REPTILES & AMPHIBIANS

Consumption of Licuri Palm (*Syagrus coronata*) Fruit by an Argentine Black and White Tegu (*Salvator merianae*) in the Caatinga Seasonally Dry Forest: Nutritional and Ecological Implications

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The common name "tegu" encompasses a number of large teiid lizards, such as the recently recognized genus *Salvator*, which is derived from the genus *Tupinambis*, with both genera sharing a number of morphological characteristics (Harvey et al. 2012). Among the species, the Argentine Black and White Tegu (*Salvator merianae* Duméril and Bibron 1839; Fig. 1) is common in South America and is widely distributed throughout Brazilian biomes (Guedes et al. 2023; Uetz et al. 2023).

The species is an active diurnal forager, more active during the warm season than during the cold and rainy seasons (Vitt 1995; Winck and Cechin 2008). *Salvator merianae* occupies native, degraded, and anthropic habitats (Vitt 1995), reaching high densities in some conditions, mainly on islands (Chiarello et al. 2010; Abrahão et al. 2019). It is an omnivorous, opportunistic, and generalist species that feeds on invertebrates, vertebrates, carrion, fruits, other plant items, and even fungi (Sazima and Haddad 1992; Toledo et al. 2004; Winck et al. 2011). The intake of fruits has been reported for the species from field observations (Paixão and Venticinque 2020), interviews in ethnoecological studies (Silva et al. 2014), and stomach contents (Kiefer and Sazima 2002).

In nature, studies highlight the consumption or preference for fruits by this species from families such as Sapotaceae, Curcubitaceae, Anacardiaceae, Cactaceae, and Moraceae, among others (Kiefer and Sazima 2002; Silva et al. 2014; Paixão and Venticinque 2020). In turn, an experiment with captive *S. merianae* offered different fruits found a preference for fruits of the families Myrtaceae, Solanaceae, and Arecaceae, in the latter case consumption of different species of *Syagrus* (Castro and Galetti 2004). Fruits of *Syagrus* represent an excellent source of calories that can provide a rapid energy return if available in environments where *S. merianae* normally lives.

Herein we describe consumption by an Argentine Black and White Tegu of the fleshy fruit of a Licuri Palm, *Syagrus coronata* (Martius), which is endemic to Brazil and is typically found in the seasonally dry Caatinga (Noblick 2017; Souza et al. 2018). We collected data during a rapid assessment using camera-traps in a Caatinga forest remnant (-9.96667, -38.25000) in the Municipality of Jeremoabo, Bahia State, Northeast Brazil. This observation was opportunistic, documenting a novel food item in the species' diet, possibly rep-

Figure 1. An Argentine Black and White Tegu (*Salvator merianae*) like that captured feeding on Licuri Palm (*Syagrus coronata*) fruit. Photograph by Raone Beltrão-Mendes.

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resenting an ecological role in the dispersal of seeds. We also discuss the energetic implications of searching and feeding on highly energetic food items.

At 1509 h on 7 December 2022, we recorded an adult *S. merianae* actively searching for food. The animal tried to reach the bait (corn grains) in a PET bottle mounted on a tree that was used to attract local fauna. The animal tried multiple times to reach the corn but was unable to access the grains due to the position of the hole. After failing, the lizard resumed foraging, finding a Licuri Palm fruit under a dead palm leaf. The *S. merianae* swallowed the fruit as soon as it was discovered. The event lasted approximately 3 minutes, ending at 1511 h, when the tegu left the site (see Supplementary Material).

Frugivory is well documented in *S. merianae* and may be associated with seed dispersal (Castro and Galetti 2004; Paixão and Venticinque 2020). However, this is the first report documenting the consumption of *Syagrus coronata* fruits, as well as attempts to feed on corn grains. Both food items are highly caloric. *Syagrus coronata* is rich in proteins and lipids and contains β-carotene (Crepaldi et al. 2001). Corn grains are mainly composed of amide (68–85%) and protein (9–10%) (Zeoula et al. 2003). The consumption of Licuri Palm fruits and perhaps corn could be important for *S. merianae* in a highly seasonal environment, especially during the dry season, as we observed, when many plant items are scarcer in the Caatinga (Prado 2005; Caldas et al. 2019).

According to Castro and Galetti (2004), tegu ingestion does not affect seed germination rates, although germination rates of Licuri Palm seeds were not examined. Nevertheless, tegu lizards may act as dispersers for *Syagrus* species, even in harsh environments such as the Caatinga. Further studies should evaluate the importance and benefits of tegu lizards for palm trees in relation to germination rate and dispersal. Also, because *S. merianae* is commonly hunted in the semiarid region of Brazil (Alves et al. 2012), further studies can investigate the consequences of its removal from the environment and how that could compromise local animal-plant interactions and ecological processes such as seed dispersion and plant succession.

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Supplementary Material

Video 1. Attempts by an Argentine Black and White Tegu (*Salvator merianae*) to consume corn grains in a plastic bottle in a Caatinga seasonally dry forest in Jeremoabo, Bahia, northeastern Brazil, and consumption by *Salvator merianae* of Licuri Palm (*Syagrus coronata*) fruit found under a dead leaf in a Caatinga forest in Jeremoabo, Bahia, northeastern Brazil. Video by Raone Beltrão-Mendes. https://www.youtube.com/watch?v=p_uVvn_JuQM.