



First record of the Aztec Rail (*Rallus tenuirostris*) in Coahuila, Mexico Primer registro del Rascón Azteca (*Rallus tenuirostris*) en Coahuila, México

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Abstract

Historically, the Aztec Rail (*Rallus tenuirostris*) has been recorded in the wetlands of the Mexican Transvolcanic Belt, and recently in wetlands and along river edges in Chihuahua and Durango. As participants in a citizen science birdwatching collective that regularly visits the small artificial wetland of La Partida, Torreón, we obtained the first record of the species in Coahuila, northern Mexico. On 16 January 2024, we spotted a rail-like bird among the vegetation. We photographed the individual, which we later identified as an Aztec Rail by the grayish head, cinnamon malar coloration, white chin and throat, rufous chest and belly, dark central dorsal feathers surrounded by light gray, and white undertail coverts. Our observation represents a distributional range extension for the species, highlights the ecological importance of the small wetlands of northern Mexico that are habitats for waterbirds, and exemplifies the value of citizen science programs to better understand species distributions.

Keywords: Chihuahuan Desert, citizen science, endemic, Rallidae, waterbird.

Resumen

Históricamente, el Rascón Azteca (*Rallus tenuirostris*) se ha registrado en los humedales de la Faja Transvolcánica Mexicana, y recientemente en humedales y a lo largo de las orillas de los ríos en Chihuahua y Durango. Como parte de un colectivo de observación de aves de ciencia ciudadana que visita regularmente el pequeño humedal artificial La Partida, Torreón, obtuvimos el primer registro de la especie en Coahuila, norte de México. El 16 de enero de 2024, divisamos un ave parecida a un rascón entre la vegetación. Fotografiamos al individuo, que luego identificamos como un Rascón Azteca por la cabeza grisácea, coloración malar canela, mentón y garganta blancos, pecho y vientre rojizos, plumas dorsales centrales oscuras rodeadas de gris claro y coberteras inferiores de la cola blancas. Nuestra observación representa una extensión del área de distribución de la especie, resalta la importancia ecológica de los pequeños humedales del norte de México que son hábitats de aves acuáticas y resalta el valor de los programas de ciencia ciudadana para comprender mejor la distribución de las especies.

Palabras clave: ave acuática, ciencia ciudadana, endémico, Desierto Chihuahuense, Rallidae.

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Introduction

The Aztec Rail (*Rallus tenuirostris*) is an aquatic bird endemic to Mexico (Moreno-Contreras et al. 2021; Berlanga et al. 2021). Historically, the species has been documented to occur in the Mexican plateau, from Mexico City westwards, including the states of Jalisco, Colima and Nayarit (Warner and Dickerman 1959, Howell and Webb 1995). Recently, an Aztec Rail population was discovered in Chihuahua, extending its known range (Mondaca-Fernández et al. 2017, Moreno-Contreras et al. 2021). There is also a confirmed but unpublished record of the species in Durango, Mexico (GBIF 2024).

The Aztec Rail is considered an endangered species by both Mexican law (SEMARNAT 2010) and the IUCN Red List (IUCN 2024). It is a secretive bird, being spotted mainly by voice throughout its distribution, where it occupies freshwater marshes and river edges with abundant vegetation (Warner and Dickerman 1959). In the past, the Aztec Rail was considered conspecific to other *Rallus* species, for instance as a subspecies of the King Rail (*R. elegans*) in the eastern United States, and as a subspecies of the Mangrove Rail (*R. longirostris*) distributed from southwestern United States to northwestern

Mexico (del Hoyo et al. 2020). Molecular analysis justified the split of the Aztec Rail into a distinct species (Chesser et al. 2014) that is typically distributed in the highland wetlands of central Mexico (Maley and Brumfield 2013).

The avifauna of Coahuila has been extensively studied (Benson et al. 1989, Garza de León et al. 2007), and comprises 416 species (eBird 2024). Of these, four species belong to Rallidae, and only one is from the genus *Rallus*. The state has several important wetlands such as Río Sabinas, Cañón de Jimulco and the Cuatro Ciénegas Valley, all of which are known for their high avian diversity (Suárez-García et al. 2017). Hence, despite the overall desert conditions, Coahuila has several aquatic habitats for waterbirds. In this study, we provide the first report of the presence of the Aztec Rail in the state of Coahuila and discuss the implications of recent records of the species in the Chihuahuan desert.

Observation

As part of a citizen science birdwatching collective, we conducted regular visits to observe

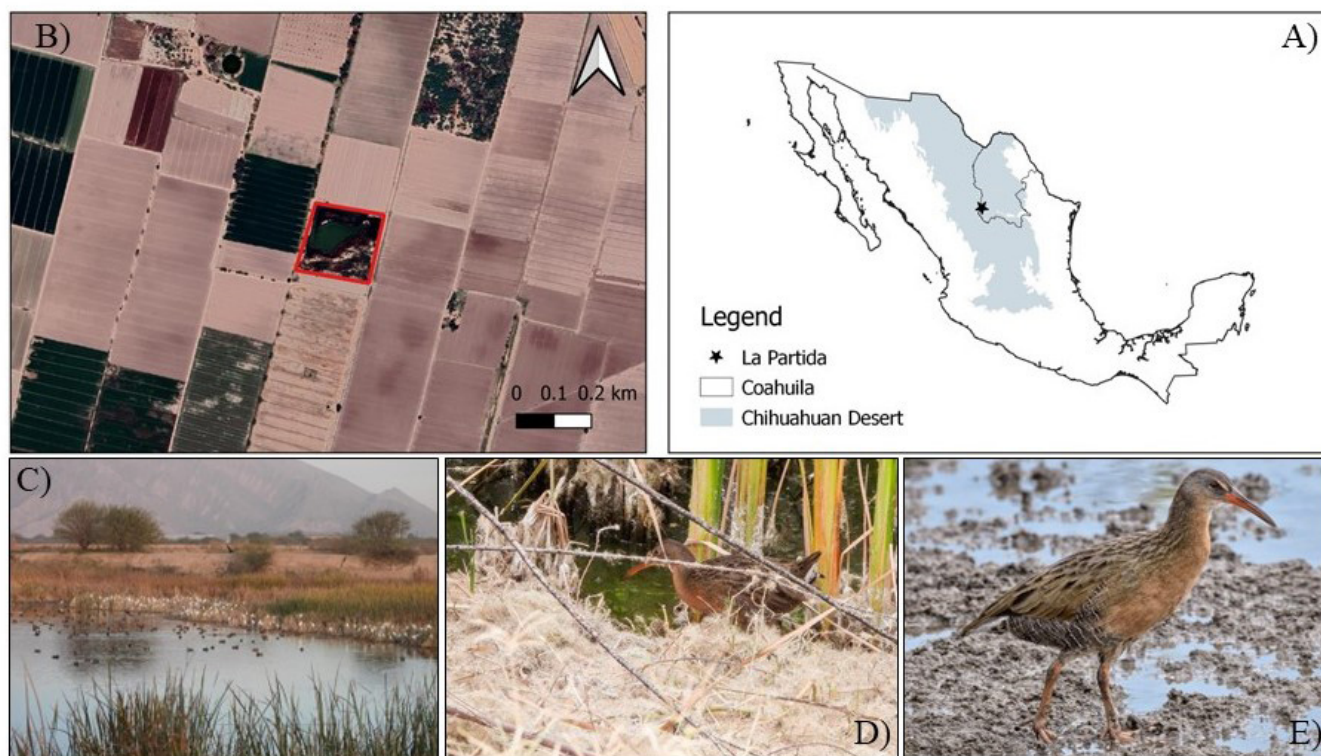


Figure 1. A) Location of the study site within the Chihuahuan desert, B) aerial view of La Partida (obtained from Google Earth) showing the wetland and surrounding arable land, C) general view of La Partida, several waterbirds are observed, D) Aztec Rail photographed in La Partida on 16 January 2024, E) Photograph from eBird provided for comparison. Picture credits: Julie Ibarra-Rossow (C and D), Carlos García (E).

and count birds in the artificial wetland of La Partida (25° 36'14" N, 103°16'50" W), located in the municipality of Torreón, Coahuila, northeast Mexico, within the Chihuahuan desert range (Fig. 1A). La Partida occurs at an altitude of 1113 m asl, has a total area of 3.5 ha, and is surrounded by arable land (Fig. 1B). This wetland was created ten years ago with construction of a highway that surrounds the city of Torreón, and is 1 km from the highway. The dominant plant species in La Partida are Southern Cattail (*Thypha dominguensis*), Giant Reed (*Arundo donax*), Mexican Palo Verde (*Parkinsonia aculeata*), and Sweet Acacia (*Vachellia farnesiana*). The wetland attracts waterbirds (Fig. 1C), including species such as the Ruddy Duck (*Oxyura jamaicensis*), Gadwall (*Mareca strepera*), Long-billed Curlew (*Numenius americanus*) and Virginia Rail (*Rallus limicola*). A total of 131 bird species has been recorded at La Partida (iNaturalist Community 2024). Threats such as water pollution and goat grazing are common in La Partida.

On the afternoon of 16 January 2024, while counting birds in La Partida, we detected a sound in the vegetation and saw a bird walking silently among the vegetation. When the bird showed itself for a moment, we were able to take photographs (Fig. 1D) before the individual was gone. We later examined the photographs and determined that the individual was an Aztec Rail by the grayish head, cinnamon malar coloration, rufous chest and belly, dorsal central dark feathers surrounded by faded gray, and white undertail coverts (Fig. 1D). We distinguished the species from the Virginia Rail, which is smaller, with an intense red bill coloration and dark gray head (Alderfer and Dunn 2014). The identification was confirmed by comparison to pictures from eBird (Fig. 1E). Confirmation of identification from the iNaturalist community supported our conclusion. After checking the GBIF databases and the specialized literature (Howell and Webb 1995, Garza de León et al. 2007), we determined that this was the first report of the species in the state of Coahuila.

Discusión

Our observation provides the first documented record of the Aztec Rail in the state of Coahuila, Mexico. Our record also represents an extension to the distribution range of the species (Garza de León 2003, GBIF 2024), as La Partida is 221 km northeast from José Refugio Salcido, Durango, and 355 km and 295 km southeast from Delicias and Camargo,

Chihuahua, where the species was previously recorded (GBIF 2024). We highlight that La Partida is the fourth locality within the Chihuahuan desert ecoregion where the species has been registered. Our record of the Aztec Rail at La Partida is also within the altitudinal range of the species (del Hoyo et al. 2020).

Rails are known to be long-distance flyers that can colonize new aquatic habitats (Maley and Brumfield 2013). Considering that this group of species is very secretive, we hypothesize that the distribution range of the species is underestimated. The Aztec Rail may be present in other wetlands or seasonal water bodies between Nayarit and Chihuahua, or between the central Mexican states and Coahuila, as a report from Durango suggests (GBIF 2024).

We recorded the Aztec Rail in an artificial water-body that arose as consequence of human activities. This contrasts with the threats faced by the species throughout its range due to human activities of water pollution, drainage and overexploitation of marshes, and the development of new infrastructure and goat grazing. Especially important are the water bodies interspersed in the arid regions of the Chihuahuan desert, where aquatic species such as the Aztec Rail can find territories and resources to survive (Mondaca-Fernández et al. 2017, Moreno-Contreras et al. 2021). It is expected that more populations of the Aztec Rail will be found in other wetlands of northern Mexico as sampling effort increases, especially through observations conducted by birdwatchers engaged in citizen science programs, such as the Red Naturalista.

We consider that it is important to regularly survey La Partida, to determine whether our record is an isolated individual or part of an established population. Studies could also determine whether the Aztec Rail is breeding at the site, as subaquatic plants like Southern Cattail and Giant Reed are abundant in the marsh edges, providing vegetation cover that may favor the species presence and reproduction (Warner and Dickerman 1959). Given the high number of 131 bird species recorded at La Partida (iNaturalist Community 2024), it would be important to secure the existence of this water body in the long-term. We hope this short communication highlights the relevance of La Partida for the maintenance of the local biodiversity, as it is threatened by urban development, intensive agricultural activities and misuse of water resources.

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