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DIPSAS INDICA (Snail-eating snake): REPRODUCTION. The genus *Dipsas* is a well diversified taxa composed of nocturnal, semi-arboreal and malacophagous species (Greene, 1997) widely distributed in Central and South America (Peters & Orejas-Miranda, 1970). In Brazil eight species occur (SBH, 2008) and published reproductive data are restricted to half of them (Porto & Fernandes, 1996; Martins & Oliveira, 1999; Hartmann *et al.*, 2002; Alves *et al.*, 2005).

Herein, we present unpublished data about oviposition, hatching, clutch size, relative clutch mass (RCM) and size of hatchlings of *Dipsas indica*. This species is distributed in South America and five subspecies are recognized (Peters & Orejas-Miranda, 1970; Hoge & Romano, 1975).

On 10th November 2006, a gravid female *D. indica* with a snout-vent length (SVL) of 600 mm, tail length (TL) of 170 mm, and mass of 60.8 g was collected in Mogi Mirim (22°25'S, 46°57'W, 632 m), São Paulo State. On 17th November 2006 it was housed in 40 x 80 x 50 cm terraria, with a water dish, moistened soil, leaves and branches.

Until oviposition, veronicellid slugs were offered as prey. During this period the snake fed on two slugs with 2.5-3.0 cm. On 27th December 2006 it laid 5 eggs, being 2 weakly adhered and 3 separated. The snake was found under the leaves semi-coiled around the eggs. No behavioral changes of the female were observed during collection of the eggs.



Figure 1. Difference in color pattern of hatchling *Dipsas indica*. Upper: Female. Lower: Male.

Eggs averaged 29.2 ± 1.9 mm in length (range = 27.3-31.7 mm), 12.7 ± 0.4 mm in width (range = 12.2-13.2 mm) and 3.0 ± 0.1 g in mass (range = 2.8-3.1 g). Clutch mass was 14.9 g and after oviposition the female weighed 36.0 g. Relative clutch mass (RCM; total clutch mass/body mass of mother after oviposition + clutch mass; cf. Seigel & Fitch, [1984]) was 0.29. The RCM calculated according to Shine (1980) (total clutch mass/body mass of mother after oviposition) was 0.41. Four out of five eggs were incubated in a plastic container with moistened vermiculite, at room temperature averaging 24 °C (range = 22-26 °C). On 13th April 2007, three eggs hatched after an

incubation period of 107 days. Hatchlings averaged 180.3 ± 8.0 mm SVL (range = 172-188 mm), 55.7 ± 4.0 mm TL (range = 51-58 mm) and 2.6 ± 0.2 g (range = 2.4-2.8 g) and were similar to other hatchling *Dipsas* sp. (Hartmann *et al.*, 2002; Alves *et al.*, 2005). Male hatchlings (n = 2) were clearer than female (n = 1) (Fig. 1). The egg not hatched was dissected and contained one dead full term embryo. Hatchlings were placed in terraria (30 x 15 x 20 cm), with soil, leaves, branches, a water dish and fed with snails. Initial growth rate during the first 14 weeks was 2.64 mm by week.

D. indica is a semi-arboreal species (Sazima, 1989; Greene, 1997) but despite this, until oviposition, the female was never seen on the branches. Instead, it was frequently found coiled under the leaves. Conversely, hatchlings were frequently found resting on the branches within the terraria even during the day. Pregnancy may have dissuaded the adult female snake from arboreal habits. Fecundity (clutch size, RCM) was low and this is also a common trait within other *Dipsas* sp. (Zug *et al.*, 1979; Martins & Oliveira, 1999; Hartmann *et al.*, 2002; Alves *et al.*, 2005; Cadle, 2005). Low fecundity may have two different (but non-exclusive) reasons: the small body size of the adult female (larger females tend to produce larger clutches; Shine [1994]), or a reflection of the genus' arboreal habits (Pizzatto *et al.*, 2007). Seemingly, species of *Dipsas* show aseasonal reproduction in lower latitudes (e.g. Zug *et al.*, 1979; Porto & Fernandes, 1996; Alves *et al.*, 2005) and seasonal reproduction in higher latitudes (e.g. Marques, 1998; Hartmann *et al.*, 2002; Marques & Sazima, 2004). Our observation strengthens the suggestion of seasonal (spring-summer) reproduction in *Dipsas* from higher latitudes, however, more data on southern Brazil populations of *D. indica* would be necessary to provide concrete evidence of this definition of reproductive cycle for the species.

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MASTIGODRYAS BODDAERTI (Boddaert's Tropical Racer): PREDATION. Frogs do not have nails, teeth and hair per se, and since they are able to rapidly convert ingested food into biomass, they often represent a high quality meal (Wells, 2007). Thus, many different animals are known to attack frogs, such as arthropods like arachnids, centipedes (McCormick & Polis, 1982; Forti *et al.*, 2007). Vertebrates such as snakes one of the more significant predators on adult amphibians (Toledo *et al.*, 2007).

This paper presents a predation behavior record

of the snake, *Mastigodryas boddaerti* on the frog, *Leptodactylus fuscus* in natural conditions, in Cuiabá municipality, state of Mato Grosso, Brazil. This region has annual precipitation varying from 1,250 to 1,500 mm. Two different seasons (rainy/dry) are recognized, with mean air temperature about 24 - 26 °C Carvalho & Nogueira (1998).

Mastigodryas boddaerti occurs in Colombia, Venezuela, Brazil, Bolivia, Ecuador, Trinidad, French Guiana and Peru (Cunha & Nascimento 1993; Uetz, 2008). It is a terrestrial and diurnal species whose diet is composed mainly of lizards, frogs of the families Leptodactylidae and Hylidae (Vanzolini, 1986; Carvalho & Nogueira, 1998; Bernarde, 2004; Leite *et al.* 2007), reptile eggs, birds, and small mammals (Bernarde, 2004). On this occasion the victim was *Leptodactylus fuscus* (Leptodactylidae), which occurs throughout Brazil, Argentina, Bolivia, Paraguay, and the eastern Andes (Frost, 2007). Males of *L. fuscus* are approximately 36 mm and females 39 mm of Snout-vent length (SVL). Reproduction is restricted to the rainy season, when males build nests on the mud and actively vocalize to attract females (Martins, 1988).

The predation event was observed on the 29st February 2008, at 14:05 hrs (approximately 36.0 °C air temperature) by the first author, who documented the entire event photographically. The *L. fuscus* individual invaded the backyard area of a rural residence (approximately 15° 20' S 55° 53', 250 m elevation) in Cuiabá, state of Mato Grosso, Brazil. The snake appeared, possibly attracted by the prey movement, a feature common to snakes with diurnal habits (Ota, 1986), and slowly, by lateral undulations approached the victim. The snake stopped to 20 cm from the frog and struck the left pelvic region of the victim rapidly, without releasing the frog. In response, the frog started to emit a 'release call', but the snake held it by the left posterior limb with the mouth. The ingestion process occurred from cloacae to head direction, after about 1 minute from the initial strike (Fig. 1). Two minutes from the ingestion process commencing, the snake consumed the entire captured prey.

The snake was then collected and deposited as a voucher specimen at Coleção Zoológica da Universidade Federal de Mato Grosso, UFMT