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Scientific note

Tail bifurcation in *Tropidurus hispidus* (Squamata, Tropiduridae), in a semiarid area of Northeastern Brazil

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Tropidurus hispidus is a member of the Tropiduridae family and presents a wide distribution in Northeastern Brazil (Abreu *et al.* 2002.). It is a diurnal, heliophilous, generalist, and abundant species (Vitt *et al.* 1996) and is mainly observed in rocky outcrops, trunks, and man-made structures (Rodrigues 1987, Carvalho 2013). Herein, we report two cases of tail bifurcation in *Tropidurus hispidus*.

On the 3rd September 2017 at 0839 h in an area of Caatinga, in a rural property named Sítio Fechado, (7° 20' 45'' S/37° 17' 20'' W; 737 m.a.s.l) in the municipality of Brejinho, Pernambuco State, Northeastern Brazil, we sighted an adult *T. hispidus* female presenting a bifurcated tail, on the wall of a residence (Figure 1). The second sighting was recorded on the 24th September 2019 at 1150h, during a behavioral study of this species (primary author), we observed one second female presenting a small tail bifurcation, during a mating encounter (Figure 2). Lizards have a remarkable ability to repair various tissues, such as muscle, osteological and neuronal, in addition to their notable ability to regenerate their damaged tails (Alibardi 2010). Tail malformations can result from failures in regeneration after autotomy or may be congenital (Conzendey *et al.* 2013). It is considered an anti-predatory strategy, whose main objective is to increase the survival rate when the escape behavior is inefficient and may also be related to intraspecific aggression during mating and territoriality (Arnold 1994, Koleska *et al.* 2017, Bateman & Fleming 2019). In addition, it may be related to adverse environmental conditions caused by pollutants or pathogens that cause these malformations (Martinelli & Bogan 2013).

Some records of bifurcated tails have been highlighted in the available literature on the lizard species *Tropidurus torquatus* (Martins *et al.* 2013, Martinelli & Bogan 2013) *Tropidurus semitaeniatus* (Passos *et al.* 2014), *Vanzosaura rubricauda* (Pheasey *et al.* 2014), *Aspidoscelis tigris septentrionalis* (Heyborne *et al.* 2019), *Hemidactylus agrius*

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(Andrade *et al.* 2015) *Ameiva ameiva* (Gogliath *et al.* 2012), *Salvator merianae* (Pelegrin & Leão 2016), *Ameivula ocellifera* (Sales & Freire 2019), and *Iguana iguana* (Lozano & Siro 2020), lepidosaurs (Barr *et al.* 2020). Here we observed another case for a *Tropidurus* species, likely due to the widespread distribution and high abundance of this species in Northeastern Brazil, as well as its frequent occurrence in anthropized environments. Although this phenomenon is common in nature, it likely does not affect the survival and reproductive success of individuals, as has been reported in the literature (Martins *et al.* 2013, Passos *et al.* 2014, Barr *et al.* 2020) and our observation, as in one of our reports, the individual was in the process of mating.



Figure 1. Tail bifurcation in *Tropidurus hispidus* (female individual) Sítio Fechado, in the municipality of Brejinho, Pernambuco. Photo: Sousa, J.D (2017).



Figure 2. Tail bifurcation in *Tropidurus hispidus* (female individual), during copulation behavior, Sítio Fechado, in the municipality of Brejinho, Pernambuco. Photo: Sousa, J.D (2019).

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