

Gymnophthalmid and tropidurid lizards as prey of the crab-eating fox, *Cerdocyon thous* (Linnaeus, 1766) (Carnivora: Canidae)

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Gymnophthalmid lizards occur from southern Mexico to Argentina, in the Caribbean, and on some continental shelf islands of Central and South America east of the Andes, and are generally small or medium-sized (Pellegrino et al., 2001; Vitt and Caldwell 2009). Currently, 85 species distributed within 33 genera are recognized in Brazil (Bérnils and Costa, 2011), some of which are restricted to the northeastern region (Rodrigues et al., 2007; Rodrigues and Santos 2008; Rodrigues et al., 2009).

The Tropicidae is a reptilian family comprising a large number of known species among the Neotropical lizards (Torres-Carvajal, 2004). There are 36 species of tropidurids in Brazil, distributed into seven genera (Bérnils and Costa, 2011) living in open and forest habitats throughout the country (Howland, Vitt and Lopez, 1990; Vitt, Zani and Ávila-Pires, 1997; Ribeiro, Sousa and Gomides, 2009; Ribeiro and Freire, 2011).

The crab-eating fox, *Cerdocyon thous* (Linnaeus, 1766) (Fig. 1), is a canid widely distributed in South America from northern Colombia to southern Brazil, excluding the Amazon region (Berta, 1982). The diet of individuals that inhabit dense, closed forests in the south and mid-west regions of Brazil is omnivorous, since food items such as plants, insects, fish, reptiles, birds, mammals, in addition to reptile and bird eggs, have been recorded (Rocha, Reis and Sekiama, 2004; Pedó et al., 2006). However, there are no records for the Caatinga regarding the diet composition

of *C. thous*. In the present study we report on two hitherto undescribed cases of lizard predation by the crab-eating fox in the semiarid region of Brazil.

During a monitoring study of mastofauna conducted by the Center for Fauna Conservation and Management of the Caatinga (CEMAFAUNA-CAATINGA/UNIVASF), eight fecal samples of *Cerdocyon thous* were collected between September 2010 and January



Figure 1. An adult Crab-eating fox, *Cerdocyon thous* in the Caatinga, northeastern Brazil. Photo: F.M. Walker.



Figure 2. Adult specimen of *Vanzosaura rubricauda*. Photo: CEMFAUNA-CAATINGA.

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Figure 3. Fragments of scale tissue from the dorsal region of the gymnophthalmid lizard *Vanzosaura rubricauda* found in feces from *Cerdocyon thous*. Photos: R.M. Gomes.

2012. Two of the fecal samples analyzed had records of Squamate reptiles. “Sample I”, collected on September 21, 2010 in Cabrobó, Pernambuco state, contained parts of scale tissue from the dorsal region of the gymnophthalmid lizard *Vanzosaura rubricauda* (Fig. 2), whose largest fragment measured approximately 15 mm and weighed 0.03 g (Fig. 3). “Sample VIII”, collected on January 26, 2012 in Mauriti, Ceará state, included eight keeled scales exhibiting morphology patterns and coloration typical for scales at the base of the tail of *Tropidurus* lizards (Fig. 4). *Tropidurus hispidus* and *T. semitaeniatus* (Fig. 5) occur in sympatry in the collection area of *C. thous* feces. This is corroborated by the collection of both lizards, whose voucher specimens are deposited in the herpetological collection of the Caatinga Fauna Museum of CEMAFUNA-CAATINGA. Because of the absence of additional body parts from the predated lizard, which would provide added evidence for its identification at species level, we limited ourselves to determining the genus *Tropidurus*.

Among the studies conducted in southern Brazil that registered reptiles in the diet of *C. thous*, based on fecal samples, we highlight the work of Rocha, Reis and Sekiama (2004), who recorded the occurrence of unidentified *Ophidia* and *Bothropoides jararaca*

(Viperidae); Rocha *et al.* (2008), presenting a list of partially unidentified Squamata; snakes (unidentified Colubridae, *Liophis poecilogyus* (Colubridae), *Bothrops sp.* (Viperidae)), lizards (*Anisolepis grilli* and *Enyalius perditus* (Leiosauridae) and *Cercosaura schreibersii* (Gymnophthamidae)); and finally Pedó *et al.* (2006), who documented that 87.62% of the *C. thous* diet consisted of vertebrates, including Testudines and turtle eggs. *Vanzosaura rubricauda* was previously



Figure 4. Keeled scales found in feces from *Cerdocyon thous*, typical of those situated on the base of the tail of *Tropidurus* lizards. Photo: R.M. Gomes.



Figure 5. *Tropidurus hispidus* (left) and *Tropidurus semitaeniatus* (right), illustrating the respective scales at the base of the tail (below). Photos: L.B. Ribeiro.

reported as prey for the teiid lizard *Ameiva ameiva* in a Caatinga area of Rio Grande do Norte state (Sales et al., 2010). According to current literature, predation of *V. rubricauda* and *Tropidurus* by *C. thous* is unprecedented, revealing the importance of herpetofauna, particularly lizards, within the diet of this canid in the semi-arid of the eastern portion of northeastern Brazil. Moreover, it demonstrates the significance of interspecific studies in Caatinga in order to better understand the different relationships exhibited by diverse taxonomic groups, as well as ecological adaptations they may have developed.

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