

# Records of predation on *Itapotihyla langsdorffii* (Anura: Hylidae) by *Chironius bicarinatus* (Serpentes: Colubridae) with notes on foraging substrate

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Neotropical colubrid genus *Chironius* are among the most abundant snakes of the Brazilian Atlantic Forest (Dixon et al., 1993; Marques and Sazima, 2004). Species belonging to this genus are diurnal, terrestrial to arboreal and feed mainly on frogs (Dixon et al., 1993), although they can occasionally also prey on lizards and birds (Sazima and Haddad, 1992; Carvalho-Silva and Fernandes, 1994; Marques and Sazima, 2004). *Chironius bicarinatus* (Wied, 1820) is a medium-sized to large snake (attaining around 1800 mm) with a slender and predominantly green body that forages actively in shrubs and trees (Marques and Sazima, 2004). The diet of this species is mainly composed of terrestrial and arboreal frogs, which suggests this snake forages in both substrates (Marques and Sazima, 2004; Rodrigues, 2007; Oliveira, 2008).

During a herpetofaunal survey conducted on 23rd October 2010 at the Parque Estadual da Várzea de Embu-Guaçu (PEVEG), municipality of Embu-Guaçu, state of São Paulo, southeastern Brazil (23°49'20"S, 46°48'40"W; 743 ASL), we recorded at 16:40 h an adult male *C. bicarinatus* (IBSP 78511, SVL = 806 mm, tail = 516 mm, mass = 160 g) capturing an adult female of the hylid Ocellated Treefrog, *Itapotihyla langsdorffii* (Duméril and Bibron, 1841) (SVL = 75 mm, mass = 18.7 g) on the leaf litter (Fig. 1), beside a trail on the forest floor 20 m away from one margin of the Embu-Guaçu River. The weather was drizzling slightly, the sky was cloudy and the air temperature was around 22°C. When we showed the record to the park manager Gilberto Passos, he brought us a photograph taken by him on 19th March 2010 at 15:55 h (Fig. 2), containing the same species registered by us. At this record, the snake was

capturing the frog on the bromeliads approximately one meter above the ground.

There are previous records from species of the genus *Chironius* inspecting bromeliads while foraging for frogs (Carvalho-Silva and Fernandes, 1994; Marques and Sazima, 2004). Contrary, previous studies recorded *Leptodactylus latrans* (Leptodactylidae) and *Haddadus binotatus* (Craugastoridae), both primarily terrestrial, as prey of *C. bicarinatus* (Marques and Sazima, 2004; Hartmann et al., 2009). Also, Oliveira (2008) observed one specimen of *C. bicarinatus* capturing the hylid *Hypsiboas pulchellus* on the riparian forest floor in the municipality of Caçapava do Sul, in the central region of the state of Rio Grande do Sul, South Brazil. In relation to *I. langsdorffii*, this species was recorded previously in the gut of *Chironius exoletus* and *Chironius foveatus* (Marques and Sazima, 2004). Both snake species may be more arboreal than *C. bicarinatus* (cf. Marques and Sazima, 2004; Rodrigues, 2007). Likewise, *I. langsdorffii* is reported as being an arboreal frog that occurs on shrubs and trees inside rainforest (Aquino et al., 2004), which may suggest that most predation events upon this species occur on arboreal substrates, contrary



**Figure 1.** A male Two-Head Sipo (*Chironius bicarinatus*) at the beginning of swallowing a female Ocellated Treefrog (*Itapotihyla langsdorffii*) on terrestrial substrate. Photograph: Isaías Santos.

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**Figure 2.** A Two-Head Sipo (*Chironius bicarinatus*) catching an Ocellated Treefrog (*Itapotihyla langsdorffii*) on arboreal substrate. Photograph: Gilberto Passos.

to our record (Fig. 1), but corroborating the photograph brought to us (Fig. 2).

In addition to the existing data on *C. bicarinatus* prey and foraging substrates, our records strengthens that this snake may forages on both terrestrial and arboreal environments. To complement, although these are the first two records of predation by *C. bicarinatus* upon *I. langsdorffii*, this interaction not seems to be unusual, especially as recorded by us at the region of the PEVEG. It remains to be investigated if there is any other biotic or environmental factor that favors the predation by *C. bicarinatus* upon *I. langsdorffii* in this region, and if predation occurs more often on arboreal or terrestrial substrates.

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