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- PHILODRYAS PATAGONIENSIS (Parelheira): VENOMOUS SNAKE A (CROTALID) AS PREY.** *Philodryas patagoniensis* is found almost everywhere in South America. In Brazil, it can be found in the states of Pernambuco and Bahia (Northeast Region), Minas Gerais, Rio de Janeiro and São Paulo (Southeast Region) and in Parana and Rio Grande do Sul (South Region) (Peters & Orejas-Miranda, 1986) where it occurs primarily in open areas, but also woodland (Thomas, 1976). *Philodryas patagoniensis* is a medium-sized colubrid snake (Figure 1.) with predominantly terrestrial, diurnal habits (Marques *et al.*, 2001) that feeds on frogs, lizards, birds, mice, and other snakes (Duarte & Eterovic, 2003; Perroni, 2004; Hartmann & Marques, 2005). However, available reports limit it to the ingestion of colubrids, such as *Philodryas olfersii*, *Thamnodynastes strigatus*, *Clelia occipitolutea*, *Liophis poecilogyrus*, *Liophis jaegeri*, *Helicops carinicaudus*, *Lystrophis dorbignyi* (Lema *et al.*, 1983) and *Liophis poecilogyrus* and *Pseudablabes agassizii* (Hartmann & Marques, 2005). Perroni (2004) found dorsal and ventral scales of a non-identified colubrid on his analysis. According to Shine (1991) ophiophagus snakes can possibly show cannibalism. In the genus *Philodryas* this has been confirmed by Lema (1983) and by Hartmann & Marques (2005), with one report of cannibalism each. In captivity, a newborn *P. patagoniensis* was observed ingesting another conspecific newborn by attacking and ingesting it head-first. *Philodryas olfersii*, despite being a non-venomous snake, has enlarged maxillary fangs in addition to a Duvernoy's gland (which produces toxic substances), and is thus potentially bale to envenomate its prey (Silvia Cardoso, personal observation).
- We analyzed gut contents from the digestive tract of one female *Philodryas patagoniensis* sent to us on April 24th 2003 from Santana de Parnaíba - SP (23° 26' S. 46° 56' W), measuring 525 mm in snout-vent length (SVL), 190 mm in tail length (TL), 14.2 mm in head length (HL) and weighing 35 g. After examining the faeces of this individual, we verified the presence of a grooved fang which belonged to a venomous snake, probably a young one. By comparing it with the fangs of other venomous snakes born in captivity, in order to

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Figure 1. *Philodryas patagoniensis* (adult female). Photograph © S. R. Travaglia-Cardoso.

estimate the age group of the swallowed prey item, we found that it was from a species of pit viper (juvenile), probably of the genus *Bothrops*. The offspring of *Bothrops* spp. in Brazil are usually born between November and March (Almeida-Santos & Salomão, 2002), thus, predation on a newborn specimen by *Philodryas patagoniensis* in April could be possible. As far as we are aware there are no other such records available in the literature. Perhaps *P. patagoniensis* avoids this kind of prey because it is a venomous snake and can suffer some injury or even death. Alternatively, the snake may have been ingested when already dead. No cases of feeding on carrion have previously been reported for this species, but is rare to observe in nature unless you see the snake directly encountering a dead animal (Lillywhite, 1982; Shine, 1986). We seriously considered the possibility of secondary prey ingestion but conclude that for several reasons this seems unlikely. Firstly it is known that *P. patagoniensis* feeds primarily on mice and birds,

and venomous snakes are not part of the general diet of these animals. In addition, only a large-sized bird could presumably have attacked a venomous snake, much larger than could have been ingested by a *Philodryas*.

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AMPHIESMA STOLATUM (Striped keelback): PREDATION ON POLYPEDATES MEGACEPHALUS (Java Treefrog). Snakes have solved the problem of nourishing a heavy body, with a relatively small mouth, by infrequently consuming large prey items (Greene, 1997); made possible by the mobility of the jaw and mouth skeleton (Ernst & Zug, 1996). But preying on large prey comes at a cost. Snakes are not always capable of subduing such prey, and even when they do, risk losing it due to other predators, as well as being subjected to the risk of predation themselves. Another problem is that consuming a large prey item might result in injury or death to the snake due to the ingesting process or compromised mobility. It is thus crucial to note which prey items are consumed by which snake species, as well as the size of the prey in relation to the predator. Since the ability of snakes to swallow relatively large prey items is not equal throughout the snake kingdom (Mattison, 1995), it is important to note the prey/predator weight-ratio, and types of prey consumed by individuals of the same species to develop a better understanding of the energy budgets and foraging behaviour of the species in question.

Here we report predation by a Striped keelback (*Amphiesma stolatum*) on a Java treefrog (*Polypedates megacephalus*). At 11:52 h on 19th May 2006, a male *A. stolatum* (430 mm SVL, 7.72 mm HW, 18 mm HL, 144 mm tail length, 13.2 g) was observed moving along the fence on the inside of a 6m x 6m enclosure, constructed of 3 mm plastic mesh, erected in a Betelnut palm (*Areca catechu*) plantation in Santzepu, Sheishan District, Chiayi County, Taiwan (23°28'23"N, 120°29'15"E). The vegetation on the inside of the enclosure was very dense and consisted of *A. catechu*, *Bidens pilosa* var. *radiata*, *Ipomoea cairica*, *Mikania micrantha*, and *Panicum maximum*. The *A. stolatum* was captured and it was noted that the mid-body was greatly enlarged. After gentle palpation of the enlarged area of the mid-body, the snake regurgitated an anuran, along with a large number of eggs. The prey item was identified as a female *P. megacephalus* (ca. 55 mm SVL, 2.5 g). Since it was regurgitated head and fore limbs first, and the hind limbs folded forward, combined by the fact that the vent area and parts of