
NATURAL HISTORY NOTES

Natural History Notes features articles of shorter length documenting original observations of amphibians and reptiles mostly in the field. Articles should be concise and may consist of as little as two or three paragraphs, although ideally will be between 500 and 700 words. Preferred contributions should represent an observation made of a free-living animal with little human intrusion, and describe a specific aspect of natural history. Information based on a captive observation should be declared as such in the text and the precise geographical origin of the specimen stated. With few exceptions, an individual 'Note' should concern only one species, and authors are requested to choose a keyword or short phrase which best describes the nature of their observation (e.g. Diet, Reproduction). The use of photographs is encouraged, but should replace words rather than embellish them. Contributions are accepted

CHIRONIUS LAEVICOLLIS (Pale-necked whipsnake): REPRODUCTION. *Chironius laevicollis* is a large terrestrial, diurnal colubrine snake, which feeds on frogs (Dixon *et al.* 1993; Marques, 1998), and inhabits rainforests in eastern Brazil, from the States of Bahia and Minas Gerais up to Santa Catarina (Dixon *et al.* 1993; Marques & Puerto, 1996). This note presents unpublished information about oviposition and hatching, clutch size, relative clutch mass (RCM), and size of newborns for *C. laevicollis*, based on individuals collected in the littoral region of São Paulo State, southeastern Brazil.

One female *C. laevicollis* (IB 70049: 1273 mm in snout-vent length (SVL), 590 mm in tail length (TL), and 630 g) collected in São Sebastião (23°50'S 45°18'W) was brought to Instituto Butantan (IB) and laid 10 eggs on 16th January 2004. Two other females were collected in Caraguatatuba (23°37'S 45°24'W). One of them (IB 71561: 1413 mm SVL, 650 mm TL, and 775 g) laid 14 eggs on 10th September 2004. The other one (IB 72012: 1350 mm SVL, 608 mm TL, and 770 g) laid nine eggs on 16th November 2004. The eggs ($n = 33$) averaged 43.2 mm in length (range = 36.5–52.0 mm) and 22.6 mm in width (range = 18.7–24.0 mm). The RCM (mothers weighed after oviposition) varied from 0.18 to 0.25 (mean =

on the premise that they represent a previously unreported observation, and may be edited prior to acceptance. Standard format for this section is as follows:

SCIENTIFIC NAME (Common Name): **KEYWORD**. Text (there are no constraints on how information is presented but the date, time, and locality – with full map co-ordinates if possible – must be included, as should precise details on the nature of the observation with some discussion of its significance, and references to pertinent literature). If the information relates to a preserved specimen, its catalogue number and place of deposition should also be given. **REFERENCES**. Then leave a line space and close with name and address details in full.

0.22), which is lower than that reported for most other oviparous snakes (see Seigel & Fitch, 1984).

The eggs were incubated in a plastic container with moistened vermiculite as substrate, at room temperature varying from 20 to 32°C. Hatchings occurred from 20th–21st May 2004, 16th–19th January 2005 and 15th March 2005, respectively. Newborns ($n = 18$) averaged 276.05 mm SVL (range = 230–295 mm), 126.5 mm TL (range = 110–134 mm) and 10.5 g (range = 6.6–12.5 g), and had a uniformly green ground colour (Figure 1), differing markedly from the mother, which was a yellowish brown (for details see Marques & Sazima, 2003). Marques (1998) suggested that reproduction in *C. laevicollis* is seasonal, although this inference was based on a limited number of preserved specimens (five individuals containing vitellogenic follicles from August to December, and two with oviductal eggs in October and November). Our observation is consistent with the notion of seasonal reproduction in this species, with oviposition at the end of the dry season and beginning of the rainy season (September – January), and recruitment during the rainy season and beginning of the dry season (January – May). This pattern is the same as that recorded for other species of *Chironius* (Dixon *et al.* 1993; Marques & Sazima, 2004).



Figure 1. Newborn of *Chironius laevicollis* after 36 days of birth (male, 335 mm SVL, 145 mm TL and 12 g).

ACKNOWLEDGEMENTS

We thank Maria da Graça Salomão and Otavio A. V. Marques for the manuscript review and suggestions. Supported by FUNDAF and FAPESP.

REFERENCES

- Dixon, J. R. Wiest, J. A. & CEI, J. M. (1993). Revision of the tropical snake *Chironius Fitzinger* (Serpentes, Colubridae). *Mus. Reg. Sci. Nat. Monograf.* **13**, 1–279.
- Marques, O. A. V. (1998). Composição faunística, história natural e ecologia de serpentes da Mata Atlântica, na região da Estação Ecológica Juréia-Itatins, São Paulo, SP. Unpublished Ph.D. Thesis, Universidade de São Paulo, Brazil.
- Marques, O. A. V. & Puerto, G. (1996). *Chironius laevicollis*. Geographic distribution. *Herpetol. Rev.* **27**, 212.
- Marques, O. A. V. & Sazima, I. (2003). Ontogenetic color changes may strengthen suggestion about systematic affinities between two species of *Chironius*. *Phyllomedusa* **2**, 65–67.
- Marques, O. A. V. & Sazima, I. (2004). História

- natural dos répteis da Estação Ecológica Juréia-Itatins. In *Estação Ecológica Juréia-Itatins: ambiente físico, flora e fauna*, pp. 254–274. Marques, O. A. V. & Duleba, W. (Eds.). Ribeirão Preto: Holos.
- Seigel, R. A. & Fitch, H. S. (1984). Ecological patterns of relative clutch mass in snakes. *Oecologia* **61**, 293–301.

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