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NEW NESTING RECORD AND OBSERVATIONS OF BREEDING PEREGRINE FALCONS IN BAJA CALIFORNIA SUR, MÉXICO

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The Baja California peninsula has been an area where resident Peregrine Falcons (*Falco peregrinus*) were common in the past (Bancroft 1927, Banks 1969). Historical records of their presence in the region were published by Bryant in 1889 (see Grinnell 1928). Detailed accounts of nesting territories for the peninsula and Gulf of California islands were made by Banks (1969), Anderson (1976), and Porter et al. (1988). According to Banks (1969), prior to 1967, 54 known peregrine locations accounted for approximately 66 nest sites in this region. Porter et al. (1988) identified 67 eyries in this area in 1976–84. As in other parts of the world from the late 1960s to the early 1980s, the peninsular Peregrine Falcon population declined, likely due to the impact of organochlorine pesticides (Kiff 1988). However, published data show that recovery began by the late 1980s (Porter et al. 1988, Castellanos et al. 1997).

Historical nesting territories were mainly located on sea cliffs of the western side of the state of Baja California, from Tijuana to Santa Catarina, and on islands along both coasts of the peninsula (Banks 1969, Porter et al. 1988, Castellanos et al. 1997, Ruiz-Campos and Contreras-Balderas 2000). A small number of inland territories were also known (Banks 1969, Castellanos et al. 1997). However, no nesting pair has ever been reported on Bahía Magdalena region, which is located on the west coast of the peninsula (Fig. 1). Here, we provide the first report of Peregrine Falcons nesting in this area. Our finding extends the breeding range of this species to an area of the Baja California peninsula lacking suitable natural nesting sites. We also report on the reproductive output of this pair.

METHODS

We observed the nest from vantage points 100–200 m from the metal tower, where the peregrine nest was located. We monitored activities around the nesting area, and with the help of binoculars and a spotting scope, recorded the behavior and attendance of adults at the nest. During each observation period, we registered the contents in the nest, the birds' activities, time, the number of interactions between birds, and disturbance events that occurred.

RESULTS AND DISCUSSION

On 25 January 2004, we found a pair of Peregrine Falcons at 25°05′21″N and 112°04′41″W in Santa Elenita, a remote, abandoned industrial port 7 km north of Adolfo López Mateos in Bahía Magdalena, Baja California Sur, México. Both birds displayed activities (mutual roosting, cooperative hunting excursions, courtship flights) suggesting they were a territorial pair. The same day we sighted another single adult Peregrine Falcon 7.5 km south of Santa Elenita. After our finding, we visited Santa Elenita between February to mid-October to monitor the pair's reproductive status (20 hr 25 min of observation in 9 d between 1000–1600 H). The port is a concrete platform about 30 m wide by 120 m long located in a mangrove estuary. Above this platform there are four metal towers and a central crane 40 m tall. The crane has a metal horizontal arm about 30 m long oriented northeast to southwest (Fig. 2). The peregrine pair nested on an old Osprey (*Pandion haliaetus*) nest at the extreme southwestern end of the arm (Fig. 2). On the opposite side was another Osprey nest. A small fishing camp near the platform was operating daily during the study.

On 28 February, we saw another single bird (male Peregrine Falcon, by relative size) approaching the nest. Both males "fought," and after the interaction and the intruder left, the nesting male copulated with the female. On 18 March, we found the female incubating eggs. From 8–28 May, three nestlings were observed in the nest, and they began to fly in late June. On 22 July, we observed the parents and one of the fledglings. The adults were still on the territory on 1–4 and 11–15 October.

The tower was shared with an Osprey pair during the entire study period. However, both pairs showed tolerance despite their proximity. Daily and incidental human disturbance at the base of the towers was relatively intense (22 events or 1.08 events/hr, including small boats, people, cars, and motocross traffic); however, the peregrine nest was not deserted and breeding was successful. Peregrine response to disturbance occurred more frequently when other birds approached to within about 20

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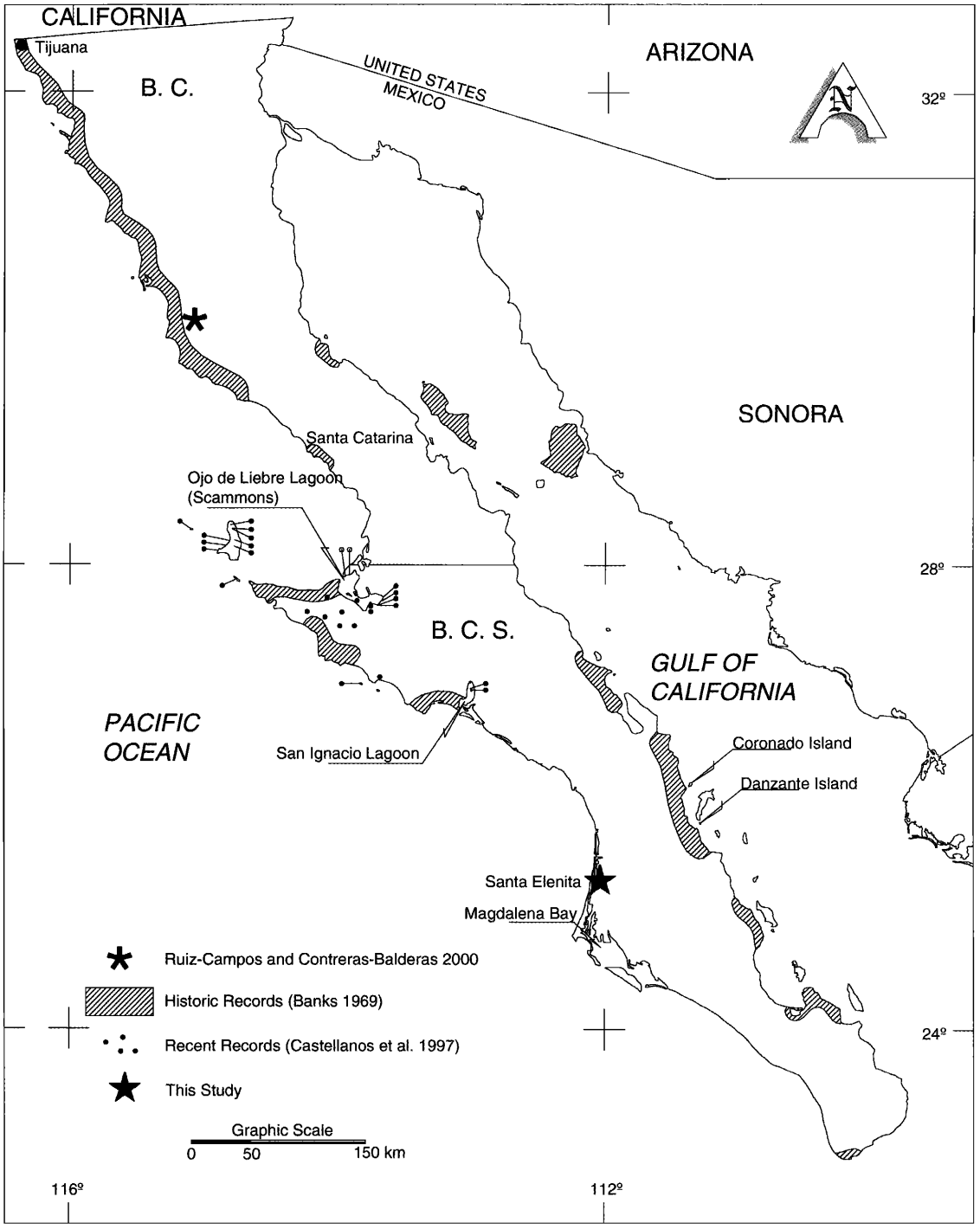

Figure 1. Current and historical distribution of nesting territories of Peregrine Falcon in Baja California Sur, México

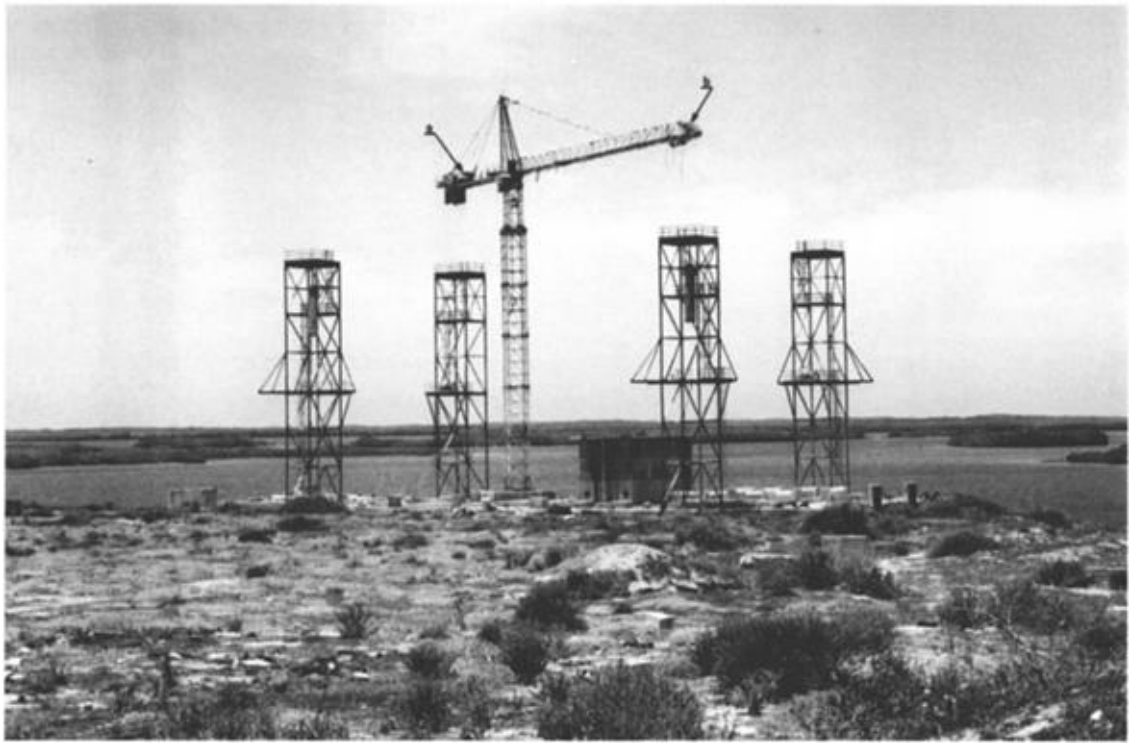

Figure 2. View of Santa Elenita mangrove estuary in Bahía Magdalena, B. C. S., México, and Peregrine Falcon (a) and Osprey (b) nesting sites.

m of the nest. We observed 16 interactions (0.79 events/hr), including eight with Magnificent Frigatebirds (*Fregata magnificens*), four with Ospreys, three with Common Ravens (*Corvus corax*), and one with a gull (*Larus* sp.). Peregrines made territorial attacks or cacking-calls in all interactions.

Breeding dates and the number of nestlings and fledglings reared by this pair were similar to those reported for other areas on the western coast of the peninsula (Porter et al. 1988, Castellanos et al. 1997). Previous reports (Castellanos et al. 1997) also show the number of nestlings and fledglings produced by pairs on the western side of the peninsula are greater than those along the Gulf of California. Reasons for this higher productivity are unknown. However, it may be an indication of a healthier environment; the west coast of the peninsula is a relatively low organochlorine pesticide-polluted area in North America (total DDT concentration levels on Osprey eggs between 5–311 ppm lipid basis; Spitzer et al. 1977).

The southwest coastline of the peninsula is quite different from the northwestern coast. The terrain is relatively flat and covered by sparse desert shrubs. The lack of suitable natural nesting sites such as sea cliffs, ledges on vegetated slopes, and high trees precludes establishment of breeding pairs in spite of a variety and abundance of shore birds and waterfowl. The Santa Elenita towers provided an opportunity for this nest-site-limited species to breed.

Future conservation of Peregrine Falcon south of the U.S.A. should be focused on protection of the natural landscape (Temple 1988). This strategy is on course in México. In 1972, the islands in the Gulf of California were protected as wildlife refuges. In 1988, the entire central west coast, including the small islands and Lagunas Ojo de Liebre and San Ignacio, was declared a biosphere reserve. These refuges preserve prime Peregrine Falcon breeding range with low human impact.

NUEVO REGISTRO DE ANIDACION Y OBSERVACIONES DE HALCONES PEREGRINES REPRODUCTORES EN BAJA CALIFORNIA SUR, MÉXICO

RESUMEN.—Encontramos una pareja reproductiva y dos adultos no reproductivos de *Falco peregrinus* en Bahía Magdalena, en la costa suroeste de Baja California Sur, México. El nido estaba localizado en una torre metálica en un puerto abandonado. La anidación fue exitosa y tres volantones abandonaron el nido. Nuestro hallazgo amplía el rango de anidación conocido en la península.

[Traducción de los autores]

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