NOTES

DETECTIONS OF CALIFORNIA BLACK RAILS IN THE COLORADO RIVER DELTA, MEXICO

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Populations of California Black Rails (*Laterallus jamaicensis coturniculus*) have been drastically reduced in western North America over the last several decades (Repking and Ohmart 1977, Evens et al. 1991). The California Black Rail is listed as threatened by the California Department of Fish and Game and is considered a "species of concern" by the U.S. Fish and Wildlife Service (www.dfg.ca.gov/endangered/birds.html). In Mexico, the California Black Rail is listed as endangered (Diario Oficial de la Federación 2000). Current management of the lower Colorado River, including the difficulty maintaining shallow and stable water levels at potentially suitable wetlands, is the critical factor limiting the distribution of Black Rails inland (Eddleman et al. 1994). Black Rails were first detected in the Colorado River delta in 1998, at the Ciénega de Santa Clara (Piest and Campoy 1999), despite rail surveys having been conducted there in the 1980s and early 1990s (Abarca et al. 1993, Eddleman et al. 1994). Evens et al. (1991) speculated that Black Rails were absent from these wetlands because of massive habitat degradation. The purpose of our study was to assess the presence or absence of Black Rails in the remnant wetlands of the Colorado River delta, Baja California and Sonora, Mexico.

Our surveys were focused in the Ciénega de Santa Clara, at about 5800 ha the largest marsh in the delta. This wetland lies within the Upper Gulf of California and Colorado River Delta Biosphere Reserve. Other surveyed areas were Hardy River, El Mayor River, Pescaderos River, Riito Drain, Cucapá Complex, El Indio Lagoon, El Doctor wetlands, and Eastern Drains (Figure 1). The surveyed wetlands included emergent marshes fed by agricultural runoff and natural springs. Vegetation was dominated mostly by cattail (*Typha domingensis*), with common reed (*Phragmites australis*), bulrush (*Scirpus* spp.), saltcedar (*Tamarix ramosissima*), and salt grasses (*Distichlis* spp.) present also. Glenn et al. (2001) described each wetland.

We conducted call-response surveys from March to June 2000 during Yuma Clapper Rail (*Rallus longirostris yumanensis*) surveys (Hinojosa-Huerta et al. 2001). After completing the Yuma Clapper Rail survey protocol, we played taped vocalizations of California Black Rails for 2 minutes, followed by a silent period of 2 minutes in which we recorded all responding individuals. The tape included two types of calls (starting with *kickee-doo*, followed by grunt vocalization) arranged in a 1-minute loop. Surveys started at sunrise and continued no later than 1030. Survey stations were circular plots (30-m radius) located at least 200 m apart and grouped into routes. We visited each station once during the early breeding season (11–17 March) and again during late breeding season (18–22 May). We selected the location of the routes in the Ciénega de Santa Clara randomly (16 routes, 173 stations, covering about 9% of the total area of the ciénega). Other wetlands considered potential habitat were much smaller, and we placed routes in them nonrandomly to maximize coverage of these areas (8 routes, 55 stations).

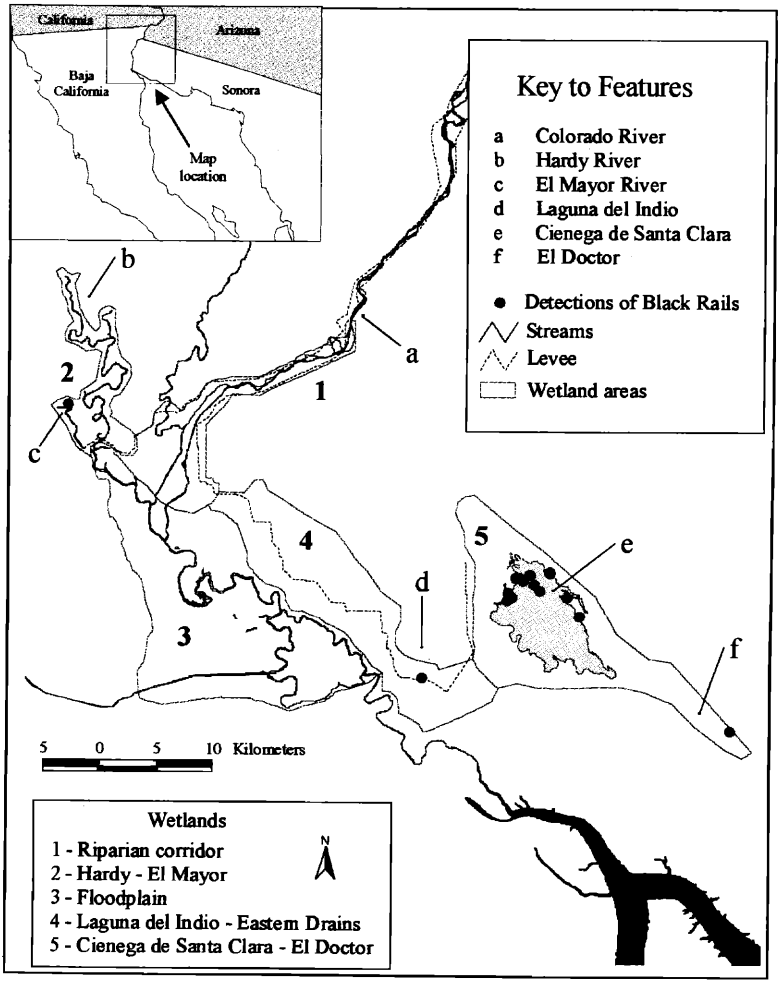

Figure 1. Wetland areas where California Black Rails were detected in the Colorado River delta, Baja California and Sonora, Mexico.

We detected a total of 19 Black Rails at 18 survey stations (3.94 % of the surveyed stations) during the two survey periods (Figure 2). Most were located in the Ciénega de Santa Clara, where we detected 10 Black Rails at nine stations (5.20% of the surveyed stations) during early breeding season and six at six stations (3.46% of the surveyed stations) during late breeding season. All of the detections in the late breeding season were >500 m away from any detection in the early breeding season (Figure 2). Cattail was the dominant vegetation (>50% of vegetation cover) at all stations where Black Rails were detected in the ciénega. Bulrush was an important vegetation feature

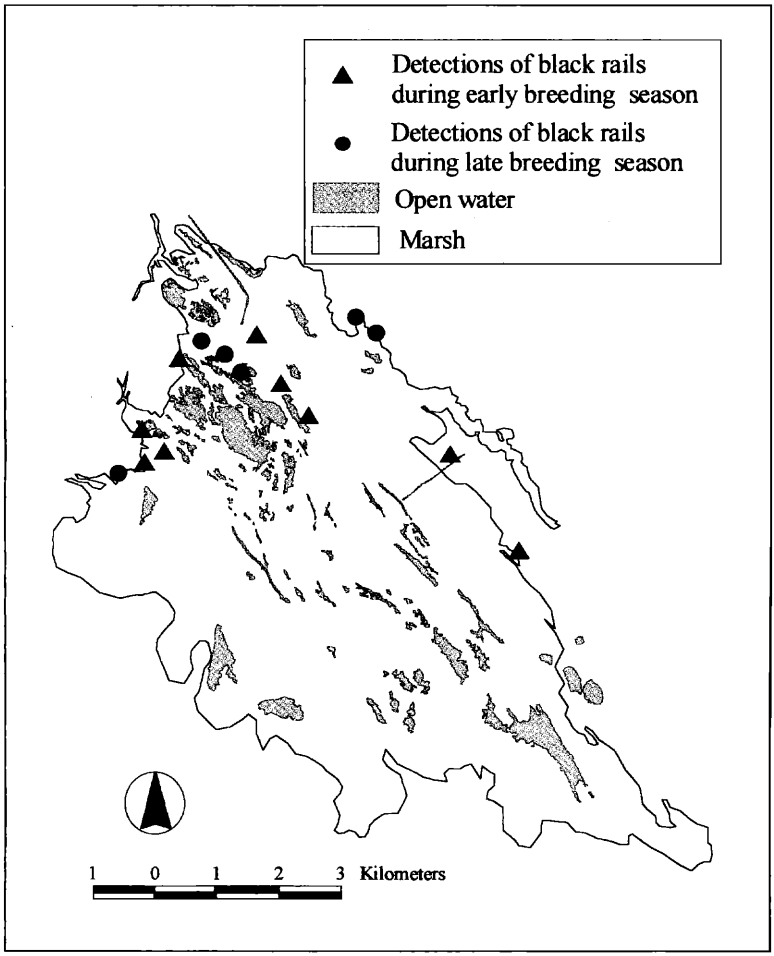

Figure 2. Survey stations where California Black Rails were detected in the Ciénega de Santa Clara, Sonora, Mexico during 2000.

(>15% of the vegetation coverage) at five of these stations, saltcedar only at two.

We detected three Black Rails at other wetlands in the delta during March (early breeding season) (present at 5.45% of the surveyed stations). One individual was along El Mayor River in a shallow (12–30 cm) agricultural drain dominated by cattail. A second Black Rail was at El Doctor wetlands in Sonora, which are maintained by natural springs. This area has constant shallow water throughout the year, and its vegetation is dominated by bulrush. The third individual was at El Indio Lagoon, Baja California, a recently restored wetland supported by agricultural drainage water, dominated by saltcedar but with substantial cattail. We detected no Black Rails at

Hardy River, Pescaderos River, Riito Drain, Cucapá Complex, or Eastern Drains. This absence may be related to the dominance of saltcedar and the lack of a constant source of water at these wetlands (Hinojosa-Huerta 2000).

California Black Rails were scarce and located at only a few sites in the Colorado River delta during our surveys in 2000. However, these detections document California Black Rails occurring in these wetlands during the breeding season. These sites should be monitored for changes in the population, with a survey design specific for the subspecies, to avoid potential disruption caused by other procedures (e.g., eliciting taped calls of Yuma Clapper Rails). An optimum protocol to survey California Black Rails should follow recommendations by Spear et al. (1999), although further research is needed. The sequence of calls in the survey tape should be reassessed, as the *kickee-doo* call may interfere with the grunt vocalization (M. Legare pers. comm.).

The subspecies should be included in management plans for the biosphere reserve, with specific practices to enhance or restore Black Rail habitat. Our results indicate that there is potential in agricultural drainage water and remnant wetlands in the delta for the conservation of the subspecies. This information should be considered in the development of conservation and recovery plans for inland populations.

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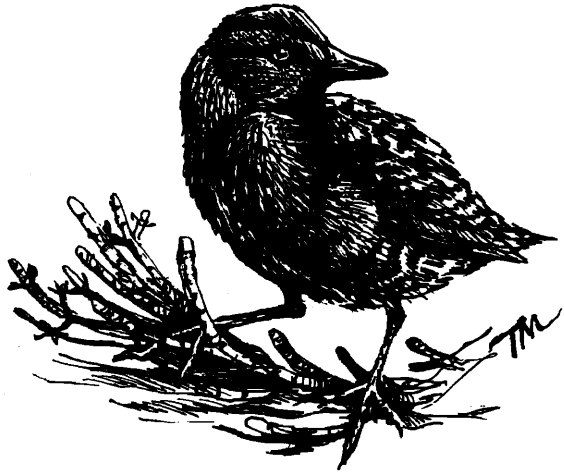

Black Rail *Sketch by Tim Manolis*