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THE KENTUCKY WARBLER

Vol. XXXI

NOVEMBER, 1955

No. 4

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THE KENTUCKY ORNITHOLOGICAL SOCIETY

(Founded in 1923 by B. C. Bacon, L. Otley Pindar, and Gordon Wilson)

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| Vice-President..... | Robert A. Pierce, Frankfort |
| Corresponding Secretary and Treasurer..... | Mrs. William B. Tabler, 6, Glen Hill Road, Louisville 7 |
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Charles Meade, Henderson, 1953-1955
Rodney Hays, Lexington, 1954-1956
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Helen Browning, Membership; Leonard C. Brecher, Endowment; Rodney Hays, Conservation and Legislation.

NEWS AND VIEWS

THIRTY-SECOND ANNUAL FALL MEETING

The Kentucky Ornithological Society held its thirty-second annual fall meeting at Frankfort on October 7-9, 1955. At the first session, on Friday evening, Mrs. F. W. Stamm, the president, welcomed the members and visitors; Mr. Larry Gale, representing the Department of Fish and Wildlife Resources, explained the work of his department in protecting songbirds, especially the work at Kleber Songbird Sanctuary; Mr. Robert Pierce, also of that department, further developed the theme of the sanctuary; Dr. Harvey Lovell reviewed the study of songbirds and their nesting on forty acres of the sanctuary made by him and Mrs. Stamm in the summers of 1954 and 1955; and Miss Mabel Slack spoke on her experiences in a nature camp at Gothic, Colorado, in the past two summers, showing many colored slides of the picturesque area. After the program a reception was given for the society, in charge of Mr. and Mrs. Leonard Brecher.

On Saturday morning the society adjourned to the sanctuary and spent the morning in field trips, led by Mrs. Stamm, Dr. Lovell, Mr. Sam Parrent, and Mr. Pierce.

In the afternoon business meeting Miss Helen Browning reported that there had been seventy new members added during the year since our last fall meeting. Mr. Brecher told of the \$800 now in our endowment fund, largely from a small bequest by the late Dr. L. Otley Pindar and the dues from Life Memberships. The officers were re-elected, with two Councillors—W. P. Rhoads, Henderson, and Okey Green, Ashland—to succeed Mrs. J. Kidwell Grannis, Flemingsburg, and Charles Meade, Henderson, whose terms had expired.

The afternoon program consisted of "The Breeding Birds of Clemon's Fork, Breathitt County," by Dr. Roger W. Barbour; and a color film, "The Life History of the Bob-white Quail," furnished by the Department of Fish and Wildlife Resources.

The dinner meeting was presided over by Dr. Gordon Wilson, toastmaster, who introduced visitors, the guests at the speakers table, and some of our members who had come a long way to be at the meeting. Dr. Ernest P. Edwards, of Hanover College, spoke on "Bird Changes Along the Frontier in Mexico," beautifully illustrated with films made by Dr. Edwards himself, who is also one of the Audubon Screen Tour lecturers this year.

On Sunday morning the members who had remained over assembled in front of the Capitol Hotel for their annual pictures. After that they visited the State Game Farm, on U. S. 60, some three miles away.—MRS. VESTINA BAILEY THOMAS, Recording Secretary.

* * * * *

RESOLUTIONS ADOPTED

I. That we extend our thanks to the Department of Fish and Wildlife Resources for their cooperation in making our meeting a success and especially for conducting our field trips to the Kleber Songbird Sanctuary and the State Game Farm.

(Continued on Page 72)

SOME REMARKS ON THE ECOLOGY OF PREDATION *

By William M. Clay, Louisville

Ornithologists and other biologists have made surprisingly little effort to discover the meaning of predation. The subject is easily approached with more emotion than objectivity, a fact which leads me to admit that the joy of watching birds can lead one into becoming a bird-worshipper rather than a bird-student.

Once upon a time predation was condemned on moral grounds. Predators were regarded as evil, and man's position as the greatest and most ruthless of all predators was excused by assuming that all things existed for his exclusive use. Although the idea that predation has immoral qualities is now outmoded, it is not entirely abolished, and our language still contains many expressions and fables revealing this ancient contempt. Predation may have no rightful place in human society, but inasmuch as man is the only animal to have evolved an ethical mechanism, however rudimentary, it is not good sense to judge the conduct of other animals by human standards.

One current belief about predation is that it reduces the numbers of more desirable animals. That this idea is not well founded in all cases has been shown by the results of many predator-control programs, by the usual failure of bounty systems on predators to accomplish the desired ends, and by scientific studies on the ecology of predation. In other instances predators do reduce prey species severely and may even threaten them with extermination. The ecological principles of predation are not simple or self-evident.

The notion that predators invariably lessen the abundance of other animals which we may prefer in their stead may result from failure to recognize that in all species save a few, most individuals must die before reaching maturity. This is so because the capacity of a species to reproduce and increase its numbers, if unchecked, will quickly lead to a population larger than its range can support.

A species in which each pair would leave two young to mature and reproduce, and in which the reproductive span lasted ten years, would increase two-fold in one year, 1000-fold in ten years. A species which left ten young per pair per year, if there were no controls and if the adults bred during but a single season, would increase six-fold in one year, ten million-fold in ten years. If the reproductive span lasted ten years, in this time the descendants of a single pair would number more than a hundred million. Despite the absurdity of such excesses, we mourn the death of wild animals!

It is necessary to distinguish between the biological properties of the individual and those of the species. A species is one kind of population, and populations have certain properties not possessed by individuals, such as birth rate, death rate, and density or number of individuals per unit area. (The significance of these properties is discussed in "Principles of Animal Ecology," by Allee and others, 1949).

A point of major importance is the surprising stability of animal populations in comparison with their maximum theoretical variability. Many species do have either cyclic or aperiodic fluctuations in num-

* A talk given at a meeting of the Kentucky Ornithological Society in Louisville, Kentucky, April 15, 1955.

bers, but these fluctuations usually are of the order of two to six-fold and rarely are as great as ten-fold. Such variations are much less than would be permitted by the theoretical maximum rate of increase which, of course, is the "compound-interest" curve.

Approaches to the theoretical maxima do occur sometimes. The starling in America has increased a million-fold from the original six-score (or thereabouts) introduced sixty years ago. From two male and six female pheasants liberated on Protection Island, off the coast of Washington, in 1937 came a population of approximately 2000 in five years. Certain insects may show surprising outbreaks or "plagues" and in two or three years increase their numbers ten thousand-fold.

The human population has a tremendous capacity to increase. That of Japan doubled during the last century, while the white population of the United State has increased 3000-fold during the last three centuries. Even in the ancient history of the Israelites these people increased, according to Moses, from a band of 70 to a multitude of 603,550 fighting men after a stay of 430 years in Egypt. "Thy fathers went down into Egypt with threescore and ten persons; and now the Lord thy God hath made thee as the stars of heaven for multitude" (Deut. X. 22; Numbers I. 45, 46). Lack (1954) points out that even if these figures be questioned, the increase is theoretically possible.

All these examples of rapid rates of increase are exceptions to the general rule of stability in the size of animal populations. The growth form of a population is more like an S-shaped curve. After a species has been greatly reduced in some particular area (as by unusually severe weather), it tends to regain its former numbers. As it does so, the rate of increase is not uniform. First there is a slow increase, then a rapid increase, and finally a decreased rate until the population has levelled off and increases no further. Rarely or never does a population stay at a particular level; oscillations occur with changing conditions. Experiments on protozoa, flour beetles, fruit flies, and other organisms show that the sigmoid curve is a rough but seemingly valid approximation of the growth curve (Allee, et. al., op. cit., p. 301; Andrewartha and Birch, 1954, p. 396).

It was Malthus who first showed the existence of population controls in nature. Malthus's words fell on heedless ears, at a time when the world's human population was rapidly increasing. Several decades later they were restated by Darwin, who formulated the theory of natural selection to account for the automatic regulation of animal numbers in nature. The regulation of domesticated animals is not automatic but is provided by the animal-husbandryman.

While it is obvious that regulation of animal numbers does occur in nature, the mechanism of regulation may be complex and obscure. It is easy to suppose that predators are the main factor, but ecological studies show the existence of several other types of limiting factors, such as food supplies, habitat, competitors, territorialism, and weather, and indicate that only in some instances are predators of extreme importance.

The ultimate limiting factor, if all others be relaxed, is the food supply. Let us consider food chains and "trophic levels."

The most basic trophic level is the producer level. This is the role of green plants, to manufacture organic compounds from the

inorganic by the agencies of sunlight and chlorophyll. Here, too, are formed amino acids, the building blocks of proteins and therefore of protoplasm itself.

These substances are essential both to plants and to animals, but animals cannot manufacture them from inorganic resources. They must depend upon plants. Animals which feed upon plants comprise the second trophic level, the herbivore level. Among its diverse members are grasshoppers, quail, cattle, and man.

The third level is that of carnivores, the animals which eat other animals. This is the usual predator level. Some animals are omnivores, as is man, and simultaneously occupy two consumer levels. In some instances there are additional consumer levels. Parasites are always one step higher on the food chain than their host. While many food chains on land are short, as grass-beef-man, they may be longer, as plant-bug-spider-wren-hawk. Long food chains are commonplace in ponds and streams, where many of the producers and first-level consumers are microscopic and each creature in turn is eaten by a larger organism.

Finally there are the decomposers, the bacteria and fungi which break down the organic compounds of plants and animals and return them to the inorganic state. Decomposers are important in the cyclic re-use of such elements as nitrogen, carbon, and oxygen, but they need not be considered further in the light of our present topic.

It is important to note that at each successive level the total quantity of energy is greatly reduced, owing to losses as heat and to other factors. Even plants appear to be inefficient, for in building their own bodies they convert less than one per cent of the radiant energy falling upon them into chemical energy of their body compounds. The conversion rate of plant material into animal flesh varies greatly, but the general order of magnitude is about five per cent. Thus 100 pounds of plant tissue may be converted into approximately five pounds of animal flesh. If passed on to a second consumer level, a predator, the value becomes less than one pound.

It is apparent, then, that the total mass of the producer level is many times that of the herbivore level which it can support, and that the herbivore level must be greater than the predator level. These relationships provide for a type of automatic control. An excessive increase of consumers may so reduce the food supply as to cause a subsequent decline in their own numbers. This is a "feed-back" mechanism which serves to check fluctuations, both of prey and predator.

Natural situations are of such complexity that more than one limiting factor are likely to be in operation simultaneously. Thus the reproductive rate of an expanded population may be limited by the availability of nesting sites or by other factors. Stability in numbers is promoted also by utilizing various food resources. This is true both of herbivores and predators. Note the following reports of varied diets among predators.

Burns (1952) lists 17 species in the food of the Great Horned Owl. The quantity of each item probably varies according to its availability. In the interior of Alaska the Peregrine Falcon has a varied diet, the three main items being gulls (16% of total weight), unidentified passerines (17%), and Alaska Jay (12.5%). Lopinot's (1951) observation

of raccoons eating nestling Great Blue Herons suggests widely varied feeding habits of this predator. The heron is a predator, also.

Occasionally it is difficult to determine which of two combatants is the aggressor. Williams (1951) reports finding a rat snake (*Elaphe obsoleta lindheimeri*) coiled about a limp but still uninjured Red-shouldered Hawk. When separated and released, each went its own way.

The intensity of predator action may increase greatly when the prey species becomes excessively abundant. Errington (1937) thinks that quail populations are not appreciably decreased by predators but that they are vulnerable only to the extent that the proper carrying capacity of the range is exceeded. A fall population which can find adequate shelter will survive both weather and predators, whereas any excesses are removed during the critical winter season by predators or other factors. Furthermore, if too many survive the winter, they may exceed the capacity of the breeding territories and be subject to heavy predation when they become restless, quarrelsome, and move into insecure areas. In summer, predation is proportional to saturation of the habitat; if the population is near the saturation point, fewer young reach maturity.

Fichter, Sildman, and Sather (1955) studied the feeding patterns of coyotes in Nebraska with reference to a proposal that the coyote be controlled as part of a pheasant-management program. They concluded that the coyotes relied mainly upon rabbits and small rodents and that pheasants were important food items only in certain areas.

The Sparrowhawk (*Accipiter*) of Europe has been extensively studied and is known to feed upon many small passerines, but Lack (1954) states that the main limiting factor of the passerines seems to be food.

On the other hand, predation (by foxes, horned owls, and hawks) seems to be the main limiting factor in the Ruffed Grouse, and Schuman (1950) estimated that 31.3% of the red salmon spawning population of the Karluk River system on Kodiak Island is destroyed by the Kodiak bear. The sea lamprey after gaining entrance to Lake Huron and Lake Michigan virtually exterminated the lake trout in these waters and now is threatening this important food fish in Lake Superior.

Where the interacting species have had an evolutionary history together, they have evolved adjusting mechanisms such that the prey may get along better with than without the predator. The white-tail deer has a strong tendency for overpopulation, now that wolves and pumas have been removed. Here man must be the substitute predator. Predators are essential in the ecology of the Kaibab deer. From 1907 to 1923 an organized extermination program greatly reduced the number of predators on the Kaibab Plateau, a 700,000-acre area on the north rim of the Grand Canyon. By 1925 the deer population reached 100,000. Extensive overbrowsing followed, with severe and long-lasting damage to the range. Starvation during two winters reduced the herd to about 10,000. It is estimated that the original range was capable of supporting about 30,000 deer, and it is obvious that the predators were keeping the herd at a safe level, well below the carrying capacity of the area.

Trembley (1948) believes that the superior fishing provided by the ponds and lakes in the Pocono Mountain region until a few years ago was due to the abundance of water snakes, mergansers, loons, grebes, herons, otters, mink, foxes, raccoons, and other predators which now have been reduced nearly or quite to the point of extermination. Man is the substitute predator but with different ecological consequences. He takes large fishes while the former predators utilized the young. Now the waters are overcrowded with small, stunted fish. Trembley believes that fishing would be improved by increasing the number of water snakes.

The newer knowledge of predation is accepted in current textbooks on conservation (e. g., Black, 1954). It now is recognized that antivermin campaigns have resulted in disservice to the very sportsmen groups which promoted them. Let the bird-lover note the lesson thus learned and look with tolerant eye upon the blacksnake at the warbler's nest and the hunter who observes bag limits. Moderate predation seldom threatens a healthy species. Animal populations are limited in numbers, and death to the many is grace to the surviving few.

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FIELD NOTES

NOTES ON THE NESTING OF THE YELLOW-CROWNED NIGHT HERON NEAR CAPERTON SWAMP

On April 16 this year my sons, Lee and Roger, came home from one of their expeditions in the woods announcing that they knew where the herons were nesting. Was I interested? Of course, I was, and we went right where the nest was but discovered the birds gone. Since it was getting dark, I did not wait, for the boys assured me the herons would return, they always did. "In fact," they told me, "they have been nesting here every year since we came to Louisville." (1952). I might add that I had not become serious about birding until last year, and the enthusiasm is just now spreading through the family.

The following day I returned to the nest and identified two Yellow-Crowned Night Herons standing on the limb beside it, plus an immature one on another branch preening. This was the only time I ever saw the immature one.

At this point I called on Catherine Noland for verification and help in observation, for she is more advanced in ornithology than I. Had it not been for her urging and frequent accompaniment, I would not have made so many observations or written these notes.

In all we observed three separate nestings, but only one raised the young. We did not go daily nor even regularly for fear of scaring the birds away, and so our observations leave much to be desired.

In the first nest on April 18 Catherine and I saw one bird sitting on the nest and the mate standing on the limb beside it. Twice more we observed what seemed to be incubation, but on April 28 I found the nest abandoned.

Although trees were now in leaf, Roger discovered two more nests that day. One heron seemed to be incubating, as it did on several subsequent observations. On June 8 this same bird had recently hatched young, but on June 11 the nest was abandoned. What had happened? Had a crow, hawk, or owl, all of which are in those woods, taken the young?

The third nest was the prize, for it was here we were able to observe the complete process, and this one was about a mile from the feeding ground, although only about 300 yards from the nearest house. I can only approximate times, not being able to look into the nest, but incubation was about three weeks, and the time until young left the nest was about three and one-half weeks, beginning April 28 and ending June 14.

What does the nest of a Yellow-Crowned look like? From the ground it looks to be of sticks only, mostly large ones, placed on a horizontal fork near the end of the branch about 40 to 50 feet above the ground and almost directly over a small stream, which dried up later except for heavy rains. The nests were shallow as nests go but deep enough to hide the incubating parent from sight at ground level except for bill and tail. The three nests, although in the same area, were out of sight of each other. One was in a black walnut, one in an English walnut, and one in an elm.

The eggs were a solid color, pale aquamarine, measuring in diameter two inches in length and one and one-half inches in width. Two shells were on the ground directly beneath each of two nests, and by putting together two parts of a shell, I managed to measure one with calipers.

Although the parent heron always observed us, only once was one alarmed enough to fly away, and that was when I stood directly beneath the nest. However, it was back in three minutes incubating. As we would approach, the bird would assume its alarmed pose of standing with neck stretched tall and straight (unless incubating) but would gradually relax until it was all hunched up again.

During incubation we frequently saw one on the nest and the mate standing beside. Catherine Noland records them changing positions as she observed the first nest (which was later abandoned). "On April 20th in the early morning I observed Bird I incubating, a second, Bird II, was two feet away from nest. The incubating bird stood up, preened its feathers for a minute or two, and then settled down, reversing its position, which was horizontal to the limb on which the nest was located.

"During this move a third adult bird (III) flew in and stood on a branch about four feet from the nest, where it remained for a half hour, its presence seemingly ignored by the pair.

"Twelve minutes after Bird I had changed its position, Bird II edged up to it and entered the nest, touched Bird I on the nape, and then crowded it up and out of the nest. Before settling down, Bird II carefully worked the twigs around the inside of the nest with its bill and may also have turned the eggs. Fifteen minutes later Bird I, which had been preening close by, entered the nest directly in front of Bird II. It raised the bird's head with its own and moved under the breast, gently easing its mate up and out of the nest. There was no change during the next 20 minutes of watching."

When the four young hatched in the third nest, the parent continued to sit on the nest for a few days but soon switched to its final position of standing on the edge of the nest. Two of the young were larger than the rest, and one was very small and weak. They were never left alone until about three weeks old.

When the heron were two weeks old, I sat for an hour and watched the feeding process late one afternoon. The young appeared to be clamoring for food with their necks stretched high, bills partly open, and throats vibrating, but no noise was audible where I sat 40 feet away, and the parent sitting with them paid no attention. After 25 minutes the other parent came silently in, landed on the end of the branch, and walked toward the nest. Whenever the two adult birds approached each other, they elevated and spread the yellow crown and plumes until it resembled a fan projecting vertically from the forehead. Then they as quickly relaxed. The parent with the food regurgitated into the bottom of the nest, and the four young picked for themselves. This was repeated twice more and took in all about 15 minutes. I concluded that a large part of this food was crawfish, judging by the remains under the nest on the ground. The feeding over, both parents stood beside the nest about a bird's width apart and seemed to go to sleep. The young settled down, and I stole away.

On windy days when the branch was tossing now high, now low, the parent squatted on the nest and covered the young, although by the time they were three weeks old, it had to spread its wings much like a duck brooding, and then two little heads peeked through. During the rain, however, the young remained uncovered, and the same on a cold day. (This was an exceptionally cold and rainy year.)

Then came the inevitable day when I went to watch and found all the herons gone. I searched through the woods, but they had not stayed nearby, nor did they come back in the evening to roost. Perhaps the parents took them nearer the feeding grounds in Caperton or the Country Club road, but I could not find them. I hope someone will be able to write the end by reporting some immature birds in that area, for at this point I am moving to New York State.

Also since we have observed as many as nine Yellow-Crowned Night Herons feeding at once by the Country Club road, there must be nests in other places, and perhaps a hunt next fall for the telltale twigs high above some stream will reveal them.

—EMILY HALVERSON, Louisville.

* * * * *

NESTING SITE OF LOUISIANA WATER-THRUSH AT LAKE CUMBERLAND

On the weekend of May 27-29, 1955, my husband, Yancey, and I were the guests aboard the Cris-Craft Cruiser NANCY HANKS, owned by Nancy and Henry Offutt, Jr., of Louisville, and docked this season on Lake Cumberland. On the afternoon of May 28, as Nancy and I were swimming and floating in one of the small coves that edge one of the many inlets on the south side of Lake Cumberland and not far above Harmon Creek, we observed two small birds flying gaily through the trees above the banks and soon identified them as Louisiana Water-thrushes by the song of the male. They flew back and forth across a narrow limestone rill from which only a trickle of water dripped. The rill itself reached several hundred feet up to the top of a rocky promontory, which is typical of Lake Cumberland. There were many level rocky ledges over which water undoubtedly tumbles, during the rainy season, to the lake below. Most of these ledges were covered with decaying leaves and other organic matter. The sides of the rill were edged with saplings, wildflower plants, and pieces of old limbs which had fallen from nearby deciduous trees.

Nancy suddenly discovered that one of the birds had alighted on one of the ledges of the rill, about 30 feet above the water, and was carefully selecting pieces of wet leaves and carrying them to a spot about five feet above the left edge of the rill. There it disappeared beneath a canopy of wildflower leaves. We both watched it for some time. The male had disappeared in the meantime. We could hear one singing along the bank across the cove, some 200 feet away, but we could not, of course, be sure that it was the male we had seen flying through the woods.

After about an hour the male came back to the nesting area, and the female stopped work and whirled through the trees with him. He sang as they flew. I immediately climbed aboard the NANCY HANKS, dressed, and with the boat hook as an Alpine stock started up the steep embankment. Zigzagging my way and with Nancy's

guidance from the water, I finally reached a spot directly opposite, and not more than six feet away, from what we thought was the nesting area. I did not want to disturb the nest by any rough handling with the boat hook, and I wanted to get away before the bird might return. I thought I had located the exact spot but could not see any real evidence of a nest. I was disappointed, but descended to the boat.

Then Henry made a suggestion that paid off. We would come back to this spot after some fishing and tie up for the night right across the base of the rill. From there Nancy and I could continue to watch and perhaps actually locate and see the nest.

Late in the afternoon we returned, tied up the boat, and again started our observations. There was no more activity at the nesting site, but we did hear and see the birds in the area, and once they flew near the suspected nest as though to see whether everything were undisturbed.

Early the next morning I looked out of my upper berth porthole and saw the two birds flying rapidly to the rocky ledge where we had seen the female before. They both spent a few seconds there; then he left singing his way through the woods, and she started to work. It was soon obvious that she had a definite pattern of work. She would walk, not hop, quickly up and down the ledges, turning over and examining dead, wet, brown leaves. When satisfied, she would take a leaf of her choice in her bill, walk to a mound of dead leaves just below the nesting area, and from there, teetering several times as though to get her balance, take off for a particular spot a little higher up than the area I had searched the day before but on the same west side of the rill. We never saw her fly to the nest from any but the one spot, and she usually teetered exactly three times before the take-off.

The male did not approach the spot for more than an hour, and then he suddenly appeared, and the two were off together in a second. I believe they were gone at least an hour. We saw them across the cove, feeding above the water's edge. At the end of the feeding period he escorted her back to the nest, and the same procedure as before was continued. She seemed very choosy about the leaves she selected. Usually they were very large for such a little bird to carry, but sometimes they were small. Nancy saw her carrying moss at one time and a few sticks, but most of the material seemed to be wet, almost black, leaves;

After breakfast, when we were sure the two had left the nest, I again climbed the embankment, and with the guidance of Nancy, Henry, and Yancey, reached a spot somewhat higher than where I had been the day before—about eight feet above the ridge from which the female always took off from her nest but on the opposite side of the rill. From that vantage point I found the nest, or the beginning of the nest.

It was located under a canopy of dead leaves which rested on some dead twigs stretching between a small redbud sapling and another sapling which appeared to be alive but was leafless. There were about four inches of dead leaves above the nest. All but the side with the opening merged with the surroundings. There were several wild flowers, with the foliage only, growing around the opening. In time they probably would completely conceal the opening, but when I was there, it was entirely visible. It was round and appeared to be

from 2½ to 3½ inches in diameter. I could see directly inside it, as the light at the time was perfect. It was completely globular and very smooth-looking, except for two small rootlets or sticks that were attached to one side. It was as smooth as the inside of an orange skin from which all the pulp and juice had been removed. I believe that we saw the very beginnings of the nest, as there appeared to be no nesting material within the cavity. There was a pathway of leaves leading to the entrance, and we believe that those were the leaves we had seen the female carrying to the area. Perhaps she had also used some of them to add to those covering the top and sides of the nest.

I was particularly interested in finding this nest, as I had searched so diligently during the spring of 1954, when we were at Sleepy Hollow, for the nest of this species. It had eluded me, although the males were singing from the "Bottoms," and before I left in June, I had seen the young. The nest at Lake Cumberland was almost forty feet above the water's edge. I am wondering whether more of these ground warblers nest farther above the water than we suspect.

Unfortunately, I shall never know whether this nest was completed or any young were fledged. I do know that we did not disturb it, as the female was back again several times after I descended and before we left for home about noon.

Also there was a Red-bellied Woodpecker's nest about 100 feet from the rill in an old dead tree by the waterside. Young were being fed. Nancy discovered a Summer Tanager's nest in the crotch of a sapling about 30 feet from the Water-thrush nest. The sapling was almost entirely covered with Virginia Creeper, and there was a canopy of the vine over the nest, which was about 20 feet from the ground. Is it not unusual for a Summer Tanager to nest in a crotch next to the trunk?—KAY ALTSHELER, Louisville.

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NEST OF LOUISIANA WATER-THRUSH IN BERNHEIM FOREST

On May 22, 1955, the author, with Bob Merkel, Amy Deane, and Mabel Slack, was walking along the road leading to the firetower in Bernheim Forest Reservation in Bullitt County. A pair of Louisiana Water-thrushes (*Seiurus motacilla*) began to fuss at us, and soon we flushed a young bird out of the nest which could fly very little. Bob Merkel caught the bird with ease and then noted the nest in a deep gully along the side of the road. The nest was under the overhanging bank and was rendered conspicuous by a pile of leaves and mud, making a column over a foot high. The nest was perched on top of this column and partly back under the bank. Some extra leaves were hanging from the edge of the nest. I got the impression that some of the nesting materials kept falling down from the too-narrow shelf until the column of material widened the area sufficiently to support the nest. A stalk of Solomon's Seal was in bloom over the nest, and a blackberry briar and some Virginia creeper were hanging down over the area occupied by the nest. The area was shaded by a variety of forest trees.—HARVEY B. LOVELL, Louisville.

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ANOTHER LOUISIANA WATER-THRUSH NEST

On June 7, 1942, when Dr. Harvey Lovell and his family were spending a vacation at Dr. L. Y. Lancaster's cabins at the Mouth of Gasper River, Warren County, Dr. Lovell and I found a Louisiana

Water-thrush's nest in a little gorge that lies behind Rockland Baptist Church. The nest was under a mossy bank, within a few inches of the small running stream. We tried to hold the small trees aside so that a good picture of the nest could be made in color, but the place was too dark for a very successful shot. I held two of the very small young in my hand out in the sunlight for the picture that many of our members have seen in some of Dr. Lovell's colored movies. All the time we were trying to photograph the young, the adult birds were teetering along the small stream or flying nervously around us.—GORDON WILSON, Bowling Green.

WOOD IBISES AT HICKMAN

On August 3, 1955, while observing a group of waterbirds which were gathered at the lower end of a broad, shallow bayou emptying into the Mississippi River at Hickman, I noticed a flock of nine Wood Ibises (*Mycteria americana*) feeding along the shoreline. By their size, color, and shape of the bill, they were not hard to distinguish from the American Egrets, Great Blue Herons, and immature Little Blue Herons which were feeding with them. The ibises kept pretty much to a group of themselves within the larger gathering. These birds were first sighted at 6:45 P. M. and observed for about twenty minutes. They were not shy, and I was able to advance to a distance from them of about one hundred yards before they flushed. In flight they assumed the characteristic ibis posture, with neck extended, and exhibited the black and white pattern on their wings. They flapped around lazily for several minutes before sailing over to the large rookery on an island opposite the bayou.

On the following evening I returned to the bayou but at first found no birds feeding there. Minutes later, however, a flock of 36 ibises came sailing over the horizon, but they did not land. Instead, they circled the feeding area for about fifteen minutes, finally settling on the trees in the rookery, as they had on the previous evening. They were not all together this time but came over in waves, with approximately nine birds in each group.

On August 6 I returned to the feeding area again, but this time no birds were seen, nor were any more found for the week and a half I was able to search for them after that. The water in the bayou had dropped, and the stream was quite narrow. Apparently this caused them to move on.

The most recent record I was able to find on the Wood Ibis in Kentucky comes from Eugene Cypert, who observed a single bird on July 29 and 31, 1941, at Kentucky Woodlands National Wildlife Refuge (Kentucky Warbler, 24:15, January, 1948). A previous record of this bird at Hickman comes from Dr. L. O. Pindar 1887, *Ornithology and Oology* 12:166). Dr. Pindar records a flock of 250 ibises seen on July 15, 1887, at Hickman, and another flock of 50 on August 7 of that same year. The wood ibis has also been observed on the Falls of the Ohio by Burt Monroe (*Auk*, 55:673, 1938). The records given in this last article are for August 12 and 18, 1934.

Apparently, good protection of the nesting grounds is paying off with these birds, and in future years their wanderings into Kentucky might well increase. I also feel that further observations might establish the Wood Ibis as a regular summer visitor to this state.—ROBERT H. STEILBERG, Louisville, Ky.

MICHIGAN BLUEBIRDS

We vacationed around Saugatuck, Michigan, a land of lakes, dunes, forests, old orchards, and sun-drenched meadows. Blue birds are not common there, but wren boxes and martin boxes are present around nearly every residence. In late July we checked our Bluebird nesting boxes in this area and in twelve boxes found ten Bluebird nests and two of the House Wren. We placed six additional boxes on golf courses, at farmhouses, and at tourist motels. A Bluebird nesting box is like the proverbial grain of mustard seed: after three summers of sowing in Michigan, we are beginning to see results.—W. G. DUNCAN, Louisville, Ky.

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THE WOODBURN LAKES—1955 SEASON

Since 1954 went by without so much as a puddle at the two corn-field lakes that I have studied so long, it was a great thrill to have the two lakes up this year from mid-February until late June. The water came up too late to catch the larger migrating hordes of ducks, but I did see the twenty species that I commonly record here. On March 18 I saw sixteen species of ducks in a single afternoon, most of them in one section of the Chaney Lake. On no day did I find more than 1500 to 2000 ducks, far below the numbers of my better years.

The heron group and the shore birds were quite disappointing. Though I recorded all the Ciconiiformes except the Least Bittern, there were never any large numbers or spectacular displays as I have had in former seasons. The shore birds just did not appear, in number of species or of individuals. Only fourteen of the twenty-four species that have been recorded on the lakes were here in the spring. No one species, not even the Lesser Yellow-legs, ever went higher than fifty individuals. I was unable to account for this dearth of shore birds, for the water was up well beyond the end of the normal spring migration season, and the Chaney Lake, especially, seemed to have an abundance of plant and water life. In fact, after the last water disappeared, the whole field smelled like a slaughter house from the decaying remains of water life. A large part of the Chaney Lake was not cultivated this year and has grown up in foxtail grass, lady-finger smartweeds, and cocklebur.

All told, I recorded forty-nine species of water birds.—GORDON WILSON, Bowling Green.

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MISSISSIPPI KITE AT LOUISVILLE

On May 31, 1955, I was in my yard, about 150 yards from Cherokee Park, Louisville, and looked up just in time to get a splendid view of a Mississippi Kite. It was about 4:30 P. M. CDT; the day was clear, with the light in the best direction. The shape and markings were unmistakably those of an adult bird. It was about 500 feet up and flying in a straight line toward the northwest and from the park. Its flight was light and easy, about halfway between sailing and flapping. It was in view only a short time before it was hidden by the surrounding houses and trees and was not seen again.

Two years ago I also saw a bird with similar shape from my home but did not get a clear enough view to be certain. One of my neighbors saw the same bird along about the same time; his description tallied with mine.—FLOYD S. CARPENTER, Louisville.

WHISTLING SWANS SIGHTED AT DALE HOLLOW LAKE

On the afternoon of September 29, 1929, and immediately after a hard rain, I saw some unusual waterfowl near the Cedar Hill Dock at Dale Hollow Lake. I heard a strange honking note long before the six goose-like birds came into view. They appeared to be much larger than the Canada Goose and the Blue Goose, which I have known for a long time. The wings and neck, especially, seemed longer than those of any goose with which I am familiar. They continued to fly up and down the lake for three quarters of a mile, part of the time in formation, part of the time in scattered order. I believe they were Whistling Swans; if not, I cannot identify them. They appeared to settle down in the water near the dam.—DR. RUSSELL STARR, Glasgow.

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OUR NEWEST LIFE MEMBER

Miss Margaret Fowler, now of Washington, D. C., formerly a teacher at Berea College, is our newest Life Member. Since retiring from teaching she has established the Rose and Cardinal Gift Shop in Washington. All of us were glad to see her at our meeting. She feels that her ornithological work while she lived in Kentucky was the best of her many years of studying birds.

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SAWYER, EDMUND J. BIRD HOUSES, BATHS, AND FEEDING SHELTERS: How to Make and Where to Place Them. Cranbrook Institute of Science, Bulletin No. 1, Fifth Edition, 1955. 50c a copy.

Mr. Sawyer's bulletin, a reworking of his now-classic "Bird Houses," first issued in 1931, is one of the "musts" in the library of any bird student who wants to attract birds around human habitations. It is profusely illustrated with sketches of plans, it has excellent directions about how to attract certain species, and it has a great deal more material on feeding devices and similar ways of attracting birds than the earlier editions had. It would make a very interesting and valuable gift to some younger ornithologist, one who would like to make his hobby seem practical and useful to his associates. It also fits equally well the stable, mature bird student who welcomes any addition to the knowledge of man's place in nature.—G. W.

(Continued from Page 53)

2. That we extend our sympathy to the family of the Reverend J. W. Clotfelter of Paris, Kentucky, who died on September 27. Mr. Clotfelter was for many years an active member of our society and kept up his observations of birds until within a few days of his death.

3. That we send our warmest greeting to Dr. T. Atchison Frazer, of Marion, our oldest member, who is now in poor health. Dr. Frazer has kept up his daily observations of birds since he was a young man, never being too busy between calls or on long country drives to see the birds along the way.—AUDREY WRIGHT, Chairman of Resolutions Committee; DR. CYNTHIA COUNCE and GORDON WILSON, Members.

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REPORT OF TREASURER

Balance on hand, April 15, 1955.....\$370.43

Receipts:

| | |
|---|-----------------|
| Membership dues | 79.00 |
| One Life Membership | 50.00 |
| Miscellaneous | 3.00 |
| Sale of check lists, WARBLERS, Bibliographies | 4.00 |
| Dividend—Jefferson-Federal | 11.38 |
| Total | \$517.81 |

Disbursements:

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|--|-----------------|
| Postage and Envelopes | \$ 31.30 |
| Journal | 1.00 |
| Expense for Spring Meeting | 7.56 |
| To Selby Smith for Printing May and August | |
| WARBLERS | 236.33 |
| Filing fee to Secretary of State | 1.00 |
| 325 Membership Cards | .50 |
| Total | \$277.69 |

Balance on hand, October 8, 1955.....\$240.69

Note: \$125 of this amount belongs to the Endowment Fund.

—FAN B. TABLER, Treasurer.