

NESTING OF WESTERN GULLS IN BAHÍA DE SANTA MARÍA-LA REFORMA, SINALOA, MEXICO

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The Western Gull breeds on islands along the Pacific coast of North America from southern Washington to southern Baja California but, before the observations we report here, had never been reported breeding in the Gulf of California (American Ornithologists' Union 1998; Everett and Anderson 1994; Howell and Webb 1995; Pierotti and Annett, 1995; Wilbur 1987). Non-breeding individuals, mostly immature, range into the Gulf of California as far north as Puerto Peñasco and as far south as Bahía Guásimas (Russell and Monson 1998). They are frequently found among Yellow-footed Gulls (*Larus livens*).

Isla El Rancho (25° 10' N, 108° 23' W) is at the northern end of Bahía de Santa María, a large coastal lagoon in northwestern Sinaloa approximately 115 km northwest of Culiacán. Located in the center of the lagoon's largest inlet, Isla El Rancho is a low-lying and sandy island covering approximately 120 ha. A series of low dunes covers the western part of the island, while an extensive salt pan and tidal flats cover its center and eastern part. A small area is covered by salt marsh (*Salicornia* sp.) and some shrubs of white mangrove (*Laguncularia racemosa*) less than 80 cm tall. Some sand dunes are covered by the herb *Jaumea* sp. and saltgrass (*Distichlis* sp.).

We visited the area on 20 occasions between March 2000 and June 2001 and made additional visits during the breeding seasons of 2002 and 2003. On each visit we recorded all nesting birds on the island, and on some occasions we noted nest contents.

No Western Gulls were observed on El Rancho in 2000. On 17 March 2001 we found four adult Western Gulls on the western side of the island. On 29 March two Western Gulls were courting, and on 7 April we found a nest with two eggs among the dunes. On 4 May we found a second nest, also with two eggs, and six adults, presumed to constitute three pairs. On 22 May the first nest had been abandoned and the eggs were broken. The second nest and a third nest contained three eggs each. On 6 June the second nest contained two chicks and an unhatched egg. On 16 June the third nest contained two chicks, and we found two additional nests with eggs. Finally, on 23 June we found two additional nests (one with two eggs, the other with three). Some of the nests appeared to have been replacement nests, since several of the earlier attempts were flooded by high tides. In all we noted seven nest attempts, but our largest tallies of adults and active nests at any one time were of eight and four, respectively.

On 9 and 16 May 2002 we found three Western Gull nests containing one, two, and three eggs. In addition to the adults, there were some immature individuals, perhaps those fledged in 2001. On 24 and 25 May 2003 only two nests remained active with clutches of two and three eggs.

In all three years the Western Gulls nested within the large Laughing Gull (*Larus atricilla*) colony along the island's western shore. On 22 May 2001 a Western Gull flying close to Laughing Gull nests was attacked vigorously by adults of the latter species, and on 23 June 2001 we witnessed predation of Laughing Gull chicks by Western Gulls. It is likely that Western Gulls prey also on the eggs of Laughing Gulls and on those of the other nesting seabirds of the island.

NOTES

El Rancho is located not only well outside the known breeding range of the Western Gull but also outside that of the Yellow-footed Gull (A. O. U. 1998, Howell and Webb 1995, Patten 1996). Indeed, the Yellow-footed Gull has not been confirmed to nest in Sinaloa, not even on Farallón de San Ignacio, an island north of Bahía Santa María that appears to have good habitat for this species (González-Bernal et al. 2002) and lies at the same latitude as colonies on the western side of the Gulf of California (Carmona et al. 1994, Mellink et al. 2002).

In addition to the Western and Laughing Gulls, the Blue-footed Booby (*Sula nebouxii*), Osprey (*Pandion haliaetus*), Snowy Plover (*Charadrius alexandrinus*), Wilson's Plover (*Charadrius wilsonia*), American Oystercatcher (*Haematopus palliatus*), Heermann's Gull (*Larus heermanni*), Royal Tern (*Sterna maxima*), Gull-billed Tern (*Sterna nilotica*), and Black Skimmer (*Rynchops niger*) also nest in Bahía Santa María. Although the area is relatively remote, the waterbird colonies on Isla El Rancho face several conservation problems. These include the removal of eggs for human consumption, use of fledglings as bait in crab traps (Muñoz del Viejo et al. 2000), and the presence of pesticides from the adjacent agricultural regions (Carmona and Danemann 1994).

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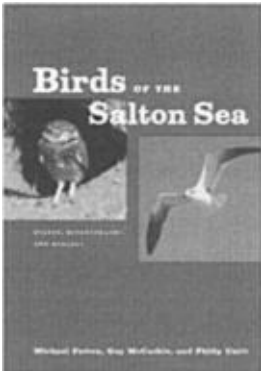
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