

NESTING BIRDS OF FARALLÓN DE SAN IGNACIO, SINALOA, MEXICO

MARCO ANTONIO GONZÁLEZ-BERNAL, Universidad Autónoma de Sinaloa, Ciudad Universitaria, Culiacán, Sinaloa, México

ERIC MELLINK, Centro de Investigación Científica y de Educación Superior de Ensenada, B. C., Apartado Postal 2732, Ensenada, Baja California, México (U.S. mailing address: CICESE, P. O. Box 434844, San Diego, California 92143-4844)

JOSÉ ROBERTO FONG-MENDOZA, Universidad Autónoma de Sinaloa, Ciudad Universitaria, Culiacán, Sinaloa, México

ABSTRACT: From 1999 to 2001 we made the first thorough bird surveys of Farallón de San Ignacio, an islet off Topolobampo, Sinaloa. The islet hosts 100-200 nesting pairs of the Red-tailed Tropicbird, about 1200 of the Brown Booby, 1400-1650 of the Blue-footed Booby, and about 1000 of Heermann's Gull. The Double-crested Cormorant and Yellow-footed Gull nest irregularly in small numbers.

Farallón de San Ignacio (25° 26' N, 109° 22' W) is a small islet in the Gulf of California located 27 km off the coast from Topolobampo, in northern Sinaloa (Figure 1). It is a barren steep-sided rock that rises 140 m above sea level. Its top is nearly flat and covers approximately 3.5-4 ha (B. F. Osorio-Taffal, unpubl. data, letter to E. Beltrán, dated 26 April 1944, deposited at the Instituto Mexicano de los Recursos Naturales Renovables, México, D.F.). The island has a few detached rocks to its north but is otherwise surrounded by deep water. Mean annual temperature of the region is 20° C, and mean annual precipitation is between 100 and 300 mm.

The island has not been thoroughly surveyed for its birds. Krull (in Hutchinson 1950) apparently visited the island in the late 19th century to evaluate the quality of its guano. Although some work was done there during the Allan Hancock Expeditions, it did not involve birds (Fraser 1943). Finally, in the spring of 1944 the island was briefly visited by Osorio-Taffal (1944, unpubl. data), but few data on the birds were obtained. Loye Miller (unpubl. data; 1939 typescript with Mellink) did not visit it on a 1939 cruise in the Gulf of California, nor was the island examined on a flight in the early 1940s (specific year not given) focused on the guano-producing islands in the Gulf of California (Vogt 1946).

We visited the island on the following dates: 13 April 1999 (EM), 18 April 2000 (EM), July 2000 (exact date lost, MAGB), January 2001 (exact date lost, MAGB), 5 February 2001 (MAGB), 6 March 2001 (MAGB, EM, JRF), and 21 May 2001 (MAGB, EM). On the first two dates Mellink approached the island from the north scanned the northern and eastern slopes with binoculars. Scanning of other slopes as well as landing was prevented by rough seas (except for a brief approach to a group of detached rocks). On the other visits we landed, examined the northern slope and the top, and circumnavigated the island. Visits were made by sailboat from La Paz, Baja California Sur (the first two visits) or by fiberglass motorized fishing skiffs chartered out of Topolobampo (all the others).

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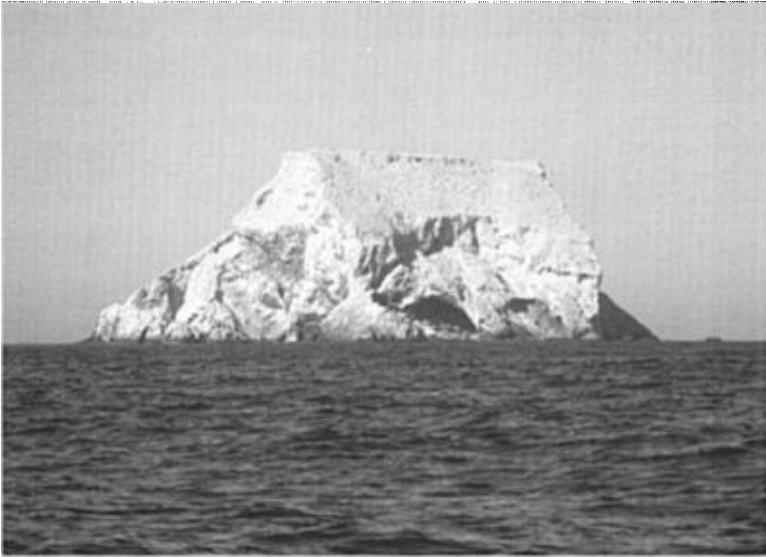


Figure 1. Farallón de San Ignacio, seen from the east.

Photo by M. A. González-Bernal

SPECIES ACCOUNTS

Red-billed Tropicbird (*Phaethon aethereus*). This species was a breeder on the island at the end of the 19th century (Krull in Hutchinson 1950), but Osorio-Taffal (1944, unpubl. data) failed to record it (although he did record the species from other islands). In February 2001 we estimated between 100 and 200 pairs nesting in crevices near the top of the island. By May 2001, most birds were absent, and only three of 50 marked nests were still active (they had chicks). Of 14 unmarked nests examined on this date, 13 held chicks and one an egg. In May 2001 we recorded 10 active nests, with eggs or chicks, and one pair in aerial courtship.

The importance of this island for Red-billed Tropicbirds has not been recognized previously. For example, the fifth edition of the A.O.U. checklist of North American birds (1957) indicated its probable nesting on this island, but the 7th edition of the checklist (1998) ignored it. Velarde and Anderson (1994) considered Isla San Pedro Mártir with its 150–250 pairs (Everett and Anderson 1991, Tershy and Breese 1997) the only significant colony of this species in the Gulf of California. The Farallón de San Ignacio colony represents an important increase in the known population of the Gulf of California.

Brown Booby (*Sula leucogaster*). This species is a common resident on the island (Krull in Hutchinson 1950, Nelson 1978). Our maximum tally was of about 1200 pairs nesting in March 2001, when most birds were at some stage of breeding, from courtship to the tending of chicks (a detailed count was not carried out at this time). At this time there were also many gray juveniles, suggesting that the breeding season at Farallón de San Ignacio could have begun early in 2001 (see Mellink 2000). This species reduced its breeding on this island in the summer, as elsewhere in the Gulf of

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California (Mellink 2000), and there were none nesting in May 2001, but there was a nest with one egg in July 2000, and one with a small chick in October 2000.

Blue-footed Booby (*Sula nebouxi*). Farallón de San Ignacio is one of the important breeding islands for this species in the Gulf of California (Nelson 1978). Osorio-Tafall (unpubl. data) noted about 5000 boobies on the Farallón, mostly Blue-footed. Interestingly, Krull (in Hutchinson 1950) made no mention of this species, but it is not clear whether he visited the top of the island, to which Blue-footed Boobies are restricted. In February and March 2001 we found 1400 and 1650 nesting pairs; most were tending eggs, but there were at least five juveniles. One nest attended by a male contained only a pseudo-egg, consisting of an irregularly shaped rock measuring $136.8 \times 48.1 \times 41.9$ mm (Mellink 2002b). Breeding was greatly reduced during the summer. In July 2000 we found one nest with an egg, another with a half-grown chick, and in May 2001 there were no active nests.

Double-crested Cormorant (*Phalacrocorax auritus*). Eighteen nests of this species were counted on the northern cliffs in February 2001. A month later most contained large chicks, but one nest had an egg and two recently hatched chicks. In May 2001 there were no Double-crested Cormorants on the island.

Heermann's Gull (*Larus heermanni*). On 18 April 2000, Mellink confirmed the presence of eggs in one Heermann's Gull nest, but bad weather precluded a landing to inspect 20 to 40 additional gulls that appeared to be on nests (Mellink 2001). They were a few meters from the water and in direct sight of it. On March 2001 there were about 2500 Heermann's Gulls, many nesting on a 45° slope on the southern side of the island. By May, breeding was widespread over the island, from the flat top of the island to the 45° southern slope. We counted 466 chicks, but this was an underestimate, as many of the chicks were well hidden and most of the area was too dangerous to be inspected directly. We estimated that a few hundred pairs were breeding at the time. One chick regurgitated a Pelagic Tuna Crab (*Pleuroncodes planipes*).

Yellow-footed Gull (*Larus livens*). On 13 April 1999 we observed a few dozen adults standing near the water on the eastern side of the island. The place was typical of the nesting habitat of this species, but we could not assess whether the gulls were nesting at this time. This species was not seen in April 2000, and a careful scrutiny of the entire island in May 2001 produced no evidence of its breeding.

In May 2001, in search of nesting Craveri's Murrelets (*Synthliboramphus craveri*) and storm-petrels (*Oceanodroma* spp.), we examined a number of crevices but were unsuccessful in finding any of these birds. Only one Black Storm-petrel (*O. melania*) was seen on this date, flying midway between the island and Topolobampo.

CONSERVATION RISKS

Despite a concrete staircase, Farallón de San Ignacio is little inviting to exploration. In the past, guano was extracted from this island, but the island's small size and difficult access, plus the extensive use of synthetic fertilizers now, makes it unlikely that guano extraction will some day resume there. The island's difficult access makes other sources of human disturbance of the colonies also unlikely to be a major threat.

On the other hand, every time we landed on the island we found dead Black Rats (*Rattus rattus*), previously unreported from this island (Mellink 2002a). It is likely that rats were introduced at the time of guano extraction around the turn of the 20th century. Whether our failure to find nesting murrelets and storm-petrels is a result of the rat predation or a normal distributional feature we do not know, but eradication of the rats seems an appropriate management procedure.

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