

complete clutch of 3 eggs in the northern part of the salt flats. It is quite possible that the first of the three was laid on or before 1 May, and certainly the nest contained one egg by 2 May. On 24 May we found the first plover chicks along Clay Creek, several miles south of the first nest discovered. Since the plover's incubation period approximates 23-24 days, it is evident that nesting on the salt flats was well underway early in May. We saw active nests of all three species on 6 August, so it is evident that unfledged chicks were still present on the refuge in late August. In light of these new early and late dates for nesting, we are justified in assuming that the three species are actively engaged in nesting on the flats from the first of May through August.

We attended public meetings of the Corps of Engineers and consulted with personnel from the U.S. Fish and Wildlife Service's Office of Ecological Services in order to keep abreast of project plans for the Salt Plains area. Plans called for diversion of all fresh water streams around the salt flats. We were forced to conclude that carrying out the project as planned would preclude future nesting by these species on the salt flats. As a result of our study, those in charge expressed willingness to consider carefully timed seasonal releases of water onto the salt flats in order to retain what the three charadriiform species needed as breeding habitat. As of this writing, the Chloride Control Project is deferred due to economic infeasibility.

DEPT. OF ZOOLOGY, 402 LIFE SCIENCES WEST, OKLAHOMA STATE UNIVERSITY, STILLWATER, OKLAHOMA 74078, 15 MARCH 1982.

### GENERAL NOTES

**Ibis of Genus *Plegadis* sighted in Muskogee County, Oklahoma.**—On 21 April 1982, at about 1900, I observed an ibis circling over a busy heronry 3 miles south of Muskogee, Muskogee County, east-central Oklahoma. The bird's curved bill and rapid flight made it conspicuous among the many Cattle Egrets (*Bubulcus ibis*) and Little Blue Herons (*Florida caerulea*) that were returning for the night. Using my 10 x 50 binocular, I could see that the ibis's head and neck were dark and without red-brown tinge and that there was a green shine on its back and on the upper surface of its wings. It was obviously an immature White-faced Ibis (*Plegadis chihi*) or Glossy Ibis (*P. falcinellus*), neither of which species had ever been reported from east-central Oklahoma. After circling over the area several times the ibis alighted at the north end of the heronry. I did not see it again.

Immature White-faced and Glossy ibises are indistinguishable in the field, and in the hand are difficult to tell apart; an adult Glossy collected in Johnston County on 13 May 1954 is the basis for the only wholly satisfactory Oklahoma record for that species; the easternmost sightings for either species heretofore reported have been for Tulsa, Oklahoma, Cleveland, Murray, and Choctaw counties (Sutton, 1967, Oklahoma birds, Univ. Oklahoma Press, Norman, pp. 43-44). — G. William Sallee, *Corps of Engineers, P.O. Box 61, Tulsa, Oklahoma 74121, 18 February 1982.*

**Greater Scaup in Cimarron County, Oklahoma in mid-May.**—In the early afternoon on 19 May 1981, I observed an adult male Greater Scaup (*Aythya marila*) on one of the several sewage-treatment ponds 1 mile northeast of Boise City, Cimarron County, far western Oklahoma. I watched it through 7 x 35 binocular and 20 x 60 telescope from a dyke between the ponds under a clear sky with the sun at my back. It was about the same size as the male Redheads (*A. americana*) that were with it. The rounded profile of the head, with its green shine, and the white sides that contrasted so sharply with the dark chest were unmistakable. When it flew I could see that the white wing-stripe extended well out onto the primaries. No Lesser Scaups (*A. affinis*) were present for comparison.

This sighting is apparently the latest for the Greater Scaup during its spring migration in Oklahoma. The latest heretofore on record is for 9 May (Sutton, Check-list of Oklahoma birds, Stovall Mus. Sci. & Hist., Univ. Oklahoma, Norman, p. 7).—Joseph A. Grzybowski, *Oklahoma Dept. Wild. Cons.*, 1801 N. Lincoln, Oklahoma City, Oklahoma 73105, 29 July 1981.

**Two concurrent nestings of Chuck-will's-widow in McClain County, Oklahoma.** — On the night of 22 May 1981 several members of the Oklahoma City Audubon Society camped out on acreage owned by my husband (Sam Muzny) and me about 1½ miles east of Byars, McClain County, central Oklahoma. Before retiring, the party heard what they believed to be several Chuck-will's-widows (*Caprimulgus carolinensis*) calling in the vicinity.

At about 1800 the following morning (23 May), while my son Tim and I were walking through mixed oak woods on a gentle eastward-facing slope a hundred yards or so from the barn on our place, Tim flushed a Chuck-will's-widow. Presently we found the nest: two eggs in a slight depression among dead leaves in a well shaded part of the woods.

In the afternoon on the following day (24 May), Tim and I hung a mist-net near the nest and caught the adult female (large incubation patch, buffy throat-band, no white in tail), which we banded (842-67957) and released. While we were waiting for the banded bird to return, we heard a Chuck-will's-widow calling not far away.

Later that afternoon, Neil Garrison found another nest (two eggs) in the same sort of woods about half a mile east of Nest 1, not far beyond a small stream that usually dries up by the end of summer. At Nest 2 another mist-net caught the incubating bird, again a female (band no. 842-67819). Since I never saw this nest, I made no attempt to observe it from time to time, so do not know what happened to the eggs.

At Nest 1, I again flushed an adult female bird on 6 June. There were still two eggs. The buffy throat band was quite noticeable when the incubating bird held her head high. On 14 June the nest held two tawny, down-covered chicks, too small for banding. I photographed them and put up the mist-net, hoping to recapture the adult, but when it did not come back I took the net down lest its presence lead to trouble for the chicks. On 21 June, after a long and thorough

search, I flushed the female parent about 10 feet from the original nest-site. She flounced off so rapidly that I could not tell whether the one chick there had been under her or beside her. The chick remained quite motionless while I observed and photographed it. Presumably it could not fly. I did not band it.

On 5 July I found neither adult nor chick at or near the nest-site. That evening we heard no Chuck-will's-widow calling—Patricia L. Muzny, 1209 S.W. 47, Oklahoma City, Oklahoma 73109, 25 June 1981.

**On Anting in the Blue Jay.**—On 16 May 1981, while watching two adult Blue Jays (*Cyanocitta cristata*) through a window in Edmond, Oklahoma County, central Oklahoma, I realized that they were engaged in ant-application behavior. They were about 10 feet from the window, so I could see them well. Water from a garden hose had soaked the ground near a partly buried cedar fencepost and this was forcing ants to the surface. The jays took turns with their anting. Each would, after picking up a single ant, spread one of its wings and move its tail downward and forward, as if attempting in this way to keep the wing open (see photograph in Whitaker, 1957, *Wilson Bull.* 69: 194). Then it would stab bill and ant repeatedly into the spread wing feathers. After continuing this application behavior for about a minute it would hop several feet away from the fencepost and preen; nor would it return for another ant until the other jay had gone through the same routine with an ant of its own. Neither jay swallowed any ants, so far as I could see, nor could I tell whether the ants they had used were lodged among the feathers. I did see ants crawling on the jays' legs. The anting episode lasted for about six minutes. When I examined the ground after the jays had departed, I found many maimed and dead ants. The thoraces of all that I examined had been crushed, but the abdomens were intact.

Whitaker (1957, *op cit.*, pp. 194-262) has written extensively on anting behavior in birds. Simmons (1966, *J. Zool. Soc. London* 149: 145-162) has made clear that birds demonstrate a high degree of ant-specificity when anting and that, in order to understand this strange behavior the better, observers should ascertain which species of ant is being used. All ants used by the two jays that I observed were of the formicid species *Camponotus americanus* Mayr, a species not heretofore reported as one used by the Blue Jay. I am indebted to D. R. Smith (U.S. Dept. Agric. Res. Serv. Syst., Entomol. Lab., Washington, D.C.) for identifying the ant remains that I sent him.—William Caire, *Department of Biology, Central State University, Edmond, Oklahoma 73034, 1 October 1981.*

FROM THE EDITOR.—The O.O.S. Executive Committee has adopted the following policy with regard to purchase of back issues of the *Bulletin*: to defray cost of mailing and processing, both members and non-members will be charged \$1.00 per copy for the first ten (10); for numbers greater than ten, and providing the purchaser is an O.O.S. member, the price shall be .50c per issue; back issues purchased in bulk by O.O.S. members for completion of a set shall cost .50c per copy, providing the order is accompanied by a letter of explanation to, and approved by, the O.O.S. librarian; authors of papers and notes will, upon request, receive two free copies of the issue in which their work was published, and additional copies at .50c each.—Jack D. Tyler.