

lined with wilted green leaves. The young birds, with buffy-tan down, black beaks, and an eye-line, appeared about one-quarter to one-third grown. One was noticeably larger than the other.

The second nest (Fig. 2) was similarly positioned, but in a larger cypress. The nest appeared larger, and the leaf lining consisted of cypress leaves. There were four nestlings in this one. Two of the occupants were larger than their nestmates and were developing black primaries and stubby black tail feathers. The other two birds were of the size and level of development of the two birds in the first nest. Irregular egg-laying is suggested in Harrison (1975).

#### LITERATURE CITED

- Harrison, H.H. 1975. A Field Guide to Birds' Nests. Houghton Mifflin Co., Boston.
- Hauser, Doris C. 1957. Birds of Cumberland County, North Carolina. Fayetteville Audubon Society.
- Kologiski, R.L. 1977. The Phytosociology of the Green Swamp, North Carolina. Tech. Bull. No. 250, N.C. Agri. Exper. Sta., N.C. State Univ., Raleigh.
- Potter, Eloise F., J.F. Parnell, and R.P. Teulings. 1980. Birds of the Carolinas. Univ. North Carolina Press, Chapel Hill.

### **Tricolored Herons and Snowy Egrets Breeding in the Interior of South Carolina**

C.G. BELSER and W. POST  
The Charleston Museum  
360 Meeting Street  
Charleston, S.C. 29403

In South Carolina, Snowy Egrets (*Egretta thula*) and Tricolored Herons (*Hydranassa tricolor*) inhabit coastal areas and often wander into the interior after the breeding season. However, no confirmed nestings have been reported away from immediate coastal (tidewater) areas.

During the 1986 nesting season (March-July) we marked and monitored nests in the mixed-species heronry on Green ("Bird") Island on Lake Marion, near Eadytown, Berkeley County (33° 26' N, 80° 10' W). The colony site is 77 km from the Atlantic Ocean (Fig. 1). The most common species in the colony are Great Egrets (*Casmerodius albus*), Cattle Egrets (*Bubulcus ibis*), and White Ibis (*Eudocimus albus*). Other nesting species are Anhingas (*Anhinga anhinga*) and Little Blue Herons (*Florida caerulea*).

From 30 May 1986, about the time that small herons and White Ibis started nesting and Great Egrets had completed nesting, we usually saw five or more Tricolored Herons in the heronry. They frequented the central, low-shrub area of the island that was used most heavily by other nesting herons. The main tree in this section were Buttonbush (*Cephalanthus occidentalis*) and willow (*Salix* sp.). The White Ibis built nests in taller trees on the edge of the island. These were mainly Hackberry (*Celtis* sp.) and Bald Cypress (*Taxodium distichum*).

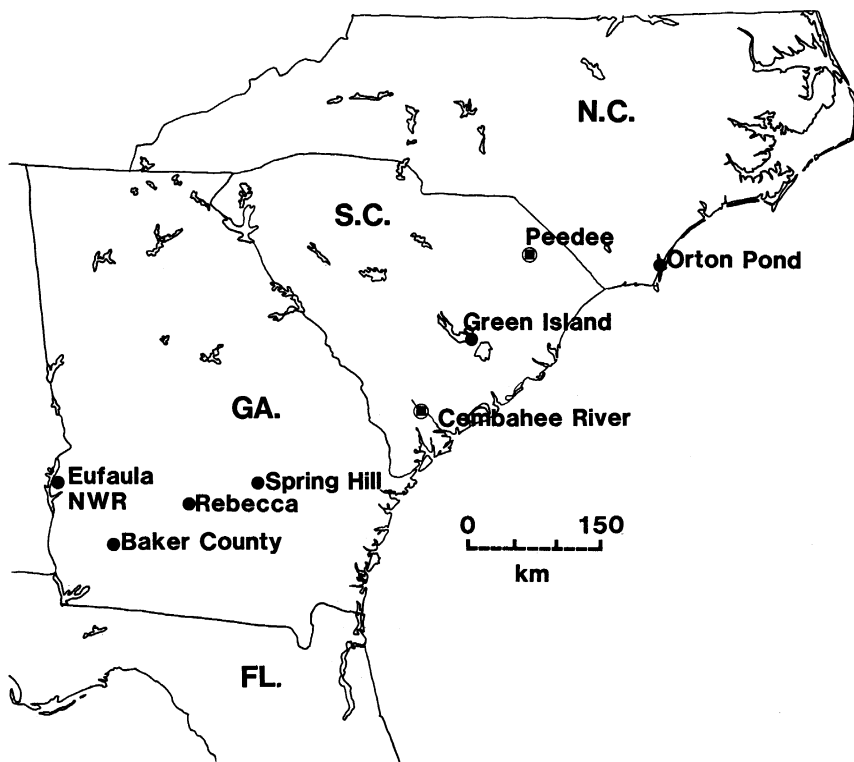


Fig. 1. Inland breeding localities of Snowy Egrets and Tricolored Herons in the Carolinas and Georgia. Solid circles = confirmed nesting sites; circled squares = reported, but not confirmed nesting sites.

On 11 July we found two nests containing young Tricolored Herons. In one nest, located in the top of a low Buttonbush, we found two young that were about 21 days old. In another nest, we found one young bird about 25 days old.

On 13 June we saw at least five Snowy Egrets in the central shrub zone. Nest 153 had initially been identified as a Cattle Egret's on 30 May, but on 27 June, we examined the three young in the nest closely and determined that they were Snowy Egrets.

These are the first confirmed nesting records for Snowy Egrets and Tricolored Herons in interior South Carolina. Based on aerial surveys, Osborn and Custer (1978:110) reported Snowy Egrets nesting in the Pee Dee Islands heronry at Marion, S.C., in 1975. This is 65 km from the coast (Fig. 1). These authors also mention fledged Snowy Egrets and Tricolored Herons at a heronry near the Combahee River, north of Yemassee (Fig. 1), in 1975. This site is about 30 km inland. However, no details of these records were published, and they were apparently never confirmed on the ground. The information was published without

further comment in inventory tables of all rookeries along the Atlantic coast (Osborn and Custer 1978).

In North Carolina, Pearson et al. (1942) and Soots and Parnell (1979) reported Snowy Egrets and Tricolored Herons nesting in the coastal plain at Orton Pond in Brunswick County. This area is 1 km from the Cape Fear River and 5 km from the ocean (Fig. 1). Lennon's Marsh near Lumberton in Robeson County (100 km inland) was the most diverse interior mixed-species heronry in North Carolina, but neither Snowy Egrets nor Tricolored Herons nested there (Soots and Parnell 1979).

Tricolored Herons and Snowy Egrets have nested in several interior colonies in Georgia. The first report of a Tricolored Heron nesting in the interior was in a heronry south of the Eufaula National Wildlife Refuge (LeGrand 1976), about 200 km from the Gulf of Mexico (Fig. 1). No details of this record were published. In 1979 two Tricolored Herons were fledged at Eufaula National Wildlife Refuge (B. Orteg in LeGrand 1979). Another interior colony, near Rebecca, Georgia (200 km from the Atlantic), had two Tricolored Heron nests in 1981 (Hopkins 1981).

The first Snowy Egrets nested in interior Georgia in 1970 at Spring Hill in Wheeler County, about 150 km inland from the Atlantic (Fig. 1) (Hopkins and Kilgo 1971). In 1986 three or more pairs of Snowy Egrets nested in Baker County, about 190 km from the Gulf of Mexico (M. Lynch and M. Hopkins *fide* H. LeGrand, pers. comm.)

In general, both species appear to nest in the interior more commonly in areas west of the Carolinas. For example, in addition to the Georgia records enumerated above, there are interior nesting records of Snowy Egrets for Mississippi (Werschkul 1977) and Missouri (Peterson 1965). The latter breeding site is about 725 km from the Gulf of Mexico. Still farther west, in Nevada, Snowy Egrets made up 12% of the nesting birds in a colony about 420 km from the Pacific coast (Giles and Marshall 1954).

As both species have repeatedly invaded the interior of Georgia and states farther west, it is surprising that there have been no verified nestings in the interior of South Carolina until this time. It is probable that the species have nested on the large interior lakes for some time, but have been overlooked. However, North Carolina, with better observer coverage than South Carolina, has not yet had any interior colonies with these species. Ornithologists in the interior of the Carolinas should be aware that these species may begin to move farther inland along the extensive network of hydroelectric lakes that have been created since World War II. Particularly appropriate colonization sites are colonies of Cattle Egrets.

*Acknowledgements.* For financial support we thank Santee-Cooper, The Thomas A. Yawkey Foundation, The South Carolina Wildlife and Marine Resources Department/Heritage Trust, and The Charleston Natural History Society. We also thank P.S. Coleman, D. Howell, and C. Seals for field assistance. Nancy Pringle typed several versions of this manuscript. Kathleen Post prepared Figure 1.

#### LITERATURE CITED

Giles, L.W., and D.B. Marshall. 1954. A large heron and egret colony on the Stillwater Wildlife Management Area, Nevada. *Auk* 71:322-325.

- Hopkins, M., Jr. 1981. Louisiana Heron breeding in Turner County [Georgia]. *Oriole* 46:15-16.
- Hopkins, M., Jr., and J.P. Kilgo. 1971. Nesting of the Snowy Egret and other herony notes. *Oriole* 36:25-26.
- LeGrand, H.E., Jr. 1976. Southern Atlantic coast region. *Amer. Birds* 30:942.
- LeGrand, H.E., Jr. 1979. Southern Atlantic coast region. *Amer. Birds* 33:853.
- Osborn, R.G., and T.W. Custer. 1978. Herons and Their Allies: Atlas of Atlantic Coast Colonies, 1975 and 1976. FWS/OBS — 77/08.
- Pearson, T.G., C.S. Brimley, H.H. Brimley. 1942. *Birds of North Carolina*. N.C. Dept. Agric., Raleigh.
- Peterson, C.T. 1965. An unusual colony of Little Blue Herons. *Wilson Bull.* 77:192-193.
- Soots, R.F., and J.F. Parnell. 1979. Inland heronries of North Carolina. *Chat* 43:10-16.
- Werschkul, D.F. 1977. Changes in a southeastern herony. *Oriole* 42:5-9.

### **First Documented Occurrence of the Ruff in South Carolina**

MICHAEL F. COOPER

59 Florence Street

Central Islip, New York 11722

On 16 May 1986 at 1130, I photographed a Ruff (*Philomachus pugnax*) in Jasper County, S.C., about 14 km SSW of Hardeeville. The specific locality was a dredge-spoil site on the south side of US 17, just before it crosses the Savannah River.

The bird was in a small, shallow pool and was in a large mixed-species flock of shorebirds. The pond in which the Ruff was found is one of a group of temporary ponds associated with dredging operations of the U.S. Army Corps of Engineers. This particular pool was sandy, with no vegetation.

The Ruff was slightly larger than a nearby Lesser Yellowlegs (*Tringa flavipes*) and was easily identified by its "bottle shape": small head, small thin bill, and plump body. Its brown face, neck, and upper parts were also salient. The scapulars and tertials were large and floppy, and often were ruffled in the breeze.

When first seen, the Ruff was bathing in the middle of the pond. It then flew to the edge and began feeding actively. It walked about rapidly and pecked the surface constantly. Although it fed close to Lesser Yellowlegs, Stilt Sandpipers (*Calidris himantopus*), and White-rumped Sandpipers (*C. fuscicollis*), it did not interact with them. After about 20 minutes I left and telephoned Bob Tucker. We then returned to the spot and relocated the Ruff. We watched it for about an hour. Despite several searches over the next 2 days, the Ruff was not seen again. Most of the Lesser Yellowlegs were gone the next day.

This record is the first for South Carolina to be documented by a photograph or specimen. Seven color slides have been placed in the state collection (ChM 1986.46.1-1986.46.7).

I thank Pat Young of the U.S. Fish and Wildlife Service for arranging access to the spoil area.