

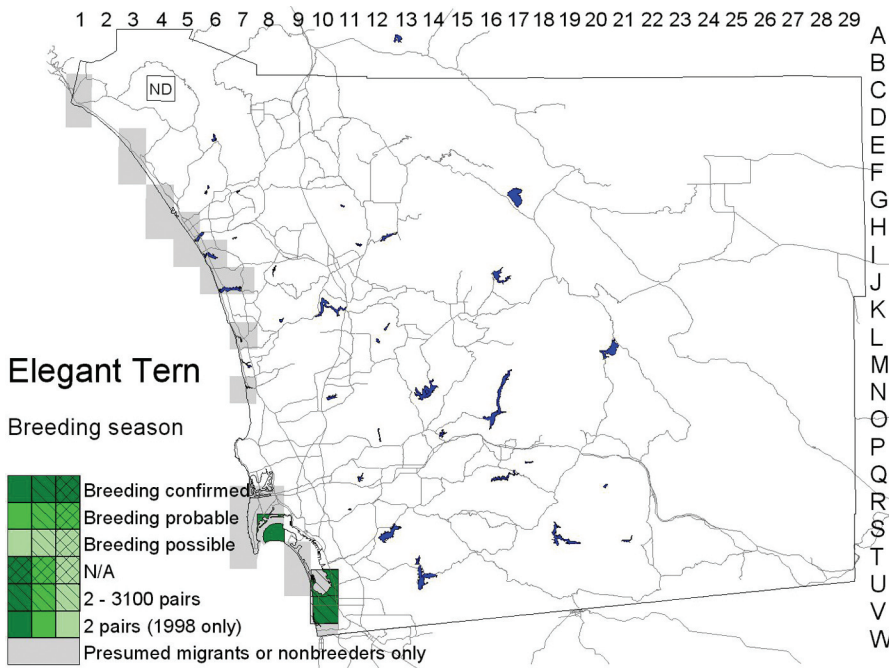
Elegant Tern *Sterna elegans*

At the beginning of the 21st century, the world's 50,000–60,000 Elegant Terns were nesting in only five known colonies. Isla Rasa in the Gulf of California is the most important of these, but the salt works of south San Diego Bay are important too. With variation in the abundance of anchovies (the tern's principal prey) and the birds' shifting among colonies, the number of nests in the salt works has varied from none in 1990 to an unprecedented 10,300 in 2003. After nesting, many of the birds nesting on Isla Rasa migrate to southern California, making the Elegant Tern an abundant visitor to San Diego County's coast in late summer and early fall.

Breeding distribution: Gallup and Bailey (1960) discovered the Elegant Tern nesting in the salt works in May 1959, with 31 pairs. The colony grew fairly steadily until the early 1980s, reaching at least 861 in 1981 (Schaffner 1986). Until this time, San Diego Bay was the species'

Photo by Jack C. Daynes

only nesting site in the United States. With the establishment of colonies at Bolsa Chica, Orange County, in 1987 (Collins et al. 1991) and the Los Angeles harbor in 1998, the number nesting in San Diego Bay became irregular. The number of pairs nesting was 1870 in 1995 then dropped to only two in 1997 and about 100 in 1998



Elegant Tern

Breeding season

- Breeding confirmed
- Breeding probable
- Breeding possible
- N/A
- 2 - 3100 pairs
- 2 pairs (1998 only)
- Presumed migrants or nonbreeders only

(Terp and Pavelka 1998)—perhaps as a result of El Niño reducing the fish supply, perhaps as a result of predation and disturbance. In 1999, with the onset of La Niña and improved management of predators—or just shifting of the population back from Bolsa Chica—the colony shot up to 3100 nests on 27 May. On 3 May 2000 there were 81 active nests with eggs. The count of 10,300 nests 28 May–4 June 2003 was over three times that in any previous year (R. T. Patton).

The only site outside the salt works where the Elegant Tern has attempted to nest in San Diego County is Zuñiga Point at the mouth of San Diego Bay (S8). In 1998, two pairs had laid eggs there by 22 May, but both nests were depredated and abandoned by 5 June (R. T. Patton).

Even during the middle of the breeding season the Elegant Tern is seen all along San Diego County’s coast, sometimes in large numbers: up to 800 at the Santa Margarita River mouth (G4) 5 June 1998 (B. L. Peterson) and 2000 at San Elijo Lagoon (L7) 13 June 1998 (B. C. Moore).

Nesting: Within the salt works, the Elegant Terns nest in a few tight clusters, in association with Caspian Terns, on the bare dirt on top of the dikes. The exact sites shift from year to year. Within each subcolony, egg laying is usually synchronous, after the Caspians begin (Kirven 1969). In

1980 and 1981, the terns laid from 4 April to 6 June (Schaffner 1982). In 1999 and 2003 they were later, with first nests found 5 May and 29 April, respectively (R. T. Patton). After hatching, the young cluster into crèches. After fledging, they follow their parents far from the colony and are seen being fed all along San Diego County’s coast.

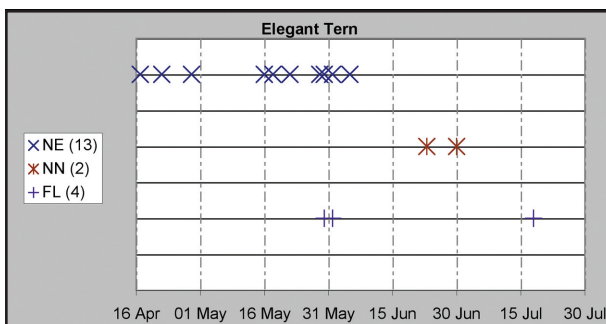
Migration: Elegant Terns begin returning to San Diego typically in the second week of March, exceptionally as early as 3 March, as in 1968 (AFN 22:478, 1968) and 1982 (AB 36:893, 1982). Postbreeding dispersal from Mexico may begin as early as late May, depending on the success of the colony at Isla Rasa (Burness et al. 1999). Numbers

peak from July to September, then drop through October and November. At the peak, flocks from 500 to 2000 are routine. During the atlas period our highest estimate was of 3500 at San Elijo Lagoon 8 August 1998 (B. C. Moore).

The only records even a short distance inland are from the San Diego River in Mission Valley (R9), from which one was picked up sick or injured and brought to rehabilitators 19 October 1990 (SDNHM 47145) and where I saw one on 3 May 1992.

Winter: A few stragglers sometimes remain as late as the third week of December, accounting for the Elegant Tern being recorded occasionally on San Diego Christmas bird counts. Records from the 1950s and 1960s into early January could represent misidentified Royal Terns, but experienced observers reported single individuals at North Island (S8) 6 January 2000 (R. T. Patton) and on south San Diego Bay 5 January 2003 (D. M. Parker, NAB 47:257, 2003). The only Elegant Tern that clearly wintered in San Diego County was at North Island (S8) 20 January–8 February 2002 (R. E. Webster, R. T. Patton, NAB 56:224, 2002).

Conservation: Before 1926, when Abbott (1927e) saw flocks off La Jolla, the Elegant Tern was known in San Diego County from just one specimen (FMNH 137053; Bishop 1905). By the early 1950s, it had become regular and common as a postbreeding visitor (Monroe 1956). Though the long-term trend in the tern’s numbers in California has been up, the species faces many threats, acknowledged in its listing as a species of special concern by the California Department of Fish and Game. An intensely gregarious species nesting at so few sites is inevitably vulnerable. Several colonies in the Gulf of California were eliminated in the early 20th century, and that at Isla Rasa was reduced by commercial eggging. In the salt works, disturbance and predation by dogs have been the principal threats, and



policing is essential to ensure that any intruders, including people, are excluded. The salt works were included in the San Diego National Wildlife Refuge in 1999, but continuing management will be necessary to maintain the dikes and protect the terns. The failure of the nesting attempt at Zuñiga Point suggests that the Elegant Tern would estab-

lish new colonies if there were suitable sites but none are available. Elegant Tern numbers and nesting success in San Diego Bay are linked to the abundance of the northern anchovy offshore, suggesting the tern could be affected by overfishing or changing oceanographic conditions that affect the anchovy (Schaffner 1986).