

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 6 m x 6 m 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

the hind limbs were already partly digested, it is believed it had been ingested vent first.

Colubrids prey commonly on creatures about 20% of their own mass (Greene, 1997), and in this case, although the prey item was already partly digested, the prey/predator weight-ratio was 18.93%. Based on the mass/SVL (0.119; $n = 9$) index of live *P. megacephalus* encountered in the study area, it was estimated that the prey item had an approximate mass of 6g, i.e. an estimated prey/predator weight-ratio was 46%. With an approximate prey/predator weight-ratio of ca. 1:2, the prey size is out of the ordinary for a colubrid. However, it may not be unusual for this species. Norval *et al.* (2005) recorded a prey/predator weight-ratio of 39.5% for a specimen of *A. stotatum*, and on the 22nd October 2006, another male that preyed on a *Rana limnocharis* was collected in the same study area. The prey/predator weight-ratio of this latter prey item was 26.6%. In addition, since *A. stotatum* is primarily a diurnal terrestrial species, whereas *P. megacephalus* is nocturnal and arboreal, it is interesting to note that this snake species would prey on this anuran species. This was also not an isolated case; on the 11th of August 2006, at ca. 09:45 h, a female *A. stotatum* (458 mm SVL, 148 mm tail length, 42.5g) was collected from inside another enclosure (23°28'39"N, 120°29'23"E), with a similar habitat to the one described above. It too had the remains of a *P. megacephalus* in its stomach, but since the digestive process was fairly advanced, no further descriptions can be made.

The following other prey types have been reported for *A. stotatum*: insects (Acrididae), tadpoles, toads, frogs, fish (Lee & Lue, 1996), earthworms, geckos (Lue *et al.*, 2002), lizards and scorpions (Das, 2002). To date, however, the only other recorded prey of this species of snake in our study area are: *Bufo melanostictus* ($n = 3$), *Microhyla ornata* ($n = 1$), *Microhyletta heymonsi* ($n = 2$), and *Rana limnocharis* ($n = 2$). Because it has been shown that snakes of the same species, but from different localities, can have different prey preferences (Arnold, 1993), we would like to encourage authors to describe prey items and collection localities in greater detail. This would not only greatly contribute to the understanding of the foraging behaviour and energy budgets of

snakes, but also the ecosystem and food-chains they are part of. To our knowledge this appears to be the first description from Taiwan of *A. stotatum* predation on *P. megacephalus*.

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