- Martins, M. & Oliveira, E. (1998). Natural history of snakes in forests of the Manaus region, central Amazonia, Brazil. *Herpetol. Nat. Hist.* **6** (2), 78-150.
- Nogueira, C.C. (2001). New Records of Squamate reptiles in central Braszilian Cerrado II: Brasília Region. *Herpetol. Rev.* **32** (4), 285-287.
- Rossman D.A. (1970): Helicops Wagler. In: Catalogue of the Neotropical Squamata. Part. I Snakes, pp. 122-125.
- Sawaya, R.J. Marques, O.A.V. & Martins, M. (2008). Composition and natural history of a Cerrado snake assemblage at Itirapina, São Paulo state, southeastern Brazil. *Biota Neotrop.* 8 (2), 127-149.
- Sazima, I. & Strüssmann, C. (1990). Necrofagia em serpentes brasileiras: exemplos e previsões. *Rev. Bras. Biol.* **50** (2), 463-468.

HENRIQUE CALDEIRA COSTA¹, TIAGO LEITE PEZZUTI², FELIPE SÁ FORTES LEITE² and CAMILO CIENTIFUEGOS³

¹ Museu de Zoologia João Moojen, Universidade Federal de Viçosa, Vila Giannetti 32, CEP 36571-000, Viçosa, MG, Brazil.

² Laboratório de Herpetologia, Departamento de Zoologia, Instituto de Ciências Biológicas, Universidade Federal de Minas Gerais, CEP 31270-901, Belo Horizonte, MG, Brazil.

³ SETE Soluções e Tecnologia Ambiental, Av. Getúlio Vargas 1420, CEP 30112-021, Belo Horizonte, MG, Brazil.

TUPINAMBIS MERIANAE: OPHIOPHAGY. The *Tupinambis* genus is distributed almost entirely throughout south America. They are found east of the Andes ranging from the north of the continent to northern Patagonia; specifically in the Amazonia Basin, along costal waters in the Guianas, Venezuela, Colombia, in addition to northern Brazil and areas in southern Paraguay, Uruguay, and northern Argentina (Presch 1973). *Tupinambis merianae* Dumeril & Bibron, 1839 is a terrestrial lizard found throughout Brazil, mainly in open areas in the central Cerrado and southeastern forest regions, but they are also found in Argentina and Uruguay (Carvalho & Araújo, 2004; Haddad et al., 2008; Colli, 2009). They are omnivorous and their diet consists of: invertebrates (millipedes, arachnids, insects and mollusks), vertebrates (birds, fishes, amphibians, lizards and small mammals), bird and turtle eggs, fruits, carrion and mushrooms (Presch, 1973; Sazima & Haddad, 1992; Tortato, 2007; Carvalho & Araújo, 2004; Colli, 2009; Toledo et al., 2004 and references within). They can act as potential seed dispersers (Castro & Galetti, 2004) and may have a profound impact on ground nesting birds on islands and possibly in forests fragments (Bovendorp et al., 2008).

The Swamp Racer Snake *Mastigodryas bifossatus* Raddi 1820 is a large neotropical Colubrid that occurs in south America. They feed on frogs, small mammals, lizards, birds and snakes (Leite et al., 2007; Marques & Muriel, 2007). These snakes live mainly in open areas in the Brazilian Cerrado, Pantanal and the grasslands of southern Brazil. They also occur in low abundances in the Amazon and Atlantic forests (Hoogmoed, 1979; Strüssmann & Sazima, 1993; Lema, 2002; Argôlo, 2004; Marques et al., 2004). The adults average ca. 1,100 mm snout vent length (SVL) and there is a lack of sexual dimorphism (Marques & Muriel, 2007).

On 7 December, 2006 around 10:00 to 12:00 an adult T. meriane (ca. 400 mm SVL) ate a M. bifossatus (ca. 1000 mm SVL) in the grasslands of Pantanal's Nhecolandia Region (19º 14'59" O; 57° 01'45" S), at the Fazenda Nhumirim, Mato Grosso do Sul State (Fig. 1). This type of predation is not common in lizard species. Normally, lizards are eaten by snakes. Furthermore, detailed records of prey-predator inter-specific relationships are limited in the literature for many species (Lima & Colombo, 2008). This observation represents the first documented record of snake predation by a Tegu Lizard species. From now, snakes may be considered a prey category for the lizard T. merianae in the Brazilian Pantanal area. We are grateful to C. Strüssmann, V. L. Ferreira and A. B. Outeiral for identifying the snake species, to A. Peres Jr. for information about Tupinambis and A. Gainsbury for reviewing the text.

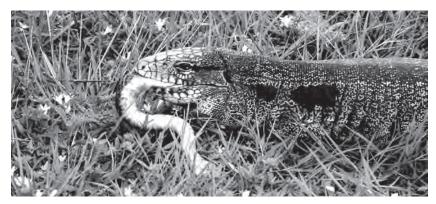


Figure 1. *Tupinambis meriane* preying *Mastigodryas bifossatus* in the Pantanal's Nhecolandia Region, Brazil. (Photograph by V.L. Camilotti).

REFERENCES

- Argôlo, A.J.S. (2004). As Serpentes dos Cacauais do Sudeste da Bahia. Ilhéus: Editora da UESC.
- Bovendorp, R.S., Alvarez, A.D. & Galetti, M. (2008). Density of the Tegu Lizard (*Tupinambis merianae*) and its role as nest predator at Anchieta Island, Brazil. *Neotrop. Biol. Conserv.* **3** (1), 9-12.
- Carvalho, A.L.G. & Araújo, A.F.B. (2004). Ecologia dos Lagartos da Ilha da Marambaia, RJ. *Rev. Univ. Rural, Sér. Ci. Vida. Seropédica* **24** (2), 159-165.
- Castro, E.R. & Galetti, M. (2004). Frugivoria e dispersão de sementes pelo lagarto teiú *Tupinambis merianae* (Reptilia: Teiidae). *Pap. Avul. Zool.* 44, 91-97.
- Colli, G.R. (2009). *Tupinambis merianae*. <www. unb.br/ib/zoo/grcolli/guia/tmerianae.htm>. (Accessed March 1, 2009).
- Haddad, V., Duarte, M.R. & Neto, D. (2008). Tegu bite: Report of human injury caused by a Teiidae Lizard. *Wild. Environ. Med.* **19**, 111-113.
- Hoogmoed, M.S. (1979). The herpetofauna of the Guianan region. In: *The South American Herpetofauna: Its Origin, Evolution and Dispersal*, pp. 241-279. Duellman, W.E. (Ed.). Monogr. Mus. Nat. Hist. Univ. Kansas 7. Lawrence: University of Kansas.
- Leite, P.T., Nunes & S.F., Cechin, S.Z.(2007). Dieta e uso de habitat da jararaca-do-brejo, *Mastigodryas bifossatus* Raddi (Serpentes, Colubridade) em domínio subtropical do Brasil. *Rev. Bras. Zool.* **24** (3). 1.

- Lema, T. (2002). *Os répteis do Rio Grande do Sul: atuais e fósseis - biogeografia e ofidismo*. Porto Alegre: Pontificia Universidade Católica do Rio Grande do Sul. 485 pp.
- Lima, A.F.B. & Colombo, P. (2008). Observação do comportamento predatório de *Liophis miliaris* orinus (Serpentes, Colubridae) em *Hylodes* meridionalis (Anura, Hylodidae), Serra Geral, Rio Grande do Sul, Brasil. *Rev. Bras. Zoocien.* **10** (1), 73-76.
- Marques, O.A.V., Eterrovic, A. & Sazima, I. (2004). Snakes of the Brazilian Atlantic forest: an illustrated field guide for the Serra do Mar range. Ribeirão Preto, Holos Ed., 205 pp.
- Marques, O.A.V. & Muriel, A.P. (2007). Reproductive biology and food habits of the Swamp Racer *Mastigodryas bifossatus* from southeastern south America. *Herpetol. J.* **17**, 104–109.
- Presch, W. (1973). A review of the tegu lizards genus *Tupinambis* (Sauria: Teiidae) from south America. *Copeia* **4**, 740-746.
- Sazima, I. & Haddad, C.F.B. (1992). Répteis da Serra do Japi. In: *História Natural da Serra do Japi.* pp 212-235. Morellato, L.P.C. (Ed.), Universidade Estadual/FAPESP, Campinas.
- Strüssmann, C. & Sazima, I. (1993). The snake assemblage of the Pantanal at Pocoró, western Brazil: fauna composition and ecology summary. *Stud. Neotrop. Fauna Environ.* 28, 157-168.
- Toledo, L.F., Prado, C.P.A. & Andrade, D.V. (2004). *Tupinambis merianae* (Tegu Lizard). Fungivory. *Herpetol. Rev.* **35** (2), 1.

Tortato, M.A. (2007). Contribuição ao conhecimento de *Phrynops hilarii* (Duméril & Bibron, 1835) (Testudines, Chelidae) em área de restinga no Estado de Santa Catarina, Sul do Brasil. *Biotemas* 20 (1), 119-122.

Submitted by: ANDRÉ F. BARRETO-LIMA and VAGNER L. CAMILOTTI

Universidade Federal do Rio Grande do Sul, Instituto de Biociências, Departamento de Ecologia, Avenida Bento Gonçalves, 9.500, bloco IV, prédio 43.422, Campus do Vale - Bairro Agronomia, Porto Alegre - Rio Grande do Sul, Brazil. 91.501-970. afblima@hotmail.com.

ELAPHE OBSOLETA SPILODES (Grey Rat Snake): BODY-BENDING BEHAVIOUR. The behaviour of "body-bending" in arboreal snakes has recently been described as a cryptic defensive behaviour by Margues et al. (2006). This behaviour consists of a snake, usually (but not necessarily) with arboreal affinities, going to ground level, spreading out along the ground with its body contorted into many small bends. Margues et al. (2006) proposed that such behaviour was a behavioural camouflage, imitating fallen vines, to prevent detection by predators such as birds or mammals, while at the same time enabling the snake to sit and wait for prey or to thermoregulate. This behaviour was recorded in two arboreal Colubrid snakes in southeastern Brazil: Philodyas viridissimus and Spilotes pullatus. This observation was only preliminary, with the occurrence of this behavioural trait in other snakes and other limbless vertebrates unknown. Records of other species displaying body-bending would therefore be useful in testing the ecological and evolutionary significance of this behaviour.

Here, I describe an incidence of body bending in the Grey Rat Snake, *Elaphe obsoleta spilodes*. This animal was encountered in Wakulla County, northwest Florida on the 21 July 2003. The animal was observed outside an infrequently used bunkhouse, adjacent to hardwood hammock swamp forest on the edge of the St. Marks National Wildlife Refuge. This region has fairly low levels of urbanization compared to other regions of the world, though there was a busy highway not far from this site. The animal was approximately 1 m long and was observed on a substrate of stone slabs that were part of a small patio. Its body was stretched out straight with over 20 bends in its body (Fig. 1). It is not known if this animal was basking or waiting to ambush prey. Anthropogenic influence is assumed to be negligible as this animal was discovered immediately after arrival in a jeep. assuming bending the body is not a spontaneous reflex for this species on the approach of a predator. This species is distributed throughout the Carolinian forest zone of eastern north America (forming five sub-species, Conant & Collins, 1998), and is renowned for its arboreal affinities, particularly for preying upon birds and squirrels nesting in trees (Weatherhead et al., 2003, references therein). This does not rule out terrestrial foraging being the cause of this behaviour, with terrestrial voles (Microtus sp.) and mice (Peromyscus sp., Zapus sp.) recorded from faecal samples of snakes captured in the north of this species' range in Ontario, Canada (Weatherhead et al., 2003). Fig. 1 shows that this animal was not in direct sunlight, though the thermoregulatory state of the animal at the time is uncertain Future encounters with snakes or other limbless vertebrates displaying such behaviour should take the opportunity to measure: the body temperature of the animal; the ambient temperature; the temperature of the specific microhabitat; the presence of potential prey; the presence of potential predators and monitoring of the animal to observe any interactions with predators or prey. Further investigations could take place to see if Elaphe obsoleta spilodes displays this behaviour frequently, and if so, could be a model species to test hypotheses on the significance of body bending. This is feasible based on research on the ecophysiology of this species in the field in Ontario, using temperature-sensitive radio-transmitters (Blouin-Demers & Weatherhead, 2001).

Body bending is recorded in another member of the family Colubridae, with the ecological causes for this behaviour still uncertain. Deciphering the phylogenetic consistency of this behavioural trait will be important in the assessment of the ecological and evolutionary significance of this strategy.