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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.

GENERAL NOTES

White Ibis in Osage County, Oklahoma.—In mid-morning on 6 July 1977, my wife Mary and I observed a flock of at least 60 White Ibises (*Eudocimus albus*), all of them apparently adult, circling high above Sand Creek in Osage Hills State Park in Osage County, northeastern Oklahoma. We had been watching two flying Turkey Vultures (*Cathartes aura*) when suddenly we realized that above them was a big flock of white birds that at first we thought must be herons. Using our binoculars, we clearly saw the decurved bills and black wingtips. Occasionally the whole flock disappeared when the light hit them at a different angle. We watched them for about ten minutes. When last seen, they were drifting southeastward, presumably toward some large impoundment visible to them.

The White Ibis has not heretofore been reported from Osage County, Oklahoma, though there are several records for Tulsa County; nor has any large flock of the sort that we watched been reported from anywhere in the state. My wife and I both are familiar with the White Ibis, for we have seen much of it on the Gulf Coast.—Rex Hunter, 1718 Skyline Drive, Bartlesville, Oklahoma 74003, 29 August 1977.

Second King Rail breeding record for Payne County, Oklahoma.—In the summer of 1973 a pair of King Rails (*Rallus elegans*) nested at a small, marshy farm pond 2 miles south of Cushing in Payne County, north-central Oklahoma. I did not find the nest, so cannot say how many eggs it contained, but I know that at least seven chicks grew to fair size. Equipped with a 10 x 40 binocular, I visited the pond 12 times between 21 and 29 July, on ten occasions at various times between 0650 and 2030, on two occasions at 2100. I was surprised by the fact that on eight visits I saw one or more rails immediately on arrival. On two other visits at least one rail put in its appearance within ten minutes of my arrival. I neither saw nor heard the rails during my two evening visits.

The pond covered about half an acre. A sparse stand of cattails at one end provided cover for the rails. A road close by made the pond readily accessible by car and many people fished there. As a rule, I saw one parent bird as it worked gradually along the pond's edge, followed by one to four chicks strung out well apart, single file. After they had fed a while in the open, they pivoted and returned to the cattails. On one occasion when I approached a chick to within about 12 feet it froze behind a cattail stalk, completely hidden save for the tip of its bill.

I noted that the chicks were of several sizes. The smallest seemed to be more rounded of head and body than the older ones, this possibly because their bills were noticeably shorter. Meanley (1969, Natural history of the King Rail, N. Am. Fauna No. 67, p. 84) reported that siblings of a given brood under a month old normally represent various stages of development since they do not hatch simultaneously and each is capable of quadrupling its weight during the first month of its life. I estimated that the youngest of the brood that I watched was about 20 days old, the oldest about 30 days old. There could have been more than seven chicks. Bent (1926, U.S. Natl. Mus. Bull. 135:261) stated that this species "lays from 6 to 15 eggs, from 8 to 11 being the commonest numbers."

On one occasion I witnessed the capture of a large crayfish by a parent rail that had made its way slowly along the pond's bare edge probing for food, heedless of the chick trailing behind. While the old bird was subduing and eating its prey, I crept to within about 20 feet of it. It did not share the crayfish with the chick. I expected the two birds to run for cover. Instead, the old bird uttered a loud *chuck*, flew across the pond, and dropped into the cattails, and the chick hid in the grass.

Never did I see the whole family of rails simultaneously, but I did see eight of them at the same time on 22 July. On that occasion an adult that had stepped into the open and walked a short way was joined first by a chick that appeared from behind a muskrat

mound, then by another chick, then by another, and so on until seven chicks were with the old bird. For a few minutes parent and chicks were quite still. Then, responding to a call from one parent, six of the chicks retreated into the cattails. The one that did not retreat received a swift jab on the nape from the parent that was still in the open. Presently this parent and the chastised chick moved into the cattails.

Heavy rains in late July submerged the bases of the cattails and otherwise altered the rails' habitat. Although I visited the pond several times between 30 July and 15 August, I did not see the rails again.

There is one other published record of the King Rail's breeding in Payne County: on 25 May 1925 George A. Moore collected a male specimen in Payne County that had been incubating ten eggs (Moore, 1928, Proc. Oklahoma Acad. Sci., 7:99; Nice, 1931, Birds of Oklahoma, p. 85; Baumgartner and Howell, 1948, Proc. Oklahoma Acad. Sci. 27:50).—Deloris Isted, 1124 E. Ninth Pl., Cushing, Oklahoma 74023, 18 August 1975.

Black Rail sighted in Osage County, Oklahoma.—On 7 June 1977, while looking for Sora Rails (*Porzana carolina*) at a "mini-marsh" about 50 feet east of a small pond through which Quarry Cove Creek flows just before entering the north side of Hulah Reservoir in Osage County, northeastern Oklahoma, I almost set foot on an adult Black Rail (*Laterallus jamaicensis*). The sedge at that particular spot was thin. I had only a brief look at the white speckles on the bird's back and the reddish brown patch on its hind neck before it flushed, but I saw these diagnostic features clearly. Keeping low, the rail flew a few feet and dropped into thicker sedge. I failed to flush it again.

Water in that marshy place was 3 to 9 inches deep. Vegetation there and along the creek included black willow (*Salix nigra*), buttonbush (*Cephalanthus occidentalis*), a few clumps of cattails (*Typha* sp.), and scattered hawthorn trees (*Crataegus* sp.). Along the marshy area's west edge Red-winged Blackbirds (*Agelaius phoeniceus*) were nesting.

On 1 July, ten members of the Bartlesville Audubon Society, tape-recorder in hand, worked the marsh thoroughly but failed to find the Black Rail again. The date of my sighting strongly suggests that the species was breeding in the area. To the best of my knowledge, however, I did not hear a Black Rail calling on 7 June. — Elizabeth C. Hicks, 815 S. Jennings, Bartlesville, Oklahoma 74003, 5 July 1977.

On early nesting of the American Coot in Oklahoma, with comments on incubation period and chick mortality.—Four young American Coots (*Fulica americana*) observed with their parents by Cindy Felis on 26 May 1972 at Lake Helen in Lawton, Comanche County, southwestern Oklahoma, were believed to be "about ten days old" (Felis, 1975, Bull. Oklahoma Orn. Soc., 8: 18-19). Since the incubation period of *Fulica americana* is said to be "21 or 22 days" (Bent, 1926, Bull. U.S. Natl. Mus. 135: 361), these four chicks, if hatched about 16 May, were from eggs laid in April — in other words much earlier than 15 May, the earliest of the several Oklahoma "dates for nesting" cited by Sutton (1967, Oklahoma birds, Univ. Oklahoma Press, Norman, p. 166). The "15 May" was based on G. H. Ragsdale's discovery on 15 May 1889, in Love County, south-central Oklahoma, of three coot nests, two of which held six eggs each (Nice, 1931, Birds of Oklahoma, p. 86): the date obviously represents, therefore, not the start of nesting, but rather a considerably later stage; indeed, some of the several eggs counted by Ragsdale on 15 May 1889 could have been at the point of hatching.

On 30 April 1975, again at Lake Helen in Lawton, I found a coot nest well hidden in a rank stand of cattails (*Typha latifolia*) about 12 meters out from shore. The nest was a basket of intricately woven cattail stalks just above water; in it were six finely speckled

buff colored eggs. Since *Fulica americana* is known to lay an egg a day until the clutch is complete (Gullion, 1954, Auk, 71: 383), the first egg in this nest (Nest A) could not have been laid later than 25 April.

On 6 May 1975 I found another nest (Nest B), this one holding a single egg. The nest was about 30 meters south of Nest A and about 9 meters out from shore in a separate clump of cattails. On 12 May it held a complete clutch of seven eggs.

During the first half of May I visited the two nests two or three times a week; but from 16 May on I visited them daily. At Nest A, hatching started on 16 May: on that date the nest held one chick and five eggs. From 16-19 May I found one chick each day, but never more than one. On 17 May the nest held two chicks and only three eggs: what had happened to the missing egg I had no way of knowing. At Nest B, hatching started on 28 May and one egg hatched each day until 3 June.

On 20 May, not far from Nest A, I saw five coot chicks with their parents. On 2 June, not far from Nest B, I saw seven coot chicks with their parents. Though within each brood the chicks were known to be of different ages, they appeared to be of about the same size. Between 20 May and 9 June each set of parents lost two chicks, leaving the number of young from Nests A and B at three and five respectively on 9 June.

I witnessed no chick predation. But Diamond-backed Water Snakes (*Natrix rhombifera*), which were abundant at Lake Helen in the spring and summer of 1975, could have eaten one or more of the missing chicks, or the chicks could have become entangled in aquatic vegetation while diving and drowned (see Friley *et al.*, 1938, Wilson Bull., 50: 85).—Charles M. Scott, 5621 S. Madison Pl., Tulsa, Oklahoma 74105, 21 September 1977.

Buff-breasted Sandpiper in Jackson County, Oklahoma.—On 1 September 1976, while John W. Ault and I were looking for birds at a thriving prairie dog town 3½ miles east of Duke, Jackson County, southwestern Oklahoma, we observed two Buff-breasted Sandpipers (*Tryngites subruficollis*). The birds were surprisingly tame. From my car we watched them for 15 minutes or so at a distance of about 40 feet.

The dogtown virtually surrounded several cattle feedlots owned by Don Kizziar of Altus, Oklahoma. The decomposing carcasses of cattle that had been dumped on a little hill at one corner of the dogtown had attracted swarms of flies. On these the sandpipers were feeding. Several times we saw them snatching flies from the air. They reminded me of miniature Upland Sandpipers (*Bartramia longicauda*). In each of them the light eye-ring was noticeable.

Tryngites subruficollis has not heretofore been reported from farther west in Oklahoma than Alfalfa, Canadian, and Caddo counties (Sutton, 1974, Check-list of Oklahoma birds, Stovall Mus. Sci. & Hist., Univ. Oklahoma, p. 17). According to the summary of records on file at the University of Oklahoma Bird Range, the species has been sighted several times on the Salt Plains National Wildlife Refuge in Alfalfa County; on at least three occasions in Canadian County, just west of Lake Overholser; and once in Caddo County: on 2 September 1970 Janet M. McGee and William J. Fox saw a flock of eight birds at the north end of Lake Ellsworth in the south-central part of the county (Tyler, 1978, Birds of southwestern Oklahoma, Stovall Mus. Sci. & Hist. Contrib. No. 2, Univ. Oklahoma, in press).—Brad Carlton, 5949 N.W. 27th St., Oklahoma City, Oklahoma 73127, 20 November 1976.

Ash-throated Flycatcher and Loggerhead Shrike nesting in same tree.— In the summer of 1977 a pair of Ash-throated Flycatchers (*Myiarchus cinerascens*) and a pair of Loggerhead Shrikes (*Lanius ludovicianus*) nested concurrently in a fairly large mesquite tree in open, well drained pastureland about 4 miles north and 1½ miles east of

Eldorado, Jackson County, southwestern Oklahoma. The tree was about a quarter of a mile from an extensive stand of mesquite through which Gypsum Creek flowed. The flycatchers' nest was about 2 feet from the ground at the bottom of a cavity 10 inches deep in the tree's main trunk, the shrikes' on a large, almost horizontal branch in an exposed position about 8 feet up. The two nests were only about 12 feet apart.

John W. Ault III, Brad Carlton, Nicholas Jackson, and David Wiggins found the shrike nest on 10 July; they did not see the adult shrikes that day, but they did see two adult Ash-throated Flycatchers in the nest-tree, one with a grasshopper in its bill, so they assumed that the nest was the flycatchers'. When word reached George M. Sutton that a nest of *Myiarchus cinerascens* had been found "on a branch," his disbelief was so roused that he discussed pertinent details with David Wiggins, whose father, Thomas W. Wiggins, offered to drive to the nest, taking David and Sutton along. The mini-expedition took place on the morning of 13 July. Watching from hidden positions not far from the nest-tree, the three observers saw a shrike go to the nest, which contained four small young. Nowhere in the immediate vicinity did they see an Ash-throated Flycatcher, though they were at the nest-tree for about an hour.

That same day, in the late afternoon, Carlton, Ault, Jack D. Tyler, and his young son Jeffrey also went (quite independently of the Wiggins-Sutton party) to the nest-tree. They too saw an adult shrike at the nest, but they saw no adult flycatcher. They did, however, find a cavity in the main trunk, and, using a flashlight, they discovered two almost-fledged young flycatchers, each with tufts of natal down on its head, deep in the flycatchers' nest. These they photographed, using flash equipment, but the pictures did not turn out well.

On 13 July both parties saw at least one adult shrike at the nest-tree, but neither saw an adult flycatcher there. The Wiggins-Sutton party did, however, find two adult flycatchers in mesquite woodland about half a mile away. It occurs to us that the two species must have followed a regimen that avoided confrontation: when the young shrikes were being fed, the flycatchers simply stayed away . . . and vice versa. — George M. Sutton, *Stovall Museum of Science and History, University of Oklahoma, Norman, Oklahoma 73070* and Jack D. Tyler, *Department of Biology, Cameron University, Lawton, Oklahoma 73501*, 3 July 1978.

Late fall sighting of Rough-winged Swallow in Oklahoma. — On the morning of 1 November 1977, while Dotty M. Goard and I were birding around an oxbow lake near Dewey, Washington County, northeastern Oklahoma, we were surprised to see a company of five Rough-winged Swallows (*Stelgidopteryx ruficollis*) perched on a power-line wire above the water. From time to time one of them flew after an insect, then returned to its perch. An Eastern Phoebe (*Sayornis phoebe*), apparently disinclined to share the insect supply, flew at the swallows aggressively.

According to the summary of records at the University of Oklahoma Bird Range, the latest fall sightings for *Stelgidopteryx ruficollis* heretofore reported have been in October: on 31 October 1959, several Roughwings were seen with Barn Swallows (*Hirundo rustica*) near Willis, Marshall County, south-central Oklahoma by C. D. Riggs; on 30 October 1951, a few Roughwings were seen with a mixed flock of swallows near Tulsa, Tulsa County, northeastern Oklahoma by Anne Reynolds and Letitia Gilbert.—Ella Delap, 409 *N. Wyandotte, Dewey, Oklahoma 74029*, 7 March 1978.

Verdin nest in Harmon County, Oklahoma. — The Verdin (*Auriparus flaviceps*) was first observed in Oklahoma in 1971: in summer of that year at least one pair nested successfully along Lebos (Sandy) Creek near Eldorado, Jackson County, in the southwesternmost part of the state (Seyffert, 1972, *Bull. Oklahoma Orn. Soc.*, 5: 9-12). On 1

January 1972, the first specimen for Oklahoma was collected in the same area (Sutton and Lawrence, 1972, Bull. Oklahoma Orn. Soc., 5: 32). Since then the species has been sighted from time to time near Eldorado and several nests have been found, most of them in mesquite trees (*Prosopis juliflora*), but a few in Christmas cactus (*Opuntia leptocaulis*). None of these nests contained eggs or young, but at least one was in use as a dormitory in winter (Sutton and Lawrence, *loc. cit.*).

On 26 July 1977, we happened upon evidence that the Verdin inhabits "mesquite country" in Harmon County as well as in Jackson County. On that date, in a lightly wooded arroyo which drained into the Red River about 6 miles due south of Hollis, we found a full-formed, grass-lined Verdin nest on the ground under a mature mesquite about 15-20 feet high. We had no way of knowing that the nest had been built in that tree. Segments of Christmas cactus as well as twigs that varied considerably in length had been used in constructing it. One Verdin nest described by Seyffert (*op. cit.*, pp. 9-10) was "in a clump of Christmas cholla" and had been made "largely of twigs of sage."

Although we searched the arroyo and surrounding area for about two hours, we did not see a Verdin. — Robert D. Owen and Beth E. Leuck, *Oklahoma Biological Survey and Dept. of Zoology, University of Oklahoma, Norman, Oklahoma 73019, 8 March 1978.*

Early fall sighting of Townsend's Solitaire.—At about 0730 on 12 August 1975 I saw a Townsend's Solitaire (*Myadestes townsendi*) on the University of Oklahoma campus in Norman, Cleveland County, central Oklahoma. My attention was called to the bird by its callnote, a sharp *eeee* followed immediately by a soft *chuck*, both syllables of which it uttered several times before flying directly over me and alighting about 20 feet up in a pine, where I had a good look at it. According to data filed at the University of Oklahoma Bird Range, the earliest fall sighting heretofore on record for Oklahoma is of one seen 4 miles south of Kenton, Cimarron County on 22 August 1972 by William A. Carter and myself.—George M. Sutton, *Stovall Museum of Science and History, University of Oklahoma, Norman, Oklahoma 73019, 13 August 1975.*

Third fall sighting of Black-capped Vireo in Oklahoma. — From about 0815 to 0830 on 29 September 1976 I watched a Black-capped Vireo (*Vireo atricapilla*) at very close range as it foraged among tall weeds in my back yard in Stillwater, Payne County, north-central Oklahoma. The bird was clearly a male, for its cap was black and its "spectacles" boldly white. It did not sing.

The sighting is the third fall sighting of this species in Oklahoma. According to Jean W. Graber (1961, *Ecol. Mono.*, 31: 313), a female Black-capped Vireo was seen near Cogar, Caddo County, southwestern Oklahoma on 9 September 1959, and a male was seen in the same area on 17 September 1960. So far as I have been able to ascertain, the species has not been heard singing in Oklahoma in the fall. — Charles R. Hiatt, *2831 S. 104 E. Ave., Tulsa, Oklahoma 74129, 25 March 1978.*

FROM THE EDITOR: I would like to thank the following for their help with the lead paper in this issue: Douglas Mock, of the Department of Zoology at the University of Oklahoma, for many constructive suggestions; J. Keever Greer, Director of the Stovall Museum of Science and History at the University of Oklahoma, for checking certain references; and David Ross, of the Stovall Museum staff, for putting the photograph of the Cattle Egret into shape for reproduction.—J. D. Tyler.

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