Brazilian Snail-eating Snakes (Reptilia, Serpentes, Dipsadidae) and their Alimentary Preferences by Terrestrial Molluscs (Gastropoda, Gymnophila & Pulmonata): an Preliminary Overview

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Received: 21 Sep., 2012
Accepted: 15 Oct., 2012
Published: 16 Oct., 2012
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Abstract An ecological study and preliminary revision concerning the snail-eating snakes and potential “prey” (alimentary preferences) present in the Brazilian country region, integral geographical territory of the “Atlantic Slope of the South Cone” is presented here based on wide bibliographical revision, the examination of specimens contained in collections of regional natural history museums, consultation with specialists, and the eventual collection of specimens in the environment. Around 17 species of snakes exclusively on the feed on slugs and snails, belonging to the family Dipsadidae, including the genus Dipsas (9 species), Sibon (1 species—amazon form) and Sibynomorphus (5 species) – the subfamily Dipsadinae (nocturnal arboreal and/or terrestrial forms) - and Tomodon (2 species), the subfamily Xenodontinae and Tribe Tachymenini (diurnal habits, terrestrial forms). A total of seven native nominal slugs and two snails they were confirmed in progress.

Keywords Biodiversity; Snail-eating snakes; Alimentary preferences; Terrestrial mollusks; Brazilian country

The mollusks participate in the ecosystems as important agents in the re-use of nutrients, forming part actively of the calcium cycle in the nature, besides supplying important alimentary supplement to diversified number of organisms. In the vast territory of Brazil terrestrial gastropod mollusks generally are very superficially mentioned in reports under its condition, “accidental components” in the diet of some reptiles, birds and mammals of small load. However, they exist in this country around 17 nominal species of serpents or snakes, inoffensive to humans, whose specialized alimentary habits it bases exclusively on the consumption of slugs and snails – tree and/or terrestrial forms – present in jungles, forests, fields and gardens, belonging to the family DIPSADIDAE (Photo slide), including the genus Dipsas (9 species), Sibon (1 species—amazon form) and Sibynomorphus (5 species) – representatives of the subfamily DIPSADINAE (of night habits, tree and/or terrestrial forms in forests – and Tomodon (2 species), integral of the subfamily XENODONTINAE and Tribe TACHYMENTINI (of diurnal habits, terrestrial forms in altitude fields, occupying mainly diversified environments them present.

Photo slide (http://bio.sophiapublisher.com/article_picture.php?article_id=490&type=be)
In the Southern Brazil region, by example, are recognized 12 of those species, with occurrence in the territory States of Paraná/ PR, with 8 forms – only in the Atlantic region of this state six species are fully recorded, among others, foraging on some tree and/or terrestrial slug & snail regional species.

Many of the aspects concerning the “feeding behavior” of this snail-eating snakes they are even today completely unknown, among them the functional evolutionary morphologic adaptations presented as a consequence of possible specific alimentary preferences – type of consumed mollusks.

Framed in these molds, reaching simultaneously relative topics of the Malacology and Herpetology, a ecological study and preliminary revision concerning the snail-eating snakes and your potential “preys” (alimentary preferences) present in the Brazilian country, with special emphasis in the Southern region – integral geographical territory of the “Atlantic Slope of the South Cone” – is presented, tends as base wide bibliographical revision, the exam of specimens contained in collections of regional natural history museums, it consults direct with specialists, and the eventual collection of specimens in the environment.

Said species present activity stimulated during more humid periods (under or after rains) for search of molluscs, they are also stimulated moving in moments of larger environmental humidity. In moments of drought it is possible that stay in rest, once the caloric content of its food is low, not being advantageous to carry out feeding activities in periods with small probability of encounter of the preys.

Snail-eating snakes of the genera *Sibynomorphus* and *Tomodon* (terrestrial forms) they would be “specialist” in consumption of native slugs of the family VERONICELLIDAE, meanwhile that serpents of the genera *Dipsas* and *Sibon* (tree forms) they would be less selective, consuming slugs and/or snails faintly.

**Annotation for photos:**

**Photo 1:** Snake *Dipsas indica* eating native tree snail Bulimulidae Mesembrinus interpuscatus (capture sequence). *Photo:* Ivan Sazima.

**Photo 2:** Snake *Sibynomorphus ventrimaculatus* eating exotic invasive snail Braddybaena similaris in captivity conditions. *Photo:* Claiton Evaristo Silveira Machado.

**Photo 3:** Snake *Dipsas indica bucephala* (Shaw 1802) capturing native terrestrial slug Veronicaellidae Sarasindula plebeia. *Photo:* Ivan Sazima.

**Photo 4:** Snake *Tomodon dorsatus* capturing and eating terrestrial native giant slug Veronicaellidae Phylocaulis boraceiensis. *Photo:* Ivan Sazima.

**Acknowledgements**

Special thanks to Drs. Ivan Sazima and Otávio Marques, researcher herpetologists of the “Instituto Butantan”, São Paulo/ SP, and Biologist Claiton Evaristo Silveira Machado, Museum of Natural Sciences ULBRA Gravatá/ RS, for their timely help with information, bibliographical support, unpublished photographic materials, critical observations / discussion and suggestions.

**References**


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Photo 1: Snake *Dipsas indica* eating native tree snail *Bulimulidae Mesembrinus interpunctus* (capture sequence).
Photos: Ivan Sazima.

Photo 2: Snake *Sibynomorphus ventrimaculatus* eating exotic invasive snail *Bradybaena similaris* in captivity conditions.
Photo: Claiton Evaristo Silveira Machado.
Photo 3: Snake *Dipsas indica bucephala* (Shaw 1802) capturing native terrestrial slug *Veronicellidae Sarasinula plebeia*.
Photo: Ivan Sazima.

Photo 4-1: Snake *Tomodon dorsatus* capturing and eating terrestrial native giant slug *Veronicellidae Phyllocautis boraceiensis*.
Photo: Ivan Sazima.
Photo 4-2: Snake *Tomodon dorsatus* capturing and eating terrestrial native giant slug *Veronicellidae Phyllocaulis boraceiensis*.  
*Photo:* Ivan Sazima.