

A NEW BIRD FOR OKLAHOMA: GARGANEY

BY EVAN V. KLETT

On the morning of 15 May 1981 (sky 100% overcast; southwest wind), while conducting a bi-weekly waterfowl census on the Washita National Wildlife Refuge in Custer County, west-central Oklahoma, I observed a teal-sized duck that I did not recognize. It was feeding with 22 Blue-winged Teal (*Anas discors*) in shallow water near the shore of Foss Reservoir. Its head was rust-colored. A very distinct line that resembled a broad white eyebrow extended



GARGANEY

Two photographs taken on 18 May 1981 by Evan V. Klett of the same male bird wading (above) and swimming with two Blue-winged Teal (below) in shallow water near the shore of Foss Reservoir on the Washita National Wildlife Refuge in Custer County, west-central Oklahoma.

from in front of and over each of its eyes to the back of its head and down its neck. Its sides were light gray, in sharp contrast to the darkness of the chest. Above its folded wing were dark and light stripes. I observed it through binocular and spotting scope from 0835 to 0911 at distances of 75 to 100 yards.

After taking notes on the bird's markings and color patterns, I returned to the refuge office to check books and references. A colorplate in Peter Scott's "A coloured key to the wildfowl of the world" (1977, H. F. and G. Witherby Ltd., London, England, p. 57) showed what appeared to be the same bird, a Garganey (*Anas querquedula*).

Returning to the area at 0924, Leonard D. Zerby and I observed the duck through a Questar telescope (130 X) and compared it with the colorplate in Peter Scott's book. The duck and colorplate matched. I stayed until 1020 observing the duck and taking color photographs through the telescope (80 X) at distances varying from 60 to 100 yards.

I called Ina S. Brown, an Oklahoma Ornithological Society member who lives in Elk City, Oklahoma, telling her of our sighting. She came to the refuge that afternoon, but was unable to find the strange duck. Still later that same day, my wife Jessie and I watched it from 1656 to 1716. It was feeding along the shore of the big reservoir with three drake and two hen Blue-winged Teal.

Because of rain and high wind the following day (16 May), I made no attempt to find the Garganey, but on 17 May I saw it again, this time with three drake and one hen Blue-winged Teal. The sky on that date was partly overcast and the wind continued to be from the southwest.

I watched the bird again from 0842 to 0926 on 18 May (weather clear; light southwest wind). It was with a drake and hen Blue-winged Teal, and a hen Northern Shoveler (*A. clypeata*) was not far away. I took photographs with a Questar-equipped camera.

The Garganey is an Old World species that has been seen in the New World only a few times. The first sighting for the North American continent was of a drake on a pond near the Cape Hatteras lighthouse in North Carolina on 25, 30, and 31 March 1957 (Chamberlain, 1957, Audubon Field Notes 11:334); the second of a single bird at Two Hills, Alberta, on 24, 25, and 26 June 1961 (Houston, 1971, Amer. Birds 25:754); the third of one swimming with Common Eiders (*Somateria mollissima*) and White-winged Scotors (*Melanitta deglandi*) at Kuluk Bay, Alaska on 29 May 1970 (Gibson, 1970, Audubon Field Notes 24:634); the fourth of a drake well photographed near the town of St. Ambroise at the south end of Lake Manitoba (Houston, *loc. cit.*).

Of special interest here is the fact that a bird believed to be a drake Garganey was carefully observed near Durham, Roger Mills County, Oklahoma on 2 May 1979: that bird was with a flock of Blue-winged Teal (Ross, 1982, Bull. Oklahoma Orn. Soc. 15:7).

BREEDING CHARADRIIFORM BIRDS OF THE GREAT SALT PLAINS

BY PAUL B. GROVER, JR. AND MIDA GROVER

Three charadriiform bird species — the American Avocet (*Recurvirostra americana*), Least Tern (*Sterna albifrons*), and Snowy Plover (*Charadrius alexandrinus*) — have long been known to nest side by side in considerable numbers, almost as if colonially, on the vast salt flats that lie west of the main reservoir (impounded Salt Fork of the Arkansas River) on the Salt Plains National Wildlife Refuge in Alfalfa County, north-central Oklahoma. All three species nest elsewhere in Oklahoma — the tern and plover on salt flats in Woods County as well as on open shores of rivers and impoundments at widely scattered localities, the avocet at two or three localities in the Panhandle. To be noted are two facts: 1. The three species represent three families — respectively the Recurvirostridae, Laridae, and Charadriidae. 2. The Killdeer (*Charadrius vociferus*), a plover that breeds widely throughout Oklahoma, displaying great catholicity in choice of nest-sites, breeds only in small numbers on the salt flats.

From 1 May through August in 1977 and 1978, we studied the breeding ecology of the three species named in the first sentence of the above paragraph. Our objectives were to determine population size and breeding overlap; to quantify reproductive success and determine causes of nest failure; and to record the chronology of nesting activities. We especially wanted to form an opinion as to how the removal of salinity from the Arkansas River by the proposed "Arkansas-Red Rivers Basins Chloride Control Project" of the U.S. Army Corps of Engineers would affect the salt flats as a breeding habitat for the three species.

From counts made at regular intervals we determined that at least 46 pairs of American Avocets, 80 pairs of Least Terns, and 325 pairs of Snowy Plovers nested on the flats in 1977 and that 53, 135, and 260 pairs, respectively, nested there in 1978. Most nests were along streams — Clay Creek, Cottonwood Creek, and the Salt Fork of the Arkansas River. Nests were farther upstream in 1978 than in 1977, a discrepancy resulting, we believe, from the inclement weather and frequency of flooding in the early spring of 1978. The streams' channels are deeper and their water levels more constant in their upper reaches and the erratic changes of course near their mouths may have been responsible for the move back from the reservoir's shore in 1978.

As part of our study we marked 184 nest sites with wooden stakes and visited each nest at intervals of one to three days, monitoring the progress of eggs until the time of hatching or of nest failure. Nest success for all three species in 1977 was 72.8% (82.6% for the avocet, 73.1% for the tern, 64.3% for the plover), whereas in 1978 it was only 26.3% (36.6% for the tern, 16.7% for the plover), but the discrepancy may well be more apparent than real for it does not take into account the fact that we found only one avocet nest in 1978

and that in 1978 many pairs of all three species nested successfully after we had finished our work. We could not, unfortunately, continue our observations that summer to determine important facts about renesting.

In 1977 we made a point of measuring the distance between the closest two nests of the same species, the distance between the closest two nests regardless of species, and the distance between nests and water; too, we took notes on the presence or absence of debris at nests. In 1977 we found 23 avocet, 28 tern, and 53 plover nests, in 1978 one (only) avocet nest, 42 tern nests, and 37 plover nests. The closest two avocet nests in 1977 were 25 meters (82 feet) apart, the closest two tern nests 3 meters (10 feet) apart, the closest two plover nests 7 meters (23 feet) apart. In general, the avocet appeared to require the largest amount of space for successful nesting, the plover a somewhat smaller amount, the tern definitely the smallest amount. The 14 avocet nests (nine with four eggs each, one with five eggs, one with one egg, three empty) found by G. M. Sutton and P. F. Nighswonger on 15 May 1960 (Sutton, 1967, Oklahoma birds, Univ. Oklahoma Press, Norman, p. 207) were strung out along a 100-yard stretch of Clay Creek not far upstream from the point at which Clay and Cottonwood creeks join before entering the reservoir. No plover or tern nest that Sutton and Nighswonger found that day was at all close to any of the avocet nests, but some avocet nests were only a few paces apart.

Most nests that we found in 1977 and 1978 were close to driftwood or other debris. The debris may shelter the eggs from the wind or aid the bird in locating its nest in the vast monotony of the flats. We soon found that tracks of the Coyote (*Canis latrans*) often led from one piece of debris to another, especially along drift lines washed up by flooding. We expected to find that nests in drift lines were usually destroyed by the Coyotes, but during the two seasons only 69% of known Coyote depredation took place at nests associated with debris, a figure not significantly different from the 64% of nests destroyed that were not associated with debris.

Flooding and Coyote predation were the principal factors limiting reproductive success during both years. Of 116 reported cases of nest failure they accounted for 45% and 30% of the losses, respectively. Heavy rainfall and flooding on the night of 31 May 1978 destroyed almost all nests that were active at the time. In addition, many plovers were killed during the storm, presumably by hail. We found 18 adult plovers dead at or near nests. Why we found no dead terns or avocets is beyond explanation. Other factors limiting reproductive success were abandonment of eggs (for reasons not known to us), high winds blowing eggs from nests, and the inability of the incubating bird to turn over eggs that were stuck fast to salt.

Nest site data revealed the preference of all three species for nesting near water. We determined that in addition to creating a habitat for animal life that adult and young birds fed on, water aided the plover (and possibly the other species) in solving thermoregulation problems. Standing in the stream, the

plover allowed the water to shunt heat away from the body through its legs. All food sources exploited by the nesting birds were abundant in or near water. We seldom saw the birds away from the streams. The terns would fly up and down the larger streams and along the reservoir's shore, diving to catch small fish. Fish species taken by them included the Plains Killifish (*Fundulus kansae*), Arkansas River Shiner (*Notropis girardi*), and Mosquitofish (*Gambusia affinis*). Seining of the streams revealed large numbers of water boatmen, small corixid insects believed by many to comprise the bulk of the American Avocet's diet. *Bledius*, a burrowing beetle that is abundant on the salt flats, is eaten by the Snowy Plovers. We often saw the plovers running from burrow to burrow, stopping briefly at each entrance to probe for its inhabitant. The plovers also consumed large numbers of the shore flies (chiefly of the genus *Ephydra*) that inhabit the banks of streams and standing pools on the flats.

Sutton (*op. cit.*, pp. 172, 207, 224) gave 13 May, 15 May, and 31 May as the earliest dates on record for nesting of the Snowy Plover, American Avocet and Least Tern, respectively, in Oklahoma; latest dates reported by him for chicks still unable to fly were 15 August (p. 172), 26 July (p. 207), and 13 August (p. 224), respectively. On 4 May 1978 we discovered a plover nest containing a



SNOWY PLOVER

Photographed on 9 July 1979 by Paul Grover, Jr. Nest was 120 meters south of Clay Creek on the Salt Plains National Wildlife Refuge in north-central Oklahoma.

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 north-east 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.