

Short Communication

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Ophiophagy in the colubrid snake *Echivanthera occipitalis* (JAN, 1863) from southern Brazil

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Abstract. Ophiophagy is reported for the first time in *Echivanthera occipitalis*. A juvenile male from São Jerônimo, Rio Grande do Sul, Brazil, ate a juvenile *Tantilla melanocephala* measuring 19% of its own total length. Although the diet of *E. occipitalis* is poorly known, its general morphology and constrictor ability allow us to suggest that ophiiform prey items might constitute a significant percentage of the food spectrum in this species.

Key words. Serpentes: Colubridae: *Echivanthera occipitalis*, *Tantilla melanocephala*; diet; southern Brazil.

Echivanthera occipitalis (see CACIVIO et al. 1999 with regard to its taxonomic status) is broadly distributed in South America, occurring from northeastern Peru through Bolivia, Paraguay, northern Argentina and Brazil, to Uruguay. In Brazil, it occurs in almost all the territory, from the northwestern, north and northeastern portions to the extreme south (DI-BERNARDO 1992, SANTOS-JR. & LEMA 2004).

The diet of this species consists of small lizards like *Cercosaura* spp. and *Colobosaura modesta* (SERIÉ 1919, CUNHA & NASCIMENTO 1978, CEI 1993, CARREIRA 2002, ACHAVAL & OLMOS 2003), anurans (SCHOUTEN 1931, CUNHA & NASCIMENTO 1978, CEI 1993) and tadpoles (WILLIAMS & SCROCCHI 1994, LEYNAUD & BUCHER 1999, ACHAVAL & OLMOS 2003).

At 10:34 h on 17 April 2004, one juvenile male *E. occipitalis* (collection of the Museu de Ciências e Tecnologia of the Pontifícia Universidade Católica do Rio Grande do Sul - MCP 14903; 200 mm snout-vent length, 63 mm tail length, weight 4.30 g) was collected coiled under a rock (air temperature 23 °C) in Fazenda Novosares, 30°22' 15.8"S, 51°54'07.4"W, municipality of São Jerônimo, Rio Grande do Sul. The snake was

sacrificed two days after collection by injection of lidocaine chloridrate (3%). The specimen was dissected and a juvenile of the colubrid snake *Tantilla melanocephala* (LINNAEUS, 1758) (MCP annex collection 1621; 109 mm snout-vent length, 25 mm tail length, weight 0.60 g) was found in its stomach. The prey was swallowed headfirst. Although the prey's head was very damaged due to the digestive process, its body and tail were well preserved, and allowed for calculating its length and mass by comparing them with an intact specimen of *Tantilla melanocephala* from the same region (municipality of Dom Feliciano, 30°25'23.5"S; 052°18' 41.4"W) (MCP 13760). The relative prey mass (RPM) was 0.14, and the relative total length (RTL) was 0.19. This is the first record of ophiophagy for *E. occipitalis*. Other ophiiform prey items, like gymnophthalmid lizards, were previously recorded for this species (see above), and one individual of *Amphisbaena mertensii* STRAUCH, 1881 was recorded by BARBO & MARQUES (2003) as prey item for another species of the same genus, *E. affinis* (GÜNTHER, 1858).

Ophioform, elongate prey items can provide a high food intake (high RPM), and they require a low energetic investment due to the easy swallowing (the entire diameter of the prey is similar to the head diameter of the predator – see POUGH et al. 2001). Thus, ingesting this kind of prey could benefit elongated, slim and small-headed snakes like *E. occipitalis*. Although there are no comprehensive studies on the diet of *E. occipitalis*, its general morphology and constrictor ability (pers. obs.) suggest that ophioform prey items might constitute a significant percentage of the food spectrum in this species.

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References

- ACHAVAL, F. & A. OLMOS (2003): Anfíbios y reptiles del Uruguay. 2. edition. – Montevideo, Uruguay (Graphis Impresora), 136 pp.
- CACIVIO, P., G.J. SCROCCHI & A. GIRAUDO (1999): *Echinanthera occipitalis* (Serpentes, Colubridae). Nuevos datos de escamación, hemipenes y distribución. – Cuadernos de Herpetología, Tucumán, **13**(1-2): 81-87.
- CARREIRA, S.V. (2002): Alimentación de los ofidios de Uruguay. – Barcelona, Asociación Herpetológica Española, 126 pp.
- CEI, J.M. (1993): Reptiles del noroeste y este de la Argentina. Herpetofauna de las selvas subtropicales, puna y pampas. – Museo Regionale di Scienze Naturali, Torino Monogr. **14**: 1-949.
- CUNHA, O.R. & F.P. NASCIMENTO (1978): Ofidios da Amazônia X – As cobras da região leste do Pará, Belém. – Publicações Avulsas do Museu Paraense Emílio Goeldi, Belém, **31**: 1-218.
- DI-BERNARDO, M. (1992): Revalidation of the genus *Echinanthera* COPE, 1894, and its conceptual amplification (Serpentes, Colubridae). – Comunicações do Museu de Ciências da PUCRS (série Zoológica), Porto Alegre, **5**(13): 225-256.
- BARBO, F.E. & O.A.V. MARQUES (2003): Do aglyphous colubrid snakes prey on live amphisbaenids able to bite? – Phyllomedusa, Belo Horizonte, **2**(2): 113-114.
- LEYNAUD, G. C. & E. BUCHER (1999): La fauna de serpientes del Chaco Sudamericano: diversidad, distribución geográfica y estado de conservación. – Academia Nacional de Ciencias (Córdoba, Argentina), Córdoba, **98**: 1-46.
- POUGH, F.H., R.M. ANDREWS, J.E. CADLE, M.L. CRUMP, A.H. SAVITZKY & K.D. WELLS (2001): Herpetology. – Prentice-Hall, Inc, New Jersey, 612 pp.
- SANTOS-JR, A.P. & T. LEMA (2004): Geographic distribution: *Echinanthera occipitalis* (Spot's Snake). – Herpetological Review, Saint Louis, **35**(1): 83.
- SCHOUTEN, G.B. (1931): Contribuciones al conocimiento de la fauna herpetológica del Paraguay y de los países limítrofes. – Revista de la Sociedad Científica del Paraguay, Asuncion **3**(1) 5-32.
- SERIÉ, P. (1919): Notas sobre la alimentación de algunos ofidios. – Revista del Jardín Zoológico Buenos Aires, Buenos Aires, **15**(60): 307-328.
- WILLIAMS, J.D. & G. SCROCCHI (1994): Ofidios de agua dulce de la República Argentina. – Fauna de Agua Dulce de la República Argentina, La Plata, **42**(3): 1-55.

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