Death-feigning in *Tropidurus itambere* (Reptilia: Tropiduridae)

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Death-feigning or thanatosis is a behavior characterized by a state of immobility, simulating death to inhibit the attack of a predator. This behavior is widespread among diverse animals (see Purkayastha and Das, 2010) but has been recorded mainly in amphibians and reptiles (Kohlsdorf and Rodrigues, 2004; Bertolucci *et al.,* 2006; Stevenson, 2010; Santos *et al.,* 2010; Gerald and Graziano, 2011; Marques *et al.,* 2013).

Here I report death-feigning behavior in juveniles of the tropidurid lizard *Tropidurus itambere* (Rodrigues, 1987) found in the wild at Santa Elisa Farm on a rock outcrop (22°36'S, 46°14'W, 15001535 m elevation), municipality of Munhoz (Serra da Mantiqueira, Minas Gerais state, Brazil). Voucher specimens were deposited at Museu de Zoologia da Universidade de São Paulo (MZUSP 9528486).

On the morning of 10 July 2008, at 17°C, three juveniles of *Tropidurus itambere* (41 mm SVL, 38 mm SVL, and 31 mm SVL) were captured by hand and immediately exhibited death-feigning, remaining motionless during manipulation (Figure 1) and when placed on the substrate (rocks) (Figure 2).

After the observer moved 1 m from the lizards, the death-feigning behavior persisted. When the distance increased (> 1 m) the lizards resumed their usual behavior and quickly hid under the rocks. The mean duration of these death-feigning behaviors had was 1 min 58 sec.

Unlike the juveniles, adult individuals (SVL > 56,1 mm for females; SVL > 57,3 mm for males, based on Van Sluys, 1993) did not exhibit death-feigning when handled,. Instead, they tried to escape attempted to flee when placed on the rocks.



Figure 1: Juvenile of *Tropidurus itambere* showing death-feigning after capture by hand.

Death-feigning has been reported for *Tropidurus torquatus* (juveniles and adults; Bertolucci *et al.,* 2006), *T. hispidus* (adult; Bertolucci *et al.,* 2006), *T. nanuzae* (juveniles and adult; Galdino and Pereira, 2002), and *T. itambere* (adults; Carvalho *et al.,* 2011). However, in this study death-feigning was recorded only in juveniles. Some authors suggest that the frequency of death-feigning increases at lower temperatures (Miyatake *et al.,* 2008), which might hinder thermoregulation and, thereby, hamper their activities, including the escape. Due to their smaller body size, young lizards can warm up (Felappi, 2009) and lose heat faster than adults, which might affect their ability to escape. This might explain the frequent observation of this behavior in juveniles in the study area, classified as tropical altitude climate. However, other factors might be involved



Figure 2: Juvenile of *Tropidurus itambere* showing death-feigning after being released onto a rock.

in this behavior, because the relationship between physiology and behavior is complex and poorly understood under natural conditions (Navas and Bevier, 2001).

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Lachesis muta, CE. foto: Daniel Passos.