

Probable hybridization between Elegant Tern and Sandwich Tern in west-central Florida:

The first North American nesting record of Elegant Tern away from the Pacific Coast

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ABSTRACT

This article summarizes the nesting of an Elegant Tern (*Sterna elegans*) with a Sandwich Tern (*S. sandvicensis*) on Island 3D in eastern Hillsborough Bay, Hillsborough County, Florida in a mixed colony of Sandwich and Royal (*S. maxima*) Terns in May 2002. Worldwide vagrancy in Elegant Tern, field separation from similar species, and

hybridization among crested terns are considered in the context of this record as well.

FIELD ENCOUNTER

On 23 May 2002, RTP, AFP, and ABH were censusing breeding birds at Island 3D in eastern Hillsborough Bay, Hillsborough County, Florida. At about 0900 hours, RTP discovered an Elegant Tern (*Sterna elegans*) in incubating posture along the outer edge of a colony of Royal Terns (*S. maxima*) and Sandwich Terns (*S. sandvicensis*). As he approached, the tern stood up, revealing an egg underneath. Lacking a camera on the boat, RTP called BP, who, along with DJP, met the others later that morning. By the time we returned to the island, around 1150 hours, the Elegant Tern was gone and a Sandwich Tern appeared to have taken its place in the colony. To avoid excessive disturbance to Laughing Gulls (*Larus atricilla*) nesting nearby, we began to depart the island after a few minutes, when the Elegant Tern flew in. It landed in the colony and stood about 0.6 m from its nest for about one minute, but then flew down the beach and preened. Videotapes and photographs of the Elegant Tern were obtained by BP and DJP, but nesting was not documented (*sensu* Robertson and Woolfenden 1992). The following morning, RTP and ABH returned to the island at 0800 hours, and the Elegant Tern was not present. By noon, however, it had returned, and RTP photographed the Elegant Tern as it incubated its egg (Figures 1–3).

On 7 June, we revisited the island and scanned the beach from about 15 m offshore. Dozens of tern chicks, estimated to be about one week old, lined the shoreline, most guarded by one or two adults. Choppy water impaired viewing and videography, but we observed the Elegant Tern fly in with a fish and land next to a chick guarded by a Sandwich Tern. We did not observe the Elegant Tern feed the chick but are confident that it did. (Due to harassment from Laughing

Gulls, most terns that brought fish into the colony fed their chicks quickly, usually within seconds after landing). Over the next 10 to 15 minutes, the Elegant Tern, the Sandwich Tern, and the chick remained together and walked among the other terns as a trio (Figure 4). The chick was pale grayish above and whitish below and was very similar to Sandwich Tern chicks in direct comparison. We did not find the Elegant Tern on 10 June but it was seen on the island (away from the colony) on 10 July, when it was not clearly associated with any other birds.

IDENTIFICATION

In direct comparison, the Elegant Tern was intermediate in size between the Sandwich and Royal Terns. The forehead and cap were nearly wholly black (Figures 1, 2), and the crest was extremely long and shaggy (Figure 3). The underparts were rosy, and this color was so conspicuous that it enabled us to locate the tern on 7 June as it approached the island. (Bright lighting conditions and distance prevented this character from being visible in our photographs and videotapes.) The mantle and wings were roughly the same shade of gray as those of the other terns and contrasted with the white rump. At rest, the primaries were blackish. The tail was forked and appeared to be completely white. The bill seemed to be longer than the length of the head, but the shaggy crest made it difficult to determine head length precisely. The rosy underparts, downcurved bill—reddish with a yellowish tip—nearly full black cap, and extremely shaggy crest indicated an Elegant Tern in definitive alternate plumage, and bill morphology suggested a male (Olsen and Larsson 1995).

We ruled out other similar tern species by plumage characters, apparent size, and apparent size of bill. Rosy underparts are unique to Elegant Terns among orange-billed crested terns (Olsen and Larsson 1995), and the bird's size—intermediate

between Royal and Sandwich Terns—rules out the smaller Cayenne Tern (*S. [sandvicensis] eurygnatha*) of the West Indies and South America, which is similar in size to the American race of Sandwich Tern, *acuflavida*. Cayenne Tern has a straight, mostly yellowish bill, but orange-billed examples are known from the Virgin Islands, Netherlands Antilles, and Argentina, as well as elsewhere in its range (Ansingh et al. 1960, Voous 1968, Buckley and Buckley 1984, van Halewyn 1985, 1987; F Hayes, pers. comm.; A. Jaramillo, pers. comm.), and the suspected hybridization of Elegant Tern with Cayenne Tern in the southern Caribbean at Curaçao has been raised as a possible source of such birds (Ansingh et al. 1960, Shealer 1999). The smaller Lesser Crested Tern (*S. bengalensis*) of the Old World has a straight, orange-yellow bill, and a gray rump and tail (Olsen and Larsson 1995). The Florida Ornithological Society Records Committee (FOSRC) accepted our field notes, photographs, and videotapes as constituting a verifiable record of an Elegant Tern (R. Bowman, FOSRC Secretary, in litt.).

DISCUSSION

The Elegant Tern has an extremely restricted breeding range—three coastal colonies in southern California and two in the Gulf of California, Mexico, with between 90 and 97 per cent of the world's population nesting at Isla Rasa, Mexico (Burness et al. 1999, Lefevre and Burness 2000). During post-breeding dispersal, Elegant Terns wander north along the Pacific coast regularly to northern California, and in smaller numbers to Oregon, Washington, and occasionally southern British Columbia. They winter coastally south to Ecuador and Chile, principally in the Humboldt Current region, with a few north as far as Mexico (A.O.U. 1998, Burness et al. 1999). Vagrants have strayed to Arizona, Florida, New Mexico, Texas, Virginia, and Massachusetts, and, remarkably, to Belgium, England, France, French Guiana, Ireland, Johnston Atoll, the Netherlands, and Northern Ireland (A.O.U. 1998, Burness et al. 1999, Kwater 2001, Williams 2001, Iliff 2002, Lockwood et al. 2002, Marshall 2002, Millington and Gantlett 2002, Ellison and Martin 2003). Their long migration, the longest of any large tern in North America, probably explains their propensity for vagrancy.

Florida's first Elegant Tern, a bird in second-basic plumage, spent at least two months at Honeymoon Island State Recreation Area, Pinellas County 3 October to 22 November 1999 (Pranty 2000, Bowman 2001, Kwater 2001). Honeymoon Island lies along the Gulf coast approximately 45 km northwest of Island 3D. A year later, Florida's second Elegant Tern, also in second-winter plumage, appeared at Fort De



Figure 1. Elegant Tern incubating an egg at Island 3D, Hillsborough Bay, Hillsborough County, Florida, 24 May 2002. Island 3D is one of two dredged-material disposal sites for the main shipping channel through Tampa Bay to the Port of Tampa. Both islands are owned by the Tampa Port Authority and are designated sanctuaries of the National Audubon Society. Roughly 2.6 km long by 1 km wide, Island 3D consists of a diked area into which dredged material is pumped. Currents have deposited sand and shell flats up to 100 m wide outward of the dike in some places. One of these flats supported the breeding colony of Royal and Sandwich terns that contained the Elegant Tern. The plant visible in the photographs is Railroad Vine (*Ipomoea pes-caprae*). Photograph by Richard T. Paul.



Figure 2. Elegant Tern standing over its egg, Island 3D, 24 May 2002. The long, thin bill, reddish with a yellowish tip, suggests a male. Note the beginning of prebasic molt of white feathering in the forehead, which is far more advanced in most of the Sandwich and, especially, Royal terns. Photograph by Richard T. Paul.

Soto County Park, Pinellas County 2–29 December 2000 (Pranty 2001a; DJP, pers. obs.). Presumably, this individual was relocated at the park 20–29 April 2001, when it was seen courting and copulating with a Sandwich Tern (L. Atherton in Pranty 2001b). Fort De Soto County Park is approximately 45 km south of Honeymoon Island and 35 km southwest of Island 3D. This Elegant Tern record also was accepted by the FOSRC (R. Bowman, in litt.). There have been several subsequent observations of Elegant and "Elegant-type" terns in the Tampa Bay area (Pranty 2002), but these have not yet been reviewed by the FOSRC (R. Bowman, in litt.). Most of these terns have been photographed by Lyn Atherton, and images are posted to her website (<<http://home.earthlink.net/~bonnie-dabird/FirstElegant.htm>>).

Vagrant crested *Sterna* terns breed readily with congeners in the absence of members of their own species. A lone Sandwich Tern

bred with an Elegant Tern in California in 1995 and 1997 (Collins 1997), one or more Elegant Terns bred with Sandwich Terns in France from 1974 to 1985 (Olsen and Larsson 1995), and lone Lesser Crested Terns have bred with Sandwich Terns in England and the Netherlands (Olsen and Larsson 1995). The nesting of a vagrant Elegant Tern with a Sandwich Tern in Florida is therefore not surprising, especially considering the presence of Elegant Terns in the area for the previous two years. Indicating the close relationship between the species, Mayr and Short (1970 in A.O.U. 1998) considered Elegant, Sandwich, and Lesser Crested Terns to represent a superspecies with Chinese Crested Terns (*S. bernsteini*). Most reports of vagrant Elegant Terns have occurred within the past 20 years, but whether these represent a genuine increase in vagrancy or merely improved observer coverage or identification skills is not known. Additional research into vagrancy and plumage varia-



Figure 3. Elegant Tern standing over its egg, Island 3D, 24 May 2002. Note the extremely shaggy crest.
 Photograph by Richard T. Paul.



Figure 4. Elegant Tern, Sandwich Tern, and presumed hybrid chick, estimated at one week of age, among Royal and Sandwich Terns and their chicks at Island 3D, 7 June 2002. Photograph from digital videotape by Bill Pranty.

tion in Cayenne, Elegant, and Lesser Crested Terns should refine our understanding of "Elegant-type" terns seen away from the Pacific coast of the Americas, of which several—most recently in England, the Netherlands, Massachusetts, Virginia, and Texas in 2001 and 2002—have already stimulated extensive on-line discussions of the field identification of this group.

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Literature cited

American Ornithologists' Union [A.O.U.]. 1998. *Check-list of North American Birds*. Seventh edition. American Ornithologists' Union, Washington, D.C.
 Ansingh, F. H., J. J. Koelers, P. A. van der Werf, and K. H. Voous. 1960. The breeding of the Cayenne or Yellow-billed Sand-

wich Tern in Curacao in 1958. *Ardea* 48: 51-65.
 Bowman, R. 2001. [Florida Ornithological Society] Records Committee secretary's report. Online version posted to the Florida Ornithological Society website: <<http://www.fosbirds.org/RecordCommittee/Fall01.htm>>. Accessed 18 June 2003.
 Buckley, P. A., and F. G. Buckley. 1984. Cayenne Tern new to North America, with comments on its relationship to Sandwich Tern. *Auk* 101: 396-398.
 Burness, G.P., K. Lelevre, and C.T. Collins. 1999. Elegant Tern (*Sterna elegans*). In *The Birds of North America*, No. 404 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, Pennsylvania.
 Collins, C.T. 1997. Hybridization of a Sandwich and Elegant tern in California. *Western Birds* 28: 169-173.
 Ellison, W. G., and N. L. Martin. 2003. The fall migration: New England Region. *North American Birds* 57: 27-31.
 Illif, M. J. 2002. The fall migration: Middle Atlantic Coast Region. *North Ameri-*

can Birds 56: 37-41.
 Kwater, E. 2001. First record of Elegant Tern in Florida. *Florida Field Naturalist* 29: 90-94.
 Lefevre, K., and G.P. Burness. 2000. A closer look: Elegant Tern. *Birding* 32: 146-153.
 Lockwood, M. W., G. Lasley, W. Sekula, and B. Freeman. 2002. The fall migration: Texas Region. *North American Birds* 56: 70-74.
 Marshall, P. 2002. The Elegant Tern in Devon - a new British bird. *Birding World* 15: 209-211.
 Millington, R., and S. Gantlett. 2002. The orange-billed tern in Norfolk. *Birding World* 15: 244-246.
 Olsen, K.M., and H. Larsson. 1995. *Terns of Europe and North America*. Princeton University Press, Princeton, New Jersey.
 Pranty, B. 2000. Field observations fall report: August-November 1999. *Florida Field Naturalist* 28: 78-90.
 ——. 2001a. Field observations winter report: December 2000-February 2001. *Florida Field Naturalist* 29: 100-112.
 ——. 2001b. Field observations spring report: March-May 2001. *Florida Field Naturalist* 29: 130-141.
 ——. 2002. Field observations fall report: August-November 2001. *Florida Field Naturalist* 30: 65-76.
 Robertson, W.B., Jr., and G.E. Woolfenden. 1992. *Florida Bird Species: An Annotated List*. Special Publication No. 6. Florida Ornithological Society, Gainesville, Florida.
 Shealer, D. 1999. Sandwich Tern (*Sterna sandvicensis*). In *The Birds of North America*, No. 405 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, Pennsylvania.
 van Halewyn, R. 1985. Conservation programme for Cayenne Tern *Sterna sandvicensis eurygnatha* breeding on reef islets, Aruba, Netherlands Antilles. Report on 1984 survey of marine birds of Aruba, Netherlands Antilles. Part 1, International Council for Bird Preservation endorsed project No. 25. Research Institute for Nature Management, Arnheim, Netherlands.
 ——. 1987. Conservation programme for Cayenne Tern *Sterna sandvicensis eurygnatha* breeding on reef islets, Aruba, Netherlands Antilles. *Marine birds of Aruba: Report on 1985 survey and conservation campaign*. Research Institute for Nature Management, Arnheim, Netherlands.
 Voous, K. H. 1968. Geographical variation in Cayenne Terns. *Ardea* 56: 184-187.
 Williams, S.O., III. 2001. The nesting season: New Mexico Region. *North American Birds* 55: 467-469. ☉