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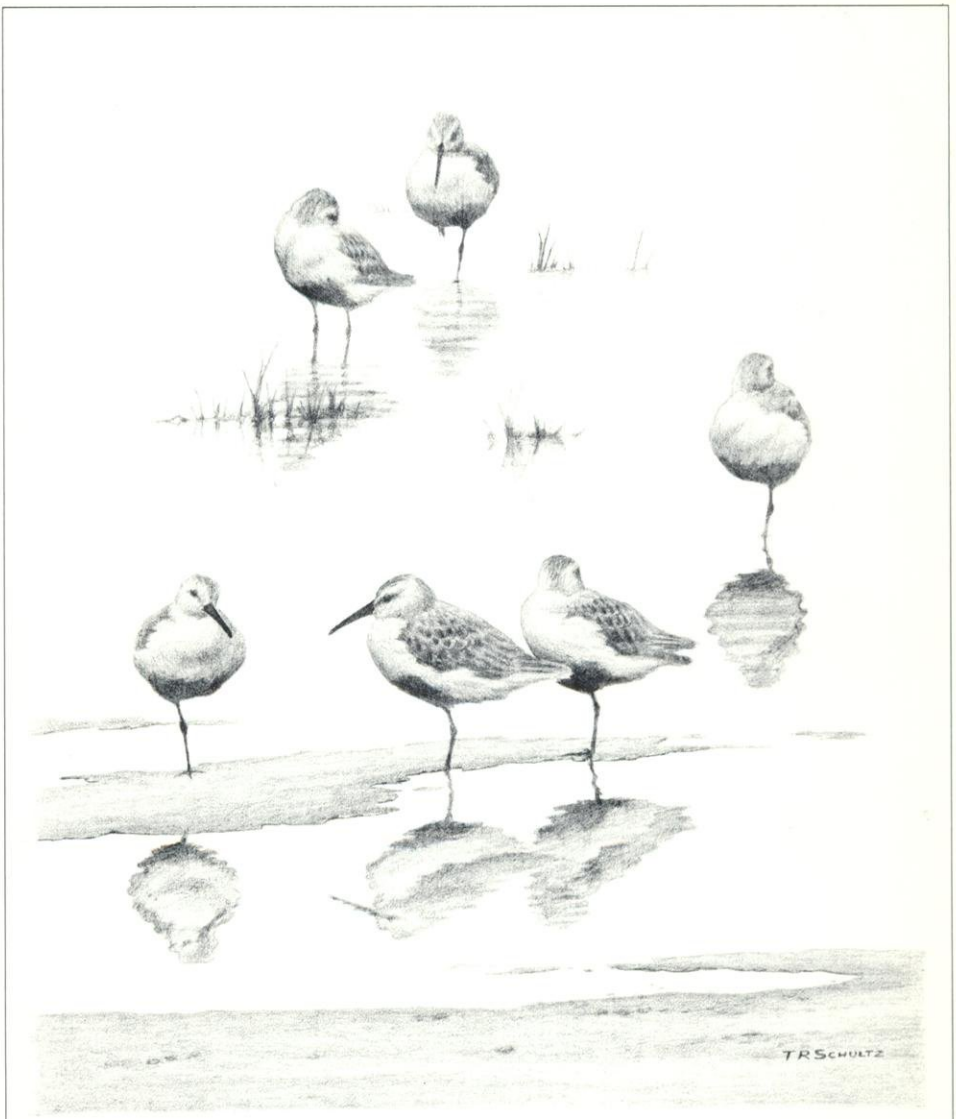

THE PASSENGER PIGEON Vol. 50 No. 3 Fall 1988

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Send all manuscripts and correspondence to the Editor; information for "Seasonal Field-notes" should be sent to the Associate Editor or the appropriate Field-note Compiler. Manuscripts that deal with information on birds in the State of Wisconsin, with ornithological topics of interest to WSO members, or with activities of the WSO will be considered for publication. All manuscripts submitted for possible publication should be typewritten, double-spaced, and on only one side of page-numbered typing paper. Illustrations should be submitted as photographs or good-quality drawings. Keep in mind that illustrations must remain legible when reduced to fit on a journal page. All English and scientific names of birds mentioned in manuscripts should follow *The A.O.U. Checklist of North American Birds (6th Edition)*. Use issues after Vol. 50, No. 1, 1988, as a general guide to style.

Fowl, Falcons, and Our Future

As I write, Wisconsin is midway through one of the hottest and driest summers on record; by the time you read this message, perhaps fall rains will have reduced the drought and heat to just a bad memory. Our field-note compilers should be able to document effects the summer has had upon Wisconsin birdlife, if observers will submit their field notes for the seasonal summary. Many of you must have anecdotes from this record-setting season: robins lining-up waiting for sprinklers to be turned on, thousands of shorebirds not found on traditional late summer ponds and mudflats but gorging themselves on the benthos of what was once a shallow lake, or herons and egrets finding fishing easy in the water that remains.

The continent's duck population has been severely effected by the drought. Reproductive success was poor and even those birds that moved from drought stricken prairie-pothole regions to the "parklands" in Canada did not breed successfully. The Wisconsin Waterfowl Association wanted a complete closure of the Mississippi Flyway to hunting, while the Isaac Walton League implored the Flyway Council meeting in late July to keep the resource and its viability utmost in their decisions on the 1988 hunting season. Some of the outcomes of this meeting were a 10-day shortening of the season, reductions in bag limits, shortening of hunting hours, abandonment of the "point system," and other restrictions. This change was a compromise between the northern and southern states whose opinions on restrictions were conflicting. Indeed, even the Director of the U.S. Fish and Wildlife Service, Frank Dunkle, stated that it is important "to carry on the tradition of hunting, the opportunity to go hunting, [but] it is belt-tightening time."

Waterfowl management in the U.S. depends on the millions of dollars generated by federal and state licensing and stamp fees. But, what if the drought of 1988 is the start of a series of dry years, as in the 1930's, making further restrictions on hunting necessary. The drought of this year notwithstanding North America's waterfowl populations are already in trouble because of habitat loss, and the future of waterfowl management holds increased management costs and fewer hunting opportunities. Several hunters I know have given up the sport completely. Perhaps some of these waterfowlers will continue to enjoy waterfowl through nonconsumptive activities, such as banding and photography, but who will pay for waterfowl management programs if the numbers of hunters drop?

All conservationist, hunters and nonhunters alike, should continue to purchase duck stamps, even without expecting a "harvest" in return? As a birder, I am happy to pay my fair share for the opportunity to observe, photograph, or trap and band waterfowl. By purchasing duck stamps, we can help generate the dollars that support the U.S. Fish and Wildlife Service's waterfowl management activities each year. You can write, stating your opinions on the wa-

terfowl situation, to: Office of Migratory Bird Management, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

Shortly after our Waukesha convention this year, the DNR Bureau of Endangered Resources contacted me to ask about WSO's position on the control of Great Horned Owls to protect Peregrine Falcon chicks. Misinformation on this program seems to be rampant among the public, resulting in the mistaken impression that the entire owl population is under persecution rather than just a few threatening birds. Last winter, the Board of Directors took a neutral stand after some discussion, realizing that local owl control has been a necessary and successful part of Peregrine Falcon recovery efforts elsewhere and that it has no effect on abundant owl populations. I also informed the DNR that WSO's Board of Directors cannot speak for all of the Society's members. I would appreciate receiving your comments about WSO's position on this issue. In light of the recent successes of the Peregrine Falcon recovery effort in Wisconsin (four territorial pairs and a successful nest in Milwaukee this year), conservationists should lend responsible support to the reintroduction efforts for this magnificent bird.

Several members have written me concerning the management of our Honey Creek property. This fall WSO will receive an additional 20 acres of land for perpetual stewardship from the Wisconsin Chapter of The Nature Conservancy. Because of this transfer and concerns of members, we will draft a land-use and management plan for the entire property by the January board meeting. Vice-President Randy Hoffman will lead this effort, together with Noel Cutright and me.

One of our unsung committees has been that of historian. For years, Linda Thomas of Sayner has organized photos, clippings, and articles, but few members have sent her new materials dealing with recent activities of WSO. The Board of Directors decided that the materials she has collected should be included with our archives at the State Historical Society in Madison and that the collection of additional historical items should be overseen by the Board of Directors. Members are encouraged to send historical materials to the pertinent board member. Archived materials and, of course, *The Passenger Pigeon* will continue to chronicle our place in the history of Wisconsin ornithology. Our thanks go to Linda Thomas for her efforts in organizing these materials.

Nearing completion is a plan for the future management of WSO,including an analysis of trends in our membership and a budget. This analysis will help us project how much money will be available for research grants and scholarships and ensure that we can keep our publications at a high standard without raising our dues. This document has its birth in the budget and finance planning begun by past President Noel Cutright and past Treasurer Catherine Cleary. Highlights of the plan will be included in the next installment of this column.

John Idzikowski

President

Some Unanswered Questions About Wisconsin Birdlife

The soon-to-be-published book, Wisconsin Birdlife, *won't answer every question about birds in the state. Here's a list of 89 unanswered questions that eager researchers might want to tackle.*

by Samuel D. Robbins

In the course of preparing *Wisconsin Birdlife* for publication, I found myself treading many times on the boundaries of the known and the unknown. It seemed appropriate that I list a few of the questions which I raised in my own mind, and could not answer adequately. Some of these could well become the subject of research projects which you might wish to investigate. I will gladly share whatever information I have with investigators who wish to pursue any of these questions.

1. In the 1920s fishermen were netting loons as well as fish on Green Bay and Lake Michigan—Red-throated and Pacific, as well as Common. Is this still going on? With what frequency are the different species found?

2. What is the status of the Red-throated Loon on Lake Superior in summer?

3. Are Western, Eared and Red-necked Grebes more frequent in western Wisconsin than previous records indicate?

4. Are there discernible patterns governing the occurrences of White Pelicans in Wisconsin? How do the frequencies of occurrence compare with those of 50–100 years ago?

5. What further delineation of "plegadis" ibises can be made by available specimens, photographs, and documented sight records?

6. There used to be a late-summer influx of "white herons" following the breeding season. To what extent is this still true? Do Tricolored Herons and Cattle Egret follow similar patterns?

7. What is the relative abundance of Greater and Lesser Scaup on Lake Michigan, Lake Superior, and on inland lakes at different seasons?

8. Is there a substantial Scoter migration each fall and spring far enough offshore to be undetected by shoreline birders?

9. How regular are the Sharp-shinned Hawk, Cooper's Hawk, and Merlin in winter? Has the increase in residential winter feeding stations led to changes in winter hawk populations?

10. How numerous is the Swainson's Hawk as a migrant in western Wisconsin? Is it a summer resident?

11. Red-tailed Hawks appear to have different migration and nesting schedules in the northern and southern halves of the state. What are the schedules? To what extent does Wisconsin attract light and dark races of red-tails?

12. What is the status of the Gyrfalcon in Wisconsin? Is this species' status changing? If so, why?

13. How widespread is the Yellow Rail in summer in northern and central Wisconsin?

14. Should not marshes from Horicon south and east be investigated for Black Rails, especially at night with tape-recorded calls?

15. Has the status and population level of the King Rail changed significantly since 1950?

16. Although most fall migrant Golden Plovers chose an Atlantic coastal route, significant numbers make stops in parts of central Wisconsin between August and October. How extensive in this phenomenon?

17. Killdeer and Common Snipe are often found on Christmas bird counts. How well do they survive the winter?

18. How numerous are the various species of small "calidris" sandpipers during the various stages of the fall migration in different parts of Wisconsin?

19. How many sod farms are there in Wisconsin, and how many of them attract Buff-breasted Sandpipers in fall?

20. How extensive is the breeding range of the Wilson's Phalarope in Wisconsin? How late do the birds remain in fall?

21. In former years there were instances of sizable flocks of Red-necked Phalaropes in Green Bay and Lake Michigan far off shore. Does this still occur? Could there be Red Phalaropes among them?

22. How numerous and widespread are Glaucous, Iceland, Thayer's, and Great Black-backed Gulls in fall, winter, and spring?

23. Do Black-legged Kittiwakes migrate more regularly along the Great Lakes than is generally supposed, out of sight of land?

24. How common and regular is the Arctic Tern in Wisconsin between late April and early June? Does it migrate through Wisconsin in fall?

25. How numerous is the Yellow-billed Cuckoo in the northern half of Wisconsin? Are some of the purported records cases of mistaken identity?

26. What is the current range of the Eastern Screech-owl in Wisconsin? How has this changed since 1950?

27. To what extent is the Great Horned Owl migratory? How frequently do northern races occur?

28. How widespread are winter roosts of Long-eared Owls? When do they disperse? How extensive is spring and fall migration? How common is it as a breeding species?

29. How regular are Boreal Owls in northern Wisconsin in winter? in summer?

30. How regular are Great Gray Owls in northern Wisconsin in winter? in summer?

31. Are Whip-poor-wills increasing or decreasing, expanding or contracting their range? Why?

32. How does the present Red-bellied Woodpecker range compare with that of 1951?

33. How widespread are the Black-backed and Three-toed Woodpeckers in northern Wisconsin in winter? In summer?

34. How much change in the range

and abundance of the Pileated Woodpecker has occurred since 1941?

35. In certain spots in southern Wisconsin (Lima Bog, Yellowstone Lake, etc.) there are suspicions of summer residency of some northern forest birds (Alder and Yellow-bellied Flycatchers, Palm and Black-throated Green Warblers). True or false? What other northern species may be present?

36. How extensive is the summer range of the Acadian Flycatcher in southern and central Wisconsin?

37. What are the summer range limits of the Willow and Alder Flycatchers?

38. Are Western Kingbirds more prevalent and regular in western Wisconsin than present records indicate?

39. What happens to the ravens that move south of their usual range in October-November?

40. How many of our Blue Jays are permanent residents? Where do summer jays spend the winter? Where do winter jays spend the summer?

41. Where do summer crows spend the winter? Where do winter crows spend the summer? How extensive is their migration?

42. How extensive is migration in the Black-capped Chickadee? Are some chickadees resident, while others are migratory?

43. How extensive is migration in the Boreal Chickadee? Are some resident? Some present only in winter? What is their time schedule for breeding?

44. What is happening with Tufted Titmouse populations? Increasing? Decreasing? Why was there a serious drop in the Beloit area in the 1950s?

45. What triggers the periodic influxes of Red-breasted Nuthatches?

46. How does one explain the presence and absence of Carolina Wrens at various seasons?

47. Why were Bewick's Wrens so much in evidence before 1966,and so scarce thereafter?

48. Do winter wrens survive the winter? How widespread are they in summer?

49. P. R. Hoy noticed a decrease in Sedge Wrens because of hay harvest? To what extent is this still true? Does the trend toward earlier hay harvest have an adverse effect?

50. What is the status of the Marsh Wren in the forested counties of north central Wisconsin?

51. What patterns (if any) exist for Mockingbird records in Wisconsin?

52. How extensively do the Golden-crowned and Ruby-crowned Kinglets nest in northern Wisconsin? Nesting evidence for the Golden-crowned is lacking.

53. Is the summer range of the Blue-gray Gnatcatcher expanding or contracting? When does egg-laying and fledging occur?

54. Where do Wisconsin's Northern Shrikes come from? How even and regular is their winter distribution around the state?

55. How does one explain the serious drop in Loggerhead Shrikes? Is there evidence of a recent increase? Are more of our winter shrikes loggerheads than previous records indicate?

56. Previous commentators have referred to the Bohemian Waxwing as a strictly irregular winter visitor. Can it now be considered regular in the northern counties? To what extent do the winter movements of the Bohemian Waxwing parallel those of the Varied Thrush? Are Townsend's Solitaires showing some of the same tendencies?

57. How widespread is the White-eyed Vireo in southern Wisconsin in spring and summer? Is it a regular breeder?

58. How widespread is the Bell's Vireo in southwestern Wisconsin? Has the loss of the Trempealeau Refuge colony affected populations in nearby areas?

59. How widespread is the Solitary Vireo in northern and central Wisconsin in summer? Are there other central and southern areas, as suggested by summer observations in Waukesha and Jackson counties?

60. Is the Yellow-throated Vireo expanding its summer range in northern Wisconsin?

61. What effect has the loss of elm trees had on the Warbling Vireo?

62. How much overlap occurs in the breeding ranges of the Blue-winged and Golden-winged Warblers? How much interbreeding occurs between the two? Are sightings of Brewster's and Lawrence's Warblers increasing?

63. There are occasional summer records in the northern counties for the Tennessee, Bay-breasted, Blackpoll and Wilson's Warblers, but no sure breeding records. Do any of these breed anywhere in the state?

64. How widespread and numerous is the Northern Parula as a breeding bird in northern Wisconsin? Why is it so numerous along the Bois Brule River, and so scarce elsewhere? Does it nest anywhere along the Wisconsin and Mississippi rivers in southwest Wisconsin?

65. Nesting evidence is fragmentary for several northern Wisconsin warblers: Pine, Palm, Connecticut, Magnolia, Cape May, Yellow-rumped, Black-throated Blue, Blackburnian. Undoubtedly they are regular nesters in some numbers. Can more definite evidence of nesting be secured?

66. South of Barron, Rusk and Taylor counties, such warblers as Magnolia, Blackburnian and Black-throated Green are found in summer in southwestern Wisconsin only in the Baraboo Hills in Sauk County. Are there other undiscovered locations in southern and western counties?

67. How extensive are colonies of Prothonotary Warblers in the vicinity of Stevens Point and New London? F. S. Dayton found them regularly near New London in the 1930s.

68. How extensive is the summer range of the Worm-eating and Yellow-throated Warblers in southern Wisconsin? Do they breed occasionally? Regularly?

69. How much overlap occurs in the summer ranges of the Northern and Louisiana Waterthrushes? Do they ever share the same habitat in summer?

70. How extensive are the summer ranges of the Canada and Kentucky Warblers? Do they ever overlap?

71. How many of the southern passerine oddities (Gray Catbird, Brown Thrasher, Yellow-rumped Warbler, Yellow-bellied Sapsucker, Rufous-sided Towhee, Vesper Sparrow, Field Sparrow, etc.) that show up on Christmas bird counts survive through January and February?

72. Are Cardinals continuing to spread northward? Are populations increasing within the established range?

73. Why have there been no cyclic "highs" for the Dickcissel since 1968, when for many previous years "highs" would occur at least once every six years? Have recent agricultural practices (changing land use, earlier hay harvest) adversely affected this species?

74. Are Chipping Sparrows increasing as summer residents as rapidly as Breeding Bird Survey results indicate? If so, why?

75. Are Field, Vesper and Grasshopper Sparrows decreasing as summer res-

idents as extensively as Breeding Bird Survey results indicate? If so, why?

76. How far south are LeConte's Sparrows present in summer? Are they decreasing? Are they more numerous in southern Wisconsin as autumn migrants than the records indicate?

77. Are Sharp-tailed Sparrows regular summer residents at Crex Meadows? At other locations?

78. How extensively does the Lincoln's Sparrow breed across the northern counties?

79. Do Smith's and Chestnut-collared Longspurs and Sprague's Pipits occur as migrants in Wisconsin more often than the records indicate?

80. What effect is early-June hay-cutting having on Bobolinks, Sedge Wrens, and Upland Sandpipers?

81. How serious are the declines in Eastern and Western Meadowlarks that have been noted on the Breeding Bird Survey? What are the ranges of Eastern and Western Meadowlarks in Wisconsin in winter?

82. No one has ever traced adequately the spread of the Brewer's Blackbird through Wisconsin? Is the current range static or fluid? Is it increasing as a wintering species?

83. How great is the problem of Brown-headed Cowbird parasitism? Is it great enough to warrant control measures as have been used in Michigan to combat parasitism of the Kirtland's Warbler?

84. Is there a predictable pattern that governs the frequency of irruptions of Wisconsin's irregular winter finches (Pine Grosbeak, Common and Hoary Redpolls, Red and White-winged Crossbills, Pine Siskin)?

85. To what extent do Purple Finches migrate north-south and east-west? How does one explain the highs and lows one sees on the Christmas bird count?

86. How often do the Red and White-winged Crossbills nest in any part of Wisconsin? At what times of the year? What geographic races of the Red Crossbill occur in the state?

87. How extensive is the summer range of the Evening Grosbeak in the northern counties? Are the breeding birds the same ones that are here in winter? Is the east-west migration pattern as pronounced as it was when few birds remained to spend the summer here?

88. Can any pre–1900 (or even pre–1930) records be found to indicate what northern Wisconsin birds were like at that time?

89. Where, besides at the Milwaukee Public Museum, are specimens collected by Thure and Ludwig Kumlien still to be found?

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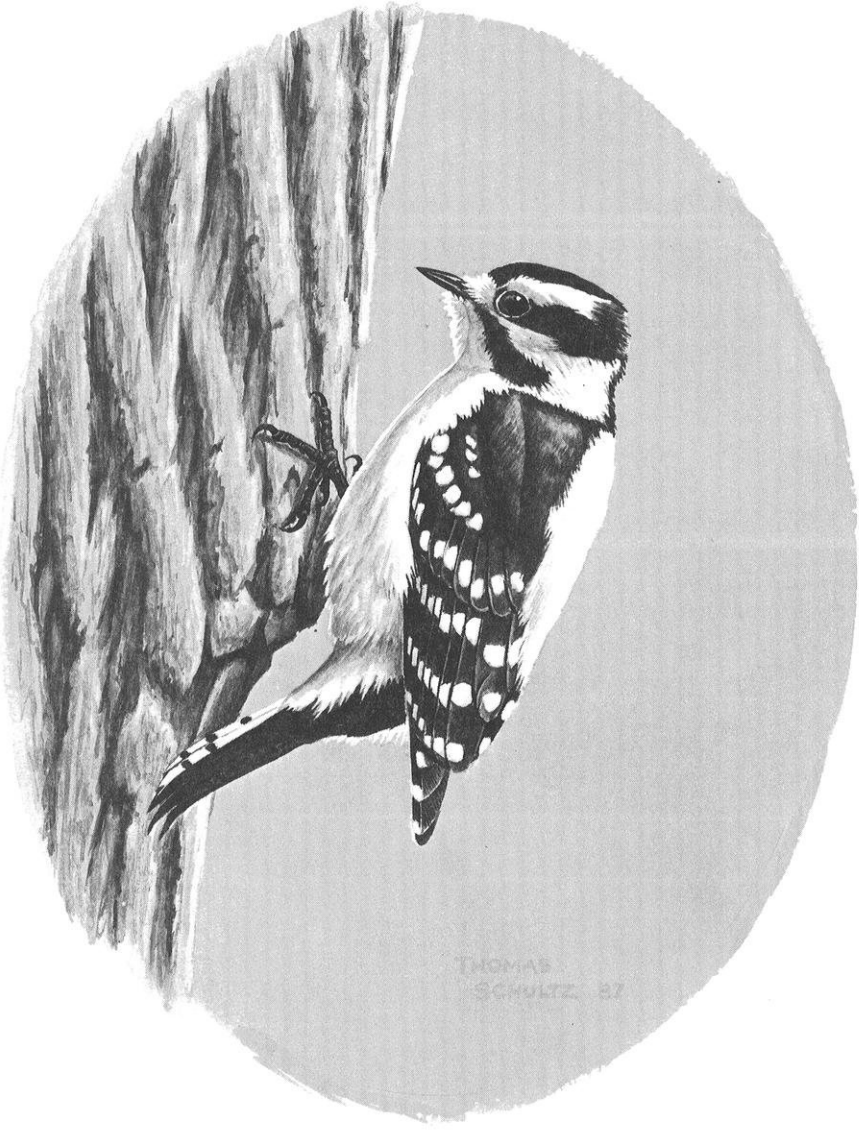

Downy Woodpecker *by Thomas R. Schultz*

Picoides "xylophonium"

Everyone acknowledges that bird songs are nature's most beautiful music, but can a woodpecker make music while tapping on a tree limb?

by Charles C. Bradley

In the early morning of April 20, 1988, my wife and I had the privilege of hearing an astonishing xylophone solo performed by a Downy Woodpecker. The word "astonishing" of course applies to us, but we would enjoy word from those more familiar with the activities of *Picoides pubescens*.

The bird was quite visible throughout the concert. It was a male. We suppose the music was directed toward some female, but if so she was too demure to show herself. The visual performance of the male was almost as interesting as his percussion effects. He flitted swiftly from branch to branch, tree to tree, getting a different burst of tone from each. There was a wide range of pitch and his selection of limbs (aspen and oak) were all wonderfully resonant. Not a dead note in the lot. I would guess the whole concert lasted about a minute or less. Each burst of tone lasted no more than a second with one to three seconds of flying or jumping time between bursts. He used some of the branches more than once, but there was no discernable repetition in the melodic line.

Some aspects of the performance invite speculative questions. Was this Downy breaking new ground? Other Downy drumming I have heard rarely went beyond repeated monotonal bursts from the same perch. (All too often it came complete with flying chips from our roof.) Bent (1939) records an observation where a Downy Woodpecker pecked out a tune from wooden insulator pins on a telephone pole. However, selecting from among 4–6 pins all handily lined up together seems an order of magnitude simpler than what our virtuoso did. Did he select his key board in advance? Did he have a dry run to see if he could achieve the necessary acrobatics? No bad notes. No awkward time breaks. What are the chances that the whole glorious affair was a complete accident?

Literature Cited

Bent, A. C. 1939. *Life Histories of North American Woodpeckers*. U.S. National Museum Bulletin No.174.

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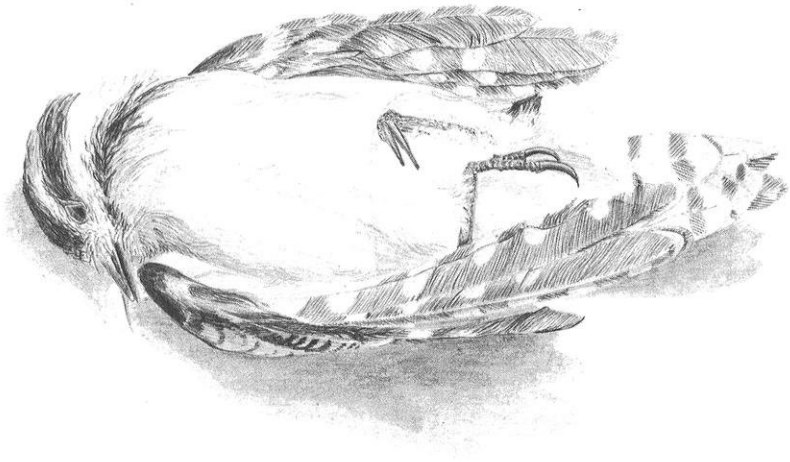

Downy Woodpecker (corpus dilicti) *by Cary Hunkel*

Avian Disease and Winter Bird Feeding

The results of a survey of WSO members revealed that four factors were associated with disease outbreaks at feeders: the species using the feeder, the number of birds using the feeder, the habitat around the feeder, and the type of feeder.

by Margaret Clark Brittingham and Stanley A. Temple

Although winter bird-feeders provide birds with a concentrated source of high-energy food during the period of the year when natural food supplies are low and energetic demands are high, there are some potential risks for birds that visit feeders. These include predation by domestic and wild predators attracted to the concentration of prey; accidents, such as flying into windows; and the spread of disease among birds concentrated at an easily contaminated food source. We report on the frequency with which mortality, apparently due to disease, occurs at feeders, and we describe factors that may affect the probability of mortality occurring at feeder-sites.

The principal disease that has been reported as a cause of mortality at bird feeders is salmonellosis (Hudson and Tudor 1957, Wilson and Macdonald 1967, Macdonald et al. 1968, Macdonald and Cornelius 1969, Locke et al. 1973, Hurvell et al. 1974, Nesbitt and White 1974, Fichtel 1978). This disease is caused by the bacteria *Salmonella* spp. and usually results in intestinal infections. Infected birds often have diarrhea and become weak, listless, dehydrated and emaciated. Fecal contamination builds up near the feeder and increases the risk of infection to other susceptible individuals (Macdonald et al. 1968, Macdonald and Cornelius 1969, Fichtel 1978, Terres 1981). Prior to death, sick individuals become extremely weak and may roost near the feeder or even within the feeder.

Other diseases which have been associated with bird feeders or crowded feeding conditions include trichomoniasis (Rosen 1961), coccidiosis (Todd and Hammond 1971), aspergillosis (Terres 1981), avian pox (Bergstrom 1952), and avian mange. Trichomoniasis is caused by a trichomonad parasite that lodges in the throats and lungs primarily of Mourning Doves (*Zenaida macroura*) and Pigeons (*Columba livia*). The disease produces sores in the throat and mouth. Infected individuals often have difficulty swallowing and become emaciated. The disease is spread at feeders when contaminated food drops from the mouth of an infected bird and is picked up by

a susceptible individual. Trichomoniasis is observed primarily in spring and summer (Rosen 1961, Greiner and Baxter 1974, Terres 1980).

Coccidiosis is caused by coccidia, an intestinal parasite. Infected individuals often have diarrhea, lose weight, become weak, and occasionally die. It is transmitted from one individual to another in food contaminated by feces (Todd and Hammond 1971).

Aspergillosis is caused by a fungus, *Aspergillus fumigatus*, that grows in damp or wet bird seed. Birds breath in the spores of the fungus while they are feeding, and the spores lodge in their lungs and air sacs causing bronchitis and pneumonia. Infected birds have trouble breathing and become weak and listless. This disease is usually fatal (Terres 1981). It is spread at feeders through the use of moldy seed.

Avian pox is caused by a virus, *Poxvirus avium*, that produces warty lesions on the feet or head of the bird. It is transmitted directly by contact between infected and susceptible individuals and indirectly from perches or other contaminated objects (Terres 1981). The spread of pox may be increased when individuals concentrate at feeders (Bergstrom 1952).

Avian mange is caused primarily by mites and results in a loss of feathers on the head or body (Keymer and Blackmore 1964, Terres 1980). It may be spread at feeders when susceptible and infected individuals feed in close proximity.

Methods

In October 1983, we mailed a questionnaire to 1,145 members of the Wisconsin Society for Ornithology (WSO). These members were distributed throughout Wisconsin and are among the State's most serious amateur ornithologists. The purposes of the questionnaire were to determine the frequency with which mortality due to disease and unknown causes was observed at feeders and to determine whether or not there were correlations between occurrences of mortality and the species of birds using the feeder, the number of birds using the feeder, the type of feeder being used, and the habitat around the feeder. We asked respondents to distinguish among mortalities due to predation, accidents (such as flying into windows), or disease and unknown causes and to report details only of occurrences of mortality due to disease and unknown causes. In analyzing survey responses, we used the following definitions: a feeder-site was one household feeding birds for at least one winter; a feeder-year was one winter of bird feeding at one feeder-site; an occurrence of mortality was at least one bird dying from causes other than predation or accidents at a feeder-site.

To determine the prevalence of mortality at feeder-sites, we calculated both the percentage of feeder-sites at which an occurrence of mortality had been observed and the frequency with which mortality had been observed (total number of occurrences of mortality/total number of feeder-years). The latter calculation gave us the number of occurrences of mortality per feeder-year. We used the same methods to calculate the prevalence of mortality among feeder-sites in different habitat types (urban, suburban, rural) and among feeder-sites with different types of feeders in use (porthole, platform, hopper, suet). If more than one type of feeder was in use, the site was counted more than once. We tested whether or not the probability

of observing an occurrence of mortality was higher for feeder-sites in a particular habitat type and for sites with a specific type of feeder in use.

Respondents reported the approximate number of individuals of each species using the feeder on a typical winter day in 1 of 3 categories: 0, 1–20, >20. To make comparisons, we assigned a value of 0 if the number was reported as 0, a value of 10 individuals if the number was reported as 1–20, and a value of 30 if the number was reported as >20, a method described by Wonnacott and Wonnacott (1977). For each feeder-site, we calculated the number of individuals using the feeder and the number of species using the feeder. We tested whether or not the probability of observing an occurrence of mortality was dependent on the number of species present and the number of individuals present.

We tallied the number of occurrences of mortality in which each species was reported dead or dying. For many occurrences of mortality, more than one species was involved. We compared the frequency of occurrences of mortality for individual species, and we tested whether the probability of observing an occurrence of mortality was dependent on the presence of any particular species at the feeder-site.

Results and Discussion

A total of 624 WSO members responded to the questionnaire, a 54% response rate. As a group, these members had been feeding birds for a total of 7,202 feeder-years. We had no follow-up mailings, so we have no information on the non-respondent population. On average, 20% of all households in the United States feed birds during the winter (DeGraaf and Payne 1975). A survey of Wisconsin residents found that 34% of the households in the state regularly feed birds (Cary 1985). From our results, a minimum of 54% of the WSO members fed birds, a percentage well above both the national average and the average for Wisconsin. Therefore, we suspect that many of the members, not responding to our questionnaire, failed to respond because they did not feed birds.

Prevalence of Mortality.—Ninety-eight (16%) of the 624 feeder-sites experienced at least 1 occurrence of mortality due to disease or unknown causes (Table 1). Although most (64%) of the feeder-sites with a history of mortality had experienced only 1 occurrence, 36% of the sites had experienced recurring problems, and 12% had >10 occurrences.

Mortalities due to disease and unknown causes were detected 335 times in 7,202 feeder-years (Table 1). On the average, therefore, there had been one occurrence of mortality for every 21.5 feeder-years. This is probably a low estimate of the actual prevalence of such mortality at feeders. Many birds die and are not detected. Other birds, weakened by disease, starvation or hypothermia, are taken by predators. The deaths of the former go unnoticed, and deaths of the latter are attributed to predation.

Although the probability of any particular feeder-site experiencing an occurrence of mortality due to causes other than predation or accidents is relatively low, the probability of an occurrence within any geographic area may be quite high, depending on the density of feeders in the area. For example, Milwaukee, Wisconsin, had a 1972 population of 442,804 households, and 19.4% of those households regularly fed birds (DeGraaf and Payne 1975). During the winter of

Table 1. Percentage of feeder-sites with reported mortalities and frequency of mortalities at feeder-sites in 3 habitat types in Wisconsin.

Habitat surrounding feeder-site	Number of feeder-sites	Feeder-sites with mortalities[1]	Number of feeder-years	Occurrences of mortality per 1000 feeder-years[2]
Urban	107	18%	1399	24
Suburban	230	19%	2741	50
Rural	270	13%	3017	53
Not reported[3]	17	12%	45	44

[1]Differences were not significant ($x^2 = 3.84$, $P < 0.10$).
[2]Differences were significant ($x^2 = 19.6$, $P < 0.01$).
[3]This group was not included in statistical tests.

1972, birds in Milwaukee were, therefore, exposed to 85,904 feeder-years. If an occurrence of mortality happened once in every 21.5 feeder-years, we would have expected 3,995 occurrences of mortality at feeder-sites in the Milwaukee area during the winter of 1972.

Factors Affecting Mortality.—The number of species using a feeder was higher ($t = 2.11$, $P < 0.05$) at feeder-sites which had experienced an occurrence of mortality (13.9 ± 0.37 SE) than at those which had never experienced an occurrence of mortality (13.0 ± 0.18 SE). The number of individuals using a feeder was also greater ($t = 2.54$, $P < 0.05$) at feeder-sites which had experienced an occurrence of mortality (175.8 ± 6.17 SE) than those which had never experienced an occurrence of mortality (158.3 ± 2.74 SE).

This association could be due simply to chance. As the number of birds using the feeder increases, the probability of detecting birds that die also increases. However, as the number of birds increases, the probability of disease spread by contact between infected and susceptible individuals also increases. In addition, fecal contamination of food, the primary way in which many pathogens are transmitted, increases. Crowded feeding conditions have been implicated in outbreaks of salmonellosis (Hudson and Tudor 1957, Macdonald et al. 1968, Wilson and Macdonald 1967), coccidiosis (Todd and Hammond 1971), trichomoniasis (Rosen 1961), and avian pox (Bergstrom 1952).

There were no differences between habitats in the proportions of feeder-sites at which mortality had occurred (Table 1). There was, however, a difference in the frequency with which occurrences of mortality were reported (Table 1). The frequency of observed mortality was lowest at feeder-sites in urban areas and highest at feeder-sites in rural areas. These differences may have resulted from differences in the numbers of individuals and species using the feeder-sites in the 3 habitat groups. Both the number of individuals and the number of species were lowest at feeder-sites in urban areas and highest at feeder-sites in rural areas (Table 2).

The identities of the species found dead or dying were known for 289 of the 335 occurrences of mortality (Table 3). The House Sparrow (*Passer domesticus*) was the species most frequently involved. House sparrows were 7 times more likely to be found dead or dying

Table 2. Numbers of individual birds and numbers of species using feeder-sites in 3 habitat types in Wisconsin.

Habitat surrounding feeder-site	Average number of birds using feeder-site[1]	Average number of species using feeder-site[2]
Urban	144.1	11.9
Suburban	157.8	13.3
Rural	171.5	13.6

[1]Differences were significant ($F = 7.99$, $P < 0.01$).
[2]Differences were significant ($F = 6.48$, $P < 0.01$).

than the next most frequently involved species, the American Goldfinch (*Spinus tristis*), and at least 10 times more likely to be involved than any other species (Table 3). Five species were associated positively with the probability of an occurrence of mortality at feeder-sites (Table 4). Feeder-sites at which these species were present experienced mortality significantly more often than feeder-sites at which these species were absent.

Most of the species found dead or dying and all of the species associated with an increased risk of mortality at feeder-sites are gregarious during the winter. They roost and feed in large flocks, a behavior which could increase the probability of pathogens being transmitted from an infected individual to a susceptible one. When an infected individual visits a feeder-site, individuals from other non-gregarious species may become infected. Other researchers have noted that gregarious species are most frequently the victims of disease outbreaks at feeders (Hudson and Tudor 1957, Wilson and Macdonald 1967, Macdonald and Cornelius 1969, Taylor 1969, Todd and Hammond 1971, and Locke et al. 1973). It is not known if individuals of these species are more susceptible to certain pathogens or if the increased infection rate is due merely to an increased spread of disease resulting from their gregarious habits.

Only 1 species, the Tufted Titmouse (*Parus bicolor*), was associated negatively with the probability of an occurrence of mortality at a feeder-site. Feeder-sites at which this species was present experi-

Table 3. Frequency of mortality among species reported dead or dying at winter bird feeders in Wisconsin.

Species	Number of mortalities	Mortalities per 1000 feeder-years
House Sparrow[1]	222	37.0
American Goldfinch[1]	33	5.1
Dark-eyed Junco[1]	21	3.2
Mourning Dove[1]	20	3.7
Evening Grosbeak[1]	12	3.3
Common Grackle	10	2.4
Common Redpoll[1]	6	1.7
Purple Finch[1]	4	0.8
Pine Siskin[1]	3	0.7
Others	11	0.4

[1]Species that are particularly gregarious during the winter.

Table 4. Relationship between the presence of certain species and the prevalence of mortality at winter bird feeders in Wisconsin.

Species	Species present		Species absent	
	Number of sites	Percent with history of mortality	Number of sites	Percent with history of mortality
Mourning Dove[1]	421	18	202	11
European Starling[1]	397	18	224	12
House Sparrow[1]	501	18	123	9
American Goldfinch[1]	544	17	79	6
American Tree Sparrow[1]	344	20	278	11

[1]Differences in prevalence between sites with species present or absent were significant.

enced significantly lower mortality than sites where this species was absent. This association probably occurred because titmice occur primarily at feeder-sites in wooded areas where house sparrows, American Goldfinches, European Starlings (*Sturnus vulgaris*), Mourning Doves (*Zenaidura macroura*), and American Tree Sparrows (*Spizella aborea*), which prefer open areas, are relatively rare.

Hopper feeders were present at 73% of all sites, suet feeders at 72%, porthole feeders at 70% and platform feeders at 47% (Table 5). We found no significant relationship between the type of feeder in use and the number of feeder-sites reporting occurrences of mortality (Table 5). There was, however, a difference in the frequency of occurrences (Table 5). Mortality occurred most frequently at feeder-sites where platform feeders were used, and the probability of mortality occurring was higher at sites where platform feeders where in use than at sites where platform feeders were absent ($x^2 = 5.34$, $P < 0.05$).

The use of platform feeders that allow birds to stand in the food is likely to increase the probability of seeds becoming contaminated with fecal matter. Other researchers have found that occurrences of salmonellosis declined when feeders that birds could not directly contaminate with fecal material were used and when feeders were cleaned and disinfected frequently (Hurvell et al. 1974). No matter what type of feeder is used, seeds often fall to the ground below it, where they may become contaminated and then eaten by birds feeding on the ground. Also, fecal contamination is often abundant on the vegetation near the

Table 5. Effects of type of feeder on the prevalence and rate of mortality among birds at winter feeders in Wisconsin.

Type of feeder	Number of feeder-sites	Feeder-sites with mortalities[1]	Number of feeder-years	Mortalities per 1000 feeder-years[2]
Platform	297	19%	3801	61
Porthole	436	18%	5269	58
Hopper	453	16%	5231	48
Suet	451	17%	5719	49

[1]Differences were not significant ($x^2 = 1.61$, $P > 0.1$).
[2]Differences were significant ($x^2 = 11.55$, $P < 0.05$).

feeder where, under optimal conditions, some pathogens may survive for up to 28 months (Petrak 1982).

Although we could not test statistically whether or not mortalities were observed more frequently during periods of severe weather, 12 of the 98 respondents, who observed mortality, reported that they found dead birds primarily during periods of particularly cold temperatures. At very low temperatures the risk of fatal hypothermia increases. Birds are stressed and also have a reduced resistance to disease (Taylor 1969, Steele and Galton 1971). In addition, the number of individuals using the feeder often increases as the temperature drops (Leck 1978). These factors may result in an increased prevalence of mortality during cold spells.

Causes of Mortality.—Only 9 of the 98 individuals who reported observing occurrences of mortality at their feeder-sites obtained a professional diagnosis of the cause. Six occurrences involved salmonellosis, 2 involved avian mange, and 1 involved avian pox.

Since only 9% of the respondents who observed mortalities obtained a professional diagnosis of the cause, we had to classify the majority of mortalities as due to unknown causes which potentially included: disease, starvation, and death due directly to hypothermia. Inasmuch as deaths were observed near feeders, it is doubtful, however, that many were solely the result of starvation. Hypothermia was probably not a major cause of mortality either because most individuals are able to withstand normal winter temperatures if their food supply is adequate. Juncos, which were provided with an abundant supply of food, suffered no adverse affects when exposed to temperatures as low as −47° C (Rowan 1925). Other researchers have observed that high rates of mortality associated with low temperatures affect primarily individuals with an inadequate food supply (Roseberry 1962, Dobinson and Richards 1964).

The probability of mortality occurring at a particular site was associated with both the type of feeder in use and the species composition at the feeder-site. We would not expect to see relationships such as these if the deaths were due primarily to starvation and hypothermia. Therefore, although we can not prove that the majority of the mortalities were due to disease, it appears to be a likely conclusion.

Recommendations

If your feeder-site is in one of the categories associated with a higher risk of disease, or if you want to minimize this risk, we concur with the following recommendations made by others (e.g., Terres 1981 and Dennis 1986):

1. Clean and disinfect the feeder with a weak bleach solution at least once a year. Clean more frequently if a platform feeder is in use. This reduces the risk of all disease.
2. Store seed in a dry place, and do not use it if it becomes moldy. If seed in the feeder becomes moldy, throw the seed out and clean the feeder. This reduces the risk of aspergillosis.
3. Avoid feeding on the ground. This reduces the risk of all diseases.
4. Avoid feeding in the summer if Mourning Doves or Rock Doves are using your feeder. This reduces the risk of trichomoniasis.

If you find birds dead or dying near your feeder, we advise the following:

1. Wearing gloves, pick up all carcasses and either bury them or wrap

them in plastic bags and dispose of them. This is particularly important for occurrences of salmonellosis because both human beings and domestic animals can become infected from the carcasses.

2. Clean and disinfect the feeder.
3. Sweep up and dispose of seeds spilled on the ground.
4. Continue to feed, but move the feeder to a new location in the yard. If you stop feeding completely, infected individuals may move to someone else's feeder and introduce disease there. Moving the feeder to a new location will reduce the probability of birds becoming infected from fecal contamination on the ground and vegetation.

Acknowledgements

This paper duplicates in many ways a paper published in *The Wildlife Society Bulletin* (Brittingham and Temple 1986). We thank The Wildlife Society for allowing us to republish our results in *The Passenger Pigeon* so that WSO members can benefit from the findings. We thank the 624 WSO members who responded to our questionnaire. We thank John R. Cary for assistance in the analysis of these questionnaires, Sherrie Gruder-Adams for assistance in compiling the data, and Thomas M. Yuill, Robert P. Hanson, Fred S. Guthery and three anonymous reviewers for suggestions and advice on earlier drafts of this manuscript. Funding for this project was provided by a grant from the University of Wisconsin, College of Agricultural and Life Sciences, Agricultural Experiment Station.

Literature Cited

Bergstrom, E. A. 1952. Foot pox in passerines. *Bird-Banding* 23:169–171.

Brittingham, M. C. and S. A. Temple. 1986. A survey of avian mortality at winter feeders. *Wildlife Society Bulletin* 14:445–450.

Cary, A. 1985. Evaluation of the 1983 Wisconsin tax checkoff for nongame and endangered resources. Wisconsin Department of Natural Resources Resource Publication 137. 37pp.

DeGraaf, R. M., and B. R. Payne. 1975. Economic values of non-game birds and some urban wildlife resource needs. *Transactions of the North American Wildlife and Natural Resources Conference* 40:281–287.

Dennis, J. V. 1986. A complete guide to bird feeding. Alfred A. Knopf, New York, N.Y. 288pp.

Dobinson, H. M. and A. J. Richards. 1964. The effects of the severewinter of 1962/63 on birds in Britain. *British Birds* 57:373–434.

Fichtel, C. C. 1978 A salmonella outbreak in wild songbirds. *North American Bird Bander* 3:146–148.

Greiner, E. C. and W. L. Baxter. 1974. A localized epizootic of trichomoniasis in Mourning Doves. *Journal of Wildlife Diseases* 10:104–106.

Hudson, C. B. and D. C. Tudor. 1957. *Salmonella typhimurium* infection in feral birds. *Cornell Vet* 47:394.

Hurvell, B., K. Borg, A. Gunnarsson, and J. Jevring. 1974. Studies on *Salmonella typhimurium* infections in passerine birds in Sweden. *International Congress of Game Biologists* 11:493–497.

Keymer, I. F. and D. K. Blackmore. 1964. Diseases of the skin and soft parts of wild birds. *British Birds* 57:175–179.

Leck, C. F. 1978. Temperature and snowfall effects on feeding station activity. *Bird-Banding* 49:283–284.

Locke, L. N., R. Schillinger, and T. Jareed. 1973. Salmonellosis in passerine birds in Maryland and West Virginia. *Journal of Wildlife Diseases* 9:144–145.

Macdonald, J. W. and L. W. Cornelius. 1969. Salmonellosis in wild birds. *British Birds* 62:28–30.

———, M. J. Everett, and M. Maule. 1968. Blackbirds with salmonellosis. *British Birds* 61:85–87.

Nesbitt, S. A., and F. H. White. 1974. A *Salmonella typhimurium* outbreak at a bird feeding station. *Florida Field-naturalist* 2:46–47.

Petrak, M. L. 1982. Diseases of cage and aviary birds. Lea and Febiger, Philadelphia, Pa. 680pp.

Roseberry, J. L. 1962. Avian mortality in southern Illinois resulting from severe weather conditions. *Ecology* 43:739–740.

Rosen, M. 1961. Trichomoniasis or canker in doves. *California Department of Fish and Game Game Management Leaflet* 2. 11pp.

Rowan, W. 1925. On the effect of extreme cold on birds. *British Birds* 18:296–299.

Steele, J., and M. Galton. 1971. Salmonellosis. Pages 51–58 *in* J. W. Davis, R. C. Anderson, L. Karstad, and D. O. Trainer (eds.) Infectious and

parasitic diseases of wild birds. Iowa State Univ. Press, Ames.

Taylor, J. 1969. Salmonella in wild animals. Pages 51–73 *in* A. McDiarmid (ed.) Diseases in free-living wild animals. Symposia of the Zoological Society of London No. 24. Academic Press, Orlando, FL.

Terres, J. K. 1980. The audubon society encyclopedia of North American Birds. Alfred A. Knopf, New York, N.Y. 1109 pp.

———. 1981. Diseases of birds - how and why some birds die. *American Birds* 35:255–260.

Todd, K. S. and D. M. Hammond. 1971. Coccidia of Anseriformes, Galliformes, and Passeriformes. Pages 234–281 *in* J. W. Davis, R. C. Anderson, L. Karstad, and D. O. Trainer (eds.) Infectious and parasitic diseases of wild birds. Iowa State University Press, Ames.

Wilson, J. E., and J. W. Macdonald. 1967. Salmonella infection in wild birds. *British Veterinary Journal* 123:212–219.

Wonnacott, T. H., and R. J. Wonnacott. 1977. Introductory statistics.John Wiley and Sons, New York, N.Y. 753pp.

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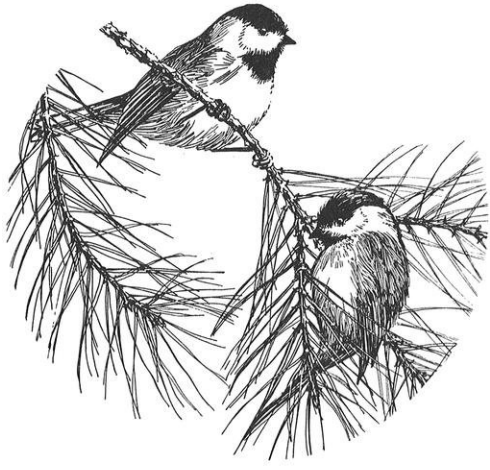
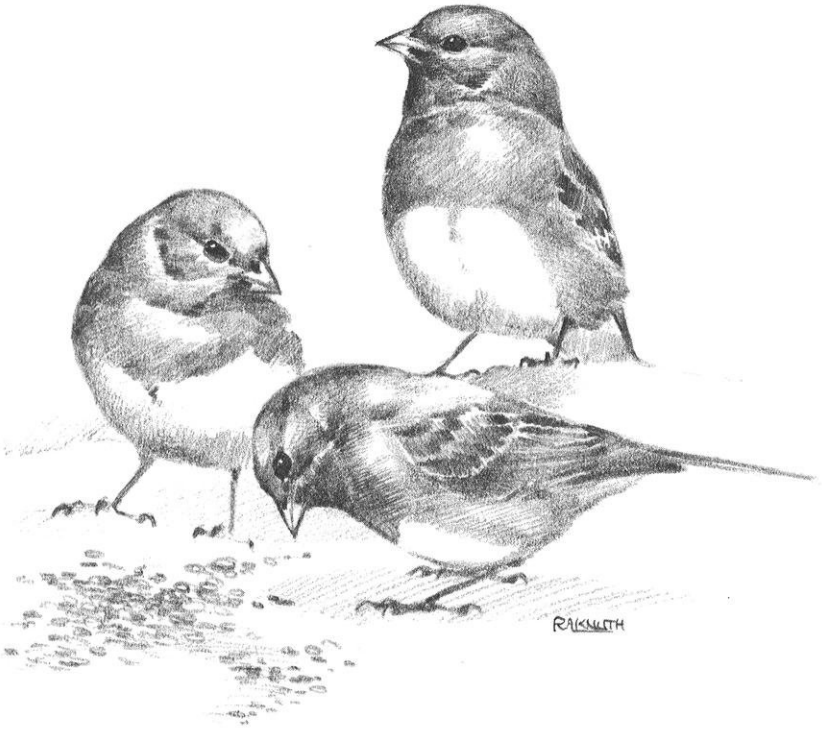


Black-capped Chickadees *by Cary Hunkel*



Feeder scene *by Rockne A. Knuth*

Is Winter Bird Feeding Good For Birds?

by Stanley A. Temple

Most of the millions of Americans who feed birds during the winter believe that they are engaging in an activity that is good for both them and the birds receiving the supplemental food. There can be little doubt that bird feeding benefits people; they derive tremendous satisfaction from the sights and sounds of birds near their homes during the otherwise somber winter season. But, what about the birds? Does winter feeding really do them any good? Or, could it be that winter feeding is actually not good for birds?

There is a glut of information available to would-be bird feeders on what to feed birds and how to present the food to them (e.g., Dennis 1975). But, despite the fact that winter bird feeding by the general public is perhaps the largest program of wildlife management in the U.S. (more people are engaged, more money is spent, and more wildlife is affected than in any other program), it has never been subjected to the equivalent of an "environmental impact assessment." There is, as a result, no way to be certain what the overall impact of winter feeding actually is. There are many potential pluses and minuses that are either known or suspected.

On the positive side, the potential benefits of winter feeding for birds include:

1. Increased overwinter survival.
2. Increased survival during periods of extreme weather.
3. Improved reproduction during the following spring breeding season.

On the down side, there are also potential risks associated with winter feeding; they include:

1. Increased risk of mortality from diseases spread by contaminated food or feeders.
2. Increased risk of mortality caused by unnatural accidents (e.g., window collisions) or by predators that have been attracted to the concentration of prey.
3. Increased dependence on supplemental food so that abilities to use natural foods are impaired.
4. Increased risk of mortality for birds that have been enticed to stay north of their normal winter range by an unnaturally abundant food supply.

A number of these issues have been investigated recently by researchers who can provide some definitive answers to questions of risks versus benefits. Several key studies have been done in Wisconsin (e.g., Brittingham and Temple 1986, 1988a, 1988b), and WSO members have contributed information for these studies (Brittingham and Temple 1986, 1988b). I'll try to summarize some of the most pertinent recent findings here and integrate them so that the overall impact of winter feeding can be assessed.

Evidence Of Benefits

The benefit most often assumed to accrue from winter bird-feeding is improved survival of birds that have access to supplemental food. Recently, Brittingham and Temple (1988a) published the results of a 3-year study that compared the survival rates of 418 banded Black-capped Chickadees that had access to bird feeders with those of 158 banded chickadees that were in remote natural areas where no bird feeders were available. The two groups of birds lived in similar habitats and were subjected to the same southern Wisconsin winter conditions, so direct comparisons were possible.

During the three winters of the study (1982–85), chickadees with access to bird feeders survived better than those without supplemental food. On average, 69% of the chickadees with access to feeders survived over the winter (October through April). In contrast, only 37% of the chickadees without supplemental food survived.

This big difference in overwinter survival was the result of how well birds survived during brief periods of especially severe winter weather. During months with more than 5 days below 0 degrees Fahrenheit, only 67% of chickadees without supplemental food survived, whereas 93% of the chickadees with supplemental food survived. In contrast, during mild months (with fewer than 5 days below 0 degrees Fahrenheit), there were no significant differences in survival; on average, 96% of chickadees with access to feeders survived while 92% of chickadees without supplemental food survived. Brittingham and Temple (1988a) also discovered that chickadees having access to feeders survived better during severe winter weather because they were fatter and because they had to spend less time and energy foraging for dispersed natural foods.

Although some British studies of tits (e.g., Perrins 1979) suggested that supplemental feeding during the winter improves breeding performance in the following spring, Brittingham and Temple found no evidence for this in Wisconsin chickadees. By the time the breeding season arrived, chickadees had greatly reduced their use of feeders because they were spending most of their time in distant breeding territories. Hence, the feeders did not benefit the birds when they were laying eggs and rearing young.

Evidence Of Risks

No one who has fed birds can deny that there are risks involved. There have been massive die-offs of birds at feeders because of disease outbreaks, and there are the inevitable accidents with windows, cats, etc. How do these problems figure into the overall impact of winter bird feeding?

Brittingham and Temple's (1988a) study clearly demonstrated that the

losses to disease and accidents at feeders were more than offset by the increased ability of feeder birds to withstand the rigors of winter. Over winter survival rates were, after all, much higher for birds with access to a feeder than for birds without. However, Brittingham and Temple were careful to maintain their feeders so that risks of diseases and accidents were minimized. As they report elsewhere in this issue of *The Passenger Pigeon* (Brittingham and Temple, 1988b), the risks of disease mortality may be significantly increased if you use an easily contaminated feeder or if you fail to regularly disinfect your feeder. If your feeder poses great risks to birds using it, you could erase the benefits and have a negative impact.

A common fear among bird feeders is that they are turning birds into dependent beggars who lose their ability to fend for themselves after becoming "hooked" on bird feeders. Brittingham and Temple were able to look at the dependency question in two different ways. First, they found that even chickadees having access to a feeder never relied entirely on the feeder for their energy needs. On average, chickadees obtained only 20–25% of their energy needs from feeders; the remaining 75–80% came from natural supplies, even though there were ample opportunities to take more from the feeder. Even birds with free access to feeders apparently use the feeder only as a supplement to their natural diet, not as a replacement.

Brittingham and Temple also had a unique opportunity to observe the responses of birds that had long used a feeder when that feeder was suddenly removed. The Wisconsin DNR had maintained a bird feeder at the nature center at Devil's Lake State Park every winter for the previous 25 years (1959–84). If any population of chickadees had an opportunity to become dependent on a feeder, it was this one! In the winter of 1984–85, we removed the feeder and forced 49 banded chickadees that had previously used the feeder to survive without supplemental food. We compared their survival with the survival of 35 banded chickadees in a remote region of the Baraboo Hills where there had never been any feeders. The results provided no evidence for harmful effects of forcing the Devil's Lake "feeder addicts" to go "cold turkey" and forgo the benefits of a feeder. At Devil's Lake, 35% of the chickadees survived the winter, while at the remote Baraboo Hills site 37% of the birds survived. The former "feeder addicts" survived the winter at a rate that was not significantly different from that of chickadees that never had access to a feeder.

Finally, what about the idea that winter bird feeders entice birds that should have migrated to remain too far north to survive the rigors of winter. Most migratory birds leave northern areas before winter bird feeders are filled for the year (most people don't begin feeding until November). Hence, there is typically little chance for feeders to interfere with migratory schedules. Occasionally, a few migratory birds that have lingered in northern areas, because they are sick or injured, are drawn to feeders when winter temperatures start to drop. The feeders may help these individuals survive better than they might otherwise, but it is probably not correct to interpret their use of the feeder to mean that they would have departed were it not for the feeder.

The Overall Impact

It appears that the overall impact of winter bird feeding, at least as revealed in studies of chickadees in Wisconsin, may be slightly positive. It seems to help birds survive better during especially severe weather, but during mild or normal winters it seems to make no difference at all. There is no impact on reproduction during the subsequent breeding season, so whatever the impacts may be they are restricted to the winter season.

Birds that are given supplemental food don't appear to become dependent beggars that are unable to effectively use natural food sources. Even when they have free access to a feeder, they obtain only a portion of their energy requirement from it.

The possibility of exerting a negative impact on birds that visit a feeder is real. Diseases and accidents can take a significant toll if proper precautions aren't taken. A poorly designed and placed feeder or one that has become contaminated with droppings can change the slight positive effect of bird feeding into a negative effect.

The best overall assessment seems to be that winter bird feeding is a positive activity, as long as it is done properly. Suggestions on how to provide food in a manner that prevents diseases and accidents from erasing the slight benefits are provided by Brittingham, Temple and Craven elsewhere in this issue of *The Passenger Pigeon*. Follow their suggestions to ensure that your winter bird feeding activities are good for you and for the birds.

Literature Cited

Brittingham, M.C. and S.A. Temple. 1986. A study of avian mortality at winter feeders. *Wildlife Society Bulletin* 14: 445–450.

Brittingham, M.C. and S.A. Temple. 1988a. Impacts of supplemental feeding on survival rates of Black-capped Chickadees. *Ecology* 69: 581–589.

Brittingham, M.C. and S.A. Temple. 1988b. Avian diseases and winter bird feeding. *Passenger Pigeon* 50: (in press).

Dennis, J.V. 1975. A complete guide to bird feeding. Alfred A. Knopf, New York.

Perrins, C.M. 1979. British tits. Collins. London.

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Getting the Most From Your Feeding Efforts

by Scott R. Craven

There can be no doubt about the immense popularity of winter bird-feeding as a form of recreation. In 1980, a U.S. Fish and Wildlife Service survey revealed that some 63 million Americans spent over a half a billion dollars feeding wild birds! Preliminary analysis of 1985 data suggests that these figures have continued to increase each year.

Why do we do it? Do we put vast quantities of seeds out into the snowy landscape to "help" wild birds; perhaps by improving overwinter survival? Or do we feed birds in order to enjoy the sight, sound, color, and activity that wild birds add to an otherwise bleak and inanimate winter scene? I suspect that, whether we admit it or not, most of us feed birds for our own enjoyment, and that's a perfectly valid reason!

Regardless of our motivation, it makes sense to maximize the return from our investment in terms of attracting more birds or "better" birds and doing what's best for the birds. As you gear up for the fast-approaching winter bird-feeding season, consider a few points about feeders, seeds, and techniques that could improve your feeding station.

Let's begin with the feeder itself. The selection of sizes, shapes, materials, features, and prices has exploded right along with interest in feeding. Are any of these feeders better than others? One consideration in selecting a feeder is whether or not it is safe for the birds that will use it. As Margaret Brittingham and Stan Temple discovered in their survey of disease outbreaks at feeders maintained by WSO members, it seems best to avoid platform feeders that allow birds to stand in the seeds and contaminate them with their droppings. Such feeders are especially prone to transmitting diseases and facilitating a disease outbreak that could kill many visitors to your feeder. It's probably safest to use a hopper or porthole feeder that prevents birds from contaminating the seed. There are many designs of this type, and most will accommodate a variety of seeds and a variety of birds. Keep in mind, also, how easy it will be to disassemble and clean the feeder. Some are almost impossible to clean thoroughly whereas others are easily disassembled and

cleaned. The seed capacity of a feeder determines how often you will have to refill it. If the feeder is difficult to reach or if you, like most of us, don't enjoy frequent refill trips on cold mornings, consider a large capacity feeder.

What about specialty feeders, such as a suet container, a feeder for thistle seed, or squirrel-proof feeder? There are feeders designed for certain seeds, certain birds, special places (such as windows), or to repel pests such as squirrels. Select any and all feeders that meet your needs, but keep in mind the basic guidelines on safety and convenience mentioned above.

If you are inclined toward woodworking, feeders are easy to make. Woodworking plans for several styles are available in 2 very popular publications: "Shelves, Houses, and Feeders for Birds and Squirrels" available from the University of Wisconsin Extension ($2.00) and "Woodworking for Wildlife" available from the Minnesota Department of Natural Resources ($3.95). "Do-it-yourself" offers the opportunity for personal modifications of basic designs as well as reduced costs. Hand-made feeders also make excellent gifts. Don't overlook recycling for the birds either. Very effective yet inexpensive feeders can be made easily from such household waste as milk cartons, 2-liter pop bottles, and gallon jugs.

Placement of your feeder should be done with several factors in mind. Make sure the feeder is visible from a favored window or vantage point. Be sure you have an easy path to the feeder, not likely to be blocked by deep snow, to allow filling. Finally, consider placing the feeder near some sheltering plant cover that allows birds to get out of the wind, perch comfortably while they crack seeds, or escape predators which are frequently attracted by large concentrations of their prey..

With your feeder in place, the next decision is what to fill it (or them) with. The U.S. Fish and Wildlife Service determined the food preference of some common species (Table 1). In general, the type of food you provide will influence what birds you attract. The most attractive seeds are sunflower, white proso millet, and finely cracked corn. These seeds can be provided in separate feeders or used in a seed mix. The mix favored at the huge Madison Audubon Society seed sale consists of roughly equal proportions of the three foods mentioned above. Some less expensive commercial mixes contain quantities of less attractive seeds such as wheat, milo, peanut hearts, or hulled oats. To get the most return on your seed expenses, stick with attractive varieties. High quality mixes are worth the price. Unattractive seeds may be eaten, but favored seeds will be taken first and may attract species that might not otherwise visit a feeder.

Overall, small black-oil type sunflower seeds seem to be the best choice if you are going to use only one type of seed. The larger, striped sunflower seeds are still good, but they are losing their market share to the small black seeds which are taken by more species and have a relatively large kernel. Thistle seed, safflower, and suet are examples of "specialty foods" used to attract certain species. They may require special feeders (such as a thistle sock or tube) and be a little more expensive, but they can be well worth the expense. Thistle seed will attract finches, and suet is the best way to attract woodpeckers and nuthatches.

The best advice on purchasing seed

Table 1. The seed preferences of some of the most common visitors to winter bird feeders in Wisconsin.

Species	Preferred Seeds
American Goldfinch	Thistle seeds, hulled sunflower seeds, black sunflower seeds
Blue Jay	Whole peanut kernels, striped sunflower seeds
Northern Cardinal	Black sunflower seeds, striped sunflower seeds, safflower seeds
Black-capped Chickadee	Black sunflower seeds, striped sunflower seeds, hulled sunflower seeds
Dark-eyed Junco	Red and white proso millet, canary seeds, fine cracked corn
Evening Grosbeak	Black sunflower seeds, striped sunflower seeds
Mourning Dove	Black sunflower seeds, white and red proso millet
Purple Finch	Black sunflower seeds, striped sunflower seeds, white and red millet
American Tree Sparrow	Red proso millet, white proso millet, fine cracked corn
Tufted Titmouse	Peanut kernels, black and striped sunflower seeds
White-throated Sparrow	Black sunflower seeds, white proso millet

is "buy early and in quantity." If you can anticipate your winter needs and have the room for storage, you can save money by taking advantage of preseason sales and bulk discounts. As an example, you could pay up to double the per pound cost of bulk (50-pound bags) thistle seed by buying it several pounds at a time. Remember an active feeding station can easily require several hundred pounds per season. At the time I was writing this article there was much talk of the affect of the drought of '88 on bird-seed supplies. Several sources assured me that supplies would be adequate, but prices will undoubtedly be somewhat higher than last year. Thus, "buy early and in quantity" may be even more appropriate this season.

Now that the feeder is in place and filled with a smorgasbord of food items are we ready to sit back, grab the binoculars and field guide and enjoy the steady procession of birds? Not quite. There are 2 things to consider before we can relax.

The first consideration is the health of our feathered guests. Be sure to read the article by on bird feeders and disease by Margaret Brittingham and Stan Temple in this issue. A feeding station should be kept as clean as possible to minimize the possibility of disease. A routine cleaning and a quick dunk in a weak bleach or Lysol solution (several tablespoons in a bucket of water) will do the job. Be sure to clean up accumulations of seed hulls and droppings beneath a feeder, especially if you continue feeding into the warmer months.

The second consideration is how to cope with unwelcome guests, both feathered and furred. Without question the most troublesome guests are gray squirrels. Squirrels can monopolize food, damage feeders, and generally be a source of endless aggravation, unless you like squirrels! If you do, there's no problem. If, however, you are in the anti-squirrel majority, here are a few suggestions:

(1) Use a squirrel baffle or dome-like squirrel guard on your feeder poles.
(2) Spend the extra money for an "armored" feeder—one with metal around the seed ports.
(3) Try a "squirrel-proof" feeder like the weight-balanced "Hylarious"

feeder. Even if it doesn't work, it's fun to watch!

(4) Suspend your feeders from a thin wire strung between 2 trees or other end points that are out of jumping distance (about 6 feet).

(5) Provide squirrels with an alternative food source, such as ear corn or nuts.

(6) Thin-out the local squirrel population (I will leave the specific techniques to your imagination).

(7) Grin and bear it.

Now with these 2 final hurdles overcome you should be ready to relax and enjoy our birds. If you have never tried bird feeding, join the millions already hooked and give it a try. If you have additional questions, a good source of information is UW-Extension Publication No. G3176 "Bird Feeding: Tips for Beginners and Veterans" ($1.00). Have a good winter and good feeding.

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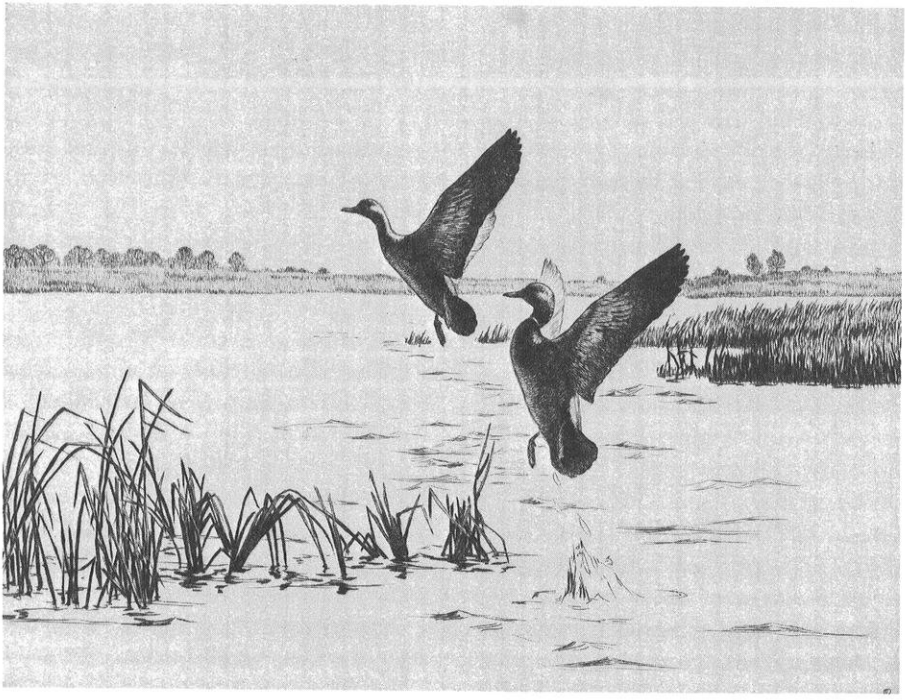

Mallards "Getting Up" *by Walter A. Bohl*

Wisconsin Wetlands of Importance to Migrant Waterbirds

by Mark A. Martin

This paper, in a series of habitat guides to birding in Wisconsin, does not examine a particular community and its breeding birds but instead focuses on three State Natural Areas where excellent concentrations of migrating waterbirds can be observed.

On most of Wisconsin's State Natural Areas the primary goal is to protect an example of a biotic community. A few areas, however, have been designated mainly for their significance to just a small group of species. Examples are Fourmile Island Rookery—which contains over 1,300 nests of Great Blue Heron, Great Egret, Black-crowned Night-heron, and Double-crested Cormorant—and Neda Mine—one of the largest bat hibernacula in the state. Some of these natural areas are not accessible to the public because their unique wildlife populations could be negatively impacted, but others are open for public visitation. Three State Natural Areas that protect wetlands of importance to migrating waterbirds are featured in this article because they are excellent places for the public to view impressive concentrations of migrants as well as representative examples of the bird populations that breed in wetland habitats.

Red Cedar Lake State Natural Area

Location.—Western Jefferson County.

Access.—From Cambridge proceed east on U.S. Highway 12 to an access road and parking area south of the highway. The access road is 0.25 miles east of the intersection of County Highway A north and U.S. Highway 12. Access to the lake is by canoe. A ditch runs south of the parking lot and enters the northeast corner of the lake. In years of low water the ditch is difficult to canoe. Much of the land surrounding the lake is in private ownership.

Best Time to Visit.—Mid May to end of July.

Description.—Red Cedar Lake (Figure 1) has a surface area of 370 acres and a maximum depth of six feet, al-

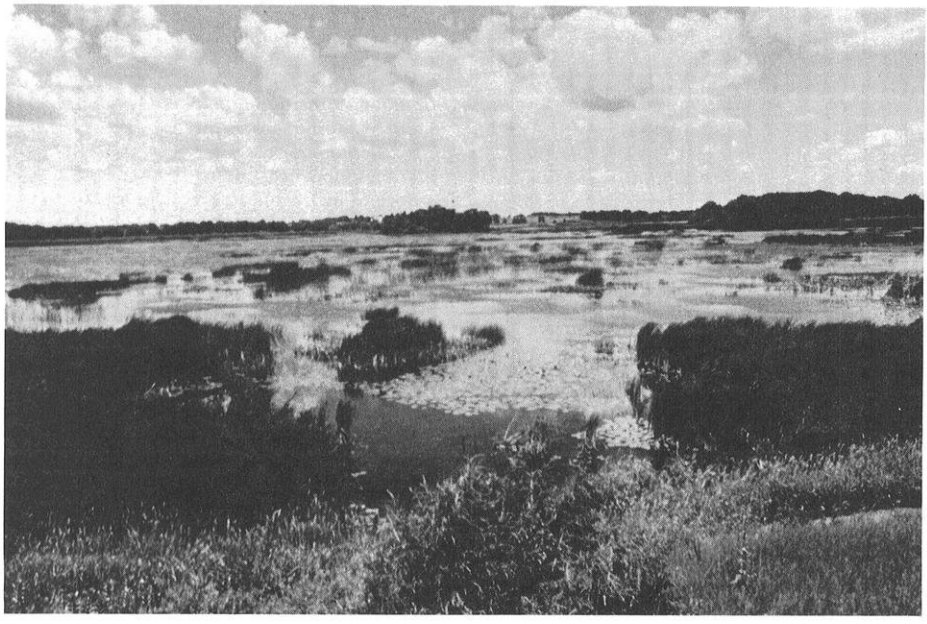

Figure 1. A view of Red Cedar Lake State Natural Area.

though 90 percent is less than three feet deep. The lake is irregularly shaped in east and west halves and has clear water. The drainage area is only two square miles, and the water level fluctuates. The lake and surrounding marsh areas have a diverse submerged and emergent aquatic flora, providing excellent habitat for waterfowl and marsh birds. Dominant emergent aquatic plants include common arrowhead, great bulrush, pickerel weed, and cattail. Periodic "freeze outs" in the past have limited the fishery to perch and bullheads. Surrounding the lake are open bog, old field and southern dry forest habitat.

Site History.—The lake has a long history of waterfowl hunting. In 1934 the Wisconsin Marsh Land Survey identified the lake as warranting further study. In the 1960's, 47 acres were acquired by the DNR's Bureau of Wildlife Management, and in 1974 the United States Fish and Wildlife Service began to acquire Waterfowl Production Areas around the lake to provide upland nesting cover. Beginning in 1984, additional land has been set aside as a State Natural Area. Currently there are 177 acres of Waterfowl Production Areas, 50 acres of upland Natural Area land, and 47 acres of Wildlife Management land. These totals do not include the 370-acre lake which is in public ownership.

Waterfowl use of the lake is extensive. The Bureau of Research conducted a waterfowl study in the 1970's and found an average of 60 pairs of nesting waterfowl, including Mallard, Wood Duck, Blue-winged Teal, Black Duck, Green-winged Teal, American Wigeon, Gadwall, Redhead, and Canada Goose (Petersen et al. 1982).

Marsh birds found on breeding bird surveys conducted in 1985–87 include Great Blue Heron, Green-backed Heron, Least Bittern, Virginia Rail, Sandhill Crane, Marsh Wren, Yellow-headed and Red-winged Blackbirds (Table 1). The surveys, conducted by canoe, recorded all birds seen or heard but do not total numbers of individuals. Species and their numbers vary according to habitat conditions. Sixty-two species were recorded on the breeding bird surveys. In addition to the birds, green frogs and a few bullfrogs may be found calling in summer.

Diving ducks stop in spring migration and should not be disturbed. In September Blue-winged Teal can be found in migration. With the opening of the waterfowl season, fewer waterfowl use the lake.

Comstock Bog-Meadow State Natural Area

Location.—Eastern Marquette County

Access.—From the intersection of State Highway 22 and County Highway J, which is five miles north of Montello, go east on County J slightly less than one mile; turn north and east on Edgewood Road one mile to a parking lot at the southeast corner of the site. The old beach ridge northwest of the parking lot is an excellent place to view the area.

Best Time to Visit.—Late August to the end of September is the best time to view the Sandhill Cranes that stage at the area.

Description.—Comstock Marsh lies within a natural wetland basin that covers about 1000 acres. The main community types are southern sedge meadow and northern wet forest. The marsh is permanently wet and relatively free of water fluctuations. The south end is a quaking sedge bog dominated by sedges with many acid-bog plants—including pitcher plant, bladderwort, and sundews—and plants characteristic of calcareous wetlands. Northward and westward the species composition changes to more closely resemble a sedge meadow. Nesting birds are Sora, Virginia Rail, Common Snipe, Wilson's Phalarope, LeConte's Sparrow, Savannah Sparrow, Bobolink, and Sandhill Crane. In addition, Nashville Warbler and Northern Waterthrush are found in tamarack areas. The original land surveyors described the area in 1851 as a wet and quaking marsh "over which we crossed with not a little danger to our lives."

Site History.—Edges of the marsh have been grazed in the past, and some marsh hay was removed during drought years. Land was first purchased for the State Natural Area in 1975, and 537 acres are currently protected.

Since the 1930's flocks of 100 to 200 Sandhill Cranes have staged at Comstock Marsh (Bennett and Nauman 1978). This was one of the few marshes that cranes used when their population was very low in the 1930's.

Bennett and Nauman studied sandhill crane populations in 1977 and found seven breeding pairs and 20 nonbreeders using Comstock Marsh. By August there were 97 cranes on the marsh, and they increased to 400 by September. Cranes are most abundant in staging areas in September. They

Table 1. Birds found on breeding surveys at Red Cedar Lake (1985–87) and Goose Pond (1979–88).

Species	Red Cedar Lake		Goose Pond	
	Years Present	Average Number Present Per Year	Years Present	Average Number Present Per Year
Pied-billed Grebe	1/3	<1	9/10	3
Double-crested Cormorant	1/3	<1		
Least Bittern	3/3	2		
Great Blue Heron	3/3	6	6/10	1
Green-backed Heron	3/3	6	5/10	1
Black-crowned Night-heron			1/10	<1
Canada Goose	2/3	20	1/10	<1
Wood Duck	3/3	12	8/10	4
Green-winged Teal			2/10	<1
American Black Duck			1/10	<1
Mallard	3/3	21	10/10	25
Northern Pintail			3/3	1
Blue-winged Teal	2/3	2	10/10	14
American Wigeon			1/10	<1
Redhead			3/10	1
Ring-necked Duck			2/10	<1
Lesser Scaup			1/10	<1
Hooded Merganser			2/10	<1
Ruddy Duck			2/10	1
Red-tailed Hawk	1/3	1		
American Kestrel			2/10	<1
Ring-necked Pheasant	2/3	1	3/10	<1
Northern Bobwhite	2/3	1		
Virginia Rail	2/3	1		
American Coot	1/3	<1	7/10	7
Sandhill Crane	3/3	3		
Killdeer	2/3	2	9/10	6
Lesser Yellowlegs			2/10	1
Spotted Sandpiper	1/3	<1	8/10	1
Common Snipe			1/10	<1
Black Tern			8/10	6
Rock Dove	1/3	2	5/10	1
Mourning Dove	3/3	8	10/10	8
Black-billed Cuckoo			2/10	<1
Yellow-billed Cuckoo	1/3	1		
Great Horned Owl	1/3	<1	1/10	<1
Chimney Swift	2/3	1	6/10	1
Belted Kingfisher	3/3	2	4/10	1
Red-headed Woodpecker			1/10	<1
Downy Woodpecker	1/3	<1		
Northern Flicker	2/3	2		
Eastern Wood-Pewee	2/3	1		
Willow Flycatcher	2/3	2	9/10	4
Great-crested Flycatcher	1/3	1	1/10	<1
Eastern Kingbird	3/3	4	2/10	<1
Horned Lark			1/10	<1
Purple Martin			3/10	<1
Tree Swallow	3/3	8	8/10	2
Northern Rough-winged Swallow			2/10	<1
Barn Swallow	3/3	15	10/10	10
Blue Jay	2/3	3	1/10	<1
American Crow	3/3	3	2/10	<1

Table 1. *continued*

Species	Red Cedar Lake		Goose Pond	
	Years Present	Average Number Present Per Year	Years Present	Average Number Present Per Year
Black-capped Chickadee	3/3	3		
White-breasted Nuthatch	3/3	2		
House Wren	2/3	4		
Sedge Wren			2/10	<1
Marsh Wren	3/3	20	7/10	10
Blue-gray Gnatcatcher	1/3	<1		
American Robin	3/10	8	9/10	5
Gray Catbird	3/3	4	5/10	1
Brown Thrasher	2/3	1	1/10	<1
Cedar Waxwing	2/3	4		
European Starling	1/3	23	6/10	5
Yellow-throated Vireo	2/3	1		
Warbling Vireo	2/3	2	2/10	<1
Red-eyed Vireo	1/3	<1		
Yellow Warbler	2/3	3	1/10	<1
Common Yellowthroat	3/3	14	9/10	5
Northern Cardinal	3	4		
Rose-breasted Grosbeak	1/3	1		
Rufous-sided Towhee	1/3	<1		
Chipping Sparrow			1/10	<1
Field Sparrow	1/3	1		
Savannah Sparrow	1/3	<1	1/10	<1
Song Sparrow	3/3	12	9/10	8
Swamp Sparrow	3/3	20	9/10	2
Red-winged Blackbird	3/3	109	10/10	25
Western Meadowlark			2/10	1
Yellow-headed Blackbird	2/3	3	8/10	7
Common Grackle	3/3	14	10/10	16
Brown-headed Cowbird	1/3	1	10/10	6
Northern Oriole	1/3	1		
American Goldfinch	3/3	5	9/10	4
House Sparrow	1/3	3	6/10	1

usually depart Wisconsin in early October with the opening of the waterfowl season. Cranes using the staging areas in Wisconsin are local breeders and birds from northeast Wisconsin and Upper Michigan.

Many cranes spend much of the day in upland fields and return to the staging marshes at dusk to roost in areas with standing water. Flocks of cranes can be found by driving roads in the local area. At Comstock you can walk along the old beach ridge on the east side of the marsh and observe cranes. Due to the wet conditions—and also so the cranes are not disturbed—one should not venture into the wetland.

There are a number of other crane staging areas in Marquette and Green Lake Counties where cranes can be observed. Germainia Marsh Wildlife Area, about two miles northeast of Comstock is an excellent place to visit. Other staging areas are White River and Grand River Wildlife Areas in Green Lake County, near Muir County Park in Marquette County, and French Creek Wildlife Area in Columbia County.

Audubon Goose Pond State Natural Area

Location.—South Central Columbia County.

Access.—From Arlington go south and east on Highway 51 and 60 for 0.5 mile, then south on Goose Pond Road 1.5 miles. Birds can easily be observed from Goose Pond Road or south of the pond on Prairie Lane. There is an information board on Prairie Lane. Stay on the roads. Bird watchers should not walk around the pond and disturb the wildlife.

Best Time to Visit.—Late March to mid-November.

Description.—Goose Pond (Figure 2) is a small, isolated prairie pothole in a marshy basin in ground moraine. Before European settlement the surrounding area was a 60-square-mile mesic prairie. Wetlands were scarce in this prairie, and Goose Pond was a wetland island in the sea of grass. The site was designated a preserve because of the high number of bird species sighted on the property (242 species). Water levels fluctuate due to runoff conditions, and in years of very high or very low water, shorebirds congregate on exposed mudflats. Arrowhead and river bulrush are the dominant wetland plants. The pond lacks extensive stands of cattail which are usually found around similar ponds. Some upland fields have been restored to prairie or planted to cool season grasses to provide nesting cover.

Site History.—Madison Audubon Society began purchasing property at the pond in 1967 and currently preserves

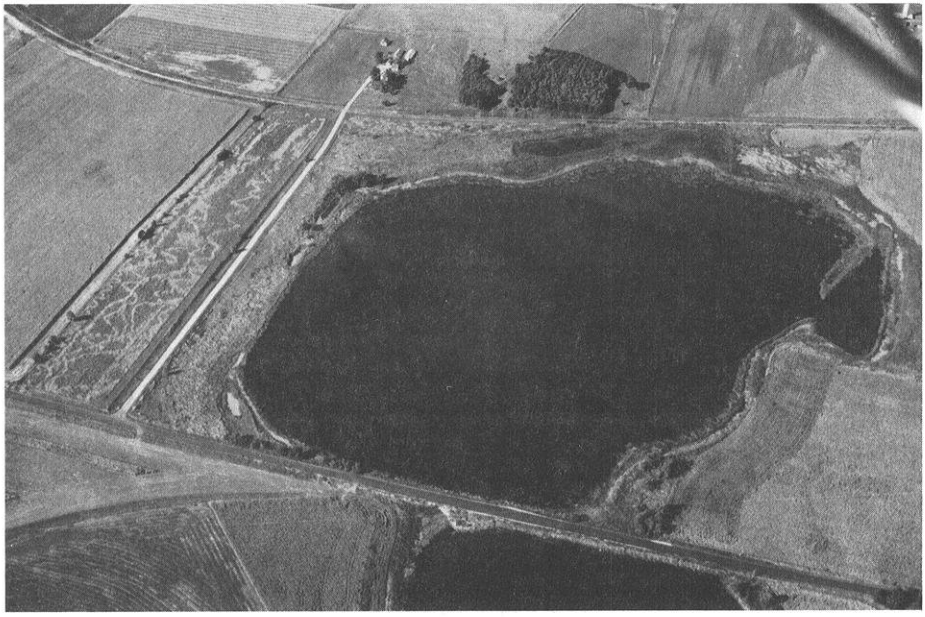

Figure 2. An aerial photograph of Audubon Goose Pond State Natural Area.

100 acres. The site was designated a State Natural Area in 1970.

Goose Pond is an excellent place to observe marsh birds spring, summer, and fall. At this prairie pothole one finds many of the species that nest at the prairie potholes of North Dakota such as Ruddy Duck, Northern Pintail, and Yellow-headed Blackbird.

In spring the main attraction is waterfowl. Twenty-eight species of waterfowl have been observed at the pond and in many years 23 species are seen in spring (Table 2). It is possible on many days to see twelve or more species of waterfowl at the pond.

Many bird watchers make an annual visit looking for hundreds of Tundra Swans which stop on their spring migration (last week of March to first two weeks of April) and feed on the arrowhead tubers. Abut 2,500 Canada Geese are usually present from the third week of March till April 20th. The area is one of the best places in the state to find White-fronted Geese. Diving ducks, especially Lesser Scaup and Ring-necked Duck, are abundant in most years.

Table 2. Waterfowl recorded at Goose Pond during spring migration.

Species	Status
Tundra Swan	Common
Mute Swan	Rare
Greater White-fronted Goose	Common
Snow Goose	Common
Canada Goose	Common
Wood Duck	Common, nests
Green-winged Teal	Common, nests
American Black Duck	Common
Mallard	Common, nests
Northern Pintail	Common, nests
Blue-winged Teal	Common, nests
Northern Shoveler	Common, nests
Gadwall	Common, nests
Eurasian Wigeon	Rare
American Wigeon	Common
Canvasback	Common
Redhead	Common
Ring-necked Duck	Common
Greater Scaup	Rare
Lesser Scaup	Common
Oldsquaw	Rare
Surf Scoter	Rare
Common Goldeneye	Common
Bufflehead	Common
Hooded Merganser	Common
Common Merganser	Common
Red-breasted Merganser	Common
Ruddy Duck	Common, nests

Water levels fluctuate greatly and in some years there are 100 acres of standing water in addition to the 60 acres of permanent water. In those years with large exposed mudflats, concentrations of shorebirds can be found from later April through mid-May. Thirty-four species of shorebirds have been observed, and some of the common ones include Black-bellied and Lesser Golden Plovers, Lesser and Greater Yellowlegs, Short- and Long-billed Dowitchers, Semipalmated Sandpiper, and Dunlin.

An average of 40–45 pairs of ducks nest each year. Blue-winged Teal and Mallard are most common. Other species of puddle ducks include Northern Pintail and Northern Shoveler. The Ruddy Duck is the only diving duck to nest at the pond. Ruddys nest over-water and are late nesters since the arrowheads which provide nesting habitat do not appear until June. This colorful duck can usually be seen in courtship most of the summer. From June through August broods of ducks are frequently seen.

In the last ten years 63 species have been found on breeding bird surveys (Table 1). Marsh birds found most years include Black Terns, Yellow-headed and Red-winged Blackbirds, and Marsh Wrens. In August, Great Egrets and Black-crowned Night-herons fish at the

pond along with Green-backed Herons and Great Blue Herons which are found all summer.

Blue-winged Teal are the first waterfowl to stop at Goose Pond in fall migration during the month of September. Waterfowl find refuge at Goose Pond during the waterfowl season, and the birds are quick to learn where they are safe. The lack of variety in fall migration is made up in numbers with mallards making up over 90 percent of the waterfowl numbers. In October it is not uncommon to find 2,000 mallards, and their numbers increase until freeze up. In two of the past ten years over 9,000 mallards have been counted. Black Duck numbers may number over 300 and usually are about two percent of the mallard numbers.

Mallards and Black Ducks find excellent feeding in the nearby picked corn fields. What a sight to see a flock of 2,000 Mallards and Black Ducks coming back from feeding.

Tundra Swans stop about November 12 and usually stay a couple of weeks. Swan numbers in the fall rarely reach 50. After the Tundra Swans leave, only Mallards and Black Ducks remain and they stay until the picked corn is covered by snow or the weather is very cold and pond freezes over.

Goose Pond is an excellent place to see a wide variety of birds, and with all the bird watchers that stop, a number of rare species are usually seen each year. Other wildlife can frequently be seen or heard. Six species of frogs, four species of turtles and a variety of mammals such as mink and red fox reside in the area.

Acknowledgements

I would like to thank those who helped on the breeding bird survey, especially Karen Etter Hale who has been on all the surveys at Red Cedar Lake and Sue Foote-Martin who helped compile bird records at Goose Pond.

Literature Cited

Bennett, A. J. and L. E. Nauman. 1978. Summer populations of Sandhill Cranes in southeastern Wisconsin, 1976–77. *The Passenger Pigeon* 40(1):349–356.

Petersen, L. R., M. A. Martin, J. C. Cole, J. R. March, and C. M. Pils. 1982. Evaluation of Waterfowl Production Areas in Wisconsin. Wisconsin Department of Natural Resources Technical Bulletin 135. 32pp.

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S. Paul Jones: A Keen and Conscientious Observer

by Sumner W. Matteson and John Bielefeldt

S. Paul Jones (1886–1959) was one of Wisconsin's most highly regarded amateur ornithologists, as well as a fine naturalist. He kept a meticulous record of his bird observations, mainly in Waukesha County, for more than 40 years, 1916–58. His records are invaluable because, collectively, they give us a rare view of birdlife at a time when dairy farms and small villages dominated the county scene.

After 1950, residential and commercial development forever changed the Waukesha County landscape. The county's population grew 169%; the total number of farms decreased 60%, and woodland cover and wetland acreage declined by about a third from amounts existing in the mid–1930s (Johnson 1984).

Few people have examined Jones' long and abundant record of bird observations. His field notes for 1916–58 are housed in the archives of the Wisconsin State Historical Society in Madison, where 5 boxes are filled with his checklists and notebooks.

Except for service in World War I, two years as a project manager at Horicon Marsh in 1944–45, and a three-year hiatus in the mid–1950s, Jones studied birds in Waukesha County. His notes list birds seen in the county on more than 1600 dates. The great majority of those dates were full-fledged field trips, not incidental sightings. He usually kept a complete list of every species found on each trip—not just "unusual" birds—and ordinarily gave the number seen for all but the most numerous species. He followed regular routes by car, and he stopped to walk favorite areas in oak woods and other habitats.

Originally from Sandy Lake, Pennsylvania, Jones was graduated from Penn State University and moved to Wisconsin in 1914 to head the Waukesha YMCA. Later employed in the insurance business, he apparently had ample time to pursue his passion for birds. Jones' records from the late 'teens through the 1930s are especially significant, coming at a time when there was only a handful of bird students in Wisconsin. Among his early field companions in the 1920s and 1930s were Milwaukee Public Museum ornithologists, H. L. Stoddard (whom he had met in Europe during World War I),

Owen Gromme, and Clarence Jung, as well as the museum's taxidermist, I. J. Perkins. Many of the field trips were expeditions to collect birds for the museum.

On Christmas Eve, 1921, Jones' first personal records of the Northern Sawwhet Owl came during a collecting foray with Stoddard and Jung to a tamarack stand known as the Calhoun Swamp, a few miles east of Waukesha. While Jung and Jones "made noises to attract the birds' attention, Stoddard "approached from [the] rear and reached up his hand and picked it off a limb." The usual method of collection, however, was a gun, although this was not always successful. At Goose Lake in Jefferson County in late May 1932, Jones noted that Perkins attempted to collect a Forster's Tern; he "shot twice and wounded [the] bird but it left the lake flying eastward." And Jones himself, in early June 1934, "attempted to collect" a Willet in a gravel pit north of Waukesha but was "not successful."

During the nesting season, Paul Jones was not content with merely recording the presence of a bird species. He had a penchant for locating nests, and his sleuthing led him on several occasions to the upper reaches of a tree. A 23 May 1926 notebook entry reads:

> "Long-eared Owl—Nest 35 feet up in white oak tree about 1 foot thru. About size of crow's nest. Made of dead twigs and some corn husks. Climbed nearby tree and saw 2 or more downy young. Both old birds stayed near, dived at me and one, probably female, squalled, [a] nasal 'quit, quit, quit' and [also] cat-like squalls. [The nest was] Located in second growth woods, mostly oaks. In woods known as Foster's or Browne's on N. side 50 yards from edge and 150 yards from Fox River. Hard to dislodge bird from nest. Clubs struck nest but bird did not move until I had climbed nearly as high as nest. The young birds estimated at a week or 10 days old."

Examining another Long-eared Owl nest 17 years later on 11 April 1946 at the "Saylesville woods" in south-central Waukesha County was no less appealing:

> "Nest 26′ up in a Black Oak tree which was 31′ high. Shallow nest with 5 dirty-white eggs. [Female] sitting and [male] perched in another Oak tree. I climbed the tree to examine the nest. The [female] stayed within 50′, mewed like a cat and spread wings and acted weak as though she were going to fall from the tree limb. Dived at the tree twice. Clicked the bill. Observed [the female] expel a pellet. [The male] left when I was about 100′ from nest and did not show up again."

Jones usually revisited a nest periodically to determine nesting success. He made this 5 May entry (after he discovered 4 young on 28 April) on the Long-eared Owl nest found in 1946: "Nest reported before in Saylesville woods. Now 5 young estimated at ages 6, 8, 10, 12 & 14 days." Then on 12 May: "Nest & 5 young appeared growing and healthy." Returning to the nest site on 30 May, he reported that the birds had left the nest and could not be found; this suggested that all five young had fledged.

Paul Jones delighted in boating through a marsh, "wading in the high water," and in getting as close to nesting birds as possible. At Beaver Dam Lake on 20 June 1946, with Stoddard and Gordon Orians, Jones recorded finding the nest of a Least Bittern with 3 eggs. The female "standing about 1½″

from (the) nest allowed all of us to touch her [while she] stayed where she was." At Big Muskego Lake on 8 June 1941, with Paul and Emma Hoffman, he observed a Virginia Rail near its nest of 7 eggs. Their boat nudged up to the nest and Jones "with my hand on it . . . was within 1 foot of the bird, and it sat for some time."

Jones, ever the alert observer, had an eye for detail. How many of us would records a White-breasted Nuthatch diving for a piece of dislodged suet as Jones noted on 26 February 1935: "One feeding on suet on Elm tree at house. Feeding box about 8′ up. The bird knocked off a piece of suet about 2 inches long and about 1/4″ across. The bird dived for the suet and caught it about 5′ below the box in the air."

Or what about this 18 July 1926 entry on the feeding behavior of an adult Black Tern: "Noted feeding full-grown young with small frogs from the Fox River. Bird often washed frogs before feeding young."

In the early 1930s, the growing coterie of young birdwatchers in Waukesha County included John T. Curtis, who would eventually author the classic *Vegetation of Wisconsin* (1959). On 30 May 1933, Jones and Curtis discovered a nest of the Brewer's Blackbird southwest of Waukesha near Saylesville: "Nest about 4″ across and 3/4 in. deep. Made of weed stems and roots and lined with horsehair. On ground. 4 eggs. Bluish with rather heavy light chocolate markings. Located on an unbroken savannah or wet prairie. Has been pastured." The phrase "savannah or wet prairie" shows the hand of the botanist Curtis. Curtis (1933) himself noted that a "small colony of ten pairs have established themselves on a savannah" and compared the site to another nesting area, a "large area of wet prairie south of Waukesha. . . Both localities are similar." Perhaps it was these spots that Curtis (1959:186) had in mind 35 years later when he called the Brewer's Blackbird a "typical species" of Wisconsin's native lowland prairies.

When Jones first began to study Waukesha County birds there were still large tracts of wetlands and large acreages of both oak and maple woods. Hayfields and pasturelands were dominant, in association with the dairy farms that typified the times. Against this backdrop it is possible to take Jones' records and examine long-term changes in local abundance according to the frequency with which he saw a species (number of dates seen/number of dates afield).

Here, for example, is a preliminary look at the Loggerhead Shrike, now listed as an endangered species in Wisconsin. Kumlien and Hollister (1903) say only that it was "common" in southern Wisconsin at the turn of the century. Jones' data provide more insight. In the months of April through July, he saw this shrike on 8% of 331 field dates, 1922–36. The species was probably fairly common but not abundant: Jones seldom saw more than one per day and never more than three.

Beginning in the late '30s, Jones began to miss the shrike entirely in many years, despite numerous field trips. During 1937–53 he found it on only 3% of 474 days afield, April-July. Apparently a slow decline in numbers was underway (at least in Waukesha County) long before the bird became rare in the 1960s and '70s.

Similar analyses—again preliminary—suggest that nesting Upland Sandpipers lost some of their abun-

dance in the county about 1930, then stabilized in numbers until the late 1950s. Black-crowned Night-Herons showed a sudden drop in abundance after the "heron invasion" years of the early '30s.

Jones and Owen Gromme sometimes visited I. J. Perkins at his farm near Dousman. There, one April day in 1922, they found a Great Horned Owl's nest with pluckings from both the Prairie Chicken and King Rail; they also saw several Ruffed Grouse the same day. Current-day birdwatchers in Waukesha County are likely, indeed, to envy this owl for the birds it was seeing and eating. Prairie Chickens were abundant until the early 1870s, selling for $1.25 per dozen in 1845, with 5,000 alone sent by rail from Milwaukee to New York City (Johnson 1984). By 1934, they were almost gone from Waukesha County, and Aldo Leopold suggested they could be reestablished on the expansive Bark River Marsh in western Ottawa Township—the very same area where Jones had watched chickens in 1922.

In cases like these, old bird records read as a depressing catalog of population decline and habitat loss. Many of the locales Jones visited no longer exist or have been altered drastically. For instance, the Calhoun Swamp was a 90 year-old tamarack stand where Jones found wintering Red-headed Woodpeckers, Northern Shrikes, Pine Grosbeaks, redpolls, and Barred, Long-eared, and Great Horned Owls in 1921–31. The "swamp" is now a suburb. A marsh where Jones saw nesting phalaropes and gadwalls in 1933 is now an airport. Gone is the wet prairie where Jones and Curtis recorded nesting Brewer's Blackbirds.

But, Jones also documented positive changes in local birdlife as formerly rare species became more numerous. He saw his first Turkey Vulture in the county in 1947, his first Sandhill Crane there in 1950. Before 1946, he had only one or two local records of Red-bellied Woodpecker or Blue-winged Warbler. All these species are now commonplace in the county.

In the 1920s and '30s, Jones never counted more than 160 Canada Geese in a single spring day, and usually saw them just once or twice in a whole spring season. Since then, of course, geese have increased many-fold.

Few examples of changes in a species' status compare with that noted by Jones for the Starling. He found the first Starling nest in the state. In light of a speceis we consider ubiquitous and a pest, it is worth presenting much of Jones' account as it appeared in the *Auk* (44:104–05, 1927), supplemented by his field notes.

> "On June 13, 1926, I discovered two adult Starlings (*Sturnus vulgaris*) on a barn on the farm of John Geiger, about three miles south of Waukesha, Wisconsin. [From Jones' notes for this date: 'Geiger . . . reported seeing them around since February but did not know what they were.'] Mr. James Crookston was with me and for some time, with 9× binoculars, we observed the birds coming and going. I had seen Starlings in England during the war and was certain of the identification. . . They were again observed on June 18 and 19, and on the latter date a nest was discovered in a cornice on the east end of a small barn, about 35 feet from the ground. Mr. Geiger helped me remove some shingles and we examined the nest, finding four pale blue eggs. The nest was composed chiefly of dried grass."

On 23 June, Jones returned to the

Geiger farm and (according to his field notes) observed the barn "closed up by roofers." This was not unexpected. He had made arrangements earlier to maintain an opening for the birds. So, he "pried a piece of board off so old birds could enter at a new opening. Young birds heard. Old birds inspected new opening but did not enter while I watched."

But, according to the *Auk* article, the adults used

> "the new opening . . . from then on. . . On the 28th, while observing the nest with Rev. O. W. Smith of Evansville, a second nest was discovered on the north end of a large barn, about 40 feet from the ground. This nest was also in a cornice. On July 3, Mr. Geiger and I examined both nests, finding only one young in the first one. The bird was removed and banded. At the second nest we could hear the young, but from the entrance it was impossible to reach them without destroying too much of the barn. . . These nests were probably second broods, for during one of the early visits, one full grown immature bird was noticed with the adults. The plumage was distinctly different, grayish in color, and the bill was dark."

By 1931, Jones noted that the Starling was "common south of Waukesha." This probably marked the beginning of a steady population increase statewide. On 27 June 1945 at Horicon Marsh headquarters, a Jones notebook entry reads: "3,000 observed in [a] . . . soy bean field and a total of 5,000 in the vicinity. Moved west in flocks across the marsh as far as they could be followed with binoculars." On 28 June, he observed about the same number, but this time "they pulled up soy beans in the field. Beans were 1″ high and less. Starlings would pull the bean stalks up and sometimes break them up but did not eat them. . . Considerable damage was done to the crop and we made efforts to keep them from the field during the evening flight."

Among other "firsts" for Jones was the first state nesting records for the Red-necked Grebe and for the Cerulean Warbler. During the spring of 1938, Jones took extensive notes on the breeding behavior and nesting of a pair of Red-necked Grebes on Fish Lake in northwestern Dane County. He summarized these notes in the *Auk* (55:666, 1938). From his notes for 13 May he recorded the nest as "4 inches above water and made of watersoaked vegetation . . . from a mud or sand bar nest to shallow water. 4 large eggs, dirty white, speckled with brownish. Few strands of vegetation lying over the eggs. Bird on nest but left. . . Both birds stayed in the vicinity and called."

On 15 June 1938, Jones observed young for the first time: "[Adults] Approached thin clump of bulrushes (*Juncus*). Immature birds appeared, 2 or 3 in sight at once, but were diving and [there was] possibility [that there were] 4 altogether. . . One Adult left and the Ims. disappeared in the rushes." The following day he documented a feeding: "8:37 [a.m.] Adult returned with food in its mouth. Swam back and forth several times apparently trying to feed the Young. Finally either ate the food or dropped it. Adult Female swam N. 300 yards in open water. 8:55. Adult Male returned to Female with food in his mouth and fed the Young. Brought food several times and fed the Young which were on the Female's back. Both Adults dived at the same time and the 2 Young were left swimming on the surface."

Unknown to A. W. Schorger, who in 1951 had revised Kumlien and Hollister's (1903) *Birds of Wisconsin*, was Jones' record for a Cerulean Warbler nest in the Saylesville Woods on 5 July 1925. Schorger (1951:101) had written: "There is no satisfactory account of a nest being found." Here's what Jones recorded that July day: "Nest with 2 young found on burr oak tree about 14 feet from trunk of tree. Tree located at S.W. corner of woods on N. side of road crossing from Saylesville Road to Highway 59. Tree about 35 feet tall. Both birds fed the young and the female sat on the nest a few minutes."

The Cerulean nest was fairly close to the road because on 9 July Jones returned with his family and the "female appeared and scolded when we stopped the car near the nest." The following day he returned alone. His notebook entry reads: "Nest examined but found empty. One young bird being fed by male located on East side of road. Young bird could fly well and stayed too high in second growth trees to be caught. Other young being fed by female located on the west side of the road. Young captured and banded. Did not fly as well as other young. While preparing to photograph the young bird it was kept covered with a cap and was found dead." Jones, later, in his summary notes for the species, said the bird had suffocated. "The bird and the nest which I removed with a part of the branch from the tree . . . were given to the Milwaukee Public Museum."

In his characteristic manner, Jones completed the 10 July entry with a detailed description of the nest location and the nest. "The nest was set on the top of a limb about 1½″ in diameter between two somewhat upright branches. It was 14′–9″ above the roadbed and was 5′–6″ away from the trunk of the tree. Nest composed of weathered bark fibers on the outside and lined with brown hair-like bark fibers. It was held very securely on the limb although none of the parts encircled the limb or branches. The tree was a burr oak about 30′ tall."

Jones was also meticulous about tracking down specimens and compiling reports by other observes, though he always preferred to see the bird himself. Among his notes on the Common Barn-Owl in Waukesha County, for example, is this for October 1924: "One killed and brought to C. Stickles, butcher. . . It was mounted and examined in the barroom of the Mukwonago Hotel. One other was killed in an old silo by farmhands. Four were seen in all in the silo."

Despite his many years of record keeping, Jones published only four articles, all as "General Notes" or "Field Notes"; these coming in the years 1922–23, 1927, and 1938. In addition to the *Auk* pieces on the Starling and Red-necked Grebe mentioned above, he wrote one article on the "Winter Birds of Southern Wisconsin" (*Wilson Bulletin* 34:43–44, 1922), and provided updated information on six species mentioned in Cahn's (1913) "The birds of Waukesha County" through "Notes from Waukesha County, Wis." (*Auk* 40:137–38, 1923).

Jones did journey elsewhere in Wisconsin, but outside of Waukesha County he apparently chose to limit most field trips to southern, southeastern, and eastern portions of the state. Each spring he travelled to the Sauk City-Mazomanie-Spring Green area, participated in May Day bird counts in Adams County, observed

birds along the Lake Michigan shore to Cedar Grove, and explored remote areas of Lake Koshkonong (Scott 1959). Jones always left home a few days before the Wisconsin Society for Ornithology (WSO) annual convention and, regardless of the convention location, he was known to comment that "the shortest distance between any two points always goes through Goose Pond in Columbia County" (Scott 1959).

Jones thoroughly enjoyed teaching others about birds, and in this regard his effect on others was wide-reaching. A quiet, unpretentious man, he probably would have been a little embarrassed by the founding of the S. Paul Jones Bird Club at Oconomowoc in 1960 (Ed Peartree, pers. comm.) in recognition of the many years of Jones' unsung contributions to Wisconsin ornithology.

As a charter member of WSO, Jones worked hard to support Wisconsin bird study. He served 4 years on WSO's Board of Directors as Member-at-Large (1940–41), Vice-President (1942–43 and 1947–48), and as President (1947–48) (Scott 1959). He was also a member of the American Ornithologists' Union, the Wilson Ornithological Society, the Cooper Ornithological Society, and The Wildlife Society (Scott 1959).

Paul Jones' unpublished notes (most of them unanalyzed) contain a giant storehouse of information. The beauty of his records is the sheer number of sightings over a long span of years. His legacy is the volume and breadth of these records. No less important is the lesson he leaves to observe keenly the natural world: his conscientious note-taking reminds us of the lasting value of keeping careful record of our own observations.

Literature Cited

Cahn, A.R. 1913. The birds of Waukesha County, Wisconsin. *Bulletin of the Wisconsin Natural History Society* 11:113–49.

Curtis, J.T. 1933. Brewer's blackbirds in Waukesha County, Wisconsin. *The Wilson Bulletin* 45(3):142.

———. 1959. The vegetation of Wisconsin. The University of Wisconsin Press, Madison.

Johnson, M. 1984. Natural features and land use. pp 1–43. *In* E. D. Langill and J. P. Loerke (eds.). From farmland to freeways, a history of Waukesha County. Waukesha County Historical Society, Inc., Waukesha, WI.

Jones, S.P. 1922. Winter birds of southern Wisconsin. *The Wilson Bulletin* 34(1):43–44.

———. 1923. Notes from Waukesha County, Wis. *The Auk* 40(1):137–38.

———. 1927. Starling nesting in Wisconsin. *The Auk* 44(1):104–05.

———. 1938. Holboell's grebe and American brant in Wisconsin. *The Auk* 55(4):666.

Kumlien, L. and N. Hollister. 1903. The Birds of Wisconsin. *Bulletin of the Wisconsin Natural History Society* 2: 1–143 (with revisions by A.W. Schorger. 1951. The Wisconsin Society For Ornithology, Inc., Madison).

Scott, W.E. 1959. In Memoriam: S. Paul Jones. *The Passenger Pigeon* 21 (1):31–33.

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American Kestrel *by Karen Birgit Christiansen*

The Fall Season: 1987

by Mark S. Peterson

After several fairly uneventful fall seasons, the fall of 1987 proved to be more productive in both the number of species seen and also the numbers of most species seen. During the fall season 26 duck species, 34 shorebird species, 9 gull species, 31 warbler species, and 18 sparrow species were reported in the state.

August was warmer and wetter than normal. A high of 97 was reported at Mt. Mary College on the 3rd, and a low of 35 was reported on the 5th at Phillips and Lake Thompson. Some severe weather was reported on the 15th and 16th. Hale reported a warbler migration between the 13th and 19th, and Robbins reported a strong warbler movement by the 19th. Cederstrom reported a significant nighthawk migration in Milwaukee and Waukesha Counties on the 29th.

September continued to have fairly warm temperatures, but rainfall was less, except for the week of September 14–20. A high temperature of 91 was reported at Port Edwards on the 5th, and a low of 25 was reported at Harrison on the 25th. There was widespread frost in the north on the 25th. Hale reported a warbler migration between the 5th and 22nd, although Robbins reported little warbler migration after the 12th.

Temperatures rapidly cooled down in early October with a general freeze on the 7th. A high of 76 was reported at Cassville on the 15th, and a low of 12 was reported at Harrison on the 11th. Light snow was reported in the north on the 3rd with more significant snows in large portions of the state on the 20th and 22nd. Butterbrodt reported 14–18 inches of heavy wet snow in Iron County on the 20th. There were wide fluctuations in the temperatures with lows in the teens frequent throughout the month.

November began with above normal temperatures and with above normal temperatures during the middle of the month, although the fluctuations in the temperatures continued. Precipitation for the month was above normal with some snow from the 17th to the 19th and from 6–10 inches of snow in the far north on the 29th. Lowest temperatures for the month were mostly in the upper single digits or lower teens.

During the period 90 observers

found 290 species, which is up considerably from the 275 species found in the fall of 1986. The numbers of rarities was also up and included: Eared Grebes in Bayfield, Columbia, Manitowoc and Ozaukee Counties; Western Grebes in Siskiwit Bay in Bayfield County; American White Pelicans in Beaver Dam Lake in Dodge County; Yellow-crowned Night-Herons in Clark, Dane, Manitowoc, and Outagamie Counties; an Eurasian Wigeon in Horicon National Wildlife Refuge in Dodge County; Harlequin Ducks in Columbia and Manitowoc Counties; Golden Eagles in Burnett, Green Lake, Monroe, Oconto, Ozaukee and Sheboygan Counties; Spruce Grouse in Forest, Oneida, Price, and Vilas Counties; King Rails in Dane and Dodge Counties; a Yellow Rail in the Kewaunee Impoundment; Piping Plovers in Columbia and Manitowoc Counties, American Avocets in Columbia and Milwaukee Counties; Whimbrels in Douglas County; Western Sandpipers in Columbia, Dane, Manitowoc, and Milwaukee Counties; Purple Sandpipers at North Point in Sheboygan and at the Milwaukee Coast Guard Impoundment; Buff-breasted Sandpipers in Columbia, Dane, Douglas, Racine, Rock, and Shawano Counties; Parasitic Jaegers in Bayfield and Douglas Counties; Little Gulls in Manitowoc and Milwaukee Counties; Thayer's Gulls in Ashland and Milwaukee Counties; an Iceland Gull at Wisconsin Point in Douglas County; a Sabine's Gull at Wisconsin Point in Douglas County; an Ani (species unknown) near Elkhart Lake in Sheboygan County; Common Barn Owls near Franklin Lake in Forest County; Black-backed Woodpeckers in Douglas, Forest, Oneida, Sawyer, and Vilas Counties; a Scissor-tailed Flycatcher at the end of Lake Drive in Ozaukee County; Carolina Wrens in Waukesha and Bayside; Varied Thrushes near Neilsville and Shawano; White-eyed Vireos in Kenosha and Ozaukee Counties; a Black-headed Grosbeak in Waukesha; Sharp-tailed Sparrows at the Milwaukee Coast Guard Impoundment; and House Finches in Dane, Manitowoc, Outagamie, Sheboygan, and Winnebago Counties.

Reports (1 August–30 November 1987)

Red-throated Loon.—Reported from October 16 to November 14 in Douglas County by Johnson, from October 17 to November 14 in Ozaukee County by Baughman, on October 27 in Bayfield County by Swengel, and on November 7 in Ozaukee County by Tessen.

Common Loon.—Found at the beginning of the period in Ashland, Barron, Bayfield, Burnett, Douglas, Iron, Oneida, Price, and Vilas Counties. Verch found 15 in Ashland and Bayfield Counties on October 11. Reported at the end of the period in Chippewa, Dane, and Sheboygan Counties.

Pied-billed Grebe.—Reported at the beginning of the period in scattered areas throughout the state. Parsons found 30 in Walworth County on August 30 and Hale found 30 in Jefferson County on October 14. Last reported by Hansen in Dane County on November 29.

Horned Grebe.—First reported by Swengel in Bayfield County on August 4. Verch found 60 in Ashland and Bayfield Counties on October 11. Found at the end of the period in Milwaukee, Ozaukee, and Trempeleau Counties.

Red-necked Grebe.—Found at the beginning of the period in Columbia and Winnebago Counties. Ziebell found 10 in Winnebago County on September 5. Last reported on November 27 in Waukesha County. Also found in Bayfield, Dane, and Douglas Counties.

Eared Grebe.—First reported by the Leg-

lers in Columbia County on September 28. Ashman found 5 in Columbia County on October 11. Last reported by Sontag in Manitowoc County on November 7. Also reported in Bayfield and Ozaukee Counties.

Western Grebe.—Swengel found 2 in Bayfield County on October 28.

American White Pelican.—The Sheas found 3 in Dodge County on August 23. Polk reported an unidentified pelican sp. in Eau Claire County on August 16.

Double-crested Cormorant.—Reported in scattered areas throughout the state at the beginning of the period. Tessen found 300 in Brown County on October 17. Found at the end of the period in Chippewa and Trempeleau Counties.

American Bittern.—Found at the beginning of the period in Ashland, Barron, Bayfield, Burnett, Iron, Jackson, Marinette, Price, and Portage Counties. Last reported by Williams in Milwaukee County on October 24.

Least Bittern.—Reported at the beginning of the period in Dane, Iron, Marinette, and Vilas Counties. Last reported by Ashman in Dane County on August 22.

Great Blue Heron.—Found throughout the state at the beginning of the period. Ziebell found 84 in Winnebago County on September 5. Last reported by L. Risch in Clark County on November 23.

Great Egret.—Reported at the beginning of the period in Burnett, Crawford, Dane, Polk, Trempeleau, and Winnebago Counties. Ziebell found 286 in Winnebago County on September 5. Last reported by Lesher in La Crosse County on November 19.

Cattle Egret.—Reported during the period in Brown, Dodge, Douglas, Green, Milwaukee, and Taylor Counties. DeBoer found 6 in Milwaukee County on August 2. Last reported by Lewis in Green County on November 14.

Green-backed Heron.—Found throughout the state at the beginning of the period. Tessen found 15 in Winnebago County on August 19. Last reported by Wierzbicki in Brown County on October 31.

Black-crowned Night-Heron.—Reported at the beginning of the period in Brown, Columbia, Manitowoc, Marinette, Milwaukee, Portage, and Winnebago Counties. Tessen found over 30 in Winnebago County on August 19. Last reported by Sontag in Manitowoc County on October 19.

Yellow-crowned Night-Heron.—Reported from the beginning of the period to September 6 in Outagamie County by Anderson and Gill, on August 19 in Outagamie County by Peterson, on August 19 in Manitowoc County by Sontag, on September 6 in Dane County by Ashman, and on September 12 in Clark County by L. Risch.

Tundra Swan.—First reported by Pickering in Langlade County on October 1. Lesher found 4000 in Vernon County on November 28. Found at the end of the period in Ashland, Bayfield, Chippewa, Columbia, Monroe, Shawano, Trempeleau, and Winnebago Counties.

Mute Swan.—Reported at the beginning of the period in Ashland, Bayfield, and Douglas Counties. Tessen found 15 in Waukesha County on October 3. Found at the end of the period in Ashland, Bayfield, and Shawano Counties.

Greater White-fronted Goose.—The Leglers found 2 in Dodge County on October 1 and 7 in Dodge County on October 2, Tessen found 3 in Dodge County on October 3, and reported by Baughman in Dodge County on October 4.

Snow Goose.—First reported by Robbins in Dodge County on September 30. Ziebell found 60 in Winnebago County on October 31. Found at the end of the period in Dodge, Sauk and Taylor Counties.

Canada Goose.—Found throughout the state at the beginning of the period. Ziebell found 2000 in Winnebago County on October 10. Found in scattered areas throughout the state at the end of the period.

Wood Duck.—Found throughout the state at the beginning of the period. Ziebell found 60 in Winnebago County on September 5. Reported at the end of the period in Chippewa,

Fond du Lac, Ozaukee, and Washington Counties.

Green-winged Teal.—Found at the beginning of the period in Barron, Burnett, Dane, Manitowoc, Marinette, and Portage Counties. Ziebell found 14 in Winnebago County on October 18. Last reported by Ashman in Dane County on November 14.

American Black Duck.—Reported at the beginning of the period in Ashland, Barron, Bayfield, Dane, Manitowoc, Marinette, and Portage Counties. Martin found 300 in Columbia County on November 28. Found at the end of the period in Ashland, Bayfield, Columbia, Dane, Green Lake, Manitowoc, Marinette, Portage, Shawano, and Winnebago Counties.

Mallard.—Found throughout the state at the beginning of the period. Martin found 9100 in Columbia County on November 28. Found in scattered areas throughout the state at the end of the period.

Northern Pintail.—Found at the beginning of the period in Marinette County by Lindberg. Ashman found 5 in Columbia County on November 15. Reported at the end of the period in Chippewa and Columbia Counties.

Blue-winged Teal.—Reported throughout the state at the beginning of the period. Martin found 140 in Columbia County on September 20. Last reported by T. Risch in Jackson County on November 9.

Northern Shoveler.—Found at the beginning of the period in Barron and Marinette Counties. Ashman found 55 in Dane County on November 21. Reported at the end of the period in Dane and Winnebago Counties.

Gadwall.—Reported at the beginning of the period in Marinette County by Lindberg. Ashman found 158 in Dane County on November 21. Found at the end of the period in Ashland, Bayfield, and Dane Counties.

Eurasian Wigeon.—Harriman found one in Horicon National Wildlife Area on November 7. See By the Wayside.

American Wigeon.—First reported by Johnson in Douglas County on August 8. Peterson found 500 in Shawano County on October 23. Found at the end of the period in Dane County by Ashman.

Canvasback.—First reported by Diehl. In Columbia County on October 10. Epstein found 18 in Monroe County on October 17. Reported at the end of the period in Columbia County by Ashman.

Redhead.—Found at the beginning of the period in Winnebago County by Ziebell. Verch found 147 in Ashland and Bayfield Counties on October 18. Reported at the end of the period in Dane County by Ashman.

Ring-necked Duck.—Found at the beginning of the period in Barron and Burnett Counties. Ziebell found 30 in Winnebago County on October 18. Reported at the end of the period in Dane and Eau Claire Counties.

Greater Scaup.—First reported by Verch in Ashland and Bayfield Counties on September 15. Sontag found 200 in Manitowoc County on October 14. Found at the end of the period in Bayfield, Chippewa, Manitowoc, Milwaukee, and Sheboygan Counties.

Lesser Scaup.—First reported by Tessen in Brown County on August 11. Parsons found 500 in Walworth County on November 15. Found at the end of the period in Bayfield, Dane, Portage, Sauk, and Winnebago Counties.

Harlequin Duck.—Sontag reported 2 in Manitowoc County from October 14 to October 16, and Hansen and Martin reported one in Columbia County on November 7.

Oldsquaw.—First reported by Ron Hoffman in Kenosha County on October 22. Baughman found 55 in Ozaukee County on November 10. Reported at the end of the period in Kenosha and Manitowoc Counties.

Black Scoter.—First reported by Johnson in Douglas County on October 10. Swengel found 15 in Bayfield County on October 28. Last reported by Tessen in Ozaukee County on November 7. Also reported in Ashland and Racine Counties.

Surf Scoter.—First reported by Tessen in Ozaukee County on October 3. Miller found 16

in Sawyer County on October 10. Last reported by Tessen in Ozaukee County on November 7. Also reported in Ashland, Bayfield, Chippewa, Douglas, and Milwaukee Counties.

White-winged Scoter.—First reported by Schultz, Baughman, and the Leglers in Ozaukee County on October 11. Baughman found 125 in Ozaukee County on November 8. Found at the end of the period by Baughman in Ozaukee County. Also found in Ashland, Bayfield, Chippewa, Dane, Douglas, Kenosha, Manitowoc, Milwaukee, and Monroe Counties.

Common Goldeneye.—Found at the beginning of the period in Vilas County by Karow. Ziebell found 60 in Winnebago County on November 18. Reported at the end of the period in scattered areas throughout the state.

Bufflehead.—First reported by Lesher in La Crosse County on August 7. Baughman found 121 in Ozaukee County on November 21. Found at the end of the period in Ashland, Bayfield, Chippewa, Dane, Douglas, Manitowoc, Milwaukee, and Sheboygan Counties.

Hooded Merganser.—Found at the beginning of the period in Barron, Burnett, Douglas, and Vilas Counties. Robbins found 55 in Dane County on November 21. Reported at the end of the period in Dane County by Ashman, Robbins, and Sutton.

Common Merganser.—Reported at the beginning of the period in Iron and Oneida Counties. Peterson found 500 in Shawano County on November 24. Found at the end of the period in Ashland, Bayfield, Dane, Douglas, Green Lake, Manitowoc, Monroe, Shawano, and Trempeleau Counties.

Red-breasted Merganser.—Found at the beginning of the period in Ashland, Bayfield, and Oneida Counties. Zehner found 70 in Milwaukee County on November 13. Reported at the end of the period in Ashland, Bayfield, Manitowoc, Milwaukee, Ozaukee, Sheboygan, and Trempeleau Counties.

Ruddy Duck.—Found at the beginning of the period in Columbia and Winnebago Counties. Williams found 160 in Milwaukee County on October 24. Last reported by Hunter in Trempeleau County on November 29.

Turkey Vulture.—Reported at the beginning of the period in scattered areas throughout the state. Lange found 220 in Sauk County on October 17. Last reported on November 21 in Ozaukee County by Baughman and in Taylor County by P. Risch.

Osprey.—Reported at the beginning of the period in Barron, Burnett, Jackson, Manitowoc, Oneida, Shawano, Trempeleau, and Vilas Counties. Berger found 14 in Sheboygan County on September 19. Last reported by Berger in Sheboygan County on November 20.

Bald Eagle.—Found at the beginning of the period south to Crawford, Jackson, Langlade and Marinette Counties. Hunter found 87 in Trempeleau County on November 26. Reported at the end of the period south to Crawford and Green Lake Counties.

Northern Harrier.—Reported at the beginning of the period in scattered areas throughout the state. Berger found 20 in Sheboygan County on November 5. Found at the end of the period in Burnett, Clark, Monroe, Portage, Richland and Winnebago Counties.

Sharp-shinned Hawk.—Found at the beginning of the period in Ashland, Bayfield, Burnett, Crawford, Green Lake, Jackson, Langlade, Marinette, Price, and Walworth Counties. Berger found 337 in Sheboygan County on September 19. Reported at the end of the period in Clark, Crawford, Green Lake, Manitowoc, and Sauk Counties.

Cooper's Hawk.—Reported at the beginning of the period in Bayfield, Burnett, Crawford, Dane, Green Lake, Jackson, Sauk, and Taylor Counties. Berger found 6 in Sheboygan County on October 30. Reported at the end of the period in Crawford, Green Lake, Sauk, and Taylor Counties.

Northern Goshawk.—Reported at the beginning of the period in Ashland, Bayfield, and Iron Counties. Erdman reported 8 during the period at the Little Suamico Banding Station in Oconto County. Reported at the end of the period in Ashland and Bayfield Counties.

Red-shouldered Hawk.—Found at the beginning of the period in Marinette, Outagamie, Polk and Sauk Counties. Epstein found 8

in Monroe County on October 24. Last reported by Swengel in Sauk County on November 4.

Broad-winged Hawk.—Reported at the beginning of the period south to Sauk, Dane, and Fond du Lac Counties. Epstein found 1600 in Monroe County on September 20. Last reported by Merz in Crawford County on November 8.

Red-tailed Hawk.—Found throughout the state at the beginning of the period. Berger found 286 in Sheboygan County on October 24. Reported at the end of the period north to Burnett, Barron, Taylor, Portage, and Sheboygan Counties.

Rough-legged Hawk.—First reported by L. Risch in Clark County on September 20. Ziebell found 4 in Winnebago County on October 24. Found at the end of the period south to Monroe, Sauk, Green Lake, Winnebago, and Manitowoc Counties.

Golden Eagle.—First reported by Erdman in Oconto County on September 26. Erdman reported 5 at the Little Suamico Banding Station in Oconoto County during the period. Last reported by Epstein in Monroe County on November 15. Also reported during the period in Burnett, Green Lake, Ozaukee, and Sheboygan Counties.

American Kestrel.—Found throughout the state at the beginning of the period. Parsons found 75 in Walworth County on September 20. Reported at the end of the period north to Burnett, Barron, Taylor, and Marinette Counties.

Merlin.—Reported at the beginning of the period in Ashland and Bayfield Counties by Verch. Baughman found 42 in Ozaukee County on October 18. Last reported by Polk in Dunn County on November 25.

Peregrine Falcon.—First reported on August 17 in Marquette County by Swengel and in Sauk County by Smith. Berger found 9 in Sheboygan County on October 5. Last reported by Baughman on October 18 in Ozaukee County.

Gray Partridge.—Reported throughout the period in Marinette County by Lindberg.

Ring-necked Pheasant.—Found during the period north to Douglas, Clark, and Marinette Counties. Ziebell found 4 in Winnebago County on October 31.

Spruce Grouse.—Reported by Reardon in Vilas County on August 5, by Hardy in Price County from September 21–28, by DeBoer in Forest County on October 10, and by Tessen on October 17 in Forest and Oneida Counties.

Ruffed Grouse.—Reported during the period south to Grant, Richland, Sauk, Green Lake, and Ozaukee Counties. Hardy reported a maximum of 14 in Price County during the period.

Greater Prairie Chicken.—Reported throughout period in Burnett County by Hoefler and in Portage County by Semo.

Sharp-tailed Grouse.—Found throughout the period in Burnett County by Hoefler. The Sheas found 25 in Burnett County on September 24.

Wild Turkey.—Reported during the period in Crawford, Iowa, Jackson, Marinette, Monroe, and Sauk Counties. Merz found 23 in Crawford County on October 22.

Northern Bobwhite.—Found during the period in Crawford, Dane, Jackson, Kenosha, Milwaukee, Monroe, Richland, Sauk, and Trempeleau Counties. Duerksen found 18 in Richland County on August 17.

King Rail.—Robbins found 2 in Dane County on August 15 and Swengel found one in Dodge County on August 20.

Yellow Rail.—Swengel found one in Kewaunee County on September 15.

Virginia Rail.—Reported at the beginning of the period in Ashland, Bayfield, Columbia, Dane, and Winnebago Counties. Last reported by Williams in Milwaukee County on October 24.

Sora.—Found at the beginning of the period in Ashland, Barron, Bayfield, Columbia, Dane, Manitowoc, Marinette, Trempeleau, and Winnebago Counties. Ashman found 11 in Dane County on September 5. Last reported by Ziebell in Winnebago County on October 21.

Common Moorhen.—Reported at the beginning of the period in Dane, Marinette, Walworth, and Winnebago Counties. Parsons found 15 in Walworth County on August 30 and Swengel found 15 in Columbia County on September 2. Last reported by Parsons in Walworth County on October 19.

American Coot.—Found at the beginning of the period south to Dane and Walworth Counties. Peterson found 10,000 in Shawano County on October 23. Reported at the end of the period in Clark, Dane, Green Lake, Sheboygan, Walworth, and Winnebago Counties.

Sandhill Crane.—Reported at the beginning of the period in scattered areas throughout the state. Hoefler found 1170 in Burnett County on October 24. Reported at the end of the period in Burnett County by Hoefler.

Black-bellied Plover.—First reported by Tessen in Brown County on August 4. Johnson found 17 in Douglas County on September 22. Last reported on November 7 in Sheboygan County by the Brassers and Tessen.

Lesser Golden Plover.—First reported by Williams in Rock County on August 12. Robbins found 90 in Columbia County on October 18. Last reported by Tessen in Columbia County on November 8.

Semipalmated Plover.—Found at the beginning of the period in Dane, Manitowoc, and Walworth Counties. Frank found 8 in Milwaukee County on August 23. Last reported by Sontag in Manitowoc County on October 29.

Piping Plover.—Randy Hoffman found one in Columbia County on August 3 and Sontag found one in Manitowoc County on September 20.

Killdeer.—Found throughout the state at the beginning of the period. DeBoer found 400 in Racine County on August 28. Last reported by Ashman in Dane County on November 14.

American Avocet.—DeBoer found one in Milwaukee County on August 2 and Robbins found 4 in Columbia County on October 18.

Greater Yellowlegs.—Reported at the beginning of the period in Ashland, Bayfield, Burnett, Dane, Douglas, Marinette, and Milwaukee Counties. Williams found 16 in Milwaukee County on August 16. Last reported on November 4 in Chippewa County by Polk and in Milwaukee County by Cederstrom.

Lesser Yellowlegs.—Found at the beginning of the period in Ashland, Bayfield, Burnett, Dane, Douglas, Marinette, Milwaukee, Sheboygan, and Waukesha Counties. The Brassers found 44 in Sheboygan County on August 9. Last reported by Robbins in Dane County on November 4.

Solitary Sandpiper.—Reported at the beginning of the period in Clark, Dane, Douglas, Outagamie, Shawano, Taylor, and Waukesha Counties. Thiessen found 50 in Dane County on August 1. Last reported by Diehl in Milwaukee County on October 18.

Willet.—DeBoer found one in Milwaukee County on August 16, Sontag found one in Manitowoc County on August 18, and Verch found one in Ashland and Bayfield Counties on October 27.

Spotted Sandpiper.—Reported in scattered areas throughout the state at the beginning of the period. Zehner found 6 in Milwaukee County on August 4. Last reported by Ron Hoffman in Kenosha County on October 22.

Upland Sandpiper.—Reported at the beginning of the period in Ashland, Bayfield, Burnett, Iron, and Marinette Counties. Randy Hoffman found 7 in Columbia County on August 11. Last reported by Hoefler in Burnett County on September 10.

Whimbrel.—Johnson found 2 in Douglas County on September 10.

Hudsonian Godwit.—Reported by Berger in Sheboygan County on August 22, by the Leglers in Brown County on September 6, and by the Leglers in Dodge County on October 1.

Marbled Godwit.—Reported by DeBoer in Milwaukee County on August 2, by Robbins and Swengel in Dodge County on August 12, by Johnson in Douglas County from August 15–18, and in Douglas County on August 21 by DeBoer.

Ruddy Turnstone.—First reported by

Robbins in Dodge County on August 12. The Brassers found 6 in Sheboygan County on October 13. Last reported on October 24 in Sheboygan County by the Brassers and in Milwaukee County by Williams.

Red Knot.—First reported on August 11 in Kewaunee and Manitowoc Counties by Swengel. Last reported on September 6 in Milwaukee County by DeBoer.

Sanderling.—Found at the beginning of the period in Douglas, Manitowoc, Marinette, and Milwaukee Counties. The Brassers found 30 in Sheboygan County on October 14. Last reported on November 7 in Sheboygan County by the Brassers and Tessen.

Semipalmated Sandpiper.—Reported at the beginning of the period in Dane, Douglas, Marinette, Milwaukee, and Waukesha Counties. Thiessen found 40 in Dane County on August 1. Last reported by Cederstrom in Milwaukee County on November 4.

Western Sandpiper.—First reported by Swengel in Manitowoc County on August 11. Williams found 9 in Milwaukee County on September 26. Last reported on October 25 in Milwaukee County by Randy Hoffman and Robbins. Also found in Columbia and Dane Counties.

Least Sandpiper.—Found at the beginning of the period in Dane, Douglas, Marinette, and Waukesha Counties. Thiessen found 30 in Dane County on August 23. Last reported by Cederstrom in Milwaukee County on October 21.

White-rumped Sandpiper.—First reported by Mueller in Milwaukee County on August 10. Tessen found 3 in Milwaukee County on October 17. Last reported by Baughman in Douglas County on November 21.

Baird's Sandpiper.—Reported at the beginning of the period in Douglas County by Johnson. Thiessen found 8 in Dane County on August 29. Last reported by Robbins in Dane County on October 29.

Pectoral Sandpiper.—Found at the beginning of the period in Dane, Douglas, Marinette, Milwaukee, Sheboygan, Taylor and Waukesha Counties. Thiessen found 180 in Dane County on October 11. Last reported by Polk in Chippewa County on November 16.

Purple Sandpiper.—Reported by the Brassers in Sheboygan County on October 14 and by DeBoer and Idzikowski in Milwaukee County on November 1. These records were accepted by the Records Committee. See By the Wayside.

Dunlin.—Reported at the beginning of the period in Douglas County by Johnson. Tessen found 115 in Milwaukee County on October 17. Last reported by the Brassers in Sheboygan County on November 22.

Stilt Sandpiper.—Found at the beginning of the period in Dane, Douglas, and Milwaukee Counties. Williams found 65 in Milwaukee County on August 16. Last reported by Thiessen in Dane County on October 17.

Buff-breasted Sandpiper.—First reported by Robbins in Dane County on August 4. Tessen found 7 in Shawano County on August 17. Last reported by Johnson in Douglas County on September 5. Also found in Columbia, Racine, and Rock Counties.

Short-billed Dowitcher.—Found at the beginning of the period in Dane and Milwaukee Counties. Williams found 24 in Milwaukee County on August 16. Last reported by Baughman in Manitowoc County on October 11.

Long-billed Dowitcher.—First reported by Mueller in Milwaukee County on August 7. The Leglers found 15 in Dane County on October 4. Last reported by Robbins in Columbia County on October 20.

Dowitcher (species unidentified).—Last reported by Robbins in Dane County on November 4.

Common Snipe.—Found at the beginning of the period in scattered areas throughout the state. Tessen found 25 in Brown County on October 17 and Lindberg found 25 in Marinette County on October 24. Reported at the end of the period in Barron County by Goff.

American Woodcock.—Reported at the beginning of the period south to Richland, Sauk, and Winnebago Counties. Last reported by Hoefler in Burnett County on November 1.

Wilson's Phalarope.—Found at the beginning of the period in Dane and Marinette Counties. Lison and Ottinger found 6 in Dane County on September 6. Last reported by Swengel in Columbia County on September 9.

Red-necked Phalarope.—First reported by the Leglers in Dane County on August 27. Lison and Ottinger found 6 in Dane County on September 4. Last reported by Robbins in Dane County on October 3.

Parasitic Jaeger.—Reported by Swengel in Bayfield County on August 3, by Johnson in Douglas County from September 20 to October 29, and by Knue in Bayfield County on October 3.

Jaeger (species unidentified).—Reported by Polk in Douglas County on September 12, and by the Leglers in Douglas County on September 26 and October 29.

Franklin's Gull.—First reported by DeBoer in Milwaukee County on August 1. Huduck found 150 in Polk County on September 26. Last reported by Lison and Ottinger in Columbia County on October 8.

Little Gull.—Found at the beginning of the period in Manitowoc and Milwaukee Counties. Swengel found 6 in Manitowoc County on August 12. Last reported by Tessen in Milwaukee County on October 3.

Bonaparte's Gull.—Found at the beginning of the period in Douglas, Manitowoc, Milwaukee, and Sheboygan Counties. Cederstrom found 300 in Milwaukee County on October 21. Reported at the end of the period in Milwaukee County by Bontly.

Ring-billed Gull.—Reported at the beginning of the period in scattered areas throughout the state. Ziebell found 2000 in Winnebago County on September 13. Reported at the end of the period in scattered areas throughout the state.

Herring Gull.—Reported at the beginning of the period in scattered areas throughout the state. Johnson found over 1000 in Douglas County on November 21. Found in scattered areas throughout the state at the end of the period.

Thayer's Gull.—Reported by Baughman in Milwaukee County on October 31, by Knue in Ashland County on November 8, and by Williams in Milwaukee County on November 21.

Iceland Gull.—Johnson reported one in Douglas County from November 18 to 21. This record was accepted by the Records Committee. See By the Wayside.

Glaucous Gull.—Reported by Johnson in Douglas County from November 14 to the end of the period with a maximum of 3 on November 21, and by Lison and Ottinger in Manitowoc County on November 29.

Sabine's Gull.—Johnson reported one in Douglas County from October 28 to 30. This record was accepted by the Records Committee. See By the Wayside.

Caspian Tern.—Found at the beginning of the period in Douglas, Manitowoc, Marinette, Milwaukee, and Sheboygan Counties. Tessen found 225 in Kewaunee County on August 4. Last reported by Baughman in Ozaukee County on October 18.

Common Tern.—Reported at the beginning of the period in Ashland, Bayfield, Douglas, Iron, Manitowoc, Marinette, Milwaukee, and Winnebago Counties. Johnson reported over 500 in Douglas County on September 5. Last reported by Baughman in Manitowoc County on October 18.

Forster's Tern.—Reported at the beginning of the period in Manitowoc, Marinette, Milwaukee, and Winnebago Counties. Cederstrom found 50 in Milwaukee County on August 13. Last reported by Baughman in Manitowoc County on October 18.

Black Tern.—Found at the beginning of the period in Ashland, Barron, Bayfield, Dane, Iron, Manitowoc, Marinette, Monroe, Trempeleau, Vilas, Walworth, and Winnebago Counties. Lesher found 50 in La Crosse County on August 7. Last reported by the Brassers in Sheboygan County on September 7.

Rock Dove.—Found throughout the state during the period. Ron Hoffman found 380 in Kenosha County on October 22.

Mourning Dove.—Reported throughout the state during the period. Lesher found 500 in La Crosse County on August 4.

Black-billed Cuckoo.—Reported at the beginning of the period in Ashland, Barron, Bayfield, Burnett, Dane, Douglas, Iron, Jackson, Langlade, Price, Richland, and Walworth Counties. Last reported by Hoefler in Burnett County on September 28.

Yellow-billed Cuckoo.—Found at the beginning of the period in Ashland, Bayfield, Iron, and Richland Counties. Last reported by the Brassers in Sheboygan County on September 26.

Ani (species unidentified).—Hans Kuhn reported a Smooth-billed Ani in Sheboygan County on October 19. This record was accepted by the Records Committee. See By the Wayside.

Common Barn Owl.—The Burns reported 2 at the Franklin Lake Campground in Forest County from August 10 to 13. See By the Wayside.

Eastern Screech Owl.—Reported during the period in Barron, Dane, Jackson, Jefferson, Langlade, Milwaukee, Monroe, Outagamie, Price, Richland, Sauk, Sheboygan, Walworth, and Washington Counties.

Great Horned Owl.—Found throughout the state during the period.

Snowy Owl.—First reported by Semo in Portage County on October 25. Sontag found 3 in Manitowoc County on November 8. Reported at the end of the period in Ashland, Bayfield, Douglas, Iron, Kewaunee, Manitowoc, Sheboygan, and Taylor Counties.

Barred Owl.—Reported during the period south to Crawford, Richland, Sauk, Dane, and Kenosha Counties.

Long-eared Owl.—Berger reported one in Sheboygan County on October 28.

Short-eared Owl.—Reported by L. Risch in Clark County on August 29, and by DeBoer in Kenosha County from November 15 to the end of the period.

Northern Saw-whet Owl.—Found at the beginning of the period in Ashland, Bayfield, and Marinette Counties. Erdman reported 86 the night of October 19–20 at the Little Suamico Banding Station in Oconto County with 526 caught during the fall migration. Last reported by Berger in Sheboygan County on November 14.

Common Nighthawk.—Found throughout the state at the beginning of the period. Berger reported 7500 in Sheboygan County on August 30. Last reported by Schultz in Ozaukee County on October 11.

Whip-poor-will.—Reported at the beginning of the period in Ashland, Bayfield, Crawford, Iron, Jackson, Marinette, Price, and Vilas Counties. Karow found 3 in Vilas County on September 7. Last reported by Karow in Vilas County on September 15.

Chimney Swift.—Found throughout the state at the beginning of the period Leher found 300 in La Crosse County on October 8. Last reported by Williams in Kenosha County on October 24.

Ruby-throated Hummingbird.—Found at the beginning of the period south to Crawford, Richland, Sauk, Dane, and Walworth Counties. Tessen found 15 in Menominee County on August 7. Last reported by Hardy in Price County on October 8.

Belted Kingfisher.—Found throughout the state at the beginning of the period. Sontag found 7 in Manitowoc County on September 10. Found at the end of the period in Ashland, Bayfield, Crawford, Dane, Green Lake, Marinette, and Trempeleau Counties.

Red-headed Woodpecker.—Reported throughout the state at the beginning of the period. Hunter found 5 in Trempeleau County on September 7. Found at the end of the period in Jackson, Marinette, Portage, and Sauk Counties.

Red-bellied Woodpecker.—Reported during the period north to Burnett, Bayfield, Ashland, Taylor, Langlade, and Marinette Counties. Duerksen found 4 in Richland County on October 18.

Yellow-bellied Sapsucker.—Reported at the beginning of the period south to Jackson,

Richland, Portage, and Shawano Counties. Tessen found 15 in Ozaukee County on September 26. Reported at the end of the period in Jackson and Washington Counties.

Downy Woodpecker.—Found throughout the state during the period. Ashman found 8 in Dane County on October 3.

Hairy Woodpecker.—Reported throughout the state during the period. Ashman found 5 in Dane County on September 20.

Black-backed Woodpecker.—Reported by Reardon in Forest County on August 18, by DeBoer in Douglas County on August 20, by Bontly in Sawyer County on September 2, by Reardon in Vilas County on October 27, and by the Leglers in Oneida County on November 8.

Northern Flicker.—Found throughout the state at the beginning of the period. Hardy found 75 in Price County on September 12. Reported at the end of the period in Clark, Outagamie, Ozaukee, Portage, and Sauk Counties.

Pileated Woodpecker.—Reported during the period south to Grant, Sauk, and Green Lake Counties, Johnson found 3 in Douglas County on August 8 and the Engbergs found 3 in Oneida County on August 15.

Olive-sided Flycatcher.—Found at the beginning of the period in Barron, Bayfield, and Vilas Counties. Tessen found 4 in Forest County on August 7. Last reported by Lange in Sauk County on September 6.

Eastern Wood-Pewee.—Found throughout the state at the beginning of the period. Parsons found 10 in Walworth County on September 3. Last reported by Anderson and Gill in Outagamie County on October 14.

Yellow-bellied Flycatcher.—First reported by Bontly and Zehner in Milwaukee County on August 17. Last reported by L. Risch in Clark County on September 13.

Acadian Flycatcher.—Reported at the beginning of the period in Fond du Lac and Washington Counties by Baughman.

Alder Flycatcher.—Found at the beginning of the period in Ashland, Bayfield, Douglas, Fond du Lac, Iron, Shawano, Sheboygan, and Washington Counties. Last reported by L. Risch in Clark County on August 29.

Willow Flycatcher.—Reported at the beginning of the period in Dane, Fond du Lac, Sauk, and Washington Counties. Ashman found 3 in Dane County on August 4. Last reported by L. Risch in Clark County on September 10.

Least Flycatcher.—Reported at the beginning of the period south to Sauk, Dane, and Washington Counties. Last reported on September 18 in Sauk County by Lange and in Chippewa County by Zehner.

Eastern Phoebe.—Found throughout the state at the beginning of the period. Ashman found 4 in Dane County on August 15, the Kuhns found 4 in Sheboygan County on September 21, and Tessen found 4 in Ozaukee County on September 26. Last reported by Bontly in Milwaukee County on November 4.

Great Crested Flycatcher.—Reported throughout the state at the beginning of the period. Ashman found 4 in Dane County on August 10. Berger found a very late one in Sheboygan County on November 5.

Eastern Kingbird.—Found throughout the state at the beginning of the period. Peterson found 37 in Shawano County on August 1. Last reported on September 15 in Crawford County by Merz and in Jackson County by T. Risch.

Scissor-tailed Flycatcher.—Baughman found one in Ozaukee County on October 17. This record was accepted by the Records committee. See By the Wayside.

Horned Lark.—Reported at the beginning of the period in scattered areas throughout the state. Epstein found 33 in Monroe County on October 22. Found at the end of the period in Barron, Burnett, Clark, Dane, Green Lake, Jackson, Richland, Sauk, Taylor, Walworth, and Winnebago Counties.

Purple Martin.—Found throughout the state at the beginning of the period. Ziebell found 130 in Winnebago County on August 29. Last reported by the Brassers in Sheboygan County on September 26.

Tree Swallow.—Reported throughout the state at the beginning of the period. Martin reported over 5000 in Columbia County on October 1. Mueller found a very late one in Oconto County on November 21.

Northern Rough-winged Swallow.—Found in scattered areas throughout the state at the beginning of the period. The Engbergs found 10 in Oneida County on August 17. Last reported by Tessen in Outagamie County on October 25.

Bank Swallow.—Reported throughout the state at the beginning of the period. Lindberg found 200 in Marinette County on August 15. Last reported by Goff in Barron County on September 13.

Cliff Swallow.—Found throughout the state at the beginning of the period. Lindberg found 200 in Marinette County on August 15. Last reported on September 23 in Jackson County by T. Risch and by Peterson in Shawano County.

Barn Swallow.—Found throughout the state at the beginning of the period. Ziebell found 160 in Winnebago County on September 3. Last reported by Ron Hoffman in Kenosha County on October 22.

Gray Jay.—Reported during the period in Forest, Iron, Langlade, Oneida, Price, Sawyer, and Vilas Counties. Tessen found 11 in Forest County on October 17.

Blue Jay.—Found throughout the state during the period. Epstein found 180 in Monroe County on September 20.

American Crow.—Reported throughout the state during the period. The Engbergs found 60 in Oneida County on August 12.

Common Raven.—Reported during the period south to Monroe, Sauk, and Sheboygan Counties. Tessen found 15 in Forest County on August 17.

Black-capped Chickadee.—Found throughout the state during the period. Ron Hoffman found 137 in Kenosha County on October 22.

Boreal Chickadee.—Reported during the period in Forest, Langlade, Oneida, Sheboygan, and Vilas Counties. The leglers found 6 in Oneida County on August 20.

Tufted Titmouse.—Found during the period in Crawford, Dane, Grant, and Jackson Counties.

Red-breasted Nuthatch.—Reported at the beginning of the period south to Jackson, Sauk, and Milwaukee Counties. Tessen found 15 in Ozaukee County on September 26. Found at the end of the period in scattered areas throughout the state.

White-breasted Nuthatch.—Found throughout the state at the beginning of the period. Ron Hoffman found 7 in Kenosha County on October 22.

Brown Creeper.—Reported at the beginning of the period in Ashland, Bayfield, Burnett, Douglas, Iron, Milwaukee, Polk, Portage, and Vilas Counties. Tessen found 35 in Ozaukee County on September 26. Found at the end of the period in Ashland, Bayfield, Dane, Portage, Trempeleau, and Winnebago Counties.

Carolina Wren.—Bontly found one in Milwaukee County on October 15 and Aune found one in Waukesha County on November 10.

House Wren.—Found throughout the state at the beginning of the period. Parsons found 37 in Walworth County on August 6. Last reported by Parsons in Walworth County on October 12.

Winter Wren.—Reported at the beginning of the period in Ashland, Bayfield, Douglas, Iron, Langlade, Marinette, Sauk, and Vilas Counties. Ashman found 6 in Dane County on October 3 and Sontag found 6 in Manitowoc County on October 16. Reported at the end of the period in Sauk County by Lange.

Sedge Wren.—Found at the beginning of the period in Ashland, Barron, Bayfield, Clark, Dane, Green Lake, Iron, Jackson, Marinette, Polk, Sauk, Shawano, and Winnebago Counties. Ziebell found 4 in Winnebago County on August 1. Last reported by Schultz in Green Lake County on September 30.

Marsh Wren.—Reported at the beginning

of the period in Ashland, Barron, Bayfield, Dane, Green Lake, Iron, Jackson, Marinette, Sheboygan, and Winnebago Counties. Ashman found 10 in Dane County on August 4. Last reported by Diehl in Milwaukee County on October 14.

Golden-crowned Kinglet.—Reported at the beginning of the period in Douglas, Langlade, and Walworth Counties. Tessen found 70 in Ozaukee County on September 26. Found at the end of the period in Dane, Portage, Sauk, and Trempeleau Counties.

Ruby-crowned Kinglet.—Found at the beginning of the period in Iron and Vilas Counties. Ashman found 30 in Dane County on October 3. Reported at the end of the period in Clark, Taylor, and Walworth Counties.

Blue-gray Gnatcatcher.—Reported at the beginning of the period in Dane, Polk, Richland, and Sauk Counties. Peterson found 4 in Shawano County on August 5. Last reported by Baughman in Ozaukee County on October 18.

Eastern Bluebird.—Found throughout the state at the beginning of the period. Hudick found 54 in Polk County on September 20 and the Sheas found 76 in Burnett County from September 24 to 25. Last reported by Hoefler in Burnett County on November 2.

Veery.—Reported at the beginning of the period in Ashland, Barron, Bayfield, Dane, Douglas, Iron, Price, and Sauk Counties. Pickering found 6 in Langlade County on September 17. Last reported by Richter in Monroe County on October 4.

Gray-cheeked Thrush.—First reported by Pickering in Langlade County on August 31. Last reported by Tessen in Forest County on October 17.

Swainson's Thrush.—Found at the beginning of the period in Douglas and Iron Counties. Cederstrom found 30 in Milwaukee County on September 12. Last reported by Berger in Sheboygan County on October 19.

Hermit Thrush.—Reported at the beginning of the period in Ashland, Barron, Bayfield, Douglas, Iron, Marinette, Oneida, Shawano, and Vilas Counties. Randy Hoffman found 40 in Ozaukee County on October 10. Reported at the end of the period in Dane County by Ashman.

Wood Thrush.—Found at the beginning of the period in Ashland, Barron, Bayfield, Dane, Green Lake, Iron, Marinette, Outagamie, Price, Richland, Sauk, Vilas, and Walworth Counties. Last reported by the LaValleys in Iron County on October 11.

American Robin.—Reported throughout the state at the beginning of the period. Ziebell found 600 in Winnebago County on October 18. Found at the end of the period in Ashland, Bayfield, Dane, Green Lake, Manitowoc, and Portage Counties.

Varied Thrush.—T. Risch reported one at a feeder in Clark County from November 5 to the end of the period, and Peterson reported one at a feeder in Shawano County from November 26 to the end of the period.

Gray Catbird.—Found throughout the state at the beginning of the period. Ashman found 17 in Dane County on September 20. Last reported by Bontly in Milwaukee County on October 31.

Brown Thrasher.—Found in scattered areas throughout the state at the beginning of the period. Ashman found 8 in Dane County on September 13. Reported at the end of the period at a feeder in Shawano County by Peterson.

Water Pipit.—First reported by Johnson in Douglas County on September 22. Johnson found 20 in Douglas County on October 3. Last reported by Robbins in Milwaukee County on October 25.

Bohemian Waxwing.—First reported by Pickering in Langlade County on October 10. Verch found 160 in Ashland and Bayfield Counties on November 22. Reported at the end of the period in Ashland, Bayfield, Iron, and Shawano Counties.

Cedar Waxwing.—Found throughout the state at the beginning of the period. Ashman found 150 in Dane County on September 26. Reported at the end of the period in Barron, Burnett, Dane, Green Lake, Iron, Jackson, Manitowoc, Marinette, Polk, and Portage Counties.

Northern Shrike.—First reported by Peterson in Shawano County on October 6. Hoefler found 4 in Burnett County on November 29. Reported at the end of the period in Ash-

land, Barron, Bayfield, Burnett, Clark, Green Lake, Jackson, Polk, Price, Sauk, and Taylor Counties.

Loggerhead Shrike.—Peterson found one in Shawano County on August 5.

European Starling.—Found throughout the state during the period. The LaValleys found 90 in Iron County on September 2.

White-eyed Vireo.—Reported by Williams in Kenosha County on September 12 and in Ozaukee County on October 25 by Hansen, Randy Hoffman, Robbins, and the Sheas.

Bell's Vireo.—Lesher found one in Trempeleau County on August 6.

Solitary Vireo.—Found at the beginning of the period in Ashland, Barron, Bayfield, and Iron Counties. Last reported by Wierzbicki in Brown County on October 12.

Yellow-throated Vireo.—Reported at the beginning of the period in Dane, Dodge, Douglas, Fond du Lac, Green Lake, Polk, Sauk, and Washington Counties. Last reported by Peterson in Shawano County on September 22.

Warbling Vireo.—Found at the beginning of the period in Barron, Dane, Douglas, Green Lake, Iron, Manitowoc, Polk, Sauk, Shawano, and Walworth Counties. Ashman found 5 in Dane County on August 4. Last reported by Richter in Monroe County on October 1.

Philadelphia Vireo.—First reported on August 15 in Douglas County by Johnson and in Polk County by Hudick; last reported on October 3 in Dane County by Ashman.

Red-eyed Vireo.—Found throughout the state at the beginning of the period. Ashman found 8 in Dane County on August 29. Last reported by Hansen in Dane County on September 27.

Blue-winged Warbler.—Found at the beginning of the period in Polk County by Hudick. Last reported by Peterson in Shawano County on September 4.

Golden-winged Warbler.—Reported at the beginning of the period in Barron, Douglas, Polk, Price, and Sauk Counties. Last reported by Lange in Sauk County on September 20.

Tennessee Warbler.—Found at the beginning of the period in Clark, Douglas, Iron, and Taylor Counties. The LaValleys found 40 in Iron County on September 19. Last reported on October 15 in Manitowoc County by Sontag and in Brown County by Wierzbicki.

Orange-crowned Warbler.—First reported on September 3 in Dane County by Hansen. Last reported on October 29 in Dane County by Robbins.

Nashville Warbler.—Found at the beginning of the period in Ashland, Bayfield, Clark, Douglas, Iron, Langlade, Oneida, Sauk, Shawano, and Vilas Counties. The LaValleys found 15 in Iron County on August 5. Last reported by Hansen in Dane County on October 20.

Northern Parula Warbler.—Found at the beginning of the period in Ashland, Bayfield, Douglas, Iron, and Vilas Counties. Ashman found 3 in Dane County on September 7. Last reported in Dane County on October 3 by Ashman.

Yellow Warbler.—Reported at the beginning of the period in Ashland, Barron, Bayfield, Dane, Douglas, Iron, Jackson, Marinette, Taylor, Vilas, and Walworth Counties. Last reported on September 18 in Chippewa County by Zehner.

Chestnut-sided Warbler.—Found at the beginning of the period in Ashland, Bayfield, Douglas, Iron, Marinette, Oneida, Price, Shawano, and Vilas Counties. Ashman found 4 in Dane County on September 7. Last reported by Ashman in Dane County on October 3.

Magnolia Warbler.—Reported at the beginning of the period in Ashland, Bayfield, Iron, and Vilas Counties. Ashman found 16 in Dane County on September 7. Last reported by the Kuhns on October 15 in Sheboygan County.

Cape May Warbler.—Found at the beginning of the period in Iron and Vilas Counties. Zehner found 3 in Milwaukee County on August 11. Last reported by Ziebell in Winnebago County on October 12.

Black-throated Blue Warbler.—Found

at the beginning of the period in Shawano County by Peterson. Last reported on September 15 in Jackson County by T. Risch. Also found in Dane, Iron, Milwaukee, and Price Counties.

Yellow-rumped Warbler.—Reported at the beginning of the period in Ashland, Bayfield, Clark, Douglas, Iron, Jackson, Price, Taylor, and Vilas Counties. The Sheas reported over 400 in Burnett County on September 24. Last reported by Ashman in Dane County on November 7.

Black-throated Green Warbler.—Found at the beginning of the period in Barron, Douglas, Fond du Lac, Iron, and Shawano Counties. Ashman found 3 in Dane County on September 26. Last reported by Bontly in Ozaukee County on October 16.

Blackburnian Warbler.—Found at the beginning of the period in Douglas, Iron, and Shawano Counties. Last reported by L. Risch in Clark County on September 26.

Pine Warbler.—Reported at the beginning of the period in Ashland, Bayfield, Iron, and Oneida Counties. Last reported by Merz in Crawford County on October 4.

Palm Warbler.—Found at the beginning of the period in Bayfield County by Swengel. The LaValleys found 30 in Iron County on September 19. Last reported on October 29 in Douglas County by Johnson and in Milwaukee County by Bontly.

Bay-breasted Warbler.—First reported on August 17 in Menominee County by Tessen. Thiessen found 7 in Dane County on September 19. Last reported by Sontag in Manitowoc County on October 6.

Cerulean Warbler.—Reported on August 18 in Milwaukee County by Zehner, on August 20 in Dane County by Hansen, on August 23 in Crawford County by Merz, and on August 25 in Dane County by Robbins.

Black and White Warbler.—Found at the beginning of the period in Ashland, Bayfield, Douglas, Fond du Lac, Iron, Jackson, Price, Sauk, Shawano, Sheboygan, Vilas, and Washington Counties. Ashman found 6 in Dane County on September 7. Last reported on October 14 in Brown County by Wierzbicki.

American Redstart.—Reported at the beginning of the period in Ashland, Barron, Bayfield, Dane, Douglas, Fond du Lac, Iron, Polk, Sauk, Sheboygan, and Washington Counties. Ashman found 34 in Dane County on September 7. Last reported by Ashman in Dane County on October 17.

Prothonotary Warbler.—Reported from the beginning of the period to August 21 in Polk County by Hudick and on August 23 in Trempeleau County by Hunter.

Ovenbird.—Found at the beginning of the period in Ashland, Barron, Bayfield, Clark, Crawford, Dane, Douglas, Iron, Langlade, Oneida, Polk, Price, Sauk, and Vilas Counties. Ashman found 10 in Dane County on August 29. Last reported on October 8 in Milwaukee County by Bontly and Diehl.

Northern Waterthrush.—Found at the beginning of the period in Ashland, Barron, Bayfield, Douglas, Iron, and Shawano Counties. Sontag found 3 in Manitowoc County on September 15. Last reported by Verch in Ashland and Bayfield Counties on October 13.

Louisiana Waterthrush.—Robbins found one in Dane County on September 5.

Connecticut Warbler.—Reported at the beginning of the period in Douglas County by Johnson. Last reported by L. Risch in Clark County on October 4.

Mourning Warbler.—Found at the beginning of the period in Ashland, Bayfield, Douglas, and Iron Counties. Last reported by Robbins in Dane County on September 18.

Common Yellowthroat.—Reported throughout the state at the beginning of the period. Peterson found 20 in Shawano County on September 15. Last reported by Ron Hoffman in Kenosha County on October 22.

Wilson's Warbler.—Found at the beginning of the period in Barron and Clark Counties. Last reported by Goff in Barron County on September 27.

Canada Warbler.—Reported at the beginning of the period in Douglas, Fond du Lac, Iron, Langlade, Sauk, and Shawano Counties.

The LaValleys found 5 in Iron County on August 5. Last reported by Cederstrom in Milwaukee County on September 12.

Yellow-breasted Chat.—Hansen found one in Dane County on September 3.

Scarlet Tanager.—Found at the beginning of the period south to Richland, Sauk, Dane, and Green Lake Counties. Parsons found 4 in Walworth County on September 3. Berger found a very late one in Sheboygan County on November 18.

Northern Cardinal.—Reported during the period north to Polk, Barron, Bayfield, Ashland, Iron, Langlade, and Marinette Counties. Duerksen found 16 in Richland County on November 9.

Rose-breasted Grosbeak.—Found throughout the state at the beginning of the period. Ashman found 7 in Dane County on September 7. Last reported by Sontag in Manitowoc County on October 28.

Black-headed Grosbeak.—Aune found an immature male in Waukesha County on September 23. This record was accepted by the Records Committee. See By the Wayside.

Indigo Bunting.—Reported throughout the state at the beginning of the period. Peterson found 32 in Shawano County on August 1. Last reported by Ashman in Dane County on October 10.

Dickcissel.—Found from the beginning of the period to August 7, with a maximum of 4 on August 1, in Winnebago County by Ziebell and on August 2 in Ozaukee County by Frank.

Rufous-sided Towhee.—Found throughout the state at the beginning of the period. Duerksen found 5 in Richland County on September 25. Last reported by Mahlum in Rock County on November 22.

American Tree Sparrow.—First reported by Swengel in Sauk County on September 29. Ron Hoffman found 156 in Kenosha County on October 22. Found throughout the state at the end of the period.

Chipping Sparrow.—Found throughout the state at the beginning of the period. The Engbergs found 37 in Oneida County on August 17. Last reported by Hoefler in Burnett County on November 1.

Clay-colored Sparrow.—Reported at the beginning of the period in Ashland, Barron, Bayfield, Burnett, Clark, Douglas, Langlade, Polk, Price, and Shawano Counties. Last reported by Johnson in Douglas County on October 14.

Field Sparrow.—Found at the beginning of the period north to Burnett, Barron, Price, Vilas, and Marinette Counties. The Kuhns found 8 in Sheboygan County on September 27. Last reported by Tessen in Ozaukee County on November 7.

Vesper Sparrow.—Found throughout the state at the beginning of the period. Tessen found 3 in Waukesha County on October 3. Last reported by Hoefler in Burnett County on November 2.

Savannah Sparrow.—Reported at the beginning of the period south to Monroe, Dane, and Sheboygan Counties. Ziebell found 20 in Winnebago County on August 7. Last reported by Mueller in Sheboygan County on November 15.

Grasshopper Sparrow.—Found at the beginning of the period in Fond du Lac, Iron, Ozaukee, Shawano, Sheboygan, and Trempeleau Counties. Last reported by Hunter in Trempeleau County on August 8.

Henslow's Sparrow.—Reported at the beginning of the period in Fond du Lac, Monroe, Richland, Sheboygan, and Washington Counties. Duerksen found 4 in Richland County on August 3. Last reported by Epstein in Monroe County on August 30.

Le Conte's Sparrow.—Reported at the beginning of the period in Ashland and Bayfield Counties by Verch and on October 24 in Milwaukee County by Williams.

Sharp-tailed Sparrow.—DeBoer found 3 in Milwaukee County on September 20, and Williams found one in Milwaukee County on September 26 and 2 in Milwaukee County on October 24.

Fox Sparrow.—First reported by L. Risch in Clark County on September 21. Parsons found 15 in Walworth County on October 25. Last reported by Hansen in Dane County on November 8.

Song Sparrow.—Found throughout the state at the beginning of the period. Ziebell found 30 in Winnebago County on September 6. Reported at the end of the period in Dane and Manitowoc Counties.

Lincoln's Sparrow.—Reported at the beginning of the period in Ashland, Barron, Bayfield, and Douglas Counties. Last reported by Robbins in Dane County on October 29.

Swamp Sparrow.—Found throughout the state at the beginning of the period. Ziebell found 35 in Winnebago County on October 4. Reported at the end of the period in Dane County by Ashman.

White-throated Sparrow.—Reported at the beginning of the period south to Clark, Fond du Lac, and Sheboygan Counties. Ron Hoffman found 237 in Kenosha County on October 22. Last reported by Cederstrom in Milwaukee County on November 24.

White-crowned Sparrow.—First reported by Johnson in Douglas County on August 31. Hardy reported a maximum in one day of 11. Last reported by Ziebell in Winnebago County on November 2.

Harris' Sparrow.—First reported by Verch in Ashland and Bayfield Counties on September 24. Peterson found 5 in Shawano County on October 10. Last reported by L. Risch in Clark County on October 26. Also reported in Barron, Burnett, Columbia, Douglas, Iron, Kenosha, Marathon, Milwaukee, Ozaukee, Polk, Price, and Sheboygan Counties.

Dark-eyed Junco.—Reported at the beginning of the period in Iron and Vilas Counties. Hardy found 900 in Price County on October 24. Found at the end of the period north to Burnett, Barron, Iron, Vilas, and Marinette Counties. Hansen reported one during the period in Dane County with white wing bars. Tessen reported one of the Oregon race in Outagamie County through most of November.

Lapland Longspur.—First reported by Robbins in Oneida County on September 24. Tessen found 100 in Dodge County on October 3 and Ziebell found 100 in Winnebago County on October 25. Found at the end of the period in Clark, Taylor, and Winnebago Counties.

Snow Bunting.—First reported by Hoefler in Burnett County on October 10. Hansen found over 400 in Columbia County on November 29. Reported at the end of the period in Ashland, Bayfield, Burnett, Clark, Langlade, Manitowoc, Marinette, Sheboygan, Taylor, and Winnebago Counties.

Bobolink.—Found throughout the state at the beginning of the period. Tessen found hundreds in Winnebago County on August 19. Last reported by L. Risch in Clark County on October 1.

Red-winged Blackbird.—Reported throughout the state at the beginning of the period. Duerksen found 200 in Richland County on August 2. Found at the end of the period in Barron, Crawford, Green Lake, Portage, Trempeleau, and Walworth Counties.

Eastern Meadowlark.—Found throughout the state at the beginning of the period. The Brassers found 12 in Sheboygan County on August 9. Last reported by Hunter in Trempeleau County on November 15.

Western Meadowlark.—Reported at the beginning of the period in Ashland, Bayfield, Burnett, Dane, Jackson, Marinette, Polk, Portage, and Sauk Counties. Last reported by Hoefler in Burnett County on November 1.

Yellow-headed Blackbird.—Found at the beginning of the period in Ashland, Barron, Bayfield, Columbia, Dane, Green Lake, Marinette, and Winnebago Counties. Tessen found 10 in Brown County on August 20 and Ziebell found 10 in Winnebago County on September 1. Last reported by Ziebell in Winnebago County on September 24.

Rusty Blackbird.—First reported by Verch in Ashland and Bayfield Counties on September 15. Ziebell found 40 in Winnebago County on October 4. Last reported by Anderson and Gill in Outagamie County on November 11.

Brewer's Blackbird.—Found at the beginning of the period south to Jackson and Sha-

wano Counties. Tessen found over 100 in Dodge County on October 3. Last reported by Tessen in Dane County on November 8.

Common Grackle.—Found throughout the state at the beginning of the period. Ashman found 200 in Dane County on September 20 and the LaValleys found 200 in Iron County on October 5. Reported at the end of the period in Barron, Clark, Dane, Green Lake, Monroe, Portage, Taylor, Walworth, and Winnebago Counties.

Brown-headed Cowbird.—Found throughout the state at the beginning of the period. Ron Hoffman found 11 in Kenosha County on October 22. Reported at the end of the period in Walworth County by Parsons.

Orchard Oriole.—Reported by Merz in Crawford County from the beginning of the period to August 23.

Northern Oriole.—Reported throughout the state at the beginning of the period. Pickering found 7 in Langlade County on August 7. Last reported by Richter in Monroe County on September 12.

Pine Grosbeak.—First reported by Swengel in Bayfield County on October 2. Reported at the end of the period in Ashland, Bayfield, Clark, Douglas, Iron, and Price Counties.

Purple Finch.—Found at the beginning of the period south to Burnett, Barron, Clark, and Shawano Counties. Hunter found 12 in Trempeleau County on November 27. Reported at the ed of the period south to Crawford, Sauk, Dane, Green Lake, and Winnebago Counties.

House Finch.—Reported during the period in Dane, Manitowoc, Outagamie, Sheboygan, and Winnebago Counties. Ziebell found 4 in Winnebago County on October 31.

Red Crossbill.—Reported at the beginning of the period in Ashland and Bayfield Counties by Verch. Polk found 20 in Eau Claire County on October 18. Found at the end of the period in Ashland, Bayfield, Dane, Iron, Jackson, Oneida, and Price Counties.

White-winged Crossbill.—Found at the beginning of the period in Ashland, Bayfield, and Douglas Counties. DeBoer found 25 in Douglas County on August 20. Reported at the end of the period in Ashland, Bayfield, Forest, Iron, Price and Vilas Counties.

Common Redpoll.—First reported by Swengel in Bayfield County on October 28. Tessen found 5 in Douglas County on October 31. Reported at the end of the period in Ashland, Bayfield, Clark, Douglas, Oneida, and Price Counties.

Pine Siskin.—Reported at the beginning of the period in Ashland, Barron, Bayfield, Clark, Douglas, Iron, Jackson, and Price Counties. Tessen found 200 in Ozaukee County on October 17. Found at the end of the period south to Richland, Sauk, Dane, Jefferson, and Manitowoc Counties.

American Goldfinch.—Found throughout the state during the period. Ron Hoffman found 195 in Kenosha County on October 22.

Evening Grosbeak.—Reported at the beginning of the period in Ashland, Bayfield, Clark, Douglas, Iron, Oneida, Price, Shawano, and Vilas Counties. Karow found 15 in Vilas County on August 7 and Harmer found 15 in Jackson County on October 9. Reported at the end of the period south to Jackson, Portage, Green Lake, and Winnebago Counties.

House Sparrow.—Found throughout the state during the period. Duerksen found 50 in Richland County on October 29.

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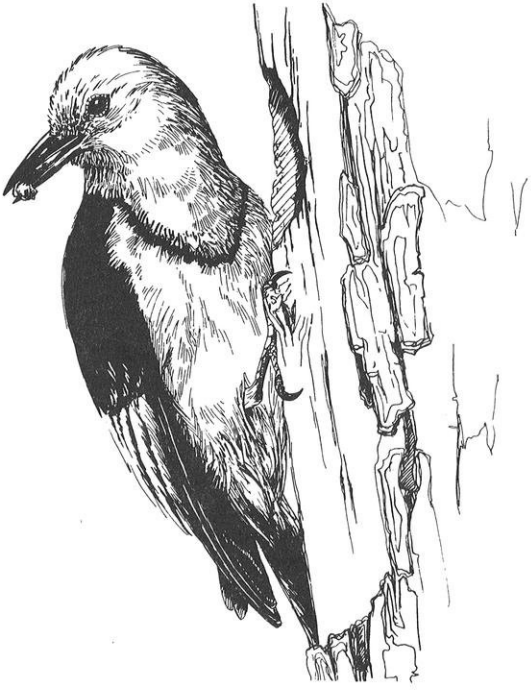
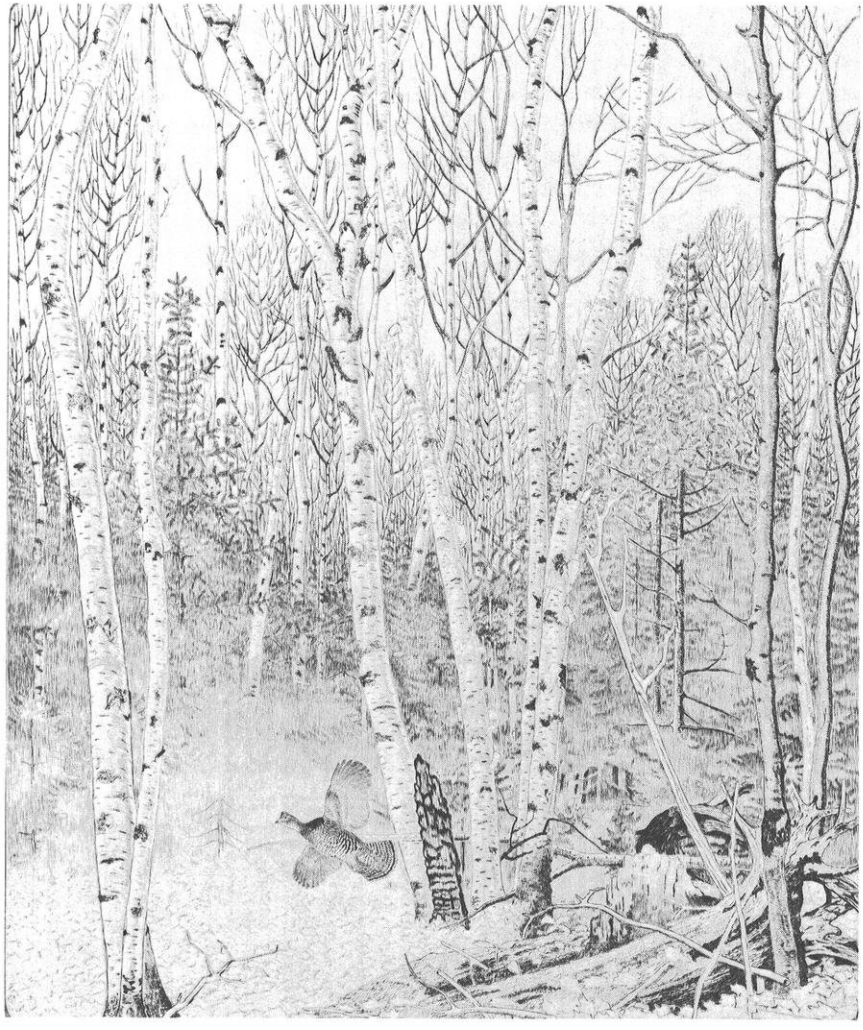


Red-headed Woodpecker *by Cary Hunkel*



Ruffed Grouse "Breaking Cover" *by Walter A. Bohl*

The Winter Season: 1987–88

by Kenneth I. Lange

It is difficult to summarize a season in a relatively few words, but this winter could be remembered as a see-saw one, with alternating periods of mild and cold weather and snowy and snow-less days. Perhaps it came close to being a "normal" Wisconsin winter.

Much of November was mild and this continued into December. By mid-December all of the state had at least an inch of snow cover, and frost depths were shallow (they remained so into January). Frigid temperatures arrived at the end of December, after many of the Christmas Bird Counts had been completed.

January was a month with two periods of above freezing temperatures, at least in southern Wisconsin, one in the middle of the month and another at the end of the month. It was also a month with two heavy snowfalls, resulting in the season's maximum average snow depth towards the end of the month of 13.8 inches, approximately 3 inches above normal.

February was cold (below normal temperatures) for approximately the first half of the month, relatively mild at mid month, cold again for a few days, and seasonal or near seasonal for the remainder of the month, with south winds on several days in the 4th week.

Here is something to watch for. Meteorologists at the University of Wisconsin have noted heavier snowfalls every other winter, especially for the Madison area. This coming winter, then, should have below normal snowfall. We shall see.

Ornithological highlights for the period included the House Finch's continuing expansion in both numbers and range, 3 species of warblers in December, a Mountain Bluebird in Milwaukee County, and a Boreal Owl in Oneida County. Another highlight was the variety of gulls along the Lake Michigan shoreline, especially in Milwaukee County; as Roger Sundell expressed it, "Through most of January and February . . . a birder could count on interesting and challenging gulls in the Milwaukee Harbor . . . Iceland, Glaucous, Mew, Great Black-backed, and Thayer's." In addition, Jeffrey L. Baughman found Wisconsin's third Laughing Gull, a first winter bird. Fred Lesher on the other side of the state reported still another highlight:

"Warmer than average temperatures into mid-December kept the Mississippi River open and allowed unusual numbers of waterfowl and gulls to linger on the Mississippi at LaCrosse . . ."

The Pine Siskin was the most numerous of the winter finches state-wide. It was in record numbers on the Christmas Bird Counts and in above normal numbers for the remainder of the period. The American Goldfinch was also in record numbers on the Christmas Bird Counts, but generally in normal numbers thereafter. There was a marked influx of the Red Crossbill into southern Wisconsin in February, whereas the White-winged Crossbill was only reported in southern Wisconsin in 5 counties, including those on the Christmas Bird Counts, for the entire period. The Pine Grosbeak was confined to northern Wisconsin and the Evening Grosbeak virtually so. The Purple Finch as usual was found throughout the state; for this winter its numbers were normal to below normal. Redpolls were in normal to below normal numbers in northern Wisconsin and typically scarce elsewhere; they were reported from the south-central and eastern parts of the state in January and February.

One raptor, the Red-tailed Hawk, was in record numbers on the Christmas Bird Counts, and the Merlin was represented by 6 individuals in as many counties, including those on the Christmas Bird Counts, a relatively high number.

The Northern Shrike was in normal to below normal numbers, after two successive winters of above normal numbers. The Mourning Dove and American Robin were generally in above normal numbers, and there was again a good movement of the Bohemian Waxwing into northern Wisconsin. Two sparrows, Song and Swamp, were in record numbers on the Christmas Bird Counts, but only the former species was reported for the entire period; perhaps the Song Sparrow is more tolerant of Wisconsin winters than the Swamp Sparrow. The Red-breasted Nuthatch, Brown Creeper, and Northern Cardinal were generally in normal numbers, while the Red-headed Woodpecker was scarce.

Sometimes we know the least about the most common species. How far north in winter, for example, do the Rock Dove, House Sparrow, and European Starling range in Wisconsin? Do any of these species (or certain populations) move south in winter? Or perhaps into cities? And what about the Dark-eyed Junco and Tree Sparrow? Just how far north are they found in Wisconsin in winter? If you have pertinent information, please let me know.

Fall migration was reported for the Tundra Swan, Canada Goose, certain ducks, and various raptors.

Spring migration occurred in the following species: Snow Goose; Canada Goose, 26–29 February, from Grant to Milwaukee counties; certain ducks; Sharp-shinned Hawk, 19–28 February, mainly southern Wisconsin; Cooper's Hawk; Red-shouldered Hawk; Red-tailed Hawk, February, southern Wisconsin; Rough-legged Hawk, February; American Kestrel; Bald Eagle, the latter half of February; Northern Harrier, 6–29 February, southern Wisconsin; Sandhill Crane, 28 February, one in Winnebago County; Killdeer, 28–29 February in 3 southern counties; Long-eared Owl; Red-headed Woodpecker; Horned Lark; Golden-crowned Kinglet; Eastern Bluebird, 28 February in 2 south-

ern counties; Cedar Waxwing, February, southern Wisconsin; Red-winged Blackbird; Eastern Meadowlark; Common Grackle, 25–29 February, southern Wisconsin, generally single birds; Brown-headed Cowbird, 27 February, Rock County; Purple Finch, an increase in February in southern Wisconsin; Red Crossbill, a major influx in February in southern Wisconsin; Common Redpoll, the last week of February, Sauk County; and Pine Siskin, an increase in February in southern Wisconsin. Refer to the species accounts for details.

A total of 83 people contributed records covering 61 counties. The following 11 counties, scattered throughout the state, were not covered: Calumet, Door, Florence, Green, Kewaunee, Lafayette, Lincoln, Marathon, Oconto, Pierce, and Washburn.

Reports (1 December 1987–29 February 1988)

Red-throated Loon.—One in Sheboygan County, 12 December (Tessen).

Common Loon.—No reports after the Christmas Bird Counts.

Pied-billed Grebe.—One record after the Christmas Bird Counts, a bird through 12 February in Dane County (many observers).

Horned Grebe.—No reports after the Christmas Bird Counts.

Double-crested Cormorant.—After the Christmas Bird Counts, an immature on 24 February in Ozaukee County (Sundell).

Great Blue Heron.—Probably throughout the period in the University of Wisconsin Arboretum, Dane County (Hansen).

Black-crowned Night-Heron.—The only report was of a single bird on the Green Bay Christmas Bird Counts.

Tundra Swan.—Migrants noted in December, especially on the 20th when they were reported in 4 southern counties (many observers). 1032 on 7 Christmas Bird Counts, most (600) on the LaCrosse Count; 4 overwintered in LaCrosse County on the Black River (Lesher).

Mute Swan.—Including the Christmas Bird Counts, reported from 6 counties in the extreme southeast and northwest corners of the state, and Sheboygan, Green Lake, Jefferson, Columbia, Sauk, Portage, and Shawano Counties (many observers).

Snow Goose.—Through 16 January in Dane County (Hilsenhoff). One (a migrant?) in Adams County, 27 February (Tessen).

Canada Goose.—Numerous in southern Wisconsin through early January, then reduced in numbers, at least for a few weeks; throughout the period in southeast Wisconsin and the following counties: Dane, Winnebago, Trempealeau, and St. Croix (many observers). Returning to Dane County (Hansen) and Horicon Refuge (Werner), 26 February, and other southern counties, Grant to Milwaukee, 27–28 February (many observers).

Wood Duck.—Throughout the period in the following counties: Chippewa, 2 males (Polk), Trempealeau, 2 with mallards in a village pond (Hunter), and Shawano, a male (Peterson). Duerksen found 5 in Richland County, 5 January

Green-winged Teal.—The only report: 4 on the Poynette Christmas Bird Count.

American Black Duck.—Throughout the period in approximately 10 counties scattered throughout the state (many observers). The maximum number reported was 14 in Dane County (Hilsenhoff).

Mallard.—Throughout the period in approximately 18 counties scattered throughout the state. Numbers not reported.

Northern Pintail.—After the Christmas Bird Counts, one report, a bird in Milwaukee County, 16 January (Tessen).

Blue-winged Teal.—The only reports: one on the Green Bay Christmas Bird Counts and one on the Madison Christmas Bird Count.

Northern Shoveler.—Throughout the period in Milwaukee and Dane Counties. The maximum for Dane County was 59 on 3 January (Hilsenhoff). Ziebell found one (a migrant?) in Winnebago County, 28 February.

Gadwall.—Throughout the period in Dane County, with a maximum of 520 on 3 January (Hilsenhoff). A female in Eau Claire County, 11 January (Polk).

American Wigeon.—Throughout the period in Racine County (many observers), Dane County, maximum 5 (Hilsenhoff; Thiessen), and Waupaca County, 1 (Peterson).

Canvasback.—Throughout the period in Dane, Racine, and (?) Milwaukee Counties (many observers).

Redhead.—One throughout the period in Dane County (many observers).

Ring-necked Duck.—Throughout the period in Dane County (many observers). Ziebell found 2 in Winnebago County, 4–10 January, and the Smiths noted one in St. Croix County, 16 January. DeBoer found one in Racine County, 28 February (migrant?).

Greater Scaup.—Reported throughout the period only in Milwaukee County, but doubtless more widespread.

Lesser Scaup.—Apparently throughout the period in Milwaukee County (many observers). Ziebell found this species in Winnebago County, beginning of the period—5 February, maximum 8, 19 December.

Harlequin Duck.—Racine County, 2 females and an immature male, 19 December–3 January (many observers); a female may have overwintered (Diehl).

Oldsquaw.—Throughout the period in Lake Michigan from Kenosha to (Ephraim Christmas Bird Counts) Door Counties (many observers).

Black Scoter.—The only report: 3 on the Racine Christmas Bird Count.

Surf Scoter.—One on Devil's Lake, Sauk County, 9 December (Swengel).

White-winged Scoter.—Milwaukee County, 22 January (Sheas), Ozaukee County, beginning of the period (JLB), and Sheboygan County, 16 January, 1 (Tessen).

Common Goldeneye.—Throughout the period in the following localities: Lake Michigan from Kenosha to Marinette Counties; the Wisconsin River in Dane, Sauk, and Portage Counties; Outagamie and Winnebago Counties; Polk and St. Croix Counties; and the Ashland area (many observers). Peterson found this species in Shawano County, 1 January-end of the period, and Reardon in Vilas County, 23 February.

Bufflehead.—Throughout the period in Lake Michigan from Racine to Sheboygan Counties (many observers). Manitowoc County, through 7 January (Sontag), and Door County, 19 December (Ephraim Christmas Bird Counts). Hilsenhoff found this species in Dane County through 16 January.

Hooded Merganser.—After the Christmas Bird Counts: 3 January in Sheboygan County (Brassers), 22 January, Milwaukee County (Sheas), and 23 January-end of the period, 2, Portage County (Semo).

Common Merganser.—Throughout the period in the following localities: Lake Michigan from Racine to (Ephraim Christmas Bird Counts) Door Counties; the Wisconsin River in Dane, Sauk, and Portage Counties; and Outagamie and Winnebago Counties (many observers). Peterson found this species in Shawano County, 12 January One (a migrant?) with mallards, 14 February, Trempealeau County (Hunter).

Red-breasted Merganser.—Throughout the period in Racine, Milwaukee, and Ozaukee Counties (many observers); Manitowoc County, through 3 January (Sontag). Robbins found this species in Sauk County, 9 January.

Ruddy Duck.—No reports after the Christmas Bird Counts.

Bald Eagle.—This species overwintered as

far north as Marinette County (Lindberg), Iron County (Butterbrodt), and the Ashland area (Verch). Also throughout the period in Polk, Barron, and probably St. Croix Counties, Trempealeau County, and along the Wisconsin River in Portage, Dane, and Sauk Counties (many observers). Peak numbers (60+) in the Prairie du Sac area, Sauk County, in the second week of February (Lange), with 30 still present along the Wisconsin River between the Prairie du Sac dam and Ferry Bluff, Sauk County, on 28 February (Sheas).

Northern Harrier.—This species overwintered in Winnebago County (Ziebell) and probably Wood County (Ziebell) and St. Croix County (Hudick). One in Sauk County, 4 January (Swengel). Bishop found one (a migrant?), 6 February in Kenosha County A pronounced invasion into southern Wisconsin, 28–29 February, with individuals reported from 7 counties (many observers).

Sharp-shinned Hawk.—After the Christmas Bird Counts, reported in Barron County (Goff) and 11 central and southern counties (many observers). At least some of the birds in Kenosha, Rock, Dane, Winnebago, and Langlade Counties, 19–28 February (many observers), must have been migrants.

Cooper's Hawk.—After the Christmas Bird Counts, reported in Shawano County (Peterson) and 11 central and southern counties (many observers). Birds on 26 February in Polk County (Hudick) and 27 February in Dane County (Ashman) may have been migrants.

Northern Goshawk.—After the Christmas Bird Counts, records for 9 counties scattered throughout the state (many observers).

Red-shouldered Hawk.—After the Christmas Bird Counts: Milwaukee County, 1–2, throughout the period? (many observers); Winnebago County, 19 January, 1 (Ziebell); Dane County, 30 January, 1 (Tessen), and 20 February, migrant? (Hilsenhoff); and Portage County, 1, throughout the period? (Semo).

Red-tailed Hawk.—Northwards to Barron County, throughout the period (Goff), Price County, 19 February, migrant? (Hardy), Taylor County, 1–31 January (NDR); Lincoln and Marathon Counties? (not covered), Wood County, throughout the period (Merkel), Portage County, throughout the period (Semo), and Shawano County, 1 January-end of the period (Peterson). The dark western subspecies was noted in Monroe, Sauk, and Milwaukee Counties (Mossman; Lange; Mueller). Migrants in February, especially the last 2 days, e.g., Wood County (Merkel) and probably Monroe County (Epstein).

Rough-legged Hawk.—Population estimates varied, but generally in normal numbers with a few "hot spots," e.g., (Epstein) as many as 16 in a single contiguous pasture of approximately 2 square miles in Monroe County, late January-mid February, with snow depths of 5 inches (and hard crusted) to 14 in. A total of 13 in Taylor County, 24 January (PR). Spring migrants, 11 February-end of the period (many observers).

Golden Eagle.—In addition to the Christmas Bird Counts, these reports: single adults on 8 occasions, 20 December–22 February, Monroe County (Epstein); at least one adult and one immature, 31 December–end of the period, Sauk County (many observers); an immature in Portage County, 18 February (Ziebell); and an adult in Jackson County, 27 February (Tessen).

American Kestrel.—Northwards to the following counties: Burnett, one on the Grantsburg Christmas Bird Counts; Barron, throughout the period (Goff); Taylor, throughout the period, 1 (NDR); Lincoln-Marathon? (no coverage); Wood, throughout the period (Merkel; Ziebell); Portage, throughout the period (Semo); and Shawano, 12 January-end of the period (Peterson). Possible migrants on 14 February in Rock County (Mahlum) and 29 February, 4, Richland County (Duerksen).

Merlin.—Single birds on the Waukesha, Kettle Moraine, and Madison Christmas Bird Counts; 20 December, one in Ozaukee County (Green); 20 February, one in Columbia County (WAS via Lange); and 29 February, one in Trempealeau County (Hunter).

Peregrine Falcon.—One in Douglas County, 16 January (Johnson).

Gray Partridge.—Records for these counties: Marinette, Outagamie, Brown, Manitowoc, Sheboygan, Ozaukee, Winnebago, Green Lake, Columbia, Sauk, Dane, and Iowa (many observers).

Ring-necked Pheasant.—Northwards to

the following counties: Douglas, throughout the period (Johnson), Taylor, 27 December–1 January (NDR), and Marinette (Lindberg).

Spruce Grouse.—Oneida County (Lange).

Greater Prairie Chicken.—Taylor, Portage, and Wood Counties (many observers).

Sharp-tailed Grouse.—Douglas, Burnett, Rusk, and Taylor Counties (many observers).

Northern Bobwhite.—Including the Christmas Bird Counts, reported for these counties: Kenosha, Rock, Iowa, Dane, Columbia, Richland, Monroe, Trempealeau, St. Croix, Dunn, and Waushara (many observers).

Virginia Rail.—One on the Waukesha Christmas Bird Counts and one on the Poynette Christmas Bird Counts.

American Coot.—Throughout the period in Winnebago County, 2 (Ziebell), and Dane County, maximum 75, 20 February (Hilsenhoff). Also in Walworth, Milwaukee, and Ozaukee Counties in January (Tessen).

Sandhill Crane.—A migrant in Winnebago County, 28 February (Ziebell).

Killdeer.—28 February, one in Sauk County (Martin), and one in Grant County (William A. Smith via Lange), and 29 February one in Trempealeau County (Hunters).

Purple Sandpiper.—One in Manitowoc County, 13 December (Sontag), and one in Sheboygan County, 10–25 December (many observers).

Common Snipe.—After the Christmas Bird Counts: at least one throughout the period in Monroe County (Epstein), apparently throughout the period in Green Lake County (JLB), apparently throughout the period in Manitowoc County (Sontag), and 5 January, one in Richland County (Duerksen).

American Woodcock.—One on the Mt. Horeb Christmas Bird Count in Dane County, and one during the Christmas Bird Counts period in Kenosha County

Laughing Gull.—Wisconsin's third report of this species was a first-winter bird in Milwaukee County, 31 January (JLB).

Little Gull.—19 December, 2 on the Racine Christmas Bird Count.

Bonaparte's Gull.—After the Christmas Bird Counts, reported only from Racine County, 26 December (Mueller).

Ring-billed Gull.—A record number on the Christmas Bird Counts; throughout the period in these counties: Racine, Milwaukee, Sheboygan, and (maximum 75, 31 January-Sontag) Manitowoc. Through 8 January in Iron County (LaValleys), and through 16 January in Winnebago County (Ziebell).

Herring Gull.—Throughout the period in Lake Michigan from Kenosha to Marinette Counties (many observers). For Manitowoc County (Sontag), maximum 1138, 3 January through 22 February in Winnebago County (Ziebell), 10 January, Sauk County (Sheas), 3 January, Dane County (Hilsenhoff), 8 January, Iron County (LaValleys), and 16 January, Douglas County (Johnson).

Thayer's Gull.—1–2 in Milwaukee County, 19 December–21 February (many observers).

Mew Gull.—Wisconsin's third record of this species was a second-winter bird, 28 February (Sundell), in Milwaukee County

Iceland Gull.—One in Milwaukee County, 16–22 January (Tessen; Frank; Sheas), and one in Douglas County, beginning of the period–28 December (Polk; Semo).

Glaucous Gull.—Reported from 6 counties: Racine, 19 January (DeBoer); Milwaukee, 16 January–21 February, maximum 6 (many observers); Ozaukee, 16 January, 4 (Tessen); Manitowoc, beginning of the period–5 February, 1 (Sontag); Bayfield, 30 December, an adult (Swengel); and Douglas, beginning of the period–16 January, maximum 21, 1 January (Johnson).

Great Black-backed Gull.—11 December, an adult in Sheboygan County (Legler), 16–19 January, a first-year bird in Racine County (many observers), and 28 February, an immature in Milwaukee County (Thiessen).

Rock Dove.—Northwards to: Douglas County, 12 January (Johnson), the Ashland area, throughout the period (Verch), Iron County, throughout the period (LaValleys), Vilas County, 14 January (Reardon), Langlade County, throughout the period (Pickering), and Marinette County, throughout the period (Lindberg).

Mourning Dove.—Northwards to: Douglas County, 12 January (Johnson), the Ashland area, throughout the period (Verch), Iron County, throughout the period (LaValleys), Vilas County, 14 January (Reardon), Langlade County, throughout the period (Pickering), and Marinette County, throughout the period (Lindberg).

Eastern Screech-Owl.—Reported from 10 counties in southern and southeastern Wisconsin, and Outagamie and Shawano Counties (many observers).

Snowy Owl.—Including the Christmas Bird Counts, reported from 15 counties and the Ashland area. Still in the Ashland area and Taylor, Winnebago, and Manitowoc Counties end of the period (many observers).

Long-eared Owl.—After the Christmas Bird Counts, reported for the period, 25–29 February in these counties: St. Croix (Smiths), Clark (LR), Portage (Semo), and Milwaukee (Diehl); migrants?

Short-eared Owl.—After the Christmas Bird Counts, just one report, 2 in Ozaukee County, 10 January (Sundell).

Boreal Owl.—One in the yard of a rural property in Oneida County, 26-28 January; during this time it captured and consumed 3 small mammals and regurgitated several pellets (Vig).

Northern Saw-whet Owl.—8 December, Wood County, 1 (Merkel); one on the Gilman Christmas Bird Counts and one on the LaCrosse Christmas Bird Counts; 10 January, Price County, 1 (Hardy); 18 January, Trempealeau County, 1 (Hunter); and 27 February, Dane County, 2 (Sheas).

Belted Kingfisher.—After the Christmas Bird Counts, reported from 7 southern and west-central counties (many observers).

Red-headed Woodpecker.—Relatively scarce and low in numbers this winter. Including the Christmas Bird Counts, reported from 14 counties, mainly southern and northeastern Wisconsin. Possible migrants in Dane County, 27 February (Thiessen), and Sauk County, 29 February (Swengel).

Red-bellied Woodpecker.—Northwards to these counties: Burnett (Grantsburg Christmas Bird Counts), Iron, 19 February (LaValleys), Langlade, throughout the period (Pickering), Marinette, throughout the period (Lindberg), and Door (Ephraim Christmas Bird Counts).

Yellow-bellied Sapsucker.—After the Christmas Bird Counts, two reports: 7 February, 1, Milwaukee County (Woodmansee), and through 11 February, Dane County (Robbins).

Black-backed Woodpecker.—On 3 Christmas Bird Counts, including the Waukesha Count. Also Sawyer County (Merkel), Price County, 20 December–5 February, maximum 3 (Hardy), and Douglas County, 30 January, 1 (Johnson).

Northern Flicker.—Throughout the period in Milwaukee, Ozaukee, Outagamie, and Clark Counties (many observers). Also Racine County, 16 January (Tessen), Shawano County, 13 February (Tessen), and LaCrosse County, 14 February (TR).

Horned Lark.—Throughout the period in Racine, Columbia (?), and Clark (?) Counties. Peak numbers from 22 January–28 February, mainly 13–28 February (many observers).

Gray Jay.—Including the Christmas Bird Counts, reported for Douglas, Iron, Vilas, Forest, Oneida, Barron, Sawyer, Taylor, and Price Counties (many observers).

Common Raven.—Southernmost records for Jackson, Clark, Wood, Shawano, and Outagamie Counties (many observers).

Boreal Chickadee.—Including the Christmas Bird Counts, reported for the Ashland area and Sawyer, Douglas, Iron, Oneida, Vilas, and Forest Counties (many observers).

Tufted Titmouse.—Including the Christmas Bird Counts, records for 14 counties, approximately south of a line from St. Croix and

Chippewa Counties to Waukesha and Milwaukee Counties (many observers).

Red-breasted Nuthatch.—Throughout the state, generally in normal numbers.

Brown Creeper.—Reported in approximately 12 southern counties, plus these northern records: Douglas County, 2 December, 1 (Swengel); the Ashland ARea, throughout the period (Verch); Sawyer County, 4 February, 1 (Merkel); Price County, throughout the period, 1 (Hardy); Oneida County, 26 February, 1 (Lange); and Vilas County, 29 January (Reardon).

Winter Wren.—No reports after the Christmas Bird Counts.

Golden-crowned Kinglet.—After the Christmas Bird Counts, these reports: Milwaukee County, 9 January (Frank) and 21–22 February, 3 (Diehl), Sauk County, throughout the period in a large conifer plantation (Lange), and Richland County, 22 January, 1 (Duerksen).

Eastern Bluebird.—Plymouth and Mt. Horeb Christmas Bird Counts. No other records until 28 February, when lone birds were found in Dane County (Sheas) and Crawford County (WAS via Lange).

Mountain Bluebird.—Wisconsin's eighth record was an adult male in Milwaukee County, 20 December–1 January (many observers).

Townsend's Solitaire.—13 December, one in Devil's Lake State Park, Sauk County (Leglers).

Hermit Thrush.—One in Milwaukee County, probably throughout the period (Woodmansee; Frank).

American Robin.—Throughout the period in approximately 10 counties, including the Ashland area and Barron and Marinette Counties The largest flocks reported were of 200–300 in LaCrosse County (Lesher) and 50 at Wingra Springs in the University of Wisconsin Arboretum, Dane County (Hansen).

Varied Thrush.—Including the Christmas Bird Counts, 9 birds, all at feeders: the Ashland area, 15 December–8 January, 1 (Verch); Marinette County, 16 January-end of the period, 1 (Lindberg); Manitowoc County, one on a Christmas Bird Counts, 3 January; Shawano County, throughout the period, 1 (Peterson); Chippewa County, 18 January–5 February, 1 (many observers); Taylor County, 2, with one (an adult male) killing itself by flying into a window (PR); Marquette County, 14 January-end of the period, 1 (McDowell); and Dane County, one during the Christmas Bird Counts period.

Gray Catbird.—One in Dane County, 4 December (Freese), and one on the Newburg Christmas Bird Counts and one on the Milwaukee Christmas Bird Counts.

Brown Thrasher.—Only one report after the Christmas Bird Counts, an individual that overwintered at the Schlitz Audubon Center in Milwaukee County (Bontly).

Bohemian Waxwing.—Another invasion into northern Wisconsin, e.g., 400 in Iron County on 5 January (La Valleys). Southernmost reports from Sauk, Iowa, Dane, Manitowoc, and Ozaukee Counties (many observers).

Cedar Waxwing.—The only northern report, after the Christmas Bird Counts, 2 in Iron County, 1–12 January (LaValleys). Above average numbers in the Eau Claire area, where throughout the period (Polk), otherwise generally in low numbers until the February influx. Migrants from 6–28 February in 6 southern counties (many observers).

Northern Shrike.—Again in approximately 35 counties scattered throughout the state, but in normal to below normal numbers, compared with the above average numbers of the last 2 winters.

European Starling.—Northwards to and throughout the period in these counties: Douglas (Johnson), Iron (Butterbrodt), Vilas (JB), and Marinette (Lindberg).

Orange-crowned Warbler.—2 December, one in Milwaukee County (Cederstrom).

Yellow-rumped Warbler.—One on the New Richmond Christmas Bird Counts and one on the Madison Christmas Bird Count.

Common Yellowthroat.—One through 20 December in the Ashland area (Verch), and one on the Madison Christmas Bird Count.

Northern Cardinal.—Northwards to and throughout the period in the Ashland area (Verch) and the following counties: Iron (La-Valleys), Shawano (Peterson), and Marinette (Lindberg). Two on the Grantsburg Christmas Bird Count, 19 December

Rose-breasted Grosbeak.—30 December, and injured bird in Sheboygan County (Diehl).

Rufous-sided Towhee.—After the Christmas Bird Counts, two reports: an injured bird in Milwaukee County, 5 February (Diehl), and a female at a feeder in Langlade County, 12 January–11 February, which may have been caught by a goshawk (Pickering).

American Tree Sparrow.—Northwards to Burnett County, 16 January (Sheas).

Chipping Sparrow.—One at a feeder in Eau Claire County, 12–28 February (Polk).

Field Sparrow.—After the Christmas Bird Counts, one report, one with juncos in Iowa County, 1 January (Roethe).

Vesper Sparrow.—One on the Bridgeport Christmas Bird Count.

Lark Sparrow.—One in a large flock of Tree Sparrows on the Racine Christmas Bird Count, 19 December, the first time for a Christmas Bird Counts and apparently the first record for December.

Fox Sparrow.—After the Christmas Bird Counts, two reports: Milwaukee County, 1, apparently throughout the period (Woodmansee), and Price County, 1, throughout the period (Hardy).

Song Sparrow.—Throughout the period in 9 counties, approximately south of a line from Monroe to Manitowoc Counties (many observers), and (Semo) Portage County, 28 January–4 February.

Lincoln's Sparrow.—One on the Madison Christmas Bird Count and one on the Racine Christmas Bird Count.

Swamp Sparrow.—Only one report after the Christmas Bird Counts, one through 3 January in Dane County (Hilsenhoff; Thiessen).

White-throated Sparrow.—After the Christmas Bird Counts, these reports: Milwaukee County, at least one throughout the period (Zehner); Dane, throughout the period (many observers); one throughout the period at a feeder in Devil's Lake State Park, Sauk County (Lange); and Price County, 23 February (Hardy).

White-crowned Sparrow.—One on the Beloit Christmas Bird Count and one on the Kenosha Christmas Bird Count. Later records: 3 January–13 February, Dane County (Thiessen), and 16 January, Racine County, 1 (Tessen).

Dark-eyed Junco.—Northwards to Iron County, throughout the period (Butterbrodt).

Lapland Longspur.—After the Christmas Bird Counts, reports of 1–16 birds in Wood, Winnebago, Sauk, Ozaukee, and Rock Counties (many observers).

Snow Bunting.—After the Christmas Bird Counts, reports for 21 counties, with flock sizes of 100 and more (up to 400) in Rock, Winnebago, Columbia, Dane, and Wood Counties (many observers).

Red-winged Blackbird.—After the Christmas Bird Counts, from 1–15, mostly 5 or less, on various dates in Milwaukee, Dane, Iowa, Trempealeau, and Buffalo Counties (many observers). Probable migrants: several males in mid February in St. Croix County (Smiths), one on 25 February in Milwaukee County (Diehl), and 15 on 27 February in Walworth County (Tessen).

Eastern Meadowlark.—10 January, one in Sauk County (Sheas). One in Portage County, 23–27 February, migrant? (Semo).

Meadowlark (species unidentified).—On 13 Christmas Bird Counts, plus single birds in Rock County, 3 January (Mahlum), 17 January, Iowa County (Roethe), and Dane County, 27 February, probably a migrant (Hansen).

Yellow-headed Blackbird.—One on the Horicon Christmas Bird Count.

Rusty Blackbird.—Dane County, throughout the period, maximum 3 (many observers).

Brewer's Blackbird.—After the Christmas Bird Counts, these reports: 1–3 January, 1, Price County (Hardy), and several throughout the period at feeders in St. Croix County (Smiths).

Common Grackle.—throughout the period at feeders in St. Croix County (Smiths), throughout the period in Dane County (Robbins), and mid winter records of 1–2 birds in Milwaukee, Outagamie, Wood, and Chippewa Counties (many observers). Migrants, generally single birds, 25–29 February, in 5 southern counties (many observers).

Brown-headed Cowbird.—One in Winnebago County, 14–19 January (Ziebell), a male at a feeder in Iowa County, 31 January (Roethe), and up to 15 (17 January) in Jefferson County, where noted 8 January–14 February (Hale). Two in Rock County, 27 February (Tessen), most likely were migrants.

Northern Oriole.—At least one in Chippewa County in December, dates uncertain (via Polk).

Pine Grosbeak.—Found in the northern half of Wisconsin, south to Polk, Chippewa, Clark, Wood, Portage, and Shawano Counties (many observers). 75 in Price County (Hardy) and 50 in Bayfield County, 1 December (Swengel), otherwise counts of 10 or less.

Purple Finch.—Normal to below normal numbers. An increase in February in southern Wisconsin, e.g., Sauk County (Lange).

House Finch.—Found on 10 Christmas Bird Counts, northwards to Green Bay, Shawano, and Stevens Point. Increasing in Racine County (Diehl), apparently resident now in Madison (Ashman; Hilsenhoff; Robbins), and increasing in Sauk County (Swengel). As Hilsenhoff remarked in his summary of the Christmas Bird Counts (*Passenger Pigeon* 1988:35), this species appears to be on the verge of exploding.

Red Crossbill.—Scattered reports, mainly from northern Wisconsin, for early winter, then a major influx into the state, especially the southern half, in February (many observers). Single birds and flocks of up to 22, with a group of 50 on 30 January in Shawano County (Peterson).

White-winged Crossbill.—Reported from throughout northern Wisconsin, flocks of up to 50, with single birds and groups of 2–6 in Dane, Milwaukee, Ozaukee, Manitowoc, and Outagamie Counties (many observers).

Common Redpoll (including Hoary Redpoll).—Normal to below normal numbers in northern Wisconsin, generally scarce in southern Wisconsin. Reported from 6 southern counties: Kenosha, Milwaukee, Sheboygan, Manitowoc, Dane, and Sauk; 1–2 birds in southern Wisconsin except for Sauk County, where Swengel found a maximum of 50, 1 January.

Pine Siskin.—Record numbers on the Christmas Bird Counts and in above normal numbers for the remainder of the period. The largest flocks (approximately 100–500) were in northern Wisconsin, but siskins were common throughout the state (many observers). An increase in mid February in Sauk County (Lange).

American Goldfinch.—Record numbers on the Christmas Bird Counts, but generally in normal numbers thereafter. Northwards to and throughout the period in the Ashland area and the following counties: Douglas, Iron, Vilas, and Marinette (many observers).

Evening Grosbeak.—Except for approximately 10 southern and central counties, confined to the northern part of the state. The maximum flock size was 110 on 22 January in Iron County (LaValleys).

House Sparrow.—Northwards to and throughout the period in Douglas, Iron, Vilas, and Marinette Counties (many observers).

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Kenneth I. Lange
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Bald Eagle *by Rockne A. Knuth*

Red-tailed Hawk (*photo by Stanley A. Temple*)

"By The Wayside"

Past fall and winter seasons produced records of Eurasian Wigeon, Purple Sandpiper, Laughing Gull, Iceland Gull, Great Black-backed Gull, Sabine's Gull, Sooty Tern, an Ani, Common Barn-Owl, Boreal Owl, Scissor-tailed Flycatcher, Mountain Bluebird, Townsend's Solitaire, and Black-headed Grosbeak.

This installment of "By The Wayside" combines reports from fall 1987 and winter 1987–88. In addition, an important record from fall 1984, the state's first and only Sooty Tern, is being published for the first time.

EURASIAN WIGEON (*Anas penelope*)

7 November 1987, West Nature Trail, Horicon National Wildlife Refuge.—Margaret Misdall and I observed an adult Eurasian Wigeon at Horicon Marsh. We had parked in the lot on the south side of Highway 49 and had taken the western loop of the nature trails from the parking lot (I believe it is called the red trail). As we stood on the south edge of the pond, looking north, we observed several Canada Geese and some ducks. The first duck I looked at was a wigeon. It had a creamy beige forehead and crown, about the color of ripe wheat. The sides of the head, and the neck were a uniform warm brown. The sides of the bird as it sat in the water were grayish or charcoal, with a white vertical area just ahead of the undertail coverts. The undertail coverts were black. The back and wings, as they were folded, were darker than the sides of the bird-almost black.

At one point, the bird flapped its wings and there was a considerable amount of white in the secondary coverts. When the forehead and crown color was compared to the white of the wings and the area before the undertail coverts, it was definitely a creamy beige, not white.

Unfortunately, there were no American Wigeons nearby to compare it with, but there were five male mallards with it, as well as the geese. The green on the heads of the mallards was very visible, but there was no green noticeable on the wigeon.

The bird was floating on the water near some cattails in the company of several Canada Geese and the five male mallards. It turned several times as I watched it, so that I saw the head from

the sides, as well as straight on. It flapped its wings once while I was watching it.

We observed the wigeon about 10:30 A.M. for about five minutes. The sky was becoming overcast, but there was still a faint sun showing through the clouds. There was no wind. The birds were in the pond about 80 feet from us. the sun was behind us. I was using 8.5×44 Swift binoculars.

I have seen an Eurasian Wigeon once before, at Cape May, New Jersey, October 1986, when it was identified by experienced birders.—*Bettie R.Harriman, 5188 Bittersweet Lane, Oshkosh, WI 54901.*

PURPLE SANDPIPER (*Calidris maritima*)

14 October 1987, Sheboygan County,Sheboygan's North Point.—Stopping at Sheboygan's North Point to check out the limestone rocks for gulls and shorebirds, we first spotted numerous Sanderlings and six Dunlins feeding among a large number of Herring and Ring-billed Gulls. Closer to shore, only 40 feet from our car, we noticed a slightly larger, stockier, darker, short-legged sandpiper feeding in the shallow pools on the rocks. On closer examination we noticed a dark gray head, nape, and breast, contrasting with a white belly. The back was also darker than the Dunlin's back. Then we noticed that the legs were orange, the beak was slightly shorter than the Dunlin's, and the basal half of the beak was orange, while the terminal half was dark. We also noted a white eye ring. When we got out of the car for a closer look, the bird flew off, zigzagging rapidly, low over the water, and displaying a white wing stripe (similar to that of the Dunlin's) and a dark tail. We concluded that we had observed a Purple Sandpiper.—*David and Margaret Brasser, 813 Logan Avenue, Sheboygan, WI 53083.*

1 November 1987, Milwaukee County, Milwaukee Coast Guard Impoundment.—While checking the impoundment for gulls and late shorebirds, I noticed a plump, dark shorebird among the Dunlins. I was similar in size to the Dunlins, but plumper. while standing and walking, I could seldom see any thigh on the bird, as compared to the Dunlins, where the thigh was constantly visible. The legs were yellowish. The belly was white, however, dark gray streaking extended from the breast onto the sides. The back and head were dark gray. Although field guides mentioned a white eye ring, I do not recall seeing one. I don't know how hard I looked for it, either. The two-toned bill was slightly down-curved and was dark at the tip and yellowish to yellowish-green at the base. In flight, the wing, tail and flight patterns were similar to the Dunlins, but it could still be easily be picked out by the plumper, darker build.—*Gerald A. DeBoer, 2406 Kinzie Avenue, Racine, WI 53405.*

1 November 1987, Milwaukee County, Milwaukee Coast Guard Impoundment.—At Jerry's direction, I easily spotted a dark, plump "peep" type bird on the water's edge of the mudflat. Even with binoculars (10×40) alone, it could easily be picked out from the Dunlins. The bird was about ½–1″ larger than the Dunlins (direct juxtaposition), but was relatively more plump, thicker necked, and definitely plumper through the upper back/lower breast plane. The bill was at least as long as the head from base of bill to nape and was 2 toned light pale-orange at the base and dark ⅔ to ⅗ distally. The legs were relatively shorter appearing than the Dunlin's due to the chubby body and were a pale dirty orange. Overall, the plumage was dark gray with a coal cast (much like color #78 in

Smith's *Naturalists color Guide*); but the color was darkest and unbroken o the head and neck, giving the bird a "hooded" or "cloaked" appearance. This color decreased in value slightly on the upper breast and then broke into spots on the breast and lower breast an continued along the sides; the background color was very pale gray where the dark gray disappeared. The dark gray of the back was broken by the well-defined buffy-white edges of the back's contour feathers (indicating a Basic I bird). This feature was more pronounced than the December 1985 bird at McKinley beach. The bird moved more rapidly than the 1985 bird, as well. It was as animated as the nearby Dunlin,picking then probing for about 10 sec. max. and then quickly moving along to better areas. Perhaps due to the abundance of *Chironomous* larvae, it could afford to be frisky (or it was just plain excited). All in all, it was more peeplike than the 1985 bird in terms of behavior. The rump was dark and the wing had a whitish wing stripe when it flew. Due to the darkness of the day and the distance, no eye ring could be discerned. The area around the eye appeared dark.—*John H. Idzikowski, 418 East Plainfield Avenue, Milwaukee, WI 53207.*

24–25 December 1987, Sheboygan County, Sheboygan's North Point.—Scanning the Point for interesting birds, I spotted 2 small dark shorebirds feeding in the shallow pools of the rock outcropping, 24 December 1987 at 10 A.M. Although there were no other shorebirds to compare them with, they were Starling-sized. The body shape was plump and stocky. Color pattern: back dark gray; head, chin and breast dark gray; belly white. Form and markings: back—dark gray brown, with white edgings on the secondary feathers; wings—dark, with white wing stripe in flight; tail—when the birds were feeding, the wings extended to the tip of the tail; when the birds flew, the tail was dark in the center and white on the sides; legs—short, orange-red; underparts—throat and breast gray; where the gray "hood" ended, there were gray-brown streaks on the lower breast and sides; the abdomen/belly was white with fainter spots; head—dark gray; bill—slightly downcurved, almost as long as a Dunlin's, with the basal third orange-yellow, and the outer two-thirds dark; eye—at close range, a faint eye-ring; behavior—they spent most of their time actively feeding in the shallow pools on the rocks; flight—low, quick.

Comparison with similar species. No other shorebirds present, but Dunlins have dark legs and a longer dark bill. The only other similar bird is the Rock Sandpiper of the West Coast, but it has greenish-yellow legs and base of the bill. These birds had orange-red legs, and the basal third of the bill was orangish-yellow.

These birds were also seen on 25 December 1987 at 1 P.M.—*David and Margaret Brasser, 813 Logan Ave., Sheboygan, WI 53083.*

LAUGHING GULL (*Larus atricilla*)

31 January 1988, Milwaukee County, Milwaukee, South Shore Yacht Club.—The sighting was just by chance. I was scanning the gulls looking for one of the Glaucous Gulls that had been hanging around the lake front the past few weeks. I found the Glaucous Gull without much trouble, and at 9:22 A.M. happened to locate a first-winter Laughing Gull in the process. At first I wasn't sure whether it was a Laughing or Franklin's, because

of their similarities, but it didn't take long to determine that it was in fact a Laughing Gull. Both species have dark gray mantles, a dark bill and feet, which this bird showed. The following was noted: bill—color: black throughout; shape: 1. width/depth same throughout length, 2. long—compared to head—¾ or more of head length, 3. drooping from the middle; feet/legs: black with a hint of fleshy color; mantle: dark gray, noticeably darker than Ring-billed or Herring Gulls nearby; tail: white with a complete black terminal band; wing—primaries and coverts: black, with primaries extending well past tail; secondaries: black; secondary coverts: mottled gray and brown; head—very little hint of a hood; the forehead, partially into the crown, and the chin areas white; auricular region, partially into the nape, gray/brown; eye: back, crescents thin white; lower nape and neck: brownish/gray; breast: upper breast incomplete brownish/gray band; sides: brownish/gray through the bend in the wing; belly and undertail coverts: white to off-white.

The bird's size was easily compared with Ring-billed and Herring Gulls, while on the ice or on shore and in flight. Standing, the bird seemed about ¾ the size of a Ring-billed Gull, smaller but not real obvious. The Laughing Gull was a much slimmer bird than the other gulls and the darker mantle helped in picking it out. The difference was more pronounced when the birds took flight. The Laughing Gull seemed longer winged, probably because the wing was narrower, and had an obviously different flight. In flight the bird had a smoother-faster jizz. It seemed to fly circles around the other gulls, easily out maneuvering or eluding them for food.

I found the bird 3 other times during the day: once at McKinley Marina harbor area, once at Juneau Park, and again at South Shore.

Comparison with similar species. Comparisons to Ring-billed and Herring Gulls are mentioned above. I eliminated Franklin's Gull for a number of reasons. First the bill seemed large for a Franklin's and its curved nature meant Laughing Gull. This alone was not enough. The complete tail band, gray sides, small indistinct eye crescents and general lack of a hood also meant Laughing Gull.—*Jeffrey L. Baughman, P.O. Box 343, Kewaskum, WI 53040.*

Mew Gull (*Larus canus*)

28 February 1988, Milwaukee County, Milwaukee, South Shore Yacht Club.—A second winter Mew Gull was discovered at 10:30 A.M. while scanning a group of 75 to 80 Ring-billed Gulls and a scattering of Herring Gulls. It was strikingly smaller than any of the nearby Ring-billed Gulls, perhaps by a full inch to an inch and a half. Its head was comparatively round and dove-like, and the bill shape was especially distinctive - finer, shorter and straighter than the obviously more substantial, angular and longer bills of the Ring-billed Gulls. (Comparison was easy on these three points and others, since the Mew Gull often stood within a foot or less from the Ring-bills). The Mew Gull's bill was also marked by an irregular, dark smudge extending from the tip about one-third of the bill's length. The basal area was pale greenish-gray. No Ring-bill in any plumage had a bill so shaped or marked. The bird's legs appeared to be yellowish-green and the eye was dark and comparatively prominent.

The Mew Gull was "hooded"—with a heavy gray-brown, flecked wash over the head and upper neck. The mantle was gray (roughly the same shade as adult

Ring-bills), the underparts white, and the tail was white, with an irregular, broken, black subterminal band. At rest, the extensive and conspicuous dark-gray or black wingtips showed no white marking at all. But in flight, single, elongated "mirrors" appeared, confined, so far as I could tell, to the outermost primary feathers of each wing. The underwings appeared dirty—washed faintly with gray brown.

At rest, the Mew Gull's markedly small size, round head, hooded appearance, and narrow, short, smudged bill distinguished it easily from Ring-billed Gulls. In flight, the extensive dark primaries marked by a single, elongated white area also made the bird appear unique. In addition, the flight was peculiar to this individual, the Mew Gull appearing relatively long-winged and buoyant, less cumbersome and more graceful than Ring-bills. The Mew Gull interacted with Ring-bills in a hostile manner at times (it was the aggressor when feeding on scraps of bread thrown onto the ice by bystanders) and often it separated itself somewhat when standing on the ice just offshore.

Several times as I observed the bird feeding, it called, uttering a note clearly higher pitched and more strident than the Ring-bills.

I consulted the NGS Guide at the time of observation, recalled the 1986 Juneau Park birds, and concluded that this bird was indeed a second winter Mew Gull. Later, I found confirming information and photographs in P. J. Grant and the Audubon Master Guide.

Comparison with similar species. The Mew Gull's size and overall plumage makes the Ring-billed Gull the obvious species for comparison. As noted above, the Mew Gull was clearly and significantly smaller, its head rounder, and its bill differently shaped (narrow, shorter, less angular) and marked (smudged at the outer end, rather than ringed or distinctly tipped). The relatively great extent of dark coloration on the wings separated this bird from others present, as did the heavy "hooded" appearance, the light, buoyant flight, and the call. The size of this bird eliminated Herring, Thayer's and other larger gulls as possibilities. And nothing about the bird suggested Bonaparte's Gull, Kittiwake, or other smaller gulls.—*Roger H. Sundell, N64 W5719 Columbia Road, Cedarburg, WI 53012.*

Iceland Gull (*Larus glaucoides*)

18–20 November 1987, Douglas County, Wisconsin Point Bluff.—About 200 gulls were sitting between ¼ and ½ mile out from shore. The group included 3 Glaucous Gulls (2 second winter and one adult). On the second scan with the scope I noticed an all white gull that was smaller than the Herring Gulls by bout three inches. It was the same "dirty white" all over as a second winter Glaucous Gull, slightly grayer on the back in random patches. The bill, very unlike a Glaucous, was much smaller, thinner and at a distance of abut ⅓ mile was barely visible. Bills of Herring Gulls only a foot away from this bird looked large by comparison. The bill looked dark at the tip, but it was hard to tell if the base was dark also. Folded wing tips looked lighter than other parts of the bird. The head profile was rounder than the Glaucous and Herring Gulls and head color was lighter than the Herring Gulls. The gulls all flew when I had looked away from the scope. They settled over a mile out, so I was unable to find it again. I didn't see it in flight.

Two days later on November 20, observations were made on and off all morning of what I am sure was the same

bird, with Karl Legler at closer range (¼ mile or a little less), again from the bluff at Wisconsin Point, with the sun at our backs. this time the bird flew while I had it in the scope. The wing tips and tail were the lightest part of the plumage. The outer edges of the primaries and secondaries were a cleaner white than the rest of the wing. No visible marks were seen on the tail. On one occasion, the gull was near both Herring and Ring-billed Gulls and looked smaller than the Herring, but larger than the Ring-billed. In flight and indirect comparison the gull looks exactly like a 2nd winter Glaucous Gull, but smaller by several inches and with a much smaller bill. The bill has a dark tip, and light base suggesting a 2nd winter Iceland Gull. The bill was shorter than the Herring Gull bills by about an inch and is not thickened near the tip.

On November 21, at least 1000 gulls were off the bluff, stretching from the shoreline to a mile out. The Iceland Gull always seemed to be with the gulls closest to shore. The same field marks were observed, but a little closer. Unfortunately, they were unapproachable from the beach and were best observed from the bluff where they could be watched from considerable height. The gull also sat with its head tucked, sleeping at the landfill where I observed it briefly at 400 feet.—*Robbye J. Johnson, 2602 North 28th Street, Superior, WI 54880.*

28 December 1987, Douglas County, Superior, Wisconsin Point.—I pulled up to the dump on Moccasin Mike Road on Wisconsin Point in Superior to observe the gulls that were congregated among the debris. I estimated about 500 gulls either sitting or flying. I spotted an adult Glaucous Gull standing about 100 feet away. What caught my eye however, was another white-winged gull standing directly in front of it. It appeared only half the size of the Glaucous at first glance. It was in actuality about the same size as a small Herring Gull or maybe even smaller. It was about ⅓ the size of the Glaucous Gull behind it. Its wingtips were white and were longer in proportion to its body size than the Glaucous Gull. I did not notice any light mottling on the wingtips or on the tail. The tail appeared white as I could see.

The bill was small, shorter in proportion to both Herring and Glaucous Gulls. It had a petite appearance as compared to the thick dagger-like bill of the Glaucous. It was light yellow colored throughout except for a black "smudge" about ½ inch from the bill tip.

The head was definitely rounder than both Glaucous and Herring, almost to a point at which it seemed "fat-headed."

The eyes were light yellow and the legs were pink, about the same shade as the Glaucous.

Comparison with similar species. The differences between this bird and Glaucous and Herring Gulls were very evident and unmistakable as noted in the documentation. The very white wingtips, the very small bill, the round head and light eye distinguished this bird from Thayer's Gull. The Iceland Gull spread its wings twice and preened and had no evidence of gray or dark gray on any primaries, eliminating Kumlien's Iceland and Thayer's Gulls. The mantle of a Thayer's should also appear darker than an Iceland's.—*Laurence Semo, Rt. 2, Box 435, Superior, WI 54880.*

Great Black-backed Gull (*Larus marinus*)

28 February 1988, Milwaukee County, Milwaukee Harbor.—I was scoping the gulls towards the mouth of the harbor,

looking for uncommon species, when the larger, thick, black bill of an immature gull immediately caught my eye. I watched the gull for a while and then went back to my car to take notes.

Large size—when flying noticeably large wings and body; very thick black bill; checkered wing and back pattern, basically brown with light spots (noted while swimming); tail whitish with a dark band towards the tip plus a thin partial band; breast light with light brownish marks which ended just past the end of the wings, white under tail coverts and light upper tail coverts (noted when flying).

Comparison with similar species. Immature Herring Gull was similar. The bill was noticeably thicker and appeared all black; the bill of the Herring Gull, in comparable plumages, should be lighter in the basal half. Also in the Herring Gull in comparable plumages, the tail band would be more pronounced, including most or all of the tail, and it would extend through the tip.—*Steve Thiessen, 4913 Whitehorse Place, McFarland, WI 53558.*

Sabine's Gull (*Xema sabini*)

28 October 1987, Douglas County, Allouez Bay on Wisconsin Point.—I was birding Wisconsin Point and had stopped at the marsh end of Allouez Bay when I noticed a small dark gull with several Bonaparte's 30 feet out from the road. At first I thought it must be a Franklin's Gull and started taking pictures (Figure 1) since I don't have any of that species, but as the gull swam towards me I realized it was not. I observed the following field marks through a 500 mm lens while continuing to photograph the bird. These and shape were the same as a Bonaparte's Gull. The bill was all black,

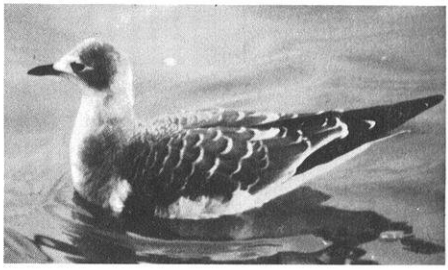


Figure 1. Sabine's Gull: 28 October 1987, Douglas County, Wisconsin Point (photo by Robbye Johnson).

maybe a little shorter than a Bonaparte's, but shaped the same. The forehead, lores, chin, throat, foreneck and rest of the underparts were whitish. The top and side of head, sides and back of neck and side of breast were medium gray with soft-edged white area around dark eye. The back was a little darker gray than the head and browner. Each back feather edged with a thin line of black, then white giving the back a scaly look I haven't seen in any other gull. I still had no idea what kind of gull I was photographing, but this became obvious when it suddenly took off. The upper wing surface had a striking triangular pattern. Outer primaries solid black; inner primaries, nearly all of secondaries and parts of greater and median coverts pure white forming a clear-edged white triangular patch with the to at the wrist. This white triangle was also visible on the underwing. The rest of the inner wing was brownish gray, the same as the back. The tail was white and slightly forked with a black sub-terminal band about ¾ inch wide. The gull flew with tern-like flight of a Bonaparte's Gull. This observation lasted about 10 minutes. I then raced to a phone to call friends. Together we relocated, watched and photographed the bird from as lose as 15

feet for another 45 minutes. During this time we heard the gull utter a shorebird-like peep when flying. It also seemed to want to be very close to or on the beach and would swim up almost to our feet.

This gull stayed another two days and was seen by Parker Backstrom, Mark Stensaas, Don Kienholz, Karl Legler, Larry Semo, Bill Evans, Kim Risen, and Janine Polk. On the last day, while on my knees photographing the bird as it stood on the beach in full sun, I noticed that the bill tip was greenish-the color of a thin yellow wash over black and that some white was visible in the folded primaries.—*Robbye J. Johnson, 2602 North 28th Street, Superior, WI 54880.*

Sooty Tern (*Sterna fuscata*)

10 September 1984, Columbia County, Gorman Road, Rio.—Peter McCormick and his grandmother, Mrs. Frances Gorman, Rt. 1, Rio, found a dead Sooty Tern on Gorman Road, Wyocena Township. This is the first state record for the Sooty Tern. They brought the dead tern to the DNR office at Poynette to confirm its identification. The authors intended to submit an account to WSO but, unfortunately, author Hunt "lost" the information in his files and just recently found it. The purpose here is to present a formal published record.

For accuracy, the original report of author Kaiser is quoted: "On September 10, 1984, a Mr. Pete McCormick, c/o Frances gorman, Rt. 1, Rio, WI 53960 was riding with his grandmother (Mrs. Gorman) on Gorman Road at approximately 9:30–10:00 A.M. They observed a bird lying on the blacktop pavement of Gorman Road. Approximately five minutes later, they returned to the Gorman residence and noted that the bird was still lying in the same location. Mrs. Gorman's residence is about 200 yards from the location of the bird on the road. Upon reaching the Gorman residence, Mr. Pete McCormick returned to the location with a camera. He took a picture of the bird on the pavement, picked the bird up and returned to the Gorman residence. The location of the bird on the road was approximately 3/10 of mile west of the intersection of Traut Road and Gorman Road (i.e., Section 33, Wyocena Twp.).

Approximately 4:00 P.M., September 10, 1984, Mrs. Gorman took her grandchild, Pete McCormick and the bird t the State Game Farm for further information about the unknown identity of the bird. At the Game Farm, I (Pat Kaiser) checked in the Birds of North America Identification guide by Robbins, Bruun, and Zim, and tentatively identified the bird as an Adult Sooty Tern.

I asked Mr. McCormick if we could keep the bird for positive identification and possible use as a study specimen. Mr. McCormick stated yes, such was okay. With that, I took the bird and placed it in a deep freeze at the State Game Farm, Poynette, Wisconsin. The following day, I took the bird along to Horicon, Wisconsin for inspection by Dick Hunt, Waterfowl Biologist with Department of Natural Resources Research. Mr. Hunt stated he would check with Mr. Sam Robbins of Wisconsin Society for Ornithology, and the MIlwaukee Museum to determine past records of the Sooty Tern in Wisconsin or other parts of the United States.

On September 18, 1984, I visited with Mr. Pete McCormick to inspect the site where he found the bird. Immediately adjacent to the location on the south side of the road was a two-line electric power line, and two-line telephone wire line. Approximately 200–300 yards south

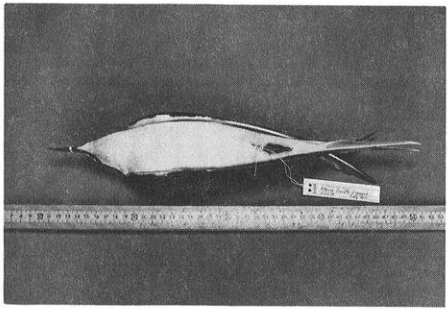


Figure 2. Wisconsin's first and only Sooty Tern: specimen in collection of Milwaukee Public Museum (photo by Greg Septon).

of the location is an approximate two-acre wetland, also, immediately adjacent to the wetland is Rocky Run Creek drainage."

The specimen was preserved as a standard study skin (Figure 2) by Mr. Greg Septon of the Milwaukee Public Museum and resides in their collection. Examination at the time of skin preparation showed the bird to be in good physical condition, although the stomach was empty,and no evidence of injury suggesting cause of death.

Mr. Sam Robbins advised there were very few inland records of Sooty Terns, the nearest being in Tennessee (see 1983 A.O.U. checklist) and other reported in New York, West Virginia, and western Texas; all these inland records appear the result of major storms.

The Wisconsin Sooty Tern specimen may also have been the result of weather factors as a major hurricane ("Diane") moved along the Atlantic Coast about September 5, 1984.

A brief newspaper account (including a photo) of this rare tern appeared in the Mid-County Times published in Pardeville, Wisconsin on September 12, 1984.—*Patrick H. Kaiser, State Game Farm, Rt. 1, Box 152, Poynette, WI 53955, and Richard A. Hunt, 309 Birchcrest Road, Horicon, WI 53032*

Ani (species not identified)

19 October 1987, Sheboygan County, near Elkhart Lake.—Physical Description: Size: Near that of a Grackle or Mourning Dove. Color: Black, the bill and legs appeared to be dark gray. Other: It generally looked disheveled,which made the head look somewhat large. The tail was cocked straight down at each perch site. The bill was large and stout with a downward point. My thought was that it appeared to be similar to a parrot. Voice Description: None apparent. Behavioral Description: Initially, it was just another black bird. Only when I realized that it was following the cows home did it strike me as odd. The bird would fly to a tree ahead of the cows, sit and wait until the herd passed (which meant I was getting close to it), then fly on ahead again. It would perch about 10–15 feet above the ground, and had no problem flying among the tree branches. This all lent to a somewhat difficult task of observation. When we reached the farm buildings, it sat in a tree near a metal shed. About ⅔ of the way home I did see its bill. That convinced me that I had never seen such a bird before. Comparison with similar species: The individual I saw had no wing markings anticipated in a male Redwing; lacked the shimmering or glossy feathers and long pointed bill of the Common Grackle; had a longer tail and different back than the European Starling; was much smaller than a crow and exhibited behavior seen only in Cowbirds, which are smaller and of a much lighter color.—*Hans W. Kuhn, 306 Kuhn Road, Elkhart Lake, WI 53020.*

Common Barn-Owl (*Tyto alba*)

10 August 1987, Forest County, Franklin Lake Campground.—Two Barn Owls camped out at Franklin Lake for at least four days. We heard them for the first time shortly after dark on Monday, August 10th. They were calling (hissing) on the west side of the camp road between sites 71 and 72. Not being able to locate them,we assumed they were Screech Owls or, perhaps, young Great Horned Owls.

On Tuesday night they started calling about 9:45 P.M. On this occasion, in company with the Hendricks who were camped at site 73 we managed to get a flashlight on them. Although they were too high in the trees for us to see any distinctive markings, they were clearly too large to be Screech Owls. As was the case the evening before, a Great Horned Owl hooted shortly after the Barn Owls started up, leading us to believe that perhaps immature Great Horned Owls had a different call than the mature ones. We checked bird books and could find no evidence of that. What we did discover was that Peterson's description of the Barn Owl's call, a drawn out "shiiish" very closely duplicated what we had been hearing. We got out our Peterson tape, played the Barn Owl call, and were convinced we had a verification based on sound.

Wednesday was overcast and we heard nothing. On Thursday night we carried our recorder up to site 73 so the Hendricks could also verify the sound. Shortly after we had played the tape, possibly as a result of our playing it, the owls obliged by coming into the site and calling while perched on open hemlock limbs 15–20 feet above the ground. This time we could see them clearly; the heart-shaped face and white undercoverts were unmistakable. We would assume they were immature, given their tameness. Maybe they were just passing through. In any event, we have not seen them since Thursday, August 13th.—*Sue and Stuart Burns.*

Boreal Owl (*Aegolius funereus*)

26–27–28 January 1988, Oneida County, Rhinelander, Highway 8 East.—Wesley Yike called for me to come and take photos and observe a small owl. It was perched on the branch of a thick red pine, 5 or 6 feet from the ground. It permitted me to get very close and made no attempt to leave. The bird stayed on perch for three days. During this time it captured and ate three voles or short-tailed shrews. Several pellets were regurgitated. Having taken a photo of a Saw-whet Owl two years ago, I thought this to be a Saw-whet. The photo appeared in several newspapers. Keith Merkel at Marshfield called and suggested that it was a Boreal rather than a Saw-whet Owl.—*Ced Vig, 919 Birch Bend, Rhinelander, WI 54501.*

Scissor-tailed Flycatcher (*Tyrannus forficatus*)

17 October 1987, Ozaukee County, east end of Lake Drive.—I was just out birding for the day, watching the southward hawk migration. There were several sharp-shins and Merlins, with a few scoters moving south. I first noticed the bird as it flew up from below the Lake Michigan bluff. My initial view of the bird was as it flew diagonally toward me. The impression was of a slim,long-tailed bird about the body size of a Catbird. My first thought was a "wagtail" species, about as unusual as the real thing. After this short view, about 2 seconds, the bird landed in a small shrub abut 20 feet away and remained for about a minute and a

half. Immediately I recognized the bird as a Scissor-tailed Flycatcher (an immature male bird). Fortunately, my camera was handy and I got a few shots and the following was noted:

Size: Body size was about that of a catbird (I saw a few that day from that location). Tail length was about as long as the body, with a slight widening at the tip. Length indicates an immature or female bird. Head size and shape reminded me of a Great-crested Flycatcher.

Color: Head, nape and back was a pale gray. In the wings, the secondaries and their coverts were the same pale gray and the primaries were dark, possibly black in color. Photographs indicated that they were in fact black. The photographs showed whitish edges to the secondaries and upper wing covert feathers. The tail was the same color as the primaries; blackish. The throat, malar area, breast and abdomen were white. The sides were rosy pink. The bill and eyes were black. Photographs indicate a pale lore spot.

Flight: The bird flew in a direct manner, with the longish tail bouncing as it flew. The bird looked as if it was dragging the tail along with it rather than using it in flight.

The bird looked healthy and was definitely on the move. It was last seen flying south-southwest along the lakeshore toward Port Washington.—*Jeffrey L. Baughman, Box 343, Kewaskum, WI 53040.*

Mountain Bluebird (*Sialia currucoides*)

20 December 1987, Milwaukee County, Cudahy, the parkway between Sheridan and Warnimart Parks.—While on the Hales Corner Christmas Bird Count I returned to my car after viewing Lake Michigan ducks; once in the car I glanced to the right directly into the sun and saw a silhouette of a thrush-like bird perched in a tree some 40 feet away. The bird perched, probably because of the wind, rather horizontally, giving the impression of a small shrike, but even without binocs one could easily see that the bill was very unshrike-like and was indeed very thrush-like, thin and short. The bird turned slightly and with binocs one could view a faint eye ring; this immediately suggested a Solitaire (two had been located in this area in the last 10 years) except for the near vertical posture and a tail that seemed too short for *Myadestes*. I was convinced of Solitaire until I maneuvered the car so that the sun was at a friendlier angle and the bird sallied out from the branch, hovered very briefly and appeared to flycatch some invisible fantasy insect from 6″ above the ground and flashed a sky blue tail (168B Venetian Blue in Smithe's Naturalists Color Guide). I knew I was dealing with *Sialia*, but which one? This area is one of the best for Eastern Bluebirds in late fall and into early winter. Closer examination on the ground and when perched for several minutes revealed a lack of any distinctive rust or even warm buff on the neck or breast indicating Mountain Bluebird (Figure 3). Otherwise the brightest blue (similar to 168A+B in Smithe's Guide) was confined to the rectrices (dorsum) and rump primaries and secondaries as well as the bend of the wing. More diluted blues (washed with gray) could be found on the back, nape and top of head extending to area around eye and fading to gray on throat. In some light the upper and middle breast could be seen to be a slightly darker, warmer gray but hardly even a rusty wash. The tips of the greater primary coverts were a light gray giving the impression of a faint single wingbar. Belly and crissum were whitish. Legs were

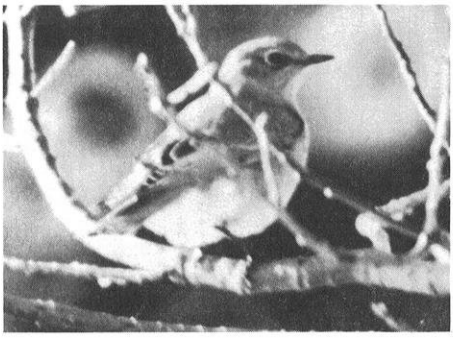


Figure 3. Mountain Bluebird: 20 December 1987, Milwaukee County, Cudahy (photo by John Idzikowski).

blackish as was bill. Eye ring was whitish with a bluish cast in some light. The subsequent behavior consisted of perching and then flying to the ground to pick up a seed or berry; flight was very thrush-like, swift and direct.

Comparison with similar species. This bird was a Basic I, male. Distinguished from other female *Sialia* by lack of rust on breast or neck, more horizontal thrush-like posture. Postured in wind like a small shrike; in poor light appeared to be a short-tailed Solitaire. Estimated to be about Hermit Thrush size, without any comparison with any other bird at any time. Blue plumage.—*John Idzikowski, 2558 South Delaware, Milwaukee, WI 53207.*

Townsend's Solitaire (*Myadestes townsendi*)

13 December 1987, Sauk County, Devil's Lake State Park.—Overcast skies. About 32 degrees F. Somewhat windy. Dorothy and I were searching along the East Bluff Trail at Devil's Lake primarily for Townsend's Solitaire. I, or both of us, had made perhaps 4 or 5 previous searches along various paths on the bluffs starting in late fall. We had been "pishing" through red cedar areas for perhaps an hour or so when, at about 12:15 P.M., we began hearing some unusual call notes coming from an area of red cedars. The call was a fairly loud, clear tone of fairly short duration and constant pitch with a metallic quality suggesting a squeak. The note was repeated over and over with several seconds pause between each occurrence. Altogether we heard a dozen or more repetitions of the tone over perhaps up to a minute.

The repetitions were fortunate for they enabled us to both study the sound and get a clear recollection to compare later with tape recordings.

While we were listening to it we both agreed that the calls were distinctive and that we'd never heard it before. While listening, I mentally translated it phonetically as "EEEK." I could hear a "K" at the end, not at the beginning.

I approached and began pishing, but the bird quit calling. Looking in the area that the sounds were coming from, I spotted a bird perched high up on a branch but it instantly flew off.

I had a vague recollection—from tapes and guides last consulted about a month before—that the Solitaire has this sort of note. After it stopped, I checked the National Geographic's description of the call and was gratified to find that it described exactly what we heard: "a high-pitched eek."

It was so unusual a call that I actually checked the wooden trail sign hanging from a metal post, not far away, to make sure that it could not have made the sort of squeak—in the wind—we heard. It couldn't.

We were unable to relocate the bird and so after 15 minutes we left and walked back to the car where we had our bird tape. We played the Solitaire tape (taken

from the Western Peterson)—about 45 minutes after the original hearing—and we both agreed that the tape was identical to the notes we had heard.

I played the tape again and listened more closely to the distinctive quality of the notes. They seemed, I thought, so ethereal or disembodied—as if someone were whistling." And, with that thought, I suddenly recalled a fleeting detail of the original hearing that I believe I never would have recalled—even when writing a summary—if I had not re-lived it by listening to the tape. When I first began hearing the notes, Dorothy was a little ahead of me, standing on the bluff edge overlooking the red cedars. It sounded as if she was whistling and as I approached I was wondering why she had begun whistling for the Solitaire instead of pishing! In a few seconds when I got up to her I discovered she wasn't whistling and my next thought was "is someone on the trail whistling?" Of course, there was no one else around! And I finally realized it was a bird calling.

The main source of queer noises in the Baraboo Hills is the red squirrel, but we've heard countless calls by this animal yet never the sort of whistled squeak herein described. I'm convinced that the only thing that does a perfect imitation of a Townsend's Solitaire *is* a Townsend's Solitaire.—*Karl Legler, 429 Franklin Street, Sauk City, WI 53583.*

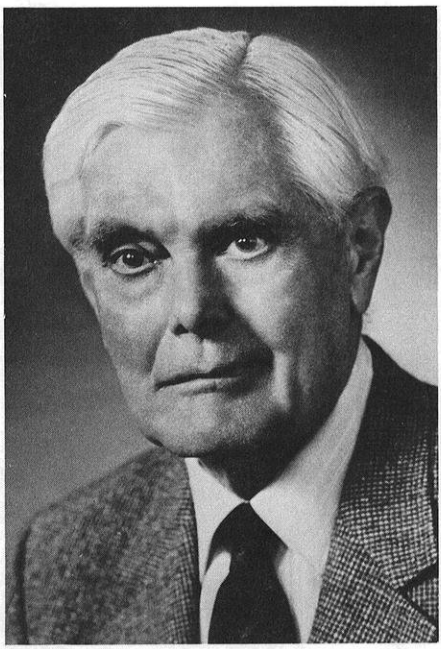
Black-headed Grosbeak (*Pheucticus melanocephalus*)

23 September 1987, Waukesha County, Waukesha.—While seated at the kitchen table a few minutes before noon on September 23, 1987, I noticed two birds alighting in a black cherry tree approximately 25 feet from my window. One bird perched on the far side and was obscured by foliage, but the other alighted on a bare branch on the near side affording an unobstructed view. It first suggested a female Rose-breasted Grosbeak, but upon viewing it with 7×35 field glasses I was immediately struck by its vivid ochre sides and flanks, its overall tawniness, and two white face stripes (one superciliary) contrasting sharply with brown cheeks. Other field marks noted: crown: brown but lightly streaked with lighter hades; bill: typical conical grosbeak shape,light colored, but with upper mandible a slightly darker shade; upper back: brown, streaked with lighter shades; lower back: unstreaked light brown; tail: dark brown; wings: dark brown, lightly spotted with white but not formed into prominent wing-bars; chin and throat: tan which contrasted slightly with a rich buff breast; legs: brown. The ochre of the sides and flanks was blended through buff to deep tan toward the mid-breast and mid-belly. No white or streaking was evident on the entire underside. The bird appeared to be interested in the feeding activity of several cardinals and Blue Jays competing for sunflower seed at a feeder nearby, but after about 6–7 minutes it flew off in the company of its companion beyond the trees bordering the backyard. It wing lings appeared to be a yellowish-tan, not rose or pink as in the Rose-breasted.

I am familiar with adult Black-headed Grosbeaks, having observed several in Arizona and Utah, but I have never before observed an immature. Viewing conditions were excellent in bright sunlight as the bird moved slowly among several bare limbs affording good views from all angles, slightly above eye level.—*Vernon Aune, S13 W22167 Ridge Road, Waukesha, WI 53186.*

Ring-necked Pheasant *by Karen Birgit Christiansen*

WILLIAM H. PUGH
1916–1988



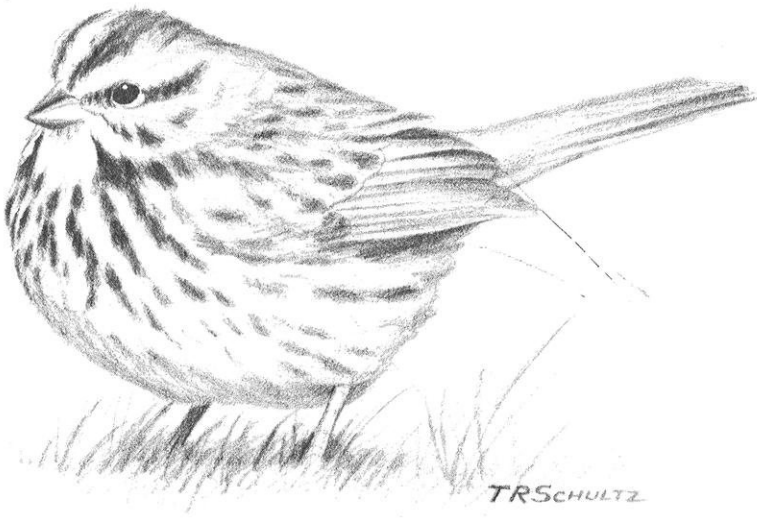
William H. Pugh, former president of WSO, passed away February 1, 1988. His death came after six to eight months of illness at a local nursing home. He was born in Racine July 10, 1916, of Welsh heritage, and he remained a lifelong resident. He was president of the W. H. Pugh Oil and Coal Co. of Racine. WSO members will remember him for supportive Pugh Oil Co. ads that appeared in *The Passenger Pigeon* for many years.

Bill Pugh was the third generation of his family involved in the Pugh firm. They supplied Racine in the early days with hard and soft coal, as well as stove-length wood for stoves. The firm grew with the city and the times, for years maintaining the huge landmark coal pile on the river dock near the harbor. Today, oil has replaced coal, and the Pugh Marina has replaced the coal pile. The firm also owns 15 service stations in Racine County and a bait shop.

For many years Bill raised exotic pheasants, most of which he later donated to the Racine zoo. At the same time, he also enjoyed the challenge of raising native upland game birds. One of his favorite birds was the Sandhill Crane. He obtained two injured ones from Canada and kept them for many years before donating them to the zoo.

As a member of the Hoy Nature Club, he was a regular participant in bird counts. Many club members will remember him most fondly for taking them on three-day trips to see the dance of the Prairie Chicken and Sharp-tailed Grouse. Charlotte, his daughter, sometimes accompanied him on these trips, assisting in taking photographs. Not just an interested observer, he also was practical in trying to restore the Prairie Chicken by being an active member of the Society of Tympanuchus Cupido Pinnatus Ltd. One of his other animal loves was circus elephants. He would go to the circus grounds early to watch them unloading, and he enjoyed watching them work.

The present Mayor of Racine, Mayor N. Owen Davies, said "Bill Pugh has been a landmark in the city for many many years. I think he's been a pillar in the community ." The Pugh name will be continued by his sons, William H. Pugh III and Richard. The women of the family are his wife Betty, daughter Charlotte Crist, and sister Marjorie Janes.—*Edward Prins, 1238 Indiana Street, Racine, WI 53405.*



Song Sparrow *by Thomas R. Schultz*

ABOUT THE AUTHORS AND ARTISTS

John Bielefeldt is a park naturalist with the Racine County Department of Public Works. He has been involved in many WSO activities, serving as a Field-note Compiler and Chairman of the Records Committee. He was the 1988 recipient of the Silver Passenger Pigeon award.

Walter A. Bohl is a former Wisconsin artist. His etching of a pair of Wood Ducks was featured on the 1943–44 Federal Duck Stamp.

Charles C. Bradley is a retired Professor of Geology from Montana State University. He has a Ph. D. and an Honorary Doctorate from the UW-Madison. He and his wife, Nina Leopold Bradley, live and study nature at the Aldo Leopold Memorial Reserve in Baraboo.

Margaret Clark Brittingham is a professor in the School of Forest Resources at Pennsylvania State University. She has both master's and doctorate degrees from the Department of Wildlife Ecology at the University of Wisconsin-Madison. Her research on diseases at bird-feeders relied extensively on volunteers from WSO.

Karen Birgit Christiansen is an undergraduate student at the University of Wisconsin-Madison, majoring in wildlife ecology and art. Her career in wildlife art is just getting started. She has contributed artwork for *The Passenger Pigeon* in the past.

Scott R. Craven is an Associate Professor and Extension Wildlife Specialist in the UW-Madison's Department of Wildlife Ecology. Scott is well known to naturalists around the state because of his extension publications and radio shows.

Cary Hunkel has a Masters of Fine Arts degree from the University of Wisconsin-Madison. Her art has been shown at the "Birds in Art" exhibition in Wausau. She is currently the recording secretary for Madison Audubon Society.

John H. Idzikowski, our current President, is a Laboratory Manager and Lecturer in ornithology at the UW-Milwaukee. He has been a past Field-note Compiler and Chairman of the Records Committee.

Rockne A. Knuth is well known to WSO members. He is a past President and a frequent contributor of artwork for WSO publications. He has done Wisconsin Duck Stamps and has shown in the "Birds in Art" exhibition.

Kenneth I. Lange is a naturalist at Devil's Lake State Park. He has a master's degree from the University of Arizona. He is a frequent contributor to *The Passenger Pigeon*, and he is coauthor of WSO's publication, *Birds of the Baraboo Hills, Wisconsin.*

Mark A. Martin is a Management Specialist in the DNR's Bureau of Endangered Resources-Natural Areas Section. He has a BS degree in Wildlife Management from UW-Stevens Point. Mark and his wife, Sue, are resident managers for the Madison Audubon Society at their Goose Pond Sanctuary.

Sumner W. Matteson works for the DNR's Bureau of Endangered Resources. He is a graduate of the UW-Madison and has a master's degree in Agricultural Journalism and Environmental Studies.

Mark S. Peterson is one of WSO's hard-working Field-note Compilers. He has a degree in nursing from the University of Wisconsin-Milwaukee, and he is presently a professional nurse.

Edward Prins is a long-time WSO member who knew William H. Pugh. He is an active birder in the Racine area.

Samuel D. Robbins is one of Wisconsin's most active ornithologists. He has served WSO in many capacities, including President and Editor. He has received WSO's Silver Passenger Pigeon Award for his many contributions. He is the author of the forthcoming book, *Wisconsin Birdlife.*

Thomas R. Schultz is a well-known Wisconsin bird artist who serves as WSO's Field Trip Chairman and Assistant Editor for Art. He was an illustrator of the National Geographic Society's *Field Guide to the Birds of North America.* He was recently honored as Wisconsin's Wildlife Artist of the Year.

Stanley A. Temple is the Beers-Bascom Professor in Conservation in the UW-Madison's Department of Wildlife Ecology. He is Editor of *The Passenger Pigeon* and Chairman of WSO's Research Committee.

NOTICES AND ADVERTISEMENTS

THE WISCONSIN SOCIETY FOR ORNITHOLOGY

The Wisconsin Society for Ornithology is an educational and scientific non-profit organization founded in 1939 "to encourage the study of Wisconsin birds." The Society achieves this goal through programs in research, education, conservation, and publication.

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