

Do pitvipers prey on mammals during daylight?

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Pitvipers of the genus *Bothrops* prey mainly on small vertebrates, particularly small mammals, lizards and frogs (Martins, Marques and Sazima, 2002). Among mammals the most important prey are nocturnal rodents. Marsupials are a minor item in the diet of the genus (e.g. Hartmann et al., 2005). Pitvipers can be active either at night or during daylight hours, the latter likely being related to thermoregulation, as snakes are typically found basking by day, whereas at night they are typically found hunting in a coiled posture (cf. Sazima, 1992; Martins and Oliveira, 1999; Oliveira and Martins, 2002). Most pitvipers hunt at night (Greene, 1997) when the air is cooler and the heat from rodents is more easily detectable (cf. Bullock and Diecke, 1956). This may explain why pitvipers are largely nocturnal or crepuscular in their hunting activity, although certain species (e.g. the insular *B. insularis*) hunt for prey during daylight hours (Amaral, 1922; Marques, Martins and Sazima, 2002). Here we report on an individual of *Bothrops jararacussu* found swallowing an unusual mammal prey by day in the wild.

A female *B. jararacussu* (SVL ~1.2 meters) was found at 8:15 a.m. on 5 April 2011 on the ground within forest habitat (-23.8550, -45.4025, 252 m a.s.l.) at the Parque Estadual de Ilhabela, São Sebastião Island, state of São Paulo swallowing a Brazilian Squirrel *Sciurus aestuans* (Rodentia, Sciuridae). The tail of the squirrel was protruding from the mouth of the snake (Fig. 1). Adult Brazilian Squirrels can reach around 220 grams in weight; although the average is around 190 grams (Emmons, 1997). A female *B. jararacussu* with a length of 1.2 meters weighs around 1 kg (records of live snakes brought to the Laboratório de Herpetologia of

the Instituto Butantan, São Paulo, Brazil, by lay people), giving an estimated predator/prey mass ratio of around 0.2.

Previous fieldwork by Marques and Sazima (2004) observed *B. jararacussu* in apparently hunt-coil postures during daylight hours, indicating that the species can hunt for prey by day. Our observation provides further evidence to support that suggestion. Squirrels (genus *Sciurus*) are strictly diurnal, agile (Emmons, 1997) and are a relatively large prey item for many snakes, making this species an unusual prey for pitvipers. The Brazilian Squirrel *S. aestuans* is solitary (occasionally feeding in small groups) and is very abundant in the Atlantic forest (Emmons, 1997; Pardini and Develey, 2004). *Bothrops jararacussu* is, at least partially, a diurnal hunter, and large body size in females allows them to eat Brazilian Squirrels.

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Figure 1. Female *Bothrops jararacaussu* swallowing a Brazilian Squirrel, *Sciurus aestuans*, at the Parque Estadual de Ilhabela, São Sebastião island, state of São Paulo, Brazil (photo: Flaviana M. Souza).

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