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Range Extension of *Aramides mangle* (Spix, 1825) (Aves, Gruiformes, Rallidae) to Cayenne, French Guiana

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Abstract. This report documents a new occurrence of *Aramides mangle* (Spix, 1825) (Little Wood-Rail) in Cayenne Town, French Guiana, marking a significant range extension within the country. Prior sightings of this species in French Guiana were scarce, confined to the Kourou Town area from 2021 to 2024. The present record, confirmed by the homologation committee of Groupe d'Étude et de Protection des Oiseaux en Guyane (GEPOG), extends the known range of *A. mangle* into the Cayenne region and provides fresh insights into its distributional dynamics in response to environmental factors. This observation adds to the growing body of evidence suggesting potential range shifts among coastal rallids in South America, particularly along the northeastern coast where climate change and habitat modifications are increasingly documented.

Key words: Aramides mangle, range, French Guiana.

Introduction

Aramides mangle (Spix, 1825), or the Little Wood-Rail is one of the smaller members of the *Aramides* genus, measuring 25-28 cm in length, notably smaller than its sympatric congener *A. cajaneus* (Müller, 1776) (Gray-necked Wood-Rail) which reaches 33-40 cm. The species shows marked sexual monomorphism, with both sexes displaying identical plumage patterns - olive-green upperparts, rufous neck and breast, and distinctive gray face. This coloration pattern serves as excellent camouflage in its preferred mangrove habitat, where dappled light and shadows create similar patterns (Uriot *et al.* 2023).

This species is adapted to mangrove habitats along the eastern coast of South America, primarily in Brazil (Marcondes *et al.* 2014). It typically inhabits densely vegetated mangrove areas, where it is rarely observed due to its reclusive behavior and challenging habitat. The species' diet primarily consists of small crustaceans, invertebrates, and plant material, aligning closely with the resources available in intertidal and mangrove ecosystems (Uriot *et al.* 2023).

Unlike more widespread congeners such as *A. cajaneus,* which readily adapts to various wetland habitats, *A. mangle* shows strict habitat fidelity to mangrove forests, making its range expansion particularly noteworthy from an ecological perspective.

Although *A. mangle*'s primary range is within eastern coast of Brazil, south of the Amazon river (iucnredlist.org 2024, ebird.org 2024), occasional records from northern French Guiana suggest a potential for sporadic range extensions. The limited records from Kourou, including sightings in 2021, 2022, 2023, and now 2024, underscore the

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significance of this new sighting in Cayenne, particularly given the potential for under-documented range expansion.

Material and Methods

Study Area: The observation occurred at the Vieux Port of Cayenne, situated at the Cayenne River's mouth (4°56'12.7"N 52°20'24.8"W). This area features intertidal mudflats exposed at low tide adjacent to mangrove forests, offering suitable foraging grounds for species such as *A. mangle*. Due to the visibility offered by the old pier, the Vieux Port is a popular spot among birdwatchers, particularly at low tide when mudflats and surrounding vegetation become ideal habitats for shorebirds. The Vieux Port location represents one of several standardized monitoring points established by GEPOG for coastal bird surveys. This site has been regularly monitored since 2018, with particular attention to mangrove-specialist species.

Observation Methods: The individual was observed during opportunistic birdwatching using a Panasonic FZ300 camera for photo and video documentation. Observing conditions from the pier provided a clear view of the mudflat and mangrove habitat. The photographic evidence was subsequently reviewed and verified by the GEPOG homologation committee, ensuring species identification accuracy.

Results

Observation Details: Date and Time: October 5, 2024, at 9:00 AM, Duration: Approx. 30 minutes, Weather: Clear skies, 30°C, no wind

Field Observations: A single adult was observed actively foraging in the mudflats near the old pier. The individual exhibited cautious behavior in open areas, frequently retreating to cover, though showed relatively low sensitivity to human presence. During foraging, the bird primarily probed the substrate, feeding on unidentified small crabs. Such behavior aligns with documented feeding habits for *A. mangle* within its typical mangrove habitat.

The foraging behavior observed in Cayenne matches patterns observed in Brazil, however, the tolerance to human presence observed in Cayenne (maintaining activity within 10-15 meters of observers) contrasts with observations from Brazilian populations, where flight distances typically is much larger. This behavioral plasticity has been noted in other rallid species adapting to urban-adjacent habitats.

These behavior differences with *A. mangle* populations in Brazil, where they are generally more sensitive to disturbance, suggesting possible behavioral adaptation to local conditions in French Guiana.

Documentation: Photographic and video evidence was collected and is accessible via Faune-Guyane's verified observation link. Expert ornithologists from the GEPOG committee confirmed the species identification.

Discussion

This new sighting represents the first record of *A. mangle* in the Cayenne region, expanding its known distribution in French Guiana and marking an important step in understanding the species' range dynamics. The presence of A. mangle in Cayenne suggests that suitable habitat may exist between Kourou and Cayenne, warranting further research and surveys in the areas between these two regions.

This range extension parallels similar movements observed in other mangrove-specialist birds along the northeastern South American coast. For instance, *Platalea ajaja* (Linnaeus, C 1758) and *Egretta garzetta* (Linnaeus, C 1766) have shown comparable range extensions in recent years. These patterns suggest broader ecosystem-level changes that may be facilitating range shifts among coastal species.

Fig. 1. *Aramides mangle* foraging in proximity to humans at the area of Cayenne.

Fig. 3. Map showing the location of the new record in relation to previous observations from inaturalist.com.

Additionally, recent unusual weather patterns in French Guiana, including reduced rainfall and increased temperatures, may be influencing the species' movement. Studies have indicated that such climatic shifts often result in temporary or permanent range shifts for various bird species, especially those inhabiting coastal and intertidal ecosystems. In a broader context, *A. mangle*'s northward movement could mirror climate-driven range shifts observed in similar rallid species, where changes in habitat suitability and resource availability prompt birds to explore new areas.

Conservation Implications: The period of 2023–2024 has seen notable climatic anomalies in French Guiana, such as extended dry spells and near-record high temperatures. These conditions could impact *A. mangle*'s habitat in several ways:

1. Range Shifts: The movement of *A. mangle* northward may reflect a climate-driven range shift, with species moving to maintain habitat suitability.

2. Habitat Modifications: Prolonged drought can lead to ecological shifts within mangroves, potentially affecting vegetation density, salinity levels, and available mudflat areas, all of which influence species distribution.

3. Resource Availability: Altered precipitation and temperature patterns may influence prey availability, especially small crustaceans, prompting foraging species like *A. mangle* to seek out new habitats in search of food.

4. Population Connectivity: The presence of *A. mangle* in Cayenne raises questions about population connectivity along the coast. Recent observations suggest that coastal populations may be more mobile than previously thought, particularly during periods of environmental stress.

This observation highlights the importance of ongoing monitoring efforts for coastal bird species in French Guiana. Observations of range extensions and behavioral adaptations under changing conditions could serve as indicators of broader ecological responses to climate variations. Similar migratory patterns are observed in other bird species globally, often linked to environmental stressors, and underscore the potential impact of climate on avian distribution in tropical coastal ecosystems.

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