar Grove), Green Bay 7, Horicon 1, Kenosha 2, (LaCrosse), (Manitowoc), Milwaukee 1, Racine 1, Superior 3, (Two Rivers)
Barred Owl	13	23	Beloit 3, Brule 2, Cedar Grove 2, Chippewa Falls 3, Cornelia 1, Fountain City 1, Green Bay 1, (Jim Falls), LaCrosse 3, Mazomanie 3, Port Edwards 1, Shiocton 1, Stevens Point 1, Tomahawk 1, (Wausau)
Long-eared Owl	9	25	Beloit 4, Kenosha 7, LaCrosse 1, Lake Geneva 1, Madison 2, Milwaukee 2, (New Richmond), Oconomowoc 1, (Oshkosh), Racine 5, Waukesha 1
Short-eared Owl	7	10	Cornelia 1, Darlington 1, Horicon 1, Lake Geneva 1, Mazomanie 1, Montello 1, Oshkosh 4
Yellow-b. Sapsucker	3	3	Cornelia 1, Fond du Lac 1, Madison 1
N. Three-t. Wdpecker	1	1	Hiles 1
Phoebe	1	1	Green Bay 1
Gray Jay	4	36	Fifield 14, Hiles 21, Rhinelander 10, Shawano 1
Common Raven	10	180	Bayfield 21, Brule 77, Chippewa Falls 4, Fifield 39, Hayward 7, Hiles 10, Langlade 10, Rhine- lander 6, Tomahawk 5, Wausau 1
Boreal Chickadee	7	31	Barron 1, Hayward 1, Hiles 13, Langlade 2, New Richmond 1, Rhinelander 8, Tomahawk 5
Winter Wren	3	3	Ellsworth 1, Green Bay 1, Lake Geneva 1
Carolina Wren	1	1	(Baraboo), Chippewa Falls 1
Mockingbird	1	1	Madison 1
Catbird	2	2	Green Bay 1, Kenosha 1, (Racine)
Brown Thrasher	7	9	Appleton 1, Chippewa Falls 1, Madison 1, Mil- waukee 1, Racine 3, (Sheboygan), Two Rivers 1, Waukesha 1
Hermit Thrush	3	3	Madison 1, Milwaukee 1, Two Rivers 1
Varied Thrush	1	1	Milwaukee 1

Table 2. (continued)

Species	Counts No. of	Birds Total	Counts and Numbers Seen
Ruby-crowned Kinglet	2	2	Oconomowoc 1, Waukesha 1
Bohemian Waxwing	4	38	Chippewa Falls 24, Ellsworth 1, LaCrosse 12, (Milwaukee), Necedah 1, (Wautoma)
Baltimore Oriole	2	2	Stevens Point 1, Wautoma 1
Rusty Blackbird	8	51	Adams 2, Chippewa Falls 1, Evansville 3, (Fond du Lac), Horicon 2, Hudson 2, Lake Geneva 3, Madison 27, Milton 11
Brewer's Blackbird	2	5	Horicon 1, (Racine), Shiocton 1
Pine Grosbeak	3	8	Brule 1, Hiles 6, (Stevens Point), Superior 1, (Wausau)
Common Redpoll	12	121	Alma 15, (Baraboo), Chippewa Falls 14, Fond du Lac 15, Green Bay 24, Hiles 4, Kenosha 2, New Richmond 4, Oconomowoc 2, St. Croix Falls 8, Stevens Point 10, Superior 11, Tomahawk 12
Pine Siskin	12	236	Appleton 16, (Brule), Cedarburg 2, Hales Cor- ners 21, Kenosha 1, Lake Geneva 6, Madison 44, (Manitowoc), Merrill 5, Milwaukee 66, Racine 52, Shiocton 4, Superior 13, Tomahawk 6
Red Crossbill	6	168	Beloit 16, (Brule), Madison 15, (Manitowoc), Mazomanie 77, Stevens Point 30, Wausau 30, (Weyauwega)
Rufous-sided Towhee	4	5	Oshkosh 1, Shawano 2, Two Rivers 1, Waukesha 1
Vesper Sparrow	4	5	Adams 1, Kenosha 2, Milton 1, Shiocton 1
Field Sparrow	1	1	Mazomanie 1
Harris' Sparrow	1	1	Cornelia 1
White-cr. Sparrow	1	1	Cornelia 1
White-thr. Sparrow	7	10	Appleton 2, Cedarburg 1, Fifield 1, Green Bay 1, Kewaunee 1, Madison 3, Stevens Point 1
Fox Sparrow	2	3	Kiel, Madison 1, Sheboygan 2
Swamp Sparrow	7	19	Cedarburg 5, Cedar Grove 1, Horicon 1, Kenosha 7, Lake Geneva 2, Manitowoc 2, Oconomowoc 1
Lapland Longspur	6	22	Beetown 3, Ellsworth 1, Green Bay 4, Madison 1, Manitowoc 2, Pulaski 11, (Randolph)

*Parentheses indicate that the species was seen during the count period but not on the day of the count.

*Discourage the use of
All Harmful insecticides.
Mary and Charlie Nelson*

Table 3. Details of the counts.

Count and Count Number	Date	Hours a.m.-p.m.	Observers	Parties	Sky	°F Temp.	Snow (Inches)	Open Water	Species
✓ Adams (43)	D-30	7:00- 5:00	8	3	Cloudy	S 0-10	5-25 11	R	38
✓ Alma (32)	J- 2	6:00- 4:45	10	3	Cl,Sn	SE 2- 5	22-26	R	26
✓ Appleton (34)	D-26	7:00- 4:30	24	6	Fair	NW 2- 8	-7-20 4	R	49
✓ Baraboo (52)	D-26	6:00- 4:00	12	4	Fair				
✓ Barron (10)	J- 1	7:00- 4:00	5	5	Snow		-5-20 6	R	24
✓ Bayfield (1)	D-22	8:00- 4:30	4	2	PCI-Cl	NW 1- 3	-1-17 6	L	21
✓ Beetown (64)	D-31	7:30- 5:00	9	2	Cloudy	NW 5-10	15-24 10		33
✓ Beloit (69)	D-26	7:30- 4:30	32	11	F-Cl	N 5	9-18 tr	R	41
✓ Brule (3)	D-26	5:30- 4:45	11	3	PCI-F	NE 3- 5	2-10 7	R	20
✓ Cedarburg (53)	D-30	7:15- 4:15	1	1	Cl-PCI	SE 5-15	10-25 8	RL	42
✓ Cedar Grove (19)	D-31	7:00- 5:30	7	2	Cloudy	SW 7-15	30-33 10	LR	28
✓ Chippewa Falls (17)	D-26	4:45- 4:45	9	3	F-Cl		-5-15		32
✓ Clintonville (25)	D-26	7:30- 4:30	4	1	Fair	W 0- 5	-2-16 2	R	15
✓ Cornelia (67)	D-27	7:30- 5:00	5	2	F-Cl	W 0- 5	4-15 ½		40
✓ Dancy (23)	D-24	7:00- 4:00	8	2	PCI	WNW 5-10	20-30 tr	R	20
✓ Darlington (68)	J- 2	7:30- 5:30	5	1	Cloudy	SE 5-10	16-30 8		27
✓ Dodgeville (60)	J-2	7:15- 4:00	2	1	Cloudy	W	15-25 7	L	15
✓ Ellsworth (24)	D-21	6:30- 4:30	4	3	Cloudy	N 5-15	27-17 1	R	28
✓ Ephraim (14)	J- 2	8:00- 2:00	6	2	Cloudy	S 0- 5	20-25 6	L	19
✓ Evansville (65)*	J- 2	8:00-11:00	2	1	Cloudy	NE	20-30 2	R	21
✓ Fifeild (5)	D-26	7:00- 4:30	4	3	MCI	NW 2-10	5-21 6	R	20
✓ Fond-du-Lac (45)	D-26	7:00- 4:30	6	3	Fair	NW 0- 5	-2-13 4		26
✓ Fountain City (38)	J 2	7:30- 5:00	11	3	Cloudy	E 2	21-31 14		24
✓ Fremont (35)	D-30	7:45- 4:15	1	1	Cloudy	0	-9-18 10		27
✓ Green Bay (27)	D-26	6:00- 5:30	23	7	Fair	NW 3- 9	-3-20 3	L	50
✓ Hales Corners (62)	D-29	7:00- 4:30	5	2	PCI	WNW 9-25	19-24 8	RL	49
✓ Hartford (54)	J- 2	8:00- 3:30	5	1	Cloudy	S 0- 5	24-34 9		23
✓ Hayward (4)	D-27	9:00- 4:30	3	1	PCI-F	NW 6- 8	-18-21 7	R	19
✓ Hiles (6)	D-24	6:15- 3:15	1	1	F-PCI	W 0-15	-5-15 4		15
✓ Horicon (51)	D-21	7:15- 4:15	1	1	PCI-F	0	24-26 5		28
✓ Hudson (20)	J- 2	6:45- 4:45	5	2	Sn-F	S-NW 5-12	22-30 9	R	26
✓ Jim Falls (16)	D-26	5:45- 6:30	1	1	F-Cl	NW 8-10	-9-16 6	R	14
✓ Kenosha (71)	J- 2	6:30- 5:00	13	5	F-PCI	SW 0- 5	25-35 9	L	46
✓ Kewaunee (29)	D-26	7:00- 4:00	2	1	F-PCI	NW 5	5-15 4	L	26
✓ Kiel (44)*	J- 2	7:30-12:00	1	1	Cl-F	SE 5-17	20-34 10		14
✓ LaCrosse (46)	D-21	6:30- 4:30	7	4	Cl-PCI	NW 5-13	26-32 2	R	35
✓ Lake Geneva (70)	J- 2	7:15- 4:30	7	3	Fair	W 0-10	19-33 10	L	48
✓ Langlade (11)	D-31	7:30- 4:30	2	1	MCI	W 5-10	0-17 8	R	14
✓ Lodi (55)	J- 2	7:30- 4:30	4	2	Cloudy	8	20-33 9	R	13
✓ Madison (58)	D-26	3:30- 5:00	45	7	Fair	SW 5-10	0-20 2	L	68
✓ Manitowoc (39)	D-29	7:00- 4:30	13	7	PCI	W 5- 7	21 5	L	41
✓ Marathon (19)*	J- 2	7:30-12:00	1	1					5
✓ Mazomanie (56)	J- 2	6:30- 4:30	26	7	Cloudy	SW 5-15	22-28 8	R	53
✓ Merrill (12)	D-23	8:00- 4:30	1	1	Fair	NNW 10	9-16 4	R	14
✓ Milton (63)	J- 2	7:30- 4:30	7	2	F-Sn	NW 4- 7	20-30 8	RL	35
✓ Milwaukee (59)	J- 2	6:45- 5:00	29	9	F-Sn	S 6-10	23-31 8	RL	56
✓ Montello (47)	D-27	11:00- 3:15	3	1	Fair	SE 3- 5	21-29 5		8
✓ Necedah (41)**	D-30	3:00- 4:45	2	2	Fair	0	20-25 12		7
✓ New Richmond (15)	D-29	6:45- 4:30	4	2	Fair	W 2-10	3-18 6	R	25
✓ Oconomowoc (57)	D-26	7:00- 4:00	21	5	F-PCI	NW 0-10	-3-16 3	R	53
✓ Oshkosh (40)	D-31	7:30- 4:30	24	9	Cloudy	S 6- 7	22-32 8		32
✓ Peshtigo (13)	D-31	6:30- 4:15	2	1	Cl-PCI	NW 0- 5	10-32 7	R	16
✓ Port Edwards (31)	D-24	7:00- 4:00	3	1	Fair	W 10-20	10-15 9	R	21
✓ Pulaski (26)	D-31	7:30- 3:00	7	2	Cloudy	SE 3	13-29 8		26
✓ Racine (66)	D-26	6:30- 5:00	26	8	Fair	W 5-10	3-25 3	L	53

Table 3.—(continued)

Count and Count Number	Date	Hours a.m.-p.m.	Observers	Parties	Sky	Temp. °F	Snow (Inches)	Open Water	Species
Randolph (50)	D-26	6:00- 5:00	2	1	Fair	E 0-15	0-15	2	R 23
Rhineland (7)	D-23	8:00- 4:00	8	3	PCI	NW 5	0-15	15	R 16
St. Croix Falls (8)	D-27	8:00- 4:00	2	1	Fair	0	-5-18	3	R 15
Shawano (21)	D-27	8:00- 4:00	5	2	PCI-Cl	WNW 5	4-12	5	R 26
Sheboygan (48)	J- 5	7:30- 3:30	8		Cloudy	0- 2	10-20	3	L 28
Shiocton (30)	D-23	7:00- 4:30	6	1	Fair	NW 2- 8	-4-20	4	R 39
Stevens Point (28)	D-31	8:00- 4:00	20	8	Cl-F	SW 5	20-28	8	R 44
Sturgeon Bay (22)	D-30	10:30- 3:00	2	1	Fair	NW 5	7-15	8	L 13
Superior (2)	D-22	8:00- 4:00	5	2	F-PCI	NW 8-16	-3-12	7	L 19
Tomah (42)	D-24	8:20- 4:40	2	1	Cloudy	NW 5	-9-15	2	19
Tomahawk (9)	D-26	7:45- 1:45	1	1	F-Cl	NNW 0-15	-8-20	8	R 13
Two Rivers (36)	D-22	7:30- 4:30	12	1	PCI	NW 8-15	14-22	4	LR 27
Waukesha (61)	D-26	7:00- 4:00	27	8	Fair	SW 5- 8	-2-16	5	49
Wausau (18)	— 2	8:00- 4:15	37	19	Cloudy	W 5-10	20-29	11	R 31
Wautoma (37)	D-31	8:00- 4:00	7	3	Cloudy	SW 15-20	10-20	12	R 28
Weyauwega (33)*	D-30	7:00-12:00	3	1	Cloudy	S 5	10-18	10	R 17

*a.m. only **p.m. only F=Fair Cl=Cloudy PCI=Partly Cloudy
MCI=Mostly Cloudy Sn—Snow R=Rivers L=Lakes

Table 4. Count, location, center of count, and observers.

Adams (43): 1mi. S of Dellwood. Tom Ashman, Mr. and Mrs. W. D. Brown, Joyce Ann Brown, Steven Curtis, Paul Krombolz, Josephine Walker, Mrs. R. A. Walker.

Alma (32): jct. I & D. David Angell, Joan Angell, Paul Blanchard, Gail Hansis, Kathy Hillery, Peggy Irwin, Rollic Irwin, Charles Kemper, Robert Moe, Ed Reifnauer.

Appleton (34): center of Appleton. Mr. & Mrs. Frank Blick, Mrs. Curney Defferding, Mrs. Florot Guenther, Fritz Guenther, Mr. & Mrs. Harvey Hansen, Gregory Hintz, Michael Hintz, Mr. & Mrs. Gordon Larson, Duane Natzke, Mrs. Ed Natzke, Mr. & Mrs. Harold Pasch, Mr. & Mrs. Ross Peahson, Mrs. Mildred Seeliger, Daryl Tessen, Mr. & Mrs. Fred Tessen, A. G. Wakeman, Mrs. Russell Ward, Mrs. William Wright.

Baraboo (52): 3mi. N of Baraboo. Donald Fisher, Bayard Gee, D. L. Mossman, Darrell Potter, Sue Premo, Ronald Rich, Terry Rich, Ron Savey, Carl Seils, Bea Wenban, Gary Wickus, Mrs. Leonard Parson.

Barron (10): Glenn Christianson, Andy Folstad, Howard Gilbertson, Mrs. Clifford Sims, Mrs. Jim Strang.

Bayfield (1): Mark Baillie, Bernard Klugow, Jack Pickert, Robert Smeed, Mrs. John Witt.

Beetown (64): Judy Hinderman, Terrence Ingram, Jean Ramaker, Kathy Simmons, David Wildes.

Beloit (69): N end Big Hill Park. Bernice Andrews, Robert Behrens, Edith Brakefield, John Brakefield, Darrell Cox, David Cox, Hazel Cox, Ron Dougan, Vera Dougan, Gladys Ellefs, Ray Ellefs, Tom Ellis, Francis Glenn, Harold Guetchow, Helen Guetchow, Al Hepler, Carol Klinkenberg, Hubert Klinkenberg, Gyda Mahlum, Melva Maxon, David Mezgar, Ruth Mezgar, Ralph Morse, June Ohm, Rudy Ohm, Dolores Reppert, Robert Reppert, Carl Sandgren, Dorothy Sandgren, Ed Wilson, Ethel Wilson.

Brule (3): jct. B and 27. Mark Baillie, Richard Bernard, Dennis Fonger, Al Gagne, Marvin Graulund, Bernard Klugow, Richard Klugow, Steve Meyer, Beatrice Norman, Mrs. Chandler Osborn, Robert Romans.

Cedarburg (53): jct. 141 and K. Dennis Gustafson

Cedar Grove (49): jct. K, B, and BH. Mary Ann Dykstra, John Ellarson, Mrs. John Ellarson, William Ellarson, Alvin Heidel, Mrs. Arthur Heidel, Kathlyn Heidel.

Chippewa Falls (17): jct. 178 and S. Paul Blanchard, Ralph Christopherson, Charles Kemper, Robert Moe, Virginia Reaves, Ed Reifenauer, Neva Reifenauer, Marsha Wiley, George Willett.

Clintonville (25): Jeffrey Rill, Mr. & Mrs. Russell Rill, Mark Wisnefske.

Cornelia (67): Judy Hinderman, Terrence Ingram, Loretta Nikolai, Thomas Taylor, David Wildes, Harry Wilkerson.

Dancy (23): Steve Gouyl, Jeanette Hansen, Don Helgersen, Don Hoehn, Linda Luther, Sue Ousley, Tim Ratzlaff, Paul Wilsman.

Darlington (68): Seymour Corners. Ellen Deitzman, Judy Hinderman, Terrence Ingram, Carolyn Pascoe, David Wildes.

Dodgeville (60): Gov. Dodge State Park. Mrs. Wilbur Beach, Mrs. David Ladd.

Ellsworth (24): 5mi. E of Ellsworth. Paul Blanchard, Walter Jiracek, C. A. Kemper, Sam Robbins.

Ephraim (14): Virginia Booth, Perry Hill, Henry Lapp, Roy Lukes, Mrs. Amos Rasmussen, Mrs. Emma Taft, Verna and Harold Wilson.

Evansville (65): Edith Brakefield, John Brakefield.

Fifield (5): Fifield post office. Mary Lou Nicholls, Thomas Nicholls, Gayle Trygseth, Alice Vincent.

Fond du Lac (45): Tower and Coty Roads, 6mi. NE of Fond du Lac. Walter Gilles, Carl Knuth, Rockne Knuth, Blanche MacKensie, David Steiner, Edward Stopper.

Fountain City (38): Mr. & Mrs. G. Barb, Gerald Daley, Mrs. Harvey Gordon, Don Gray, Kenneth Krumm, Dr. & Mrs. Don Mahle, Merton Maier, Sanford Tylor, Pauline Uershofen.

Fremont (35): jct. I and HH. Daryl Tessen.

Green Bay (27): Bernard Chartier, Edwin Cleary, Brother Columban, Louise Debenack, Gordon Delsart, Thomas Erdman, Barbara Humphreys, Revell Humphreys, Clara Hussong, Ralph Koeller, Mrs. Ralph Koeller, Harold Lindberg, Mr. & Mrs. Roy Markel, Virgil Muench, Ed Paulson, Paul Romig, Cora Stencil, Michael Stencil, William Talen, Jr., Andrew Tiveet, Mildred Van Vonderen, Alice Weber.

Hales Corners (62): jct. Peutz Rd. and I. Ivy Balsom, Mary Dodald, Dennis Gustafson, Don Hanbury, Karl Priebe.

Hartford (54): Arthur Gauerke, Irene Kohls, Mrs. Sigurd Rudorf, Earl Schmidt, Norma Schmidt.

Hayward (4): city of Hayward. Mark Baillie, Marvin Graulund, Bernard Klugow.

Hiles (6): 9mi. N of Hiles at Pine R. bridge on 2182. Tom Soulen.

Horicon (51): Harold Mathiak.

Hudson (20): S end of Lake St. Croix. Nelson Baxter, Robert Garber, Martin Laakso, Alice Pemble, Sam Robbins.

Jim Falls (16): Bob Creek bridge on 178. Clarence Kube.

Kenosha (71): 1mi. E of I-94 on 158. Gregg Baker, Ann Carlson, Genevieve Crema, Peter Dybad, Dan Erickson, Louise Erickson, Barrie Hunt, George Ludwig, Thelma Ludwig, Mark Madsen, Paul Madsen, Ed Prins, Bill Weber.

Kewaunee (29): Casco. Enos Campbell, Elmer DeCramer, Millie DeCramer, Roy Lukes, Dr. Neseman, Paul Wolske.

Kiel (44): Myron Reichwaldt.

LaCrosse (46): Cameron Gunderson, Dave Hammes, Janice Johnson, Eric Lawson, Fred Leshar, Jerome Rosso, Howard Young.

Lake Geneva (70): Williams Bay. Earl Anderson, Joan Anesey, Margaret Lehmann, Clarence Palmquist, Ronald Palmquist, Paul Schulze, Helen Wilson.

Langlade (11): jct. T and 2117. John Woodcock, Paul Woodcock.

Lodi (55): center of Lodi. Mr. & Mrs. Lars Quam, Mr. & Mrs. Edwin Thompson.

Madison (58): State capitol. Thomas Ashman, Philip Ashman, Betty Akagi, Mr. & Mrs. N. R. Barger, Fern Bell, Nancy Birkley, Ken Bowling, Joyce Brown, Mr. & Mrs. W. D. Brown, Catherine Crocker, Judy Faisich, Mr. & Mrs. Earl Fetterer, G. W. Foster, J. J. Hickey, Bill Hilsenhoff, Harrie Irwin, Gina Kline, Mrs. J. J. Lacey, Mr. & Mrs. Roy Lound, Dennis Luchterhand, Steve Martin, Eleanor Miles, Mr. & Mrs. Charles Naeseth, Martin Naess, Richard Narf, Helen Northup, J. A. Simpson, Mr. & Mrs. F. E. Shepherd, Clyde & Leonard Squires, Richard Tenaza, Josephine Walker, Mrs. R. A. Walker, Dave Willard, Mr. & Mrs. Oliver Wynn, Nancy Wynn, James Zimmerman.

Manitowoc (39): Mrs. Louis Ansoerge, Kent Beeman, Bernard Brouchoud, Dick Burger, Mr. & Mrs. Roy Effner, Mr. & Mrs. Ray Halsey, Lillian Marsh, John Meyer, Florence Miller, Merle Pickett, Tom Vnuk.

Marathon (19): Fra. Finian Wonn.

Mazomanie (56): 1½mi. SE of Witwen. Mrs. Tom Akagi, Tom Ashman, Mr. & Mrs. N. R. Barger, Nancy Borkley, Mr. & Mrs. W. D. Brown, Mr. & Mrs. David Cox, Mr. & Mrs. Steven Curtis, Harriet Irwin, F. H. King, Mr. & Mrs. Henry Koenig, Paul Kromholz, Mr. & Mrs. Harold Kruse, Ralph Mancke, Mr. & Mrs. Thomas Nicholls, Helen Northrup, Charles Sontag, Mr. & Mrs. Martin Stephen, Mrs. R. A. Walker.

Merrill (12): Alan Rusch.

Milton (63): W shore of Clear Lake. Virginia Anderson, Melva Maxson, June Ohm, Rudy Ohm, Dolores Reppert, Robert Reppert, Dorothy Sandgren.

Milwaukee (59): jct. Hampton and Pt. Washington Rd. Marion Allen, Ivy Balsom, Mr. & Mrs. Elmer Basten, Mr. & Mrs. Harold Bauers, Mrs. A. C. Bromm, Mr. & Mrs. John Campbell, Rosemary Carlson, Mary Donald, Mr. & Mrs. Carl Frister, Dennis Gustafson, Mr. & Mrs. Lowell Hall, Don Hanbury, Mr. & Mrs. Vincent Lynagh, Anna Hahn, Billie Logan, Lillian Logerman, Agnes McGovern, Karl Priebe, Elly Reed, Amelia Simmons, Marion Stremple, Pearl Thompson, Alice White.

Montello (47): Helen Jahn, Laurence Jahn, Richard Jahn.

Necedah (41): Edward Collins, Howard Lipke.

New Richmond (15): 1½mi. E of Boardman. Jerrol Conley, Sam Robbins, Evie Skog, Peter Tweet.

Oconomowoc (57): 2mi. N of Oconomowoc on 67. Harold Bauers, Don Beimborn, Dave Blair, Irene Blair, Lester Crawford, James Fuller, Art Gauerke, Lucy Gauerke, Gordon Hammel, Dorothy Harthum, Edwin Larson, Gertrude Larson, Ed Peartree, Bess Ritchey, Dennis Ruppnow, Mable Sharp, Mary Sharp, Richard Sharp, Robert Sharp, Tom Sharp, Walt Wellman.

Oshkosh (40): jct. 41 and 21. William Anderson, Gertrud Braun, Marj Bretschneider, Mrs. Ralph Buckstaff, Janet Evans, Mr. & Mrs. Glen Fisher, Mrs. Charles Foote, Sr., Mr. & Mrs. Nevin James, John Kaspar, Dan Krysiak, Rockne Knuth, Mrs. Barton Lewis, Mr. & Mrs. Louis Lyon, Mr. & Mrs. Philip Nelson, Dorothy Root, Elsie Siebert, Mariam Smith, Emma Stanley, Dr. & Mrs. Michael Weinzierl.

Peshigo (13): Harold Lindberg, LeRoy Lintereur.

Port Edwards (31): 5mi. W of Port Edwards. Andy Durand, Jerry Greubel, Suanne Greubel.

Pulaski (26): jct. 32 and B. Carmela Blecha, Bernard Chartier, Quentin Ciurej, Richard Hasterlik, Mrs. William Merkey, Columban Sokolowski, Melvin Wierzbicki.

Racine (66): Greg Baker, Ann Carlson, Myra Downie, Mary Donald, Frieda Dunat, Peter Dybvad, Louise Erickson, Robert Fiehweg, Richard Garber, Brother Jerome, Joy Joslyn, Jack Kent, Mark Madsen, Paul Madsen, Andrew Poulsen, Edward Prins, Joan Rohan, Mardi Staffel, William Pugh, John Van de Bunt, Mike Van de Bunt, Brother Vianney, Dr. B. L. von Jarchow, Bill Weber, Mary Whelan, Ida Whitten.

Randolph (50): midway between Cambria and Randolph. Charles Gilmore Sr., Marie Locke.

Rhineland (7): jct. Stevens and Davenport Streets. Afton Basset, Sadie Dahlstrand, Phil DeWalt, Marjorie DeWalt, Jessie Foster, Forest Sterns, R. L. Stumper, Cedric Vig.

St. Croix Falls (8): Mildred Jerdee, Gertrude Pedersen.

Shawano (21): Loon Lake. Mrs. Herbert Banser, Mr. & Mrs. Larry Fenton, Arthur Schoff, Patrick Schoff.

Sheboygan (48): Mr. & Mrs. Edwin Fisher, Mr. & Mrs. Phoenix, Helen Richardson, Mr. & Mrs. Stolzenberg, Pauline Trowbridge.

Shiocton (30): jct. 54 and M. Mrs. Curney Defferding, Mrs. Harold Komp, Mr. & Mrs. Louis Schwall, Daryl Tessen, Mrs. Fred Tessen.

Stevens Point (28): Wisconsin State University. Ray Anderson, Fred Baumgartner, Marguerite Baumgartner, Dale Becker, George Becker, Don Benz, Fred Copes, Paul Drake, Arol Epple, William Hansen, Gilbert Newman, James Newman, Joe Paulk, Nancy Roberts, George Stevenson, Nancy Stevenson, Bernard Wiesel, Charles White, Robert Whitmire, Paul Yambert.

Sturgeon Bay (22): Arni Benzow, Adrian Freitag.

Superior (2): 3mi. SE of Superior. Richard Bernard, Marvin Granlund, Robert Romans, Ted Staupe, Phil Vandershaegen.

Tomah (42): jct. 21 and 12. Robert Heagle, Harold Smith.

Tomahawk (9): Donald Hendrick.

Two Rivers (36): between Mishicot and Larrabee. Mrs. Charles Altmann, Ervin Baker, Mrs. B. A. Crane, Eugene Haefner, Theodora Harman, Mr. & Mrs. John Kraupa, Katherine Smith, Edna Smith, Ted Stobbe, Harry Wilsman, Winifred Smith.

Waukesha (61): jct. ZZ and D. Robert Adams, Ruth Adams, Clarence Anthes, Harlow Bielefeldt, John Bielefeldt, Olive Compton, Harold Graser, Dennis Gustafson, Clarence Hendricks, Emma Hoffmann, Paul Hoffmann, Lowell Hunter, Stewart Johnson, Charlotte Klug, Janet Klug, Walter Klug, William Laatsch, Charlotte McCombe, James McCombe, Ted Michaud, Charles Nelson, Mary Nelson, E. R. Rurenber, Mary Rutenber, Alvin Throne, Ernie Zimmerman.

Wausau (18): Mr. & Mrs. Roy Andrews, Charles Beckman, Mr. & Mrs. David Biechauer, Mrs. Otto Brueger, Ruth Duncan, Marion Forcey, Susie Gjetson, Mr. & Mrs. Art Hundhausen, Margaret Hyde, Merrill Hyde, Kenneth Kann, Charlotte Kann, Mrs. Kemp, Tim Kline, Dorothea Krause, Ruth Lane, Bertha Mattern, LeRoy Mattern, Gladys Oatman, Bertha Pearson, Margery Peterson, Margaret Peechner, Leonard Peterson, Mary Rothman, Harry Schield, Harland Wadsenski, Olive Wells, Joan Williams, Karl Williams, Mr. & Mrs. Witzel, Mr. & Mrs. Harry Zillman, Gary Zillman.

Wautoma (37): Richard Anderson, William Bose, Merwood Chipman, Mrs. Merwood Chipman, Robert Gilbert, Ralph Locke, George Peck.

Weyauwega (33): Mrs. Verne Brewster, Mrs. Emil Prah, Mrs. Clarence Radtke.



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Racine, Wisconsin



The Winter Season

By **WILLIAM L. HILSENHOFF**

Winter Season, December 1-February 28, 1967

"This has been one of the poorest birding winters in 15 years." "This is the quietest season for birds I can remember." "This has been one of the most disappointing winters I have ever seen." "Despite an excellent variety of species, individuals of most species were noticeably low in numbers." These were typical of the comments concerning the winter of 1966-67. The last comment seemed the most appropriate, because 138 species were observed during the winter season. While this was nine short of last year's record total, it was one of the highest winter totals ever recorded.

Were birds really that scarce, or did they just seem to be scarce in comparison with the record winter of 1965-66? The only quantitative records available for comparison were the Christmas Bird Counts, and, surprisingly, these showed that most species were more abundant in 1966. The 55 most common species on the 1965 and 1966 Christmas Counts were compared, and in spite of 78 fewer observers on 14 fewer counts, in 64% of these species more individuals were seen in 1966. In a comparison of the number of individuals per count, 73% of the species were more common in 1966.

What, then, was the basis for the above comments? Did the numbers of most species decline rapidly in January and February because of adverse weather conditions? Or was it because the commonly observed species that frequent feeders were down in numbers? A perusal of the weather records and the Christmas Bird Counts suggested that both factors could have been the basis for comments about bird scarcity, but the evidence was certainly not conclusive.

The weather through December was nearly ideal for producing a good Christmas Count. Temperatures in November were near normal in the north and slightly above normal in the south, and normal temperatures prevailed through December with no prolonged or intense periods of cold. The first snow (2-5 inches) blanketed the state December

19, and the first major snowstorm occurred December 27-28, with 6 to 12 inches falling in most areas. With no severe cold to drive birds south, and with a snow cover to concentrate birds at roadsides, feeders, and open water, conditions were excellent for a good Christmas Bird Count.

In January there were wide fluctuations in temperature and heavy precipitation over much of the state, with temperatures slightly above normal for the month as a whole. There were no prolonged cold spells, but the temperature on several occasions plunged well below zero, reaching -45° in the northwest on the 18th of the month. These extremely cold temperatures, although of short duration, could have induced birds to depart. The heavy snow may also have caused many birds to fly south or perish, giving rise to comments on the scarcity of birds. A "January thaw" on the 24th produced temperatures near 60°F in the extreme south, and on that date several tornadoes were reported in the east and south, the first ever reported in January.

February was slightly colder than normal, and precipitation was near normal. Snow covered the state through the entire month, with depths averaging 4 inches in the south to 4 feet in some areas of the north. The winter as a whole could perhaps be summarized as one with wide temperature fluctuations, with no prolonged cold spells or thaws, and a blanket of snow that remained from December 19 through February, although it occasionally was very thin in the south.

Also, there was evidence from the Christmas Counts that several of the species that frequent bird feeders were less common. Heading this list were most of the winter finches. Evening Grosbeaks, Purple Finches, and Pine Siskins were much less common, and after a tremendous invasion the previous year, Common Redpolls and Pine Grosbeaks were almost entirely absent. Of the finches, only the American Goldfinch remained common, and it was unusually common throughout the state. Numbers of Blue Jays and Red-headed Woodpeckers were down, probably due to a failure of the acorn crop, and Red-breasted Nuthatches and Black-capped Chickadees were also less common. But other woodpeckers, White breasted Nuthatches, Tufted Titmice, blackbirds, Cardinals, Tree Sparrows, juncos, and Song Sparrows were all more common on the 1966 Christmas Counts.

Highlighting the winter season were many rarities. There were several unusual records from the Christmas Counts, the most unusual being a Barrow's Goldeneye at Milwaukee, a Northern Three-toed Woodpecker at Hiles (See "By the Wayside"), a Phoebe at Green Bay, a Peregrine Falcon at Beetown, a Virginia Rail at Waukesha, a Varied Thrush at Milwaukee, Baltimore Orioles at Stevens Point and Wautoma, and a Harris' Sparrow at Cornelia.

After the Christmas Count period, there were several other unusual discoveries. A second Barrow's Goldeneye was discovered at Port Washington. It, and a Harlequin Duck that was sighted there earlier, remained throughout the winter. A white Gyrfalcon was seen in Trempealeau County (See "By the Wayside"). Daryl Tessen made two spectacular gull discoveries in late February, an Iceland Gull and a Little Gull, both at Port Washington (See "By the Wayside"). In Milwaukee the Varied Thrush and a Hermit Thrush stayed the entire winter.

The winter of 1966-67 can perhaps be best characterized as a rela-

tively normal winter as far as weather and birds were concerned. There were no spectacular invasions of any species from the north. Numbers of most of the northern birds, and especially the winter finches, were abnormally low, exceptions being the Snowy Owl, Northern Shrike, Bohemian Waxwing, and Red Crossbill. Many species that normally migrate south remained in significant numbers at least through December. One of the Highlights of the winter was the abundance of many of the blackbird family. And although several persons found birds to be "scarce", there were a sufficient number of rarities all winter to make it an exciting winter for many observers.

The Season Summary

Common Loon: One was observed December 9 on Devil's Lake, Sauk Co. (K. Lange).

Horned Grebe: Reported only on the Hales Corners Christmas Count.

Pied-billed Grebe: After being reported on Christmas Counts in Appleton, Fife Lake, Lake Geneva, and Waukesha, the only one that wintered was in Price Co. (Alice Vincent). This is an unusual record for a northern county.

Great Blue Heron: The only sightings were on the Christmas Counts at Adams and Fountain City.

Canada Goose: After being found in 12 areas during the Christmas Count period, wintering birds were recorded only in Brown Co. (E. Paulson & E. Cleary) and Ozaukee Co. (D. Tessen & L. Erickson).

Snow Goose: Wintered in Brown Co. (Paulson & Cleary).

Blue Goose: Found on Christmas Counts at Racine, Sturgeon Bay, and Green Bay, but reported wintering only at Green Bay (Paulson & Cleary).

Blue-Snow hybrid: A bird that was all white on the head, neck, down the front, and underneath, and dark on the wings and back spent the winter in Racine Co. (E. Prins).

Mallard: Wintered where there was open water from St. Croix Co. to Marinette Co. and south, being most common in the south.

Black Duck: Wintered as far north as Marinette Co. Reported from most counties in the southern half of the state.

Gadwall: At least 19 birds wintered in Dane Co. (W. Hilsenhoff), and one that probably wintered in Ozaukee Co. was seen February 8-20 (Erickson). This species remained in Waukesha Co. until Dec. 25 (J. Bielefeldt) and in Milwaukee Co. until Dec. 17 (D. Gustafson).

Pintail: After being found during the Christmas season in 6 counties, the only report of a wintering bird was from Winnebago Co. (Tessen). One remained in Waukesha Co. until Jan. 22 (Bielefeldt).

Green-winged Teal: One was reported on the Stevens Point Christmas Count. Three birds that apparently wintered were present in Dane Co. from Feb. 18 to the end of the report period (Hilsenhoff).

Blue-winged Teal: Reported only from Waukesha Co. Dec. 17-26 (Bielefeldt).

American Widgeon: Found on Christmas Counts at Appleton, Hales Corners, LaCrosse, Madison, and Oconomowoc, but not seen after Jan. 1.

Shoveler: Reported only from the Madison, Manitowoc, and Oconomowoc Christmas Counts.

Wood Duck: Found on Christmas Counts at Madison, Oconomowoc, and Racine. The one at Racine wintered.

Redhead: Two were found in Winnebago Co. Feb. 24 (Tessen), and one in Ozaukee Co. Feb. 18 (Tessen). Seen on Christmas Counts in Cedarburg, Oconomowoc, and Two Rivers.

Ring-necked Duck: Found on Christmas Counts at Appleton, Lake Geneva, and Madison. One was seen at Madison Jan. 28 and may have wintered (Hilsenhoff), and two birds that probably wintered were found Feb. 20 in Ozaukee Co. (Erickson, Donald).

Canvasback: Wintered in Milwaukee Co. (Donald) and Ozaukee Co. (Tessen), and until Jan. 25 in Waukesha Co. (Bielefeldt).

Greater Scaup Duck: Wintering birds were reported only from Milwaukee Co. (Donald), where 7575 were found on the Christmas Count. Found also on Christmas Counts at Cedarburg, Hales Corners, Manitowoc, and Madison.

Lesser Scaup Duck: Six wintered in Winnebago Co. (Tessen). Also found on Christmas Counts at Lake Geneva, Oconomowoc, Racine, and Sturgeon Bay.

Common Goldeneye: The most common winter duck. Reported as wintering in almost every county, including those in the far north.

Barrow's Goldeneye: After one was carefully identified on the Milwaukee Christmas County (L. Johnson), another (or possibly the same bird) was sighted at Port Washington, Ozaukee Co. on Jan. 28 (E. Peartree). This latter bird remained through February and was seen by several reliable observers. A specimen of this species has never been collected in Wisconsin, and there are only two or three previous reliable sight records.

Bufflehead: Seen on several Christmas Counts as far north as Bayfield, but reported wintering only in Outagamie (Tessen), Milwaukee (Donald) and Racine (Erickson) Counties.

Harlequin Duck: This rare species remained in Ozaukee Co. after Dec. 20 (Donald) and was seen by many observers.

Oldsquaw: Found on several Christmas Counts along Lake Michigan, where this species commonly winters. Seen on one inland Christmas Count (Lake Geneva). Wintering birds were also found in Lake Superior Feb. 20 (B. Norman). An unusual report came from Price Co. Feb. 14 (H. DeBriyn) where one with a broken wing was found on highway 182.

White-winged Scoter: Three were found in Ozaukee Co. on Feb. 18 (Tessen), with 8 being found in the same area Feb. 21 (Erickson).

Ruddy Duck: Two wintered in Waukesha Co. (Bielefeldt), and 15 wintered in Ozaukee Co. (Tessen, Erickson). This species was seen on 6 Christmas Counts.

Hooded Merganser: Wintering birds were reported from Winnebago Co. (Tessen), LaCrosse Co. (F. Leshner), and Milwaukee Co. (Donald).

Common Merganser: Reported wintering only in Marinette, Winnebago, LaCrosse, Milwaukee, and Racine Counties.

Red-breasted Merganser: After being seen on 9 Christmas Counts, wintering birds were reported only from Milwaukee and Racine Counties. On Feb. 17, 247 were counted in Racine Co. (Erickson).

Goshawk: This species was not very common this winter. During the Christmas season there were sightings at Shiocton, Stevens Point, Madison, Manitowoc, and Wausau. The bird at Madison remained on Picnic Point all winter (R. Sandburg). Additional sightings were from Outagamie Co. Dec. 18 (A. Bradford), Milwaukee Co. Jan. 13-20 (E. Strehlow), and Marathon Co. Feb. 24 (J. Williams).

Sharp-shinned Hawk: After 8 reports in December, there were only two January reports and no February reports. Found in Washington Co. Jan. 20 (Ms. Maurin) and as far north as Langlade Co. during January (L. Schimmels). One was banded in Waushara Co. in late December (Mrs. Chipman).

Cooper's Hawk: Although there were sightings in 11 areas through the Christmas season, there was only one subsequent report. A bird was seen on Jan. 23 in Waukesha Co. (Bielefeldt).

Red-tailed Hawk: Reported wintering south of a line from Green Bay to LaCrosse, although some were found a little north of this line through December. Reports from the southern counties were numerous.

Red-shouldered Hawk: There were no reports after the Christmas season, when this species was seen on 7 counts and as far north as Shiocton and Two Rivers.

Rough-legged Hawk: This species was reported to have wintered in the southern two-thirds of the state, with sightings most numerous in the southern counties.

Golden Eagle: There were two reports. One bird was seen on the Chippewa Christmas Count, and another was found in Juneau Co. on Feb. 19 (Oconomowoc Bird Club).

Bald Eagle: There were reports of wintering birds as far north as Douglas, Burnett, and Lincoln Counties, and large numbers spent the winter along the Wisconsin and Mississippi Rivers where there was open water. The Christmas Counts at Beeton, Alma, Mazomanie, and Adams counted 78, 63, 42, and 24 birds respectively.

Marsh Hawk: Although seen on many Christmas Counts, there were subsequent reports from only 3 southern counties. Birds were seen in Waukesha Co. Jan. 28 (Gustafson), and Feb. 25 (E. Hoffman), Dane Co. Feb. 3 (Ashman), and throughout the period in Rock Co. (Mrs. Mahlum).

Gyr Falcon: One was sighted in Trempealeau Co. Jan. 31 (B. Klugow). See "By the Wayside".

Peregrine Falcon: Reported on the Christmas Count at Beeton.

Sparrow Hawk: Wintering birds were reported from Marinette, Brown, Portage, Outagamie, and LaCrosse Counties, and most of the counties farther south.

Ruffed Grouse: Found in all but the extreme southeastern counties.

Greater Prairie Chicken: Found on Christmas Counts at Dancy and Stevens Point, and later seen in Portage Co. on Jan. 27 (Leshner).

Sharp-tailed Grouse: Found only in Burnett Co. (Stone), and on the Port Edwards Christmas Count.

Bobwhite: Reported only from Rock, Sauk, LaCrosse, Vernon, Columbia, Dane, and Waushara Counties.

Ring-necked Pheasant: Found throughout the state in agricultural areas.

Gray Partridge: Reported from Brown, Manitowoc, Outagamie, Winnebago, Fond du Lac, Dane, Milwaukee, Racine, and Kenosha Counties.

Turkey: Eighty-five were seen on the Necedah Christmas Count.

Virginia Rail: Seen on the Waukesha Christmas Count.

American Coot: Seventy wintered in Dane Co. (Hilsenhoff), and 60 in Waukesha Co. (Bielefeldt). This species also wintered in Winnebago and Ozaukee Counties (Tessen), and in Milwaukee Co. (Donald).

Killdeer: Seen on Christmas Counts at Cornelia, Fountain City, and LaCrosse, but not thereafter.

Common Snipe: There were reports from 10 areas during the Christmas season, but the only report of wintering birds was from Rock Co. where 3 were found on the Feb. 26 "Christmas Recount" (Maxson, et al).

Glaucous Gull: There were sightings in four areas this winter. One was seen in Douglas Co. Dec. 2 (R. Bernard), one on the Bayfield Christmas Count, one in Racine Co. Feb. 2-14 (Erickson) and one in Kewaunee Co. Feb. 15 (Erickson).

Iceland Gull: This rare species was seen in Ozaukee Co. on Feb. 18 (Tessen). See "By the Wayside".

Herring Gull: Wintering birds were reported from Lake Michigan counties as far north as Marinette Co. There were also reports of birds wintering in Outagamie and Winnebago Counties.

Ring-billed Gull: Reports after the Christmas season came only from Racine Co. Feb. 2 (Erickson) and Milwaukee Co. where this species wintered (Donald, Gustafson).

Bonaparte's Gull: The only report was from Milwaukee Co. on Dec. 10 (Gustafson).

Little Gull: One was carefully observed in Ozaukee Co. Feb. 24 (Tessen). See "By the Wayside". This is the fourth sight record for the state; a specimen has never been collected.

Common Tern: One was seen in Racine Co. on Dec. 29 (B. Fiehweg), an exceptionally late record for this species. The forked tail, black on the head, and the white crown were observed in good light.

Mourning Dove: Remained until Jan. 2 in St. Croix Co. (Robbins), and was found throughout the winter from Outagamie Co. to LaCrosse Co. and south. It was common in the southern counties.

Screech Owl: Reports from only 11 counties, the most northern reports being from Brown, Outagamie, and Buffalo Counties.

Great Horned Owl: Reports from throughout the state.

Snowy Owl: Numerous reports this winter, especially from counties bordering Lake Superior, Lake Michigan, and Lake Winnebago, but also observed in St. Croix, LaCrosse, Columbia, Barron, and Dane Counties.

Barred Owl: Reported throughout the state.

Long-eared Owl: After being sighted in 11 areas during the Christmas Count period, this species was seen Jan. 21 in LaCrosse Co. (Leshner) and wintered in Waukesha, Milwaukee, Racine, Kenosha, and Rock Counties.

Short-eared Owl: After being found on 7 Christmas Counts, it was reported to have wintered in Dane Co. (Ashman) and Racine Co. (Erickson). It was found in Milwaukee Co. Feb. 3-16 (Gustafson) and Kenosha Co. Feb. 16 (Erickson).

Saw-whet Owl: The only report was of one seen in Milwaukee during the Christmas Count period.

Belted Kingfisher: Present on several Christmas Counts, this species wintered only in Waukesha, Rock, and St. Croix Counties. There were January reports from Vernon, Sauk, Dane, and Milwaukee Counties.

Yellow-shafted Flickers: After being seen on 14 Christmas Counts in the southern half of the state, later reports came only from Racine Co. Feb. 11 (G. Baker), Dane Co. Jan. 29 (Ashman), and Vernon Co. where it wintered (V. Weber).

Pileated Woodpecker: Noted everywhere except in the extreme southeastern counties.

Red-bellied Woodpecker: Wintered as far north as Washburn Co. (B. Bailey) and found in Douglas Co. Dec. 11-21 (B. Norman et al). Common in the southern and western counties.

Red-headed Woodpecker: Reports of wintering birds were limited to Brown, Outagamie, Vernon, Dane, Waukesha, Racine, and Kenosha Counties.

Yellow-bellied Sapsucker: After occurring on the Madison, Fond du Lac, and Cornelia Christmas Counts, there were two unusual late winter records. Most unusual was a bird that wintered in Langlade Co. (Mrs. Drozdik). One was also present in Brown Co. Jan. 18-28 (Fr. Wierzbicki).

Black-backed Three-toed Woodpecker: The only report was from Douglas Co. Jan. 20 to Feb. 11 (Bernard).

Northern Three-toed Woodpecker: One was seen on the Hiles Christmas Count, Forest Co. (Soulén). See "By the Wayside."

Eastern Phoebe: One remained in Brown Co. from Dec. 17 to Jan. 6 (E. Paulson), and was seen on the Green Bay Christmas Count. This is an exceptional record.

Horned Lark: This species apparently wintered this year in all but the most northern counties, and was unusually common in the southern counties. Migrants were reported in Marinette Co. Feb. 18 (Lindberg) and Burnett Co. Feb. 28 (Stone).

Gray Jay: Reported on 4 northern Christmas Counts, and after that only from Price Co. (Vincent).

Common Raven: Present throughout the winter in the northern counties, and reported south to Chippewa and Marathon Counties on the Christmas Counts.

Common Crow: Some wintered even in the northernmost counties.

Boreal Chickadee: Found in 7 northern counties; Forest, Langlade, Lincoln, Oneida, Sawyer, Barron, and St. Croix. The one in St. Croix Co. Dec. 29 (Robbins) was a new record for that county.

Tufted Titmouse: An unusual report of a wintering bird came from Langlade Co. (Mrs. Rudy). Others wintered in St. Croix Co. (Robbins) and Brown Co. (Paulson & Cleary). There were numerous reports of wintering birds in the southern counties.

Red-breasted Nuthatch: Fairly common throughout the entire state.

Brown Creeper: Found throughout the state on Christmas Counts; wintering reports came from only as far north as Outagamie Co. (Tessen).

Winter Wren: The only records were from Ellsworth, Green Bay, and Lake Geneva on Christmas Counts.

Carolina Wren: One was found Dec. 22 in Sauk Co. (K. Lange). Another appeared at the home of W. L. Gantenbein in Polk Co. for the second consecutive winter and was still present Jan. 14.

Mockingbird: One was found on the Madison Christmas Count. The same bird, perhaps, was found in Dane Co. Jan. 5 (Ashman).

Catbird: There were four reports. One remained in Brown Co. until Jan. 6 (Paulson) and another in Kenosha Co. until Jan. 2 (Erickson, Madsen). A third was seen in Racine Co. Dec. 19 (Erickson), and the fourth in Outagamie Co. Dec. 3-16 (Bradford).

Brown Thrasher: This species wintered in Langlade Co. (Drozdik) and Waukesha Co. (Mrs. Nelson), and remained through January in Outagamie Co. (Tessen) and Racine Co. (Garber & von Jarchow). One was seen in Douglas Co. Dec. 15 (Bernard). Others were spotted in 6 additional counties during the Christmas Count period.

Robin: Wintered in the north in Douglas (Bernard) and Langlade (Drozdik) Counties, with numerous reports from the southern half of the state.

Varied Thrush: A male appeared at the Robert Schulenberg home in Milwaukee on Dec. 2, and remained through February.

Hermit Thrush: Seen on 3 Christmas Counts, with the one in Milwaukee remaining the entire winter (Gustafson).

Golden-crowned Kinglet: Found in several of the northernmost counties during the Christmas Count period, but reported wintering only in the southern half of the state.

Ruby-crowned Kinglet: Found on the Waukesha and Oconomowoc Christmas Counts.

Bohemian Waxwing: Reported from 13 counties, the southernmost report was of a single bird in Racine Co. Jan. 5-12 (Erickson). Flocks of 50 to 100 were noted in some of the northern counties.

Cedar Waxwing: Wintered as far north as Brown and Outagamie Counties, with several reports from the southern counties. Numbers were generally low, and there was no evidence of a February migration this year.

Northern Shrike: Reported from throughout the state, but not common.

Meadowlarks: Wintered from Outagamie to Jackson County and south. A Western Meadowlark was found in St. Croix Co. Jan. 14 (Robbins).

Yellow-headed Blackbird: One was seen in LaCrosse Co. Jan. 1 (Leshner).

Red-winged Blackbird: Numerous reports from the southern half of the state, with several wintering even as far north as Douglas Co. (Bernard).

Baltimore Oriole: There were 3 very unusual winter records. One remained in Sauk Co. until mid-December (H. Kruse) and others were found on Christmas Counts in Waushara and Portage Counties.

Rusty Blackbird: Found on 8 Christmas Counts, as far north as Chippewa and St. Croix Counties, but the only later report was from Rock Co. Feb. 26 (Maxson et al).

Brewer's Blackbird: Seen on the Racine, Horicon, and Shiocton Christmas Counts, the one at Shiocton remaining through January (Tessen).

Common Grackle: Numerous reports of wintering birds, especially in the southern counties. The most northern report of a wintering bird was from Langlade Co. (Droz-dik). One stayed in Douglas Co. until Dec. 22 (Bernard) and one in St. Croix Co. until Jan. 19 (Robbins).

Brown-headed Cowbird: An unusual number of reports of wintering birds in the southern counties and as far north as Brown Co. (Paulson & Cleary). More than 500 were banded at Horicon (H. Mathiak).

Cardinal: Abundant in the south, and found as far north as Douglas, Burnett, and Marinette Counties.

Evening Grosbeak: Found throughout the northern half of the state, with only a few reports from the south in Washington, Milwaukee, and Waukesha Counties.

Purple Finch: Not especially common, but reported as wintering throughout the state.

Pine Grosbeak: There were reports from only 7 counties this year. They were found throughout the winter only in Burnett Co. (Stone) and reported as far south as Milwaukee Co. Jan. 8-Feb. 10 (Gustafson).

Common Redpoll: Found in only 14 counties during the Christmas Count period, and wintered only in Douglas (Bernard) and Lincoln (Hendrick) Counties.

Pine Siskin: Wintered throughout the state, but not very common anywhere.

Goldfinch: Wintered throughout the state in larger than normal numbers. This species was found on 83% of the Christmas Counts.

Red Crossbill: Scattered reports from 12 counties as far south as Rock, Dane, Columbia, and Sauk.

White-winged Crossbill: The only reports were of 127 in Bayfield Co. Dec. 30 (Bernard) and one in Waukesha Co. Dec. 11 (Bielefeldt).

Rufous-sided Towhee: For the fourth consecutive winter one with an injured wing wintered in Langlade Co. (Droz-dik). This species was also seen on 4 Christmas Counts.

Savannah Sparrow: There was the unusual report of this species from Milwaukee Co. Jan. 5 (Donald).

Vesper Sparrow: Observed on 4 Christmas Counts, but not thereafter. Two were seen on the Kenosha Count.

Slate-colored Junco: Wintered south of St. Croix, Marathon, and Brown Counties.

Oregon Junco: The northernmost record was from St. Croix Co. (Robbins) where one wintered. After being sighted on several Christmas Counts, this species was reported as wintering in Outagamie, Fond du Lac, Sauk, Washington, Waukesha, Milwaukee, and Rock Counties.

Tree Sparrow: Wintered from St. Croix, Marathon, and Brown Counties south.

Field Sparrow: One was found on the Mazomanie Christmas Count, and another was banded in Waushara Co. Jan. 14 (Chipman).

Harris' Sparrow: One was seen on the Cornelia Christmas Count.

White-crowned Sparrow: This species was also reported only from the Cornelia Christmas Count.

White-throated Sparrow: After being found on 7 Christmas Counts, it was reported wintering in Price County (Vincent), an exceptional record for the far north, in Kewaunee Co. (DeKramer), Outagamie Co. (Tessen, Bradford), and Dane Co. (Erickson).

Fox Sparrow: Reported from Dane, Sheboygan, and Manitowoc Counties during the Christmas Count period, but not seen thereafter.

Swamp Sparrow: There were no reports of wintering birds, although this species remained in Waukesha Co. until Jan. 23 (Bielefeldt) and Ozaukee Co. until Jan. 14 (Gustafson). It was seen on 7 Christmas Counts.

Song Sparrow: Wintering birds were found as far north as Brown (Paulson & Cleary), Outagamie (Tessen & Bradford), and Kewaunee (DeCramer) Counties. It was reported from 24 Christmas Counts in the southern half of the state.

Lapland Longspur: Reported as wintering only in Brown Co. (Paulson & Cleary). Noted on only 6 Christmas Counts.

Snow Bunting: Wintered throughout the state, but much more common in the northern half. However, there were reports of wintering birds as far south as Kenosha and Dane Counties.



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FIELD NOTES

Gyr Falcon in Trempealeau County. I saw it—yes sir!—a Gyr Falcon (white phase) on January 31, 1967 in Trempealeau County at about 10:45 A. M. This was on County Trunk "E" west of Pleasantville. There wasn't too much of a story. I noticed a small flock of pigeons flying towards a set of farm buildings and about 50 yards behind the pigeons was this white bird. The pigeons stopped at the barn, but this beautiful falcon went right on over the set of buildings heading north. I was out of the car when it went over the road about 40 feet above the ground and about 30 yards from me. The wings seemed to be pure white except for some dark tips (feather edges).—Bernard F. Klugow, Brule.

Iceland Gull: One individual was observed in the Port Washington harbor on February 18 for a period of one hour. It was in company with a small group of Herring Gulls which were feeding on a dead Oldsquaw floating in the harbor. During this time the following identification points were noted: 1. Size—similar to that of the Herring Gull. 2. Color—a uniform white with no dark markings on the wings. 3. Bill—of a markedly smaller size than that of the Glaucous Gull. This bird was observed with a 30X scope during the early afternoon.—Daryl Tessen, Arlington Heights, Illinois.

Little Gull: On February 24, while birding at the Port Washington harbor, my attention was drawn to a gull sitting on the shore by the parking lot. From time to time it would fly several feet into the air and then alight. Upon moving closer I noticed it to be very small, with all white undersides, and a black and white color pattern on the wings in the form of a "V".

During my observation I inadvertently moved close to the bird as it took flight. It circled directly overhead for several minutes where I was again able to note the aforementioned points. In addition I noted its black bill and legs. It then moved north, following the shoreline of the lake.

I felt certain that the bird I had observed was an immature Little Gull. However, there were several points that I had failed to note, especially in regard to the tail, so I decided to remain, hoping that it might return. About 15 minutes later the bird reappeared. It circled over the harbor for several minutes and then alighted on the shore near the spot where I had originally observed it. This time I noted that the bird had a rounded tail, and a black band at the end of it. In addition the aforementioned identification points were again carefully noted. This time I observed the bird for almost an hour and it was still present when I left.

Observations were made with 7 X 50 binoculars and a 30X scope. The day was clear and very cold, around 0° and windy (NW 20-25 mph). A great deal of steam was rising from the lake water. However, it in no way hampered the observations of the gull. The time was from 11:30 to 1:00.—Daryl Tessen.

Northern Three-toed Woodpecker in Nicolet National Forest. December 24, 1966, was a more comfortable day for the Hiles Christmas bird census than usual, with reasonable temperatures and in the morning, at least, calm and clear conditions. I was stopped at a favorite spot on Forest Road 2182 about 3½ miles west of the Pine River which borders a very large, open bog of small black spruce. This particular bog, one of the largest in the area, has housed some summers such species as Spruce Grouse, Connecticut Warbler, and Lincoln's Sparrow. On this bright wintry day there were the expected sounds of Gray Jays and Boreal Chickadees, but I heard also the sound of a woodpecker working over some of the trees north of the road about 50 yards ahead of me. A few moments later, the woodpecker flew across the road at about eye level, affording me a fleeting look at it broadside. This glimpse was enough to convince me that I should investigate further, however, as a yellow cap was plainly evident on the approximately Hairy-sized bird, and the black color of the wings was striking. A few moments searching the trunks of the small, rather widely spaced black spruce south of the road brought the woodpecker into view. For several minutes the bird presented to me only a side view, but with the total distance less than 40 yards, my 7 X 50 binoculars gave me in good lights a fine look at the circular shaped bright yellow cap, which extended from the topmost part of the head forward almost to the bill. The bird had very wide barred areas on both sides, with the thin black and white stripes parallel but not horizontal; rather the barring was somewhat skewed downward about midway between the wings and the breast or belly. I had perhaps 5 minutes to watch the bird rapidly scale quite a bit of bark off several spruce trees. During this period the bird remained within 5 to 6 feet of the ground, and occasionally I had brief but clear glimpses of the back, which was not the solid black of the Black-backed which I had expected to see, but rather the thinly barred black and white back of the Northern Three-toed Woodpecker.

After I had had a chance to observe the bird for a full 5 minutes, it flew to the west behind or through a row of some much larger trees. I drove ahead to the other end of this row of trees and parked, in hopes of another look. I was pleasantly surprised to find the woodpecker working on a somewhat isolated larger black spruce less than 20 yards straight south of the road, virtually free from any other trees which might block my view. The bird spent a great deal of time on this tree, taking a full 10 minutes to go from several feet off the ground to a height of at least 15 feet. I was able to see well a number of times the barring on the back and also some more subtle aspects of its plumage, as the light was excellent. There appeared to be white spots at the tips of several of the primaries. Although the tail was entirely black, it seemed at times that there were 1 or 2 white nicks at the edge. (Not all paintings of this species which I have seen are in agreement on this point, but I think there probably is variation which depends on the amount of white on various

feathers at the edge of the tail and the extent to which this white is revealed to the observer.) There was an irregular shaped mottled area, the lower edge of which was at the nape, just above the barring of the back. This area consisted of two thin oval shaped areas which extended up either side of the back of the head, diverging somewhat as they went up from the nape. A further point which I noticed was that the face pattern was not all a clean black and white; some areas presented a mottled appearance when seen under particularly good conditions.—Tom Soulen, St. Paul, Minnesota.



ANNUAL BUSINESS MEETING 1967

Wisconsin Society for Ornithology

LaCrosse, Wis. May 20

The meeting was called to order at 4:10 p. m. by President Frederick Hamerstrom with about eighty members present. Minutes of the previous Annual Meeting were approved as printed in the **Passenger Pigeon**. **TREASURER**—Mrs. Holz gave the annual financial report with the balance sheet as follows:

Assets		Liabilities	
Cash on hand	\$ 3,612.44	General Fund	\$ 452.33
Steenbock Savings	1,046.16	Outside Contributions	
Steenbock Scholarships ..	700.00	Fund	100.00
Steenbock Publications ..	905.13	Convention Fund	48.77
General Savings, H. C. ...	3,954.04	Endowment Fund	2,000.00
U. S. Treasury Note	4,960.26	Education Fund	80.51
Bookstore Inventory	5,691.60	Prairie Chicken Fund	201.13
Books Trailer	280.10	Research Fund	50.00
Addressograph	181.41	Publication Fund	176.80
Mimeograph	250.00	Conservation Fund	76.66
Land Values	11,891.39	Chiwaukee Prairie Fund	880.50
	<hr/>	WSO NET WORTH	27,860.09
	\$33,472.53	Net Gain to date	1,545.74
			<hr/>
			\$33,472.53

She explained the methods used and the reason thereof and her report was accepted with appreciation for her painstaking work.

1st VICE-PRESIDENT—George Becker announced that the 1968 Convention will be held in Green Bay; he spoke of the 1969 Convention and voiced the hope that it might be held in the northern part of the state. As Chairman of the Steenbock Scholarship Committee he said this summer's Award would go to Harry W. Pelzl who will make a study of the breeding bird populations of the Green Bay Islands.

2nd VICE-PRESEIDENT—Howard Young was not in the room, out keeping the well-managed program running smoothly, no doubt.

EDITOR—PASSENGER PIGEON—Nils Dahlstrand expressed his appreciation of the work of his co-editors; the publication is now coming out on schedule, there is a good variety of manuscript on hand and the cost of the four issues of the year was \$2,002.00, expense (miscellaneous) was \$43.85. The thanks of the Society go out full measure to his work and there is sincere regret that he is not going to continue.

EDITOR—BADGER BIRDER—Mary Donald thanked those who send in the news, Mr. Hall for furnishing the stencil, the Oconomowoc Bird Club for mimeographing and folding the bulletin and Norma Schmidt who does the addressing and mailing. Just over 1,000 copies are sent out each month, no small task but one greatly appreciated and a very important service to the members of the Society.

* * * * *

At this point Carla Kruse reported on the 4-H Project, a new service this year to the young Conservationists of the State, under her direction. All 4-H contestants in this field were given Junior memberships in the Society, field cards and check lists. County winners were awarded Bird Guides and the State winner, Terry Glanzman of Mondovi was awarded a pair of binoculars—he has also won national honors in the area of Forestry and Conservation. This was set up as a trial two-year program and has received much favorable comment.

* * * * *

PUBLICATIONS—Mr. Holz said that a proposed series of educational pamphlets, while having much merit, ran into difficulties in the way of duplication and distribution and had been shelved; he spoke of the importance of scientific findings and the need for their publication as one of the prime obligations of his committee. Another problem is the updating of the proper guide, **Favorite Bird Haunts**, and he asked for suggestions as to how this can best be done. He said that another project now in process of completion is the publishing of a membership list and, (a cheering and refreshing note), says that he has funds on hand to cover this expense.

As Chairman of the Awards Committee he announced that the Honorary Life Membership which is awarded for superior and outstanding work in the field of Ornithology had been bestowed by the Board of Directors on Dr. John D. Emlen. This Award must be approved by the vote of the membership and such approval was unanimously given. As to the recipients of the Silver Pigeon Awards, that would be divulged at the dinner. . . .

BOOKSTORE—Harold Kruse reported \$7222.50 in sales, expenses of \$5775.69, leaving a profit of \$1446.81. He has turned \$1727.00 over to the Treasury during the past year. He has been promised some relief in the infinite amount of work involved as Mark and Marilyn Hanson have volunteered to assist with the book work and will also aid in preparing a new catalog that, hopefully, will be out this year—no promises!!!

Visiting the bookstore is an interesting experience and visitors are welcome; however it would be well to let the Kruses know when you plan to come so some one will be sure to be on hand to help you.

HONEYCREEK—All is well there; a start has been made in building the Stanley Polacheck Trail which will lead through the field and the bog, cross the creek and enter the bluff area. Varying ecological communities are sure to offer something of interest in many different fields of study.

EDUCATION—Mrs. Hussong said that the WSO Bird Slide programs had been used by nine different groups including a showing at the Convention of State Garden Clubs.

Numerous letters from state residents asking about birding and birding spots have been answered and she has sent out publicity folders, pamphlets and other helpful material in answer to requests for information.

FIELD TRIPS—Edward Peartree announced that the annual Walk up the Valley at Honey Creek would be on May 28th and that Honey Creek would also be the Mecca for campers at the Annual Spring Campout—June 16-17-18.

CONSERVATION—Fred Baumgartner thanked several co-workers who, he said, had been very helpful—the major effort this year has been directed toward the setting aside of Federal areas for wilderness preservation and recreation. He and others have written regularly to Wisconsin Congressmen and to Chairmen of Congressional Committees urging the preservation of outstanding areas for limited public use. He has attended meetings of Conservation groups and has attempted to convey the point of view of people interest in the protection of bird life and in the development of habitat for wild life in general. He and Mrs. Baumgartner visited the property recently offered to WSO and following his report a motion by Judge Simpson recommended further investigation by the Board of Directors and authorized them to move as they think best—this was seconded by Dr. Kemper and carried.

RESEARCH—Fran Hamerstrom reported poor results in the Sandhill Crane study but the Cormorant Study has been completed and is in the press. The Osprey Study will proceed under the direction of Charles Sindelar; this has been underwritten by WSO to the extent of \$500.00. Any assistance in this or other Research projects will be sincerely appreciated.

MEMBERSHIP—Mrs. Mattern listed the membership at 906—a total of 1098 persons; of these 93 are new members, there have been 19 cancellations and 118 remain unpaid.

PUBLICITY—Charles Kemper said that he had been busy but had no report.

ENDOWMENT and ADVERTISING—Carl Hayssen, who recently took on this assignment, said that he had thanked the Pugh Oil Co. for advertising in the **Pigeon** and he asked for information as to possible advertisers.

LEGAL COUNSEL—Lowell Hall gave approval of the manner in which affairs have been carried on by the Board of Directors and said there were no legal problems.

OLD BUSINESS—None.

NEW BUSINESS—Rev. Sam Robbins announced the appointment of Irma Chipman as seasonal editor (spring) replacing Tom Soulen who has left the state. Asking for continued cooperation he said that the Wisconsin Christmas Count was one of the highest in the nation and while more summer counts were made than in any other state still there is need of information from many counties where little or nothing has been recorded. These notes do double service, being used in both state and national records.

Louise Erickson told of hearing Chandler Robbins say, last year, that he had never seen as large and comprehensive a bookstore display at any Convention that he had ever attended. She asked if there would be more information to be distributed to youth and welcomed suggestions. A letter from Alfred E. Krampert, Chairman of the Chiwaukee Prairie Committee, was read; he expressed appreciation for the effort WSO has made both in contributions and in bringing the need and value of this project before the public. He said that visitors were welcome at any time and they hope for our continued cooperation.

Edward Peartree, Chairman of the Nominating Committee (other members were Drs. Young and Kemper) presented the following slate of officers for the coming year: President, George Becker; Vice-President, David Cox; Treasurer, Phyllis Holz; Secretary, Hazel Cox; and Editor, Charles Kemper. There were no nominations from the floor and the Secretary was instructed to cast a unanimous ballot for said slate. This was done and Dr. Hamerstrom, thanking all who had helped throughout the year made special mention of those whose names never come before the public but whose contributions are so vital to the smooth operation of the society. He mentioned Lucy Gauerke, File-keeper; Jim and Edna Fuller, who do the mimeographing of the **Badger Birder**; the S. Paul Jones Bird Club which has assumed responsibility for folding and stapling it; and Norma Schmidt, who does the addressing and mailing.

Dr. Becker, taking over, expressed humility and asked for continued cooperation.

A vote of thanks to the University of Wisconsin-LaCrosse for the use of their facilities and excellent service and to the local committee under the direction of Dr. Young for the well-organized and smoothly-operating Convention was unanimously approved.

A rising vote of thanks to the retiring editor, Nils Dahlstrand, was a feeble attempt to express the gratitude and appreciation of the Society for his untiring and successful effort in bringing the **Passenger Pigeon** up to date and maintaining its high quality.

With Harold Kruse announcing that the bookstore would be closing very shortly and would not be open following the dinner as has been customary, the meeting was adjourned at 5:15 P. M.

Respectfully submitted,
Hazel H. Cox, Secretary

W. S. O. OFFICERS & COMMITTEES—1967-68

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Handles orders for books, stationery, etc. Catalog available.
10% discount to WSO members for ornithological supplies.

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