Lewis, J. C., L. B. Flynn, R. L. Marchinton, S. M. Shea, and E. M. Marchinton. 1990. Part 1. Introduction, study area description, and literature review. Pages 1-12 in Ecology of sambar deer on St. Vincent National Wildlife Refuge, Florida. Bull. Tall Timbers Res. Sta. 25:1-107.

MURIE, O. 1951. The elk of North America. Wildlife Management Inst., Washington, D. C. NEWMAN, C. 1948. Florida's big game. Fla. Wildl. 1:4-5,18.

ROBBINS, R. L., D. E. REDFEARN, AND C. P. STONE. 1982. Refuges and elk management. Pages 479-507 in Elk of North America: ecology and management (J. W. Thomas and D. E. Toweill, eds.), Stackpole Books, Harrisburg.

SMITH, G. 1969. St. Vincent Island. Fla. Wildl. 23:12-17.

TABER, R. D., AND K. J. RAEDEKE. 1982. The management of *Cervus* in North America. Pages 568-577 in Biology and management of the Cervidae, (C. M. Wemmer, ed.). Smithsonian Institution Press, Washington, D. C.

Webb, S. D. 1974. Chronology of Florida Pleistocene mammals. University Presses of Florida, Gainesville.

Fla. Field Nat. 21(3): 80-82, 1993.

RECENT NESTING OF GULL-BILLED TERNS IN NORTHWEST FLORIDA

Henry T. Smith¹, Jeffrey A. Gore², Woodard W. Miley³,
Henry L. Edmiston³, and James A. Rodgers, Jr.⁴

¹Florida Department of Natural Resources,
3900 Commonwealth Blvd., Tallahassee, Florida 32399

²Florida Game and Fresh Water Fish Commission,
3911 Highway 2321, Panama City, Florida 32409

³Florida Department of Natural Resources, 261 Seventh St.,
Apalachicola, Florida 32320

⁴Florida Game and Fresh Water Fish Commission,
4005 South Main St., Gainesville, Florida 32601

In the Gulf states region, Gull-billed Terns (Sterna nilotica) nest primarily with or near other colonial seabirds in coastal habitats (Clapp et al. 1983). Black Skimmers (Rynchops niger) and Least Terns (Sterna antillarum) are the most common neighboring species (Weston 1933, Hallman 1960, Portnoy 1977). Nesting habitats in North America include sandy coastal beaches, estuary islands, tidal wetlands, and freshwater wetlands (Spendelow and Patton 1988). Gull-billed Terns also nest on deposits of dredged material (Portnoy 1977; Sears 1978; Soots and Landin 1978; H. Kale, unpublished report to Shell Oil Corp.).

Observations of breeding Gull-billed Terns along the northwest coast of Florida have been very infrequent. A nest with two eggs was found near Pensacola, Escambia County in 1932 (Weston 1933). Three nests with two eggs each were located on an island in St. Joseph Bay, Gulf County in 1960 (Hallman 1960); in subsequent years, one nest was found in 1963 and one in 1965 (Hallman 1968). H. Stevenson found a nest with two eggs on St. George Island, Franklin County in 1973 (Stevenson and Anderson, in press). Stevenson also located 5-8 pairs of Gull-billed Terns with young on a spoil island near Eastpoint, Franklin County in 1979 (Stevenson and Anderson, in press). This note reports our observations of Gull-billed Terns nesting along the northwest coast of Florida from 1989-1992.

Since 1988, we have studied a large colony of Least Terns and Black Skimmers nesting along the causeway that connects St. George Island to the mainland at Eastpoint, Franklin County. The causeway is about 1.9 km long and made primarily of fill material. A variety of low herbaceous vegetation, primarily grasses, lines each side of the paved road that runs

along the center of the causeway. Twice each breeding season we traversed the entire colony and censused active nests.

On 28 June 1989, we saw two Gull-billed Terns flying among the Least Terns and Black Skimmers at the site. An adult also was observed attending a chick on the west side of the colony, but no nest was found. On 1 June 1990, two Gull-billed Tern nests were located on the west side of the colony. Both of the nests were simple depressions in the sand-shell substrate and contained pieces of unconsolidated, dried vegetation. The first nest contained one egg and the second nest contained three eggs. On 22 June 1990, the first nest was empty, but the second nest contained one egg and one chick (Fig. 1). In 1991, we located two Gull-billed Tern nests in the colony, one on 31 May and one on 19 June, both of which contained three eggs. On 2 June 1992, we located three nests with two, three, and four eggs. The nests found in 1990-1992 as well as the adult observed attending the chick in 1989 all were in areas of the colony used predominantly by nesting Black Skimmers. Although we could not identify individuals, we assume the few breeding Gull-billed Terns seen each year have been returning birds exhibiting site tenacity for this colony.

Recent, extensive surveys for the Florida Breeding Bird Atlas (H. Kale, pers. comm.) and for Least Tern and Black Skimmer colonies (Gore 1991) have revealed no other Gullbilled Tern breeding sites in northwest Florida. This species maintains an extremely rare breeding presence in our geographic area.



Figure 1. Gull-billed Tern nest containing one egg and one chick observed on 22 June 1990, on the causeway to St. George Island, Franklin Co., Florida.

We thank S. Leitman for photographing the nest shown in Fig. 1. P. G. Merritt, H. W. Kale, and an anonymous referee provided helpful review comments on earlier drafts of the manuscript.

LITERATURE CITED

- CLAPP, R. B., D. MORGAN- JACOBS, AND R. C. BANKS. 1983. Marine birds of the south-eastern United States and Gulf of Mexico. Part III: Charadriiformes. U.S. Fish Wildl. Serv., FWS/OBS-83/30, Washington, D.C.
- GORE, J. A. 1991. Distribution and abundance of nesting Least Terns and Black Skimmers in northwest Florida. Fla. Field Nat. 19:65-72.
- HALLMAN, R. C. 1960. Gull-billed Tern (Gelochelidon nilotica) nesting in Gulf County, Florida. Fla. Nat. 33:224.
- HALLMAN, R. C. 1968. St. Joe Island Sanctuary. Fla. Nat. 41:86.
- PORTNOY, J. W. 1977. Nesting colonies of seabirds and wading birds coastal Louisiana, Mississippi, and Alabama. U.S. Fish Wildl. Serv., FWS/OBS-77/07.
- SEARS, H. F. 1978. Nesting behavior of the Gull-billed Tern. Bird Banding 49:1-16.
- Soots, R. F., Jr., And M. C. Landin. 1978. Development and management of avian habitat on dredged material islands. U.S. Army Engineer Waterways Exp. Stn., Tech. Rep. DS-78-18, Vicksburg.
- Spendelow, J. A., and S. R. Patton. 1988. National atlas of coastal waterbird colonies in the contiguous United States: 1976-82. U.S. Fish Wildl. Serv. Biol. Rep. 88(5), Washington, D.C.
- STEVENSON, H. M., AND B. H. ANDERSON. In press. The birdlife of Florida. Univ. Press of Florida. Gainesville.
- WESTON, F. M. 1933. Gull-billed Tern nesting at Pensacola, Florida. Auk 50:215-216.

ANNOUNCEMENT

Snail Kite Prints.—The Florida Ornithological Society has available for sale several prints of the Snail Kite, especially painted by wildlife artist Tom Pearrow for the 1992 joint meeting of the FOS and the Wilson Ornithological Society, held in Kissimmee, Florida. Print size is 16 x 21 inches. Cost is \$35 each, plus \$4 postage/handling for one or more prints. If prints are picked up at an FOS meeting or in person there is no postage/handling charge. Make checks payable to FOS, and order from Herb Kale, Florida Audubon Society, 460 Highway 436, Suite 200, Casselberry, Florida 32707 (407-260-8300 or 898-1197).