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Nota breve | Short note

Range expansion of the house gecko in the Cabo Verde archipelago: new record from São Nicolau

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The introduction of exotic vertebrate species has led to significant ecological impact on endemic fauna, particularly when such species were introduced in island ecosystems and turned invasive. These effects include competition for habitat and food resources, predation and, consequently, in some cases, extinction (Gaiotto *et al*. 2020). In Cabo Verde, invasive vertebrate species have contributed to the decline and extinction of endemic species such as native reptiles (Pinho *et al*. 2022). For example, *Hemidactylus angulatus*, an introduced gecko species, has expanded throughout the archipelago, displacing and threatening the endemic *Hemidactylus boavistensis* (Vasconcelos *et al*. 2013). More recently, another exotic *Hemidactylus* was introduced in the archipelago due to anthropogenic activities, the house gecko *Hemidactylus mabouia* (Moreau de Jonnès, 1818), which is particularly effective at colonizing new environments (Carranza & Arnold 2006). Previously, *Hemidactylus mabouia* was recorded on four Cabo Verde islands: Santo Antão, Brava, São Vicente, and very recently also on Sal (Vasconcelos *et al*. 2013; Almeida & Vasconcelos 2023). We here report, for the first time, its occurrence on São Nicolau, and the continued range expansion of this invasive species across the archipelago.

During an ad hoc survey on São Nicolau, we found a juvenile gecko specimen inside a residence in Ribeira Brava (16.6157145ºN, -24.2960997ºW). We photographed the specimen and collected its tail tip for morphological and molecular identification. We extracted its DNA using the saline method and amplified and sequenced it (GenBank accession code PX723529) it using universal 12S primers and the conditions as described in Almeida & Vasconcelos (2023).

We confirmed the species identification as *H. mabouia,* based on morphological features using identification keys and genetic data available at GenBank. Due to its young age, we could not determine the sex of the specimen (Fig. 1). The genetic analysis revealed that the individual shared the same haplotype as those found in the other islands, supporting a recent introduction (Pinho *et al*. 2023; Almeida & Vasconcelos 2023).

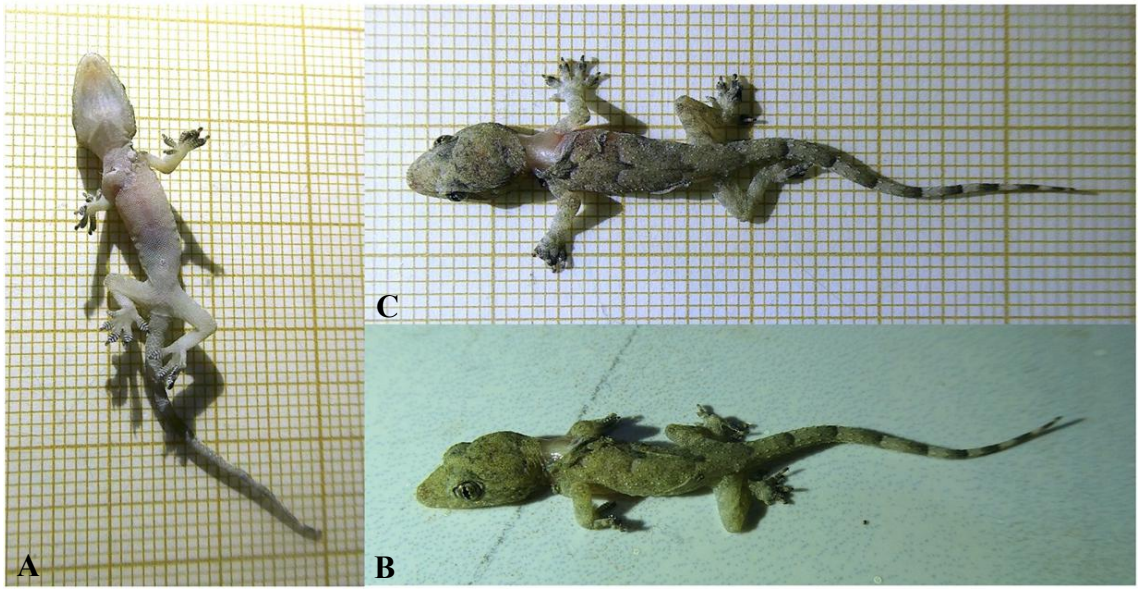

Fig. 1. *Hemidactylus mabouia* recorded on the island of São Nicolau in April 2025 (photos by R. Vasconcelos). **A**) Ventral, **B**) Frontal and **C**) Dorsal view of the specimen (C).

The expansion of *H. mabouia* raises serious conservation concerns due to its competitive interactions with native species (Short & Petren 2008), especially on São Nicolau, due to the presence of the potentially Critically Endangered endemic *Hemidactylus nicolauensis* (Vasconcelos *et al*. 2020). *H. mabouia* shows several advantages over other species, including greater urban tolerance and higher reproductive success (Meshaka *et al*. 2000). These findings highlight the urgent need for targeted ecological studies and effective conservation measures to prevent further inter-island dispersal and protect Cabo Verdean endemic biodiversity.

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