

DISTRIBUTIONAL NOTES ON THE MANGROVE WARBLER  
(*DENDROICA PETECHIA CASTANEICEPS*) NEAR THE NORTHERN  
EDGE OF ITS RANGE IN EASTERN BAJA CALIFORNIA SUR, MEXICO

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In Baja California Sur (hereafter BCS) the Mangrove Warbler (*Dendroica petechia castaneiceps*; nomenclature follows Browning 1994) is distributed in suitable mangrove (family Rhizophoraceae and Avicenniaceae [Roberts 1989]) habitat from Cabo San Lucas (22°53'N [all coordinates are according to Topography International, Inc. 1986 and Baja Almanac Publishers, Inc., undated]) to Laguna Pond (26°45'N) on the west coast and Laguna San Lucas (26°13'N) on the east coast (Wilbur

1987, Browning 1994, Howell and Webb 1995). Since suitable mangrove stands are widely separated, especially on the east coast of BCS, initial documentation of individual locations was thought to be warranted. During spring and fall 1996, and spring 1997 and 1998, we conducted systematic surveys of potentially suitable habitat, including all accessible mangrove sites, between Laguna San Lucas and the southern end of Bahía Concepción (26°32'N; Fig. 1). Potential warbler sites were

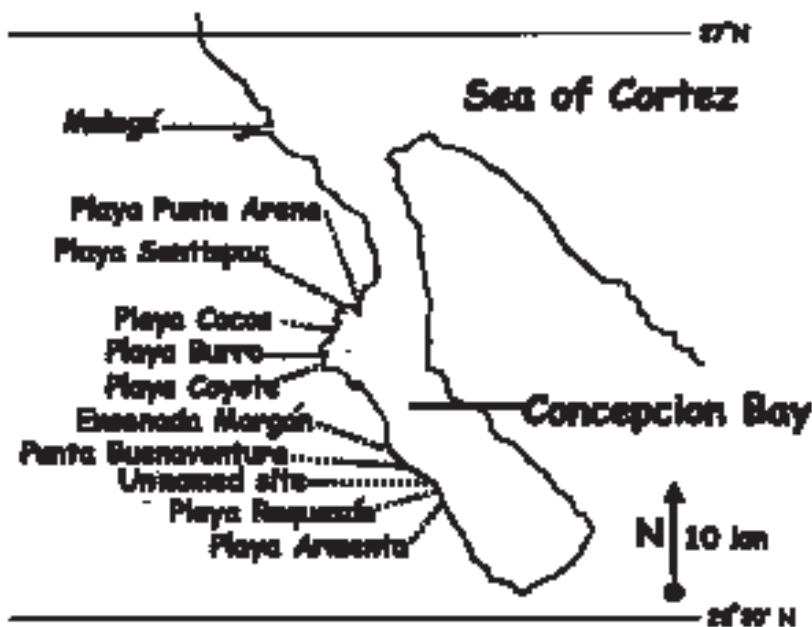


Fig. 1. Principal study area in the region of Concepción Bay, Baja California Sur, Mexico. Playa San Lucas is approximately 44 km north of Mulegé and does not appear on this map. Place names follow those from Baja Almanac Publishers, Inc. (undated).

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TABLE 1. Distribution of Mangrove Warblers on the east coast of central Baja California Sur, Mexico. Parenthetical numbers refer to number of visits made over the study period.

Location name	Latitude <sup>a</sup>	Location <sup>b</sup>	Years checked	Status <sup>c</sup>
Playa San Lucas (3)	27°13'N	North 179	1998	2M, 1F, 1IM
Boca el Majón (1)	27°02'N	South 155	1998	Sparse mangroves
Mulegé (>15)	26°53'N	South 135	1996–98	4M, 3F
Playa Punta Arena (3)	26°47'N	South 118	1997–98	No mangroves
Playa Santispac (6)	26°46'N	North 114	1997–98	1M, >2F
Playa Cocos (4)	26°44'N	North 111	1997–98	3M, 2F
Playa Burro (2)	26°44'N	North 109	1997–98	No mangroves
Playa Coyote (2)	26°43'N	North 108	1997–98	No mangroves
Ensenada Morgán (4)	26°39'N	North 95	1997–98	5M, 1F, 1IM
Playa Buenaventura (2)	26°38'N	South 95	1998	No mangroves
Unnamed beach (4)	26°38'N	South 94	1998	2M, 1F <sup>?</sup>
Playa Requesón (5)	26°37'N	North 93	1997–98	2M, 1F
Playa Armenta (4)	26°36'N	North 90	1998	1M, 1F

<sup>a</sup>Latitudes are approximate and based on Baja Almanac Publishers, Inc. (undated) and Topography International, Inc. (1986).

<sup>b</sup>Location of site in relation to nearest Mexico Highway 1 kilometer marker with the zero point at Loreto, Baja California Sur.

<sup>c</sup>Based on maximum number of responding adult males (M), females (F), and immature males (IM) at any single trip to the site. Areas with dense underbrush, such as acacia thorn scrub, were also surveyed.

surveyed by quietly moving through the habitat while playing a generic recording of Yellow Warbler (*Dendroica petechia*) song (Thayer's Birding Software 1997). Positive response to the played tape was recorded if either check notes song or full visual cues were detected. All surveys were conducted between 0700 and 1000 h or 1600 and 1730 h.

We surveyed 13 sites, 8 of which contained territorial male warblers (Table 1). Males aggressively responded to the tape by approaching the speaker while giving both territorial song and check notes. Females responded, usually in the accompaniment of a male, by approaching the speaker while giving check notes. Both sexes gave wing-flutter displays. Four of 5 non-mangrove sites were checked because they contained dense patches of acacia (*Acacia* sp., family Mimosoideae) and/or mesquite (*Prosopis* sp., family Mimosoideae), which superficially approximated the structural density of mangroves, and because they were within the geographic limits of our study. The 5th site, Boca el Majón, had a few widely scattered mangroves, but apparently these were of insufficient density for warbler use.

The maximum number of male Mangrove Warblers detected at a single time was 5 at Ensenada Morgán and 4 at the estuary at Mulegé (although the latter received more sampling effort). Suitable warbler habitats are widely separated (e.g., 44 km from Playa San Lucas to Mulegé) because these birds have stenotopic requirements, are presumed to be nonmigratory, and at any 1 site territorial male populations are low. Therefore, concern for

their long-term viability seems warranted, and detailed studies of the reproductive biology of banded individuals are strongly encouraged. Moreover, mangrove habitats themselves are being fragmented at an alarming rate (Massey and Palacios 1994), subjecting these systems to concomitant dilemmas such as species elimination by stochastic processes, reduction of dispersal, genetic problems associated with small populations, and reduction of habitat core area (Meffe and Carroll 1994).

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