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THE PASSENGER PIGEON

FOR VICTORY
AT SEA

TO ENCOURAGE STUDY OF WISCONSIN BIRDS

Vol. V

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No. 3

THE CANADA SPRUCE GROUSE IN WISCONSIN (*Canachites canadensis canace* Linn.)

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The Bird and Its Habitat Requirements

A brief summary of the food and habitat requirements of the Canada Spruce Grouse (*Canachites canadensis canace* Linn.) may well be a basic requirement for proper understanding of the history of this bird in Wisconsin.



Spruce Grouse Male

—Photo by Staber W. Reese

—Cut courtesy Wisconsin Conservation Dept.

Practically all articles on this species agree that it is to be found in the spruce and balsam swamps of Eastern Canada and the northern portions of the United States from Minnesota to Maine. The bird is generally considered to have been bound to this area by its food and cover needs with the possible exception of wanderings to other habitats in Autumn. According to its present location in Wisconsin, this would seem to be a fact, for it is almost always found only in the spruce-balsam swamps. But was this the case a century or more ago when the state was sparsely populated with the Spruce Grouse's main enemy—man?

There are several suggestions in the literature to the effect that this bird may well have inhabited additional range either permanently or temporarily. A. C. Bent in his *Life Histories of North American Birds*, states: "Nor are they unknown to appear well out in rather wide upland clearings, where the only available cover consists of thickets of raspberry bushes, or even in river- or brook-meadows, where it is furnished solely by rank grass. Ramblings, thus venturesome, are exceptional, of course, and undertaken, I believe, at no seasons other than late summer and early autumn, when the lowly vegetation that clothes such perfectly treeless ground is most luxuriant, and also best supplied with berries or insects of various kinds; these spruce grouse devour eagerly whenever, and wherever, they can obtain them readily, although subsisting during the greater part of the year on a nearly unmixed diet of spruce and balsam spills (leaves), plucked mostly from branches at least fifteen or twenty feet above the ground." Bent also mentions the fact that Brewster found larch spills (leaves)—tamarack—in some crops of young birds in September and that he had found in crops of young birds in Autumn raspberries, blueberries, and fruit of *Virburnum lentago* (?) as well as larch spills.

Also by way of food habits, which are so important to the original range of this species, F. H. King (1882) in his study of foods of Wisconsin birds as published in Vol. 2 of *Geology of Wisconsin*, writes that they are "a very common resident in the coniferous forests of Northern Wisconsin" and quotes authorities on their food habits as follows: "Buds and cones of spruce and larch (DeKay); buds, seeds and foliage of evergreens (Samuels); berries, young twigs and blossoms of several species of plants and berries of the Solomon's Seal (Audubon)." T. S. Roberts, in *The Birds of Minnesota*, also includes in their diet such things as willow, cranberry leaves, seeds of spruce, thistle, and fruits of cranberries, blueberries, bunchberries, crowberries, juniper berries and Solomon's Seal. Likewise mushrooms are mentioned frequently as a food as are grasshoppers in late Summer and Autumn. Ludwig Kumlien, in his "List of Birds Known to Nest Within the Boundaries of Wisconsin" (1891) as published in *The Wisconsin Naturalist*, also reports that this bird is never found "far away from spruce, cedar or fir timber."

Possible Original Range and Population

Analyzing the above food habits requirements in relation to the original distribution of the native trees of Wisconsin, a reconstruction of the probable early day range of this species may be possible. In this regard, special attention should be given to the fact that larch or tamarack, cedar, juniper, cranberries, and in general buds, seeds and foliage of conifers or evergreens, have been included in the foods of this grouse in addition to many auxiliary foods during the fall of the year. It is not impossible, considering the original distribution of evergreens of these types in the State, that Spruce Grouse may at one time have been found not only throughout the northern parts, but also along the Lake Michigan shore as far south as Racine County, in parts of Central Wisconsin, and also south along the St. Croix and Mississippi Rivers for some distance. However, as this bird, the "Fool Hen," is known to be very tame and easy to kill, and as the more southern and central parts of the State were settled at an early date, it undoubtedly was rapidly exterminated as settlements sprang up 75 to 100 years ago—without leaving much recorded evidence of its original presence in these areas.

Data to support this possible range, besides original food and cover, are as follows:

1. W. W. Cooke, in his **Bird Migration in the Mississippi Valley**, (1888) states: "Principally resident in British America but in winter occurs as far south as **Racine, Wisconsin**. In Minnesota it is resident from **Minneapolis** northward. . . ." It is not known where Cooke got the evidence for this mention of Racine, and the record is even more questionable as P. R. Hoy of Racine, in his article on Wisconsin Birds published in the **Transactions of the Wisconsin State Agricultural Society** (1852) simply states that the Spruce Grouse is "common on the head-



Spruce Grouse Female

Cut courtesy Wisconsin Conservation Dept.
—Photo by Staber W. Reese

waters of the Wolf River and vicinity of Lake Superior."

2. A. W. Schorger, in a letter to me dated July 30, 1942, quotes the following passage from G. W. Featherstonaugh, **A Canoe Voyage up the Minnaw Sotor**, London (1847), Vol. I, p. 229, referring to an incident which took place when their canoe party stopped on some lowland at La Crosse on Sept. 5, 1835, as follows: "Just as we landed, one of the men knocked a large Tetrao down from a tree, which was cooked for my supper. This bird was not particularly good, and, indeed, was only made tolerable by the slices of ham that were fried along with it." Mr. Schorger states regarding this quotation, "It may be inferred that this was a Spruce Grouse since it is the only grouse that has a bad taste on occasions."

3. From Kumlien and Hollister, **Birds of Wisconsin** (1903) we quote: "Fairly common resident in the pine regions of the State, but so far as we can learn has never been found south of the pine belt." However, especially in the early days, virgin pine timber was found not only in the extreme north, but also far south beyond Milwaukee on the Lake

Michigan shore and into Central Wisconsin and south some distance on the Wisconsin, St. Croix and Black Rivers.

The above evidence supporting this theory must all be taken in light of the very definite statement of Ludwig Kumlien (1891) from the previously mentioned source as follows: "Spruce Partridge—nests in northern part of the state, but from all I can learn rather sparingly, from my observations is far more abundant in the Northern Peninsula of Michigan than in Wisconsin. Never found in the central or southern sections of the state; nor far away from spruce, cedar or fir timber." Much more data is needed before a positive statement on the original range of this grouse in Wisconsin could be made.

Ludwig Kumlien's comment on population in 1891, "appears rather sparingly," is one suggestion on the subject of numbers at that time. Other historical data of an early date includes Hoy's statement (1852) to the effect that they are "common on the headwaters of the Wolf River and vicinity of Lake Superior"; Rev. A. C. Berry's note (1854) from **The Proceedings of the Boston Society of Natural History**, "said to be plenty in the extreme northern part of the state (Wisconsin)"; King's reference (1882), "common resident in the coniferous forests of northern Wisconsin"; and another record secured from A. W. Schorger in his letter to me of July 30, 1942—from S. F. J. in *Forest and Stream* 40 (Jan. 12, 1893) 29. as follows: "He hunted at Beecher Lake, on line of Milwaukee Northern Railroad, near Lake Superior, and shot a pair of 'Canada grouse' that are 'very rare' birds."

It should be noted that the earliest records by Hoy, Berry and King referred to the Spruce Grouse as common or plentiful, while later in the 1890's and near 1900, when Northern Wisconsin was coming to its peak in lumber production, the bird was not considered so common any more. In this regard, Kumlien and Hollister in **The Birds of Wisconsin**, (1903) make a pertinent comment: "*Appears to be disappearing at a rather rapid rate, just why is not easily answered. We have personally met this species in different portions of Northern Wisconsin for the past twenty-five years, but in constantly decreasing numbers. In some sections of our extreme northern counties many still remain.*"

This remark should be italicized, for in the words "constantly decreasing numbers" lies the explanation of the Spruce Grouse's fate. There is every reason to believe that this bird undergoes a cyclic increase and decrease in populations, but a constant decrease over a 25 year period must mean reduction of original cover and removal of food by man's lumbering operations and resulting fires, as well as killing by these lumbermen, settlers and hunters for food. Naturally, the birds soon remained only in the deepest timber and swamps. If there is any question that the birds were killed for food, it should be stated that in the fall these grouse, after feeding on berries, grasshoppers, and so forth, are edible and were shot for food.

Although undoubtedly affected by the cycle (Bendire in his **Life Histories of North American Birds** speaks of both "possible irruptions and minor migrations"), it is very probable that originally the Spruce Grouse was a common bird in all favorable habitats in Wisconsin, being rare only at a low period of the cycle or in locations unfavorable to its full food and cover requirements.

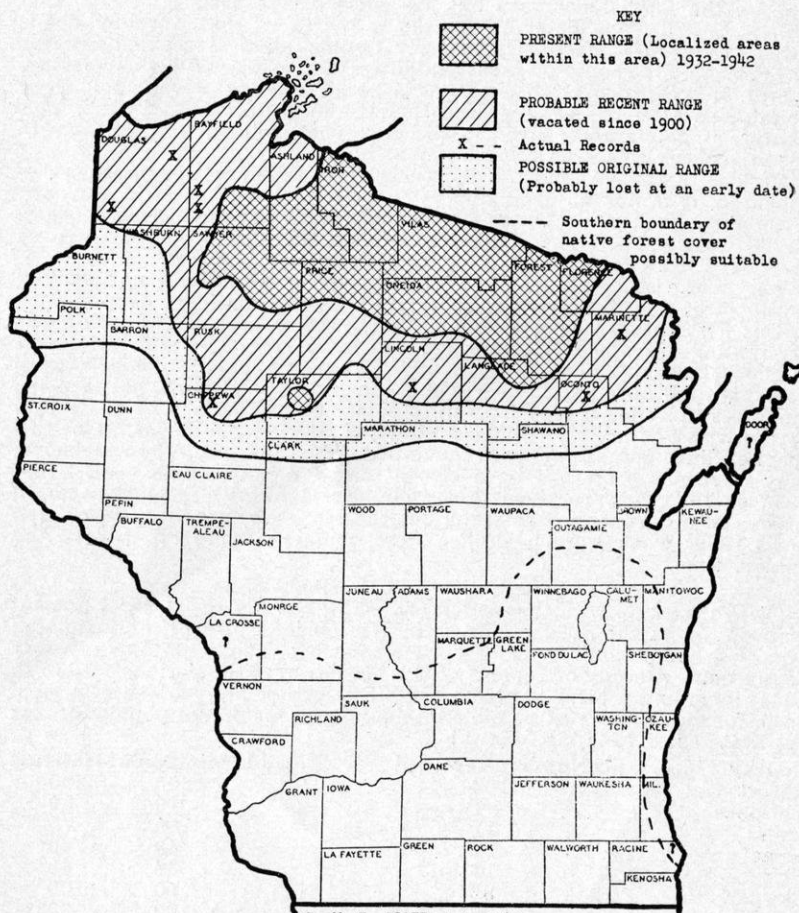
Decimation and Recent Recorded Range

Again I am indebted to A. W. Schorger for more valuable data on the Spruce Grouse in early day Wisconsin (also from his letter of July 30, 1942 to me). The following two quotations will show what happened to this bird and why its range rapidly receded—for destruction began almost a century ago. From the **Superior Chronicle**, Jan. 15, 1856: "The bill of fare for the New Year's dinner at the Superior Hotel included 'Spruce Partridge'." From the **Bayfield Press**, Nov. 20, 1886: "James Hitt, one of Bayfield's homesteaders, placed the Press under obligations to him the first of the week by presenting us with four nicely dressed spruce partridges."

As will be noted by the map with this article, the Spruce Grouse has since 1900 reduced its range in the state considerably, receding all along

its southern border and leaving only one known outpost in Taylor County which may no longer be present. Of course, it should be understood that even in the area shown as "present range," this bird now is found only in certain isolated localities. However, even records of this bird from 1900 to 1935 are difficult to secure, so those which indicate lost range should be mentioned here.

The most valuable source of information on this subject is the result of a survey questionnaire sent out by the Wisconsin Conservation De-



Range of the Spruce Grouse in Wisconsin

partment in 1932 which asked, among other questions, "When did you last see or have a report of this bird in your county?" Here are the records which are of interest:

1. Last reported in Town of Dairyland, Douglas County, in 1928 or 1929 (Barney Devine).
2. Last seen in Lincoln County in 1917.
3. Two birds reported seen in 1912 in Marinette County (Arthur Baie).
4. Not believed to have been seen since last one in Brule River area, Douglas County, about 1915 (James McNaughton).

5. A few birds were reported to be located in T32N, R8W, Chippewa County, in 1931.

Other records of lost territory secured elsewhere than those above include:

6. One seen by W. E. Snyder in Langlade County near Antigo in 1932, according to his unpublished records.

7. August Schoenebeck's comment on this bird in his **Birds of Oconto County** (1902) in which he lists the Spruce Grouse as "Visitant, rare."

8. Reports from Andy Anderson and Ranger Moore of Grandview to the effect that in 1907 and 1914 this bird was found regularly in the jack pine on the Bayfield barrens but has since disappeared.

9. A record from Sister M. Martha to the effect that Anthony Burns noted this grouse frequently in Door County about 1919 and saw his last one in 1938 should be investigated further. Along with this goes the record of a Spruce Grouse seen 1½ miles east of Sevastopol, Door County, on Dec. 22, 1939 by the Door County Junior Bird Club. This location is deliberately given in the hope that someone will be able to try to recheck this area for additional birds.

Besides the above recorded locations from which this grouse has disappeared, it is not unlikely that it could have been found in Burnett, Washburn, Rusk, and Shawano Counties within the past three decades. Taylor County also undoubtedly had more of these birds 30 years ago, as they have been found there recently.

This is the story of a rapid loss of range by a valuable native Wisconsin bird, due to a complexity of reasons. The common denominator in this destruction was man and probably the largest single factor was his hunting of these tame partridge, but lumbering, fires and settlement in general accounted for the remainder. These 30 years spanned Wisconsin's greatest days for lumber camps, fires and settlement of northern lands. At this time it may be well to comment on the lack of protection by the laws of the State, which also contributed to the downslide of this species. Since game laws were inaugurated in 1851 until 1916 inclusive, they were not protected by a closed season in any single year. From 1917 to 1921 they received protection (accidentally) through a closed season on all grouse in the state, but the season was then again opened until 1929, when Spruce Grouse were completely protected until the present time.

Present Distribution and Possible Population

The range map with this article will show quickly the general present distribution of the Spruce Grouse in Wisconsin. However, only isolated areas of heavy coniferous or spruce-balsam swamps contain any fair populations. A study of reports of this species over the period of 1935 to 1941, including a total of about 230 birds in that period, was used as a basis for an estimate of possible minimum and maximum population for the State as of 1941, as follows:

County	Number Reported	Possible Minimum-Maximum	
Forest	103	200	300
Florence	1	10	50
Iron	11	50	75
Vilas	17	40	60
Price	17	40	60
Sawyer	32	60	100
Bayfield	8	20	30
Ashland	17	40	60
Oneida	20	50	75
Taylor	1	6	10
Totals	227	516	820

The above estimates, of course, are arbitrary and based only upon a knowledge of the available possible favorable habitat in these respective counties and also the difficulty with which the birds are observed due to the inaccessibility of their usual surroundings. It is more than likely, however, that this period includes a peak period in their cycle and also that the minimum figure is more correct than the maximum.

WISCONSIN SPRUCE GROUSE RECORDS

County	Location	Number	Date	Observer or Reporter	Remarks
Ashland	—	8	1928	John Long	Observed
Ashland	T41N, R4W	2	Jan. 1936	W. A. Elkins, USFS	Report
Ashland	T42N, R1W	Covey	Last seen 1936	Aldo Leopold	Report
Ashland	T42N, R3W	1	April 1937	Hal Coons, USFS	Observed
Ashland	T42N, R3W	Covey	1938; 1 dead	Aldo Leopold	Report; no date covey
Ashland	T41N, R4W	1F & 6 juv.	6-21-38	Hal Coons, USFS	Close observation
Ashland	T43N, R2W	6	Fall, 1938	Charles Lawrence	Report
Ashland	T43N, R1E	5	5-20-39	Wm. Raske	Observed
Ashland	T42N, R3-4W	2F; 1M	12-1-39	Wayne Lewis	Observed
Bayfield	T45N, R8W	Present	1907	Andy Anderson	Observed
Bayfield	10 mi. W. Drummond	Common	1914	Ranger Moore	Never left Barrens even to nest
Bayfield & Sawyer	Namekagon Lake, Con- nor's Lake & vic. Camp 7	Very rare	1919 ?	H. H. T. Jackson	Report; Camp 7 14 mi. W. of Phillips
Bayfield	—	1 or more	1922	Wm. H. Kavanaugh	Observed
Bayfield	T43N, R6W	Present	1935-36	Andy Anderson	Observed
Bayfield	T43N, R6W	3	Winter 1935-36	John Lewis	Observed
Bayfield	vic. Cable	Several	No. years ago	Fred Minor	Report
Bayfield	T45N, R6W	2M	4-18-38	R. S. Rykert, USFS	Birds fighting
Bayfield	T45N, R6W	1	4-22-38	Hal Coons, USFS	Observed
Bayfield	Town Drummond	8	11-26-40	I. O. Buss, R. Jones	
Douglas	Brule River	1	1914	J. W. McNaughton	Observed
Douglas	Town Dairyland	Several	1928-29	Barney Devine	Report
Chippewa	T38N, R8W ?	Few	1931	Unknown. WCDept.	Observed
Florence	T39N, R17E	1	1932	Bert Nixon	Observed

County	Location	Number	Date	Observer or Reporter	Remarks
Forest	near Newald	Several	1923	Tony Oliester	Observed
Forest	Town Hiles	6	1931	Louis Oshesky	Observed
Forest	near Laona	Est. 200	1932	Leonard P. Bradle	Observed
Forest	T39N, R12E	Covey—12	1933	Aldo Leopold	Report; 4 in 1934 and '36
Forest	T38N, R12E	3	1935	Coleman Vaughn, USFS	Observed
Forest	T39N, R13E	2	1936	Gordon Baken	Observed
Forest	near Crandon	2F; 1M	1-9-38	I. J. Perkins	Collected
Forest	T38N, R12E	1	10-6 & 10-25-38	L. A. Mueller, USFS	Observed
Forest	T39N, R13E	2	Oct. 1938	Louis Oshesky	1 shot; 1 seen
Forest	T39N, R12E	1	11-9-38	L. A. Mueller, USFS	Observed
Forest	T39N, R12E	20	12-20-38	Louis Oshesky	Observed
Forest	T36N, R16E	3	Winter, 1938	Deane Mather	Observed
Forest	T38N, R13E	4	Jan. 1939	Gilbert Mentz	Others there in 1933 and 1934
Forest	T38N, R14E	30	1-20-40	Edw. Gravitter	Seen while cutting wood
Forest	T40N, R13E	1M	10-9-40	Louis Oshesky	Bird shot in crazy flight
Forest	T38N, R13E	1	Fall, 1940	Louis Oshesky	Killed by hunter
Forest	T39N, R12E	25	1940 or 1941	Louis Oshesky	Observed
Forest	Lake Julia	7	1940 or 1941	Louis Oshesky	Observed
Forest	? (in 40 a. swamp)	About 30	1940-41	W. E. Scott	Report thru wardens from A. Hageman
Forest	Survey of county	Few	3-19 to 21, 1941	W. S. Feeney & W. E. Scott	
Forest	?	1	7-14-42	Deane Mather	
Iron	Town Mercer vic.	Approx. 25	1932	I. C. Rheäume	Observed
Iron	T47N, R1E	Several	1936	Aldo Leopold	Report
Iron	T42N, R2E	1	Nov. 1938	I. C. Rheäume	Close observ.
Iron	T43N, R4E	1	Nov. 1938	O. J. Husemeier	Close observ.
Iron	T42N, R2E	1F	Oct. 1939	I. C. Rheäume	Seen
Iron	?	Large flock	11-26-39	Edw. Tipler	Seen
Langlade	near Antigo	1	6-19-32	W. E. Snyder	Observed
Langlade	T34N, R12E	Covey	Dec. 1939	Ernest Schuster	Logging swamp

County	Location	Number	Date	Observer or Reporter	Remarks
Lincoln	near Merrill	6 to 8	1913	Carl Whitman	One shot
Marinette	?	2	1912	Arthur A. Baie	Reported
Oconto	?	Report	1902	A. J. Schoenebeck	On his list
Oneida	T35-36-37-R6E	Several	1932	C. J. Jensen	Observed
Oneida	T38N, R11E	1	Oct. 1935	Louis Oshesky	Shot by hunter
Oneida	Squirrel Lake	2	Dec. 1935	Joe Jonas & Hartwell Paul	Observed
Oneida	T35N, R10E	Covey—6	Fall, 1936	Chas. & Robt. Ceronsky	Observed
Oneida	T38N, R11E	3	Feb. 1938	Deane Mather	Observed
Oneida	T38N, R11E	Covey—5	Feb. 1938	Chas. A. Rindt, USFS	Observed
Oneida	T39N, R11E	1	Oct. 1938	Louis Oshesky	Shot by hunter
Oneida	T37N, R9E	2	Fall, 1938	H. T. McKeague	Report
Oneida	T38N, R11E	5	1-7-40	Gaylord Helmich	Observed
Oneida	?		4-10-42	Earl T. Mitchell	Observed
Oneida	T39N, R5E	1	10-18-43	Orvel A. Schmidt	Observed
Price	T37N, R2W	Several	1932	K. C. Jakoubek	Observed
Price	T38N, R2W	8 & 12	1935 & 1938	K. C. Jakoubek	Observed & reported
Price	T38N, R1W	2	Fall, 1938	Charles Lawrence	Report
Price	T38N, R1W	3	11-6-38	Wm. Raske	Observed
Price	T38N, R1W	12	12-30-38	Wm. Raske	Observed
Sawyer	T37N, R3W	3	1931	Aldo Leopold	Report
Sawyer	Tn. Spider Lake	1	1932	J. O. Moreland	Observed
Sawyer	T37N, R4W	2	Each fall, 1933	Sam Ruegger	—
Sawyer	T38N, R3W	1	1934 & 1937	Neil LeMay	1 shot in 1934
Sawyer	T40N, R3W	Covey	1935	Aldo Leopold	Report
Sawyer	Connor's Lake	1	July, 1936	Clyde Terrell	Observed

County	Location	Number	Date	Observer or Reporter	Remarks
Sawyer	T40N, R5W	1	11-11-37	Roy Degler, USFS	Observed
Sawyer	T40N, R4W	1	3-21-38	Vern Risberg, USFS	Observed
Sawyer	Teal Lake	1	Summer, 1938	Dr. E. C. Moore	Observed
Sawyer	T40N, R4W	1F	8-24-38	Marvin Heinske, USFS	Observed
Sawyer	T42N, R6W	Covey—5	Sept. 1938	Roy Hamblin	Observed
Sawyer	T41N, R7W	1	Oct. 1938	Leon Plante	Killed by hunter
Sawyer	T38N, R3W	1	Oct. 1938	Aldo Leopold	Report; killed by hunter
Sawyer	T40N, R9W	2	Fall, 1938	Robt. Fairfield	Report
Sawyer	T42N, R6W	2	11-24-38	Robt. Fairfield	Report
Sawyer	T42N, R5W	Pr. & 2 juv.	8-11-39	M. B. Edwards, USFS	Observed
Sawyer	Town Winter	1-2 pair	Fall, 1939	Neil LeMay	
Sawyer	Lost Land Lake	2-4 birds	Dec. 1939	Henry Brandt	
Sawyer	T38N, R3W	1F	12-18-39	Sam Ruegger	15-20 ft. view
Sawyer	Ghost Lake	1F	10-8-42	Karl Kahmann	Killed
Taylor	T33N, R2W	1	1935 & prev.	Harry Hosford	Observed
Vilas	T40N, R11E	75 in 15 yrs.	Nov. 1906 to '21	Arthur Morgan	Observed
Vilas	Bent's Camp	1	1916?	H. H. T. Jackson	Killed by hunter
Vilas	Spring Creek	1	Nov. 1919	H. H. T. Jackson	Killed by hunter
Vilas	Land o' Lakes	Covey—14	1931	Stuart Hayner	Observed
Vilas	T42N, R10E	Approx. 24	1932	Stuart Hayner	Observed
Vilas	T40N, R9E	1	1933	Aldo Leopold	Report
Vilas	T43N, R6E	1	Oct. 1933	Aldo Leopold	Report; one killed in trap
Vilas	T40N, R8E	1F	1934	Joe Froelich	Observed
Vilas	T43N, R8E	1	Oct. 1934	Arthur Morgan	Observed
Vilas	T42N, R8E	1	1934 & 1936	Pat A. Wilsey	Observed
Vilas	Lac Vieux Desert	1	1936	Aldo Leopold	Report
Vilas	Palmer Lake	5	1936	Aldo Leopold	Report
Vilas	T40N, R11E	1	Sept. 1936	Arthur Morgan	Observed
Vilas	T40N, R8E	1M	Oct. 1937	Joe Froelich	Observed
Vilas	T42N, R11E	2	1939	Hartwell Paul	Observed
Vilas	T43N, R8E	1	Oct. 1940	R. L. Pripps	Seen

Because so many individuals have been of assistance in supplying these field observation records, the accompanying list of reporters and reports is shown here, with descriptions including townships when possible.

Miscellaneous Notes and Possible Future Management

A few additional notes on the Spruce Grouse itself may be enlightening. The male bird, like other grouse, goes through a strutting and "drumming" period in March and April, usually in a small clearing near its usual swamp home. The noise made by the wings is largely the result of jumping into the air or made while flying from a perch in a tree to the ground and back to another tree. W. J. Breckenridge, who observed this procedure, writes of it in detail in *The Birds of Minnesota*. The birds mate in April, May and possibly into June and the hen begins laying in late May and early June. Various broods of young have been observed in Minnesota in July and even in August. The incubation period is given at 17 days and clutches number from nine to 13 and possibly more. Under favorable nesting conditions, this species should therefore increase with reasonable speed if given proper environment and protection.

W. S. Feeney, Wisconsin Conservation Department deer research biologist, has had considerable opportunity to observe the Spruce Grouse while studying winter deer yards, and the following notes from him as to methods of determining the presence of Spruce Grouse in Ruffed Grouse territory without seeing the birds are of interest and value: 1. Territory—Spruce Grouse winter in dense spruce swamps where Ruffed Grouse seldom go except on the edges; 2. The tracks of Spruce Grouse are smaller, narrower, and feet are in line, while the Ruffed Grouse takes a longer step, and has a bigger foot, which is wider like a duck; 3. Feeding of Spruce Grouse on black spruce shows needles as if they were sheared by a scissors and this feeding operation often can be spotted by needles which have fallen under the trees; 4. Droppings of Spruce Grouse are thinner and darker (green or yellowish green) and uniform in composition, while those of Ruffed Grouse are thicker, yellowish and contain bud scales; 5. Spruce Grouse beds are smaller and they roost in the snow.

The Spruce Grouse was domesticated successfully by Watson L. Bishop of Kentville, Nova Scotia, and details on their nesting and incubation in captivity are to be found in Bendire's *Life Histories of North American Birds*. Because of this record, W. S. Feeney and the author captured two pair of Spruce Grouse in Forest County on March 21, 1941 and turned them over to Bert Barger of the State Experimental Game and Fur Farm for breeding experiments. On July 17, almost four months later, two males and one female were still alive, and one of the adults lived until the next spring. In that first spring, the two hens laid a

Spruce Grouse Chick

—Photo by Staber W. Reese
Cut courtesy Wisconsin Conservation Dept.



total of 14 eggs, six of which hatched. Barger was able to keep the chicks alive a number of days, one of them living for 16 days. Special credit should be given Mr. Barger for his painstaking efforts to raise these young grouse, but it is believed that another attempt of this type might very well be even more successful, with past experience to draw upon.

What is the future of the Spruce Grouse in Wisconsin? What can be done to increase its numbers and will it ever again become a "game" bird? In the past eight to ten years, Wisconsin has maintained several hundred thousand acres of refuge for deer in which no hunting was permitted. It is believed that this prevention of hunting in many timbered areas also helped this grouse considerably, because Spruce Grouse are killed regularly, accidentally, by hunters after Ruffed Grouse. Now, however, with the deer population so high and deer starvation a problem, the state has been forced to open many of these refuges. This undoubtedly will be a set-back of some consequence to the Spruce Grouse and its already reduced numbers. Likewise, during this war period, many spruce swamps not previously touched by the axe are being cut for that all-important and much needed lumber. Destruction of Spruce Grouse habitat in this manner can mean only one thing—less birds. In fact, the best recent record of this bird in Forest County came from a timber cutter, A. Hageman, who was removing the trees from about 40 acres of swamp in the winter of 1940-41. He reported seeing about 30 Spruce Grouse in this area and investigation proved that he was not overestimating the numbers. These birds now must move to the adjacent swamp timber—but what will they do when that is gone?

On the brighter side of the ledger are two facts: 1. The Wisconsin Conservation Department now has a budget set aside by the Legislature, for the purchase of county-owned "cedar swamps" in the north for deer management. Any such purchases of uncut timber will help the Spruce Grouse. This likewise applies to the proper management of the spruce-cedar swamps already owned by the State and Federal governments in Wisconsin to which more attention for proper deer management cutting (and Spruce Grouse management) may be paid after the war. 2. If Wisconsin is able to reduce its deer population, many swamplands in the north now being stripped of even balsam and spruce as well as cedar, will be able to come back. This new growth, along with a few remaining older trees, should in the future assure Spruce Grouse habitat if properly managed. This land already is managed largely by County, State or Federal authorities as it reverted to the public after it had been cut.

Even if Wisconsin's Spruce Grouse population falls to a lower point because of lack of proper habitat, it is not impossible to look forward to the possibility of restocking the species in areas where it had once been and where food and cover now has been replaced or is later again secured. A survey of such possible areas which are protected properly from cutting in the future could be made even now, as the range of this bird has been greatly reduced. Birds for stocking could be secured from Canada—or they might be propagated artificially. But why? It is not a game bird—there is no sport in shooting a "dead pigeon"!

Yes, but the Spruce Grouse is a native of Wisconsin—a beautiful, interesting and friendly bird—it does no one any harm. One might as well be unconcerned about the loss of the Canada Jay in the State because they are of no economic value. All Wisconsin sportsmen should become acquainted with the Spruce Grouse in their state, considering it not a bird at which to aim, but one to look at while stalking deer in the north woods or trout fishing on the Brule.

* * * *

Restricted travel and reduction in speed of automobiles has reduced the road-kill hazard to such species of birds as the Red-headed Woodpecker, Bluebird, Pheasant, as well as to mammals, says E. L. Loyster of the Conservation Department.

WALTER E. SCOTT

BY N. R. BARGER, ACTING EDITOR

Walter E. Scott, first editor of *THE PASSENGER PIGEON* and active leader in the organization, has been drafted. During the four and one-half years of its existence our bulletin has been brought forward out of nothing to its present enviable position by Scott. Stimuli to growth and efficiency of method, such as the society has enjoyed since its origin, emanated primarily from this natural-born leader.



By profession Scott has been Supervisor of Cooperative Game Management in the Wisconsin Conservation Department. Contacts made in this field placed him at an advantage to further the interests of bird study in the state.

His unselfish cooperation with the Society in devoting many hours of personal time and his meticulous attention to detail will make him irreplaceable for the duration.

At this writing Scott is in Texas. There he is also *making good*. However, we join the Society in extending a hearty wish to his success in the army with a hope that he will soon return to again edit *THE PASSENGER PIGEON*.

Walter E. Scott

AN AUDUBON WARBLER IN WISCONSIN

BY FRANCIS ZIRRER, HAYWARD

On May 3 at about seven o'clock in the morning I was on a field trip in the nearby bog. It was cold. At home the temperature was 26°, the sphagnum moss cracked like glass under every step. About a dozen Tree Swallows, frightened from a small tamarack by my approach, flew away with such peculiar unsteady flight that I took them at first for bats or some sort of large moths. The birds, however, were numb from cold and returned to the same perch as soon as I was a few yards away.

Coming to a small pond, not much larger than an average house and set in a typical bog vegetation of evergreens, bog shrubbery, reeds, sedges and cedars, I noticed a small grayish looking bird with white on the wings. Due to poor light, dense shrubbery and the bird's restlessness, I was not able to see the bird with sufficient clearness to place it. Finally, after many attempts to obtain a clear view of it the bird turned, displaying a yellow rump and I thought that it was perhaps a Myrtle Warbler.

The manner of searching for food intrigued me greatly, however, as I have studied their habits and could not recall having ever seen the Myrtle Warbler feeding in this manner (the Myrtle Warbler breeds near our dwelling and feeds on various soft foods on our feeding table, preferring mashed potatoes made with butter and milk). Since my interest in birds is primarily in observing their behavior I watched the bird further. After several unsuccessful attempts to see it clearly, the bird, standing in the bright sunlight, turned toward me. There, above the black streaked breast was a *yellow throat* and I could also see the yellow on the head and on the upper flanks. After some effort I saw it again and again which precluded all doubt. It was the Audubon Warbler!



THE SUMMER SEASON*

American Egret: Two nests on Horicon Marsh, June 23 (Pelzer, Kennon and Mitchell). Three eggs and three young respectively. Young well feathered July 21. On Sept. 11, about seventeen Egrets were on the marsh.

Common Mallard: Late nesting in Milwaukee (first egg Aug. 19; last egg Aug. 22; but seven in all) was found by Mueller.

Redhead Duck: Nest with nine eggs on Horicon Marsh, June 23 (Mitchell). Female approached on nest to within five feet.

Turkey Vulture: Two on dead hemlock stub, Oconto County, July 30, by game warden Albright. Nine were observed in Sawyer County, July 11, by Berner and Feeney.

American Knot: In Milwaukee, August 29 (Stevens).

Dowitcher: Three on Horicon Marsh, Sept. 10 (Mitchell).

Screech Owl: Late nesting in Milwaukee, June 28 (Jung).

Arkansas Kingbird: Oneida County, June 9 (Berner and Feeney).

"All of the characteristic markings were plainly seen at close range. As usual with rare species we jotted down what we saw in our notebook while on the spot, a practice we have although there is no doubt in the mind of the observer as to the identity of the species."

Short-billed Marsh Wren: Extremely abundant in comparison with the Long-billed in the vicinity of Hayward (Zirrer).

E. Ruby-crowned Kinglet: Observed in Forest County, June 11; Vilas County, July 7; and in Oneida County, July 13 (Schmidt).

White-eyed Vireo: Dane County, August 21 (Robbins).

Prothonotary Warbler: Wood County, near Babcock, July 20 (Mathiak).

Nashville Warbler: A breeder in Sawyer County (Zirrer).

Black-throated Green Warbler: Vilas County, July 6 (Schmidt).

Cerulean Warbler: Feeding young in Waukesha County, July (Jackson).

W. Palm Warbler: Sawyer County, a breeder (Zirrer).

Connecticut Warbler: Sawyer County, a breeder (Zirrer).

Mourning Warbler: Vilas County, July 6 (Barger).

Yellow-breasted Chat: Dane County (Madison), Aug. 21 (Robbins).

E. Chipping Sparrow: Feeding a fully fledged Cowbird, Rusk County, July 4 (Berner).

Clay-colored Sparrow: Florence County, June 10 (Feeney).

Flicker's Home Defense—Last summer I was watching a pair of Flickers feeding their nearly-grown young in a tall hollow stump. Frequent trips were made by both birds. Suddenly a red squirrel came upon the scene just as the male was about to leave the nest. Instead of leaving, he remained at the entrance ready to use his formidable bill if the squirrel should have tried to enter the nest. Although the squirrel ran away at my approach, the Flicker wouldn't leave his post until I was nearly close enough to touch him. As soon as I turned to walk away, he was back again as though fearing the squirrel would return. He was there when I left shortly afterward. This is an interesting contrast to the Robin's method of squirrel defense.—**Donald Bierman, Milwaukee.**

* In keeping with the times, the board of directors recently voted to conserve space in the bulletin by eliminating the recording of notes by areas. Thus field notes should be sent directly to the editor. All records turned in will be accounted for in the annual summary of bird work in the state, but only those parts of genuine news value will be published quarterly. Individual paragraph write-ups of valuable records, signed by the observer, are preferred. Please send notes at the close of each season—notes for the Autumn season will be due Dec. 21.—Ed.

Send in your Christmas Bird Count this year the same as usual.

A STUDY OF BIRDS AS FOOD (The Aboriginal Winnebago in Wisconsin)

BY A. P. KANNENBERG
Oshkosh Public Museum

During the progress of the excavation work on the site of the prehistoric Winnebago Indian village, situated on the east shore of Lake Winneconne, in section 20, Town of Winneconne, Winnebago County, Wisconsin, during the years 1935, 1936, and 1937, a great mass of food refuse was uncovered in the refuse pits, kitchen middens, fire places, and on sacrificial altars.

Among this refuse was an abundance of bird, animal, fish and turtle bones. Some were in perfect condition, some cracked for the marrow, and some partly burned. Still others showed that they had been worked on by cutting, polishing, and engraving.

All bones and fragments of the same were saved, washed, and catalogued. The whole bird bones were sent to the Smithsonian Institute for definite identification. This step was made possible through the kindness of Mr. Alexander Wetmore of that institution.

Among the bones examined were wing joints of the: wild turkey (*Meleagris gallopavo*); bald eagle (*Haliaeetus leucocephalus*); Canada goose (*Branta canadensis*); loon, (*Gavia immer*); marsh hawk (*Circus cyaneus hudsonius*); barred owl (*Strix varia*); ruffed grouse (*Bonasa umbellus*); ruddy duck (*Erismatura jamaicensis*); and last but not least, the passenger pigeon (*Ectopistes migratorius*).

This last species has been known to be extinct for a long time. During the years 1860 to 1880, they were abundant in Wisconsin; in fact, they were so prolific that when they would roost in certain trees, their weight would break down the branches. But for a reason yet unknown by science, they disappeared suddenly.

Other identified bird bones were a leg bone of the duck hawk (*Falco peregrinus*), a lower part of the bill from the bittern (*Botaurus lentiginosus*), and also three parts of the skull of a mallard duck (*Anas platyrhynchos*).

It is really marvelous when one stops to remember the time that has expired since those Indians had their village on that site, several hundreds of years ago, and realize how well those bones have been preserved all through the years in which they were covered with soil.

Some of the species mentioned may have been used for plumage instead of for food.

The Oshkosh Public Museum is grateful to Mr. A. W. Schorger of Madison, Wisconsin, for making the identity of the specimens possible.

SOMETHING ABOUT CHICKADEES

BY J. H. H. ALEXANDER
Wisconsin Conservation Dept.

That the energetic mite of cheerfulness, the Chickadee, responds readily to its imitated "sweet weather" whistling call note is well known.*

But there is another call that brings Chickadees—*mess call*. In a quiet autumn woods when a squirrel crunches through the hard shell of a walnut or hickory nut, the "crunch-crunch-crunch" can be heard for a long distance. Observing squirrels (incidentally to hunting) I have repeatedly noticed that Chickadees are attracted by the crunching sound made by a feeding squirrel. When the squirrel has finished his meal and gone its way, the Chickadees promptly gather around the vacated dinner table where they hungrily glean every crumb of nut meat from bark crevices.

I have tried, but with only partial success, to imitate the crunching sound made by a feasting squirrel. So far, my nearest approach to success was with two walnuts rubbed briskly and intermittently together.

* The call notes of the Chickadee are the second "A" followed by "G," twice repeated, above middle "C."



After a pine tree was cut down near Wausaukee on July 8 it was discovered that the upper branches held a Bald Eagle's nest with two fledglings about two weeks of age.—H. R. Dahl, Wausaukee.

According to the Iowa Conservation Notes, American Egrets have been found recently near Sabula, Iowa, to the number of seven hundred.

While in the vicinity of Chicago during August, Sam Robbins saw a Little Blue Heron, a species rare this far north.

"The Jack Pine Warbler" magazine from Michigan reports authentically that many Holboell's Grebes are captured in one season by fishermen at James Bay. This is news since the species is seldom seen inland by observers around the vicinity.

Dr. Gatterdam of La Crosse has noticed that most of his Mourning Dove banding returns come from Texas and Oklahoma during September.

A male Ring-necked Duck, banded Apr. 8, 1942 in Dane County by Hubbard and Zummerman, was shot Oct. 25 of the same year, in Geneseo, Ill., by M. E. Newman.

A Brown Thrasher banded Oct. 18, 1942 in Milwaukee by Sam Thorn was recaptured in a rabbit trap, Jan. 1, 1943 near the same spot.

A Bronzed Grackle banded by Mueller in 1938 in Milwaukee was found in the same city by Thorn, May 27, 1943.

NEWS

The Christmas Bird Count will be taken this year again as usual. Please mail your report as soon as it is completed for publication.

Reprints of Dr. H. H. T. Jackson's "Birds of Northwestern Wisconsin" are now available from the office of publication at a price of 30c each.

A centennial celebration of Thure Kumlien's coming to Wisconsin was conducted by the Fort Atkinson Historical Society in conjunction with the residents of Busseyville and Mrs. Angie Kumlien Main. The event brought to light the scientific accomplishments of this great pioneer naturalist in the fields of botany and ornithology. The acting editor was privileged to attend and was impressed by the interest shown locally.

A generous contribution to the Society's postage fund has been made by Francis Zirrer. This is much appreciated.

The following contributions have been made to the library of the society: "The Birds of North America" by Jacob H. Studer, 1888, quarto volume. Twelve issues of Bird-Lore and one bulletin of the Massachusetts Audubon Society. These donations were by W. E. Scott, Alvin M. Peterson donated twenty-seven excerpts from magazines on natural history subjects of his own writing. These are gratefully received.

RESULTS OF THE BOARD MEETING, NOV. 6, 1943

Since travel is restricted it was decided to hold the next annual convention also in Milwaukee. The exact date will be announced later. The budget was discussed with a hope of encouraging members to become sustaining members where possible. Interested members are requested to check-up on fellow-members and new prospects in their neighborhood in order to maintain our numerical strength (a substantial number of our members are now in the armed forces). The Society's bulletin will be conducted on a conservative basis in that the membership list will be supplied in a mimeographed form by the president of the society to those who are interested in a copy, and the index to the bulletin will be printed occasionally instead of annually.

The treasurer's slogan: BIRDS MIGRATE—SO DO OUR DOLLARS! Donations to our organization in the form of memberships or endowments are tax free.

HOW TO INCREASE THE PASSENGER PIGEON*

BY WALLACE B. GRANGE

Game Biologist, Babcock

It is most unusual to outline increase or management measures for extinct species of birds or animals. For there is no doubt that the Passenger Pigeon has flown from earth never to return except in memory. No management measure, no environmental control, no legislation will bring back the pigeons. When the breeding stock or the seed stock is gone, all further hope is lost. *Natural propagation* can succeed only when there are survivors still in breeding condition. If there are no survivors, as in the present case, how lamentable a state of affairs we have left as our heritage!

But as in the case of loved ones who have passed into the Great Beyond, our minds continued to think and to ponder upon the unsaid word, the undone deed, the unexpressed appreciation which we know would have made life more worth while and enduring. This twinge of remorse that smites us when it is too late can no longer help in the sad instance at hand, yet it can be translated into understanding attention toward those still living.

The Passenger Pigeon is forever gone, but was it not said in its day that the pigeon legions would fly onward to the end of time? Was it not perhaps the most abundant, the most spectacular of all our birds, so common as to defy the thought of extermination? Was not the coming of the pigeons in the spring and fall a very part of the seasonal change, as indestructible and as inexhaustible as the wind? Is it possible to annihilate sunshine?

Yet the pigeons are gone.

Yet today, because some species of bird or animal is common or abundant, we presume to believe that it shall always remain so. Yet some hunters rail at the restrictions imposed upon the taking of other migratory birds which are several instances closer to the verge of disappearance than most of us realize. No alarmist cry need be charged if we remind our readers of the fact that "the time to devise management measures is while a species is still abundant."** That when a species is on the decline, as may be stated for several of our wild ducks and for a number of our rare larger birds and mammals, the necessity for taking measures which shall permit continued *natural propagation* becomes the *moral duty* of those who gain pleasure from nature, whether involving the killing of game or its observation.

We have never seen a Passenger Pigeon. We have walked in the oaks and pines of a formerly enormous nesting colony of these birds, listening; but with no whistle of pigeon wings; no sight of the swift flock; no hint of the life which was. We have seen the tons of unutilized acorns lying upon the forest floor. We have seen the grainfields; the pigeon grass, the plentiful seeds of rich weeds; thousands of acres of fine pigeon environment, a world which was seemingly made for pigeons, but as we waited and pondered, no single remnant of all the legions was there. We have sat upon a high hill overlooking the former choicest of mid-Western pigeon ranges, with the far blue haze wavering in the sunlight, with flocks of birds winging off to their chosen haunts, with the calls and songs of birds and the noise of their wings close on every hand: But the pigeons were not among them. Yet we have missed the pigeons we never saw. The woodlands are barren of a fine bird, robbed of a thing as necessary to them as are the leaves of the oak or the flash of a Scarlet Tanager in the foliage.

What management measures would have been effective in saving the Passenger Pigeon? Many persons will tell you that nothing would have saved them, for the pigeons must have flown out to sea and perished in a storm. Some catastrophe overtook them on their migration. Disease possibly played havoc with them on their nesting grounds.

* Although not written for publication (the date being 1936) this article is timely as it is written by a good manager of wildlife now living at the site of the last known killing of Passenger Pigeons in Wisconsin.—Ed.

**Edge Committee.

Yes, these things are true. The Pigeons flew out into the sea of eternity, in whatever direction that may be. A catastrophe reckoned in terms of the numbers of nets and the numbers of dozens of barrels consigned daily to the markets. Disease did play havoc on the nesting grounds; the disease of greedy men too shortsighted to refrain from the killing of thousands of birds which had helpless young in the nests; the disease of lead; the disease of a worse moral blight than all the prayers on earth could cure.

Passenger Pigeon management would have consisted, first of all, in the setting aside of inviolate nesting areas on the known breeding grounds, both in the Middle West and in the East. It would have meant the abolition of killing pigeons during the nesting season wherever found. It would have done away with nets. It would have limited the open seasons on the birds during their migrations.

Would it have worked? Yes! The result, had such intelligent measures been applied, would have been to preserve a very large breeding stock of the birds within the proper environment, so that annually for an indefinite period of time a horde of pigeons could have been taken after August 15th and until the birds returned north in the spring; with sport and food available in all northern and southern states within the pigeon range.

Would it have been desirable? The Passenger Pigeon was capable of, and often caused great destruction of, small grains. Had the numbers of pigeons remained at their former high level, the damage would have been intolerable in many instances. A. W. Schorger in his recent most interesting discussion of the Passenger Pigeon in Wisconsin has pointed this fact out forcefully. A reduction in numbers would have been quite in order. Permission for farmers to shoot pigeons in their grain fields after July 1st would have been feasible.

It is doubtful if shooting alone ever could have wiped out the pigeons, although it would have kept them on the move so that the damage or consumption of grain could be pro-rated from community to community.

And with so great a sporting and food resource to be reckoned with, could not the benevolent governments of our present day have planted extensive acreages of waving grain for pigeon feeding grounds? Could not the land retirement program of today have been coupled with some useful purpose of this sort, to accommodate the hordes of pigeons? It is even thinkable that we might have developed expert pigeon damage appraisers to allot stipulated pigeon-conservation-payments to farmers permitting a certain amount of destruction of their grain by these birds. In this day and age, such measures would represent no difficult jump of the imagination, nor would they be hindered by any lack of available funds. The pigeon-conservation-payments might have become of political importance, with one section of the country vying with its neighbor for an advantage by which additional funds might accrue to its own members, so that politicians orated and fumed at length in our legislative halls over pigeon-patronage. It is too bad that we failed to appreciate these possibilities until too late.

It would seem that our fathers and forefathers were most unimaginative. We of the younger generations which have followed can scarcely comprehend the blind acceptance of their traditions which implied at all times that because God created pigeons in the first place He would perhaps continue to watch over them, for "not a sparrow falleth" without His blessing and benevolence, if not remorse. It seemed never to occur to them that they had any part in the shaping of the destinies of wild birds and animals; except in the killing of them. Those few individuals who undertook the attempt to breed the Passenger Pigeon in captivity, (and their results were surprisingly successful), received very little attention. Certainly no state game commission, and no federal government subsidized any such work by providing funds for continued enlargement. How typical it is of the attitude, habits of thought and general outlook of our predecessors that the last known Passenger Pigeon on this earth perished in a zoo, where all might look and see!

We have progressed far since then. The last species of American bird to depart his earthly scene was the Heath Hen. The last bird did not die in a zoo. The death agony was actually described, almost convulsion by convulsion, out-of-doors in the Massachusetts oak scrub, in 1929.

If this is not progress, what shall we call it?

And the next species on the list? If it must perish, let us resolve that it will do so on an area where the white man has applied every known scientific aid in the preservation of the native environment which alone will insure its continued *natural propagation*: But where he first has foregone the dubious pleasure of clubbing soft creatures from their nestlings; of stool pigeoning the trusting thousands to the nets; of grasping today for the three cent material reward for a stilled body which, had it been left to propagate in our tomorrows, might have recreated a food of the spirit for those of us who are now lonely and saddened in our woodlands. Let us, however, resolve that no longer shall extermination days come to America to be marked wistfully in our natural histories; let us resolve that long before any species shall again arrive at this day of judgment we shall so well understand the problems and remedies involved that no present American species of bird or animal shall henceforth "perish from the earth."

* * * *

SOME PROBLEMS FOR WISCONSIN BIRD STUDENTS

In the January, 1943 issue of *The Jack-Pine Warbler*, quarterly publication of the Michigan Audubon Society, there appeared an article by Josselyn Van Tyne, who is editor of *The Wilson Bulletin*, entitled "Some Problems for Michigan Bird Students." Because of the value of these suggestions the following are summarized here for the information of our members: 1. Record definite cases in which the same pair (or perhaps, the same female with a new mate) raises a second, or third brood in one season. Proof of absence of second broods is also important. 2. At what age do undisturbed nestlings leave the nest? 3. How long does it take an individual of any species to complete its moult?

On special birds: **Screech Owl**—What is its distribution and what is percent of red and gray phase in your neighborhood?

Saw-whet Owl—Does it migrate and how common is it in the north?

Carolina Chickadees—Are they really so rare? Michigan has one specimen record, Wisconsin none. Learn to distinguish them from the Black-capped Chickadee.

Sycamore Warbler—Is it still found in Michigan? Has not been reliably reported for 25 years. Look for it in its habitat.

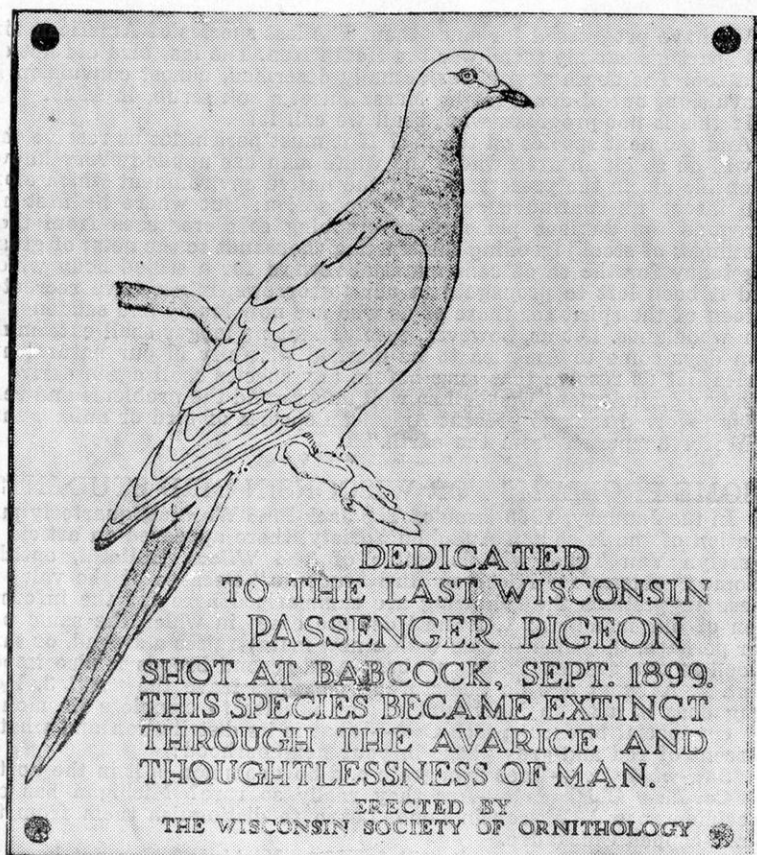
English Sparrow migration—Do they migrate and if so, where to? What proportion of local population leaves in winter and is there an influx from the north to south in winter?

American Egret—Does it ever nest in Michigan? (They do in Wisconsin sometimes). Also what portion of the fall influx are young and what adults? Are big flights correlated with dry summers and do big flights extend farther north than small ones?

Little Blue Heron—Same as for Egret except for nesting. We know (in Michigan) that only young birds come north, but should find out how frequently or how far north. (Wisconsin records very rare in fall.)

* * * *

Attention is called to the article in this issue entitled "A Study of Birds as Food" by A. P. Kannenberg. The land on which these Indian mounds are located will be purchased at some future date if a movement sponsored by the Winnebago County Historical and Archeological Society, Conservation League, and Oshkosh Horticultural Society is successful. They have issued a Pledge which calls for generous response, as follows: "I herewith pledge to contribute the sum of \$..... as my part in the purchase of a sixty acre tract of land known as the Prehistoric Winnebago Indian Village Site at Lasley's Point in the Town of Winneconne, Winnebago County, Wisconsin, the same to be purchased for the Boys and Girls of Tomorrow as a lasting monument to a Vanishing Race in Wisconsin."



Reprint From The Milwaukee Journal

The Bronze Plaque
Wyalusing State Park

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