SANDWICH TERNS ON ISLA RASA, GULF OF CALIFORNIA, MEXICO

ENRIQUETA VELARDE, Instituto de Ciencias Marinas y Pesquerías, Universidad Veracruzana, Hidalgo 617, Col. Río Jamapa, Boca del Río, Veracruz, México, C.P. 94290; enriqueta_velarde@yahoo.com.mx

MARISOL TORDESILLAS, Álvaro Obregón 549, Col. Poblado Alfredo V. Bonfil, Cancún, Quintana Roo, México, C.P. 77560; matordesillas@prodigy.net.mx

In North America the Sandwich Tern (*Thalasseus sandvicensis*) breeds locally along marine coasts and offshore islands primarily of the southeastern United States and Caribbean (AOU 1998). In these areas it commonly nests in dense colonies of the Royal Tern (*T. maximus*) and Laughing Gull (*Leucophaeus atricilla*; Shealer 1999). It winters along the coasts of the Atlantic Ocean and Gulf of Mexico from Florida to the West Indies, more rarely as far south as southern Brazil and Uruguay. It also winters on the Pacific coast, mainly from Oaxaca, Mexico, south to Panama (Howell and Webb 1995), occasionally to Colombia, Ecuador, and Peru (AOU 1998). As there are no breeding colonies on the Pacific coast, all birds wintering there are believed to represent migrants from Atlantic and Caribbean colonies (Collins 1997, Hilty and Brown 1986, Ridgely 1981, Ridgely and Greenfield 2001). Sandwich Terns have occasionally wandered as far north as eastern Canada (New Brunswick, Nova Scotia, and Newfoundland) and inland to Minnesota, Michigan, and Illinois (AOU 1998, Clapp et al. 1983). In the Pacific vagrants are known from California and the Hawaiian Islands (Hamilton et al. 2007, AOU 1998).

Here we report vagrancy of Sandwich Terns to Isla Rasa, Gulf of California, Mexico, with our observations of single individuals in 1986 and again in 2008. Tordesillas noted the first on 17 May 1986, during her behavioral observations of nesting Elegant Terns. The Sandwich Tern was identified by being close in size to the Elegant Terns but having a black bill tipped with yellow. At that time, it appeared to be attending a nest. About an hour later we returned to the site but could not get sufficiently close to isolate its nest in a photograph without severely disturbing the dense Elegant Tern nesting colony surrounding it. On the following day we returned to the location of the Sandwich Tern and found only an Elegant Tern occupying the nest. The large size of this Elegant Tern colony, with 45,000 individuals (Tobon 1992), and the high densities of both the Royal and Elegant (9 nests/m² and 15 nests/m², respectively), precluded us from following the nest of this apparent Sandwich Tern/Elegant Tern mixed pair further, to determine its eventual outcome. If the colony is approached terns leave the nest and the eggs are exposed to severe predation by Yellow-footed Gulls (*Larus livens*).

In 2008, the second Sandwich Tern at Isla Rasa was not observed directly but inadvertently documented, this time among the densely nesting Royal Terns (which numbered near 14,000 individuals, the average annual population size for the island; Velarde and Anderson 1993, Velarde et al. 2005). While photographing newly hatched Royal Tern chicks within one of the many small subcolonies on the island on 4 May, Velarde captured a partial image of a Sandwich Tern (Figure 1). It was only later that evening, while reviewing her photos, that she discovered one of her images included the yellow-tipped black bill, breast, and folded wing of a Sandwich Tern among the many Royal Terns.

Along the Pacific coast north of Oaxaca, the Sandwich Tern has been reported previously only from California, where there are four records (Hamilton et al. 2007, ww.californiabirds.org/cbrc_book/update.pdf), all during the breeding season. It has



Figure 1. Partial image (part of bill, breast, and wing) of the Sandwich Tern in the colony of Royal Terns on Isla Rasa in 2008.

not been previously verified in Baja California (Howell et al. 2001, Erickson et al. 2003). The first Sandwich Tern in California was observed in an Elegant Tern colony in south San Diego Bay in May 1980 (Schaffner 1981). What was believed to be this same individual recurred at the same location during the breeding seasons of 1982. 1985, and 1987 (Collins 1997), but there was no suggestion of successful nesting in any year. In May 1991 an adult was seen at Malibu Lagoon, Los Angeles County, and in summer 1991 and again from 1995 through 1997 what was presumed to be this same individual frequented the colony of Elegant Terns at Bolsa Chica, Orange County (Hamilton et al. 2007). In 1995, Collins (1997) documented the successful mating of this bird to an Elegant Tern, the pair producing a single chick. A single bird with "a small amount of orangish coloration along the tomium" of the bill was seen at North Island, San Diego, in early August 2007 (Singer and Terrill 2009). Most recently, one with the yellow tip of the bill apparently more extensive and diffuse than typical of the Sandwich Tern was at San Diego 11 May 2009 (identification under consideration by the California Bird Records Committee; photo at www.western fieldornithologists.org/gallery).

The Sandwich and Elegant Terns have been considered components of a single superspecies (AOU 1998); on the basis of a genetic study, Efe et al. (2009) reported the Elegant to be nested among the subspecies of the Sandwich. They proposed that *T. s. sandvicensis* of the Old World be classified as species distinct from the New World taxa, consisting of two sister species, *T. elegans* and the present *T. s. acuflavidus* (including *T. s. eurygnathus*). So it may not be surprising that in California, and now in Baja California, vagrant Sandwich Terns have usually been associated with nesting Elegant and Royal Terns. It is likely that these observations of out-of-range Sandwich Terns are of birds caught up in the northwestward movement in early spring of Elegant and Royal Terns, which have also wintered in southern Mexico, to breeding colonies in the Gulf of California and southern California rather than following their usual northeasterly migration to breeding colonies in the Gulf of Mexico and southeastern United States.

Given the very large size and densities of the breeding colonies of terns on Isla Rasa—currently some 200,000 Elegant Terns and 14,000 Royal Terns (Velarde pers. obs.), the probability of finding one or a few Sandwich Terns on the island is low. But in view of the recent trend in the vagrancy of this species in western North America, more attention should be dedicated to the possibility of future sightings. Occurrence of the Sandwich Tern in the primary colony of the Elegant could lead to sporadic hybridization and the appearance of variably intermediate birds throughout the range of the Elegant.

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