

Avian predation attempts by *Tropidurus hispidus* (Spix, 1825) (Reptilia, Squamata, Tropiduridae)

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The genus *Tropidurus* (Wied, 1825) (Tropiduridae) is a highly diversified group of lizards containing 30 species, in four species groups (namely *T. bogerti*, *T. semitaeniatus*, *T. spinulosus* and *T. torquatus* group) (Carvalho, 2016). *Tropidurus hispidus* is member of *torquatus* group (Frost, 1992; Frost et al., 2001) and it is widely distributed in the Neotropics from Northeastern Brazil to Venezuela (Rodrigues, 1988). Although *T. hispidus* inhabits “open landscapes” mostly, including cerrados, caatingas and savannas of mainland South America (Rodrigues, 1988), several populations were discovered in isolated rock outcrops in the Amazon (Vitt, 1993) and in the Atlantic Forest (Santana et al., 2008).

As a heliophilous and diurnal habitat generalist (Vitt et al., 1996), *T. hispidus* is observed mainly on rocky surfaces (Vitt et al., 1996; Vitt et al., 1997; Van Sluys et al., 2004), on ground along forest edges (Carvalho and Vilar, 2005), tree trunks, sandy floors (Rodrigues, 1987), and human-dominated landscapes (Vanzolini et al., 1980). These lizards are sit-and-wait predators (Rodrigues, 1987) that prey on a wide array of preys,

including insects, plant parts (Vitt, 1995; Ribeiro and Freire, 2011), and occasionally small vertebrates such as frogs (Vitt et al., 1996; Ribeiro and Freire, 2009) and lizards (Van Sluys et al., 2004; Sales et al., 2011). However, to our knowledge there are no published records that indicate *T. hispidus* preys or feeds on birds in nature. Herein we report on two hitherto undescribed cases of bird predation attempt by *T. hispidus* in the wild.

In the first case of predation, an adult male of *Tropidurus hispidus* (estimated snout-vent length of 150 mm) was found preying upon a Common Tody-flycatcher *Todirostrum cinereum* (Linnaeus, 1766) (estimated total length of 50 mm) at 5:00 p.m. on 15 October 2008 in a woodland area close to Parque Estadual das Dunas do Natal, Natal, Rio Grande do Norte, NE Brazil (5°47'42"S, 35°10'58"W, 30 m a.s.l.). The lizard was on the trunk of *Terminalia catappa* (Combretaceae), 1 m above the ground and biting the bird by its head (Figure 1). The prey was identified

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Figure 1. A male of *Tropidurus hispidus* preying upon an immature of *Todirostrum cinereum* in Natal, Rio Grande do Norte, NE Brazil.

as species level based on characteristic coloration and ornamentation patterns on the ventral region and wings, and the prey was identified to be an immature due to a series of morphological traits such as the presence gape and calamus on its wings, semi plumes on the ventral region, and an underdeveloped tail (Walther, 2004).

The second predation event was recorded at 8:00 a.m. in 4 April 2016, when a large-sized adult male *Tropidurus hispidus* (estimated total length of 280 mm) was found trying to feed on an adult of Swallow-tailed Hummingbird, *Eupetomena macroura* (Gmelin, 1788) (estimated total length of 125 mm), in an anthropic area nearby the Centro de Conservação e Manejo de Fauna da Caatinga (CEMAFAUNA), Petrolina, Pernambuco, northeastern Brazil (09°19'38"S, 40°32'38"W, 400 m a.s.l.). The lizard was sighted on the sidewalk carrying the bird in its mouth and actively chewing the head of the bird (Figure 2). Identification of bird followed morphological diagnosis by Schuchmann (1999).

The observation of predatory events in the wild is fortuitous, but can provide important information about life history and trophic relationships of a species. Opportunistic food habits in the wild have already been observed in other tropidurid lizards (Colli *et al.*, 1992; Teixeira and Giovanelli, 1999; Faria and Araujo, 2004; Van Sluys *et al.*, 2004). Thus, we believe that other *Tropidurus* species may have a similar, elusive predatory behaviour. However, as we did not observe the whole predation processes for either case, it is possible that the lizards were scavenging on dead birds instead of active hunting. Future studies should confirm the active predation behaviours of *Tropidurus* on birds in the wild.



Figure 2. A male of *Tropidurus hispidus* preying upon an adult of *Eupetomena macroura* in Petrolina, Pernambuco, NE Brazil.

Here we show that *T. hispidus* can be an opportunistic hunter, as previously described in a case of cannibalism (Sales *et al.*, 2011), and the feeding behaviour such as active chewing and tearing preys allow this lizard to ingest large preys.

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