

Oxyrhopus trigeminus (Serpentes, Dipsadidae): predation by *Bothrops atrox* (Serpentes, Viperidae)

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Natural history generally encompasses investigations of habitat use, reproduction, defense mechanisms, and the diet of individuals (Greene 1993). Data on natural history provide support for numerous studies and information in biological conservation, ecology, ethology, and evolution (Greene & Losos 1988; Greene 1993; Bernarde 2014). Recently there has been an increase in the study of specimens of scientific collections, especially on diet and reproduction (Barros et al. 2014; Leão et al. 2014; Santos-Costa et al. 2015; Rodrigues et al. 2016).

The Neotropical genus *Bothrops* Wagler, 1824 is composed of about 45 pitviper species, distributed from Mexico to Argentina (Uetz et al. 2021), found in tropical forests, xeric shrublands, savannas, and even populated

areas (Martins et al. 2002; Melgarejo 2009). Most species of *Bothrops* are diet generalists with ontogenetic diet shifts (Martins et al. 2002). The ontogenetic change usually consists of a switch from the consumption of ectothermic prey such as frogs, snakes, and lizards by juveniles, to endothermic prey (mammals and birds) by adults (Martins et al. 2002).

Bothrops atrox (Linnaeus, 1758) mainly occurs in Amazonia, but also in relic forests of the Caatinga (Nogueira et al. 2019). This species is usually abundant and generalist in habitat use (Martins & Oliveira 1998; Fraga et al. 2013). The more frequent presence of *Bothrops* species in certain environments may be related to the availability of their preferred prey (Martins et al. 2002; Oliveira 2003). During the organizing of the ‘Coleção Herpetológi-

ca da Universidade Federal do Ceará' (CHUFC), we noted the presence of a snake in the digestive tract of a juvenile *B. atrox* collected on June 4, 1999 at the Buriti Farm (03°50'39" S, 40°55'29" W), Ubajara municipality, in the enclave of residual humid forest in Chapada da Ibiapaba, Ceará State, Brazil (CHUFC 2388).

The juvenile *Bothrops atrox* (snout-vent length [SVL] 282 mm; tail length [TL] 45 mm, 29.2 g without prey) preyed on a specimen of the dipsadid snake species *Oxyrhopus trigeminus* Duméril, Bibron & Duméril, 1854 (SVL, 231 mm; TL, 47 mm, 21,2 g; Fig. 1). The prey's total length is 98% of the predator's SVL. The prey's body was curled inside the *B. atrox* stomach. This behavior of capturing relatively large prey is more commonly recorded among juvenile snakes, probably because of the scarcity of smaller prey and because of the relatively larger head-body ratio of juveniles (Sazima & Martins, 1990; Gavira & Loebmann 2011; Martins et al. 2002).

Ophiophagia is well reported for *Bothrops* and *B. atrox* (Martins et al. 2002; Gavira & Loebmann 2011; Pelegrini et al. 2019; Bisneto et al. 2019; Frota 2003; Egler 1996). Juveniles *B. atrox* have been recorded feeding on *Epicetia tenella* (Klauber, 1939), *Leptodeira annulata* (Linnaeus, 1758), *Tantilla melanocephala* (Linnaeus, 1758), and

Imantodes cenchoa (Linnaeus, 1758) (Monteiro et al. 2020), and a juvenile identified as "*Bothrops* sp. (gr. *atrox*)" preyed on an *Oxyrhopus melanogenys* (Gavira & Loebmann 2011), but this is the first report of *Oxyrhopus trigeminus* as a prey of *B. atrox*.

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Figure 1. Bothrops atrox (CHUFC 2388) with its prey *Oxyrhopus trigeminus* in its digestive tract. (A) Ventral view, (B) dorsal view, (C) incision showing the position of *O. trigeminus* in the digestive tract of *B. atrox*, and (D) comparison of prey-predator size.