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SNOWY OWL

GREEN BAY PRESS GAZETTE PHOTO
BY ORVELL PETERSON

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SONGBIRD COMMUNITIES OF TWO MARSH HABITATS

By WILLIAM S. BROOKS

Introduction

It is well known that breeding bird communities are regulated almost entirely by a complex of environmental conditions. Among the most important of these are light, moisture, and vegetation (Kendeigh, 1941). In this study the effects of vegetation will be stressed.

The existing vegetation of an area is primarily controlled by moisture, temperature, light, and substrate. Secondarily this vegetation is controlled by fire, mowing or cutting, plowing, grazing, and other man-introduced disturbances. Vegetation, in turn, affects bird communities by the general habitat requirements, such as cover and food, which it provides.

It was the purpose of this study to: (1) determine whether two different stages of plant succession on a marsh soil support different songbird species and densities; and (2) determine what factors explain differences observed.

Kendeigh (1954) noted that there has been a long delay in the recognition of the importance of vegetation in determining the distribution of birds. Further, he reports (1948) that niche requirements are important in controlling distribution, and that "Biotic communities are best delimited by the life-form or structure of the dominant vegetation correlated with the occurrence of distinct groupings of animal species." Since the two habitats studied are in the same marsh, any gross differences in light, moisture, temperature, and other environmental factors affecting bird distribution would be of minor influence. Vegetation remains as the dominant varying factor.

The two stages of plant succession involved are sedge-forb and willow shrub. It is interesting to note that the willow shrub stage would be expected to support the greater density and diversity of avian species, because it is somewhat similar to a forest edge in composition, and according to Kendeigh (1941) the greatest abandance of birds is found in such habitat.

The study consisted of counting the breeding songbird populations of these two areas, and combining this with observations made on the flora and its influence on the bird communities. Five trips, totalling 20 hours, were made to the area on the following dates: May 30, June 3, 5, 6, and July 12, 1959. The actual censusing took place on the three June dates.

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The Study Area—Location and History

The study area is a small part of Hoffman's Marsh, a typical glacial marsh located on the northwest edge of Ripon, Wisconsin. The study area itself is located on the southeast edge of the marsh. Drainage from

the marsh basin is impeded by a low moraine along its south and west edges. Drainage and subsequent fires have altered its character, the more severe fires having eaten fairly deep holes in the peat soil. The cutting of marsh hay has been largely abandoned by surrounding farmers, and today the marsh habitat lies idle.

The most recent fire occurred in the autumn of 1957, reducing most of the active willow shrub to dead growth. Since that time the willow has grown almost to its original height (five to 12 feet), and is spreading to other parts of the sedge-forb meadow. The fact that the new willow growth is almost as high as the dead growth indicates that there was probably another burn five or six years ago, which covered much the same area as the more recent one.

Description

The sedge-forb meadow (hereafter referred to as "the meadow"), and the willow shrub stands ("the willow") are two entirely different habitats. The extent of each of these areas is shown in Fig. 1.

Sedge-forb Meadow—The principal plants of this area and their heights as of June 6, 1959, are entered below, in order of their relative abundance.

1) Sedge, two species (**Carex** sp.) ..... 1-1½ feet
(**Carex lacustris**) ..... 2-3 feet
2) Aster (**Aster** sp.) ..... 4-5 feet (old growth)
2) Aster (**Aster** sp.) ..... 1½-2 feet (new growth)
3) Stinging Nettle (**Urtica** sp.) ..... 5-6 feet (old growth)
3) Stinging Nettle (**Urtica** sp.) ..... 2-5 feet (new growth)
4) Goldenrod (**Solidago** sp.) ..... 4-5 feet (old growth)
4) Goldenrod (**Solidago** sp.) ..... 1½-2 feet (new growth)
5) Reed Canary Grass (**Phalaris arundinacea**) ..... 3-4 feet
6) Marsh Fern (**Dryopteris Thelypteris**) ..... 1 foot

Although this is not the complete list of species present, those recorded were the most characteristic and dominant in the community. These were the principal plants that provided cover, food, nest materials, nest sites, and song perches for the bird community inhabiting this particular sedge-forb meadow.

Several small willow shrubs were present in the extreme northwest portion, but they were not in sufficient quantity to exclude this area as a part of the meadow. Bordering the pond, especially on the north and west sides, was a small fairly dense stand of willows and **Prunus** sp. These shrubs, along with the occurrence of open water, have led me to exclude this region from the study area.

The terrain is fairly rough, because of numerous depressions caused by the severe peat burns mentioned earlier. Standing water, probably the result of seepage into many of these pits and trenches, especially among the tussocks west of the pond, favors more hydrophytic species, such as the larger species of sedge (**Carex lacustris**) and reed canary grass. Where the ground is higher, and therefore dryer, the remaining species listed are favored. The stand of nettles was especially lush and dense. The main portion of the meadow was occupied by a mixture of the smaller species of sedge (**Carex** sp.), goldenrod, aster, and marsh fern. The boundaries of the sedge-forb meadow can be seen in Fig. 1. Fig. 2 shows a portion of the meadow directly west of the pond.

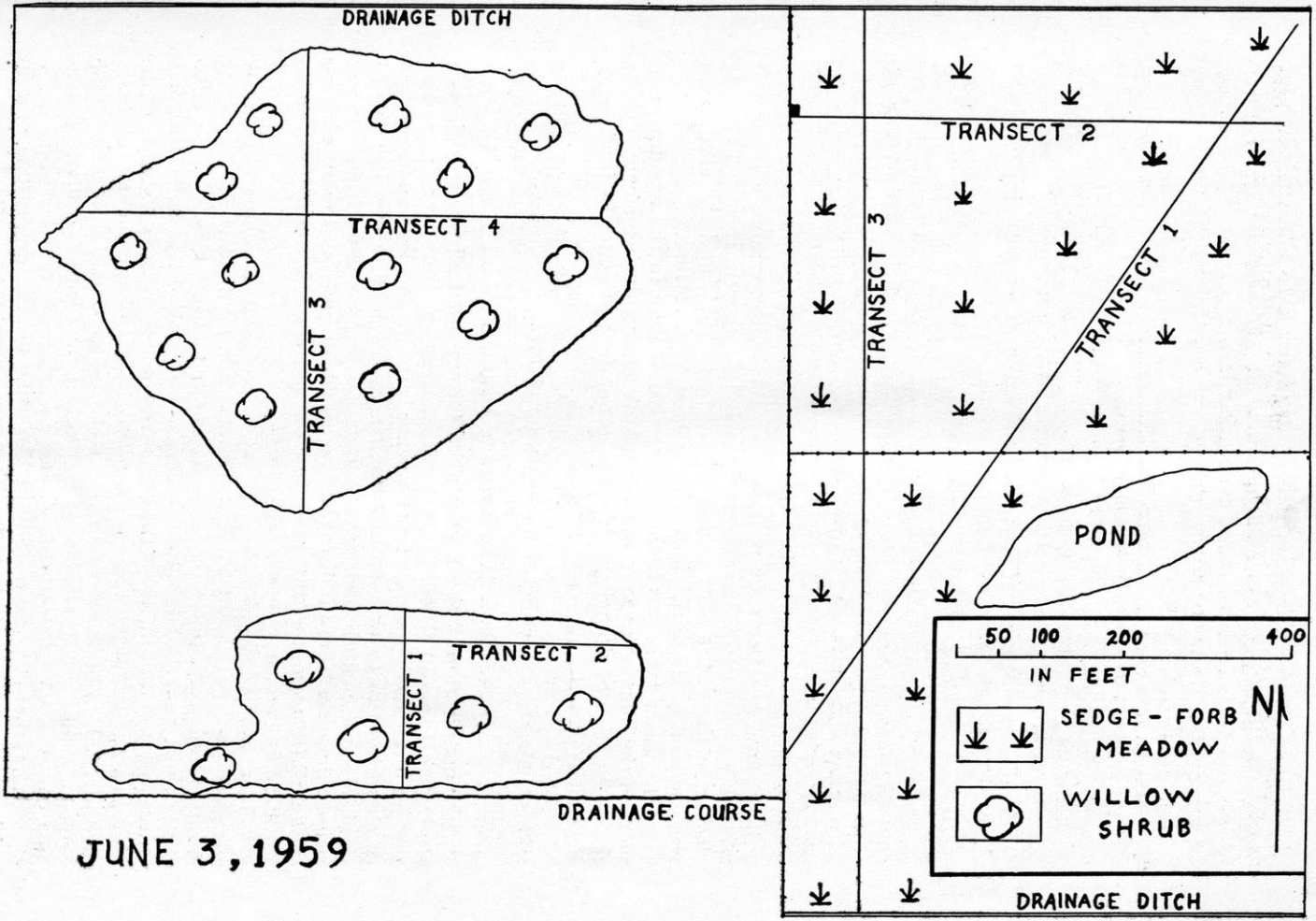

FIGURE 1—MAP OF STUDY AREA

Willow Shrub—The principal plants of this area and their heights as of June 6, 1959, can be seen below, in order of their relative abundance.

1) Willow Shrub (**Salix** sp.) ..... 5-12 feet
2) Bluejoint (**Calamagrostis canadensis**) ..... 3-4 feet
3) Aster (**Aster** sp.) ..... 4-5 feet (old growth)
3) Aster (**Aster** sp.) ..... 1½-2 feet (new growth)
4) Reed Canary Grass (**Phalaris arundinacea**) ..... 3-4 feet
5) Smartweed (**Polygonum** sp.) ..... 2-3 feet
6) Goldenrod (**Solidago** sp.) ..... 4-5 feet (old growth)
6) Goldenrod (**Solidago** sp.) ..... 1½-2 feet (new growth)
7) Marsh Fern (**Dryopteris Thelypteris**) ..... 1 foot

Red-osier dogwood (**Cornus stolonifera**) was present, but was not abundant enough to greatly affect the community

The two willow stands in this area were decidedly different. The area covered by willow canopy in the smaller south stand was approximately 20%, while canopy closure in the north stand was approximately 60%. Ground cover was also different. The ground not covered by willow in the south stand was almost entirely covered with **Calamagrostis,** while in the north stand ground cover was composed of a scattered mixture of all the plants listed.

There were no sharp lines of demarcation where the edges of each willow stand lay, but only regions were the willow canopy closure was relatively more dense have been included in the study area. Canopy closure in the entire area varied from 5% to 70%, and the study area was confined to those portions with at least 20% closure.

The water table was higher in the willow than in the meadow, and more of the burn-holes were water-filled. A narrow drainage course along the south edge of the willow had up to one foot of water in it, depending on the season.

Fig. 1 delineates the two willow stands comprising this area. Fig. 3 shows the eastern portion of the south willow stand.

Method—The Flushing Distance Count

A modification of the King Ruffed Grouse Method was used in this study (see Leopold, 1946, p. 151). Seven transect lines were placed so that a representative sample was taken, as is shown in Fig. 1. The method of censusing was to walk along these transects recording the location of the birds as they flushed. The species and approximate flushing distance perpendicularly from the line were recorded for each bird seen. Singing males, which were seen within 50 feet but not actually flushed, were also recorded in the same manner.

Discussion of the Method—This census method was chosen primarily because of a limited amount of time available for field trips. The only preparation necessary was laying out the transect lines. Despite the relatively short time this censusing takes, I believe it gives sufficiently accurate index values. Although a total population density value is desirable in some studies, a relative density index is of as much value here. Bond (1957) found similarly that a relative index count is less time consuming, and can be applied with much the same result as a total population count in a comparative study.

One rather important limitation to using the flushing distance method is that a count should not be taken in inclement weather. Birds tend

FIGURE 2—SECTION OF EASTERN PART OF SEDGE-FORB MEADOW

FIGURE 3—SECTION OF SOUTHWESTERN PART OF WILLOW SHRUB

to stay low in the vegetation, and flush with more difficulty during periods of precipitation and relatively high wind.

In addition to the actual census a journal was kept, in which notes on food type and quantity, nest sites, nest materials, and song perches were entered.

Treatment of Data

Several values useful in this study were obtained from the bird census. These values and their derivations are:

1) Effective Flushing Distance (EFD) in feet = $\frac{\text{Sum of flushing distances}}{\text{Number of individuals flushed}}$

2) Effective Flushing Strip (EFS) in feet = 2 X EFD

3) Effective Strip Area (ESA) in acres = $\frac{\text{EFS X length of transect (in feet)}}{43560}$

4) Density (birds/acre) = $\frac{\text{Number of birds flushed within ESA}}{\text{ESA}}$

All of these calculations may be applied either to the total population or to the individual species.

Species	Sedge-forb			Willow-Shrub		
	Sample Size	EFD	EFS	Sample Size	EFD	EFS
Traill's Flycatcher **(Empidonax trailli)**	....	....	....	15	31	62
Short-billed Marsh Wren **(Cistothorus platensis)**	27	21	42	28	19	38
Catbird **(Dumetella carolinensis)**	....	....	....	2	35	70
Yellow Warbler **(Dendroica petechia)**	....	....	....	11	33	66
Yellowthroat **(Geothlypis trichas)**	23	23	46	10	26	50
Red-winged Blackbird **(Agelaius phoeniceus)**	16	23	46	4	16	32
American Goldfinch **(Spinus tristis)**	....	....	....	3	30	60
Savannah Sparrow **(Passerculus sandwichensis)**	2	63	126	....	....	....
Swamp Sparrow **(Melospiza georgiana)**	26	30	60	13	20	40
Song Sparrow **(Melospiza melodia)**	40	27	54	15	23	46
Total population	134	25	50	101	24	48

Table 1

Sample Size, Effective Flushing Distance (in feet), and Effective Flushing Strip (in feet) of Birds in the Sedge-forb Meadow and Willow Shrub Stands.

Census Results

Table 1 gives the Effective Flushing Distance, Effective Flushing Strip (both in feet), and the sample size of each species. The sample size is the number of birds counted in obtaining the other values. This shows the relative accuracy of the EFD and EFS values. For example, a sample size of the two Savannah Sparrows does not give as accurate an EFD as would a sample of 20.

In Table 2 below, the relative densities of each species in the meadow and in the willow are entered. It must be kept in mind that these are relative, not actual densities, and can only be used as an index.

Species	Density (birds/acre)	
	Sedge-forb	Willow Shrub
Traill's Flycatcher	....	1.3
Short-billed Marsh Wren	2.2	4.5
Catbird	....	.16
Yellow Warbler	....	.89
Yellowthroat	1.5	1.6
Red-winged Blackbird	1.2	1.1
Brown-headed Cowbird	+	+
American Goldfinch	....	.19
Savannah Sparrow	.042	....
Swamp Sparrow	1.4	2.6
Song Sparrow	2.4	2.8
Total population	8.7+	15.1+

Table 2

Average Bird Densities in the Sedge-forb Meadow and the Willow Shrub Stands

To clarify the distribution of the birds concerning the whole of each area, Table 3 is presented below. Here, at a glance, the different species can be placed in their respective habitats.

Sedge-forb	Both Areas	Willow Shrub
Savannah Sparrow	Short-billed Marsh Wren	Traill's Flycatcher
	Yellowthroat	Catbird
	Red-winged Blackbird	Yellow Warbler
	Brown-headed Cowbird	American Goldfinch
	Swamp Sparrow	
	Song Sparrow	

Table 3

Species Found in the Sedge-forb Meadow, in Both Areas, and in the Willow Shrub Stands

On each census a different number of birds was seen. These were all averaged to obtain the final values in Tables 1 and 2, but it might be

interesting to see the fluctuations encountered. As a rule the earlier hour of censusing produced the greater number of birds. In Table 4 the June 5 census is lower because the meadow, which usually produced more birds (a larger total area was covered in the meadow), was censused from 11:30 a. m. to 1:00 p. m. Since this is part of the "resting period" for birds, fewer of them flush or sing.

Species	June 3 1:00-3:00 p.m.	June 5 8:30 a.m.-1:00 p.m.	June 6 7:00-10:00 a. m.
Traill's Flycatcher	7	3	5
Catbird	1	1	0
Short-billed Marsh Wren	19	16	20
Yellow Warbler	3	2	6
Yellowthroat	13	6	14
Red-winged Blackbird	8	6	6
Brown-headed Cowbird	+	+	+
American Goldfinch	1	0	2
Savannah Sparrow	1	1	0
Swamp Sparrow	8	12	19
Song Sparrow	17	19	19
Total	78+	66+	91+

Table 4

Comparative Numbers of Birds Counted on Each Census.

Discussion

The densities (Table 2) found in this study are uncommonly high, especially in the willow. Hickey (1943) shows the results of breeding bird censuses of various habitats. Those habitats which are fairly similar to the study area shows significantly lower density values. The reasons for this difference might lie in the method of censusing used in this study, and in the effect of edge occurring between subhabitats in the area. Young (1949) reports in his study of the nesting birds in a park that "the high density . . . is considered of special interest. This is probably due to the great interspersion of plant types, and the large amount of 'edge.' . . ." This explanation would be a suitable one in the present study as well.

The ratio of approximately 1:1¾ in total density of the meadow to the willow habitat will be clarified below, in the discussion of individual species. This difference is a result of the densities of the individual species and will be treated in that way.

Differences and importance of four main habitat requirements will be discussed for each of the 11 resident species found. These requirements are: 1) nest sites, 2) nest materials, 3) song perches and 4) food. The above will not necessarily be disccussed in this order.

Moisture appeared to affect the birds by helping to determine the type and amount of vegetation present. Where it was more moist (except where there was standing water) the vegetation was thicker, offering more cover. Cover is also an important requirement, but will not be discussed in detail for all the species. All that will be said here is that the thicker

and more variable cover (vegetation) probably is a part of the reason for higher density in the willow.

Birds in the Sedge-forb Meadow Only

Savannah Sparrow—One pair inhabited the study area, and this pair was situated at the extreme southeast corner of the meadow. Their territory included a part of the study area, but I believe the nest was on the adjacent upland soil, in a weedy bluegrass pasture.

Apparently this species prefers an open habitat, free from most shrubbery, and with only a slightly moist soil. Thus they were absent from the willow and all but the dryest part of the meadow.

Song perches of the Savannah Sparrow are usually tall weed stems or bushes (Pough, 1949), but the males also frequently sing from the ground (Pearson, 1936). Nest sites are on the ground in denser vegetation. Nest material and food were probably not important in determining why the birds were found only in the meadow, because the quantity and quality of these requirements were fairly equal in both areas.

I believe the reason the Savannah Sparrow was found only in the meadow is simply that these birds prefer an open habitat composed mainly of shorter grasses.

Birds in Both Sedge-forb and Willow Shrub Areas

Short-billed Marsh Wren—Although this species was twice as abundant in the willow, I believe that the shrubs themselves were of little direct consequence in the phenomenon. The undergrowth in this area, composed largely of **Calamagrostis,** was about twice as dense as the ground vegetation in the wren habitat in the meadow. In nesting, these birds make small well-concealed structures near the ground in the grasses, and I find it more than coincidental that the apparent density of both Wrens and plant growth was nearly doubled in the willow. Therefore it would seem that the nest site and surrounding cover were very important in their distribution. However, there are other considerations, such as food and song perches.

Bent (1948) writes that shrubs serve as singing posts, and that sedges or reeds are also used. The majority of Wrens that I observed sang low in the vegetation, but in the willow they commonly utilized the shrubs for singing. At no time was a flight song recorded, indicating no need for height or conspicuousness in proclaiming territory. It did seem, though, that a little height was preferred, and this was available mainly in the willow, where most of the Wrens were congregated.

Food was also of importance in Short-billed Marsh Wren distribution. As stated earlier, from field observations some invertebrate forms appeared to be more abundant in the willow, especially mosquitoes, flies, and spiders, which form a good part of the Wren's diet (Bent, 1948). Thus food quantity may have been of some importance in the differences seen in density.

The Short-billed Marsh Wren is quite flexible in its use of vegetation for nest material. Most of the nest is woven of surrounding grasses, both growing and dead. Therefore, this requirement appears to be not as much of a limiting factor as the other discussed.

Short-billed Marsh Wrens are known to be colonial nesters (Bent, 1948), and are therefore unevenly distributed. A possible explanation for the differences in density here might be that the center of the colony

was in the willow, which was most desirable to the birds, while the meadow was on the edge of the colony.

Yellowthroat—The nearly equal density, only slightly higher in the willow, would seem to indicate that both habitats were almost equally desirable to this species. According to Stewart (1953), typical habitat is on a moist soil with "a mixture of dense, rather lush herbaceous vegetation and woody plants, chiefly shrubs and small trees." Bent's (1953) description of preferred Yellowthroat habitat is similar to both the meadow and the willow. Consideration of both these reports seems to indicate that there is, as was found, a slight preference for territory such as the willow.

Even the slight difference found in density can be justified by enlarging upon some of the basic habitat requirements. In this case the higher density in the willow is most likely due to the presence of more elevated song perches. The song perch is usually higher than the surrounding vegetation (Stewart, 1953). There is a flight song given by this bird, but I believe it to be of little consequence to the question of whether the Yellowthroat needs a more elevated song perch or not. Bent (1953) says the flight song is not as highly developed as in true flight-singers of open grass areas, and I observed a flight song in the willow which was based from the type of a 12-foot shrub.

Since they are commonly ground nesters, nest site does not seem as important in Yellowthroat distribution, except for the greater amount of nesting cover in the willow. Bent (1953) reports that the nest is often backed by a shrub, and is sometimes built up in a shrub. For this reason the birds might show a slight preference for the willow.

Food remains as the last influencing requirement, and probably was of about the same importance as nest site. The Yellowthroat is almost completely insectivorous, and the apparent increase of insect life in the willow would presumably support more birds. Further, because of the shrubs, an increase was found in spiders and moths, which are among the main food (Bent, 1953) of this species.

Red-winged Blackbird—This was the one species found in both areas, excepting the Brown-headed Cowbird, which was more abundant in the meadow. While in general the meadow was a drier habitat than the willow, a low pocket of cattail and bulrush occurred near the southwest corner of the meadow, and made an ideal microhabitat for the Red-winged Blackbird. The cattails apparently offered more desirable nest sites and possibly more desirable nest materials and food.

Song perches did not appear to strongly influence distribution of this species in this study. An elevated song perch is almost a necessity (Nero, 1956), but both areas had tall shrubs which could be used for this purpose.

It is my belief that the open water, with its growth of cattail, was responsible for the Blackbirds' apparent preference for the meadow. Here, the atypical cattail pocket in the typical sedge-forb meadow caused the recorded density to be higher.

Brown-headed Cowbird (Molothrus ater)—The Cowbird was not censused along the transects because of its tendency to roam. Instead, observations were made over the entire area. These observations showed that from day to day five to ten pairs of Cowbirds were present in the study area, approximately two-thirds of them in the meadow.

There is no defended territory, but each pair has a domain in which that pair is dominant (Laskey, 1950). Because they have no actual territory the birds wander around their domain, as well as others' domains, and for this reason could not be censused along the transects. The birds, especially the males, congregated on an unoccupied shack at the northwest corner of the meadow. Perhaps this one of the reasons they seemed to be more numerous in this area. It would be interesting to study this species alone, and determine why they were more common in the meadow where there was a lower density of other birds.

Swamp Sparrow—The population of this species was nearly twice as dense in the willow habitat as in the meadow. The difference can probably be attributed largely to thicker cover for nesting. Dense tussocks of rank vegetation seem to be the favorable nest sites, and the thick **Calamagrostis** ground cover fulfilled this requirement.

Shrubs as nest sites most likely did not add much to the desirability of the willow habitat. Occasionally this bird does nest a short distance up in a bush, but shrubs, if they were an added attraction to these birds, probably served in that capacity as song perches, rather than as nest sites. A flight song was observed in the willow on the July trip to the area. The flight was based from a small shrub, and the bird attained a height of approximately 20 feet. As with the Yellowthroat mentioned earlier, there were numerous shrubs which could have served as song perches. I have been unable to find any mention in the literature of the flight song of the Swamp Sparrow.

Food might also have been a factor in Swamp Sparrow distribution in the study area. They eat more **Polygonum** seeds than other birds (Pearson, 1936), and the amount of **Polygonum** was greater in the willow than in the meadow. Nest material had little or no bearing on the distribution of this species, except that there was a greater bulk of suitable grasses in the willow.

Nesting cover, song perches, and food, then, seemed to be the more important requirements affecting the distribution of this species in the study area.

Song Sparrow—The presence of numerous elevated song perches is perhaps the most important factor which made the willow the preferred habitat of the Song Sparrow. Song perches observed in the meadow were fences and the taller forbs, while in the willow the tallest shrubs were the most frequent posts. Apparently a perch from ten to 15 feet up was preferred to any lower one present.

Nest site requirements were met better in the willow, where the ground cover was more dense. Although Song Sparrows nest regularly in shrubs, more profusely branched forms, such as hawthorn (**Crataegus**) are preferred to willow. In a habitat such as this a willow would be more likely used to back a nest, rather than to actually support it. Thus the shrubs themselves did not greatly affect the nest site requirement.

Food and nest material were nearly the same in both areas, and would not much affect the distribution of this species.

Birds in the Willow Shrub Only

Traill's Flycatcher—The nest site and feeding post were probably the most important requirements for this species. Shrubs are a necessity for nesting, as well as for providing song perches and stations for feeding.

In several papers on the Traill's Flycatcher (Aldrich, 1953; Berger and Parmalee, 1952; Parkes, 1954) no nest sites other than in shrubs were mentioned. This is undoubtedly the main reason that the Flycatchers were found only in the willows.

The nest material itself would not have limited the birds to the shrubbery growths, because the nest is primarily made of plant fibers from goldenrod, milkweed, and other forbs. Grasses are also important, especially the smaller finer types.

Food probably played a goodly part in the restriction of this species to the willow. The food consists almost entirely of insects caught on the wing. This requires some sort of perch from which the bird bases its flights. Shrubs are ideal for this purpose because they stand above surrounding vegetation, yet are not above the zone of most insect activity. The abundance of insects was noticeably greater in the willow, which probably influenced the Flycatchers' habitat preference.

A flight song has been described by McCabe (1951) in which the bird flies from a bush top to heights of 30 feet, while singing. I never observed this. The only songs I saw were delivered from the shrubs. The flight song would seem to indicate that a tall song perch is not absolutely required, again placing the necessity for shrubs as nest sites and feeding posts high in importance, as a controlling factor in Traill's Flycatcher distribution.

Catbird—Nest site appeared to be the main factor affecting distribution. This species was recorded only where shrubs were available for nesting. However, the requirements of food and song perches also affected distribution, especially the latter.

Catbirds consume approximately 55% seeds, fruits, and berries, and 45% insects (Bent, 1948), but according to the same author, are very adaptable in their food habits. Thus, with a relative shortage of fruits and berries in the study area, the birds probably turned to seeds and insects. Their adaptability would lessen the importance of food in their distribution.

Song perches are essential to most songbirds, and the Catbird's preference is shrubs and bushes. Therefore the meadow was excluded as Catbird habitat, while the willow was ideal.

Nest material was of least importance here, because of the adaptability of the bird. Drawing upon personal experience, I have never before found a Catbird nest which was not lined with fine rootlets, yet a nest found in the study area had none of these rootlets, but was instead lined with very fine twigs and stems. Another frequent constituent of the nest, leaf skeletons, was also missing in this nest. Adaptability, then, rules out this requirement as being very important in Catbird distribution here.

Yellow Warbler—Kendeigh (in Bent, 1953) said of this species that ". . . territory requirements included suitable nest-sites, concealing cover, tall singing posts, feeding areas in trees, and space. . . ." It is apparent from this that the willow would be the only suitable part of the study area for the warbler. Bent (1953) informs us that favorable nest sites, in part, are open brushy swamps containing willows and other shrubs—a very good description of the willow shrub area.

Nest site, food, and song perches were apparently all equally important in controlling the distribution of this bird. Rough nest material

was found in both parts of the study area, but the plant downs used for lining the nest were found in quantity only in the willow. This somewhat limited the Yellow Warbler to this area, although not entirely, because they would probably go some distance for material if forced to.

Here we see a species whose distribution was controlled most nearly by interaction of all four requirements, rather than by one or two outstanding factors.

American Goldfinch—The occurrence of this species only in the willow was undoubtedly due to the shrubs. Stokes (1950) reported in his study that ". . . food supply is a more important determiner of occurrence of Goldfinches than nest site." However, in the present study I believe that nest site was more important for two reasons. Firstly, there were very few suitable nest sites in the meadow. Secondly, food quantity and quality were nearly the same in both areas, since seeds comprise almost the entire diet. Nest materials were also of nearly equal abundance in both areas, except for plant down, so that this requirement could not be of much importance.

Because this bird is a comparatively late nester, breeding from July to September, the actual count (made in early June) did not show their true breeding density. The trip to the study area in July showed that there was an approximate doubling in density, but no census was made to authenticate this observation. Since the main object of this study was comparison, a relative density is just as important as an accurate breeding density. Therefore the density taken in June serves as a useful index in comparing the two areas concerning Goldfinch density, and does not seriously impair the findings.

Conclusions

From the present study two main conclusions may be drawn. Following the objectives as outlined at the beginning of the paper, these conclusions are:

1) Two different stages of plant succession on a marsh soil did support different songbird communities, both in species density and diversity.

2) The differences in these bird communities were influenced basically by the vegetation types present. The willow shrub stage of succession supported a very definitely more diverse and dense bird population than did the sedge-forb meadow.

That vegetation influenced these differences more than any other factor, may be somewhat qualified by taking into consideration the four habitat requirements discussed earlier for each species, and the fifth requirement of cover.

Nest site and nest material are very clearly affected directly by vegetation. Here the existing plants make up both the nest site and the material. Without the same basic type of plants the same birds would probably not be present.

Song perch requirements are perhaps not quite as strongly influenced by the type of vegetation, because "artificial" perches, such as fences, are available. However, the majority of suitable perches are the plants that are situated in the area, and therefore vegetation is still of great importance in meeting this requirement.

Two categories of food must be considered. These are the animal and vegetable constituents of the diet. The vegetable part, such as seeds and berries, is of course directly concerned with vegetation. However, the animal portion, insects for example, is only indirectly influenced by vegetation. The more dense growth of plants in the willow area would seem to form more favorable habitat for insects as well as birds. Thus, food is both directly and indirectly influenced by vegetation.

Another requirement, which was not discussed with each individual species, is cover. Cover and concealment are, of course, very important in affecting bird distribution. Very few songbirds choose habitat that is without some cover such as vegetation provides. The willow contained the more luxurious plant growth, and therefore supported the greater bird density and diversity.

Summary

1) Breeding bird communities were studied in two adjacent but difference habitats in a marsh in south-central Wisconsin to determine the effects of vegetation on the communities. These two habitats were the sedge-forb meadow and willow shrub stages of plant succession.

2) A modification of the King Method of censusing (Leopold, 1946) was employed. With this method transect lines were laid out and the spot of flushing for each bird was plotted on a map, as the lines were walked by the census taker. From the results the flushing distance and number flushed of each species was ascertained, and a density obtained for each species.

3) The songbird density in the sedge-forb meadow habitat was 8.7+ birds per acre. The density in the willow shrub habitat was 15.1+ birds per acre. These figures were used as an index rather than as absolute density values.

4) Seven species of birds were found to be nesting in the sedge-forb meadow. These were: Short-billed Marsh Wren, Yellowthroat, Red-winged Blackbird, Brown-headed Cowbird, Savannah Sparrow, Swamp Sparrow, and Song Sparrow.

Ten species of birds were found to be nesting in the willow shrub. These were: Traill's Flycatcher, Short-billed Marsh Wren, Catbird, Yellow Warbler, Yellowthroat, Red-winged Blackbird, Brown-headed Cowbird, American Goldfinch, Swamp Sparrow, and Song Sparrow.

5) Five habitat requirements—nest site, nest material, song perches, food, and cover—were considered as important in influencing the differences in the bird communities. The first four of these were discussed for each of the 11 species. Of these, the requirements of nest site and song perch were apparently the main factors influencing bird distribution, while food and nest material were considered to be of lesser importance. The fifth requirement, cover, is also very important, but it is assumed that the thicker cover in the willow shrub habitat affected each species of bird similarly. That is, the thicker cover was instrumental in causing the higher bird density.

6) It was concluded that vegetation is one of the most important influences on bird distribution. This is apparent because the additional cover, nest sites and materials, song perches, and food provided by the willow shrub habitat were accompanied by a corresponding rise in breed-

ing bird density and species diversity, compared to the conditions provided by the sedge-forb meadow.

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Ripon College
Ripon, Wisconsin

Operation Snowy Owl . . .

By FRED and FRAN HAMERSTROM

Have you seen any Snowy Owls this winter?

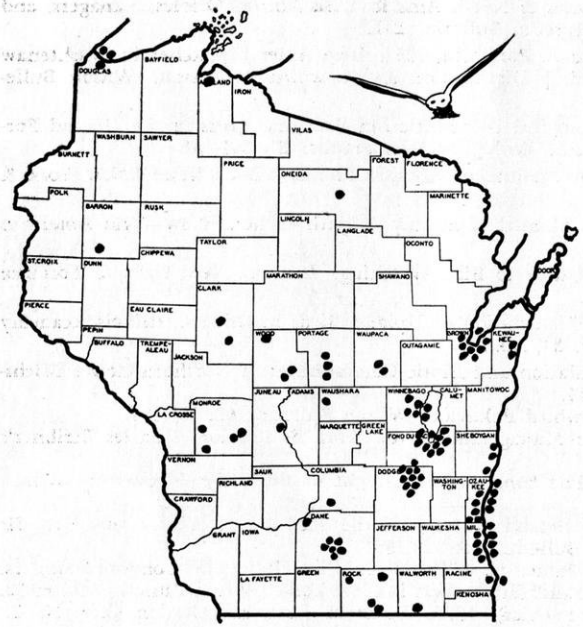
If you have please send a report, telling where and when, immediately to:

Milwaukee area—Mary Donald, 6918 Belmont Lane, Milwaukee 17

Madison area—Telephone Lloyd Keith at ALpine 5-3311, Extension 2346, or write to Helmut Mueller, Birge Hall, University of Wisconsin

Rest of the state—Fran Hamerstrom, Plainfield.

At least 93 Snowy Owls have been sighted in Wisconsin so far this winter, to the end of January. These records are indicated on the map.



The heaviest known concentrations appear to be near cities with lakes: Fond du Lac, Milwaukee, Green Bay, and Madison. However, ten have been seen on Horicon Marsh.

The following WSO members have already sent in reports, and we wish to thank them: Tom Ashman, Mr. and Mrs. N. R. Barger, Hazel Cox, Nils Dahlstrand, Mary Decker, Mary Donald, Robert Ellarson (whose radio program, "World of Nature," brought in a number of reports), Mr. and Mrs. R. P. Hussong, Roy Lukes, Harold Mathiak, Melva Maxson, Harry Meinel, Ed Prins, Sam Robbins, and Mrs. R. A. Walker.

Thirty Snowies have been banded in Wisconsin during December and January. Using a technique developed by Dan Berger and Helmut Mueller, they have been marked with the following colors: red, blue, green, copper, pink, orange. Color-markings are on the head, back, breast, right wing, left wing, rump, tail, etc.

Color-marking has already brought in a number of sight records, especially of birds seen again near the banding place. Most of the eight Snowies color-marked at Horicon Marsh have been seen repeatedly in their winter "territories." One bird reported in Kewaunee County had moved at least 16 miles north; unfortunately, however, we do not yet

MRS. FREDERICK HAMERSTROM, JR., W. S. O. PRESIDENT WITH SNOWY OWL TRAPPED AND BANDED AT GREEN BAY IN JANUARY, 1961.

"OPERATION SNOWY OWL," UNDER THE HAMERSTROMS' DIRECTION, RESULTED IN A RECORD CATCH OF FIVE OWLS IN GREEN BAY ON JANUARY 22.

PHOTO BY ORVELL PETERSON GREEN BAY PRESS GAZETTE

know whether the right or left wing was the colored one and so are not sure of the exact banding place for this bird.

Operation Snowy Owl is making a diligent attempt to document this winter's flight. We want reports of all Snowy Owls seen this winter and next spring, whether color-marked or not, and wherever they may be. Speed in getting information to us will be greatly appreciated: the sooner we know where the owls are, the better are our chances of banding them.


clearance

OPERATION SNOWY OWL IN GREEN BAY

By CLARA HUSSONG

The 1960-61 winter will no doubt go down in bird-lore history as one of the heaviest flight years for the Snowy Owl. These birds of the Arctic tundras have been reported from various parts of Wisconsin since last November.

A number of WSO members, including President Fran Hamerstrom, took advantage of the heavy flight by starting "Operation Snowy Owl." In this project the owls were caught in banding traps, examined, weighed, measured, banded (with Fish and Wildlife Service bands), and spray-painted.

This last item is something new for Snowy Owls, although geese and other large birds have been marked in this way before. The spray-painting of left wing, right wing, head, tail or other body part is recorded along with the bird's band number and other details. It is hoped that this marking of the owls will prove helpful in determining the range of the birds in their search for food, the length of their stay in the state, and other data.

Working with Mrs. Hamerstrom on this project were Dr. Hamerstrom, Mr. and Mrs. Helmut Mueller and Dan Berger. The work was carried on weekends, on a voluntary basis; that is, "on their own."

To coincide with a WSO board meeting held in Green Bay on Jan. 21, the group planned a trapping and banding expedition in that area for the weekend. They were accompanied by the Hamerstroms' daughter, Elva, and her room-mate at the University of Wisconsin, Cynthia Schachter of New York.

Enroute to Green Bay one owl was caught near Lake Butte des Morts, just north of Oshkosh. Upon examination, this bird proved to be one of very few free of lice, mites and other parasites. It was given a copper-colored right wing decoration.

In Green Bay on Sunday, Jan. 22, the "Operation Snowy Owl" crew set out at seven in the morning for the nine locations reported to me as places where Snowy Owls had been seen recently, or regularly. They were accompanied by Mr. Hussong, who helped them locate the areas.

By night, five owls had been caught, the best record for a single day. One was caught near the bay shore, one along the Fox River, and three on farmlands near De Pere. The weight of the birds ranged from three and one-half to a little over five pounds. According to crew members, the heaviest bird caught up to that time was six pounds.

The owls were caught by getting their claws tangled in fine nylon netting, looped across the top of a baited trap. Sometimes the owls came to the traps immediately, the bird banders reported, and sometimes it took hours before they ventured near.

The birds were disentangled immediately, their feet were tied and they were slipped, head down, into a nylon stocking. In this "cage" they were much safer and more comfortable than in a wire trap or cage.

IN THE PICTURES TO THE LEFT, THE OPERATION SNOWY OWL CREW AT GREEN BAY IS SHOWN WITH THEIR FIVE OWLS AND PAINTING AN OWL'S WING. AT TOP, L. TO R., MRS. HAMERSTROM, MRS. HELMUT MUELLER, DAN BERGER, CYNTHIA SCHACHTER, ELVA HAMERSTROM, AND HELMUT MUELLER. GREEN BAY PRESS GAZETTE PHOTOS BY ORVELL PETERSON

Processing each bird, that is, examining, weighing, measuring, banding and painting, took quite a while, even with the whole crew working. After the work was finished, the birds were released in the same areas in which they were caught. (A variety of stocking colors and meshes were used in order to tell the birds apart, and to insure their release in the right spot.)

One of the birds turned out to be a "bird of a different feather." Instead of the gray-brown flecks which form a pattern of streaks and bars in an "unruffled" Snowy Owl, this one was mostly pure white, with a gray wash over lower back and tail.

The local newspaper, the **Green Bay Press Gazette,** sent a photographer to take pictures of the banding and spray-painting, and on Jan. 24 carried a full page spread of pictures and story on "Operation Snowy Owl." Readers of the paper were asked to watch for the decorated birds, and to report sightings to the Hamerstroms.

CONVENTION NEWS

Plans for the 1961 Convention of W. S. O. are moving ahead under the able leadership of Vice-President Robert Adams. The new Union at Carroll College, in Waukesha, will be the setting for the paper sessions, banquet, luncheon, and bookstore. The very successful art contest of last year's convention has prompted the Convention Committee to schedule another, under the direction of Clarence Anthes. Plans for the banquet and speaker aren't yet final, but the prospects of an exceptional program appear to be excellent. The space set aside for the bookstore will offer greater room than has often been available. More items will be on display, and more visibly than has sometimes been possible. It is planned to make the store accessible to Carroll College students who may wish to browse about.

Anyone wishing to present a paper is urged to contact Adams for a place on the program, and should do so soon. There are only so many openings, and each presentation will be limited to a fixed period of time.

Convention announcements will soon be in the mail to all W. S. O. members. The officers and directors of W. S. O., and the group in Waukesha which is working on convention plans with Robert Adams, all hope for a fine attendance.

IMPORTANT NOTE!

The editor must apologize for an error which may inconvenience readers of **The Passenger Pigeon** for years to come, unless simple steps are taken to correct his error. The page numbers of the Summer 1960 issue, Number 2 of Volume XXII, should run from 57 to 108, rather than from 1 to 52. Please make the change in your own copy. This will avoid confusion when the Index is published, and when reference is made to the issue in future numbers. Thank you.

CLUB PAGE

Happy Birthday, Green Bay!

The Green Bay Bird Club celebrated its 25th anniversary on Jan. 8 with a dinner and program. Movies and slides of the club's field trips and other activities were shown by various members. The club's first president and vice president, Mrs. R. P. Hussong and Mrs. Andrew Weber, were elected to serve again for the anniversary year. In place of the first secretary-treasurer, the late Chester Krawczyk, Bernard Chartier was named to that position.

Expressing her appreciation, Mrs. Hussong cited the various activities of the club throughout the years and the fairly recent "rejuvenation" of the organization through a greater interest in conservation. One of the projects of this nature has been the erection of nest boxes for Eastern Bluebirds. These are put up along a line laid out as a "Bluebird Trail."

WORKING ON A BLUEBIRD TRAIL; L. TO R., MRS. PAUL ROMIG, ED PAULSON, MRS. ANDREW WEBER, AND JERRY APPS.

GREEN BAY PRESS GAZETTE PHOTO

Besides establishing its own "Bluebird Trail," the Bird Club has been encouraging and helping other groups and individuals to start "Trail" projects. Fifteen Brown County 4H Clubs are working on this project. It is expected that 200 houses will be up before spring in Brown County. Mrs. Andrew Weber is chairman of the "Trails" committee. The bird club will award a certificate to the best and most successful "Trail" among the 4H Clubs.

Educational activities have been an important part of the program, too. With the help of bird club members, three new Junior Audubon Clubs have been started in this area. Leaders of the three groups are Mrs. Mark Olson, Mrs. Paul Zawasky and Carleton Pugh. Each of these groups is planning to set up a "Bluebird Trail."

Two youth leaders in the Green Bay area will be sent to the Wisconsin Audubon Camp through scholarships offered by the Green Bay Bird Club. The club has been working on several money-making projects to pay for the scholarships. About two-thirds of the necessary fund has been raised thus far by a corn roast and several card parties.

The Green Bay Bird Club looks forward to many more years of constructive and enjoyable activity.

NEW RESEARCH PROJECT

The Research Committe has chosen a Breeding Colony Survey of the Yellow-headed Blackbird as the W. S. O. state-wide research project for 1961. This magnificient prairie blackbird is a popular species with most bird students, and observers are probably aware of many of the colonies which now exist in the state. In addition, the bird is conspicuous, and its colonial nesting habits make it a natural for such a study. Since Wisconsin is on the northeast fringe of the species' range, the location and history of these colonies is of special interest to us and to ornithologists in other states.

Information on current colonies is needed, but historical data on colonies no longer in existence is equally valuable. It appears that colonies have come and gone in some places; the history of these would be an interesting and important addition to a study of the bird's present status.

Data should be sent, and questions directed, to Prof. Robert A. McCabe, W. S. O. Research Committee Chairman, at the Department of Forestry and Wildlife Management, 424 University Farm Place, Madison 6. This issue contains a questionnaire insert, for submitting colony data simply and correctly.

NEWS . . .

Latest reports from the Canadian prairie "duck factories" indicate a bad breeding season, in terms of water, unless a good deal of snow falls between now and spring. Manitoba, Saskatchewan, and Alberta all report extremely dry conditions, even into the subsoil. Unless the moisture comes "between now and the middle of May, waterfowl will be in the most precarious position in the last three decades," reports the Fish and Wildlife Service.

In plenty of time for birders planning summer trips around the country comes the January-February issue of **Audubon Magazine,** with a state-by-state summary of checklists and local bird lists. Wisconsin is represented by the WSO field card, "Wisconsin Birds" checklist, the federal leaflets on Horicon and Upper Mississippi Refuges, and a list of Crex Meadows birds put out by the Burnett County Audubon Society at Grantsburg. The latter is a surprise to us, but a pleasant one. The editor would be happy to learn of such groups around the state, and to have periodic news of their activities—even if they don't publish checklists or newsletters.

1959 In Review . . .

By SAM ROBBINS

Airplanes and rockets are not the only things that can begin to grow obsolete before the production of the first model is complete. This can happen to bird books, too. When the authors completed the final draft for the revised "Wisconsin Birds" checklist in November 1959, it was with the feeling that now we had something authentic and up-to-date in the listing of birds known to come to Wisconsin, species known to have bred here, and a close approximation of the time of year when each species had been recorded for the state. It had some of the most recent information available: the first state record of the Ruff, established by the photos of Martha Lound and Buddy Barger on May 16, 1959; the first known Wisconsin nesting record for the Boreal Chickadee, discovered by Martha and Roy Lound on June 20, 1959; and even the addition of the Ross' Goose to the hypothetical list because of the sight observation by J. J. Hickey and Owen Gromme on Oct. 31, 1959.

But before the first copies of the checklist came off the press in April 1960—indeed, before the year 1959 had run out—the checklist already needed revision! It was on December 23 that the first Black-throated Sparrow ever known in Wisconsin made its appearance at the Earl Fetterer home in Madison; in the four succeeding months it was observed by many observers, and its place on the state list was established by photograph.

A Real Highlight

Surely this was one of the ornithological highlights for Wisconsin in 1959. The question that has doubtless entered many minds is: What is this bird doing here in Wisconsin when it ought to be in Texas or some even more remote location? The wonderment increased when it became known that a bird of this species had been observed and photographed in northern Illinois—less than a mile from the Wisconsin border —on May 3 and 4, 1959, and that there had been a sight record in western Massachusetts on November 5. Why should a bird that had never been recorded this side of Kansas suddenly make these three appearances all in one year? The writer is reminded of a day back in January 1935 when he watched a Dickcissel that had been discovered at a feeding station in eastern Massachusetts a few days before. Not only was this a first record for all New England at that time, but it was also the first known winter record for the entire United States. It seemed an isolated occurrence at the time, and the guesses to explain its presence ranged all the way from internal injuries that interfered with the bird's direction-finding mechanism to the possibility that the bird had been enclosed in a grain-carrying freight car that may have traveled from the bird's normal range. It seemed to be one of those peculiar accidental instances that might never again be repeated. But a look at the most recent Christmas bird count shows that Dickcissels were reported from Massachusetts, Connecticut, New York and New Jersey, and this has been going on—summer and winter—for a number of years. Will history repeat itself in the case of the Black-throated Sparrow?

Almost equally extraordinary was the addition of the Ruff to the state list, for this is an even more remote wanderer whose normal range includes Europe, Africa and Asia. In fact, it is probably the only Old World species to have been found in Wisconsin without benefit of previous introduction by man into North America. Presumably ours was a European bird, for the other American records for this species are concentrated along the Atlantic Coast, with scattered inland records from Ontario, Ohio, Indiana and Iowa. During 1960 American observations were made in Massachusetts, New Jersey, North Carolina, Texas and Illinois. Because this species is being recorded in the United States with increasing frequency, the possibility of return visits to Wisconsin in future years is very real; it should be looked for in company with yellowlegs and other sizable shorebirds in both spring and late summer migration.

A third species to be recorded in the state for the first time during 1959 was the Ross' Goose sighted at the north end of Horicon Marsh on Oct. 31 by Gromme and Hickey. This is placed on the hypothetical list because it is not substantiated by specimen or photograph, but the carefully written account by observers of the caliber of these two is the next best thing. Here is another species far outside its normal range—western Canada and the Pacific Coast states—but which is known to do some wandering. The A.O.U. **Checklist** records wanderings as far east as North Dakota and Ontario, and a specimen was secured in Illinois in 1956. This suggests the definite possibility that this species may again wander to the state, and a specimen may then add this to the regular state list.

Other Rarities

Because of other observations of rarities in 1959, additional dots will have to be added to the migration charts for some species, when another revision of the "Wisconsin Birds" checklist is eventually made. Inevitably the ornithological "firsts" always grab the headlines, but also contributing to our knowledge of Wisconsin birds are the observations of other species that are of casual or accidental occurrence. Consider these seven species, for which there existed prior to 1959 six or fewer known state records:

Ivory Gull: Norman Stone's observation of three individuals at Crex Meadows, April 3-6, constitutes only the third state record. It was on March 8, 1947, that Carl Richter collected the specimen that put this species on the state list, and it was later the same day that Leroy Lintereur observed another individual 60 miles away. This bird inhabits the far north so exclusively that it is of only casual occurrence anywhere in the United States—even the northern New England coast.

Scissor-tailed Flycatcher: It was also a third state record when Winnifred Mayer and Jim Malkowski observed one of these stragglers from the southwest near the Lake Michigan shore north of Two Rivers on July 3. Ludwig Kumlien took a specimen on Oct. 1, 1895. From then until this year, the only other known occurrence was a sight record by the Elmer Bastens in Ozaukee County on May 12, 1956. The normal range extends to Kansas and Nebraska, and most of the states that border on Wisconsin have records of casual visitors.

Western Tanager: When a vividly colored male of this species was sighted at the Walter Forbes home in Kenosha on May 6, it became the

fifth state record. Three of the previous records were made in the 19th century; the only recent observation prior to the 1959 bird was one seen at Madison in May of 1955 by Roy Lound and Janet Ela. The closest part of the normal range of this species is in the Black Hills.

Cinnamon Teal: Following the specimens collected in 1879, 1891 and 1939, and the careful sight observation by Richard Hunt and Laurence Jahn in 1958, the two spring observations this year constitute only the fifth and sixth well documented state records. The birds observed in Jefferson County on April 11 by Mrs. Housz and Mrs. Degner, and in Columbia County from May 11 through 16 by the Dryers, Winklers, et al., were strikingly-colored males, carefully described in written accounts. It is entirely possible that this bird is not as rare as the scarcity of records would indicate. Its breeding range does extend as far east as Nebraska; and it has been recorded as far east as New York, the southeastern states, and Cuba. Females could wander here and never be detected, being virtually indistinguishable from the female Blue-winged Teal. We have heard occasionally about "Cinnamon Teals" being shot by hunters in the fall, but these rumors were never backed up by specimens or other documentation.

Brant: The status of this species in Wisconsin has been a subject of confusion for the past century. Kumlien and Hollister ran down various reports, and discarded all but a very early specimen by P. R. Hoy. Schorger, in his revision of Kumlien & Hollister's work, was unable to locate even this one specimen. But there is no questioning the specimen collected by the Milwaukee Braves' Eddie Matthews at Horicon in late November; the skin has been donated to the Milwaukee Public Museum. The University of Wisconsin also has a specimen, thanks to Laurence Jahn who discovered one in a hunter's bag on October 17, 1951. There are well documented sight records for spring birds in 1950 and 1954, and fall birds in 1953 and 1954. So we are calling the 1959 bird the sixth state record.

Yellow-throated Warbler: For a bird that regularly breeds within 250 miles of Wisconsin—southern and central Illinois—this species very rarely overshoots the mark in migration. The bird studied by Daryl Tessen in Appleton on May 4 constitutes the sixth known record. Only one of the previous records includes a specimen—one taken by P. R. Hoy on June 20, 1848; the others are all sight records within the last 20 years, and all fall in the period between May 3 to 10.

Buff-breasted Sandpiper: This bird has never been recorded in spring in this state, but has been found in fall six times previous to the Sept. 8 observation at Milwaukee by the Bastens. Since this species normally migrates through the Great Plains, and since it has been noted in other nearby states—wandering even to Quebec and New England—one would expect this species to turn up in Wisconsin every so often. It should be looked for in August and early September.

Hypothetical Blue Grosbeak

One is tempted to include the Blue Grosbeak in this list. But the presence of three purported early specimens is indefinite, and the May 24 observation in Milwaukee by the Lowell Halls et al.—as well as four other recent sight records—lacks the needed supporting evidence of specimen or photograph. So this must be considered hypothetical.

Some Record-Breaking Dates

An important part of the preparation of the "Wisconsin Birds" checklist was the determination of arrival and departure dates for each Wisconsin species. After a perusal of the published literature, and especially of all field notes published since the beginning of **The Passenger Pigeon,** a working paper was drawn up that listed for each bird: earliest spring arrival, latest spring departure, summer records and/or breeding status, earliest fall arrival, latest fall departure, winter records, and exceptional dates. This document has never been published, but it was used in drawing the migration charts for the checklist. And copies have been given to the seasonal writers of field notes, and are proving of great value in interpreting the observations that are sent in each quarter.

This document was up-to-date as of July 1958. But the observations for the year 1959 alone have necessitated no less than 26 changes in the listings! Take the winter observations, for instance. The "working paper" showed the latest fall date for the Horned Grebe as Dec. 26, 1953, the earliest spring date for March 12, 1955, and no dates in between. In 1959 one was found in the snow at Two Rivers on Jan. 10 by John Kraupa, and then two were observed at Neenah on Feb. 21 and 28 by Daryl Tessen. Similarly the first winter record for the Eared Grebe in Wisconsin was obtained when Earl Loyster and Ray Kyro found a bird in the snow in Rock County on Feb. 12. This is truly a remarkable record, not only because this species had never previously been reported in the state between Dec. 7 and April 3, but also because its normal winter range as listed in the A.O.U. **Checklist** is "from southern British Columbia (Vancouver Island) to Colombia (Sabana de Bogota), less commonly in Nevada, Utah, New Mexico, and southern Texas." Another winter revision involves the Bewick's Wren. Until 1959, the latest recorded date was Dec. 7, 1954; but a bird remained through December in Madison, causing a 1959 revision which will be carried still further when the full 1960 compilation is made, for the Madison bird was last seen on Jan. 23, 1960.

New Dates From Goose Pond

Bill Hilsenhoff's splendid censusing of Goose Pond in Columbia County in June resulted in establishing new summer dates for the Dunlin, Pectoral and Semipalmated Sandpiper. One scarcely knows whether to term these "late spring departure," "early fall arrival," or just "summer" dates.

The earliest spring arrival date on record was broken during 1959 for these 12 species: Snowy Egret, Osprey, Ruddy Turnstone, Dunlin, Marbled Godwit, Black-billed Cuckoo, Yellow-bellied Flycatcher, White-eyed Vireo, Cerulean, Kentucky, Connecticut and Wilson's Warblers.

The latest fall departure date on record was broken during 1959 for these seven species: Osprey, Western Sandpiper, Solitary Vireo, Blue-winged, Parula, Cape May and Blackpoll Warblers. The Western Sandpiper Harold Bauers saw in Milwaukee on Nov. 7 was a surprising 29 days later than the previous late record. Even more astonishing was the Blue-winged Warbler that was banded on Oct. 9; the latest date reported in Bent's **Life Histories** for the entire United States is but four days later than this record.

Nesting Data

Some new data extending the breeding range of several Wisconsin birds was obtained during 1959. The U. S. Bureau of Sport Fisheries and Wildlife maintains a master file in which nesting locations for all North American species are recorded, and these files are a major source of information when various types of bird books are written that attempt to describe the ranges of North American birds. Field notes from **The Passenger Pigeon** and other state ornithological publications are regularly scanned for information that will keep these files up-to-date.

Several years ago the writer had a glimpse of this file and noticed that the northernmost nesting record of the Lark Sparrow in Wisconsin at that time was from the southwestern corner of the state. Doubtless the record of the nest discovered in Chippewa County on May 23 by Dr. Kemper and the Bargers has now reached these files, and helped correct and extend the known breeding range of this species.

The discovery of a nest of the Bell's Vireo in Sauk County on June 7 by Barger, Soulen, et al., contributes a slight range extension for that species.

Data on the breeding of the Green-winged Teal in 1959 should help straighten out an unfortunate "bulge" that appears in the previously known breeding range as described in the A.O.U. **Checklist:** ". . . south to . . . northern Nebraska, southern Minnesota (probably) western Ontario, northern Ohio . . . formerly in . . . Wisconsin . . . ." Evidence in 1959 indicates breeding in Columbia and Burnett Counties, with every likelihood of similar activity in Adams and Price Counties.

The first known nesting of the Boreal Chickadee for this state was established during 1959, when the Roy Lounds discovered parents feeding young in the nest in Forest County on June 20. Years ago it was thought by some that this species came to northen Wisconsin only in winter; its presence every summer in the northeastern part of the state is now well established, and it is high time this species is added to the state's list of breeders.

While specific nesting data was lacking this year, continued observations of the Mockingbird in Rock County where the species bred in 1958 suggest that this species may be on the way to becoming a regular state breeder. The presence of Cerulean Warblers near the Wisconsin Audubon Camp in Washburn County indicated the likelihood that the bird may now breed that far north, but specific breeding records had to wait until 1960.

Other Highlights Reviewed

A diary of the other outstanding features cropping up at various times in 1959 might read like this:

January-March: Remarkably heavy flights of Purple Finches and Bohemian Waxwings; the Mazomanie Christmas bird count had the highest count of Purple Finches for North America.

February: Wisconsin's first late-winter bird count, intended to detect population changes between early and late winter, was taken at Mazomanie-Sauk City.

March-April: Heavy spraying in southern Wisconsin cities took a heavy toll of of bird life; results in key areas being analyzed by J. J. Hickey and Barrie Hunt. Bluebird population remarkably low.

May: Warm spell in first five days of the month brought a heavy migration, resulting in record-breaking early arrival dates for eight species. 300 birds killed in collision with television tower at Eau Claire.

June-July: Big invasion of Dickcissels, reaching Oconto and Shawano Counties.

August: "White" herons were remarkably scarce. 800 bird specimens gathered after another collision at the Eau Claire television tower.

September-October: Tremendous mist-netting operation carried on at banding stations at Cedar Grove and Chippewa Falls. Remarkably heavy flight of Northern Phalaropes. Response of WSO members to the project of studying Robin populations was a real disappointment.

October: Another 1200 birds gathered after a television tower collision; 117 specimens gathered after a night's disaster at the Madison ceilometer. Mild weather resulted in four new late departure dates for warblers.

November-December: Heavy flight of Redpolls recorded for large parts of the state.

There is no doubt that the field observations of many Wisconsin ornithologists, when all put together, contributed significantly to our knowledge of birds. This is good; this is one of the purposes for which WSO exists; this is why WSO has tried to maintain a strong field note department throughout its history.

Likewise, there is no doubt that this was an exciting year for Wisconsin ornithologists. Most WSO members are amateurs, engaging in the sport of bird-watching as a hobby as much for the sake of relaxation and enjoyment as for the contribution of scientific knowledge. The number of rarities found in the state during 1959 was larger than usual, and this meant more thrills for more birders. The number of rarities determines the number of species recorded on the entire state list each year. The 1959 total stands at 291 species, plus four that are considered hypothetical (Ross' Goose, Gyrfalcon, Barrow's Goldeneye and Blue Grosbeak). Note how this compares with other years:

1946	264	1953	285
1947	274	1954	287
1948	277	1955	286
1949	286	1956	297
1950	280	1957	283
1951	280	1958	275
1952	281	1959	291

One factor in the fluctuation of this total is undoubtedly the weather. Some years there will be unusual climatic conditions that will cause unusual influxes of certain species, or abnormal displacement of birds that ordinarily would not occur in Wisconsin; some years these conditions will be missing.

But another factor is the number of observers who participate in the field note program, and the amount of time they spend in the field. Activity is great in May near the height of the spring migration, and again in December during Christmas bird counts; we wish that more participants could spend more time afield at other seasons as well.

Thanks should be given to all who participated in the field note program during 1959, and with it comes an invitation to every reader to

contribute his list of field observations—large or small, usual or unusual—regularly during the coming year.

HONEY CREEK BOG

By now, all W. S. O. members have seen the announcement of this project from Fund Raising Chairman Harold Kruse. The fact that the society now owns the 30-acre upland tract, with its hemlock grove, wildflowers, and rocky streambanks, will no longer be news to most of us. Nor will the recent decision of the directors to proceed with purchase of the adjoining 55 acres of marsh, tamarack and hardwood bog.

It should be unnecessary to point out to any student of ornithology the importance of wetlands to birds. Many of the species we find most interesting to study and observe are absolutely dependent on these areas for their environmental requirements. Most of us have some knowledge, too, of the fascinating plants and plant communities found in bogs and marshes, and of the complex ecological relationships that exist in such areas. These relationships make wetlands vital for scientific research and educational use, as well as for the esthetic and recreational values they represent.

It can be said today that almost any wetland in anything like its natural condition is worth preserving. Ditches and drainage tile have ruined—for wildlife—thousands of acres of wetlands in southern and central Wisconsin. Sedge meadows, cattail marshes, tamarack bogs, willow and cottonwood swamps, alder bottoms, and all the other wetland types we have in Wisconsin have been lost, in some counties, to an alarming extent. In the foreseeable future, public ownership—or purchase by groups such as W. S. O.—appears to be the only alternative to destruction, in those areas where even the most marginal agricultural use can be made of a wetland.

Many members may already have returned their forms to Harold Kruse, with a donation to this project. We hope they will feel free to contribute again. Those who haven't made that initial donation yet, we're confident, will do so soon. It would be most fitting if, when we visit Honey Creek in May for the Spring Field Trip, we can visit our own bog.

MORE NEWS . . .

During a general discussion of how WSO members might advance the study of birds and conservation in our schools, one of the board members suggested that local groups invite their high school biology teachers to accompany them on field trips. This could apply as well to individual members, and to teachers in communities where WSO schedules trips. Grade school nature study teachers could also be included. We'd like to hear from anyone who tries it.

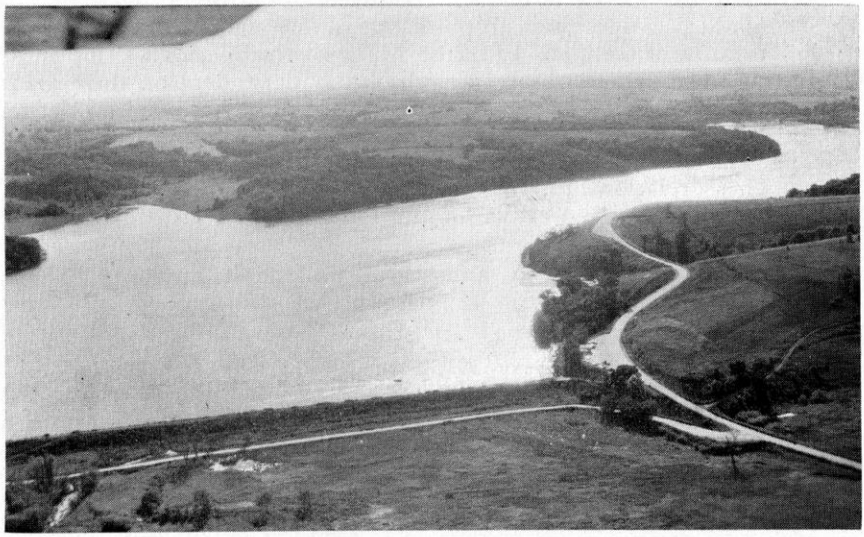
Something called "Roost - No - More," $5,000 worth of it, was sprayed on Pennsylvania Avenue trees for the Kennedy inaugural parade. It's supposed to smell bad to birds, and give them a "mild chemical hot-foot."

Our apologies to Beloit College for missing the fact that the College, not the Ned Hollister Bird Club at Beloit, is sponsoring the Screen Tours in that community. The College is to be commended for this community and conservation service, one we know is being enjoyed.

WISCONSIN'S FAVORITE BIRD HAUNTS

YELLOWSTONE LAKE

Yellowstone Lake is located in the northeast corner of Lafayette County and may be reached by driving southwesterly from Blanchardville on Highway "F." It is not a natural lake, but an artificial flowage created by the Wisconsin Conservation Department in 1954. It has served as an "oasis" for the birds as surface water is scarce in this part of the state. Waterfowl, including geese and swans, stop here in migration and a few of the more common species remain to nest.



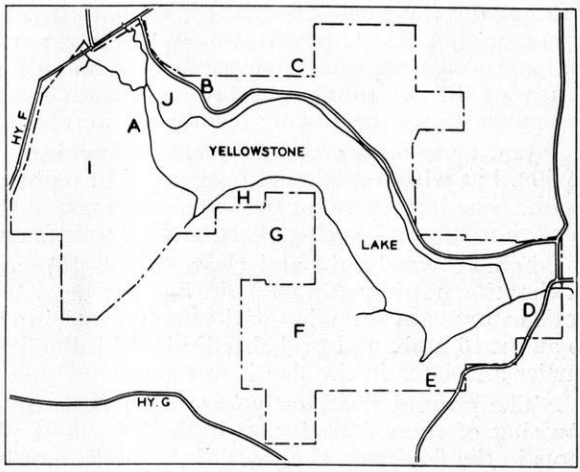
YELLOWSTONE LAKE, LOOKING WEST. DAM IN FOREGROUND
WISCONSIN CONSERVATION DEPARTMENT PHOTO

The flowage area occupies about 455 acres and state lands, bounded by dots and dashes on the map, amount to approximately 1,900 acres. Park facilities have been provided on the north side with the result that large numbers of sportsmen and boaters gather here in favorable weather, but this is not the case on the south side. Considerable planting has been done by the state, especially in the southeastern portion, to provide food and cover for wildlife. Very little work has been done along this line in the southwestern portion, however, as it has a good stand of trees. The slopes here are steep and difficult to cross, but the habitat is ideal for birds. The west end of the lake, including some marsh land, has been declared off limits for boaters in order to give the ducks a place to nest.

Some of the better spots for birding have been indicated on the map by letters. Area A may be reached from Highway "F" by means of a foot path which runs along the south side of the water. This is one of the better areas for warblers in spring as much of the woods is inundated. Many of the southern forms may be seen here such as the Prothonotary

Warbler, Louisiana Waterthrush, and Blue-winged Warbler. Areas B and C also attract warblers, but they are more restricted in size.

Area D takes in more varied habitat. Bobwhite have been found here. Such species as Mourning Doves, Flickers, Phoebes and Grackles nest here. The wooded strips are excellent for warblers and flycatchers in season. Area E is largely open and produces the birds of the field. Area F is one of the best for variety. It provides much "edge." We have found the Bell's Vireo here and the nests of many common species. The only Red - tailed Hawk nest we have seen along the flowage was observed here.



Area G is cropland, but it harbors the Grasshopper Sparrow, Bobolink, Horned Lark and other upland species. Area H is wooded and steep-sloped but it has ideal habitat for vireos, Scarlet Tanagers, Indigo Buntings, and Blue-gray Gnatcatchers.

Area I is high and open for the most part, but provides "edge" which is attractive to Bluebirds, Rose-breasted Grosbeaks and Field Sparrows.

Finally, Area J, a wide marsh area, provides nesting sites for Red-winged Blackbirds, Yellow Warblers, Song Sparrows, and Goldfinches. In spring, many species of sandpipers are attracted by the mud flats. The wooded portions, which are for the most part inundated, harbor Wood Ducks, Woodcock, and Prothonotary Warblers.

In summary, a great variety of birds use this lake. We have heard the cry of the Loon here. We have seen rails along the marshy edges. We have noted the Common Gallinule in the cover. We have not observed many gulls, but a few do occur. Terns are regular visitors, and Black-crowned Night Herons are the most conspicuous members of their clan.—N. R. Barger.

MORE NEWS . . .

Timber cutting (under permit, dead wood only) has been reported to have disturbed the Egret and Great Blue Heron colony on Four-mile Island in Horicon Marsh. There was no nesting on the island during 1959, following winter cutting. A permit issued in January has been revoked by the Conservation Department, and it is possible that the island will be added to the state's Scientific Area System.

The 1961 Audubon Camp folder is now available from the National Audubon Society, 1130 Fifth Avenue, New York 28. The first session at the Wisconsin camp begins on June 18.

Our 1963 convention will be in La Crosse, but no site has been selected for the 1962 meeting. Bids are being taken! The board or any officer will be happy to have suggestions, vague offers, or firm invitations—although it is a little early to expect the latter!

ANOTHER FEBRUARY 'CHRISTMAS COUNT'

By SAM ROBBINS

For the second successive year, the Mazomanie-Sauk City area was censused in mid-February, as well as on Jan. 1, in an effort to determine what differences in bird populations occur between early and late winter. The re-take was made on Feb. 13, 1960—six weeks after the early-winter count on Jan. 1. This year two of the five parties in the field on the earlier count were unable to participate on Feb. 13; thus, in comparing results of the two counts, the January results for only those three repeating parties (plus the Koenig feeding station) are included.

Jan. 1 was an overcast day, with temperature ranging only from 28° to 30°, but with a moderate (estimated 10 mph) wind blowing from the south. The impression of the observers was that the wind was just strong enough to have a limiting effect on bird sounds and movement.

Feb. 13 was bright and clear, cold (−4°) early in the morning but moderating rapidly (to 26°) during the day. The wind was variable, both in terms of direction and velocity; late in the morning it built up to about 10 mph, and probably limited bird activity somewhat; but both earlier and later in the day it was gentler.

The ground was mostly bare on Jan. 1; on Feb. 13 it had a light covering of snow (two inches or less) in most places, with a few bare spots in the fields and the sides of the bluffs mostly bare. The Wisconsin River had been open through the entire area on Jan. 1, but by Feb. 13 it was mostly frozen below the railroad bridge at the edge of Sauk City.

For the three parties that operated on both dates, coverage was nearly identical. Personnel for the three parties, headed by N. R. Barger, Tom Ashman and the writer, was virtually the same in both counts. The same routes were covered, with the same mileage and habitat percentages. The parties started 30-45 minutes earlier on the second date than on Jan. 1, and quit 15 minutes later—to allow for the greater length of daylight hours in February, but equalized the hours afield by a prolonged lunch hour. The miles traveled were as follows:

	Barger	Ashman	Robbins	Total
Miles afoot	6½	3	3	12½
Miles by car	70	67	71	208

That portion of the 15-mile diameter circle that is not included in this summary, because it was not covered on the Feb. 13 count, was the northern and extreme eastern sector. Both sides of the Wisconsin River, from the edge of Sauk City to the western edge of the circle, were covered. The tabulation for each party is given in the table.

January-February Comparisons

Ducks: Some eyebrows were lifted when we could find but four Common Goldeneyes and no other ducks on Jan. 1, for this is far below the normal total for the Mazomanie-Sauk City area at this time of year. Too much open water, we thought, giving waterfowl hiding places they wouldn't ordinarily have. This theory was exploded by the drawing of a complete blank on Feb. 13, when more of the river was frozen. Nor

could any ducks be found in the open water below the Prairie du Sac dam during the noon hour. Evidently the ducks just were not present—for the first winter in years.

Hawks: Individual hawks are so easily missed because of the wide territory they cover that it is hard to attach significance to variable numbers revealed on the January and February counts. The increase in Redtails probably reflects a better day for flying with the clear skies of Feb. 13. It may be significant that the three least hardy of the hawk species seen on Jan. 1. (Sharp-shinned, Marsh, and Sparrow) were missed on Feb. 13, but one wishes that the "sample" were larger for more conclusive evidence. The Bald Eagle population was definitely below par on both counts.

Doves-Kingfisher: The Mourning Dove picture is inconclusive. The presence of a sizable flock in the Ashman territory at the time of the January count was known, but the birds could not be located on the day of the count; no one can say whether the size of the flock increased or decreased during the six-week interval. Owl counts show no significant difference between the two dates; but they show that the Sauk County route the writer followed in the hour before dawn is fine owl territory. The Belted Kingfisher noted on the second date was presumably present on the first day, but "muffed."

Woodpeckers: Numbers of Pileated, Hairy and Downy Woodpeckers were surprisingly similar on the two days. So was the number of Redbellies on all but the writer's tally sheets, but his increase is difficult to explain. The jump from 19 to 39 birds is rather large to be written off as birds that were "muffed" on the earlier date; if the totals of other parties increased, one might suspect a general increase in this species; if the totals of other parties decreased, one might theorize that the birds moved out of other territories and concentrated in the Sauk County river bottom areas; the fact that counts of other parties remained much the same leaves the increase in the writer's area quite unexplained. The Redheaded Woodpeckers were quite certainly present on the earlier date, but missed. The absence of Flickers on the later date might be due either to a simple "miss" or to actual absence. A similar study the previous year revealed a drop from eight individual Flickers to one in a comparable six-week period.

Horned Larks: When we found only one bird on Jan. 1, we wondered if the birds were really absent, or just spread out on open fields where they escaped detection. The snow depth on Feb. 13 was not great enough to force birds to the gravel shoulders; the assumption is that the marked increase on Feb. 13 is due mainly to migration, and that since birds were not driven to the roadsides, there were probably many more Larks present that escaped detection.

Jays-Creepers: Numbers of Blue Jays, Chickadees, Titmice and Nuthatches were surprisingly constant. But the Crows present a mystery. The Jan. 1 total came from an estimate of a big roost in the Ashman territory, and the assumption that birds seen by the other parties had come from that roost. No sign of such a roost could be detected on Feb. 13, and the numbers seen by the various parties was so small that there obviously was no minor relocation of the roost. Was there a major relocation of several miles, and if so, what caused it? Or since this is the

time of year when Crow migration gets under way, did these birds begin migratory movement before the later count?

Starlings-Cardinals: The increase in Starlings and the drop in House Sparrows probably do not reflect population changes; Starlings tend to be a bit more noisy and conspicuous in late winter, and the number of House Sparrows is apt to vary with the thoroughness with which each individual farm yard is checked. The presence or absence of blackbirds most likely reflects the luck of the observers—or lack of it. The absence of Meadowlarks on both dates is not conclusive; snow was not deep enough to drive birds to the roadsides on either date. Cardinals remained quite constant except in the writer's party, and the suspicion here is that the stronger wind on Jan. 1 kept some of the birds more quiet and inconspicuous on that date.

Finches: Purple Finches evidently increased at the Koenig feeder between Jan. 1 and Feb. 13; but had the birds moved in from neighboring states and different sections of Wisconsin, or had birds that were in the general area merely discovered a fine restaurant in the immediate area after Jan. 1 and congregated there? The changes in numbers of Redpolls and Red Crossbills are too small to point to definite population shifts. But one of the most noticeable changes in bird life between the first and second counts is the increase in Goldfinches—strongly reflected in each party.

Sparrows: The writer's party tried hard on the second count for the White-throated, Fox and Song Sparrows that were found on the earlier date, but found none of them; two Song Sparrows were found at entirely different locations, however. The effort to find the Field Sparrows seen on the earlier date was successful; at least five were detected where only two were picked out in January, but the probability is that there were even more than five present on both occasions. The change in Junco population was probably due to the writer's failure to find a flock of 100 birds that was in the Field Sparrow area on Jan. 1; it would appear that Juncos remained rather constant between the two dates. While the total Tree Sparrow count was also rather constant, there was a sharp drop in the Barger party on the more barren Dane and Iowa County side, and a noticeable increase in the Ashman and Robbins groups working the more fertile Sauk County sectors. Was this just the luck of finding or missing flocks, or might this reflect a mild population shift?

Longspurs and Buntings: There was no evidence of these birds being present in any numbers on either date. But few areas of freshly-spread manure on snow could be found, where these species would normally congregate.

1959-1960 Comparisons

When the comparison of the same territory in early and late winter of 1959 was summarized by N. R. Barger (see **1959 Passenger Pigeon 14-17),** with severe cold and deep snow occurring between the two counts, several changes were noted. When we compare those changes of the previous year with those discussed above certain similarities can be noted in some instances, with some interesting reversals in other cases.

In both years there appeared to be a mild reduction of the half-hardy wintering species. In 1959 Marsh and Sparrow Hawks, Myrtle

Warblers, Rusty Blackbirds and Field Sparrows disappeared between the two counts; and Sharp-shinned, Cooper's and Red-shouldered Hawks, Snipe, Mourning Doves, Flickers, Red-winged Blackbirds and Lapland Longspurs were reduced. In 1960 half-hardy species that "disappeared" included Sharp-shinned, Marsh and Sparrow Hawks, Flickers, Red-winged Blackbirds, White-throated and Fox Sparrows; the other half-hardy species appeared to hold their own (Cooper's and Red-shouldered Hawks, Mourning Doves, Rusty Blackbirds, Field and Song Sparrows—some of which showed "apparent" increases that probably were not "real" gains).

While in 1959 there were six species that showed a decided increase on the lists of all or most parties during the six-week lapse between counts, only two species showed marked increase in each party during the 1960 counts: the Horned Lark and the Goldfinch. The increase in Horned Larks is easily explained by migration, and would normally be expected each year. The increase in the Goldfinch is more puzzling, for just the opposite occurred the previous year! Because the second 1959 count was taken in deep snow, it was conjectured that the food supply of this species had been covered up, forcing the birds to move elsewhere—and one would be tempted to assume that "elsewhere" would mean moving south. Weather conditions in 1960 were just reversed; the Mazomanie-Sauk City region had little snow, but areas to the south had heavy snow. Does the jump in 1960 Goldfinch population from 99 on Jan. 1 to 810 on Feb. 13, under these conditions, suggest that this time there may have been a "northward" displacement?

Another interesting "opposite" shows up in the numbers of Crows. The 1959 counts saw an increase from 40 to 577, and it was thought that this might reflect the beginnings of migration, as there was no evidence of a nearby winter roost in either January or February. The decline in 1960 (1250 to 82) was even sharper than the noticeable increase in 1959. Could the disturbance of crow hunters or some other factor have caused a major relocation of the roost, so that the birds did not return to the river area even for the day? Could some migration have begun for the birds that roosted locally, without a similar balancing migratory increase from farther south?

Many questions have been raised in this summary, and few neat answers given. The writer does not apologize for this. The evidence offered here is merely a progress report on a project that needs to be continued for years before clear-cut trends can be expected to emerge. About the only sure conclusion to be drawn from this experimental late-winter count is that there is still a great deal of guess-work involved in birding as we now know it. But we feel confident that if a late winter recount continues to be made over a period of years in this area, and if those who conduct Christmas bird counts in other parts of the state will join in similar late-winter counts, definite knowledge of what happens to our winter birds will emerge.

Species	Ashman		Barger		Robbins		Koenig		Total	
	1/1	2/13	1/1	2/13	1/1	2/13	1/1	2/13	1/1	2/13
Common Goldeneye					4				4	
Sharp-shinned Hawk	1								1	
Cooper's Hawk	1			1					1	1
Red-tailed Hawk	7	17	2	2	9	6			18	25

Red-shouldered Hawk					1	1			1	1
Rough-legged Hawk	1				1				2	
Bald Eagle		1	2		1	1			3	2
Marsh Hawk	1		1						2	
Sparrow Hawk	1				1				2	
Bobwhite					1	2			1	2
Mourning Dove		64			3	1			3	65
Screech Owl					1				1	
Great Horned Owl					15	21			15	21
Barred Owl					2	2			2	2
Long-eared Owl						1				1
Belted Kingfisher						1				1
Yellow-shafted Flicker					2				2	
Pileated Woodpecker	1	1			7	10			8	11
Red-bellied Woodpecker	3	4	6	5	19	39	1	1	29	49
Red-headed Woodpecker						3				3
Hairy Woodpecker	3	1	1	3	7	6	2	2	13	12
Downy Woodpecker	11	3	5	3	13	17	3	3	32	26
Horned Lark		45		15	1	29			1	89
Blue Jay	17	13	10	8	90	95	3	5	120	121
Common Crow 1250		29		14		39			1250	82
Black-capped Chickadee	25	16	32	28	57	55	3	3	117	102
Tufted Titmouse	2		2	2	11	15			15	17
White-breasted Nuthatch	14	4	11	11	39	45	2	3	66	63
Red-breasted Nuthatch ..					1				1	
Brown Creeper	1					1		1	1	2
Starling	227	196	65	151	14	17	3	20	309	384
House Sparrow	796	130	369	567	785	475	200	250	2150	1422
Red-winged Blackbird			1						1	
Rusty Blackbird				3	1				1	3
Cardinal	8	11	18	15	79	121	5	7	110	154
Purple Finch	10	1		1			18	100	28	102
Common Redpoll		13	1			3			1	16
American Goldfinch	41	299	38	277	20	234			99	810
Red Crossbill					1				1	
Slate-colored Junco	184	173	28	46	468	362		3	680	584
Oregon Junco	2	2				2			2	4
Tree Sparrow	102	134	167	8	86	234			355	376
Field Sparrow					2	5			2	5
White-throated Sparrow					1				1	
Fox Sparrow					1				1	
Song Sparrow					2	2			2	2
Snow Bunting					1	2			1	2

MORE NEWS . . .

Birders going south this spring may still have a chance to go on an Audubon Wildlife Tour in Florida. The schedule lists trips during April and early May. If Arizona in April is your destination, the Cooper Ornithological Society meeting in Tuscon, April 6-9, should be on your calendar.

Strange European birds continue to turn up in the East. The latest to come to our attention is a Lesser White-fronted Goose, on Long Island. It has been trapped, banded, and released. The **New York Times** calls it the first of its kind ever recorded in North America. This is a small goose, similar to but distinct from the White-front we occasionally have in Wisconsin.

Members of the Madison Audubon Society recently purchased, on an individual basis, 12 federal "duck stamps." This means $36.00 more for the purchase of urgently needed waterfowl habitat in the United States by the Fish and Wildlife Service, and convincing evidence that more birders are becoming aware of their responsibility for the welfare of our birds.

FIELD NOTES

Winter Season **December, 1959-February, 1960**

By HOWARD A. WINKLER

The winter season was in marked contrast climatologically to that of 1958-59. December was among the six warmest on record, and the warmest in 20 years, it being four degrees warmer than the average in November. It was also the wettest December since 1921, and among the four wettest on record. January continued the warm trend begun in December. Precipitation was also above normal, and up until Jan. 14, when the snow cover came in southern Wisconsin, the frost penetration was very minimal. February gave the southern portion of the state the most snow it had had in ten years, being 6.6 inches more than the average. Due to the warmer weather there was more open water available, and in more widely scattered areas—ponds, creeks, lakes etc., remaining open longer.

Recognizing these facts—warmth and water—we had substantially more species staying throughout the winter than in 1958-59. Casuals, however, were very few—with the notable exception of the fantastic Black-throated Sparrow that turned up in Madison on Dec. 23 and spent the entire winter there. This becomes species number 349 on the Wisconsin state list, being thoroughly documented by photographs (see **1960 Passenger Pigeon 32**) as well as by careful close-range observation by dozens of Wisconsin's most competent observers. To point out that this is a first state record, however, does not do justice to the abnormality of this record. It is a bird of the arid Southwest (often known as the Desert Sparrow before the change in nomenclature in the latest AOU **Checklist**), whose normal range extends barely into Colorado and Oklahoma even in summer. The winter range is even more remote. The AOU **Checklist** lists casual records beyond its normal range only from Oregon, Idaho and Kansas. Until 1959 the closest recorded observation of this species was made at least 600 miles from our state. Then came the early May observation from northern Illinois—but a fraction of a mile from the Wisconsin border (see **1960 Passenger Pigeon 26-27**)—and this unprecedented winter record from Madison. Is anything "impossible" in ornithology?

During the three-month period, December through February, 121 different species were reported. This figure includes the usual winter and permanent residents, plus presumably some early spring migrants, as well as a few of the irregular winter visitants, the northern nomads.

Forty counties figure in the compilation, which at face value would seem to be fairly representative. Regrettably, however, many of the reporting counties had only one or two individual reports. The following counties had more than one observer: Waukesha, Juneau, Adams, Sauk, Columbia, Dane, Portage, Marathon, Milwaukee, Vernon and Rock.

In essence, however, despite the vast difference in weather conditions between the past two winters, the basic bird population was very similar—with the possible exception of greater numbers of wintering summer residents, and the vagaries of the unpredictable winter finch invasions. Of interest are the two follow-up Christmas counts made in February in Sauk and Rock Counties covering identical areas. These, if continued in more areas, could provide some rather important and valuable information regarding population trends, and it is hoped that they will be more universally pursued.

Some Individual Comments

John Bielefeldt of Waukesha writes: "Many ducks wintered due to open water. Red-bellied Woodpeckers seemed to experience a decline from last winter, as did the Mourning Doves. Tree Sparrows were more than usually abundant, while Juncos dropped."

Ed Cleary from Green Bay: "One of the most unusual aspects of this winter season was the rarity of Evening Grosbeaks, Redpolls, Goldfinches, Tree Sparrows, Pine Siskins and Purple Finches. Very few of those birds were noted in our area during the winter. In the case of the Evening Grosbeaks, only a few scattered flocks were seen, quite a contrast to last year when so many were present. There were no reports of Bohemian Waxwings all winter and only one report of a Cedar Waxwing."

From Alfred Bradford, Outagamie County: "37 different species were seen during the winter season. Nothing unusual, and we did not have the ordinary number of summer resident birds staying over. Saw no meadowlarks at all—which is most unusual—and only three Mourning Doves. No Red-headed Woodpeckers, and very few Goldfinches. We also did not have our usual influx of northern birds, except Snow Buntings which seem to be about as numerous one year as the next. There were no Evening or Pine Grosbeaks that I observed, and very few Purple Finches and Redpolls. No reports from anyone on Goshawks and Snowy Owls. It was very severe here in November and early December; but from then on we had unusually mild weather with practically no snow. The storms either passed north or south of us, and for weeks at a time the ground was partly bare."

From Sam Robbins in Adams came these comments: "As winters go, this one has not been severe. We have had as much or more subzero weather in the first two weeks of March as in the rest of the entire winter season. The big snows have all gone south of us. Rubbers rather than boots have sufficed for most of the winter." He found that the wintering population of Mallards and Black Ducks was down in the Petenwell area, and that these ducks were virtually absent along the Wisconsin River near Sauk City. Red-tailed Hawks seemed about average, with other species of hawks a bit down; the eagle population below Petenwell Dam was hard to count because the birds could spread out over a much

longer area of open water in the Wisconsin River than usual. "For the first time in my memory I have gone through an entire winter without having seen a single Golden-crowned Kinglet. Shrikes were scarce. Blackbirds were very scarce. We were surprised to find no meadowlarks on the Mazomanie-Sauk City count either on Jan. 1 when the ground was mostly bare, or on Feb. 13 when a modest amount of snow would have tended to concentrate meadowlarks along the roadside."

Referring to winter finches, Robbins observed that Purple Finches returned to normal after the big influx of the previous winter—"normal" meaning that they were scarce but not completely absent. Pine Grosbeaks were more common than usual, and he had more observations than usual for the Red Crossbill. Concerning other finches he reported: "While Evening Grosbeaks have been virtually absent from feeders in the Madison-Sauk City area, they have been present around Adams-Friendship all winter—often in flocks of 100 or more. Normally we have them in November and December, and again in late March and April, with very few in between. This would seem to offer strong evidence that the southern point of the winter's influx remained in central Wisconsin. A few fair-sized flocks of Redpolls were seen in Adams County this winter, but they did not appear until mid-December. In the real big years flocks appear by early November, and are more widespread throughout the winter. In the few excursions I made to southern Wisconsin, I saw only scattered small groups and only one sizeable flock; in a few excursions into southern Wood and Portage Counties, Redpolls appeared decidedly more numerous than in Adams County." He noted that Juncos were fairly numerous in Adams County during most of December, but were gone thereafter; in the Mazomanie-Sauk City area they were down somewhat. Tree Sparrows seemed definitely below par everywhere.

What does a seasonal editor do when ducks appear to be up in one area and down in another? When Tree Sparrows are "more than usually abundant" in one part of the state, and "down in number" in another? He makes an earnest plea that more people will notice trends of greater or lesser abundance in their field work, and will report more fully on these trends when submitting their quarterly reports. Surely there are definite patterns that these birds follow, but only as more observers report on these trends will the patterns begin to stand out more clearly.

Details of individual species follow:

Common Loon: Recorded on the Cedarburg and Milwaukee Christmas counts.

Red-throated Loon: Reported from Milwaukee on Jan. 3 (Christmas count) and Feb. 8 (Mary Donald).

Pied-billed Grebe: One on the Green Bay Christmas count; another during the Christmas count period at Racine.

Great Blue Heron: Sam Robbins reported seven birds wintering along the Wisconsin River north of the Petenwell bridge in Adams and Juneau Counties; also in Rock County on Dec. 16 by Frances Glenn and Bernice Andrews.

Whistling Swan: One on the Cookville Christmas count; one at Madison during the count period.

Canada Goose: Late migrant in Juneau County on Dec. 3 (Alfred Bradford); wintering flock of 375 at Green Bay (Edwin Cleary); Dec. 17

in Rock County (Mrs. Joseph Mahlum); noted on Christmas counts in Wausau, Portage, Racine and Lake Geneva.

White-fronted Goose: Normally considered a rare transient visitant, this species was well seen and documented by James Sipe in Rock County on Feb. 21.

Gadwall: Dane County, Jan. 30-Feb. 28 (Bill Hilsenhoff); Christmas counts in Hales Corners and Madison.

Green-winged Teal: Milwaukee, Jan. 20 (Mary Donald).

Blue-winged Teal: Only from Milwaukee: Ivy Balsom from Jan. 3 to Feb. 27, and Mary Donald on Jan. 13.

American Widgeon: One on the Madison Christmas count was the only record.

Wood Duck: Milwaukee Christmas count; no other records.

Redhead: Reported only on the Milwaukee Christmas count.

Ring-necked Duck: One injured bird wintered in Adams County (Sam Robbins). Also noted in Dane County by Tom Soulen and Bill Hilsenhoff in December and January.

Canvasback: Wintered in Milwaukee (Mary Donald) and Madison (Tom Soulen-Bill Hilsenhoff).

Lesser Scaup: Wintered in Dane County (Bill Hilsenhoff); noted on Christmas counts in Wausau, Green Bay, Appleton, Dancy, Madison and Lake Geneva.

Bufflehead and Oldsquaw: All reports restricted to the usual Lake Michigan wintering grounds.

White-winged Scoter: One on the Lake Geneva Christmas count on Dec. 26 was the only record for the period.

Ruddy Duck: Wintered in Milwaukee (Mary Donald-Ivy Balsom).

Hooded Merganser: Dane County, Dec. 9 (Tom Soulen) and 26 (Christmas count); seen on Christmas counts at Green Bay, Milwaukee, Hales Corners and Lake Geneva.

Goshawk: One bird seen near Adams by Sam Robbins on Jan. 7; Columbia County on Feb. 11 (H. A. Winkler).

Sharp-shinned Hawk: Scattered reports from Waukesha, Adams (Sidney Bunner), Sauk, Milwaukee and Rock Counties.

Cooper's Hawk: Winters in many counties, the northernmost being Outagamie.

Red-shouldered Hawk: Wintered in Adams County (Sam Robbins); seen in Sauk County on Jan. 1 and Feb. 13 (Mary Walker-Tom Ashman); Dane County on Jan. 2 (Bill Hilsenhoff); Milwaukee on Jan. 10 (Mary Donald); Rock County on Feb. 28 by Ned Hollister Bird Club.

Rough-legged Hawk: Many reports mainly in southern and central counties.

Bald Eagle: More reports than last year. High count of 36 birds by Donna Denzin in Adams County; also La Crosse and Buffalo Counties on Feb. 18 and Sauk County on Feb. 24 by Bill Hilsenhoff; Sauk County on Jan. 1 and Feb. 13 by the Christmas count team; Columbia County on Dec. 29 by Donald Cors and Feb. 24 by Bill Hilsenhoff; Iowa County on Dec. 8 by Tom Soulen.

Marsh Hawk: The most northerly records were from Kewaunee on Jan. 2 (Christmas count), Portage County on Dec. 29 (Christmas count), Winnebago County on Jan. 7 (Bill Hilsenhoff), and Marquette County on Jan. 20 (Hilsenhoff).

Greater Prairie Chicken: The total on the Bancroft Christmas count on Dec. 29 was 33 birds (Fran Hamerstrom et al.); three birds in Adams County the same day (Sam Robbins).

Bobwhite: Only four counties reporting (Adams, Columbia, Portage and Rock) in addition to the Christmas counts.

Gray Partridge: Milwaukee, Jan. 22 (Mary Donald) and Feb. 3 (Ivy Balsom); Rock County, Feb. 28 (Ned Hollister Bird Club); wintered in Brown (Ed Cleary) and Outagamie (Daryl Tessen) Counties; reported on Christmas counts from Manitowoc and Two Rivers.

Sora: One seen in late December at Racine, included in the Christmas count report.

American Coot: Seen throughout the winter season in Adams (Sam Robbins) and Dane (Bill Hilsenhoff) Counties; also noted on Christmas counts at Green Bay, Lake Geneva, Oconomowoc and Waukesha. One seen in Rock County on Feb. 28 (Ned Hollister Bird Club) may have been an early migrant.

Killdeer: Only report from Vernon County where it wintered (David Hammes et al.).

Common Snipe: Single individuals reported on the Manitowoc and Adams Christmas counts were the only ones of the season. Often—particularly in mild winters—this species is more widely represented.

Bonaparte's Gull: Milwaukee on Jan. 1 (Mary Donald).

Mourning Dove: Wintered in Polk, Brown, Adams, Sauk, Columbia, Dane, Rock, Waukesha, Milwaukee and Kenosha Counties; also noted in Monroe County on Feb. 22 by Sam Robbins. This species is now wintering so widely in Wisconsin that we would hazard the guess there might be wintering birds in at least 50 of Wisconsin's 71 counties—if only we had enough people in the field to observe and report them!

Screech Owl: Wintered in Dane County (Bill Hilsenhoff); Adams County on Jan. 11 (Sam Robbins); Sauk County on Jan. 1 (Sam Robbins); Milwaukee on Jan. 10 (Mary Donald); Outagamie County on Feb. 10 (Daryl Tessen); Rock County on Dec. 30 (Mrs. Joseph Mahlum) and Feb. 23 (Ned Hollister Bird Club). Also recorded on Christmas counts at Cooksville, Hartford and Racine.

Snowy Owl: Brown County on Jan. 10 by Ed Cleary; Outagamie County on Dec. 29 by Daryl Tessen; one seen on the Milwaukee Christmas count on Jan. 3.

Long-eared Owl: Wintered in Dane, Kenosha and Milwaukee Counties; seen in Rock County on Jan. 3 and Feb. 28 (Ned Hollister Bird Club); noted on Christmas counts at Racine, Lake Geneva and Mazomanie.

Short-eared Owl: Dane County on Feb. 20 by Tom Soulen; Rock County on Feb. 28 by the Ned Hollister group.

Saw-whet Owl: The only one reported was the "one" that seems to spend the winter each year in the University Arboretum in Madison.

Belted Kingfisher: Reported from Christmas counts as far north as Two Rivers, Adams and Chippewa Falls, as well as numerous other locations.

Yellow-shafted Flicker: Dec. 20 and Feb. 20 in Milwaukee (Mary Donald); Jan. 3 in Outagamie County (Daryl Tessen); Jan. 17 and Feb. 28 in Rock County (Frances Glenn-Bernice Andrews); Feb. 21 in Wau-

kesha County (John Bielefeldt); on Christmas counts in Hartford, Mazomanie and Monroe.

Pileated Woodpecker: Burnett County, Feb. 25 (Bill Hilsenhoff); Columbia County, Jan. 2 (Donald Cors); Oneida County, Jan. 28 (Bill Hilsenhoff); wintered in Adams (Sam Robbins), Waupaca (Florence Peterson), Iron (Norman Pripps) and Polk (Mrs. Lester Pedersen) Counties.

Red-bellied Woodpecker: The northern and eastern tier of counties reporting wintering birds included Polk, Brown, Waupaca and Milwaukee; the 41 birds counted on the Mazomanie Christmas count indicate that this species is now rivaling the Downy as the commonest woodpecker in this area.

Red-headed Woodpecker: Winnebago County on Jan. 20; Washburn County on Feb. 25; wintered in Adams, Columbia, Vernon, Brown, Polk and Rock Counties; also noted on Christmas counts at Chippewa Falls, Nelson, Dancy, Seneca, Lake Geneva and Waukesha.

Horned Lark: Birds through mid-December could still be considered fall migrants, and returning birds could be noted by the end of January; but there are an unusual number of mid-winter reports from areas as far north as Burnett, Polk, Portage and Waupaca Counties.

Gray Jay: Bill Hilsenhoff reported this species in Oneida and Forest Counties on Jan. 27-28; wintered in Iron County (Norman Pripps).

Common Raven: Noted in the following northern Wisconsin counties: Burnett on Feb. 24, Oneida on Jan. 28, Forest on Jan. 28, Marinette on Jan. 28, Taylor on Feb. 24, Price on Feb. 24, Sawyer on Feb. 24, Washburn on Jan. 28, throughout the season in Iron.

Boreal Chickadee: Outside the usual range was a bird in Madison, first found on Dec. 26 by Tom Ashman and seen through the next month by many others; one on the Green Bay Christmas count on Dec. 19; and one in Portage County on Feb. 24 by Florence Peterson. Four were found on the Hiles Christmas count in Forest County by the Roy Lounds, where the species is to be expected.

Tufted Titmouse: Winter records came from as far north as Chippewa, Marathon and Outagamie Counties.

Red-breasted Nuthatch: Small numbers reported from all parts of the state.

Brown Creeper: The most northerly report came from Wausau.

Bewick's Wren: The one that attempted to winter in Madison provides only the second known winter record for the state; it was reported on Dec. 9 and 17 by Tom Soulen, and on Jan. 3 and 23 by Bill Hilsenhoff.

Carolina Wren: Sam Robbins in Adams County on Dec. 11.

Long-billed Marsh Wren: Sam Robbins in Adams County on Dec. 15; sought for but not found in several subsequent occasions.

Mockingbird: Milwaukee on Jan. 3 (Ivy Balsom) and on Jan. 9 (Mary Donald); Racine on Dec. 26 (Christmas count).

Catbird: Not reported in December or January, but strangely one was found at Milwaukee on Feb. 13 by Mary Donald.

Brown Thrasher: Reported as wintering in Brown (Ed Cleary) and Outagamie (Daryl Tessen) Counties; seen during the Christmas count period in Madison, Waukesha, Milwaukee and Racine.

Robin: Presumably wintered in Brown, Outagamie, Waupaca, Milwaukee, Kenosha and Dane Counties. Additional Christmas count ob-

servations from Luck, Chippewa Falls, Wausau, Kewaunee, Cooksville, Monroe and Racine.

Hermit Thrush: Apparently Madison had three separate wintering birds, one still present on Feb. 13 (Tom Soulen); also one in Milwaukee on Dec. 30 (Mary Donald), and on the Dec. 26 Lake Geneva Christmas count.

Eastern Bluebird: Unusual were the two found on the Seneca Christmas count on Jan. 2 by Clarence Paulson.

Golden-crowned Kinglet: Remarkably scarce; only 21 individuals tallied on the entire Christmas count, with none from the northernmost counties.

Ruby-crowned Kinglet: Tom Soulen from Dane County on Dec. 16.

Bohemian Waxwing: Milwaukee, Dec. 12 and 17 (Mary Donald); Wausau, flock of 35 on Jan. 3 (Mrs. Spencer Doty); Adams County, Jan. 11 (Sam Robbins); Waupaca County, Feb. 1 (Florence Peterson); Kenosha, two seen on Feb. 2 (Mrs. Howard Higgins).

Cedar Waxwing: Not reported during the season until the Dec. 30 birds on the Dancy and Hales Corners Christmas counts; subsequent January records from Milwaukee, Dane, Sauk and Adams Counties; February records from Milwaukee, Waukesha, Dane, Vernon, Outagamie and Brown Counties.

Northern Shrike: Marquette County, Dec. 24 and Jan. 29; Jackson County, Feb. 25; Portage County, Dec. 29; Adams County, Jan. 2; Milwaukee County, Jan. 31; Rusk County, Jan. 31; Polk County, Dec. 7, 25, and Jan. 29. Additional records during the Christmas count period from Chippewa Falls, Green Bay, Portage and Mazomanie.

Myrtle Warbler: Two remarkable winter stragglers in Waukesha County on Jan. 3 (Pete Weber-Bob Adams); another later migrant in Milwaukee on Dec. 4 (Mary Donald).

Meadowlarks: Not many records, considering the mildness of the season, but the northernmost records were from Polk, Waupaca, Brown and Kewaunee Counties.

Red-winged Blackbird: John Bielefeldt in Waukesha County, Dec. 23; N. R. Barger in Dane County, Jan. 1; Ivy Balsom in Milwaukee, Dec. 30; Mary Donald in Milwaukee, Jan. 1; Mrs. Lester Pedersen in Polk County, Jan. 17; James Sipe in Rock County, Feb. 20. Noted on additional Christmas counts at Nelson, Dancy, Bancroft and Waukesha.

Rusty Blackbird: Two at Lake Geneva, Dec. 26 (Christmas count); one in Sauk County, Jan. 1 (Sam Robbins); one in Dane County, Feb. 13 (N. R. Barger).

Common Grackle: Wintering records from Merrill, Green Bay, Appleton, Milwaukee, Waukesha, Madison and Beloit.

Brown-headed Cowbird: Reported only from Madison, Milwaukee and Green Bay—the latter on Feb. 1 by Ed Cleary.

Evening Grosbeak: Robbins' comments in the introduction to this summary about numbers of this species reaching central Wisconsin but not the southern part of the state are borne out by the records: the only report from the southern counties all winter was the sighting of a flock of 28 on the Milwaukee Christmas count. So it may surprise readers to learn that this species was recorded at five points in Alabama, at several Georgia locations, and a first record for Mississippi was obtained during this winter season! The explanation? Since the relatively recent exten-

sion of the breeding range into the Northeast, the winter movements of these birds have tended to follow a north-south pattern through the Appalachians (rather than the traditional east-west movement for which the species first became famous). Thus the Middle and South Atlantic states had an unprecedented flight of Grosbeaks last winter, while here in Wisconsin the flight was way below par in the southern part of the state. Readers are referred to **1960 Audubon Field Notes 14:285** for a fuller discussion.

Purple Finch: There was a return to normal after the winter invasion of 1958-59, with most reports coming from the southern counties—except for Marathon and Polk Counties, where a few birds wintered.

Pine Grosbeak: Records were numerous in Marathon, Polk and Adams Counties through the season; single individuals or small flocks were reported on nine Christmas counts; additional December observations were made in Milwaukee and Juneau Counties; and February records were made in Eau Claire and Columbia Counties.

Hoary Redpoll: Individuals were identified by Sam Robbins in Wood County on Dec. 11, and in Adams County on Jan. 23.

Common Redpoll: Reports came from Waukesha, Burnett, Chippewa, Juneau, Adams, Sauk, Columbia, Dane, Kenosha, Portage (where huge flocks in the area of 5000 birds were seen by Florence Peterson), Marathon, Bayfield, Milwaukee, Waupaca, Wood, Brown, Rusk, Outagamie, Iron, Polk, Rock and Langlade Counties. In short, it was an exceptionally good Redpoll year, reaching all parts of the state.

Pine Siskin: Dane County, Dec. 19 (Tom Soulen-Bill Hilsenhoff); Milwaukee, Jan. 1 (Mary Donald); Brown County, Feb. 14 (Ed Cleary); Waupaca County, Feb. 27 (Florence Peterson); wintered in Outagamie County (Daryl Tessen).

American Goldfinch: Fair-sized flocks reported from some areas, but it was not an exceptional flight.

Red Crossbill: Seen on Christmas counts in Rhinelander, Merrill, Chippewa Falls, Bancroft, Mazomanie and Madison; reported again at Madison on Jan. 9 (Bill Hilsenhoff), and noted in Marathon County on Jan. 10 and 31 (Mrs. Spencer Doty).

White-winged Crossbill: Tom Soulen in Waukesha County on Jan. 3, Bill Hilsenhoff in Dane County on Jan. 10, and Tom Soulen in Dane County on Jan. 15.

Towhee: Three exceptional winter records: Ed Cleary reported it wintering in Brown County, Daryl Tessen found it in Outagamie County on Dec. 29 and Jan. 2, and members of the Ned Hollister Bird Club had one in Rock County on Feb. 28.

Savannah Sparrow: Milwaukee, Jan. 22 (Mary Donald); Waukesha County, Feb. 6 (John Bielefeldt).

Vesper Sparrow: Single individuals recorded on the Hartford and Waukesha Christmas counts.

Black-throated Sparrow: The bird that turned up at Mrs. Earl Fetterer's feeder in Madison on Dec. 23 was seen by many others through the period. See **1960 Passenger Pigeon 22-23.**

Oregon Junco: Seven were identified on the Madison Christmas count; other well marked birds were recorded during the Christmas count period at Kenosha, Waukesha, Manitowoc, Wisconsin Dells and Mazomanie; one was still to be seen in the Mazomanie area on Feb. 13 (Tom

Ashman-Mary Walker).

Field Sparrow: Tom Soulen found one in Iowa County on Jan. 25; Sam Robbins noted two in one spot near Sauk City on Jan. 1, and five at the same spot on Feb. 13, making the third successive winter that this species has been found at this location.

White-crowned Sparrow: One in late December at Racine.

White-throated Sparrow: Reported on no less than nine Christmas counts, including areas as far north as Wausau, Dancy, Appleton and Green Bay.

Fox Sparrow: Reported on Christmas counts from Green Bay, Milwaukee, Mazomanie and Lake Geneva.

Swamp Sparrow: In addition to birds that winter every year, and to those already reported on Christmas counts in Lake Geneva, Portage and Mazomanie, there were these reports: Adams County, Dec. 15 (Sam Robbins); Milwaukee, Jan. 22 (Mary Donald); and Outagamie County, Feb. 25 (Daryl Tessen).

Song Sparrow: Wintering birds reported as far north as Brown, Outagamie and Adams Counties.

Lapland Longspur: A flock of 35 in Juneau County, Dec. 24; Adams County, Dec. 31; Columbia County, Jan. 25 and 31; Dane County, Jan. 7; Portage County, Jan. 27; Rock County, Feb. 28.

By The Wayside . . .

Banding Finches in Madison. There was a considerable decrease in the number of Purple Finches this winter (1959-60) compared to last winter. During 1958-59, 330 were banded, and only 15 this winter. The few which were banded were regular feeders. No Evening Grosbeaks were seen this winter, in comparison with at least seven last winter. In contrast, the American Goldfinch population rose tremendously. Up to 200 individuals have been seen at one time at the station, and 110 were banded in comparison with only two last year. This is the first time in the five years I have operated this station that so many of these birds have been present.—Tom Nicholls, Madison.

White-fronted Geese in Rock County. I would like to report the observing of four adult and three immature White-fronted Geese at about 10:45 a. m. Sunday, Feb. 21, 1960. The location was east of Tiffany, Rock County, about two miles out on Creek Road. I first spotted six geese, three adults and three immatures, about 500 yards out in a grain field. I had my 20x Balscope with me, and had a very clear view showing the yellow-orange feet and legs, yellow-orange bill, and white face patch at the base of the bill. One adult stood still, mostly balancing on one leg, as if standing sentry duty. We also heard the geese call; I would say that they sound like Canada Geese but with their honking higher pitched. After watching the geese for about 15 minutes, we drove on east for about one mile where the river comes within 50-100 feet of the road, and we spotted one lone adult on the bank, about 100 feet from the car. We hardly needed binoculars to identify this one as a White-front.—James P. Sipe, Beloit.

Waxwings in Adams County. While talking with a farmer in the town of Quincy in Adams County on the morning of Jan. 11, 1960, I saw two birds fly across the road—one following the other, but apparently together—and alight in a small thicket of bushes. One bird appeared slightly larger than the other, and neither was immediately recognizable at that distance. Upon approaching the bushes, I detected the call of a Cedar Waxwing and soon located this bird. The other bird was on the opposite side of the same bush, but after approaching to within 20 feet, I got an excellent view of a waxwing with rich reddish-brown under-tail coverts. An attempt to approach even closer caused the birds to fly off together, but not only did this afford an opportunity to see the size differential of the Cedar and Bohemian Waxwings, it also afforded an excellent comparison of call notes—the high-pitched "wheeze" of the Cedar, and the coarser call of the Bohemian—for the birds became noisy in flight. These were the only waxwings I saw all winter!—Sam Robbins, Roberts.

Mourning Doves Winter in Marathon County. We had 13 Mourning Doves that stayed with us all last winter (1958-59), and they lived through the winter except for one that we noticed was being eaten by a Crow in late February. On Dec. 17, 1959, we counted 50 Mourning Doves at our feeders, and on our bird count day—Jan. 3, 1960—we counted 40. We had not kept any accurate account of these birds between those two dates, but it could very well be that we did not get a complete count on Jan. 3.—Bertha Pearson, Wausau.

DATES TO REMEMBER

Right Now! (State-wide)—Field notes for the period December 1 through February should be sent to the Associate Editor.

March 19-25, 1961 (Nation-wide)—National Wildlife Week. Theme: "Multiple Use—Balanced Conservation Planning for the Future."

March 20, 1961 (Madison)—Wildlife Research Seminar, with A. W. Schorger speaking on "Wildlife in Early Kentucky," at the Forestry and Wildlife Building at 7:45 p. m.

April 1, 1961 (State-wide)—Field notes for the period December 1 through March should be sent to Mrs. Mary Lupient, Museum of Natural History, University of Minnesota, Minneapolis 14, for inclusion in **Audubon Field Notes.**

April 10, 1961 (Madison)—Wildlife Research Seminar, with Harold A. Mathiak speaking on "Muskrat Population Dynamics," at the Forestry and Wildlife Building at 7:45 p. m.

April 12, 1961 (Manitowoc)—Roger Tory Peterson Bird Club Audubon Screen Tour, with G. Clifford Carl speaking on "Secrets of the Sea," at Washington Junior High School at 8:00 p. m.

April 13, 1961 (Madison)—Madison Audubon Screen Tour, with G. Clifford Carl speaking on "Secrets of the Sea," at West High School at 7:30 p. m.

April 14, 1961 (Milwaukee)—Milwaukee Audubon Screen Tour, with G. Clifford Carl speaking on "Secrets of the Sea," at the Shorewood Community Auditorium at 8:00 p. m.

April 17, 1961 (Each County)—County Conservation Hearings, usually in the Courthouse.

May 1, 1961 (Milwaukee)—Milwaukee Audubon Screen Tour, with Emerson Scott speaking on "Pika Country," at the Shorewood Community Auditorium at 8:00 p. m.

May 5-7, 1961 (Waukesha)—Annual meeting of the Wisconsin Academy of Sciences, Arts, and Letters, at Carroll College.

May 6-7, 1961 (Plainfield)—W. S. O. weekend on the Prairie Chicken booming grounds on the Buena Vista Marsh. Reservations should be made with Ed Peartree before April 15. First come, first served—and the trip may be "full" now!

May 13-21, 1961 (State-wide)—Inclusive dates for May-Day Counts.

May 14, 1961 (Albany)—Wisconsin Nature Conservancy field trip to Abraham's Woods, led by botany Professors Grant Cottam and Hugh Iltis.

May 18-21, 1961 (Waukesha)—W. S. O. Annual Convention, at Carroll College.

May 28, 1961 (Leland)—W. S. O. Spring Field Trip to Honey Creek.

June 11, 1961 (Bailey's Harbor)—Wisconsin Nature Conservancy field trip to The Ridges Sanctuary, led by Arthur Fuller and Prof. Joseph J. Hickey.

June 17-18, 1961 (Mayville)—W. S. O. 1961 Summer Campout, Horicon Ledges County Park. Details to be announced.

June 18, 1961 (Sarona)—First session at Audubon Camp of Wisconsin opens.

September 9-10, 1961 (Cassville)—W. S. O. 1961 Fall Campout, Nelson Dewey State Park. Details to be announced.

MORE NEWS . . .

There has been some good news from Washington for birds and birders. One of Interior Secretary Seaton's last acts was to set aside 11,215,360 acres of wilderness in Alaska as National Wildlife Ranges. Much of this vast area is of prime importance to waterfowl and other birds. The National Park Service has zoned parts of Yellowstone Lake, in the Park, against power boats. This will protect some of the wilder portions most used by wildlife. And there may be action soon on the International Oil Pollution Treaty, which would make the U. S. a partner in worldwide control of this major threat to ocean birds.

The Wilderness Society recently contacted us for a copy of our membership list, to be used in a mail campaign for new members. This is an old and highly respected conservation group, with an active program of wilderness education and protection. **The Living Wilderness,** the Society's magazine, is very attractive and contains some of the finest writing on conservation philosophy and esthetics that this reader has seen. The WSO board, at its last meeting, voted to make it our policy to supply such groups with our mailing list, at no cost, whenever possible. No doubt we will all be hearing from the Society; let this be an endorsement of its program, publication, and objectives.

Our sincere thanks to Orvell Peterson, staff photographer for the **Green Bay Press Gazette,** for letting us use his fine Snowy Owl pictures. Mr. Peterson remarked on the interest shown in the pictures by **Press Gazette** readers. This doesn't surprise us at all!

BOOK REVIEW*

THE KIRTLAND'S WARBLER. By Harold F. Mayfield. Cranbrook Institute of Science, Bloomfield Hills, Michigan, 1960. 242 pp., $6.00.

The history, ecology, behavior, and especially the breeding biology of this unique species are thoroughly discussed in an excellent and interesting work.

At present probably no more than 1000 Kirtland's Warblers exist. It appears to be a relict species, and the combination of a highly restricted breeding range, single-broodedness, and mediocre reproductive success does not indicate an expending population in the future.

An unusually long incubation period of 14 days seems to be clearly shown, but the stated nestling period of no more than nine days may

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reflect frequent disturbances at the nest through the banding and weighing activities of the observers.

Now probably in the twilight of its existence, this species is menaced by a new problem, the Brown-headed Cowbird, whose range has spread to include that of the warbler's in the last 70 years. More than half of the nest studied were parasitized, resulting in an estimated 43% loss of warbler eggs through removal, failure to hatch, or failure to fledge.

The final chapter on reproduction and mortality goes into great detail, perhaps more than the data warrant. Also, the material is grouped and sub-grouped in so many ways that the discussion becomes confusing. Each nest produces on the average only .9 of a fledgling; re-nesting after failure results in an annual production of about 1.4 fledglings per adult pair.

This book is well worth the modest price, and will be an important reference for many years.—~~Harold~~ HOWARD F. Young.

*Available from the W. S. O. Supply Department.

MORE NEWS . . .

A group of birders in Rhinelander have organized the Oneida Wildlife Society, with WSO-member Francis Ratliff as their first president. Vice-president Nils Dahlstrand and Secretary Werner Brunner are also members of our Society. We hope to have a "Club Page" report from the new group before long. In the meantime, good luck!