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The PASSENGER PIGEON

VOLUME IX *July, 1947* NUMBER 3



YOUNG MIGRANT SHRIKE

PHOTO BY GEORGE PRINS

A MAGAZINE OF WISCONSIN BIRD STUDY

Published Quarterly By

THE WISCONSIN SOCIETY FOR ORNITHOLOGY, Inc.

NEWS . . .

Mr. Milton D. Thompson, museum director of the Minneapolis Science Museum Society, informs us that a pair of Carolina wrens with four young were found between Brownsville and Reno on August 2. This is not far from La Crosse and the record was sent to us because Dr. Gatterdam of that city called attention to a wren of this species nesting in his yard. The record near Brownsville is in southeastern Minnesota.

The Christmas Bird Count will be taken this year as usual. Since most records of this kind have been made in southeast Wisconsin in the past, it is hoped that some of our observers in northern and western Wisconsin will get on the band wagon this year.

The photographs of the passenger pigeon monument printed in our last issue were taken by Mr. Forest R. Poe of Milwaukee.

They turned out so well that both views have been reproduced on post cards.

Field notes for the summer season, June 1 through August 31, should be sent to the editor of field notes immediately. Your promptness will help us to get the magazine out on schedule again.

Mr. W. E. Scott extends thanks in behalf of the society for donations received for the passenger pigeon monument. He states that they are still coming in occasionally, and more are welcome.

Below, you will find some Christmas gift suggestions offered by the society. Naturally the list is incomplete as we can publish but a portion of our stock at one time. Please order anything needed, however, although it is not listed. We plan to supply all requirements of the bird student at prevailing prices, and we pay postage. Order from N. R. Barger, 4333 Hillcrest Drive, Madison 5.

CORRESPONDENCE FOLDERS

Audubon Bird Notes (20 folders, 20 envelopes), per box.....	\$1.00
Henry B. Kane—Sepia Prints (12 folders, 12 envelopes), per box.....	.85
Choice of subjects: Birds, Animals, or Flowers. Specify subject desired.	

Aluminum Coasters Decorated with Ducks (set of 8 in box), per box.....	\$1.00
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Playing Cards—Petit Point Playing Cards with Color Picture of Bird, 2 packs in colorful gift box.....	1.75
Bird Songs on Records (set of six records in an attractive album, songs of 72 birds), new.....	8.50

BOOKS

Peterson, Roger Tory. A Field Guide to the Birds (Eastern), new.....	\$3.50
Printed in 1947, this new edition has more than 500 illustrations in color, and many other added features.	
Pough, Richard H. Audubon Bird Guide: Eastern Land Birds, new.....	\$3.00
Printed in 1946, this guide illustrates all land birds in color. 275 species are pictured.	

BOOKS OF INTEREST TO CHILDREN

Travelling With the Birds. By Walter Alois Weber. With color plates by the author. Size 10x12.....	\$1.50
Birds at Home. By Jacob Bates Abbott. With color plates by the author. Size 10x12.....	\$1.50

PICTURES IN COLOR BY THE SET

Travelling with the Birds. Weber. (Set of 12 pictures in color).....	\$.60
Birds at Home. Abbott. (Set of 12 pictures in color).....	.60
Wild Animals. Weber. (Set of 12 pictures in color).....	.60

MEMBERSHIP IN THE SOCIETY

The gift of a year's membership in the Wisconsin Society for Ornithology with its subscription to The Passenger Pigeon, will be appreciated by any bird friend.

THE PASSENGER PIGEON, official publication of The Wisconsin Society for Ornithology, Inc., is published quarterly in Madison, Wisconsin. Classes of membership and annual dues: Active \$1.50 (Students under 18 years \$1.00). Sustaining \$5.00. Life \$50.00. Patron \$100.00 or more. At least \$1.25 of each annual membership is set aside to cover subscription to The Passenger Pigeon. Send membership dues to the treasurer, Harold C. Wilson, Ephraim, Wisconsin. Send manuscripts to the editor, N. R. Barger, 4333 Hillcrest Drive, Madison 5, Wisconsin.

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The Goshawk

By FRANCIS ZIRNER

During my seventeen years of residence in the wilderness of northern Wisconsin I saw this fine, bold, and daring predator upon many occasions, especially in winter. My first real acquaintance with it and the opportunity to study it at leisure, however, came in the beginning of summer, 1933.

While on a field trip through the extensive, heavy hardwood and mixed timber surrounding our log cabin and stretching for miles in every direction, I heard suddenly a loud, angry **keek, keek, keek, keek, keek**. At the same time something struck me on the head from behind, knocking my cap off. In the semidarkness, caused by the dense foliage, I saw a dark, shadowy form pass with lightning speed above my head and disappear among the leaves.

For a moment I stood bewildered not knowing what had happened, but when I heard the angry **keek, keek, keek, keek** again, and saw a large bird with blazing, blood red eyes, bearing with unbelievable speed at me, I quickly ducked. I realized that I was near the nest of a hawk and that it was the goshawk, the most fierce, brave and reckless predator of the northwoods—and, at the same time, the rarest of all. The bird passed above my head and alighted on the lower limb of a big sugar maple about two hundred feet away. Getting myself a stick for protection, I scrutinized the neighboring trees for the nest. Of course I had no intention of striking the bird, but when the hawk, screaming at the top of its voice, its eyes ablaze with fury, flew at me again, I raised the stick which the bird dodged. Though knowing that the nest could not be far away, it took a while before I located it in a crotch of a giant yellow birch, next to the tree trunk about thirty-five feet above the ground. I saw one nearly fully grown young at the rim of the nest, and, after some search, three others among the foliage of this and a neighboring tree. While thus engaged, I was attacked again and again by the old bird, which, after a few minutes was joined by another, probably the male. Swinging the stick above my head, I was able to keep the attacking birds at a respectful distance. Not wanting to frighten the birds unduly, I went home, while the hawks followed me to the road, screaming.

Next day when visiting the nest again I was attacked so unexpectedly by the angry bird, that it not only knocked my cap off, but hit me so severely on the head that it drew blood, and I felt the swelling fully two weeks after. A few days later, however, the young hawks had become sufficiently strong to leave the immediate vicinity of the nest and began straying with the parents through the neighboring woods.

Yellow Birch Preferred As Nesting Site

Perhaps it would not be amiss to say here that in our neighborhood, the northwestern corner of Rusk county where the yellow birch (*Betula lutea*) abounds, the nests of the majority of our predators are constructed in yellow birches. This is probably due to the fact that this tree abounds



IMMATURE GOSHAWK

PHOTO BY C. P. FOX

in warty protuberances, often many, which in some specimens grow to an enormous size. A cluster of twigs and small branches, or several large limbs, growing from the protuberance or above it form a basket-like container, in fall usually full of leaves, appear so predisposed for the building and camouflaging a nest, that one is not surprised if the various predators prefer this tree for a temporary home and cradle. The next tree favored by the predators is, strangely enough, the quaking and the large-toothed aspen (*Populus tremuloides* and *P. grandidentata*). Among the predators nesting in aspens the most common is the Cooper's hawk (*Accipiter Cooperi*) and the broad-winged hawk (*Buteo platypterus*). The coniferous trees, growing singly and in groups among the hardwood timber and in aspen groves, however, are favored the least of all (except by the crows which do not hesitate to nest in the usually low, wide branching crowns of both the white and the red pine, and the hemlock). When the dense green crown rests on the top of a tall, branchless trunk, well hidden among the foliage of other trees, only then is the tree considered safe enough to build a nest in. How rarely this actually happens is evident from the fact that, in my very extensive ramblings in the northern Wisconsin woods, I came upon such a tree containing a large though unoccupied nest only twice. Tall, gigantic pines and hemlocks, which stretch their dark green crowns high above other trees, whether standing singly or in small groups, are preferred as watchtowers. As nesting sites they are not utilized by any. Although the most abundant, large, tall, often gigantic, trees in our neighborhood were several species of maple,

oak, elm, white ash, basswood (*Tilia glabra*), with many unusually large ironwood (*Ostrya virginiana*), bitter hickory (*Carya cordiformis*), and butternut (*Juglans cinerea*), I have never found a nest of a bird of prey or even of a crow in any one of them. Needless to say, I am speaking here of upland woods and not of the dense coniferous thickets of the sphagnum bogs, where the ecological conditions differ considerably.

After leaving the nest the young hawks remain a few days at or near the nest tree, then they are led a little further from the nest daily by the parents. At this period the young have attained an age of about fifty days, but it takes another six weeks or longer before the young hawks leave the thirty to forty acres surrounding their nest tree unless unduly disturbed. One well acquainted with their mode of living and their habits will find them day after day in the same tract of heavy timber, perhaps only a few rods or less from the tree or trees occupied by them the day before.

If the woods is intersected by a road—as in our case a rough and neglected town road—the young hawks remain on the side where they were hatched, making no attempt to cross the road, although the old birds fly freely back and forth. All these weeks and even later the old female was ready to attack anything and anybody coming near her young. At times she was flying after our cats, which, unless I chased them back in time, followed me everywhere. Diving at them, sometimes alone, sometimes in the company of her mate, she attacked them until they beat it, which, after an initial but unsuccessful attempt to fight back, they did as speedily as possible. After several such encounters, however, the cats, fearing their fierce adversary, could not be induced to follow me there again.

The young hawks most likely would have remained undetected, had the mother not always flown like a demon at my head, while screaming at the top of her wild, shrill voice until I was afraid to go near. Of course not afraid of the bird, but of her loud and angry screaming, which, when heard by a casual passerby, could have betrayed the whereabouts of the young hawks. Fortunately for the young she was absent part of the day.

Young Are Noisy

To my great consternation and fear for their safety, moreover, the young themselves did not keep quiet. Left alone and lonesome, or perhaps hungry, they soon began to complain with low, pitiful, plaintive wails, which grew in frequency and intensity with the prolonged absence of the old birds. The male was rarely seen during this period. Although the young hawks perched during the day as much as fifty to two hundred feet from one another and usually not more than from six to twenty feet above the ground, they spent the nights and periods of heavy rain with the mother hawk, huddled together among the dense foliage some fifty to seventy feet above the forest floor. By about the first of August the area was abandoned. The young hawks, led by the old, began to stray further and further, and were not seen so often or detected so easily. The old female became quiet and did not rush to their defense when I came near the young. A glimpse of one of the old birds or of an occasional young was all I could get unless I searched for them especially. In this manner the family hunts together until the end of September. After

that and during the winter only an occasional solitary specimen is seen.

Knowing of their rarity as breeding birds in northern Wisconsin, I thought of reporting my find to the Milwaukee Public Museum, in case the birds would return. During the winter of 1933-4 I saw a solitary goshawk upon many occasions, sometimes near our woodland cabin, then again three to four miles away, but I had no way of knowing whether it was one of our birds. Generally I saw it perching in an alert, erect pose on a lower limb of a solitary red pine, often not far from a farm, undoubtedly surveying the neighborhood for possible prey. At times, however, I only secured a glimpse of the bird as it darted with great speed across the road or opening to disappear among the timber.

Depending upon the weather, the birds return on or about the twentieth of March, and, if the weather is reasonably pleasant, begin immediately with their nuptial flight, which takes place from about ten to a maximum of forty feet above the tree tops. If this really is the nuptial flight, it is not spectacular. The birds fly silently above or near the nest tree, covering an area of from two to three acres. At rare intervals the male shoots up slantingly to a height of from thirty to forty feet above the tree tops and, depending on the position of the female, comes down the same or the opposite way, then shoots up in the other direction, describing in this manner a figure of an inverted arch; but this all is done without uttering a sound. Most of the time, however, the flight consists of a wavy gliding back and forth, which brings the pair sometimes close together, then again carries it far apart, but never much higher than from ten to twenty feet above the tree tops. Whether the courtship commences earlier and is more spectacular in unpaired birds I am unable to say, as I had no way of knowing whether the old female remained paired with the same male or whether she selected another mate for the new breeding season. The exact determination of these matters is not easy, as at this time of the year the northern Wisconsin woods are buried under enormous masses of snow which renders them nearly inaccessible. After the arrival of crows which usually takes place the last part of February, I have heard occasionally the excited cawing of crows, and the angry screaming of hawks which I since have attributed to our birds as all other species of hawks return much later.

Watching these birds at their wavy flight above the nest tree the first time, I got a surprise which I did not expect. I had not stood there long when the female, followed by the male and screaming like a maniac, rushed at me almost as boldly as during the summer previously when she had the young in the nest. She was so loud that I, fearing that someone coming casually along the road might hear her, quit and went home.

After this the female began to repair the nest by arranging, moving, and adding a stick now and then. This went on daily, and regularly at ten in the morning. At about eleven she joined her mate for their daily flight above the tree tops which lasted about an hour. The flight ended, both birds disappeared and were not seen until the next day.

Milwaukee Museum Secures Photographs

At the beginning of May, after the young were hatched, I reported my find to the Milwaukee Public Museum. On May 16, 1934 when Messrs. O. J. Gromme and Walther Pelzer of the museum staff arrived, we proceeded immediately to the nest. Much to my surprise we were

not attackd. Both old birds flew high above our heads, screaming excitedly. The old female made several stoops at us but did not strike. Evidently frightened by seeing so many—there were four of us—she retired to a perch about twenty-five feet above our heads. After taking a good look at the birds, the nest, and the neighboring trees, we returned to the cabin. Shortly after this Messrs. Gromme and Pelzer drove to Birchwood, a point nine miles distant, which was to be their headquarters until the work of photographing and taking notes was finished.

Early next day they returned. After looking over the trees in the neighborhood of the nest, a large yellow birch was selected for the blind.

Pelzer, equipped with climbing irons on his boots, and protected from falling by a strong leather belt fastened around the tree trunk and to his body, proceeded to climb the tree. The work though strenu-



A WELL-EARNED PHOTOGRAPH

COURTESY MILWAUKEE PUBLIC MUSEUM

ous and dangerous progressed rapidly. Piece by piece the lumber was pulled up by a rope and nailed to the tree trunk and to one another. Before long a foundation was erected, the floor made, several boards nailed to the sides and the whole covered with heavy burlap. The blind was ready for occupancy. To reach it securely, heavy spikes were driven into the trunk all the way up to the platform. By means of a rope the cameras were hoisted to the blind and focused through a small hole in the burlap at the nest some twenty-five feet away.

Until that time the birds remained quiet and out of sight. To obtain a clear view of the nest from the blind, however, a large limb and several small branches on the nest tree had to be removed. Pelzer, armed with a small saw and a hatchet, was sent up. But now, as soon as he began to approach the nest from below, the fierce female struck. With the rush of a tornado, her eyes blazing like fire, and screaming at the top of her

shrill, angry and savage voice, she flew at the disturber of her family home. The position of the young man was truly precarious. Encumbered with tools, he could not use his hands to ward off the attacking bird. Pounded with hard, powerful wings and slashed with long, razor sharp talons, he bent his head to protect his eyes and face from the savage onslaught of the enraged bird, but to no avail. Had he not been held to the tree by the strong leather belt, he most certainly would have been knocked from it. To us, standing below, the onslaught was truly dramatic. But after a while the bird, evidently tired and spent by the unsuccessful attempt to knock the man down, suddenly stopped and retired to a nearby tree. Of course when Pelzer reached the nest and the young hawks, which arose and snarled defiantly, the mother hawk came to the defense again, but, after another mad onslaught trying to beat the man down, she apparently realized her impotence and retired to her perch—this time for good. The work could proceed. The view obstructing branches were cut and Pelzer could descend before the bird was ready for another attack. On the ground he looked with a mixture of sadness and amusement at his shirt, which was hanging in tatters. The blind was now ready but we retired for the day so that the birds might get used to the new contraption.

Photography is Dangerous

A few days later it became necessary for the photographers to return to Milwaukee, but on May 26, accompanied by Mr. Warren Dettmann of the museum staff, they returned again. Although it was late when they arrived, they decided to get some pictures. Somehow the old birds remained quiet and did not fly at us when we approached the nest tree, in fact the birds were not even seen. So all precautions were foolishly cast aside and Gromme started up the tree to the blind. He was only half way up the big trunk when, with a fierce, savage scream, and coming like a bolt of lightning, the female struck. The excited calls of warning from the ground came too late. Gromme, holding to the heavy spike, reeled for a moment as if he had lost his balance and would tumble down, but fortunately he held and in a few seconds recovered sufficiently to descend. Fortunately for him the female did not strike again. I fear to think what could or would have happened had she kept at it; our hawk investigating affair would probably have had a tragic ending. An examination revealed eight deep gashes across his head, one of them across his right temple and dangerously near his eye. The attempt at photographing was abandoned for the day. We all returned to the cabin where Gromme's wounds were washed, treated with salve and bandaged. During the rest of the time no one approached the nest or the blind from below without the precaution of wearing a sheepskin-lined leather helmet or a turban-like covering around his head.

This all raised in the neighborhood so much speculation as to the monetary gain that might be made from the hawks, that in the spring of 1935, when the pair returned and began its nuptial flight, I found it advisable to destroy the nest, thus forcing the birds to build somewhere else. This I did. After finding one of those thin poles, which, grown in a dense stand of young trees, attain an enormous length, I knocked part of the nest down. Seeing the destruction of their nest, both birds paused in their flight and flew at the pole, screaming savagely, and the female

finally at my head. By doing this she entangled one of her feet in my cap. Tearing it off my hand, she carried it some thirty yards or more before she succeeded, after turning several somersaults and beating frantically with the wings, to disentangle her foot and shake the cap off.

Most of the nest was down then, but if I thought that I got rid of the hawks, I was mistaken. For a few days I did not see any; their nuptial flight was apparently ended. After this I did not visit the old tree for about a week, but I cannot describe my consternation when I did get to the old nesting site again. Although it was the first week of April, a blizzard was raging and the thermometer stood at zero. Tramping through the snow near the old nesting site, I heard suddenly a subdued **kai, kai, kai**. Looking up I saw in a tall oak a large bird. But before I could decide about its identity in the whirling snowstorm, I heard the well known, angry **keek, keek, keek**. A dark object loosened itself from the top of a yellow birch in front and above me, and before I had a chance to duck, struck me on the head. Then I saw that the hawks had begun to build another nest, not more than sixty to eighty yards from the old one. The birds selected again a yellow birch about a foot in diameter, measured two feet above the base of it. The tree grew straight up to a height of thirty-five to forty feet, where it—its tops presumably broken off years previously—formed a thick knob. From there a thick limb grew horizontally to a distance of four to five feet, where it turned straight up, forming a dense crown of small branches. There, about forty to forty-five feet above the ground, the female had begun to build another nest. A number of sticks were placed across several upturned branches, the whole appearing like a very loose basket then. Seeing this I decided not to disturb the birds again, hoping that they would remain undetected and able to raise another brood.

Female Alone Builds Nest

Next day I went there earlier. Unseen by the birds I hid behind some storm broken tree tops and a group of balsam firs. According to my notes, gathered then and upon many another occasion, the female builds alone. The material for it, for the most part the thin, and when older, easily breakable twigs of the white birch, she finds on the ground or breaks them from the prostrate young trees whose straight white boles, a few inches in diameter, often crisscross the forest floor. After a stick is placed, which usually takes a considerable amount of time, commotion, and evidently also much thinking, she flies again downward to find another. The selection of a suitable stick takes at times wholly five minutes and even longer. Sometimes one slips from her hold and falls underneath. Without paying any further attention to it she goes for another. All sticks are carried in the beak. While this is going on the male perches high up in a neighboring tree and warns with a subdued **kai, kai, kai**, whenever anything attracts his attention. Upon hearing it the female pauses in her work and, apparently, listens attentively, but when not another sound follows, she commences to work again. According to my notes she builds only in the forenoon for about an hour.

On the tenth of April the female was sitting. The nest was far from being completed. In the center of it a small amount of twigs, moss, and dry weeds was placed, just enough to hold and protect the eggs. Pressed evidently with the necessity of laying she found no time to finish

the nest. Through the openings between the sticks her head, breast and tail were plainly visible. As incubation progressed, stick after stick was added, so that in the beginning of May when the young were hatched, she was well concealed, excepting of course her long tail, which as a rule protrudes a little above the rim of the nest. I cannot say which bird added to the nest during incubation as I did not care to disturb the birds unduly. Although I have watched these birds seven consecutive seasons, I am not sure whether or not the male ever helps to incubate. At every one of my approaches it had been always the female which flew away. The male helps screaming, but very rarely comes so near as to strike.

Since the period of egg laying is still very cold, the female remains on the nest as soon as the first egg is laid. Therefore the young hatch at different times; and one or two are always considerably smaller than the others and also leave the nest a few days later. After my initial error of setting the time required for the incubation at thirty days, I came later to the conclusion that the actual time is twenty-one or at most twenty-two days. The habit of the female to spend part of the time, especially nights, on the nest before she actually begins to lay, and again, after the young have hatched and it is still too cold to leave them uncovered, accounts for the error.

Although I had spent many anxious moments worrying over their safety, the hawks were able again to raise a brood of four healthy, husky youngsters. I was able to convince the interested party that the hawks had deserted the neighborhood for good, because of previous disturbance. Thanks were also due to the fierce female, which was always absent when the immediate vicinity of the old nesting site was being investigated. As much as a better knowledge of birds among people is desired, in this particular instance the complete ignorance of bird's life was a pleasure.

Determined, however, that this should be the last nesting of these hawks in our immediate neighborhood, I decided after the young hawks had left the nest to collect one of them for a well-known ornithologist of Madison, Wisconsin. So I took the gun, crossed the road, and dove under the dense canopy of leaves, for the day was rainy. Big drops of water, dripping from the old trees, under which, owing to the dense shade, the ground was more or less free from shrubbery and weeds, and in places altogether bare, formed small puddles of rain water. After some search I located the young hawks in the dense crown of an old maple, about sixty feet from the ground. Taking careful aim at one of the young hawks I fired. Since I was not attacked by the old female I thought she was absent. At the shot, however, at which the young bird, hit through the neck, toppled down into a puddle of rain water, the old bird flew with a cry of alarm from the dense foliage and disappeared among the trees. With a feeling of guilt I picked up the dead bird, a nice fully grown specimen with markings distinguishing it at a glance from the old birds. At the same time I pondered over the inactivity of the old female, which otherwise attacked me at every opportunity. Was it perhaps the sight of the gun which prevented her from attacking me? To make sure I visited the hawks daily, always with the same results: Without the gun I was attacked as fiercely as ever, but at the sight of the weapon the old bird remained either hidden in the dense foliage, or, with a cry of alarm, disappeared among the trees. When experiencing

anything like this, one cannot but marvel at the intelligence of the bird, which, undoubtedly, seeing the effect of the weapon on various game during the hunting season and realizing its danger and far reaching effect, had a sufficient amount of reasoning to avoid it and to remain out of its reach.

At the end of year 1935, the forty, harboring the old and the new nesting sides of the hawks, was sold to be logged off. By the middle of March, 1936, the logging progressed to the new nest tree, which, found worthless for lumbering purposes, was left standing. When, a few days later, the hawks appeared to begin their nuptial flight, I did the same as the previous year, I knocked the nest down. This, the transformation of the forty to bareness, and the disturbance caused by logging, I held to be sufficient to frighten the birds away. But again I calculated without taking the persistence of these birds into consideration. To my surprise the birds returned, and, in spite of all the work, noise, and commotion, started to build again. This time they selected a very large yellow birch, about a hundred yards from the second nest. On the tenth of April the female was sitting again. Knowing, however, that this would not do, that sooner or later the birds will be noticed by the lumbermen, and others, and very probably destroyed, I decided to get rid of them by all means. In an attempt to save the eggs for the Milwaukee Public Museum, I made myself a pair of climbing irons. These I found impracticable, however; my every attempt to reach the nest ended in failure. Next evening, after the men had left for their homes five to six miles away, I went again to the nest, avoiding carefully to make any tracks as the ground was still covered with a considerable amount of snow. Upon reaching the tree, I focused the beam of my flashlight at the nest, which was about forty feet above the forest floor. As the strong beam of light struck the nest from below I heard a noisy commotion, a clashing of wings and breaking of twigs, and saw the female rushing headlong from the nest, and, with a frightened call of alarm **kak, kak, kak**, disappear into the darkness.

Next evening and on two succeeding evenings I revisited the nest tree after the men had gone home. Everything was quiet; there was no trace of the hawks. I was firmly convinced that this time the birds had enough and would not return. A week later, however, I met one of the lumbermen. Imagine my surprise and amazement when he, after a few words of greeting, informed me that the hawks I found two years previously had returned and were repairing the nest, adding more sticks to it. In the meantime the logging had progressed to the new nest tree and the birds, for the first time, were noticed by the men. They were not attacked by the female, however; the noise and commotion caused by the men and horses made her shy. Crouching down on the nest she practically disappeared from sight. A few days later, being Sunday, the forty was deserted. Looking up at the nest I saw only a tail protruding above the rim. In the snow beneath were lying the shells of four greenish colored eggs, still partly filled with frozen yolk and albumen. During my absence of one week, the female had returned, thrown out the frozen eggs, and commenced to sit again. This was too much, however. I realized that for their own safety and well-being the birds must go. With considerable exertion I raised the long, heavy pole vertically, thus bringing its thin end under the nest. At the first push from below the poor

bird flew with a frightened scream from the nest, and, without showing fight, disappeared in the distance among the heavy timber. The happenings of the past two weeks and the destruction of her nest then was too much even for our persistent goshawk. The forty and the nest was abandoned, this time for good.

For over two weeks not a trace of the hawks was to be seen. Then, one afternoon I was attracted to the rear of the dwelling, about two hundred yards away, by a flock of crows flying around and cawing excitedly. Looking for the cause of the commotion I noticed the male goshawk perching on a broken branch of a large maple stump, about two feet below the top of it and some twenty feet above the ground. With his back protected by the big stump he faced the crows, striking savagely with one or the other of his feet at the crows whenever one came too closely in its flight past the stump. After watching the performance a while I walked nearer. At the sight of me the crows dispersed and the hawk, flying low, disappeared among the trees. After this I saw the male almost daily. At every opportunity I tried to locate the new nesting site, but although I visited every favorable appearing tract of heavy timber, I failed to find it. Finally, the thought occurred to me that the hawks, being disturbed thrice and having one clutch of eggs destroyed, had given up another attempt at nesting. But I had figured wrongly again.

July 28 I was on a field trip about a mile and a half from our cabin and more than a mile from the road, when I came upon a most dismal and forbidding tract of heavy timber. In spite of the countrywide drought, the tract, a deep depression of considerable size, was still wet. A row of small but deep holes filled with dark, inky appearing water, long clusters of old man's beard (*Usnea*) hanging from the branches of great trees, whose trunks and big limbs were beside it overgrown thickly with masses of dark green moss and gray lichens, gave the place a most gloomy, weird appearing character. Being tired and thirsty I tried the water and found it clear, cold and refreshing, in spite of its dark, murky appearance. Then I sat on a fallen tree to rest. I had not been there long before I heard a plaintive wail, the same I had listened to so many times before. The fatigue was forgotten instantly, and I went after the sound, stopping every few seconds and listening attentively. In less than five minutes I located two young hawks on a branch about fifteen feet high, and after more search, two more, about fifty yards from the first two, one of them so low that I could have touched it had the bird not flown away at my approach. There was no sign of the old birds. Their evidently prolonged absence was the cause of the plaintive calls uttered by the young at frequent intervals. Judging by the appearance the young birds must have been about fifty days old. Then I started to search for the nest. In another five minutes I had spotted it less than a hundred feet from the first two birds. In spite of many tall white pines and a considerable number of big hemlocks the nest was built again in an enormous, partly dead yellow birch, the largest I have ever seen. Measured two feet above the base it had a diameter of three feet and nine inches. I estimated the height of the nest to be fifty to fifty-five feet. The birds had evidently learned a lesson from previous experience and had placed the nest higher, out of the reach of the longest handy pole. The goshawks remained there and raised a brood all the remaining years of our living there (the summer of 1940). Last year while living a few

months in the vicinity of Birchwood I visited the same area again. The war with its demand for lumber and wood products, and human greed, had played havoc with the woods near the old road. Farther away, however, I found the tract of timber still the same, only the old birch had gone. Decaying at the base, it had become top heavy and collapsed not more than a few months previously, judging by the appearance of the splinters.

Male Follows Regular Routine Daily

Whether or not the male spends the nights near the nest during the incubation period I am unable to say. Early in April, 1935, and also in 1936, I have frightened him from his perch near or at the nest tree with the beam of my flashlight. Stricken by the bright light, he flew with an excited and frightened **kak, kak, kak** while breaking twigs from his perch and disappeared into the darkness. In later years I did not undertake the experiment again because of the remoteness and inaccessibility of the new nesting locality at night. I am sure, however, that after the young had hatched, he spent his nights away from the nest. Since the goshawks, as also practically all other wild creatures unless frightened or unduly disturbed, maintain a surprising regularity in their daily routine, it had been comparatively easy when once ascertained to follow him on some of his routes. An hour or so before sunset, perhaps after the last feeding, he left the nest and flew within sight of our log cabin into the north-westerly direction, not returning until the next day. This route he followed also several times during the day, to or from the nest. His favored hunting ground was a chain of small, shallow ponds, clear until the middle of June but later so overgrown with various water and marsh plants that the water remained visible in a few spots only. With its combination of woods, grassy shores, water, and marsh it was a favored habitat of many woodland and marsh dwellers. There, where the waters of these marshy ponds tumbled, in many little cascades, into a narrow but deep ravine, on one or another of several tall stumps, right above a well-trodden deer and rabbit pass, was his favorite perch where he spent much time watching for prey.

Upon several occasions his presence near our cabin was betrayed by a flock of noisy bluejays, which, screaming excitedly, often followed the hawk long distances. One day shortly after dinner I was attracted by their loud screaming to go out. High above, near the top of a tall maple I saw the hawk which at that very moment struck at the flock of screaming jays. Like a small explosion I saw a burst of feathers flying in all directions; and the hawk flew, the squirming and screeching bird in his right foot, high above my head and disappeared among the trees in the rear. For several minutes I listened to the angry screaming of the bluejays until the noise died in the distance. About three hours later I had work to do in the heavy timber about two hundred yards from the rear of the dwelling. Suddenly I heard the excited screaming of the bluejays again. A few minutes later I saw the hawk flying across a tiny glade and alighting on the same tall maple stump I have mentioned before, followed by a much larger flock of jays than at noon, three hours previously. There, with the screaming bluejays hovering about but keeping at a respectful distance, he began to preen his feathers. But not for long. He rose suddenly and vanished in a dense group of tall maple saplings. Since there was a much larger flock of bluejays than at noon

they must have been following him all these hours. Their inquisitiveness and persistence with which they follow and annoy hawks, owls and even the furry predators is probably the reason that, of no other bird, one finds the feathers as often as of the bluejay; they are the red squirrels of the bird world and must only too often pay for their annoyance and inquisitiveness with their lives. Otherwise the goshawks are molested but rarely. Other hawks, ravens and crows avoid the nesting area of these fierce predators; the small birds, however, do not pay much attention to them and perform their tasks unconcernedly within a few feet of the nest or of the hawks themselves. Among the innumerable bones collected by me in the course of eight years under the nest and over the surrounding thirty to forty acres, I found but once the feathers and the breastbone of a hairy woodpecker and twice the feathers and the feet of a ruffed grouse. So long as they find a sufficient number of hares, rabbits, squirrels and other small mammals they apparently do not molest the birds greatly. Necessity, or the hunting instinct perhaps, compels them at times to feed upon anything living or obtainable.

Reptiles Are Attacked

On a hot day in June I noticed on the road a very large fox snake (*Elaphe vulpina*) engaged in the characteristic activity of its species at this season, namely curving the point of its tail vertically downward and vibrating it speedily as if attempting to drill a hole in the ground. The buzzing noise produced in this manner resembles to some extent the rattling of a rattlesnake. It is assumed by some that the snake, which though harmless, is nevertheless feared greatly by the country people, mimics the rattlesnake for its protection. I doubt this, however, for it is much easier for the snake to avoid exposed places, the roads and the like, than to rely for its protection on mimicing the rattler. And since it is heard a limited time only I should rather think that it is merely the mating call of the reptile. After watching the performance a while I walked to the entrance of the short road leading to our cabin. There I stopped and turned once more in the direction of the snake, just in time to see the female goshawk swooping low above the road and lifting the snake. However, the reptile, slipping from the hold of the talons, but given the impetus in lifting, flew some five to six feet through the air and dropped among the weeds and shrubbery next to the road. Diving after the snake again the hawk came up empty for the snake had escaped where the bird could not follow.

Upon another occasion while watching men repair the road close by I saw the hawk dart with great speed across the road in the direction of the nest, carrying something bulky which appeared to be a clump of dry weeds and hay. But before it had reached the timber on the other side of the road a small object dropped from the clump it carried. No one of the men noticed anything, but their presence prevented me from investigating. At noon, however, when the men left for lunch to a car parked further down the road, I walked toward the place where I saw the object drop. After some search I found a nestling bluejay with the pin feathers just beginning to protrude. Since the nestling could not have come there of its own accord and no bluejay nested nearby, it must have been dropped there by the hawk which had evidently dislodged the nest of the bluejays with its contents. This perhaps would explain the persistence of bluejays in annoying the hawks later.

From 1932, and to the end of 1935, pheasants were rather abundant in our district, especially near the farms, three to four miles from our cabin. It was the day before Christmas; the thermometer stood at several degrees below zero and about a foot of loose, dry snow covered the ground. As I stood on a high knoll of the hilly county road several miles from our woodland dwelling, waiting for the rural mailcarrier, I noticed on one of the several scattered red pines on a hill at my right about a hundred yards away a large bird. My binocular focused at it showed that it was an adult goshawk. Although sitting erect at first it suddenly crouched down, lowering its head and the front part of its body below the level of the limb on which it sat. I thought at first that it would fly away but after a few moments in this position it resumed the erect pose again. It repeated this several times in succession, at the same time raising and lowering its tail. Seeing this I turned my attention toward the direction into which the bird crouched whenever it lowered its body upon the limb. Near the willow thicket at the bottom of the swampy depression crossed by the road I saw a fine cock pheasant working his way through the loose, powdery snow up the hill toward the scattered pines and the coniferous thicket beyond, directly toward the tree with the hawk. I saw the hawk crouching upon the limb again and again, remaining in this position longer every time as the cock drew nearer. Every time it did so I thought that it would fly at the unsuspecting pheasant below, but nothing happened. Upon reaching the coniferous thicket the cock disappeared from my view, and shortly after, the hawk resumed the erect pose it had when I saw it first. A few minutes later, however, it quit its perch and flew low along the rim of the forest in the opposite direction where it vanished from my sight.

When the young have hatched, and for two to three weeks after, the male very probably is the only one of the parents which provides food for the whole family, as during those weeks I have encountered the female practically always at or near the nest. Even later I have seen him so much on the wing and the female so much at the nest that I believe him to be the chief provider during the nest period of the young hawks.

Red Squirrels Taken

The first food for the young is usually a red squirrel or other small mammal of similar size. Strangely enough they do not get many gray squirrels then, although the gray squirrels, inferring from the numbers visiting our feeding tray during the winter, far outnumber their red relative. The habit of the red squirrel to sit exposedly on a branch or a stump, chattering and scolding excitedly whenever anything attracts its attention or meets with its disapproval, makes it easy for our predators to snatch it from the branch unaware; while the gray squirrel escapes detection comparatively easily by retiring behind a tree trunk.

In the spring of 1935, during the breeding season of the goshawks, a gray squirrel established its home, a bulky nest of twigs, leaves, and weeds, in an old, partly dead yellow birch, not more than about fifty yards from the nest of the hawks. It was also the breeding time of these squirrels during which they are unusually noisy. Day after day I saw the squirrel sitting on the broken top of the old birch, chattering and cackling atrociously. My fear that sooner or later the hawks would make an end to the chatter (which is not pleasant to listen to) did not materialize, however. After the breeding season of the hawks was over and the

young hawks had left the nest, the squirrels remained still in undisputed possession of the old tree.

That these fierce birds did not spare the gray squirrels, however, I had ample opportunity to observe upon several occasions later. When the acorns and various nuts ripen, a family or more of gray squirrels assemble in one of these trees to gather and store the rich crop for the long winter. There they are at times surprised by various hawks, notably the goshawks which hunt together then. A solitary rambler is usually attracted to the place by the loud, triumphant shouting of the hawks as they descend upon the squirrels. The hunt is often over before he arrives at the scene, but if he is fortunate to arrive in time he may witness, and listen to, a most wild and exciting spectacle offered him by the northland woods. Both old and young hawks, shouting at the top of their wild, savage voices, dart with tremendous speed after the frightened mammals, which now, trying to escape, scatter in all directions. A bold leap from the top of the tallest tree to the ground, where it can hide in a hollow stump, burrow under the roots, or among the debris, is often the only alternative between life and death. I saw it executed but once; the majority of squirrels, especially the young of the year, are too paralyzed with fear to attempt it. Woe to the one which, unable to do so or to hide quickly behind a tree trunk, or escape into some cavity, tries to get away on a branch from one tree to another. It is almost invariably caught by the passing hawk and strangled instantly. A convulsive twisting of the body, an agonizingly shrill, piercing, broken shriek, and the little body hangs limply from the feet of the hawk, which now, alighting on a limb, emits a triumphant **kaak, kaak, kaak**. For a moment all is quiet. Then one hears the young hawks which chase and worry the lucky hunter, disputing its right to the prey it caught, until it all drowns in the distance.

But even the squirrel which had escaped behind a tree trunk is not always safe from death. Judging by their actions the old hawks are well acquainted with these habits of the squirrels. Of course the young hawks are yet too awkward to hunt squirrels in this manner, but they are apt pupils and learn fast. Any squirrel, however, which is discovered clinging to the tree trunk by the old pair is as good as lost. Upon spotting the squirrel, the old birds, shouting savagely, dart with unbelievable speed past the tree trunk behind which the squirrel is hiding. Dodging the birds from one side of the trunk to another does not help the terrified little mammal. In a few minutes or less the squirrel, perhaps just dodging one hawk which had shot past the tree, is caught by the other which flew past it from the other direction. The speed with which these birds fly through such dense foliage, among the branches, and between the trees; and still more the quickness and the dexterity with which they can arrest their speedy, impetuous flight and turn in midair, is nothing short of miraculous. Small wonder that a mammal or a bird, once detected by these daring predators, is as good as lost unless it escapes somewhere where these birds cannot follow; and this so much the more as these fierce birds hunt also on foot, following their prey through grass, weeds, brambles, and dense shrubbery.

Snowshoe Hares Important As Food

In 1932, and until the end of summer 1933, the varying hares, or the snowshoe rabbits as they are called in the north country, and cottontail rabbits were very abundant. It was nothing unusual to see fifty

to sixty of them in less than a mile walk. They furnished an easy prey and an abundant supply of food to various furred and feathered predators, which congregated then in our neighborhood from far away. They also furnished an abundance of food to our goshawks. The thirty to forty acres surrounding the nest tree were at times actually littered with the skeletons and partly devoured cadavers of these hares. Usually they could be found stretched across fallen trees or on the tops of old stumps. The ruffed grouse, which also had its period of abundance simultaneously with the hares, was apparently not molested. Several coveys, hatched nearby, fed and grew peacefully less than two hundred feet from the nest of the hawks. A new settler, then living half a mile east from us, had over two hundred white leghorns which were never molested by the hawks, even when the latter strayed through the woods and came within sight of the poultry yard. However, a meadow of two acres across a narrow road dividing it from the forest.

The end of summer 1933 saw the end of the varying hares and the cottontail rabbits. Suddenly, almost all at once, they had disappeared, swept away as by an epidemic. Their smelly cadavers, lying everywhere and persisting a while longer, told of their extraordinary numbers before. The comparatively few that were spared retired then to their original habitat, the sphagnum bogs, swamps, and marshes, especially those with an abundance of willows, where they recuperate, and from whence they populate the upland woods after their renewed increase. As plentiful as the hares appeared in the upland woods before, so much rarer they had become then. During the winter of 1933 to 1934 not a track of them was to be seen in our neighborhood, but regardless of this, in the summer of 1934 and 1935 the acres of woods around the nest tree were littered again with the skeletons and partly devoured cadavers. Since the nearest locality where these hares could have been found in appreciable numbers was a large willow marsh at the eastern end of Buck Lake, a mile and a half from the nest of the hawks, they must have obtained and brought them from there. Upon one occasion I came upon the old female, which, apparently tired and exhausted in her effort, was half carrying, half dragging a fully grown, freshly killed hare across the prostrate tree trunks and other obstacles. In the course of eight years of my observation of these hawks I have secured seven of these hares for our table; upon two occasions only after a heated and spirited debate with the old female, which flew at my head first, but finally thought it over and let me have the hare. The largest of these hares was a male weighing slightly less than three pounds. This may also serve to show the weight these birds are able to carry—not a mean feat considering the unbelievable roughness of the topography. There are innumerable steep hills and deep depressions covered with heavy, dense timber through which these birds had to fly.

On its hunting forays the goshawk very rarely circles. Perching on one of the lower limbs of a large tree, preferably a red pine, at the edge of the forest, with its back hidden by the dense foliage but with its front partly exposed, it surveys the neighborhood; or it flies low near the rim of the forest, darts across an opening, or speeds along a woody road or firelane, where sunshine, and the abundance of clover, tender grass, seeds, berries, nuts, and nutlets attract many woodland dwellers. Along a firelane I saw it rushing with great speed two to eight feet above the

ground, almost skimming it at times, and throwing its body with jerky, impetuous movements from one side of the road to the other whenever anything attracted its attention.

Upon one occasion I saw it strike at something among the dense grass and weeds next to the road. For a while it appeared as if it were sitting on its haunches, apparently watching and listening. Then it suddenly struck, first with the one, then with the other foot, quickly and repeatedly as if it were feeling for something—precisely in the manner of a cat when feeling for, and ascertaining, the position of a mouse hiding under the matted vegetation. After this it arose slightly but immediately pounced down again. For a few moments it appeared as if it were lying on its belly. Then it rose and flew across the road to a tall tree in whose dense foliage it disappeared. From its feet dangled the body of the striped gopher (*Citellus tridecemlineatus*). These little mammals, though not woodland dwellers, follow, as do several others, the narrow belt of grass and weeds along the woody roads and firelanes, often establishing themselves temporary or permanently upon old mill sites, clearings made years previously by lumber camps, and, in some localities, by sheep camps.

Although I saw the old birds execute innumerable feats of aerial acrobatics, I was never so impressed with their flight as when I saw the old male flying to his place of roosting. His speedy, impetuous flight reminded me of a ball of feathers rolling with jerky, jumpy movements between the branches and among the tree tops. With comparatively short wings only partly open, his tail spreading and narrowing while jerking sideways and up and down, he rushed ahead, dexterously avoiding every branch, every object but still maintaining his straight, forward course. I cannot describe it adequately; it must be seen to be appreciated.

Although I have spoken in the preceding lines of their loud, angry screaming upon many occasions, this should not be interpreted as if these birds are particularly noisy. Exactly the opposite is true. I am not aware of another bird of prey which is so little in evidence and so secretive in all its actions as the goshawk. Undisturbed, it hardly ever utters a sound, not even during the pairing season which causes many other wild creatures to become more or less noisy. The only times when these birds become noisy and then exceedingly noisy is when their nesting area is invaded, or, but then only under certain well defined circumstances, when their hunting instincts are aroused. The parental love and fear for the young, and the excitement of the chase, cause them to become louder and scream more than any other bird of prey I am familiar with. But what else could one expect of such a brave, fierce, bold and daring bird? At any other time, even at the moment of pouncing upon a rabbit or other prey, a subdued **kaak, kaak, kaak** is the only sound heard by the observer, provided he is near enough.

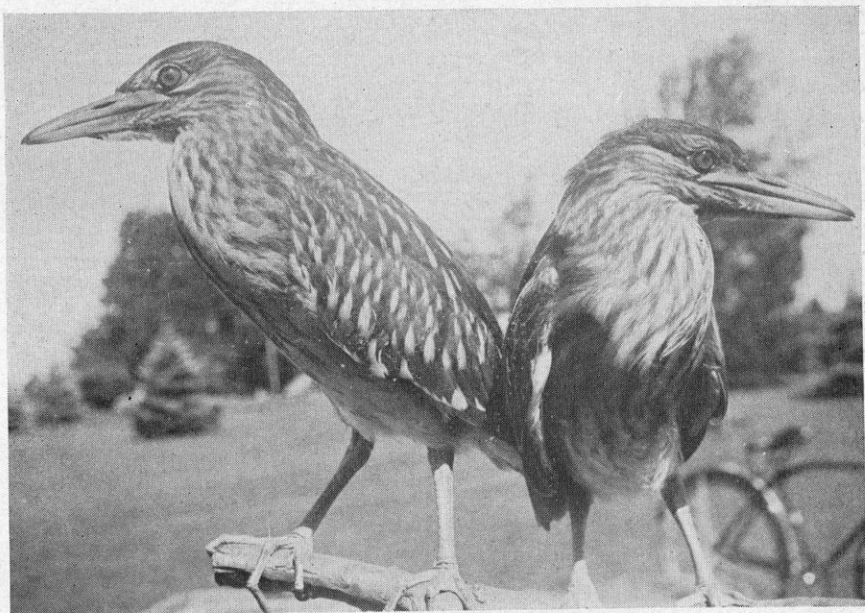
Although the first nest was not more than about two hundred yards from our log cabin and we spent most of the day in the open where the silence of endless woods ruled supreme (no other but nature sounds were heard), these birds escaped my attention entirely until I ran, purely by accident as it were, into their nest tree and was attacked by the old female. Therefore I believe these birds to be more common in the wilderness of northern Wisconsin than present meager reports of their nesting seem to indicate.

BUD 'N' BILL OF THE HUMMOCKS . . . BLACK-CROWNED NIGHT HERONS

By ELIZABETH A. OEHLenschLAeGER

Photographs by Else Suetterle Taylor

Of all the bird infants which have come under my care*, the most uninviting and repulsive looking were the black-crowned night herons. They are homely enough when viewed in their nests before a careless move has precipitated them to the ground—but once down, and neglected by their parents, starved and dehydrated to skin and bones—these youngsters are pathetic, utterly and absolutely forlorn and forgotten by their



BUD AND BILL

kind. So it happened one day that I heard a familiar voice at our front door: "What do you think, would she like to try to feed them?" The voice was very far removed from its usual confident quality. Said a woman's voice, also not very confidently, "Oh, I think she would just love them."

I needed no further information as to who and what was under discussion and dashed out of the house to see what it was I might "just love." My first glance was anything but reassuring!

On July 15, Owen Gromme of the Milwaukee Public Museum had found two nearly dead black-crowned night herons staggering about on the ground near a heronry located on the Milwaukee River. He had picked the birds up, put them in a sack and come straight to the Hum-

*Miss Oehlenschlaeger has a state permit to care for wild birds.

mocks with them. When I came out they were lying on their sides, panting and croaking in a hoarse but feeble voice. As they opened their huge mandibles the mucous membrane cracked and a pinkish-yellow discharge appeared. Their bodies were so badly emaciated that seemingly not one bit of flesh remained on the breast or thighs, just skin adhering to the bones. The entire alimentary organism was clearly visible through the thin abdominal tissue, altogether I did not think I could "love" them, nor did I feel that their condition held out much hope for recovery, but there was always the challenge: Try it, it may be a success.

It was July and we had plenty of fish available—our pelican had come back from the zoological garden—the ice box was filled with heron-food!

Mr. Gromme judged the birds were about three weeks old. Their pin feathers were still in their sheaths and much of their down still clung to heads and wings. These latter dragged heavily on the ground when the birds tried to stand. The most immediate need was food and moisture.

Needless to say, it was not difficult to find the opening wherein to deposit both food and water. A movement of hands brought about a hoarse croak and wide open, bleeding mandibles. With a teaspoon a little water was poured down the dry, tortured throats and then came a short rest in which small pieces of lake herring were prepared for their food.

The nearly dying condition of the two herons made their feeding a somewhat precarious undertaking. I had no precedent for what I was doing excepting the feeding of human beings under the same trying circumstances. So the order of the day was to go very slow.

Ten pieces of fish, about one-half inch square were prepared, five for each bird. They were held quietly in Mrs. Taylor's hands while I pushed the pieces of fish down the wide open mandibles. The response to the fish-taste was instant. There was a slight struggle and a stretching of neck for more, hunger had overcome fear. The temptation to satisfy the appeal was very strong but experience and knowledge denied the appeal.

In the meantime one of the many cages which we always kept ready for just such emergencies was brought out onto the lawn near the house. One end was covered with canvas and a large wooden box was placed inside the 3x3x9 foot cage, in case the birds desired shelter. Still not sure of my technique, but realizing that dehydration of the birds was the most dangerous symptom against their survival I took a fine sprinkling can and soaked the lawn on which the cage was placed as well as the birds themselves.

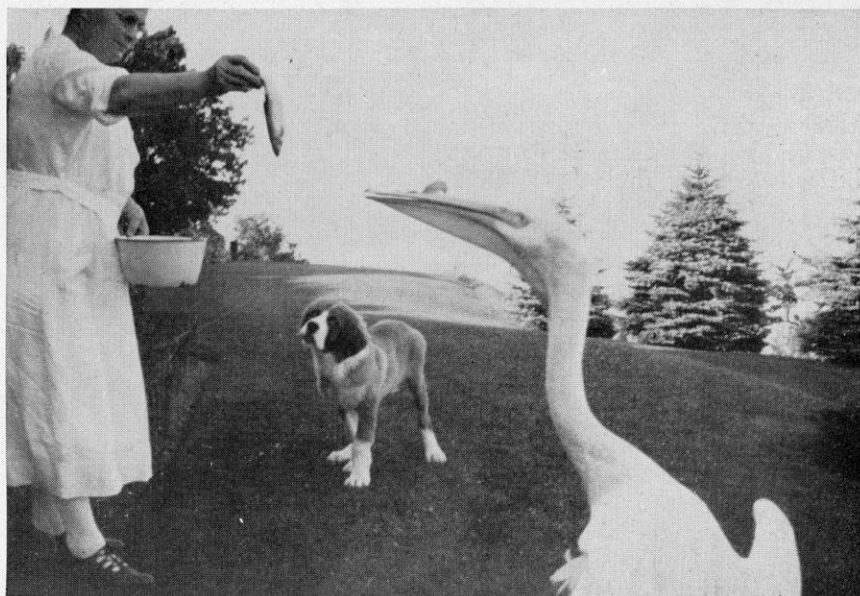
They arrived at the Hummocks at 3 p. m. and had their first feeding at four. From then on until nine they were fed from three to five pieces of fish every hour, the protest against being handled becoming less violent with each feeding. There was a full moon and at the last feeding the birds were beginning to tumble about on exceedingly weak but more useful legs!

We could hardly wait until morning to see the result of the late afternoon efforts. We were pleasantly surprised to see the herons walking about on unsteady legs and promptly hiding in the darkest corner of

cage and box when we approached. It seemed cruel to catch these weak, ugly birds, for their weakness made a pathetic thing as they tumbled about trying to avoid our hands. They made feeble and ineffective efforts to use their mandibles in their adult-like forward stab, but always withdrew their scrawny necks before contact with the human was made.

From the fifteenth of July until August first there was a gradual increase in both size and frequency of feeding. It was a case of feeding from sunrise to sunset, and into the nights when there was a full moon.

During these two weeks the birds made a most remarkable recovery. The mucous membrane in the mandibles took on a deeper red coloring and the skin about the eyes and at the upper end of the mandibles became almost polished. The devitalized, almost rickety look of their feet and legs shone in a natural gray-green when touched by the sun and the

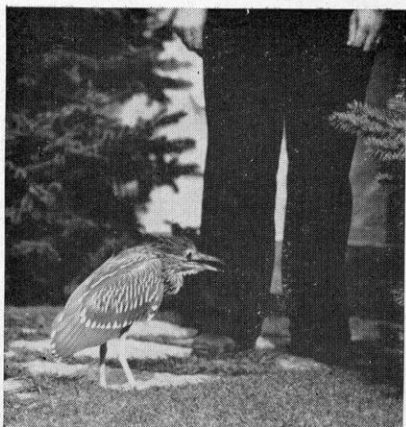


THE PELICAN AND ST. BERNARD PUP

heavy primaries and tailfeathers lost their sheaths without the feathers showing hunger traces. This latter was something we rather expected to see as the inevitable result of starvation.

By this time the birds had learned that a certain whistle and clanking of a tin dish meant fish and they came to the uttermost end of the cage to meet us. And then when the top of the cage was lifted they were strong enough to fly to the open edge and gobble down fish to the accompaniment of noisy chatter and flapping of wings. Their brown and tan plumage, sturdy green legs and bright green and gold eyes made a lovely picture. It was difficult to remember these plump and very much alive youngsters as having been the nearly dead specimens of a little more than two weeks before!

Once they had learned to fly up to the top of the cage when it was opened it was not difficult to take the second jump, down on the outside.



GOING AFTER LEGS

We watched this performance with some anxiety. How would the birds respond to freedom? Would they go wild and run off? Their primaries were not sufficiently developed to carry their bodies and all manner of difficulties would surely be theirs if they walked off, so we watched closely for the first 48 hours. To our very pleasant surprise the pair would come running toward us when we appeared with a pail, eat and promptly return to the top of their cage where the entire day would be spent, be it blistering heat or rain. We would sometimes carry the cage into the shade of a tree but they would

refuse to make use of what, we thought, would be greater comfort, and walk forlorn about the spot where the cage had been. But the sunshine did wonders for their plumage and growth. The young birds were excellent teachers, we learned much about heron behavior and needs.

By August first Bud 'n Bill were in full juvenile plumage. Lovely smooth tans and browns and a fine crest that was raised and lowered at the slightest occasion, both pleasant and otherwise. And some of these occasions were very funny.

There was, as an instance, the mating display of a gorgeous white peafowl whenever he saw our two squawkers about. They were perfectly indifferent to all this white and shimmering beauty, usually flying up into a tree to escape the overpowering affection. Then the peacock would attempt to follow into the branches only to be met by long outstretched necks and wide open mandibles which croaked a violent protest. Watching this performance, with an occasional gambol on enormous legs, was a half grown Saint Bernard pup. The two herons would leave their perch on occasions and chase the big fellow toward the house where he found safety from their more or less violent prods.

Sometimes we tried feeding experiments which were not orthodox but which seemingly in no way upset the digestion of the young herons.

The men working on the "Hummocks" are asked to bring any young rodents, mice, rats, rabbits, or whatever else that might be used for the hawks and owls which we usually have in our care, to the house. One morning I was the recipient of a handful of very young mice, still blind and with scarcely a hint of fur. I had read that occasionally herons went into fields adjoining rivers and foraged for young rodents. Nothing was there to stop me, so I tossed one of the mice to the herons which always came when they saw us. There was not one second's hesitation, the mouse disappeared and so did seven more. The squawks and the flapping of wings which accompanied the meal was most enthusiastic. Both birds showed as nearly as they could that they approved of young mice on their menu.

By the end of August Bud 'n Bill were the embodiment of lusty, full fledged juvenile herons and we began to wonder when the symptoms

of migration would appear. But before they appeared we were given a rare treat at bird play and jealousy. In our sunken garden is a large pool, the inviolate residence of a one-winged white pelican. The pelican lost his wing in an accident 12 years ago and came under my care through the Milwaukee Public Museum. Sometimes a straying great blue heron would invade the Duke's sanctuary, or even some of the mallards or wood ducks which were our charges that same year. Then, along came Bud 'n Bill! Although they were always fed at dusk we found that they wandered down to the pool to stand on its coping absolutely motionless until the pelican sallied through the water and made a dash for them.

It was a glorious thing to watch this three-cornered bird play on a moonlit night. We would lay pieces of fish on either side of the pool where the herons would find it. At once the pelican would dash across the pool to chase them off, only to have the two brown youngsters lift themselves into the air over to the other side. The great white bird shooting across the moonlit silver of the pool and the dark shadows overhead always evading his thrusts, the quiet of a late August evening, and the two herons coming to our call and following us into the house for a last bit of fish, will always remain a treasured memory.

Then, at the beginning of September the two herons separated. Bud would disappear for a day and then return. Incidentally, he had acquired a habit of flying up to the hood of any automobile waiting at the door and remaining there even after the machine was set in motion. So one morning Bud made front page news as a "bittern" which had been found sitting on the hood of an automobile in front of a garage on the west side of Milwaukee. It was quite tame, according to the report, and banded. Bud was promptly recognized, in fact, the recognition was mutual when he saw the dish of fish. As had been his custom for some time he flew up to my arm to eat, then was placed in a carton in the car and returned home. On that homeward trip he showed his displeasure in true heron fashion, he regurgitated his meal in the carton.

It was the beginning of his "wanderlust," two days later Bud's croaking, not very musical but full of heron-friendliness, had ceased to greet us, he had followed the age old instinct of his kind and gone South for the winter.

Not so Bill! He remained about the house, mostly at one of the two west doors. He would perch on the cage which had been moved nearer to the house or on top of the little bell tower near the rear entrance. With or without fish, the sight of a human was the signal for rattling mandibles and joyously flapping wings. An outstretched arm was always promptly accepted so much stroking and cuddling was indulged in. Any trouserleg or skirt which did not heed his attentions promptly received a vigorous poke and those of us who knew his bag



BOTH SUBJECTS HAVE A GOOD TIME

of tricks let him indulge in what he, no doubt, thought a serious warning against any discourtesy.

The nights of early September were beginning to be cold and again we began to worry about Bill's staying in the North too late to be overtaken by a frost which would chill him into inactivity.

From the first to the sixteenth of September Bill could always be found at the front door between seven and ten o'clock. If we happened to be out later than that he would still be there, rattling mandibles and flapping wings. He would follow us into the house and get his fish in the usual manner of flying up to my arm and eating, then being allowed to go out. It was all done very orderly and according to routine.

From the 16th up to the 26th the weather changed into more warmth including the nights. Bill decided to prolong his visit.

On the evening of the 27th of September I came home to the crunching noise of automobile wheels breaking thin ice on the country roads and when the chauffeur flashed the headlights on the front door, there stood Bill! Greetings were as usual but I was anxious about the night's cold for my bird. As usual he was fed and cuddled, the fine brown plumage received much stroking from the assembled family, but Bill was restless. He was permitted to go out, cold or no cold, we were rather helpless in this particular situation.

No Bill appeared on the clear, cold morning of the 28th of September, nor at the usual evening hour at the front door.

Then there was silence in the garden and around the pool. The great white pelican and the brown heron alike, had gone to warmer climates—the pelican to the zoological garden where he spends his winter and Bill to the "Sunny South."

But the following spring, for two nights a very vociferous squawking was all around the house, but the familiar greeting was forgotten. Bill was a free bird, joining his own kind; and we had the warm and happy feeling of having had a wilderness friend return with at least a vocal greeting after an absence of nearly eight months.

May his tribe increase!

Milwaukee, Wisconsin

February 10, 1947

A FIELD GUIDE TO THE BIRDS: EASTERN LAND AND WATER BIRDS. By Roger Tory Peterson. Illustrated by the author. Houghton Mifflin Company, Boston. 290 pp., more than 1,000 illustrations. 1947. \$3.50.

As indicated in the title, this book is designed especially for field work. Where identification is difficult, more than one illustration is provided, usually one in color. Complete cross references between text and plates facilitate use, and "similar" species are treated in their appropriate places. Interesting silhouettes which point up family characteristics are included, and a "life" list has been added. The range of each bird is given.

This new edition, the third edition, is not a revision in the usual sense. It has been re-written, reorganized, and every illustration is new. The second edition, which won the distinguished Brewster Medal, is well known among all bird students. Further comment on the third edition would be superfluous.—N. R. B.

THE INTRODUCTION OF PHEASANTS INTO WISCONSIN

By A. W. SCHORGER

Pheasants were liberated in Wisconsin much earlier than has been assumed. The activity prior to 1900 was considerable. It is doubtful if more than a fraction, if any, of these early plantings survived owing to the small number of birds liberated and to inadequate consideration of climate and terrain. Howard Bosworth of Milwaukee was the pioneer in raising pheasants. A letter written by him on March 1, 1895, states that three years previously he purchased some Mongolian pheasants from Oregon, also some birds of English stock, and that he was now ready to supply eggs.¹

The meeting of the National Game, Bird and Fish Protection Association held in Chicago, January 9, 1895, was covered by Hough.² He quotes Bosworth as saying that he started two years previously with eight Mongolian pheasants for which he paid \$5.00 each. About \$2500 had been expended on raising birds at Pine Lake, Waukesha County, with the sole object of introducing them into the state. Approximately 40 birds had escaped and become wild. They wintered well, living on buds, etc., like grouse, but they would "eat grain if necessary." The need of insect food for the young was understood and provided for in a now obsolete manner. Raw beef was suspended above the coops and the flies did their part. The maggots that lost their grip went to the birds. W. H. Thompson reported that he and some friends had a few pheasants at Gay's Mills, Crawford County, and that a cock and three hens had escaped. Three pairs were also known to be free at Muscoda.

The Two Rivers Gun Club, the spring of 1895, posted a notice that their grounds had been stocked with pheasants and quail.³ A number of plantings must have been made for there was sufficient interest to induce the legislature to pass a law in 1895 making it illegal to "take, catch or kill any Mongolian, Chinese or English pheasant, or any other variety of pheasants, for a period of five years."⁴ Protection was extended to September 1, 1901, in 1897. In this year the Commissioners of Fisheries were authorized to spend up to \$1500 over a period of two years for the propagation of Chinese pheasants, other fowl, and game.⁵

J. F. Blome, of Tomah, began raising English pheasants in the spring of 1897, starting with a cock and two hens.⁶ He obtained 161 eggs the first season. The Tomah Fish and Game Protection Club purchased seven pairs of pheasants from Blome and liberated them in the spring of 1898.⁷ They bred well. Ten pairs of young birds were also purchased for release in the spring of 1899. He proposed to raise 1000 to 1500 birds in this year. In the fall of 1898, Blome acquired from a breeder in New Jersey, English, Silver, Swinhoe, Reeves, and Lady Amherst pheasants.⁸

Several people at Palmyra were raising pheasants in 1897.⁹ Most of the young died of disease. A. H. Duchateau, Green Bay, obtained a pair of English pheasants from Janesville.¹⁰ It is stated that this bird had been planted successfully in game preserves in the state. In the fall of this year, 50 pheasants from Milwaukee, apparently purchased by the

state, were liberated near the State Fish Hatchery at Washburn.¹¹ The liberation in this locality was rightly criticised.⁷ Aside from choosing fall instead of spring for the release, the deep snows, low temperatures, and scanty food supply was against success.

In the fall of 1898, Bosworth had over 1000 pheasants near Milwaukee.¹² Those liberated at Pine Lake were heard frequently. Many pairs had been released in different parts of Wisconsin, particularly at Wauzeka where there was a "supplementary pheasant laboratory." Dr. E. A. Gatterdam raised nearly 100 Chinese pheasants at La Crosse and in the fall of this year he sent some to Tomah for liberation.¹³ If the birds thrived it was intended to plant several hundred in the region.

Pheasants were liberated at Marshfield prior to 1899 for in the spring of that year 11 birds were reported to have survived the winter.¹⁴ They were seen feeding in a barnyard. Henry McCossen, Wausau, had very poor success in his attempt to rear the birds in 1899.¹⁵ The eggs failed to hatch or the young were lost. Charles Marshak liberated pheasants at Sturgeon Bay and there was complaint of illegal shooting.¹⁶

In the fall of 1899, A. H. Pape released pheasants in the towns of Caledonia and Mukwa, Waupaca County.¹⁷ A total of 40 were liberated at different times, apparently with at least temporary success, for as many as 15 birds were seen in a covey in 1903.¹⁸ In connection with these liberations it was said that some years previously an unsuccessful planting was made on the marshes at Oshkosh; and that pheasants were becoming common in Crawford County.

A citizen of California felt it his duty to warn the people of Wisconsin against the introduction of the pheasant. He wrote in part: "A female pheasant with young will fly over a field of grain and with her wings will thresh out the grain, which falls to the ground and is devoured by the young birds. They are hearty eaters and a few broods of them will make a rather sickly-looking grain field in a short time. Another thing is that after these birds are once introduced into a locality it is almost impossible to exterminate them for the reason that they multiply so rapidly. Considering all these points it is not advisable to introduce the pheasant into a grain country like Wisconsin."¹⁹ To the best of my knowledge no one has witnessed the aerial threshing or encountered a superabundance of pheasants in this state.

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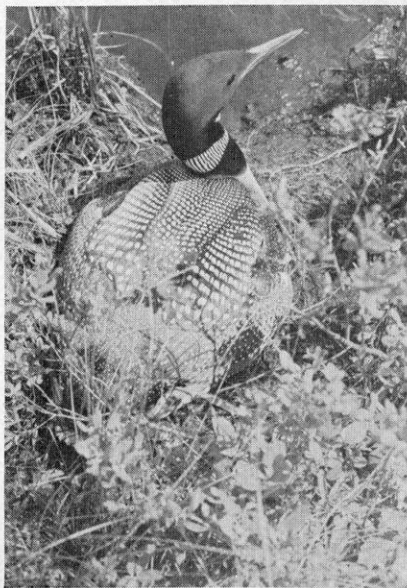
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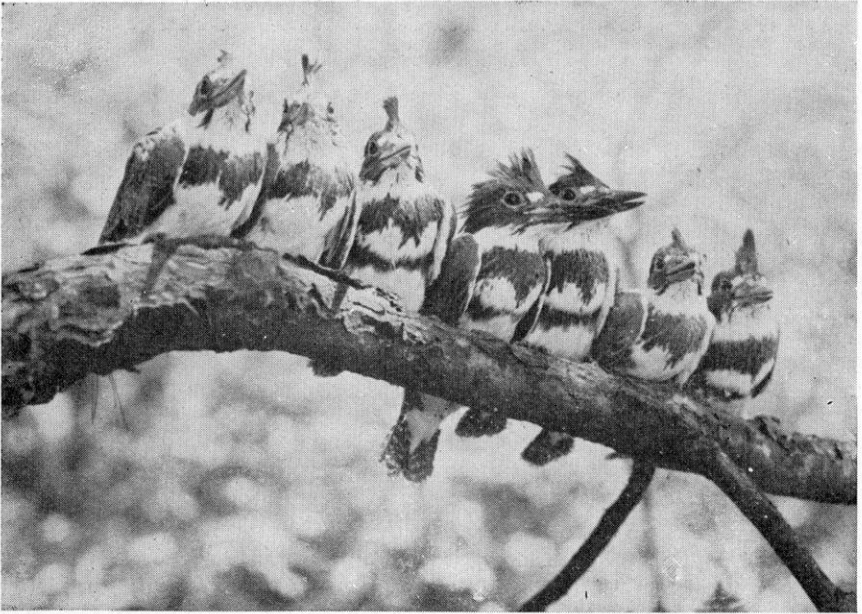
SOME INTERESTING BIRD "SHOTS"

By E. M. DAHLBERG

Sometimes the story of how a picture was taken is almost as interesting as the subject itself. The prints that I am submitting with these comments were procured under circumstances that were interesting to me.

In Ladysmith High School where I preside over the Biology Department, there were two photo-fans in a class I had about a dozen years ago. I will call them Hugo and Anita because their names were Hugo and Anita. On a Sunday picnic excursion one summer they took a canoe trip on that wide and varied body of water known as the Chippewa Flowage. Readers who are familiar with this man-made lake will recall that it has many floating islands that came up out of the peat bogs and swamp lakes after the area was flooded. The canoeists observed a loon as it made a landing on one of these treacherous islands. Sensing the prospect of an unusual picture, the amateur artists made a cautious but precarious landing and proceeded to stalk their quarry. The success of their undertaking is clearly recorded in the photograph of the loon on her nest. Hugo approached his objective with such caution that he was able to set up his tripod and take this remarkable picture without flushing the bird. Later when he told me about it, he explained that after he took the shot he motioned to Anita to step up and view the reflection in the finder. But he said she made an awkward movement and frightened the bird away. I am sure that this unkind insinuation was mere male egoism—because Anita has since earned enviable recognition as a badminton champion up and down the West coast: which suggests that she is probably less of an "awk" than Hugo is. The truth is that Hugo had probably exhausted the bird's patience before Anita arrived at the camera. Besides there was still something of interest in





the finder. So for her part in the stalking of the loon, Anita made the second shot and got the picture of the two eggs in the nest.

The seven baby birds sitting on a limb is no less a remarkable picture even if the circumstances of obtaining it were less hazardous. The birds are easily identified as a "pre-flight" family of kingfishers. Readers of "The Passenger Pigeon" surely need not to be told that kingfishers nest in a hole in a bank or hillside. In his woods-wandering one day, Hugo came upon such a hole from which there issued an unearthly clamoring of hungry fledglings. Reaching in a full arm's length, he extricated them one by one and placed them on a limb. I know of no other instance of a family of kingfishers being hauled from their hole in the ground, perched on a limb, photographed and returned to the place from whence they came.

The other picture in this series came to me through the courtesy of a well known American ornithologist, Dr. Alfred Gross of Bowdoin College in Brunswick, Maine. I first met Dr. Gross in the late 20's while he was engaged in a study of the grouse situation in Wisconsin. During that decade one of the great bird tragedies in America was drawing to a close. The usual well known causes had crowded another species of American bird life to the brink of extermination. Over shooting, destruction of natural habitat, and introduction of unnatural enemies had reduced the once abundant heath hen to a pitiable remnant of but a few score birds, isolated on Martha's Vinyard Island off the coast of Massachusetts. By 1927 there were only thirteen birds left, and in April 1928 there remained just three and these were all males. Scientists now could only observe and record the end. Dr. Gross observed and photographed the passing of the last bird. After the story of the tragic demise of this species was written, I wrote Dr. Gross for permission to use a



picture of the last heath hen in "Conservation of Renewable Resources" which was published in 1939. One of these pictures of the last heath hen is reproduced herewith.

To me there is nothing that seems more awesome and terrible than the death of the last individual of a species of God's creatures. There have been many instances of it in the past century and the prospects are that there will be many more in the century ahead. There was the brutal butchery of the defenseless great auk for its flesh and feathers. Passenger pigeons once flourished in countless millions in this very landscape, but the last of its kind died in a cage in 1914. Several other species have gone by the same way, and how near to the same fate many more may be, we will not know until it is too late.

Ladysmith, Wisconsin, February, 1947

BIRD STORIES: A COLLECTION OF BIRD AND WILDLIFE STORIES. By William T. Cox and Dietrich Lange. Published by "The Farmer," St. Paul. 112 pp., profusely illustrated. 25 cents.

Written by two nationally known figures in wildlife circles, the stories of this booklet are arranged so that they will appeal to children. Some of the birds treated are grouped by color, some by habits, and some by seasons. In addition to the stories there are chapters on the relation of wildlife to the soil; the joys of wildlife; how to learn the birds; why birds migrate; feeding birds in winter; birds work for the farmer; and plans for bird houses; to mention a few.—N. R. B.

Sac Prairie Summer

By AUGUST DERLETH

21 June: I observed this evening that nighthawks appear to make sorties, as it were, flying up crying to sky-coast several times for an hour to half an hour before sundown, and then returning to their nests or perches to fly up again for longer periods well into darkness at or after sundown. I had noticed this now and then previously, without paying much attention to the birds, but in tonight's period of watching the pattern seemed inescapable.

22 June: On the hills across from Sac Prairie this afternoon I saw that the cows in pasture there seemed to realize that the cowbirds were beneficent, and were extraordinarily patient with them in their moving around; nor were the birds themselves at all disturbed by the movements of the cows, managing only to keep out of their way, by short hops or flights, and little more. The cowbirds were clustered thickly around and among the cows, walking with them wherever they walked.

4 July: While walking out to Witwen today, I paused to watch birds moving along a fence before me—two meadow-larks and a kingbird, anticipating my approach by flying a little ahead from time to time, and then ultimately describing a wide arc around me to return to their original perches; and, while I was thus engaged, I had opportunity to see the kingbird feeding, making a sudden darting flight on two occasions from his perch low into an adjoining clover-field and snatching once a butterfly, and a second time another, larger insect, which I took to be a dragonfly, and returning to the fence to devour them. All three birds were silent, making no sound whatsoever beyond the peculiar and muted snap of the kingbird's bill in seizing its prey.

7 July: While at work in the studio tonight I heard a todo of birds outside, and, coming to the window to look out, I saw a pair of saw-whet owls in the cedar immediately beyond the east windows of the studio, clearly visible something like ten feet from where I stood. Since the hour was not long after sundown, the birds were unmistakable, and their early venturing forth had aroused robins, blue jays, sparrows, pewees, and wrens, all of which were screaming at the owls. But these birds dispersed with the invading darkness, and one of the owls then flew over to the other side of the cedar. But the other fixed his gaze on me and gave a querulous note, not quite a hoot, nor yet quite a clack. I imitated it, whereat he turned his tuftless head this way and that and snapped his black bill. Thereupon ensued a colloquy which lasted until I tired of it, though he did not, despite several attempts on the part of his mate to engage his attention from the other side of the tree; he made answer each time I imitated his peculiar cry, and if I remained silent for any time, himself cried out. He seemed indeed to be very tame, and was not in the least frightened.

19 July: A clamor of grackles in the lindens and coniferous trees north of the house this morning, their constant, rusty cries rising for two hours or more, with a kind of pleasant mellowness. And in Sac Prairie the purple martins congregated along the telephone and light wires beside the Wisconsin, and on the telegraph wires strung over the

railroad bridge—the first evidence of the approaching season of migration. However, here and there in the village, robins still foraged for young, and the wrens were busy at teaching their offspring to fly.

26 July: I was awakened early this morning, circa two o'clock, by an eerie, steady whistling emanating from the arbor vitae beyond the east windows. I got up and listened to it, but I could not determine its origin; it sounded almost mechanical, but obviously it was not. It was steady, prolonged, unbroken, and once it ceased sounding, it did not sound again. But though it was soft, there was no mellowness in it, nor yet was it harsh.

27 July: The screech owls keened around the house tonight, just off the south balcony and close to the french doors, making a sad, melancholy wailing, very welcome to the ears, not having been heard for some time.

31 July: At the hour of sundown tonight the marshes southeast of Sac Prairie still rang with sound, though birdsong generally was not heavy, the midsummer hush having descended. Yet I heard calls and songs—primarily calls—of catbirds, pewees, song sparrows, kingfishers, goldfinches, nighthawks (sky-coasting over the low hills along the Mazomanie road across the Upper Meadow), yellow warblers, indigo buntings, blue herons, yellow-billed cuckoos, great crested flycatchers, che-winks, chimney swifts, and bank swallows.

6 August: At the Ferry Bluff late tonight a wood duck called constantly from the mouth of the Honey Creek, making its *cree-ee-ee* at regular intervals from that well of darkness; while upriver a short distance, a pair of swamp owls cooed softly; and, across the water to eastward, a barred owl and a solitary killdeer cried. The blue herons fished in the moonlight on the bars, their harsh cries coming out of the darkness from time to time.

9 August: I observed a flock of killdeer, perhaps half a dozen or more, autumn-like along the Wisconsin's shore near the wing dam this afternoon; they flew up and swept away, crying at my approach in their sad voices; but they did not go far, only circling around to land again and run along the river's edge, crying as if in mourning for the lost Spring.

19 August: Grackles haunted the cornfields this morning; I saw them on both sides of the road leading north to the Upper Lane, and again in the corn along that Lane—great flocks of cawing birds, making their not unwelcome to-do in the early morning sun, and clearly raiding the ears. They flew up at my approach, circling a little, as if undecided on which way to fly, but eventually solved the problem of their reluctance to leave their food, by circling back into the cornrows somewhat away from the road and the lane. There were perhaps as many as six hundred of the birds in all.

20 August: Lying under the elm on the Big Hill this afternoon, I watched the purple martins and the bank swallows soaring and flying among the clouds—not really in the clouds, which were high cumuli, with beautiful thunderheads white and grey against the striking blue, but appearing to be of them, certainly of the windy air, a west wind blowing steadily and coolly. The birds flew all around the elm, occasionally coming down to it, up and away and around with almost ceaseless energy, twittering and crying, perhaps twenty of them in that one

place around the hill, weaving in and out from behind the foliage above, dark on the sky and the wind-driven clouds, and very beautiful to see—as if the poems I had been at reading had somehow come to life there.

26 August: Pewees and meadow-larks sang this morning in the fields along the Upper Lane, but there were few other bird voices. The pewee seems constant at this season; not even the mourning dove sings as faithfully, though in the bottoms the song sparrow approaches that constancy.

5 September: Early this evening at the Ferry Bluff I heard a whip-poorwill call for the first time in approximately six weeks—the longest quiet period within memory. The song was all the more pleasant to hear for this long period of silence. The initial bird was soon joined by others, and for approximately fifteen minutes they called out of the darkening hills, and then were still.

10 September: Warblers passed through this morning in great numbers. One flock which invaded the lilacs west of the house contained masked warblers (the warbler so unimaginatively called the Northern yellowthroat), Kirtland's, Magnolia, and Tennessee warblers.

15 September: This evening in the marshes, I observed that not a purple martin, not a swallow, not a chimney swift was in evidence. The martins have been missing for some days, but only a day or so ago a few swifts and swallows flew about. But tonight, none; the telegraph wires and the poles were bare of birds; so I knew all had gone south. I paused for a few moments to watch the restless foraging of a solitary sandpiper along the river's edge down the west shore of Bergen's Island, and noticed, while I stood there, the great numbers of warblers, predominantly myrtle warblers and redstarts. Of evening sounds, there were comparatively few: killdeer—a conclave of them along the east channel of the Wisconsin, well south of the bridge; blue jays (in numbers), goldfinches (likewise in numbers), yellow warblers, catbirds, and a lone pheasant cock, which I watched, for, having caught sight of me, he crouched well down into the grass of the Lower Meadow, and walked along stealthily, hidden there, and then looked up after I had passed to do a little scrutinizing on his own account. The birds had the sound and look of autumn.

UNIVERSITY BIRD BANDING PROGRAM REORGANIZED

A considerable number of graduate and undergraduate students at the University have been banding birds in connection with short-term research projects or long-term investigations of the University. Many of these students apply for Federal and State permits, use them for the few years that they are resident in Madison, and then drop their banding activities. The Washington office, where all records are filed, finds many loose ends, and the whole system has resulted in a rather deplorable lack of coordination in the banding programs of the University.

Acting on suggestions from the Fish and Wildlife Service, representatives of the Zoology and Wildlife Management Departments of the University and the State Conservation Department met and formulated a coordinated program designed to eliminate these difficulties. A plan and a set of regulations for all bird-banders at the University were drawn up and mimeographed for distribution. The new system should

simplify and expedite the work for all co-operators involved as well as prevent duplications and conflicts which can so easily arise in an uncoordinated program.

John W. Aldrich, now in charge of the banding work of the Fish and Wildlife Service has written with regard to the new plan as follows:

"I was very much interested in the plan which has been developed at the University of Wisconsin to have all of the bird banding work carried on by students and representatives of the University under the direction of yourself and Dr. Emlen, channeled through your office. This is exactly the sort of consolidation of the work which we have been hoping for, and which we feel may help to make the work of our central bird banding office less time-consuming, and thus allow a further expansion of the program.

"I hope that other universities and scientific institutions may be induced to follow your example and set up similar organizational systems in their banding work. For this reason I would like to see your plan receive the widest possible publicity. We would like to publish it in its entirety in our next issue of Bird Banding Notes, which we hope to have ready soon. I would like also to see mention made of it in the leading ornithological journals."

The workings of the new plan can perhaps best be described by quoting directly from the regulation sheet:

Permits: All banding projects at the University at Madison shall operate under a single, master permit issued in the name of Professor H. R. Wolfe of the Zoology Department. Each student or staff member who bands birds must carry a photostat duplicate of this permit bearing his or her signature. Persons wishing to obtain such a permit may apply at Professor Wolfe's office, bringing with them a written approval signed by a qualified sponsor. (Students and others who have their own government permits may, of course, retain these for work at other stations and for game bird studies employing State bands.)

Bands: All banding at the University (except game bird projects utilizing State bands) shall be done with bands issued to Professor Wolfe under his master permit. Persons wishing stock of bands may obtain them directly from Professor Wolfe who will keep a good supply of all sizes on hand. A bander will sign a receipt for each consignment of bands and will be responsible to see that surplusses are returned at the completion of a project.

Reports: A complete report in duplicate on standard government forms (supplied with each consignment of bands, must be submitted to Professor Wolfe on or before December 15 of each year, or on dates specified by a permittee's sponsor. Students conducting seasonal projects must submit their reports at least ten days before the end of a semester. Reports must include full data on all birds banded and an accounting of all unused bands.

Records: One copy of each report will be forwarded to Washington under the bander's name; the second copy will be filed in Professor Emlen's office in the Zoology Department. Qualified persons may have access to these files on request.

Return notices received by the Zoology Department will be recorded and promptly forwarded to the bander.

A summary report of all banding operations at the University will be sent to all cooperators at the close of each year.

The committee that formulated the above program consisted of Professor A. Leopold and Mr. R. McCabe of the Department of Wildlife Management, Professors J. T. Emlen and H. R. Wolfe of the Zoology Department, and Dr. I. O. Buss of the Conservation Department.

Zoological Laboratory, University of Wisconsin, July 25, 1947

The Student's Page

By MRS. N. R. BARGER

Those of us who have been delighted with the results of winter bird feeding are, no doubt, making plans to resume it, anticipating even greater pleasures this coming winter. Not only do we supplement bird food and help the birds through the winter when snow covers the weed-seeds, but we also learn by daily observation more of their habits and behavior patterns.

Some people continue to feed all through the spring and summer and have found it very much worthwhile. Though the birds do not actually need the extra food, it is interesting to note which birds continue to feed, when they stop coming, and to try to discover the reason why they have stopped. Some birds will bring their young to the feeding station which presents an excellent opportunity to watch the feather development of the young.

Mrs. W. T. Stephens of Madison, whose home is directly across the street from the Nakoma Duck Pond, a part of the University of Wisconsin Arboretum, has unusual opportunities for bird feeding and study. She reports that she continued feeding during the entire summer and has enjoyed a number of interesting incidents. She has kept supplies of suet suspended from tree branches in the garden. Chickadees, nuthatches, hairy and downy woodpeckers were regular visitors until the middle of June. She felt sure that a chickadee nested nearby though she did not find the nest. The year before a family of five nuthatches were reared in a cavity of a soft maple. They remained for three weeks where they could be observed.

A most interesting observation that Mrs. Stephens made this past summer was that five or six catbirds came regularly for about four weeks to feed on the suet. Was there a lack of certain insects due to the unseasonal rainy weather, she asks. They stopped coming abruptly, perhaps berries ripened supplying them with preferred food.

Mourning doves continued to come all summer. They liked the cracked corn, sugar cane and other seeds, a mixture which was the only available feed during the summer months.

Mrs. Stephens has a large stone terrace, part of which is slightly slanting from the garage with a western exposure. This was the favorite feeding place for all the ground feeding birds. Dried bread crumbs and even crushed dog biscuits were attractive to the five or six red-winged blackbird families which came to feed regularly. The development of the wing patches on the young males was especially interesting. At first only a bit of rose showed and gradually grew brighter. Finally their mottled coats turned to rich black.

Another observation of a young bird proved to be interesting when a mother cardinal brought her baby repeatedly to feed. During the mating and nesting season the male cardinal fed the female regularly at the feeding tray.

A song sparrow came to the feeding station early last fall and was a regular visitor until the middle of December.

Mrs. R. A. Walker, Madison, has also been entertained with summer bird feeding. She said her most interesting observation this summer was of a cardinal mother bringing her family of two young, one of which was a cowbird.

Not all of us have suitable places for summer feeding but those who have can make it an entertaining as well as instructive hobby. Coming back to the subject of winter feeding, may I suggest that seeds from squash, watermelon, cantaloupe and pumpkin are welcome varieties to add to bird food. Mrs. Stephens dries them at a low oven temperature and then grinds them in a food chopper. Grit is also a welcome addition as it is a necessity which often is not available when heavy snow covers the ground.

Warm water in a shallow basin will attract birds, but in very cold weather it may need to be replaced several times a day because of freezing over. The Benson Pauls in Madison had the unusual pleasure of watching a mocking bird one winter. They poured hot water into the end of a cut down wooden keg. The mocking bird appeared every time the water was poured. Mrs. Paul says that to their knowledge it never took any bird food, but that it came for water regularly.

BY THE WAYSIDE . . .

Dominance of Species. While walking along a Madison street I flushed a robin and a bronzed grackle from the vicinity of a large piece of ice cream cone. The robin had moved off only about five feet and immediately after I had passed it began to hop leisurely toward the morsel. It stopped about a foot from the cone and then waited as the grackle, which had flown off quite a distance approached. As the grackle came in rather rapidly the robin hopped away and made no effort to eat the cone or defend it. No calls of any kind were emitted and it seemed clearly a case of the robin recognizing a superior or dominant species.—George Hall, Madison.

An Upland Plover Experience. A pupil of our school took me out one day to show me the nest of an upland plover he had found. The bird on the nest saw us approaching, but it did not leave. I reached down and gently raised it from the nest, exposing four eggs. Even in my hand the bird seemed not the least perturbed. There was no attempt made to force itself from the hand. I wondered what might happen when I set it down. I expected the bird to fly up immediately when the hand grip had been released; but to the contrary, the bird showed no fear whatever, and remained upon the nest perfectly at ease, seemingly, in our presence. Four days later I drove out again to show this fearless bird to my wife, and the whole performance was duplicated. Has anyone else ever had a similar experience with an upland plover?—H. W. Schaars, Milwaukee.

THE SPRING SEASON . . .

(All field notes for the period of June 1 to August 31 should be sent immediately to Rev. Samuel D. Robbins, 205 South Hewett Street, Neillsville, Wisconsin.)

If complete ornithological records were available, this might go down as one of the latest spring migrations of all time. The presence of deep snow in southern Wisconsin well into March plus the lack of warm nights until March 22 conspired to delay the first arrivals. Thereafter there was no prolonged warm spell to enable the migration to return to normal, with the result that arrival dates were consistently late throughout the spring months, and many species were conspicuously late in departing for the north. Observers at the W. S. O. convention in Madison and Wyalusing found only the early vanguard of May warblers at a time when the migration might normally be expected to approach a peak; the Green Bay club found that their big day, May 18, preceded the height of the migration; and by the end of May the general arrival of such common migrants as the wood pewee and indigo bunting had not yet occurred. Around Neillsville the writer experienced a definite lack of clear-cut "waves," the few warm nights that might be conducive to heavy flights giving way to heavy rains before morning. As if to leave no doubt about the cold and backward spring, several inches of snow blanketed sections of northern and eastern Wisconsin on May 29, causing considerable loss of bird life.

For all of this, several observers report more than the usual numbers of small land-birds during May. This is not a universal observation, however, and it may be that local weather conditions served to "channel" birds in certain areas. From the meager reports at hand it appears that the spring duck flight was again poor; but even more noticeable was the poor flight of shore birds, especially along Lake Michigan. Red-backed sandpipers were a notable exception, but in general shore birds were conspicuous by their absence. The migration of hawks appeared to be about normal. With limited time for observation, Kaspar counted 457 hawks over Oshkosh, nearly all during April, compared with about 400 in 1946 and 498 in 1945. He reports April 24 as the peak day, when he counted 251 broad-wings, and more than 300 hawks in all.

In spite of the late season, a few surprisingly early records were turned up, some undoubtedly represent birds that wintered close by, while others are unexplained. The highlights of the season follow:

Loon: Lingered in Crawford County until May 28 (S. A. Apel).

Red-throated Loon: Milwaukee, Apr. 23 (Mrs. Balsom & Mrs. Nunemacher).

Holboell's Grebe: A pair in breeding plumage were seen in Black River Falls, Apr. 15-17 (Mr. & Mrs. Harold Roberts).

White Pelican: 48 were counted on Cedar Lake, in Polk and St. Croix Counties, on Apr. 25 (Lawrence Hope).

Double-crested Cormorant: Reported from many scattered localities throughout most of the state. First noted in Madison, Apr. 6 (Emlen et al); a peak of 2000 was reached in Adams County, Apr. 27 (G. C. Johnson); the last was seen in Jefferson County, May 27 (Buss et al).

American Egret: An individual in Waushara County on Apr. 12 (Palas-Robinson) represents the earliest known state record. Another arrived at Horicon on May 12 (Burrow).

Green Heron: One reached Milwaukee by Apr. 22 (Mrs. Nunne-macher).

Whistling Swan: After a late start, this species reached a peak by Apr. 12, when several thousands were seen on Lake Poygan, Winnebago County, by Palas and Robinson. Some were still to be seen in Bayfield County on May 2 (Annin-Combs); another was found dead in Black River Falls on May 18 (Mrs. Roberts).

Canada Goose: Last reported from Fond du Lac County, May 10 (Philip Mallow) and from Walworth County, May 11 (Mrs. Higgins-Miss Moody).

Snow Goose: The lone report comes from Wisconsin Rapids, Apr. 2 (Searles).

Gadwall: First noted in Madison, Mar. 29 (Springer); peak at Horicon, Apr. 19 (Hopkins); last seen in Madison, May 14 (Springer).

Baldpate: First, Madison, Mar. 16 (Barger); peak, Horicon, Apr. 5-25 (Hopkins); last, Madison, May 18 (Kumlien Club).

Green-winged Teal: Still in Oshkosh, May 17 (Evans), and in Green Bay, May 18 (Bird Club).

Shoveller: Peak, Horicon, Apr. 12-18 (Hopkins).

Wood Duck: Arrived in Washington County, Mar. 24 (Lake).

Redhead: Lingered in Madison until May 26 (Springer); noted in Sawyer County, May 30 (Kahmann).

Ring-necked Duck: On May 26 still present in Madison (Springer). and in Two Rivers (Mrs. Smith).

Lesser Scaup Duck: Last noted in Madison, May 26 (Springer).

American Golden-eye: Still in Milwaukee, May 15 (City Club).

Bufflehead: Arrived in Madison, Mar. 16 (Barger), and in Mercer, Mar. 21 (Mrs. Sell); last seen in Columbia County, May 18 (Roark), and in Milwaukee, May 25 (Bill Jackson).

Old-Squaw: Seen in Port Washington, Apr. 27 (Springer); last noted in Milwaukee, May 15 (City Club).

Ruddy Duck: First noted in Oshkosh, Mar. 28 (Evans); last seen in Green Bay, May 18 (Bird Club). A pair was also noted in Black River Falls, May 15 (Mrs. Roberts).

Turkey Vulture: One in Milwaukee, Apr. 7 (Gordon Oriens et al). Another was noted in Madison, Apr. 17 (Springer); while one at Wyalusing Park on May 11 was a real treat for many W.S.O. observers.

Goshawk: Three in Milwaukee accompanied a northward movement of land birds, Mar. 23 (Gordon Oriens). Also recorded in Vilas County, May 29 (Thompson-Stroebe).

Sharp-shinned Hawk: One in Kenosha on Mar. 4 (Mrs. Higgins) properly represents a bird that wintered close by.

Red-shouldered Hawk: Milwaukee, Mar. 11 (City Club).

Broad-winged Hawk: Early migrant in Milwaukee, Mar. 23 (Mrs. Larkin).

Rough-legged Hawk: The latest known spring departure date of this species having been Apr. 27, it is of interest that at least three birds were seen after that date this year: Neillsville, Apr. 28 (Robbins); Madison, May 2 (Springer); and Hancock, May 3 (Springer).

Bald Eagle: In Waupaca County one flew against a door and was killed (Pete Rasmussen). Other individuals reported from Crawford,

Winnebago, Door, Brown, Oconto, Marinette, Oneida and Iron Counties.

Marsh Hawk: Arrived in Madison, Mar. 6 (Bill Jackson).

Osprey: Three seen along the Mississippi River in Crawford County, Apr. 5 (Paulson).

Duck Hawk: Madison, Mar. 11 (Stokes-Taber); Milwaukee, Apr. 26 (Treichel); Oshkosh, April 27 (Evans); and Hayward, May 14 (Kahmann).

Pigeon Hawk: One in Madison, Mar. 6 (Bill Jackson) is remarkably early, possibly indicating a wintering bird; another in Loganville, May 29 (Kruse), is exceptionally late. Other reports between Apr. 6 and May 8 come from Dane, Milwaukee, Winnebago, Manitowoc, Door, Oconto, Clark and Iron Counties.

Prairie Chicken: Records for March and early April come from Kenosha, Waushara, Manitowoc, Oconto, Langlade and Burnett Counties.

Sharp-tailed Grouse: Mercer, May 19 (Mrs. Sell).

Hungarian Partridge: Dane County, Apr. 1 (Springer).

Reeves' Pheasant: A few of these recently introduced birds have been observed in Sheboygan County: five on Apr. 5 (Popple), and three on Apr. 15 (Hubbard).

Sandhill Crane: Wisconsin Rapids, Apr. 1 (Searles); Poynette, Apr. 14 (Greeley); 69 over Madison, Apr. 15-16 (Hale-Owen); and 15 in Shioc-ton, Apr. 17 (C. A. Schlumpf).

King Rail: Arrived in Milwaukee, Apr. 28 (Mrs. Larkin), and in Madison, May 8 (Mrs. Walker & Mrs. Doane).

Semipalmated Plover: Milwaukee, May 12 (Dr. Hehn); Madison, May 18 (Barger et al); Oshkosh, May 17 (Evans).

Golden Plover: Oshkosh, May 18 (Evans). Only spring record this year.

Black-bellied Plover: Not reported from Milwaukee, but three were seen in Dane County, May 18 (Barger); several in Oshkosh, May 19 (Evans); 46 in Fond du Lac County, May 30 (Kaspar); and 50 in Kenosha County, May 30 (Mrs. Higgins).

Ruddy Turnstone: Present in Appleton, May 12-25 (Mrs. Rogers); in Milwaukee, May 13-14 (Susan Drake); in Oshkosh, May 18-30 (Evans-Kaspar); and in Jefferson County, May 27 (Buss et al).

Wilson's Snipe: Four seen at Poynette, Mar. 1 (Bill Jackson), may have spent the winter nearby.

Willet: One in Green Bay, May 18 (Bird Club).

Pectoral Sandpiper: A remarkably early bird in Milwaukee, Mar. 23 (Gordon Orians), is the earliest state record.

Red-backed Sandpiper: A heavy flight is reported in Oshkosh, May 16-30 (Evans). Numerous other reports between May 12 and 30 come from Dane, Milwaukee, Ozaukee, Fond du Lac and Outagamie Counties.

Long-billed Dowitcher: Waukesha County, May 15 (Mrs. Larkin); Oshkosh, May 19 (Evans).

Sanderling: Scarce in Milwaukee; reported from Appleton, May 12-25 (Mrs. Rogers); one was seen in Dane County, May 18 (Scott).

Wilson's Phalarope: Milwaukee, May 4 (Orians-Treichel); Dane County, May 5 (Doane); Oshkosh, May 16 (Evans).

Glaucous Gull: The Milwaukee bird previously reported was seen again on Mar. 8 (Gordon Orians et al), and on Mar. 16 (Mrs. Nunne-macher).

Franklin's Gull: An adult bird was carefully observed both swimming and flying in Madison, Apr. 8 (Springer).

Ivory Gull: Oconto and Two Rivers, Mar. 8. See back page.

Forster's Tern: Reported in Madison and Green Bay on the respective big bird counts, May 18.

Common Tern: Arrived in Two Rivers, Apr. 16 (Mrs. Smith).

Caspian Tern: Birds in Milwaukee, Apr. 19 (City Club), and in Two Rivers, Apr. 20 (Lintereur), both broke the previous early state record. An unusual inland record was made in Dane County, May 18 (Kumlien Club).

Yellow-billed Cuckoo: Madison, May 3 (Emlen). Early.

Barn Owl: Winnebago County, May 30 (Kaspar).

Long-eared Owl: Noted in Milwaukee from Mar. 19 (Mrs. Larkin) to Apr. 23 (Gordon Orians). Also found in Door County, Apr. 24 (Strehlow).

Short-eared Owl: Milwaukee, Mar. 23 (Gordon Orians) to Apr. 20 (Mrs. Balsom); Oshkosh, Apr. 7 (Evans).

Nighthawk: Bayfield County, May 3 (Annin-Combs); early so far north.

Chimney Swift: Madison, Apr. 12 (Emlen). Straggler.

Belted Kingfisher: One seen in Madison, Mar. 11 (Stokes), may have wintered nearby.

Yellow-bellied Sapsucker: Birds found in Waukesha County on Mar. 2 (S. Paul Jones), in Milwaukee on Mar. 5 (Mrs. Larkin), and in Madison, Mar. 16 (Emlen). May have wintered farther north than usual.

Arkansas Kingbird: One in southern Columbia County, May 18 (G. A. Hall et al).

Yellow-bellied Flycatcher: Reported to be unusually numerous in Milwaukee from May 13 on (City Club). Also noted in Watertown, May 15 (Mallow); Green Bay, May 18 (Bird Club); Neillsville, May 20 and 31 (Robbins); Plymouth, May 26 (Koopmann); and Oshkosh, May 30 (Evans).

Acadian Flycatcher: Sauk County, May 15 (Kruse); Oshkosh, May 30 (Evans); and Neillsville, May 23 and 31 (Robbins).

Olive-sided Flycatcher: Milwaukee, May 13 (Cuba Club); Madison, May 18 (Kumlien Club) and May 20 (Mrs. Walker); Neillsville, May 23 (Robbins); and Oshkosh, May 30 (Kaspar).

Northern Horned Lark: Last noted in Neillsville, Apr. 14 (Robbins).

Tree Swallow: Had reached Vilas County by Apr. 7 (Mr. & Mrs. Miles).

Bank Swallow: First noted in Two Rivers, Apr. 14 (Mrs. Smith).

Rough-winged Swallow: Racine, Apr. 7 (Prins).

Cliff Swallow: Racine, Apr. 12 (Prins). Earliest state record.

Canada Jay: Found in Bayfield County, May 2 (Annin-Combs).

Raven: Noted in Green Bay, May 18 (Bird Club), and in Bayfield County, May 2 (Annin-Combs).

Hudsonian Chickadee: The Madison bird previously reported was seen again on Mar. 1 (Ollie Owen), and on Mar. 18 (Barger).

Tufted Titmouse: The wintering bird in St. Croix Falls was last seen Apr. 1 (Heinsohn). Also noted in Milwaukee, May 12-15 (Mary Donald).

Red-breasted Nuthatch: Last report from southern Wisconsin: Mil-

waukee, May 21 (Mrs. Balsom).

Brown Creeper: Green Bay, May 18 (Bird Club).

House Wren: Two early birds: Kenosha, Apr. 15 (Mrs. Higgins); Waupaca, Apr. 20 (Mrs. Peterson).

Winter Wren: First reported in Madison, Apr. 6 (Owen); last migrant seen in Milwaukee, May 14 (City Club).

Bewick's Wren: One in Milwaukee, Apr. 11 (Hehn-Larkin) and Apr. 16 (Gordon Orians); in Madison, Apr. 18 (Springer), May 11 (McCabe et al), and May 18 (Kumlien Club); one in Spring Green, May 18 (Mrs. Balsom).

Short-billed Marsh Wren: Madison, Apr. 26 (Doane); earliest state record.

Mockingbird: Noted in Milwaukee on Apr. 29 (Gordon Orians), and on May 11 (Stolle).

Catbird: First in Madison, Apr. 30 (Hale).

Robin: A tremendous flight was noted in Oshkosh on Apr. 6 (Evans et al), but the absence of similar reports elsewhere indicates that the flight was not widespread. In Neillsville, 125 miles west, Robbins was experiencing a snow storm and an influx of evening grosbeaks on that date.

Hermit Thrush: Remained in Green Bay through May 18 (Bird Club).

Olive-backed Thrush: First in Milwaukee, Apr. 23 (Gordon Orians).

Gray-checked Thrush: First in Milwaukee, Apr. 30 (Susan Drake).

Willow Thrush: First in Plainfield, Apr. 27 (Bill Jackson).

Blue-gray Gnatcatcher: An early bird was noted in Racine, Apr. 11 (Prins). Others were found in Juneau County, May 3 (Bill Jackson); Sauk County, May 4-25 (Kruse); Neillsville, May 13 (Robbins); and Appleton, May 14 (Dorothy Brown) and May 15 (Mrs. McEathron).

Golden-crowned Kinglet: Last noted in Oshkosh, May 14 (Kaspar), and in Green Bay, May 18 (Bird Club).

Ruby-crowned Kinglet: The report of one at Crystal Lake, Waupaca County, on Mar. 9 by B. W. Talbot is a remarkable record. The last one was reported from Oshkosh, May 23 (Kaspar).

Pipit: In Milwaukee three were carefully studied on Apr. 11 (Mrs. Larkin-Mary Donald); another Milwaukee record on May 15 is furnished by Mrs. Balsom and Mrs. Nunnemacher. Robbins found them migrating over Neillsville on May 30.

Cedar Waxwing: A flock of 200 was seen in Madison on Mar. 12 (Hale).

Northern Shrike: Milwaukee, Mar. 2 (Mrs. Larkin) and Mar. 19 (City Club); Madison, Mar. 16 (Barger).

Migrant Shrike: First in Neillsville, Mar. 23 (Robbins).

Blue-headed Vireo: Lingered in Neillsville until May 30 (Robbins), and in Black River Falls until May 31 (Mrs. Roberts).

Philadelphia Vireo: Reported in Madison, Milwaukee, Oshkosh, Appleton, Watertown, Neillsville and Rhinelander, between May 12 and 27.

Prothonotary Warbler: From May 10 to 27 individuals were seen in Grant, Walworth, Dane, Jefferson, Milwaukee and Outagamie Counties.

Blue-winged Warbler: Wyalusing, May 11 (many observers); 2 in

Madison, May 13 (Mrs. Walker); 1 in Neillsville, May 13 (Robbins); 1 in Green Bay, May 18 (Bird Club).

Brewster's Warbler: Single individuals were carefully observed in Neillsville, May 20 and 30 (Robbins).

Orange-crowned Warbler: First noted on Apr. 29 in Madison (Springer) and in Milwaukee (Mrs. Larkin); last seen in Black River Falls, May 20 (Mrs. Roberts), and in Appleton, May 21 (Mrs. Rogers).

Black-throated Blue Warbler: In Oshkosh Evans reports seeing his first bird of this species in several years on May 15; another is reported from that area on May 24 (Kaspar). Other inland records where this species is not often found: Appleton, May 12 (Mrs. Playman); Neillsville, May 13 (Robbins); and Madison, May 18 (Kumlien Club).

Myrtle Warbler: Late migrants reported in Appleton, May 29 (Mrs. Rogers), and in Neillsville, May 30 (Robbins).

Audubon's Warbler: The second authentic sight record of this straggler from the west, in recent years, is furnished by a University of Wisconsin ornithological class. Bill Jackson is among those who saw this bird in the Wisconsin Dells region. All the distinguishing marks were noted, and the identification was confirmed by the instructor, Jim Beer.

Cerulean Warbler: This bird is again reported from scattered points in central Wisconsin. In addition to a Dane County bird on May 18 (Barger), individuals were found in Two Rivers on May 11 (Linteur), in Oshkosh on May 19 (Kaspar), and in Watertown on May 24 (Mallow).

Prairie Warbler: Three of these rare visitants are reliably reported: one in Madison, seen on May 16 by Young and Mrs. Walker, and on May 17 by Stokes; one in Milwaukee, May 19 (Mary Donald); and one in Plymouth, May 19 (Koopmann).

Western Palm Warbler: Last seen in Rhinelander, May 28 (Miss Almon), and in Milwaukee, May 30 (Gordon Orians).

Grinnell's Water-thrush: Still present on May 31 in Black River Falls (Mrs. Roberts) and Neillsville (Robbins).

Louisiana Water-thrush: Although this species is to be looked for in April, before the arrival of the Grinnell's, an exceptionally early one was found in Milwaukee on April 7 (Orians-Treichel). Another turned up in St. Croix Falls, Apr. 15 (Heinsohn).

Kentucky Warbler: Wyalusing, May 11 (W. S. O. members); Madison, May 18 (Kumlien Club).

Connecticut Warbler: First in Kenosha, May 12 (Mrs. Higgins).

Yellow-breasted Chat: One in Madison, May 13 (Mrs. Walker).

Hooded Warbler: This visitor from the south was reported on three occasions: one in Appleton, May 15-29 (Mrs. Rogers); one in Milwaukee, May 15 (Mrs. Larkin); and one in Columbia County, May 22 (Van Ness).

Redstart: The earliest report is of a bird in Milwaukee, Apr. 29 (City Club).

Bobolink: Appeared in Sauk County, Apr. 26 (Kruse).

Yellow-headed Blackbird: Madison, Apr. 15 (Emlen).

Orchard Oriole: On May 18 four were found: one in Madison (Barger), in Milwaukee (Gordon Orians), in Green Bay (Club), and in Two Rivers (Mrs. Smith). Another was reported from Oconomowoc, May 13 (Peartree).

Rusty Blackbird: Last seen in Appleton, May 6 (Mrs. Rogers).

Brewer's Blackbird: The arrival of this species is easily overlooked,

with the more common rusty blackbird still present, but in Milwaukee one was seen on Apr. 3 under excellent conditions of observation (Mrs. Larkin). Others were reported in Dane County, Apr. 11 (Hale), and in Oconto County, Apr. 19 (Carl Richter).

Evening Grosbeak: Seen regularly in Neillsville until May 17, with a straggler still present on May 30, a record late date (Robbins).

Pine Grosbeak: The winter influx carried only into the first few days of March. Milwaukee, Mar. 2 (Hehn-Larkin); Mercer, Mar. 5-7 (Mrs. Sell); Neillsville, through Mar. 9 (Robbins).

Redpoll: In Neillsville a heavy northward flight occurred, Mar. 20-23, 500-800 being observed flying over daily; Black River Falls still had a flock of 50 on Apr. 10 (Mrs. Roberts). Last seen in Mercer, Apr. 22 (Mrs. Sell), and in Rhinelander, May 3 (Miss Almon).

Pine Siskin: Not many seen in spring, and those were remarkably late. Madison, May 9 (Bill Jackson) to May 15 (Young); Milwaukee, May 10 (Mrs. Larkin) to May 15 (City Club); Oshkosh, May 19-31 (Kaspar); Neillsville, May 13-31 (Robbins).

White-winged Crossbill: Rhinelander, Mar. 8 (Miss Almon); Neillsville, Apr. 12 (Mrs. Crothers).

Grasshopper Sparrow: First in Oshkosh, Apr. 23 (Mrs. Fisher).

LeConte's Sparrow: Milwaukee, Apr. 29 (Gordon Orians) and May 14 (Susan Drake).

Vesper Sparrow: First in Kenosha, Mar. 24 (Mrs. Higgins).

Lark Sparrow: Noted in Black River Falls, May 12 (Mrs. Roberts), and in Sauk County, May 17 (Mrs. Balsom).

Slate-colored Junco: On May 18, still present in Milwaukee (Gordon Orians), and in Green Bay (Bird Club).

Tree Sparrow: Last noted in Neillsville, May 2 (Robbins).

Chipping Sparrow: Two early arrivals noted: Madison, Apr. 6 (Hall); Waupaca, Apr. 8 (Mrs. Peterson).

Clay-colored Sparrow: Earliest arrival noted in Milwaukee, Apr. 29 (Mrs. Simmons).

Harris' Sparrow: Seen on only two occasions this spring: one in Ladysmith, May 12 (Feeney); two in Neillsville, May 16 (Robbins).

White-crowned Sparrow: An early record was secured in Waupaca, Apr. 24 (Mrs. Peterson); last seen in Milwaukee, May 28 (City Club).

Fox Sparrow: Last in Madison, Apr. 29 (Owen).

Lincoln's Sparrow: Four were banded in Two Rivers, May 13 (Mrs. Smith). Another was banded in Oshkosh, May 14 (Kaspar), and another seen there May 19. Other records: Milwaukee, May 15 (City Club) and May 24 (Gordon Orians); Neillsville, May 13-17 (Robbins); and Madison, May 16 (Hall).

Lapland Longspur: Large flock in Dane County, Mar. 8 (Barger); Oshkosh, Mar. 15 (Evans); Milwaukee, Mar. 19 (Larkin-Donald); migrating in Neillsville, Mar. 20-Apr. 11 (Robbins).

Snow Bunting: Reported in Oshkosh, Mar. 15 (Evans), and in Rhinelander, Mar. 18 (Miss Almon). In Neillsville they were seen migrating off and on from Mar. 20 to Apr. 28 (Robbins), the latter date being later than the previous late departure date for the state.

Nesting data has purposely been held out of this summary, in order to combine it with further nesting notes for the summer months. A separate article will be presented on this later.

1947 MAY-DAY COUNTS

The observations of more than sixty-five observers were represented in seven May-day bird counts this year. Their total: 198 species. A summary of each follows:

Madison: May 18; 163 species. Observers were divided into seven groups, most of whom were in the field all day long. They covered Madison itself, the river bottoms along the Wisconsin River in western Dane County, and selected ponds and other areas throughout the county. Some of the best finds included: Black-bellied plover, red-backed sandpiper, sanderling, Forster's and Caspian terns, olive-sided flycatcher, Bewick's wren, Philadelphia vireo, prothonotary, cerulean and Kentucky warblers, orchard oriole, and clay-colored sparrow.—Kumlien Club.

Milwaukee: May 13; 158 species. Twenty-four observers spent twelve hours in the field, all in small groups, covering all city parks, the rest of the county, and other territory within twenty miles of the center of the city. In spite of cool, rainy weather, the following highlights were observed: Redhead, American golden-eye, hooded merganser, osprey, king rail, ruddy turnstone, long-billed dowitcher, yellow-bellied and olive-sided flycatchers, tufted titmouse, brown creeper, gnatcatcher, ruby-crowned kinglet, pipit, junco and Lincoln's sparrow.—Bird Group of the Milwaukee City Club.

Green Bay: May 18; 139 species. Eighteen observers in four groups spent the day covering sections on both the east and west shores of the bay, and in the southern part of Brown County. Threatening weather early in the morning dissipated so that after 9 o'clock ideal conditions of observation prevailed for the day. The most outstanding records: Green-winged teal, bald eagle, willet, Forster's tern, yellow-bellied flycatcher, raven, brown creeper, hermit thrush, golden and ruby-crowned kinglets, blue-winged warbler, orchard oriole, and junco.—Green Bay Bird Club.

Fond du Lac County: May 10; 86 species. In the vicinity of Long Lake, the following highlights were observed: Loon, Canada goose, redhead, American golden-eye, bufflehead, ruddy duck, osprey, brown creeper, winter wren, hermit thrush, and junco.—Philip Mallow.

Wyalusing Park: May 11; 81 species. Although not intended as a real May-day count, the observations of ten observers have been turned in and compiled into a composite list. Time and lack of familiarity with the locality presented limitations, but the following interesting records were secured: Turkey vulture, tufted titmouse, gnatcatcher, prothonotary, blue-winged and Kentucky warblers.—W. S. O. members.

Neillsville: May 16; 78 species. This was hardly a real bird count, as the observers spent only three hours in the field, and covered only a small portion of the town. Excellent weather conditions prevailed, however. The highlights: Orange-crowned warbler, evening grosbeak, pine siskin, clay-colored, Harris', and white-crowned sparrows.—Mr. & Mrs. Sam Robbins.

Appleton: May 14; 54 species. This was another "incomplete" bird count, with only two observers, and with rainy weather forcing a halt before much of the best territory could be covered. Among the best observations: Loon, brown creeper, and Cape May warbler.—Mrs. W. E. Rogers, Mrs. H. L. Playman.

Ivory Gulls in Wisconsin

On March 8, 1947, Carl Richter established a record for this species by collecting* a specimen on the ice fields about seven miles off Oconto harbor. The specimen, a female, was donated to the Milwaukee Public Museum.

Curiously enough, LeRoy Linteurer identified an ivory gull near the shore at Two Rivers also on March 8. All marks of identification were noted, including the black webbed feet, and the bird was very tame. It is possible that both observers found the same individual.

Although this species has occurred as far south as Long Island, New York and Lake Ontario, it is indeed a bird of the arctic regions. Like many of these birds, it is circumpolar and occasionally may be seen in Europe. Because of its rareness anywhere, such records as the two under consideration are prizes that we cannot expect to duplicate.

*Under federal and state permits.

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