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**Predation attempts on *Trachycephalus* cf. *mesophaeus* (Hylidae)
by *Leptophis ahaetulla* (Colubridae) and
Ceratophrys aurita (Ceratophryidae)**

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The genus *Trachycephalus* TSCHUDI, 1838 is distributed from the lowlands of México, through Central and South America east of the Andes, to southern Argentina and eastern Brazil (FROST 2008). Species of *Trachycephalus* are known to emit a white volatile, noxious alkaline skin secretion when handled, which has been reported as being extremely irritating to mucous membranes (SAVAGE 2002). The function of this venomous secretion has been reported as being a defense against predators (LEARY & RAZAFINDRATSITA 1998). Probably due to this strategy, only a few predators have been reported so far for frogs of this genus, e. g., the colubrid species, *Leptophis ahaetulla* (PRADO 2003) and *Liophis poecilogyrus* (SILVA JR et al. 2003, ALBUQUERQUE & DI-BERNARDO 2005) for *Trachycephalus venulosus*.

To date, the only predator known for *Trachycephalus mesophaeus* is *Liophis miliaris* (OLIVEIRA & SILVA 2007). *Trachycephalus mesophaeus* inhabits the Atlantic forest from Rio Grande do Sul state northeast to extreme southern Pernambuco state, Brazil (IUCN 2006). However, frog populations assigned to this species from southern Bahia to Pernambuco might belong to a different, yet undescribed species. Therefore we refer to frogs of this population as *Trachycephalus* cf. *mesophaeus*.

During fieldwork in a rapid amphibian and reptile assessment at the village Ponta da Tulha (14° 35' 28" S, 39° 03' 56" W, 7 m above sea level), municipality of Ilhéus, Bahia, Brazil, we found on 15 August 2008 at 17:26 h at the entrance of a shade cacao plantation an adult female *Leptophis ahaetulla* (SVL 81.0 cm, tail length 45.7 cm, MZUESC [= Zoological Collection of the Universidade Estadual de Santa Cruz] 6960) trying to swallow an adult *Trachycephalus* cf. *mesophaeus* (SVL 7.2 cm, MZUESC 6821) (Fig. 1). The posterior part of the snake's body was hidden in a pile of lumber, and the tree frog tried to hold on the lumber with his toe pads while emitting loud agonistic calls. Only slightly increased skin secretion production in the frog

was observed during this interaction. After 15 minutes the snake tried to drag the hylid into the lumber pile and the colubrid was captured by one of us (MS) immediately releasing the frog.

To our knowledge this is the first report for a predation attempt of the Parrot Snake *L. ahaetulla* on *T. mesophaeus*. Other cases or attempts of predation on *T. mesophaeus* are known. LUTZ (1973: 259–260) reported a predation attempt on *T. mesophaeus* by the colubrid *Liophis poecilogyrus* (cited as *Phylodryas schottii* (?) sic). During this interaction, which was observed in November 1939 during daytime, the frog emitted loud, insistent calls and was released when poking the snake with a long stick. The escaping hylid was caught and had two sets of fang marks, but it survived. Apparently, *Trachycephalus mesophaeus* is less venomous than presently thought, or the venom has different effects on different species. LUTZ (1973: 257) herself stated that the sticky secretion of *T. mesophaeus* was not irritating to the human skin in a series of collected specimens, as reported for *T. venulosus* (LUTZ 1973: 247). However, the secretion of a half-grown female raised from an egg tasted by LUTZ was found "slightly caustic and bitter".

We are also aware of a large specimen of *Ceratophrys aurita*, which one of us (AK) found recently during a survey in the herpetological collection of W. EHRHARDT in the Zoological Museum Hamburg (see GUTSCHE et al. 2008). This well-prepared, adult female specimen (ZMH A01401, found together with ZMH A01400, a male, under the former collection number ZMH 1573) has an adult specimen of *Trachycephalus mesophaeus* in its mouth (Fig. 2). According to the jar label, both specimens were collected 1907 at Joinville, Jaragua, Itapucu (sic) by the German collector WILHELM EHRHARDT. This "locality" refers to the basin of the Itapocú River between Joinville, Corupá and Jaraguá do Sul, Northeastern Santa Catarina. Although *Ceratophrys aurita* is known predating on frogs, it is not clear, if this is a valid prey record. It is also possible, that



Figure 1. *Leptophis ahaetulla* trying to swallow a *Trachycephalus* cf. *mesophaeus*. Photo by M. SOLÉ.



Figure 2. *Ceratophrys aurita* (ZMH A01401) with an adult specimen of *Trachycephalus mesophaeus* in its mouth. Photo by A. KWET.

this scenario was faked for effect by EHRHARDT, either in a terrarium while both specimens were still alive or during the preparation process.

Leptophis ahaetulla is widely distributed from southern Mexico to northern Uruguay (OLIVER 1948), and is primarily diurnal and semi-arboreal, but can also be found actively foraging on the ground and on leaf litter (ALBUQUERQUE et al. 2007). The stomach contents of 289 specimens of *L. ahaetulla* from Pará and eastern Maranhão states in the eastern Amazon rainforest, Brazil, were analysed, out of which 53 contained identifiable remains: 90% of the prey items belonged to ten species in five genera of the family Hylidae (*Dendropsophus*, *Hypsiboas*, *Osteocephalus*, *Scinax* and *Sphaenorhynchus*) (ALBUQUERQUE, op. cit.). VITT & VANGILDER (1983) reported the ingestion of three individuals of *Scinax ruber* and one *Phyllomedusa hypochondrialis* by four specimens of *L. ahaetulla* collected in the state of Pernambuco, northeastern Brazil. Lizard tails and remains of geckos (*Gonatodes humeralis* and *Hemidactylus mabouia*, the latter being an invasive species in Brazil; see RÖDDER et al. 2008) were also found during the study by VITT & VANGILDER (1983), but no remains of *Trachycephalus* (cf.) *mesophaeus* were reported so far.

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