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NOTES FROM CLARION ISLAND¹

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Key words: Clarion Island; Revillagigedo Islands; Townsend's Shearwater; Clarion Wren; Clarion Island Dove; island endemics; green sea turtles; feral pigs.

During the course of a fishing trip in January 1986 I was able to spend several days at Isla Clarion, the westernmost of Las Islas Revillagigedos, located about 400 nautical miles southwest of Cabo San Lucas, Baja California, Mexico. Our party was in the vicinity of the island from 16 to 18 January. The commander of the Mexican Navy garrison on the island graciously allowed me to come ashore, and for 2 days I explored much of the highland portion of the island.

The garrison was established in 1979 to support a weather station at Bahía Sulphur, on the south side of the island. The settlement consists of a building for living quarters, a nearby electric generating plant, and an approximately 500-m aircraft runway parallel to the beach east of Bahía Sulphur. The garrison consisted of 11 men.

There were numerous unoccupied burrows in several areas of the highlands, where earlier visitors had found Townsend's Shearwaters, *Puffinus auricularis* (Anthony 1900, M. E. McLellan 1926, Jehl 1982). At least 200 Masked Boobies (*Sula dactylatra*) were nesting on the ground at several sites, but I saw no eggs. Red-footed Boobies (*S. sula*) were nesting on sparse bushes in several colonies near the eastern end of the island; most nests had one egg. At least 800 active nests were counted.

I saw the endemic Clarion Wren (*Troglodytes tanneri*) most often in areas around and just east of the garrison building. Up to 20 individuals were noted. No more than 20 endemic Clarion Island Mourning Doves (*Zenaidura macroura clarionensis*) were seen during my explorations. For both endemics, this appears to be a substantial reduction in numbers from the previous characterization as "abundant" (Townsend 1890, Anthony 1898). No more than 10 Burrowing Owls (*Athene*

cunicularia) were seen. As recently as 1953 Brattstrom and Howell (1956) described them as "common everywhere."

The following species, previously unrecorded from Clarion (see Jehl and Parkes 1982), were observed during my stay: one Great Egret (*Casmerodius albus*), one Osprey (*Pandion haliaetus*), three American Kestrels (*Falco sparverius*), one American Coot (*Fulica americana*), one Lesser Yellowlegs (*Tringa flavipes*), and six Laughing Gulls (*Larus atricilla*).

Shortly after establishment of the weather station, domestic pigs and hares were released as a source of food; both have multiplied and now occur everywhere from the shoreline to the highest elevations. Residents estimate pig numbers at 800 to 1,000. Evidence of rooting and destruction of vegetation was widespread, especially on the western half of the island. Chickens and goats were also released, but the chickens remain in the immediate vicinity of the settlement and no live goats were seen. According to one of the residents, an extensive fire in 1984 burned the western two-thirds of the island. This may account for the low, grassy vegetation I encountered over most of the island, in contrast to the extensive dense vine-covered cactus (*Opuntia*) described by Anthony (1898) and Townsend (1890).

Harvesting by humans and predation by pigs may reduce the small population of green sea turtles (*Chelonia mydas*) which nest at Bahía Sulphur (Awbrey et al. 1984). Ground-nesting birds such as Townsend's Shearwater and Masked Booby are especially vulnerable to predation by pigs. Massive reduction of vegetation by the fire and rooting by pigs has dramatically reduced habitat for the endemic landbird fauna.

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EVIDENCE FOR INTRASPECIFIC BROOD PARASITISM IN THE HOUSE WREN¹

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Key words: Intraspecific brood parasitism; House Wren; first evidence.

Most avian brood parasites reproduce by laying eggs in nests of other species (e.g., Hamilton and Orians 1965, Payne 1977), but some may lay in nests of conspecifics. Intraspecific brood parasitism has been reported for over 50 species of birds, mostly ducks (Yom-Tov 1980). For passerines, however, intraspecific brood parasitism has been reported far less frequently, although several well-documented cases do exist (see Yom-Tov et al. 1974, Manwell and Baker 1975). In this note we provide the first evidence for intraspecific brood parasitism in a small, cavity-nesting passerine, the House Wren, *Troglodytes aedon*.

Between 1984 and 1987 we conducted a study of the House Wren breeding ecology in Presqu'île Provincial Park (hereafter the Park) and in the Mer Bleue Bog (hereafter the Bog) near Ottawa, Ontario (description of these study sites can be found elsewhere; Belles-Isles and Picman 1986a, Belles-Isles 1987). In the 4 years of this study we have made observations on a total of 123 nests and obtained evidence for five probable cases (about 4% of the total) of intraspecific parasitic egg laying. Because we could find no previous reports of intraspecific brood parasitism for this species, below we provide a description of these cases.

Cases 1, 2, and 3—Appearance of two eggs per day. First, late in June 1985, we found a nest in the Park, where three eggs were laid in two consecutive days.

The final clutch laid in this nest consisted of seven eggs and of these six young fledged. Second, in 1986 in the Bog we recorded a case where the first egg was laid on 22 June, and 4 days later (on 26 June) the nest contained six eggs. The further breeding history of this nest is not known. Third, in one House Wren nest that was under observation in the Bog, six eggs were laid between 16 June and 19 June 1987. This nest successfully fledged all six young. Since passerines normally lay only one egg per day, the appearance of more than one egg per day can be used as evidence for parasitic laying (see Yom-Tov 1980).

Case 4—Appearance of a new egg after completion of the clutch. In May/June 1986, we observed the irregular appearance of an egg in a House Wren nest located in the Bog. In this nest seven eggs were laid between 20 and 26 May. During the next visit on 31 May the nest still contained seven eggs. However, on 2 June, we discovered a new egg near the entrance of the nest box. This nest eventually fledged seven young. The irregular time interval between laying of the seventh egg and the last egg, along with an unusual location of the last egg at the box entrance away from the nest depression, strongly suggest that the last egg was laid by a parasitic female.

Case 5—Abnormally large clutch. On 25 June 1987, in one of the boxes used for breeding by House Wrens in the Bog, we found a clutch consisting of nine eggs. Most House Wrens in our study areas, however, laid between four and seven eggs (for 1984 to 1987 mean clutch size \pm 99% CI = 6.1 ± 0.2 ; $n = 123$). The abnormally large clutch in this case thus suggests parasitic laying by another female.

The five above cases provide strong evidence for intraspecific nest parasitism in the House Wren, although this mode of reproduction appears to be infrequent (about 4%) in our wren populations. However,

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