

San Diego Museum of Natural History; U. S. N. M., U. S. National Museum.—
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Unusual feeding habits of certain herons.—Although on many occasions I have seen herons of various species land in water too deep to let them stand, it has always seemed to me that this was accidental. In all cases there has been attendant distress and the bird has made every effort to take flight again as soon as it discovered its predicament. On several occasions, however, I have seen a Ward's Heron (*Ardea herodias wardi*) apparently deliberately dive into the middle of a lake where the water was approximately 20 feet deep. Two of these instances occurred within a few minutes of each other on December 18, 1945. On this date a light rain was falling and visibility was somewhat lowered. I noticed a large bird that at first glance appeared to be an Osprey, flying over the waters of Bivin's Arm, a small lake near Gainesville, Florida. Numerous American Coots were in the vicinity and they dashed madly away at the approach of this bird which was later identified as a Ward's Heron. Suddenly the heron dived headlong into the water where it remained for perhaps 30 seconds. Again taking wing, it circled off over the lake at an altitude of about six or eight feet. By this time I had secured binoculars (18 x 50, Carl Zeiss). The bird flew with its neck partially extended and, as I watched, it again dived into the water and remained there for about the same length of time as before. This time when it took flight there was definitely an object of some kind held in its bill. With its neck partially extended, it flew out of sight around a point of the shore. The lake in which this performance was observed is filled, even in the central portions, with submerged vegetation (*Ceratophyllum* sp.) and in the summer months the surface is nearly covered with floating mats of these plants. During the winter months, however, the vegetation is well submerged and is no closer than 8 to 15 feet from the surface. I do not feel that the behavior can be explained by the hypothesis that the bird was under the impression that it was landing in a spot that would afford footing. Neither the area nor the actions of the bird will support this idea. All actions on the part of the heron point toward a deliberate attempt to secure something in the water. A letter from Mr. E. A. McIlhenny of Avery Island, Louisiana, who has observed herons in his protected rookery for many years, states that he has observed Louisiana Herons (*Florida caerulea*) and Snowy Egrets (*Egretta thula thula*) “. . . swoop down and hover for a moment, darting their heads underwater in order to capture a twig which can be used in building their nest . . .” The Ward's Heron is not known to nest in the Gainesville area in December and I feel that the evidence points toward the assumption that the heron was securing food.

Since the original observation was made I have watched with great care the behavior of what I believe to be one particular Ward's Heron and on several occasions have watched it repeat the same procedure. On February 3, I had occasion to flush this (?) bird from the shore of the lake. In its flight across the water to the opposite shore it dived into the lake five times. Each time it entered the water head-first, thrusting its entire head and neck under water, and remained on the water while it shook its head and rearranged its wings. It appeared quite at ease in the water and held its head and neck in a fashion that suggested the graceful lines of a swan. Three times the wings were folded neatly along the sides of the body and twice they rested partially extended on the surface before the bird took wing again.

Apparently this behavior on the part of the Great Blue Heron (*Ardea h. herodias*) is well recorded (Bent, Bull. U. S. N. M., 135: 110, 1926, and Taverner, The Canadian

Field Naturalist, 36: 59-60, 1922). From these descriptions I would judge that the behavior I observed was an almost exact duplicate.

On an unrecorded fall date of 1941 I observed a somewhat similar occurrence when a group of Snowy Egrets, comprising fifty to sixty individuals, was seen flying in a large circle over the same lake mentioned above. These birds were flying close to the water and it was apparent that they were dipping into the water occasionally. A 20 × spotting telescope was set up on a tripod to observe them. In this instance the herons were not alighting in the water but rather were catching small fish while in flight. The minnows were plainly visible in their bills as each bird left the circling flock to swallow its catch. This feeding circle was maintained for about fifteen minutes, gradually shifting its position over the lake. The birds were apparently circling about schools of small fish.

During the months of July and early August of 1946, I observed flocks composed of Snowy Egrets and the Little Blue Herons practicing this same behavior. All observations were made in the early morning, 5:30 o'clock. Frequently the birds alighted on the submerged mats of *Ceratophyllum* which sank with their weight. The *Ceratophyllum* is well populated with a fresh water shrimp, *Palaeomonetes palludosa* and it is possible that they were feeding on these animals although it is equally possible that they were catching Eastern top minnows, *Gambusia affinis holbrooki*, which abound on the surface in areas where the *Ceratophyllum* offers them protection. The birds apparently preferred to catch their prey while flying into the wind, circling back higher over the water when flying downwind. On mornings when no wind was blowing the feeding seemed to be governed by the sun, the birds feeding on the flight toward the rising sun.

Bivin's Arm is a bird sanctuary, jointly established by the University of Florida and the Florida Audubon Society for the protection of a large White Ibis and heron rookery, which made it impossible to collect specimens to check the stomach contents.—J. C. DICKINSON, JR., *Department of Biology, University of Florida, Gainesville, Florida.*

Unusual behavior of a Cooper's Hawk.—In April, 1946, at Edison, Bucks Co., Pennsylvania, on hearing the characteristic 'alarm' call of Starlings (*Sturnus vulgaris*) I looked about and through a fringe of trees saw a fairly large bird drop to a near-by slope. As I moved to get a clearer view it arose, struggling, with a Starling, and dropped again to a road paralleling a stream. It was an adult male Cooper's Hawk. As I approached slowly for a photograph, the hawk arose with the Starling (which began to struggle and squeal), barely reached the creek and pitched to a low bank about eight feet from the stream. When I walked to a point opposite, the Starling had quieted and I thought the hawk would commence feeding, but it did not. As I turned to bring some companions to the scene I heard the Starling squeal, and on looking back, I saw the hawk drop into the shallow water. The water touched the hawk's belly at that depth and approximately a third of its tail was immersed. After a minute or two the hawk arose, shook itself as it flew to the bank, and commenced feeding.

The only other instance I know of an accipiter 'drowning' its prey is that which John A. Gillespie, operator of a banding station at Glen Olden, Pennsylvania, witnessed during a fall migration; a Sharp-shinned Hawk (*Accipiter velox*) caught an English Sparrow (*Passer domesticus*) and dropped into a small artificial pool near Gillespie's traps. The pool was rather deep but was partially filled with the fallen autumnal foliage so the hawk sank slowly but kept its wings spread, "perhaps to retain its equilibrium" (Gillespie). It did not sink beneath the surface and shortly