



First Documented Predation Attempt by a Peters's Rock Agama (*Agama picticauda*) on a Cuban Brown Anole (*Anolis sagrei*) in Florida

Maria Ojeda-Rojas¹, Nathan Burkett-Cadena², Eric Suarez¹, Lawrence Reeves², Miles McCollum², and Melissa A. Miller¹

¹University of Florida, Department of Wildlife Ecology and Conservation, Fort Lauderdale Research and Education Center, Davie, Florida 33314, USA

²University of Florida Medical Entomology Laboratory, Vero Beach, Florida 32962, USA

Cuban Brown Anoles (*Anolis sagrei*), small lizards native to Cuba, The Bahamas, and presumably Little Cayman in the Cayman Islands, have been introduced and become established across much of the Caribbean, several regions of the United States, Bermuda, Ascension Island, parts of Central America (Mexico and Belize), and the Asian countries of Singapore and Taiwan (e.g., Campbell 2003; Kolbe et al. 2007; Powell et al. 2011; Tan and Lim 2012; Stroud et al. 2017, 2018). In Florida, *Anolis sagrei* was first reported in the late 19th Century (Garman 1887; Campbell 2003) and since has expanded its range throughout the state, where it currently occurs in both natural and urban environments (Godley et al. 1981; Battles et al. 2018).

Peters's Rock Agamas (*Agama picticauda*) are medium-sized lizards native to sub-Saharan Africa, ranging from Senegal and Mauritania in the west through much of Central Africa to Ethiopia in the east (Leaché et al. 2017). Introduced to Florida in the 1970s (Krysko et al. 2011; Nuñez et al. 2016), Enge et al. (2004) documented the expansion of agamas across the state and their tendency to thrive in urban and suburban environments, a pattern also observed in their native range (Luiselli et al. 2011; Akani et al. 2013).

Studies in the native range of the species have revealed a broad dietary niche composed primarily of insects (especially ants), orthopterans, and beetles (Porter and James 1979), but occasionally including plant material and small vertebrates such as snakes, birds, mammals, and even conspecifics (Akani et al. 2013; Henigan et al. 2019). Metabarcoding analyses conducted on introduced populations on Réunion Island in the western Indian Ocean and expressed as frequency of occurrence revealed a similar diet, dominated by ants, with the four most common ant species accounting for 76% of all detected prey. Other frequently taken prey included honeybees (19%) and coccinellid beetles (15%), whereas no other prey item exceeded an occurrence of 6%. Notably, the Common House Gecko (*Hemidactylus frenatus*), a species also

introduced in Florida, was detected at low frequency (1%), representing the only vertebrate prey identified in that introduced population (Harris 2026).

At least 63 non-native reptilian and amphibian species are established in Florida (Krysko et al. 2016). The ecological impacts of several invasive squamates have been extensively studied; however, knowledge of *Agama picticauda* in Florida remains limited despite its reported presence for over four decades and its current distribution across at least 20 counties (Florida Fish and Wildlife Conservation Commission 2025). As an opportunistic predator with a diverse diet, *Agama picticauda* could exert significant ecological pressure on native species in invaded habitats.

We herein report the first documented case of a predation attempt by *Agama picticauda* on *Anolis sagrei* in Florida. On 6 July 2025, we observed an adult male *Agama picticauda* carrying a live adult male *Anolis sagrei* in its mouth (Fig. 1) while walking at a distance of approximately 10 m in Vero Beach, Florida (27.58982, -80.38726). Due to the opportunistic nature of the observation, as well as the distance of the event from the observer, the lizards were photographed using a mobile phone camera through binoculars, and a photographic voucher has been deposited in the Florida Museum of Natural History Herpetology Collection (UF-Herpetology 196602). The anole extended its dewlap while being held by the agama, indicating it was alive and confirming predation rather than scavenging. Ingestion was not observed because



Figure 1. An adult male Peters's Rock Agama (*Agama picticauda*) preying on an adult male Cuban Brown Anole (*Anolis sagrei*) displaying its dewlap. Photograph by Nathan Burkett-Cadena.

the agama carried the anole out of view. We infer that the agama likely consumed or attempted to consume the anole.

This observation provides the first documented evidence of a trophic interaction between these two well-established non-native lizard species in Florida. However, predation of *Anolis sagrei*, as well as other sympatric native and non-native prey species, likely is a regular occurrence, with the overlapping distributions of *Agama picticauda* and *Anolis sagrei* in human-modified environments across much of southern and central Florida (Mitchell et al. 2021) likely facilitating such encounters. Predatory interactions among non-native species, such as that described herein, warrant further investigation as they could facilitate or hinder invasion success (Griffen 2016) with potential cascading effects on community structure.

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