

## GENERAL NOTES

**The motivation of sun-bathing in birds.**—A report of observations on sun-bathing in birds (Hauser, 1957. *Wilson Bull.*, 69:78-90) considers the relative importance of "heat" and "light" in initiating this behavior pattern in direct sunlight. Mrs. Hauser suggests that "heat, alone, is not the motivating factor." Observations that I have made of sun-bathing by hand-raised birds, though involving artificial conditions, may be of some value in this consideration.

A hand-raised Western Meadowlark (*Sturnella neglecta*) was observed to sun-bathe on a number of occasions, but particularly when the rays of morning sun were permitted to shine directly into the cage. When given the "freedom" of my house trailer, especially during the winter months and early morning hours, this bird would regularly "sun-bathe" in the path of the hot air being forced from the base of a space heater. The posturing in this situation did not differ from that exhibited as a response to direct sunlight. The observation that this reacton to forced hot air seemed independent of light intensity in the trailer prompted me to solicit this same behavior during the evening, under solely artificial light. I then discovered that, once a posture characteristic of sun-bathing had been assumed, I could turn off all lights in the trailer without disturbing or interfering with this behavior. After an interval of one minute of complete darkness, the lights could be turned on and the bird would still be in its characteristic position. Similar behavior was observed in a hand-raised Starling (*Sturnus vulgaris*).

These observations of sun-bathing in captive birds, in response to forced hot air, may be of importance in interpreting and evaluating the stimuli responsible for such behavior in direct sunlight. Sun-bathing has been reported to be particularly conspicuous when the sunlight is bright during periods of relatively low ambient temperature and also in the sunlight that breaks a period of rain or cloudy weather. There is a reference in the article cited above to sun-bathing in dry sand which, though not so stated, may have become warmed by the "full sun." On another occasion, several species were observed sun-bathing on a "compost heap, primarily composed of decaying elm leaves." A thermometer, laid on the leaf bed in full sun, registered 140°F. I am inclined to regard a sudden warming of the bird's immediate environment as being extremely important in the motivation of sun-bathing behavior.—WESLEY E. LANYON, *American Museum of Natural History, New York, January 1, 1958.*

**Baiting of fish by a Green Heron.**—On Lake Eola at Orlando, Florida, many visitors feed the water birds during the winter with the result the birds become very tame. When Howard Hardaway and the writer visited the lake on April 16, 1957, a Green Heron (*Butorides virescens*) was fishing from a low retaining wall on the edge of the lake. When we threw him a piece of bread, he picked it up and placed it in the water. At first we thought he was softening it before eating, but instead he allowed the piece of bread to float slowly away. When it was almost out of reach, he picked it up and placed it close to the wall again. Suddenly the heron speared a fish which came up to nibble on the bread. We threw him another piece about one inch square some distance back from the wall. The heron picked it up and ran back to the edge of the lake and again started fishing with the bread as bait. Several times when some American Coots (*Fulica americana*) swam in after the floating bread, the heron retrieved it and drove away the intruders with threatening strokes of his long bill. As soon as the coots were dispersed, he again placed the bread in the water near the wall and resumed his fishing.

When we threw the bread too far into the lake for the heron to reach it, he became very excited as he watched numerous small fish nibbling on it. Twice, on such occasions, the Green Heron leaped into the deep water and once came up with a fish in his beak. The fish evidently could see the heron standing on the wall, for they approached the bread more cautiously when it was near the heron than they did when it was thrown farther out into the lake.

Some insight into the steps by which the Green Heron developed this method of fishing was obtained by watching an American Egret (*Casmerodius albus*), which was also fishing along the wall at Lake Eola. When we threw a crumb near him, he would not eat or even touch it, but he did walk over opposite it. There he stood until some fish started nibbling on the bread and then expertly seized a fish. He would not touch bread thrown on the land, since he had not learned to place it in the water to attract fish. The Green Heron probably started in this way, but then having learned to associate bread with fish, went one step further and learned to place the bread in the water.

A clear indication that the Green Heron knew what he was doing was furnished by the following incident. While he was standing by some floating bread, several small fish broke the surface of the water several feet to his left. The heron immediately became excited, picked up his bread and moved it to almost the exact spot where the fish had appeared.

We observed this procedure for several hours on three consecutive days. Several people present agreed with us that the Green Heron was using the bread crumbs for fishing.—HARVEY B. LOVELL, *Department of Biology, University of Louisville (Contribution no. 13, New Series), Louisville, Kentucky, February 22, 1958.*

**Escape diving by a Spotted Sandpiper.**—On April 24, 1957, while Martin was sitting quietly in a boat on Wheeler Reservoir, in Limestone County, Alabama, about two miles downstream from the community of Triana, a Cooper's Hawk (*Accipiter cooperii*) emerged from brush along the bank and darted toward a Spotted Sandpiper (*Actitis macularia*) that was feeding along the shoreline. The sandpiper flew toward the opposite shore, with the hawk in hot pursuit and gaining. A few yards from the boat, with capture imminent, the smaller bird folded its wings and dived into the water, disappearing below the surface. The hawk wheeled back to the bank, alighted on a limb and turned its head from side to side, as if bewildered by the sudden disappearance of its intended victim. After only a few seconds' submergence, the sandpiper reappeared on the surface and immediately took wing. The hawk did not follow.

A careful examination of the literature on Spotted Sandpipers fails to reveal any previous description of escape diving, but the above incident indicates that the species will resort to this when hard pressed.—LEO M. MARTIN AND THOMAS Z. ATKESON, *U. S. Fish and Wildlife Service, Box 1643, Decatur, Alabama, March 25, 1958.*

**White pheasants among Ring-necked Pheasants in South Dakota.**—In the fall of 1955 one of the two large commercial pheasant growers in South Dakota showed me a white pheasant cock (*Phasianus colchicus*) which had been produced in his flock, and he asked if it would be possible to "start breeding for albinism." He stated that the cock had been mated to wild-colored hens in the spring, but no white offspring had hatched. In addition to the white cock, there was a lightly mottled hen in the flock. We picked up the abnormal birds for closer examination. When looking at the male's head, it was soon observed that he had dark-colored eyes; not pink eyes.