

Bulletin of the

OKLAHOMA ORNITHOLOGICAL SOCIETY

Vol. XI

September, 1978

No. 3



CATTLE EGRET

An adult bird photographed in the spring of 1976 at a mixed heronry near Boynton, northeastern Oklahoma, by Paul B. Grover Jr.

NOTES ON A HERONRY IN NORTHEASTERN OKLAHOMA

BY PAUL B. GROVER JR.

Five heron species nest together in many mixed colonies in Oklahoma: the Little Blue Heron (*Florida caerulea*), Cattle Egret (*Bubulcus ibis*), Great Egret (*Casmerodius albus*), Snowy Egret (*Egretta thula*), and Black-crowned Night Heron (*Nycticorax nycticorax*). All of these nested in a colony near Boynton in Muskogee County, Oklahoma in 1976, providing an excellent opportunity to observe their breeding ecology. The colony covered about 1.33 acres (.54 hectares) of dry ground. It was inside a fenced area one side of which ran parallel to, and was about 30 feet (10 meters) from, State Highway 72. Most nests were in honey locust (*Gleditsia triacanthos*), hackberry (*Celtis occidentalis*), and hawthorn (*Crataegus* sp.) trees and were from 6 feet (1.8 meters) to 44 feet (13.4 meters) from the ground.

My study extended from 14 March through 19 June 1976. On twelve visits to the colony during that period, my wife Mida and I spent a total of about 50 hours observing the herons, recording data, and banding young. I made population estimates by the sample plot method, by photographic counts, and by visual counts. Food samples were easily obtained during banding, as the nestlings often regurgitated when handled. Climbing to nests with ladders, we banded 168 nestlings — 138 Little Blue Herons, 13 Great Egrets, eight Black-crowned Night Herons, six Snowy Egrets, and three Cattle Egrets. For herons there is a critical stage for banding after the feet have grown large enough to keep the band from slipping off but before the birds become sufficiently agile to escape capture. At this age, nestlings vomit, defecate, and peck while being handled. Such defensive behavior was most pronounced in Black-crowned Night Heron nestlings, whose parents stayed away from the nests while we worked.

Great Egret and Black-crowned Night Heron nestlings were easy to identify, but differentiating between nestlings of the other species was so difficult that it was necessary to observe the parent birds sheltering or feeding their broods. We were not aware of the fact that nestling Little Blue Herons, even newly hatched ones, have dusky wing-tips.

I made no attempt to collect as many food items as possible, so have not quantified my findings. From food samples, however, I perceived trends in feeding habits. Numerous farm ponds, the nearest about 500 feet (150 meters) away, were available to the colony. Great Egret food samples included fish principally, though some frogs and crayfish were present in them. Snowy Egrets had eaten about equal numbers of frogs and crayfish, but comparatively few fish. Little Blue Herons seemed to prefer crayfish, though they ate a few frogs and some fish. The only food regurgitated by Black-crowned Night Heron

nestlings were small Gizzard Shad (*Dorosoma cepedianum*). Other fishes found among the regurgitated material included Threadfin Shad (*D. petenense*), Orange-spotted Sunfish (*Lepomis humilis*), and Green Sunfish (*L. cyanellus*), in about that order of abundance. Among food regurgitated by the Little Blue Herons were several fishing lures shaped like worms.

The diet of the Cattle Egret has been estimated to be as high as 98% insects (McDonald, 1971, Auburn University Doctoral Dissertation). From one Cattle Egret that I banded I recovered a young Hispid Cotton Rat (*Sigmodon hispidus*), from another an adult Fulvous Harvest Mouse (*Reithrodontomys fulvescens*), in each case in addition to some insect remains.

The hundreds of herons attracted the attention of nearly everyone who passed the colony. I suspect that much of the nestling mortality was attributable to human disturbance. The only potential mammalian predator that I actually saw within the colony was a Striped Skunk (*Mephitis mephitis*), but wandering Coyotes (*Canis latrans*) may eat nestlings and eggs that fall from nests, and Raccoons (*Procyon lotor*) may destroy both nestlings and eggs. The several Great-tailed Grackles (*Quiscalus mexicanus*) that nested in the colony may also have eaten some heron eggs or nestlings. To my surprise I neither saw nor heard a Fish Crow (*Corvus ossifragus*) in the area, though Sutton (1967, Oklahoma birds, Univ. Oklahoma Press, Norman, p. 379) reported a specimen of that species "from Muskogee County."

The colony's Great Egrets began arriving from the south on 31 March; the first eggs of that species appeared about 10 April; and I first found young in the nests on 3 May. The optimum banding age for the species was 10-14 days. I estimated the adult population of Great Egrets to be 680 birds.

Little Blue Herons began arriving on 2 April; eggs were in some nests by 20 April; and hatching started about 12 May. I estimated the adult population at 600. Scattered among the wholly "blue" adults were a few partly white subadult birds, none of which were incubating eggs or feeding nestlings so far as I could tell. Nestling Little Blue Herons received our bands when 14-20 days old.

Snowy and Cattle egrets we did not see until 20 April. We found eggs of both species about 1 May and young in nests about 23 May. Nestlings of both species received bands when 14-20 days of age. I estimated the adult population of Cattle Egrets at 800 birds, of Snowy Egrets at 40 birds.

We first saw a Black-crowned Night Heron on 8 April; but the species may well have arrived earlier than that, for we did not often see the adult birds. We first found eggs of this species on 30 April and hatching started about 24 May. Young Black-crowned Night Herons grow rapidly: some nestlings received our bands when only seven days old.