

***Sibynomorphus neuwiedi* (Ihering, 1911) (Serpentes; Dipsadidae) and *Potamojanuarius lamellatus* (Semper, 1885) (Gastropoda; Veronicellidae): a trophic relationship revealed**

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Resumo

***Sibynomorphus neuwiedi* (Ihering, 1911) (Serpentes; Dipsadidae) e *Potamojanuarius lamellatus* (Semper, 1885) (Gastropoda; Veronicellidae): uma relação trófica revelada.** Serpentes Dipsadidae do gênero *Sibynomorphus* são restritas à América do Sul e englobam doze espécies atualmente reconhecidas, que ocorrem no Brasil, Argentina, Peru e Equador. *Sibynomorphus neuwiedi* é uma espécie endêmica de áreas florestais do bioma Mata Atlântica, sendo especializada em comer gastrópodes. Oito indivíduos adultos de *S. neuwiedi* foram coletados entre abril de 1998 e junho de 2003 no entorno de Vila dos Dois Rios (23°11'S, 44°12'W), no Parque Estadual da Ilha Grande, município de Angra dos Reis, estado do Rio de Janeiro, Brasil. No laboratório, nós dissecamos seus estômagos para análise do conteúdo. Quatro indivíduos (50%) continham presas em seus estômagos, todas representadas pela lesma *Potamojanuarius lamellatus* (Veronicellidae), e quatro indivíduos estavam com o estômago vazio. O consumo de lesmas da Família Veronicellidae por serpentes da tribo Dipsadini tem sido relatado, entretanto, a ocorrência de *P. lamellatus* na dieta de *S. neuwiedi* é aqui relatada pela primeira vez.

Palavras-chave: Gastrópodes, Lesma, Malacofagia, Predação, Serpentes

Abstract

The Dipsadidae serpents from the genus *Sibynomorphus* are restricted to South America and include twelve species currently known, which occur in Brazil, Argentina, Peru, and Ecuador. *Sibynomorphus neuwiedi* is a species endemic to forested areas of the Atlantic Rainforest biome, and it is specialized in eating gastropods. Eight

adult individuals of *S. neuwiedi* were collected between April 1998 and June 2003 at the surroundings of the Vila dos Dois Rios village (23°11'S, 44°12'W), in the Parque Estadual da Ilha Grande, in the municipality of Angra dos Reis, state of Rio de Janeiro, Brazil. In the laboratory, we dissected their stomachs for analysis of its contents. We found prey in four of them (50%), all represented by the slug *Potamojanuarius lamellatus* (Veronicellidae), and four individuals had empty stomach. The consumption of slugs from the Family Veronicellidae by serpents from the tribe Dipsadini has been reported, nevertheless, we report the occurrence of *P. lamellatus* in the diet of *S. neuwiedi* for the first time.

Key words: Gastropods, Malacophagy, Predation, Serpents, Slug

The Dipsadidae serpents from the genus *Sibynomorphus* are restricted to South America and include twelve species currently known which occur in Brazil, Argentina, Peru, and Ecuador (CADLE, 2007). Five of these species have been reported to occur in Brazil: *Sibynomorphus lavillai* Scrocchi, Porto and Rey, 1993, *S. mikanii* (Schlegel, 1837), *S. ventrimaculatus* (Boulenger, 1885), *S. turgidus* (Cope, 1868), and *S. neuwiedi* (Ihering, 1911) (BÉRNILS, 2010). This last species is endemic to forested areas of the Atlantic Rainforest biome (HOGE, 1981) and, like other species of the genus, it is specialized in eating gastropods. Because of that, the species present morphological, behavioral, and physiological specializations related to its habits. These include cranial modifications and release of specific secretions of its infralabial glands that cause paralysis and death of prey (LAPORTA-FERREIRA, 1985, apud OLIVEIRA et al. 2008; LAPORTA-FERREIRA; SALOMÃO, 1991). In this communication, we report the diet of the snail-eater *Sibynomorphus neuwiedi* from an insular population in southeastern Brazil and report the presence of the slug *Potamojanuarius lamellatus* in the diet of this gastropod-eating snake.

Eight adult individuals of *Sibynomorphus neuwiedi* (mean snout-vent length = 419.2 ± 93 mm, range: 216.9 – 507.3mm, mean tail length = 125.2 ± 32.7 mm, range: 61.1 – 155mm), were collected between April 1998 and June 2003 at the surroundings of the Vila dos Dois Rios village (23°11'S, 44°12'W), in Parque Estadual da Ilha Grande, in the municipality of Angra dos Reis, state of Rio de Janeiro, Brazil. In the laboratory, we dissected their stomachs for analysis of its contents. We found prey in four of them (50%), all represented by the slug *P. lamellatus* (mean number of prey per individual = 1.0 ± 1.4 , range: 0 – 4.0, N = 8; Veronicellidae), and four individuals had empty stomachs.

The species of slug was determined having the main references about the genus as a basis (THOMÉ, 1969; 1975; 1993) and also through the comparison of the holotype, kept in Zoologisches Museums der Christian-Albrechts-Universität zu Kiel in Kiel, Germany (lot Mo-1392). Voucher specimens of the snake and of the gastropods shall be kept at Museu Nacional, in Rio de Janeiro.

The consumption of slugs from the Family Veronicellidae by serpents from the tribe Dipsadini (*sensu* VIDAL et al., 2010) has been reported by some authors (THOMÉ et al., 2001; MARQUES; SAZIMA, 2004; HARTMANN et al., 2009; PALMUTI et al., 2009; BERNARDE; ABE, 2010), although there was no previous record of slugs from the genus *Potamojanuarius* as prey of *S. neuwiedi*. The veronicellids *Sarasinula marginata* (Semper, 1885) and a non-identified species from the genus *Novovaginula* Thiele, 1831 were found in the stomach content of other Dipsadini species (THOMÉ et al., 2001), and the consumption of the gastropod *Sarasinula* sp. (Veronicellidae; N = 4) by three individuals of *S. neuwiedi* (N = 5) was reported by Palmuti et al. (2009). The stomach content of five individuals of *S. neuwiedi* was analyzed and was also verified the presence of slugs from the Family Veronicellidae (MARQUES; SAZIMA, 2004).

Our data and those from literature (MARQUES; SAZIMA, 2004; PALMUTI et al., 2009) suggest that the Family Veronicellidae is often consumed by *S. neuwiedi*, being an important prey for this species of serpent. Nevertheless, the occurrence of *P. lamellatus* in the diet of *S. neuwiedi* is here reported for the first time.

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