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PASSENGER PIGEON

January, 1944

Volume VI

Number 1



SCREECH OWL
Photo by
H. Peter Thomsen



A MAGAZINE OF WISCONSIN BIRD STUDY

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The sixth annual convention of the society will be held in Milwaukee, April 22-23. W. F. Kubichek will be the chief speaker. See detailed program on page 23.

A "May-Day" bird count will be conducted by the society beginning this year, and the results will be presented in THE PASSENGER PIGEON. The same rules that prevail in the Christmas count will be followed. The count should be made during the period from May 13 to 21, but a date near the 15th is preferred. All reports should be in the hands of the editor by May 31.

H. Peter Thomsen, author of the first article in this issue, came to America from Denmark about 1937. Since his arrival Thomsen has developed into a wildlife technician and acquired an enviable knowledge of American flora and fauna. In his article he has attempted to point out the inter-relationships of all life with special reference to the red-wing's role. Interesting phenological aspects are inserted which, to our way of thinking, are more important chronologically

than calendar data.

A. W. Schorger, honorary member of our society and authority on ornithological literature especially in Wisconsin, has laboriously prepared for publication an unprinted manuscript by A. L. Kumlein, a pioneer naturalist in Wisconsin. Its contents are valuable particularly for comparing the bird life of nearly one hundred years ago with ours today in the same locality.

Murl Deusing, naturalist and lecturer for the Milwaukee Public Museum and program chairman frequently for our society, has summarized the year's bird records for southern Wisconsin. This summary presents an overall picture of the

highlights at a glance.

E. M. Dahlberg, principal of Ladysmith High School and naturalist, has submitted some interesting material from his twenty-five year diary kept along the famous Flambeau River. To southerners of Wisconsin, the Flambeau has a bird life that is different-it combines elements of the Canadian Zone with Pseudo-Carolinian

Earl T. Mitchell, a member of the society, has spent his army training period in Texas. Early in April he had already found a nest of the Carolina wren in an oak stub.

Regular field notes have been omitted

with this publication as the winter season has just closed and complete reports have not been received to date.

The society has a small supply of reprints "Summer Birds of Northwestern Wisconsin," by H. H. T. Jackson, for sale at 30c per copy. Order from the editor.

Early in February H. W. Schaars, Milwaukee, had the opportunity to demonstrate Nature study under ideal conditions to his pupils. A sparrow hawk perched on a telephone pole but a short distance from the school window and proceeded to devour a small bird which it had caught.

On March 7, Mrs. T. J. Peterson, Waupaca, caught 17 starlings and 6 English sparrows in a trap set for them. More than 100 starlings and 600 English sparrows have been disposed of in this man-

ner she savs.

During its February meeting the Milwaukee Bird Club was entertained by Chief Evergreen Tree, a Pueblo Indian, who performs in the Indian ceremonies at Wisconsin Dells every summer. He gave an excellent program of bird imitations. Mrs. R. B. Freed, Rt. 2, Stevens Point,

has been appointed bird chairman for the Fox River Valley District of the Wiscon-

sin Garden Clubs.

Has the evening grosbeak nested in Wisconsin, asks Mrs. L. M. Spiers, a Canadian member? If anyone has such information regarding this species, please send it to the editor at once.

Murl Deusing showed his new film "Bright Feathers" at a combined meeting of the bird clubs in the Milwaukee area

recently.

The Kumlein Club, Madison, enjoyed "Food Habits of Some Hawks," in colored movie form also by Murl Deusing, during its March meeting.

Walter Scott, first editor of THE PAS-SENGER PIGEON, was heard from while in California about April 1. He is a member of a replacement regiment probably

bound for overseas.

Irven Buss, an active member of our society, was heard from recently while in the same area. He has been across and observed many interesting birds and animals. He states that the stilt and goldenrlover are hunted in Hawaii in much the same manner as old timers explain in our older texts. Pintails and shovellers travel from this country to Hawaii as some banding records prove.

Elton Bussewitz, also an active member. now has a New York overseas address. He writes that he enjoyed the new bird-life

observed while in Texas.

Membership fee of \$1 includes 75 cents for subscription to THE PASSENGER PIGEON, quarterly bulletin of the Wisconsin Society for Ornithology, Inc. Special memberships: Sustaining \$5; Life \$25; Patron \$50 or more. Send membership applications and dues to the treasurer, J. Harwood Evans, 517 Jackson Drive, Oshkosh, Wis. Send manuscripts to the acting-editor, N. R. Barger, 4333 Hillcrest Drive, Madison, Wis. Entered as second-class matter Sept. 4, 1940, at the Post Office of Madison, Wis., under the Act of Mar. 3, 1879.

ORNITHOLOGICAL EXTRACTS FROM

An Ecological Survey

OF THE UNIVERSITY BAY REGION, SPRING, 1943

By H. PETER THOMSEN Madison, Wisconsin Illustrated by the Author

Introduction

This study was done as a project for the Wildlife Ecology course at the University of Wisconsin. Grateful acknowledgment is made to Professor Aldo Leopold for much valuable advice and guidance, and to Joseph J. Hickey for his many suggestions; also to Robert E. Parenteau, who assisted with the identification of plants.

The study as presented here is incomplete. I have omitted many aspects of the ecology of the region in order to place more emphasis on the avifauna. Most of the data in this paper has been arranged as a day-by-day account and deals mainly with the territorial behaviour of the red-wing and with the phenology and chronology of events during the spring of 1943.

Methods

The study began on February 18, 1943. During February and March the area was visited twice weekly, usually during the late afternoon, but with the arrival of the red-wing, visits were more frequent. I was equipped with field glasses and camera. Peterson's "Field Guide to the Birds" was found handy and was carried along on trips. The species, number and locality were carefully recorded on each trip.

The Area of Study

The area lies partly within the city limits of Madison on the land of the University of Wisconsin Agricultural Experiment Station. Approximately 130 acres of this low land is situated around the so-called University Bay of Lake Mendota. The surface of about 80 acres of this land is lower than the lake level and is continuously drained by two electrically controlled pumps in order to permit the College of Agriculture to raise corn. Formerly this land was covered with wire grass and blue-joint. In deeper places grew cattails and sedges.

The Area of Study A Remnant of the Original Marsh Where the Red-wings Nest



The drainage of the marsh began in 1910, with the result that the peat settled 5 feet during the first five years. In 1919 a fire in the eastern part of the marsh burned 4 acres of peat land to a depth of 6 to 12 inches. Fortunately the fire was controlled by reflooding the marsh. As a rule, drained marsh land yields poor crops and the fire danger is great, but as yet the College of Agriculture has been fairly successful.

Today only 6 acres of the original marsh land remains, 5 of which are northeast of Willow Drive. The other is inside the drive and is also a remnant of the original

marsh. A small stream flows through it and enters Lake Mendota.

I have concentrated my study on the latter area in order to compare its relationship with the adjacent associes, and perhaps later to compare it with findings from the drained area.

The Small Marsh

The small marsh is irregular in shape, almost rectangular. The stream, before entering the marsh, is controlled by the road and dam. In the marsh it makes a single meander before entering Lake Mendota.

When the study began, the entire marsh and also part of the low meadow was covered with water and ice. By the middle of May the water level had fallen until only small puddles remained in the marsh proper. This, of course, had its effect on the limniotic species and also on the animals of the surrounding communities.

One can consider the area as a true peat bog of the alkaline type. P. H. readings done by the writer on April 6 showed for the soil 7.8. (Presence of Calcium carbonate.) The peat is from 1 to 6 feet deep and lies on a thin bed of marl which in places blends into silt and clay.

The Flora

The southern part of the marsh is dominated by a thicket of sandbar willows. Salix longifolia. Many have died due to a fungus infection. The dry branches have been broken off by wind and weather, and lying on the ground provide excellent cover for wild life. The fungus, Leuzites (Daedalea) confragosa, here benefits the fauna, but at the same time is not able to kill all of the willows, which are rapidly growing up again.

In this thicket several larger willows, Salix alba vitellina, and boxelder, Acer

negundo, grow.

A wild plum hedge, **Prunus americana**, is planted in the southeast embankment. This hedge is one of the important factors in the ecology of the region. Its fruits provide food for wild life and the branches furnish cover and protection for the avifauna.

The embankment follows the entire eastern side of the marsh to prevent water from entering the adjacent meadow. One single dark willow, **Salix nigra**, is the only tree on that embankment. It overhangs the marsh and is used by a kingfisher for a perching ground. Later a male red-wing takes over the tree as a singing post.

The dominating hydrophytes in the lentic region are: Common cattail, Typha latifolia; River bulrush, Scirpus fluviatilis; Giant burreed, Sparganium eurycarpum;

Arrowhead, Sagittaria latifolia; Marsh blueflag, Iris versicolor.

The growth rates of some of these is shown under the discussion of the red-wing. The cattail and river bulrush are the most abundant and the marsh blueflag the least. There are few floating and submerged forms. Duckweed, **Lemna minor**, was noticed early in the season. **Elodea canadensis** (waterweed) is present in the water hole behind the pumphouse. No other pond weeds were found in the small marsh, though a greater variety exists in the larger University Bay marsh. I believe this discrepancy is due to the fluctuating water level in the smaller marsh, and to the fact that the cattails and bulrushes have outgrown and outshadowed them. The large amount of pollution in the stream is another factor which probably accounts for their absence. At times the lotic water is so turbid that light with difficulty reaches the bottom of the stream.

There is a small belt of **Carex stricta** (sedge) adjacent to the dogwood, **Cornus stolonifera**, association, northeast. This small region is the only natural marsh border. The east, west and north borders are artificial (embankment and road) and to the south the sandbar willow contacts the cattails directly where only scattered patches of tussocks remain. Only one small region of blueflag, **Iris versicolor**, and marsh marigold, **Caltha palustris**, **is present**. I believe that the growth rate of the iris is checked

by the overhanging willow branches.

The marsh border is heavily overgrown with jewelweed, Impatients sp., and bindweed, Convolvulus sepium. Bittersweet, Solanum dulcamara, is also present and grows mainly along the edge of the water hole. The region east of the pump house and south of the wild plum hedge is dominated by a grass, Bromus inermis, among which in places plaintain, Plantago cordata, grows. Smartweed, Polygonum sp., yarrow.

Achillea millefolium, wood nettles, Laportea canadensis, and dandelions, Taraxacum

officinale, are found there.

Grape vines, Vitis vulpina, covers the sandbar willow and elderberry, Sambucus canadensis, bushes next to the water hole, and give excellent cover for nesting birds. One last year's ('42) nest (species?) was found here, and a yellow warbler was found nesting on June 1. The fruit of the grape vine should also furnish food for many species later in the season.

Another plant which should be of similar value is the bur cucumber, Sicyos angulatus, which is found along the east-side. It too covers the sandbar willows and

elderberry branches.

Horsetail, Equisetum sp., and plantain are abundant on the eastern bank.

Near the water hole, burs, Arctium minus, thistles, Cirsium sp., and some wild parsnip, Zitzia aurea, are shooting up.

Opposite the road towards the lake are cottonwood, Populus deltoidea, and aspen,

Populus tremuloides.

Part of the east side of the marsh borders on what one may call the "upland," which may again be divided into an original hardwood forest remnant, oak, Quercus alba (white), and Q. macrocarpa, (bur), maple, Acer saccharum, and a planted region of conifers, white spruce, Picea canadensis, Norway spruce, Picea excelsa, arborvitae, Thuya occidentalis, Douglas fir, Pseudotsuga taxifolia.

The ground vegetation consists of goldenrod, Solidago canadensis, milkweed, Asclepias sp., wild strawberries, Fragaria virginiana, bellwort, Uvularia grandiflora, and two-leaved Solomon's seal, Unifolium canadense. A single bush of Ribes sativum

(currant) is also present here.

To the east, west and south, the marsh is bordered by road and pasture land. It is interesting to compare the flora of today with a study done by J. R. Heddle in 1910. Heddle writes, "The marsh meadow on the south shades into a cultivated field, and on the southeast and east into an irregular zone of Sparganium eurycarpum (burreed) and Typa latifolia (cattail) which borders on both sides, the lower part of the creek. In 1909 a road was made along the west side of the creek, which cuts the Sparganium-Typha zone in two. The upper half of the creek is partly filled with Ranunculus scleratus (buttercup) and Elodea canadensis (water-weed). Its banks are weedy, being covered in part of Pastinaca sativa (parsnip) and Carex stipata (sedge). In the summer time the whole lower half of the creek is covered with an unbroken, thin layer of duckweed, Spirodela polyrhyza. This layer may check the growth of plants in the water beneath, for there are very few water plans. The creek mouth is, at the end of summer, bordered with an abundant growth of wild rice, Zizania, some Phragmites cummunis (marsh grass) and some Polygonum Muhlengergii (knotweed). Zizania is occasional along the border of the bay, but not abundant except at the bridge. Castalia tuberosa (water lily) grows near the mouth of the creek."

We see then that many changes have occurred since 1910. The wild rice and **Phragmites** are gone and new plants have come in. Most of these are weeds and exotics. The avifauna too has changed. Where Henslow sparrows and rails nested thirty years ago, today English sparrows and domestic pigeons fly. Still many birds remain, but as we will see later, their nest mortality is high. The niche is slowly dis-

appearing, and with it the birds.

The Avifauna*

Literature Review: As formerly stated, the main emphasis in this paper is placed upon the territorial behavior of the red-wing. First let us briefly review the literature on territorial behavior. What is it? How did the idea evolve?

Bernard Altum in "Der Vogel und sein Leben," (1868) pointed out the elements of territoriality, but it was H. Eliot Howard in his book "Territory in Bird Life" (1920) who first gave the problem any serious attention. Howard writes: "The expression 'securing a territory' is used to denote a process, or rather part of a process, which, in order to insure success to the individual in the attainment of reproduction, has been gradually evolved to meet the exigencies of diverse circumstances." Ernst Mayr defines a territory as follows: "An area occupied by one male of a species which it defends against other males of the same species and in which it makes itself conspicuous." Margaret Morse Nice's "Studies in the Life History of the Song Sparrow" is an excellent work on territorial behavior. G. K. Noble, according to my opinion, has simplified the conception of territoriality by stating: "A territory is any defended area." Perhaps he is right. Territories are not associated with birds alone. Men and mice have areas other than the home range which they defend. According to Burt, territoriality is: "A fundamental characteristic of animals in general."

Let us then realize that a certain social intolerance which controls animal popula-

^{*}Arrival dates given here pertain to the region of study only.

tions exists. This intolerance is an important factor in the management of wild creatures. Granted we are able to provide a given animal with the basic needs, such as food, cover and a mate: what good would it do us to plan for a large population if we did not know what the optimum number of a population is?

Errington's "intraspecific strife" theory is another example of an animal's (muskrat)

behavior toward members of the same species.

There are many other writers whom I should mention, but space does not permit it. A great amount of work has been done, though much remains to be investigated.

Allen wrote in regard to the red-wing in 1914: "From the arrival they assume all rights to the domain in which they have established themselves." Mayr, in 1940, made a more detailed study of the bird in Bergen County, New Jersey. His findings include, among other things, the size of the territory for Henslow Swamp, i.e. 20 yards wide and 40 yards long. One territory was almost circular with a 40 yard diameter. The arrival of the male was on March 31, 1940, and the first females were observed on April 20. Polygamy was also noted by Mayr, some of the males having two and three females. Linsdale, in 1938, writes about the red-wing in the Smoky and Reese River valleys, Nevada, "that there apparently was little if any marked division in the area," but he noted "that the males are persistent in maintaining the stands which they have established at the beginning of the nesting season."

My observations during the survey were concerned with territoriality because I wanted to determine the size of possible territories and of their relationship to the

I asked myself: Would potential territories remain the same in size and shape over a period of years? Will the shape of a territory change with certain ecological changes? When, after the arrival of the birds, does territorial behavior begin and when does it cease? By what factors are the borders of a territory determined? By the location of the nest? By the song tree?

Many of my questions still remain unanswered. The spring of 1944 may tell more, but let me now give you the events as I saw them happen last spring in the bay marsh.

February 18: The marsh lay cold under a blanket of snow. Tracks showed that about ten pheasants and several rabbits had found shelter among the cattails during last night's snow. The rabbits had browsed heavily on a lone crabapple tree and on the low-hanging branches of a golden osier willow. They had not touched the sandbar and black willow, however. High in the elm a blue jay screamed, and chickadees were climbing among the willows. A few nuthatches and a creeper joined the flock. A crow alighted from the meadow beyond, and as dusk fell a screech owl silently left the woods.

Some days later: The sun is getting warmer, and the ice on the creek is partly melted. A mink tilts his head out through an opening in the levee of the stream. As I approach, he jumps out on the ice. Water drips from his coat—he pauses a moment, shakes himself, and disappears. There is snow along the wood edge, and the tracks of a white-footed mouse lead to a goldenrod. Fox squirrels and gray squirrels scold from the trees above. A hairy woodpecker joins the chorus and tree sparrows chirp from the willow thicket.

Early March: The snow is gone, revealing the tunnels of the meadow mice in the yellow grass. A brown rat sits solemnly on a pile of refuse near the pumphouse. Chickadees are singing and a muskrat swims in the stream. The tracks of a skunk on

the wet ground are recorded.

March 9: The first migrant is here, a herring gull lands near the mouth of the creek. All of the ice has melted in the marsh. The rabbits which had been in the

cattails, now hide in a dried-out parsnip patch.

March 13: The meadowlarks have arrived and I see a downy woodpecker in the willows. No robins as yet, though I had seen them some days ago on the University Campus. The bay is partly open. A few pintails and many lesser scaups are recorded.

March 16: A pair of mallards are on stream. No red-wings yet, though Schorger records the average arrival date around March 11. Tree sparrows and juncos play among the willows.

March 18: The robin has come to the marsh, and with him a bird of rather du-

bious character, the English sparrow.

March 22: I spent most of the day in the marsh. The robin now had company. He was feeding with other robins and a flock of killdeer in the meadow. At 10:00 a.m. I saw the first male red-wing in the small marsh. During the course of the day, four other males visited the region. One of them sat in the sandbar willow thicket for about ten minutes issuing loud tjeck-tjeck noises. Later he flew into a tree and began a short song. Thus he spent the day-alternately singing and calling.

March 23: I am disappointed. No red-wings in the little marsh. The "advance

guard" of the migration must have moved on.

March 25: The red-wings are back, two beautiful males. One of them flies into the adjacent meadow to feed among the robins and starlings. The other alternately sings and calls. Herring gulls sweep low over the bay and the mallard pair again swims in the stream.

March 26: The red-wings are still here. It looks as though these are going to stay. A cowbird joins them feeding in the meadow. A song sparrow sings in the boxelder tree and a male kingfisher perches high in the black willow over the stream. On the

bay are lesser scaup and ring-necked ducks.

March 28: Early morning. Two male red-wings are feeding at the edge of the stream. There is no evidence of an established territory as yet. Another red-wing arrives from the Willow Drive region and begins to sing close to the feeding birds. There was no sign of antagonism or pugnacity. The scaups are still on the bay and a flock of canvas-backs are diving farther out. As I walk toward the water hole, I notice

the first mourning dove of the year.

March 30: The first sign of territorial behavior appears among the red-wings. Male birds were not seen in the same tree, but as yet showed no signs of direct opposition toward each other. The birds sing more often and the pauses between the songs are shorter than during the first days. A fox sparrow flies out from a red dogwood tree. It is warm. Yellow hornets are noted on the pumphouse door and a mourning-cloak butterfly flits among the boxelder branches. I was able to get a picture of a muskrat feeding on the dead stems of a bulrush. After the second click of the camera, the rat sat motionless for about two minutes, and then continued its meal. The outer dry layer of the bulrush was peeled away with the paws to reach the inner, more juicy material.

April 1: The lake is ice-free today. The behavior of the red-wings seems somewhat obscure. Male birds venture into various regions of the marsh and are often tolerated even directly below a tree in which another bird is singing. But sometimes the intruding male is chased by the one who holds the stand. However, the intruder is often found to return unmolested to take over the song tree. The first bird, in the meantime, has found another tree from which to sing. A flicker and a downy woodpecker visit the marsh. Bronzed grackles and robins bathe below the plum hedge, and a Wilson's snipe flushes from the marsh vegetation.

April 2: There are few exchanges of song posts among the red-wings today. I am looking forward to the arrival of the females. The bay is alive with waterfowl and black ducks have joined the mallard pair in the marsh. Both the ruby and goldencrowned kinglet are here, being abundant among the conifers along the lake road. A yellow-bellied sapsucker pecks away among the trees. A Cooper's hawk flies high, and later a red-tailed hawk is seen. In the afternoon several red-tails, another Cooper's

and later, a marsh hawk. It is a sunny day and the aspen pollen is falling.

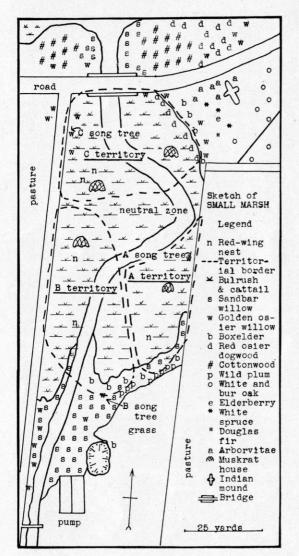
April 3: The red-wings behave as on former days. They sing, call and display their colors. The black ducks are gone, but on the lake are four horned grebes and some shovellers. It is sunny and the thirteen-striped ground squirrel has come out of

April 4: Was able to map out one of the red-wing territories today. The bird which had been singing from the dark willow no longer crossed the stream. If he did venture to cross, the bird from the bridge region immediately chased him back. Further, if the red-wing from the willow, which I shall call red-wing A, moved too far west, he was chased by the third red-wing. The male in the bridge region seems to have two song trees. Sometimes he sings from one, and then from the other. Can not as yet give definite territorial borders. The first hazel pollen is falling, and a spotted sandpiper feeds on the lakeshore. Below the dogwood a hermit thrush is seen, and a swamp sparrow sings. On the lake a loon glides silently along.

April 6: The red-wing near the bridge still alternates between the two song trees. His flights are executed at a low level along what I assume will be the border of his territory. The male who sings from the willow thicket is in constant dispute with A. Undoubtedly their territorial borders touch, but I am not sure of the northern boundary line. I shall call this bird B, and the one near the bridge, C. The croaking of the frogs fills the marsh. Skipper butterflies cling to spring buds, and high in the elm overlooking the marsh sits a black-crowned night heron. A ring-billed gull rides the

waves close to shore.

April 9: The female red-wing is here. Upon my arrival I noticed at once the rather unusual behavior of the male in Territory B. He flew from his songtree into the dry cattails and slowly climbed down one of the cattail stems issuing loud calling sounds. Shortly thereafter a female emerged below him, flew about ten feet away, only to be pursued by the male, who repeated his calls and again climbed down a cattail This single female remained in the marsh throughout the entire morning. At times she was noted in the extreme southern region and at other times she flew to



SUMMARY OF RED-WING NEST DATA ON THE THREE TERRITORIES, A, B & C

May 19

A 1. 2 eggs.

B 1. 3 cowbird eggs

2. 1 egg

C 1. 2 eggs, 2 cowbird eggs

2. 2 eggs

May 28

A 1. 4 eggs

B 1. 5 cowbird eggs

2. 3 eggs

C 1. 4 eggs, 2 cowbird eggs

2. 4 eggs

June 4

A 1. 3 young

3 1. 5 cowbird eggs

2. Broken up

C 1. 6 young

2. 4 young

June 8

C 1. 5 young Primary quill 2.5 cm.

Primary feather 0.7 cm.

June 13

C 1. Young fledged

the nearby bridle path to feed among the male red-wings, grackles, and English sparrows. Her return to the marsh was always direct. Never did she, like the males, first approach the trees and then descend to the marsh vegetation.

April 10: Two more female red-wings have arrived. None of the three females seems to belong to any particular male as yet. They move freely throughout the region while the males sing and call to them trying to attract their attention.

April 11: Two of the females seem to prefer **C**'s territory today. The male from the willow thicket (**B**) continuously tries to attract the attention of the females by invading **C**'s territory. **C** chases him away at once. **A** and **B** are still in constant dispute. I have by now been able to establish where one bird's domain begins and ends. The border must not be considered as a clearly defined line, but rather as a narrow belt, or "no-man's-land." Compared with Mayr's findings, the territories in the University Bay Marsh are somewhat larger. That of **C** is 25 yards wide to the north, with a base of about 50 yards to the south. **B**'s territory is elongated and triangular in shape. One side is about 70 yards long. The smallest territory belongs to **A** and is the only

one which has a natural border (stream edge) other than the marsh proper. The northern pike have come up the stream to spawn. Over 20 fish were counted this

morning. A purple martin is also a new visitor to the region.

April 18: Counted six female red-wings. The behavior of the males this morning is extremely pronounced. They fly along their territorial borders often. The male in Territory A sang 48 songs from 7:00 a. m. to 8:10 a. m. Males from adjacent territories (and also from the Mendota shore region) were pursued by him far beyond the territorial border. The male in Territory C attacked the male who had taken over one of his song trees. The intruder defended himself briefly before retreating. (Actual combat among the males is considered rare. Linsdale did not record it during his study in Nevada.) The male mallard who had been absent for some days returned today. He had taken up a station on the lake about 100 yards from the mouth of the stream on a partly submerged plank. The female had gone into hiding.

April 20: The kingfisher got it today. The red-wing male from Territory A decided that he no longer wished to share his song post with the perching kingfisher. Earlier in the week I had noticed a red-wing male chase grackles and once a mourning dove. Linsdale reports that in a colony of red-wings the birds attacked marsh hawks. He also cites cases of red-wings attacking black-crowned night herons, nighthawks, Brewer's blackbirds, a female mallard and young yellow-headed blackbirds. Adult yellow-headed blackbirds in turn chase and attack the red-wings. In the University Bay region no evidence was obtained of hostilities against other birds outside the immediate vicinity of the song tree. But there the red-wing had taken over. Only a robin who had begun to build a nest in B's song tree was permitted to remain. A chipmunk who dared to climb the willow was immediately chased by the red-wing.

April 22: The robin in the willow has completed her nest. Four other robin pairs are present, but I have been unable to find any other nests. A yellow warbler and several myrtle warblers have arrived. Ovenbirds also are seen. Most of the northern pike now are through spawning and few fish remain in the marsh. The dandelions

are blooming and a red-headed woodpecker visits the region.

April 25: C male acts somewhat strange this morning. I had been sure of the size of his territory, but for some reason he is withdrawing the original border line. His patrol flights do not extend all the way to A's territory. A and B both are permitted to venture into the region south of C's territory without being molested. The "noman's-land" between the territories has widened, and a neutral zone has been formed. Elm pollen is falling and bank swallows hunt for insects over the water hole. On the bay, are red-breasted mergansers. The male mallard has left his station probably to join other males away out on the lake.

April 27: Counted seven female red-wings today. Both males and females leave the marsh quite often, but I am not sure that this is what Mayr calls "sexual flights." They may be visiting a feeding area rather than leaving the marsh for mating purposes. Two Bonaparte's gulls fly along the bay shore. The rough-winged swallows

and white-crowned sparrows have arrived.

May 2: Only four female red-wings today. The others must either have moved on or be in hiding. I noted that A male would be attacked by either B male or C male if he flew lower than 25 feet over an established territory. He was, however, permitted to fly over the territory at a higher level. It would seem, then, that a third territorial dimension exists. During the course of the day the territorial borders become more flexible. The birds are less active and do not sing as often. Territorial disputes are less frequent than in the morning hours and trespassing is often overlooked. The loon is gone from the bay. Some ducks are too far out to be identified. The mourning doves have begun to nest. A brown thrasher, two gray-cheeked thrushes and palm warblers visit the marsh. A kingbird is also new. Along the wood edge the first anemone blossoms are seen and the marsh marigold is in bloom.

May 4: Walking along the marsh edge, I discovered a mallard nest containing nine eggs, only six feet from the road. In the meadow the quails are "bob-whiting." The song of a wood thrush blends with the singing of other birds. A garter snake suns himself near the rocks. A new bird in the boxelder tree, a Lincoln's sparrow, is supposedly rare in this section. I have never seen one before. He sings and sings and

sings.

May 6: I have never seen the marsh as full of birds as this morning. The juncos are still here. Most of the permanent residents are singing. Solitary sandpipers and water-thrushes frequent the stream edge. Many warblers are here, including the black and white and the yellow warbler. The first Baltimore oriole peeps from the branches of the blossoming plum hedge. The bats have come out of hibernation and play around the pumphouse during the early evening hours.

May 7: A dowitcher has joined the sandpipers. Counted six Baltimore orioles this

morning



A Song Sparrow's Nest Into Which One Cowbird's Egg Was Deposited

May 9: Bellwort blooms along the wood edge. A lone scallet tanager is in the elm. Catbirds are feeding among the red-wings, starlings and grackles on the bridge path. A long-billed marsh wren climbs in the cattails.

May 11: The "witchity-witch" of a yellow throat fills the air. A warbling vireo sings high in the conifers.

May 12: House wrens chatter in the woods, and a sora flushes from the marsh.

May 13: The female red-wing from B's territory carries nesting material. The false Solomon's seal blooms yellow.

May 15: Several robin nests recorded today. The black and white warblers are gone, but magnolia warblers replace them.

May 18: The starling in the willow has hatched her young and the bird is busy now carrying food. Another mourning dove nest is found. The water-thrushes still

probe in the peat among the rushes.

May 19: The water is lower today so I am able to venture into the marsh, but I am late—nesting has already begun. In A's territory, one nest is found containing two eggs. One of the nests in B's territory contains three cowbird eggs. The other holds but one egg. C's territory also has two nests, one with two red-wing eggs and two cowbird eggs, the other with two red-wing eggs. All of the nests were built in last year's dry aquatic vegetation. Three were found in cattails and two in bulrushes. Linsdale and Allen both reported red-wing nests in growing vegetation. They recorded also that many of these nests were unsuccessful because the rapid growth of the plants capsized the nests. The cattails of the year in the University Bay marsh on May 18 were 27 inches high, the rushes 18 inches and may not have offered suitable nesting sites. This may be the reason for the selection of last year's dry vegetation.

May 22: Discovered one of the song sparrow nests today. It held four eggs and

one cowbird egg. An olive-backed thrush is seen.

May 25: Another mallard nest found. Did not get time to look at the red-wing nests.

May 28: Goldfinches come to the marsh in pairs. I was attacked by the male red-wings while examining the nests.

May 30: The catbird has begun to nest in the plum hedge. One more robin nest is found and a yellow warbler also is noted carrying nesting material.

June 4: The yellow warbler has completed her nest. The redwings have hatched their young.

June 8: Could not check all of the red-wing nests because of the high water in the marsh, but did reach one of C's nests. The

This Mourning Dove's Nest Has But the Usual Two Eggs. The Eggshaped Nesting Material by the Eggs is a Fragment of the Bur Cucumber.



primary quill of the young is already 2.5 cm long, the feather projects 0.7 cm. While examining the young in the nests, I was again attacked by the male red-wings. The cries of both young and adult birds caused many bird species to congregate in the nearby trees: robins, song sparrows, red-headed woodpeckers, catbirds and yellow warblers. The male red-wing also tried to attack those birds.

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No further evidence was obtained in the red-wing nesting sequence as the marsh was not visited again until August 14, when the birds were noted moving about in flocks. No red-wings were seen among the cattails and the singing of the male had ceased completely.

Late in December the familiar tjeck-tjeck cry of a single male was still heard

from the willow.

Summary and Discussion

Territorial behavior studies on the red-wing showed that the one and one-half acre small University Bay marsh contained three territories. Observations also show that a third dimension in the red-wing territory may exist.

The territories were gradually formed during the first week after the arrival of the males. The territorial borders are at least partially related to the substratum. Further studies on the red-wing should show whether the territoriality exhibited by the birds in 1943 will be similar in the same region during the coming spring.

The red-wing nested in the dry aquatic vegetation of the previous year. Nesting had already begun on May 19.

Orowth rate of the common cattail
Typha latifolia, the river bulrush
Solrpus fluviatilis, and the larger
blue flag fris versicolor (that or
the latter being somewhat checked
by shade) at the arcewhat checked
by shade) at the arcewhat checked
the archeius phoenicus arctolegus
arrive and nest.

Legend

Cattail
Bulrush
Buurush

The marsh is a harbor for resident and migrating birds. Nine different species were found nesting in the region. A total of 30 nests were found by June 1. Other species, e.g. goldfinch, might have nested in the region after the above date, and renesting by catbird or song sparrow is also quite possible.

From the 30 nests under observation, only six were known to be successful by June 1. The outcome of five nests is not known. Eighteen were destroyed by predation

and two cases of desertion were noted.

Anderson et al, "Study on the Arboretum," records 2.5 pair of birds breeding per acre for a 150 acre census area of various habitats. I believe that this figure is rather low, even if one considers the large area censused. Marsh regions were reported by him

to have a density of 2.8 nests per acre. Again one may consider the number of the

nests in the small marsh of the bay region exceptionally high.

A total of 760 waterfowl were observed on the bay from March 15 to May 30. The accompanying table of course, does not represent an exact count of birds frequenting the bay at all times, but it gives a rather general cross section of the spring migration.

One may ponder upon the absence of certain common birds from the smaller marsh region. Common species like the bluebird and rose-breasted grosbeak were not seen. Certain specific foods, cover, and suitable nesting sites may account for this. It is always much more difficult to state why a species is absent than to conclude why it is present.

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NESTING DATA FOR ALL SPECIES

Species Mallard	Number of Nests	Site Site	Average e Height	Grass and down Grass Success	- Predation	Desertion
		Boxelder	7.1'	Grass and mud 3.5 2	13	1
Robin	5 8	Osier willow	12.8'	Grass and mud 3.5 2	1.0	
	1	Dark willow	6.0'			
	i	Elm	8.0'			
	î	White spruce	14.0'			
Mourning dove	2	Osier willow	9.5'	Twigs from willow, bur cucumber, wild grape 2 0	2	
Yellow warbler	1	Elderberry	4.5'	Cattail (pistillate part), trembling aspen (ripe ovary), white pine needle, horsehair, fine		
				grass 3		
Red-wing	5	Cattail and Bulrush	1.7'	Leaves of cattail and bulrush, grass (Bromus)		
				horsehair 4 3		15
Song sparrow	1	Ground	0.0	Fine grass, horsehair 3 0) 1	
Meadowlark	1	Ground	0.0	Grass (Bromus) 4		
Starling	1	Osier willow	24.0'	? ? 1		
Catbird	1	Wild plum	8.0′	Twigs, willow, plum, newspaper 4		

WATERFOWL OBSERVED FROM MARCH 15 TO		
Lesser scaup (Nyroca affinis)		48%
American golden-eye (Glaucionetta clangula americana)	91	12%
Ring-necked duck (Nyroca collaris)	84	11%
Canvas-back (Nyroca valisineria)	68	
Blue-winged teal (Ouerquedula discors)	38	9% 5%
Mallard (Anas platyrhynchos platyrhynchos)		4%
American merganser (Mergus merganser americanus)	23	
Others		3% 8%
Pintail (Dafila acuta tzitzihoa)	760	

Green-winged teal (Nettion carolinense) Hooded merganser (Lophydytes cucullatus) Greater scaup (Nyroca marila) Bufflehead (Charitonetta albeola) Black duck (Anas rubripes) Common loon (Gavia immer) Horned grebe (Colymbus auritus) Coot (Fulica americana)

A LIST OF MIGRATING BIRDS PREPARED BY A. L. KUMLEIN IN 1869

By A. W. SCHORGER Madison, Wisconsin

Recently, Mrs. H. A. Main placed at my disposal the contents of a manuscript prepared by her uncle, Aaron Ludwig Kumlien. It is entitled, Ornithological Observations, and covers mainly the migration of birds at Busseyville, Jefferson County, Wisconsin, in the spring of 1869. It is probably the earliest formal list of migrating birds prepared in Wisconsin. The occasional references to mammals, etc., have been omitted in this paper.

The list was prepared when A. L. Kumlien was 16 years of age, and it shows that he had had thorough training under his father, Thure Kumlien. The reference to species now extinct or rare are of special interest. The obvious errors, such as the arctic tern, and confusion of the prairie horned lark with the northern horned lark, are surprisingly few.

The script, except for the final entry, is excellent. The data for May 26 are in pencil and are recorded with little care. All the writing in the opinion of Mrs. Main is in the hand of A. L. Kumlien. In the present paper, the text has been followed literally though there are numerous errors in the spelling of the scientific names. Most of the latter are obsolete now and for this reason there have been inserted in parentheses the present common names as they appear in the fourth edition of the A. O. U. Check-List. The scientific names in a few cases have been completed for the sake of clarity, the additions being placed in brackets.

I desire to thank Mrs. H. A. Main for the privilege of using the manuscript.

March, 1869

- 9th. Several Sialia sialis (Eastern Bluebird). Pinicola canadensis (Canadian Pine Grosbeak. A very mild day. Aegiothus linaria (Common Redpoll) very abundant. Centurus carolinens (Red-bellied Woodpecker).
- 10th. Several days quite cold and stormy.
- 19th. Plectrophanes pictus (Smith's Longspur) Koshkonong prairie. Anas borshes (Mallard), Plectrophanes lapponica (Lapland Longspur) abundant. Plectrophanes nivalis (Eastern Snow Bunting) very abundant K[oshkonong] P[rairie]. Agelaius phoenicus (Eastern Red-wing), Corvus Americanus (Eastern Crow)
- 22nd. (noticed building, one pair helping the other in the construction of the nests.
- 23rd. Erimophila cornuta (Northern Horned Lark) probably had eggs.
 24th. Astur atricapillus (Eastern Goshawk) both old and young. Sturnella magna (Eastern Meadowlark). Aegialitis vociferus (Killdeer). A flock of Aegiothus linaria (Common Redpoll) about 4000. Buteo pennsylvanicus (Broad-winged
- Hawk). Colaptes auratus (Northern Flicker). Junco hyemalis (Slate-colored Junco). Bernicola canadensis (Canada Goose). Larus Smithsonianus (Herring Gull).

26th. **Quiscalus versiclor** (Bronzed Grackle). **Ectopistes migratoria** (Passenger Pigeon). 27th. **Melospiza melodica** (Mississippi Song Sparrow). **Sialia sialis** (Eastern Bluebird)

building.

28th. Scolecophagus ferrugineus (Rusty Blackbird) abundant. Collyrio excubitorides (White-rumped, actually Migrant, Shrike). Aix Sponsa (Wood Duck) males.

Mareca Americana (Baldpate). Dafila acuta (American Pintail) common.

Troglodytes hiemalis (Eastern Winter Wren). Passerella iliaca (Eastern Fox Sparrow). Sphyrapicus varius (Yellow-bellied Sapsucker). Circus hudsonicus (Marsh Hawk) Koshkonong L.

29th. Zenaidura carolinensis (Eastern Mourning Dove). Sayornis fuscus (Eastern Phoebe). Cygnus americanus (Whistling Swan). Gallinago wilsonii (Wilson's Snipe). Ceryle alcyon (Eastern Belted Kingfisher). Hirundo bicolor (Tree Swallow) several males. Nittion carolinensis (Green-winged Teal). Larus delawarensis (Ring-billed Gull). Fulica americana (American Coot). Porzana

carolina (Sora). Very noisy.

30th. Ardea herodias (Great Blue Heron). Butorides lentiginosus (American Bittern). Single ind[ividual]. Saw a Falcon anatum (Duck Hawk) with a just captured Chaulelasmus streperus (Gadwall), male. Cupidonia cupido (Greater Prairie Chicken) playing.

April

- 1st. A very heavy snow storm. Vast swarms of **Ectopistes migratoria** (Passenger Pigeon) flying south, very high and slow.
- 2nd. Collyrio excubitorides (Migrant Shrike) building during a heavy snow storm.
- 5th. Molothrus pecoris (Eastern Cowbird). Graculus dilophus (Double-crested Cormorant).
- 6th. Falco sparverius (Eastern Sparrow Hawk). Querquedula discors (Blue-winged Teal).
- 7th. Gambetta melanoleuca (Greater Yellow-legs). Aegiothus linaria (Common Redpoll). Chroicocephalus pha—[philadelphia] (Bonaparte's Gull). Colymbus torquatus (Common Loon). Melospiza palustris (Swamp Sparrow).
- 8th. Ampelis cedrorum (Cedar Waxwing). Nauclerus furcatus (Swallow-tailed Kite).
 9th. Centurus carolinsis (Red-bellied Woodpecker) excavating a hole in a solid [MS missing]. A very large flock of Aegiothus linaria (Common Redpoll) flying [MS missing].
- 10th. Nest and 5 eggs of Corvus americanus (Eastern Crow). Melospiza melodica (Mississippi Song Sparrow) [MS missing].
- 11th. Certhia americana (Brown Creeper). Eggs of Corvus Am. (Eastern Crow).
- 12th. Poocaetes gramineus (Eastern Vesper Sparrow). Turdus fuscens (Veery. Probably Willow Thrush).

14th. Turdus pallasii (Hermit Thrush).

15th. Regulus satrapa (Eastern Golden-crowned Kinglet). Charadrius virginicus (American Golden Plover). A very large flock. Thousands of Ectopistes migratoria (Passenger Pigeon) flying east very high, early in the morning.

16th. Regulus calendula (Eastern Ruby-crowned Kinglet).

18th. Actiturus Bartramius (Upland Plover). Rhyacophilus solitarius (Eastern Solitary Sandpiper). Spatula clypeata (Shoveller). Dendroica coronata (Myrtle Warbler). About 200-250 Graculus dilophus (Double-crested Cormorant) on a few trees at the "mouth of the creek." Egg of Zenaidura carolinensis (Eastern Mourning Dove). Aegiothus linaria (Common Redpoll). Buteo "borealis" (Eastern Red-tailed Hawk) nest?

19th. Aegiothus linaria (Common Redpoll) feeding on the blossoms of Poplar. Cathartes aura (Turkey Vulture) shot at Rice Lake by Chas. Woolworth. Large numbers of Carpodacus purpureus (Eastern Purple Finch) feeding on the blossoms of Poplar. Pipilo erythrothalmus (Red-eyed Towhee). Harporhynchus rufus (Brown Thrasher). Tringoides macularius (Spotted Sandpiper).

Female Agelaius phoenicus (Eastern Redwing).

21st. Hirundo riparia (Bank Swallow). Progne purpurea (Purple Martin). Spizella socialis (Eastern Chipping Sparrow). Hirundo horreorum (Barn Swallow). Hirundo lunifrons (Northern Cliff Swallow). A nest of Erimophla cornuta (Northern, actually Prairie Horned Lark) with just hatched young. Koshkonong Prairie.

24th. Antrostomus vociferus (Eastern Whip-poor-will). Dendroica palmarum (Western Palm Warbler). Several males. Plectrophanes lapponica (Lapland Longspur).

Busseyville, Jefferson Co., Wis. A. L. Kumlien.

26th. Spizella pusilla (Eastern Field Sparrow). Grus canadensis (Sandhill Crane) flying north in the night.

- 27th. Philohela minor (American Woodcock) probing the mud on the banks of a stream in the day time. Tringa wilsonii (Least Sandpiper). Zonotrichia albicollis (White-throated Sparrow). Dendraeca pinus (Pine Warbler). Picus varius (Yellow-bellied Sapsucker) excavating a hollow tree. Plectrophanes lapponica (Lapland Longspur). Aegiothus liniaria (Common Redpoll). Porzana carolina (Sora). Helminthophaga peregrina (Tennessee Warbler). Two Pelicanus erythrorynchuss (White Pelican). Gembetta flavipes (Lesser Yellowlegs).
- 28th. **Mniotila varia** (Black and White Warbler). **Opornis agilis** (Connecticut Warbler).
- 29th. Dolichonyx oryzivorus (Bobolink). Rallus virginnus (Virginia Rail).
- 30th. Plectrophanes lapponica (Lapland Longspur). Chordeiles popetue (Eastern Nighthawk). Melanerpes er. (Red-headed Woodpecker).

May

- lst. Collyrio excubitorides (Migrant Shrike) noticed pinning a bug on tree. Plec. lapponica (Lapland Longspur).
- 2nd. Certhia americana (Brown Creeper). Regulus calendula (Eastern Ruby-crowned Kinglet). Xanthocephalus icterocephalus (Yellow-headed Blackbird).
- 3rd. Falco columbarius (Eastern Pigeon Hawk). Lanius (Shrike) building. Sterna blumbea (Black Tern). Dendroeca aestiva (Eastern Yellow Warbler). Icterus baltimore (Baltimore Oriole) the old fellow's got back again. Graculus dilophus (Double-crested Cormorant) flying north. Ectopistes migratoria (Passenger Pigeon) very abundant. Strepsilas interpres (Ruddy Turnstone). Sitta canadensis (Red-breasted Nuthatch). Troglodytes aedon (Eastern, probably Western, House Wren).
- 5th. Vireo solitarius (Blue-headed Vireo). Setophaga ruticilla (American Redstart). Seiurus noveboracensis (Northern Water-Thrush).
- 6th. Dendroeca blackburniae (Blackburnian Warbler). Dendroeca tigrina (Cape May Warbler). Empidonax minimus (Least Flycatcher). Dendroeca castanea (Bay breasted Warbler). Helminthophaga ruficapilla (Nashville Warbler). Dendroeca canadensis (Canada Warbler). Pyranga rubra (Scarlet Tanager). Dendroeca virens (Black-throated Green Warbler). Empidonax flaviventris (Yellowbellied Flycatcher).
- 7th. Vireo olivaceus (Red-eyed Vireo). Vireo gilvus (Eastern Warbling Vireo). Mimus carolinensis (Catbird). Troglodytes hyemalis (Eastern Winter Wren). Certhia americana (Brown Creeper). Geothlypis trichas (Northern Yellow-throat). Turdus mustelinus (Veery). 3/4 grown young of Buto virginianus (Great Horned Owl) and 2/3 grown young of Buto borealis (Eastern Red-tailed Hawk). Helminthophaga chrysoptera (Golden-winged Warbler).
- 8th. Tyrannus carolinensis (Eastern Kingbird). Troglodytes hyemalis (Eastern Winter Wren). Chrysomitris tristis (Eastern Goldfinch). Myiodiocetes pusillus (Wilson's Warbler).
- 10th. Dendroeca pennsylvanica (Chestnut-sided Warbler). Myiodiocetes mitratus (Hooded Warbler). Myiodiocetes canadensis (Canada Warbler). Chrysomitris pinus (Northern Pine Siskin). Guiraca ludoviciana (Rose-breasted Grosbeak). Icterus spurus (Orchard Oriole). Contopus virens (Eastern Wood Peewee). Turdus aliciae (Grey-cheeked Thrush).
- 11th. Vireo philidelphia (Philadelphia Vireo). Troglodytes hyemalis (Eastern Winter Wren). Junco hyemalis (Slate-colored Junco). Graculus dilophus (Double-crested Cormorant) pairing. Pipilo Erythro. (Red-eyed Towee) building.
- 13th. Prothonotaria citrea (Prothonotary Warbler). Empidonax pusillus (Alder Flycatcher). Regulus calendula (Eastern Ruby-crowned Kinglet). Female Geothlypis tricas (Northern Yellow-throat). Helminthophaga pinus (Blue-winged Warbler). Myiarchus crinitus (Northern Crested Flycatcher).
- 14th. Trochilus colubris (Ruby-throated Hummingbird). Egg of Ectopistes migratoria (Passenger Pigeon).
- 15th. An egg of **Ortyx virginiana** (Eastern Bob-white) in the oviduct of female. **Cyanos- piza cyanea** (Indigo Bunting). A nearly finished nest of **Pipilo erythrophalmus** (Red-eyed Towhee).
- 18th. Contopus borealis (Olive-sided Flycatcher). 4 finished nests of Sterna plumbea (Black Tern). Fully finished nests of Cistothorus palustris (Prairie Marsh Wren). Ardea exilis (Least Bittern) building. Several finished nests of Xan-

thocephalus i. (Yellow-headed Blackbird) with eggs. Vast flocks of Pigeons flying north. Lunifrons (Northern Cliff Swallow) very abundant. Dendrocca castanea (Bay-breasted Warbler). Parang rubra (Scarlet Tanager) building. Reg. calandula (Eastern Ruby-crowned Kinglet). Crex carolinensis (Sora?) building. Gallinula galeata (Florida Gallinule) with nearly ready nest.

19th. Cistothorus stellaris (Short-billed Marsh Wren). A hybrid Helminthophaga (i.e. Vermivora, Warbler). Emb. Lincolnii (Lincoln's Sparrow) building. Several pigeon nests.

- 20th. Geothlypis Philadelphia (Mourning Warbler). Coccyzus erythropthalmus (Blackbilled Cuckoo). Warblers uncommonly abundant, all the early spring warblers abundant. Contopus borealis (Olive-sided Flycatcher). Vireo gilvus (Eastern Warbling Vireo). Vireo olivaceus (Red-eyed Vireo). Den. aestiva (Eastern Yellow Warbler). Geo. tricas (Northern Yellow-throat). Hir. riparia (Bank Swallow) constructing nests. I. Baltimore (Baltimore Oriole) with nearly finished nest. Mel. palustris (Swamp Sparrow) with nearly finished nest. 5 eggs of Pipilo (Towee) slightly bloodshot. Young nearly fledged of Turdus migratoria (Eastern Robin). A great abundance of Thrushes, etc., wagtails. Any amount of Lunifrons (Northern Cliff Swallow) nests under the eaves of the mill. Chrys. Pinus (Northern Pine Siskin). Zon. albicollis (White-throated Sparrow).
- 21st. A partially built nest of Grosbeak. White crowned finch. **Den. coronata** (Myrtle Warbler).
- 22nd. Eggs of Gall. Wilsoni (Wilson's Snipe). Eggs of King fisher. Caspian tern and lots of other tern on the lake.
- 25th. Ceader [Cedar] birds pairing. Eggs of Sterna (Tern), Ictero[cephalus] (Yellow-headed Blackbird) Nest. Wren, Porzana (Sora), and Colymbus tortuqua (Northern Loon) pairing. Geothlypis philadelphia (Mourning Warbler). Paranga rubra (Scarlet Tanager) building. Contopus borealis (Olive-sided Fly-catcher), [Contopus] Ric[h]ardsonii (Western Wood Pewee). Whitethroat. Sterna caspia (Caspian Tern).
- 26th. A great abundance of Snipes, such as Godwits, willets, blackbellied, ring, piping, and Wilson's plover, blackbellied, Bonaparte's, Least, Semipa, and pectoral sandpipers. Red, northern and Wilson's phalaropes, Turnstones, Caspian, Arctic, Wilson's and forster's tern. A large flock of terns left for the north. Bartram's tattlers fighting like ruffs. A large bird with white head and neck, speculum and part of primarys white, rest of body black. Yellowthroats building, several Warblers such as castanea (Bay-breasted), peregrina (Tennessee). Respectfully A. L. Kumlien. Wilson's Plover, Whitethroat. Yellowheaded [Blackbird] eggs.

Christmas Bird Count, 1943

Appleton. (riverbanks, lake fronts, open fields, hardwoods, city parks and streets, and cemetery). Dec. 27. Cloudy, sunshine at 3:30 p. m.; ground bare; no wind; temp. 32° at start, 34° at return. Two observers in one party. Total hours afield, 8½ (4 on foot, 4½ by car); total miles 56 (4 on foot, 52 by car). Mallard, 16; black duck, 205; American golden-eye, 850; American Merganser, 115; herring gull, 60; hairy woodpecker, 1; downy woodpecker, 9; blue jay, 2; chickadee, 27; white-breasted nuthatch, 10; brown creeper, 9; starling, 1; English sparrow, 100; evening grosbeak, 14; goldfinch, 13; tree sparrow, 2; snow bunting, 11. Total, 17 species, about 1445 individuals.—Mrs. Walter E. Rogers and Mrs. H. L. Playman.

Green Bay. (city and surrounding country; city and suburban streets and cemeteries 25%, bay and river shore marsh 20%, deciduous and evergreen swamps 20%, farmlands 10%, open hilly woodlands 25%). Dec. 19. Fair, temp. 29° to 37°; wind SW shifting to W, 20 to 25 m.p.h.; ground bare, bay and river frozen over. Fifteen observers in 3 groups. Total hours, 15 (on foot), total miles 20 (on foot). Ruffed grouse, 8; ring-necked pheasant, 1; herring gull, 8; mourning dove, 1 (J. B. K.); great horned owl, 1; screech owl, 1; hairy woodpecker, 1; downy woodpecker, 3; northern horned lark, 2; blue jay, 7; crow, 2; black-capped chickadee, 365; white-breasted nuthatch, 1; brown creeper, 1; golden-crowned kinglet, 11; ruby crowned kinglet, 3 (E. O. P.); starling, 98; English sparrow, 558; common redpoll, 14; goldfinch, 1; junco, 56; tree sparrow, 40; snow bunting, 35. Total, 24 species, 1223

individuals. Mrs. Andrew Weber, Mrs. Fred Garrett, Dorothy Ford, Grace Church, Mr. and Mrs. L. P. Works, Mr. and Mrs. R. P. Hussong, E. O. Paulson, Paul Romig, Elmer Strehlow, Earl G. Wright, W. A. Chilson, Bob Hall, J. B. Kendall (Green Bay Bird Club).

Madison—(lake shores on west side of town, fish hatchery and Yahara River; wooded hills 35%, marshland border 65%). Dec. 26. Partly cloudy; temp. 40° to 34° F.; no wind; ground bare; lakes and rivers frozen. Five observers together. Total hours on foot 3. Mallard, 533; black duck, 504; baldpate, 1; red-tailed hawk, 1; ring-necked pheasant, 7; (?) gull, 2; rock dove, 8; belted kingfisher, 2; red-bellied woodpecker, 2; red-headed woodpecker, 2; hairy woodpecker, 2; downy woodpecker, 7; blue jay, 49; crow, 5; chickadee, 20; white-breasted nuthatch, 5; starling, 60; English sparrow, 626; red-wing, 300; bronzed grackle, 3; cardinal, 2; purple finch, 18; redpoll, 1; goldfinch, 28; junco, 28; tree sparrow, 54; song sparrow, 2. Total, 27 species, about 2,272 individuals, H. P. Thomsen, Paul Luebke, Francis Jones, Mr. and Mrs. N. R. Barger.

Madison. (around Lake Mendota on foot excepting area within city limits; wooded hills 65%, lakeshore marsh 10%, farmlands 25%). Dec. 24. Partly cloudy; temp. 5° to 14° F.; wind SW, 15 m.p.h.; ground bare; lakes and rivers frozen. Two observers together. Total hours 9. Mallard, 4; black duck, 2; canvas-back, 1; red-tailed hawk, 1; marsh hawk, 1; ring-necked pheasant, 7; herring gull, 1; rock dove, 9; barred owl, 1; kingfisher, 1; red-bellied woodpecker, 2; red-headed woodpecker, 1; hairy woodpecker, 2; downy woodpecker, 8; prairie horned lark, 22; blue jay, 59; crow, 173; chickadee, 74; white-breasted nuthatch, 10; red-breasted nuthatch, 1; brown creeper, 11; goldencrowned kinglet, 8; starling, 1; English sparrow, 269; red-wing, 1; cardinal, 6; purple finch, 12; redpoll, 31; goldfinch, 42; junco, 60; tree sparrow, 40. Total, 31 species, about 861 individuals. Francis Jones and N. R. Barger.

Milwaukee. (along the Menomonee River including Jacobus Park, Hoyt Park, and the Menomonee River Parkway to Lover's Lane Road). Dec. 25. Clear; ground bare; river frozen; wind SW light; temp. 23° to 36°. Four hours on foot. Red-breasted merganser, 2; red-tailed hawk, 1; Hungarian partridge, 7; pheasant, 3; herring gull, 3; kingfisher, 1; hairy woodpecker, 1; downy woodpecker, 3; blue jay, 5; crow, 9; black-capped chickadee, 15; white-breasted nuthatch, 5; brown creeper, 4; winter wren, 1; golden-crowned kinglet, 4; starling, 35; English sparrow, 30; cardinal, 4; slate-colored junco, 12; tree sparrow, 8. Total, 20 species, 153 individuals. J. N. Woppert.

Milwaukee. (Lake Park along the shore to Juneau Park. Southshore Park, Whitnall and Grant Parks). Dec. 19. Clear; temp. 35° to 40°; wind S, 50 m.p.h.; ground bare. Four observers together. Total hours 8. Ten miles on foot, 26 by car. Mallard, 300; black duck, 125; pintail, 2; green-winged teal, 1; bufflehead, 7; American golden-eye, 150; American merganser and red-breasted merganser, 1,000; red-tailed hawk, 1; Hungarian partridge, 4; pheasant, 6; herring gull, 460; ring-billed gull, 75; screech owl, 1; short-eared owl, 1; downy woodpecker, 2; crow, 15; chickadee, 9; robin, 1; starling, 75; English sparrow, many; redpoll, 10; junco, 3; tree sparrow, 2. Total, 28 species, about 2382 individuals. Rev. H. L. Orians, Gordon Orians, Don Bierman and Walter Mueller.

Stoughton. (east side of Yahara River to Skallen's Bridge, then west side of river to Lake Kegonsa; return across open fields, Turner's Woods. Open farm land 45%, deciduous farm woodlots 50%, sedge marsh 5%). Dec. 19. Fair; temp. 28° to 40°; wind W to NW, 5-20 m.p.h.; ground bare and frozen; all water frozen except river at lake outlet, 2 observers together. Total hours, 8 on foot; total miles, 15 on foot. Mallard, 6; black duck, 1; red-tailed hawk, 2; marsh hawk, 1; herring gull, 6; red-headed woodpecker, 1; downy woodpecker, 5; blue jay, 28; crow, 21; black-capped chickadee, 16; white-breasted nuthatch, 2; starling, 3; English sparrow, 2; goldfinch, 1; junco, 6; tree sparrow, 74. Total, 16 species, 175 individuals. (Absence of pheasants unusual.) James B. Hale, Arthur Scheldrup.

Summary: The Christmas bird count was restricted to southeastern Wisconsin this season with about thirty people taking part in seven counts. These counts were made from Dec. 19-27 with starting temperatures varying from 5° to 40° . Thus the totals observed could be expected to differ, the largest list of species being 31. The combined total of species seen was 53, ten of which was waterfowl. Due to open water habitat, Milwaukee produced the largest number of individual birds observed, 2,382.

All counts included the chickadee, tree sparrow, herring gull, starling and English sparrow. Unusually late dates were secured on the following: Ruby-crowned kinglet, 3 (Green Bay); winter wren, 1 (Milwaukee); bronzed grackle, 3 and song sparrow, 2 (Madison); mourning dove, 1 (Green Bay); and robin, 1 (Milwaukee).

Of the northern visitors, evening grosbeaks, 14, appeared in Appleton; snow buntings at both Appleton and Green Bay; and redpolls were listed on four counts. Also of

interest were: Redwing, 301 (Madison); horned larks at two places; canvasback and baldpate in Madison; and pintail, bufflehead and green-winged teal in Milwaukee.

Large concentrations of birds were counted: Crow, flock of 173 (Madison); goldeneye, 850 (Appleton); chickadee, 365 (Green Bay); herring gull, 460 (Milwaukee); American and red-breasted merganser, 1,000 (Milwaukee); and mallard and black ducks, 1,000 (Madison).

A Review of 1943 Field Notes for Southern Wisconsin

By MURL DEUSING Milwaukee Public Museum

January produced a fair flight of snowy owls for southern Wisconsin. Roughlegged hawks were more common than usual and some reports on wintering marsh hawks, sparrow hawks, red-shouldered hawks, and a Cooper's hawk were made. Among the more unusual wintering birds were reports on the black-crowned night heron (most unusual), gadwall, green-winged teal, kingfisher, mourning dove, brown creeper, cedar waxwing, white-throated sparrow, and song sparrow. Reports on purple finch, horned larks, and snow buntings indicated their appearance in more than usual numbers. Only one report for the Bohemian waxwing came in. A flock of Chukar partridges were reported for Dane County, indicating at least a temporary establishment of this exotic for that county.

February continued to produce reports of snowy owls and rough-legged hawks in more than usual numbers. A movement of prairie horned larks, beginning in late January, reached its peak in early February. An early record was turned in for the killdeer on the 5th. Crows began their migration a little early, the movement becom-

ing heavy before the end of the month.

March brought cold and unseasonable weather and the migrations bogged down. Waterfowl flights remained normal (the biggest flights coming through at the end of the month) but migrations of insect eating birds generally were a week or two late. A tendency to remain in large flocks was noted of many of the early spring arrivals with large flocks of killdeers, meadowlarks, song sparrows, and robins reported. The Bohemian waxwing and evening grosbeak were reported for the month. Among the rarer birds the tufted titmouse was seen in several parts of the area and the Carolina wren was reported for Milwaukee County on the 31st (Simmons). On the 31st an

early record was produced for the olive-backed thrush by Mueller.

April continued to remain cool and disagreeable and migrants tended to arrive later than usual. Waterfowl migrations, however, remained normal with the big flights of Canada geese and whistling swans coming in during the first part of the month. An interesting mixed flock of Hutchin's geese, Canada geese, with a lone blue goose, and a snow goose was reported by Zimmerman for the 14th. Other reports of small flocks of blue and snow geese came in during the month. A number of uncommon waterbirds were reported including the Holboell's grebe, eared grebe, and white pelican. The evening grosbeak and snowy owl were reported again for this month. Paradoxically enough, despite the general late season, three early arrival records were established with the oven-bird for the 1st, the cliff swallow for the 13th, and the northern yellow-throat for the 24th. Bewick's wren (rare) was reported for the 7th (Bussewitz).

May brought continued unseasonable weather and generally late arrivals. A number of interesting reports of uncommon birds were sent in. Western willets, dowitchers, yellow rails, and egrets were reported for the month. Among uncommon warblers were reports on hooded wabler, cerulean warbler, blue-winged warbler, Kentucky warbler, prothontary warbler, and Brewster's warbler (Koehler and Robbins). Also reported among the uncommon birds were the turkey vulture, acadian flycatcher, yellow-bellied flycatcher, orchard oriole (a number of scattered reports amounting almost to an invasion), Philadelphia vireo, Harris sparrow, clay-colored sparrow, and the rare LeConte sparrow. Correlating with the late arrival of many birds this month were late departures for Lapland longspurs, pine siskins, and purple finches. Early arrival was

established for the olive-sided flycatcher on the 6th.

June ended the migration and brought a consequent slump in bird reports. It was interesting to see that the orchard oriole invasion of May (if it may be called that) left permanent results in several nesting records in Milwaukee and Dane Counties. The egrets previously reported for May in the Horicon marsh were found nesting. Two nests were found, one with eggs and one with young. The redhead duck was also found nesting in Horicon. A late nesting screech owl was reported for the 28th.

The yellow-breasted chat was reported for Milwaukee.

July did not turn up much of interest. A prothontary warbler was noted in Wood County, an interesting northern limit record. A male ruddyduck and three hooded mergansers were noted in Vernon County (Miss Morse). A cerulean warbler was found feeding young in Waukesha County.

August brought in several records of rare birds. Most interesting was the specimen of a brown pelican taken by Schorger on the 1st. This is the second brown pelican to be taken in the state. A white-eyed vireo was observed in Dane County (Robbins). Other interesting records for the month include the American Knot and the yellow-breasted chat. The fall warbler migration began on schedule during the end of the month. An interesting late nesting record for the mallard was reported by Mueller for the 22nd.

September produced little of interest. A flock of American egrets was noted in Horicon but no wide-spread flight of the egrets usually seen in the fall was reported. The dowitcher was reported for Horicon on the 10th. The first and last of the month saw heavy flights of nighthawks. The fall warbler migration hit peaks on the 22nd and 24th. A hooded warbler was reported for Milwaukee County (Corwin).

October gave us several late records. The orchard oriole was observed in Milwaukee until the 14th, the latest date on record. Another late record was established with the report of the Canada Warbler for the 10th. A heavy goose flight was observed between the 23rd and 25th.

November brought mild weather and more late records. A flock of 17 white pelicans was observed at Horicon on the 7th and a flock of 37 in Milwaukee on the 8th. These are the first November dates on record and some of the largest flocks reported in recent years. Late records were established for the hermit thrush on the 3rd and the red-eyed towhee on the 19th. Other birds staying later than usual were the kill-deer, brown thrasher, and white-throated sparrow. Many northern visitors were reported—interesting among them were: Goshawk, evening grosbeak, and pine grosbeak. Many redpolls were reported, indicating greater numbers than usual.

December continued mild and gave us some interesting wintering records. Among the unusual records were those of a catbird (crippled) and a mockingbird wintering at Madison. Other uncommon winter residents were the mourning doves (several reports on these), kingfisher, song sparrow, robins, rusty blackbird, and red-winged blackbird. A whistling swan was reported for Milwaukee on the 19th (Jones). For December records made by the Christmas count, please refer to the summary of the count, page 17 in this issue.

Random Notes from a Flambeau River Diary*

By E. M. DAHLBERG Ladysmith, Wisconsin

Winter bird life in the woods passes almost wholly unnoticed by the standard variety of woodsman. Occasionally one may be conscious of the company of the fearless "Whiskey Jack" (woodsman's term for Canada jay). He may even notice the solemn flight of a raven and mistake it for a crow. But to the solitary Saturday chopper, bird visitors are especially interesting.

Birds seem to respond more readily to a little kindness and consideration than any other class of animal life. A wood pile, particularly if it contains occasional chunks of "over-ripe" wood, is an irresistible temptation to woodpeckers. I have seen both hairy and downy woodpeckers inspecting the half-rotted chunks of ash and popple. I appreciate having these two species of **Pici** together as size comparison is the easier way to tell them apart. The pileated woodpecker is among those vanishing species probably doomed to pass into eternity with the passenger pigeon, great auks and heath hens. My wood pile attracted a lone male of this species in the late winter of 1932. His slow ponderous movement and great size seemed pitiably inadequate in this modern environment of sudden death. He was fond of the berries of the woodbine as well as of the borers and grubs. I left every chunk of borer laden wood outside as long as this rare visitor remained in the neighborhood. He left in early April and I have never seen his kind since.

^{*}These notes have been taken over a period of 25 years in Rusk county, at Cedar Camp, Slabshack, and the Town House which are the major family possessions.

Today, Sunday, January 15, 1940, I have been sitting a little while in my living room overlooking the snow-covered Flambeau. In the past fifteen minutes there have been three pine grosbeaks in the spruce outside the window, and three cedar waxwings busily feeding in the barberry hedge. A chickadee was busy on the suet on my wood pile during the dinner hour at noon and a flock of six or seven evening grosbeaks have come and gone in the sumacs. Here in town in spite of a dense population of English sparrows and cats, my home is honored by a colorful variety of bird guests the year around. This is no mere accident, however; I keep the premises free of English sparrows and cats.

I have found a very simple and effective procedure for sparrow control. Since they are permanent residents, they are always on hand to occupy the choice sites in the vines and eaves before the desirable migratory birds have arrived. I allow them to fill every available space with their filthy clutter of straw, string and paper, and to proceed with their prolific procreative activities until they have laid their first clutch of eggs. Then, with ladder and bushel basket, I collect the entire accumulation and burn it, eggs and all. A complete house cleaning at this stage of the game usually discourages them entirely and after a few hours of violent vocal abuse they generally leave the premises for the season. By this time, the catbirds, robins, phoebes and orioles are at hand to take possession, which they do—even if not without some disagreement among themselves.

- Usually, I subject trespassing cats to some form of capital punishment. The Flambeau river, being both convenient and humane, is employed most frequently. Liberal plantings of evergreens for protection, and the fruit bearing trees and shrubs for food, complete the requirements for year-round occupancy by desirable birds. The Japanese barberry hedge furnishes about a peck of berries for winter feed. The waxwings enjoy these all winter, and robins have flourished on this fare as late as January 10th. One winter a ruffed grouse made its bed under the snow and took its meals in this hedge for several weeks. The mountain ash, highbush cranberries, snowberries, sumacs, woodbine and the ash and boxelder trees furnish nourishing winter food to all the fruit and seed eaters. This is perhaps the only legitimate reason for tolerating boxelder trees in a landscape plan, but it is a very good reason! Evening grosbeaks are very fond of the ash and boxelder samaras (winged seeds) and will seldom leave the immediate community of such trees until they have eaten every seed.

Summer residents around my house include Baltimore orioles, catbirds, robins, hummingbirds, phoebes, chipping sparrows and yellow warblers. Rose-breasted grosbeaks, bluebirds and tree swallows have honored us intermittently but are not at all regular in making their appearance. I have not mentioned the house wren; it is not necessary. Sometimes I have felt almost inclined to chase them away with the English sparrows.

This little house on the Flambeau was certainly the scene of the first bird-banding done in northcentral Wisconsin. Wallace B. Grange was doing unusual work in Biology and other subjects in Ladysmith High School about 1921. I succeeded in securing a bird-banding permit for him, although it required extraordinary recommendations to overcome the handicap of his tender age. He banded the early summer brood of the phoebe family over the east porch.

Phoebes have never failed us in these twenty years. We can keep track of how long it is since we painted the house by the number of stories in the phoebe nests under the eaves. There is only about a six inch clearance between the roof and the timbers that support it. Here the phoebes built for three consecutive years. It would have been impossible for them to get in and out of a fourth story on the same nest, so there was built in due time a two story nest beside the old three story one. I left these unsightly clumps of mud and straw under my roof for several years in order to be able to verify my three and two story bird story.

In the golden mockorange, a pair of yellow warblers labored merrily and completed a beautifully quilted nest. The yellow birds in the golden foliage of the shrub seemed to be a masterpiece of protective coloration. But it was not enough. Within a few hours after the first egg was laid, some skulking enemy discovered the nest, destroyed the egg and disarranged the entire lining of the nest. The warblers were not seen for several hours, but late that afternoon they were discovered dismantling the nest and reconstructing it piece by piece in a wild shrub on a vacant lot across the street*. This is the only instance of house-moving by birds that I have ever wit-

^{*}This incident of nest moving was observed also by Evron Davison, who, like Wallace Grange, was one of the Biology students in the author's classes. Both have since made valuable contributions to Wisconsin ornithology.

nessed. Perhaps they were somehow influenced by the "new deal" relocation program which was being launched just at that time. The following summer, however, they returned to the mockorange, or at least a pair of yellow warblers occupied the same identical crotch. This time the attempt was successful, but not without my aid, for I ejected two cowbird eggs that had been left by that female imposter whose favorite victim is the little yellow warbler.

* * * * *

Passing from the Flambeau house to the Cedars, if it is winter, one is apt to kick out a couple of those avian bombs, the ruffed grouse. In all my life I have never had one of these snow mines explode precisely when I was expecting it, though I have walked among them now for some 40 winters in these northern woodlands. It is common knowledge among the rural boys of this northcountry that the partridges or ruffed grouse dive into the snow on cold winter nights and remain buried there sometimes for two days and nights, enjoying all the comforts of an igloo without the preliminary labor. It is also common knowledge that they feed almost exclusively in winter on the buds of aspens, birches and other hardwoods, and probably not at all on any food buried under the snow as some folks, including some naturalists, seem to believe.

The chickadee might be called the house wren of the winter landscape. There is no bird of my acquaintance with a more friendly and trusting disposition. At the Cedar camp, where they take dinner with me at the table, they prefer butter above all other fare. One was tempted one day by a piece of bacon in the frying pan on the stove. It actually made a safe landing and demonstrated that chickadee feet are immune to injury by hot bacon grease. It later took its fill of crisp bacon from my sandwich even while I was eating from the other side of the same. My chickadees are so accustomed to being fed when I come to the woods that they follow me around the lot from tree to tree and peck foolishly at the sawdust and chips of my labor as if they expect everything I touch to turn to butter. It is a rule in the social etiquette at my camp that all guests must share their lunch with the birds. Here are a few entries from the camp register taken at random:

"Jan. 6, 1935-Jim Michaelsom and Rosa-'We fed the birds'."

"Feb. 9, 1935—'Chickadees came to eat butter out of my hand; first time I have had that experience'—Frank Le Fevre."

The blue jays keep their distance, but not too far for their raucous cry to be heard. I would not be without their color in my winter woods, yet I have no doubt they plunder and make off with much of the provender cached by the butter-fed chickadees. The incongruous crackle of the raven ranges from a crazy cry resembling that of a loon to the characteristic hoarse caw too low to be a crow. I have been so deceived by the variety of their calls that I once mistook a raven call for that of a human voice and answered it loudly in the wilderness solitude just as the dusky deceiver sailed solemnly overhead. If my ears were red, at least no one saw them.

Large companies of the little redpolls drift through the cedar tops and eat their fill of the seeds. I have had them every winter at the Cedars, but only two miles away at the town I have never seen one. The goldfinch, known to many people by the inappropriate name of "wild canary," is a puzzle to many amateur naturalists. With the approach of winter, these lovely black and yellow seed eaters of our summer lawns seek the shelter of the nearby evergreen woods, where by some magic they change their coats to an olive drab, but retain the telltale twitter and the dipping flight, so that the color disguise is inadequate to mask the true identity of these little gregarians in the winter woods. They always seem to hurry out of the range of one's close observation as if they sensed our suspicion of their identity.

(Concluded in Next Issue)



THE SIXTH ANNUAL CONVENTION WILL BE HELD IN MILWAUKEE, FRIDAY and SATURDAY, APRIL 22-23

BY THE WAYSIDE . . .

A cardinal banded by Mrs. F. L. Hook, South Milwaukee, May 8, 1940, was found dead May 23, 1942 in the same vicinity by R. Wander.

Pileated Woodpecker In Milwaukee County. On March 25, 1944, while birding in a small stand of hardwoods just beyond the northern extremities of Whitnall Park, I saw a pileated woodpecker. I called Walter Mueller, Reverend and Gordon Orians, who were with me at the time, over to verify the identification. We could see all of the characteristic markings of the bird while it was feeding and in flight.

Some of the trees in this stand are fairly large and a few of them showed unmistakable evidence of a large woodpecker working there. Before I found the bird itself, I found a large hole about forty feet up in an oak that might be one of the birds' roosts, possibly even a nesting hole. One dead stump about twenty feet high and completely stripped of bark seemed to be one of the favorite workshops of the bird.— Don Bierman, Milwaukee.

Black Tern Migration Peak. In the spring of 1943 I drove to and from work at the Badger Ordnance Works by way of the ferry at Merrimac across Lake Wisconsin. On May 15, seemingly for the first time that season, I saw black terns over the lake. They were too plentiful to count. Apparently there were none when I crossed on May 16. May 17, however, dawned-with much cloudiness and wind that created large waves on the lake. There were black terns as far as the eye could reach in any direction, all moving steadily upstream, apparently feeding. The flight orbit was compressed into a twenty-foot stratum from the surface of the lake upward. The number dwindled daily thereafter until practically none were observed.—H. L. VanNess, Lodi.

Attracting Bohemian Waxwings With Bittersweet. A pair of Bohemian waxwings came Jan. 20 and ate bittersweet berries. When a large bunch of berries was placed near the living room windows eight more birds joined them. These came daily until Feb. 2, when they did not return until Feb. 13. On Feb. 14, after feasting on the berries, they sat on the windowsill in the warm sunshine all afternoon.—Mrs. T. J. Peterson, Waupaca.

Downy Woodpecker Eats From The Hand. A cardboard cover suspended from a tree limb near the kitchen door had been kept filled with table scraps all winter and spring. One day when it was empty, I went out to fill it. When I held out a spoon filled with food the downy ate from it.—Mrs. T. J. Peterson, Waupaca.

Repairing The Great Horned Owl's Fractured Leg. An owl which was brought to me suffered from a compound fracture of tibiotarsal joint with medium grade infection. It was therefore indicated to treat the involvement conservatively: Sulfathiazol powder was used externally and a conservative splint dressing applied. The infection subsided the fifth day. X-ray showed fracture of the tibia with the distal part badly dislocated. In view of the fact that predatory birds, due to the hyperactivity of the suprarenal gland, go easily into shock, I considered for a while amputation, since the leg would have been useless and even a hindrance to the bird. But after a study of the X-ray I felt that bloody reposition was quite feasible. This was done under intravenous nembutal anaesthetic, and a good adjustment of the joints affected. The limb was then put into a stiff steel splinting temporarily. The bird was then able to use all of its claws. There was a very good function of the leg and it appeared that the strength would not suffer. Due to the extreme tameness of the owl it was released in a large timbered area.—Dr. B. L. von Jarchow, Racine.

An Experiment with Chickadee Feeding. On the afternoon of March 22 I decided to watch a chickadee feeding on sunflower seeds just outside my window. I got the stop watch and timed his visits. He came 25 times in one hour and each visit averaged 3.76 seconds. One visit was 18.50 seconds but this was not counted in the average because it was so different. At this visit he ate two seeds and sat on the edge of the helf and cracked them. This was the only time he attempted to crack them at the feeder. The other times he took them to a nearby elm and ate them there. Assuming that it was the same bird, he ate 26 seeds in one hour. Next I cracked 26 sunflower seeds and weighed them. They weighed 27 grains, which is practically 1/18 of an ounce. T. S. Roberts gives the weight of a chickadee as .38 ounces. If we care to assume that a chickadee eats from five to six such meals in one day, it is not hard to believe that he eats his own weight daily.—Mrs. Arthur Koehler, Madison.

The Convention Program

April 22 and 23, 1944

Milwaukee, Wisconsin

SATURDAY, APRIL 22, 1944

- Afternoon Meeting—Held in the Auditorium of the Milwaukee Gas Light Company at 626 E. Wisconsin Ave.
- 1:00 P. M. Registration (registration fee 50c)
- 2:00 P. M. Address of Welcome by William McKern, Director Milwaukee Public Museum

How Ancient is the Art of Bird Banding, by Clarence Jung, Milwaukee 10 minutes

Preliminary Studies on the Ecology of the Alder Flycatcher at the University of Wisconsin Arboretum, by Robert A. McCabe, Arboretum Biologist, University of Wisconsin 30 minutes

- 3:15 P. M. Business Meeting
- 4:30 P. M. Adjournment

Evening Meeting—Held in the Milwaukee City Club at 756 N. Milwaukee Ave.

6:30 P. M. Dinner

Toastmaster-Rev. Howard D. Orians

Annual Picture and Painting Auction

Speaker of the evening—W. F. Kubichek of the United States Fish and Wildlife Service presenting his all color motion picture film: "Haunts of the Hunted"

SUNDAY, APRIL 23, 1944

- 7:00 A. M. Early Morning Bird Hikes in Jacobus Park, Lake Park, and Riverside Park
- 2:00 P. M. **Afternoon Meeting**—Held in the Auditorium of the Milwaukee Gas Light Company at 626 E. Wisconsin Ave.

A Color Motion Picture Program featuring Wisconsin Photographers

The Black Tern and the Bittern
by Paul W. Hoffman, Milwaukee . 30 minutes
The Whistling Swans of Green Bay

by Earl G. Wright, Neville Public Museum, Green Bay

by Murl Deusing, Public Museum, Milwaukee 30 minutes Some Bird Adventures

by Rev. Howard L. Orians, Milwaukee 30 minutes

A Flock of Hoary Redpolls in Wisconsin

On January 6, 1944, a flock of about twenty hoary redpolls (Acanthis hornemanni exilipes) flew over my house as I stood on the porch. Two lit in our maple tree and I instantly suspected them to be the hoary redpoll. After getting my glasses I found the flock in my backyard and that of the neighbors feeding on the grasses that had seeded. For ten minutes I had a chance to go over the flock pretty thoroughly at a distance sometimes of ten feet. They were quite tame and hungry, feeding greedily on the culled out grass seed, and entirely neglected my feeding station food of mixed grains, seeds and crumbs. They were mostly young birds of the year, and females, but three were adult males. They kept moving about actively while calling in a note quite different from that of the common redpoll, which I have recorded annually in spring and fall, except in 1924, in New London. The notes were like the tinkling of small pieces of ice in a glass of water, very high pitched but penetrating. After feeding the flock arose and flew westward.

-Rev. Francis S. Dayton, New London.