

## NOTA CIENTÍFICA

### **PREDATION ON *Hyla minuta* PETERS, 1872 (ANURA, HYLIDAE) BY *Ancylometes* spp. (ARANEAE, PISAURIDAE).**

Tadpoles, juveniles, and adults of anurans are preyed upon by spiders, principally pisaurids and tarantulas (NEILL, 1948; GROVES and GROVES, 1978; FORMANOWICZ JR. et al., 1981; HAYES, 1983; BASTOS et al., 1994; JOHNSON, 1996). Although spiders represent important predators for some small anurans (HAYES, 1983), there are few published reports of spiders preying on adult anurans (e.g., DEL-GRANDE and MOURA, 1997). The neotropical hylid frog, *Hyla minuta* Peters, 1872, occurs from lowlands east of Andes from Colombia, Venezuela, and Trinidad southward to Bolivia, and Argentina (LUTZ, 1973). This is a common small species (less than 30 mm snout-vent length) in the environments of various regions, breeding in temporary and permanent ponds (LUTZ, 1973; HEYER et al., 1990; pers. obs.). Herein, we report three cases of predation by spiders of genus *Ancylometes* on adults of *H. minuta*.

On 19 November 1996 at 21h18min (air temperature 23°C) in the "Parque Nacional da Serra do Divisor" (07°27'S; 73°36'W), State of Acre, Brazil, a pisaurid spider *Ancylometes gigas* (Pickard-Cambridge, 1897) (30 mm cephalotorax and abdomen length) was observed (by MBS) eating an adult female *H. minuta* (21 mm snout-vent length). The spider and frog which were photographed (Fig. 1) were on a 1.55 m high trunk near a river. The spider was collected and deposited in the "Coleção de Aracnologia do Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul" (MCTP 10427) and the frog in the "Coleção Herpetológica da Universidade Federal do Acre" (UFAC 2683).

On 7 November 1997 at 9h 40min. (air temperature 28°C) in the "Reserva Extrativista do Alto Juruá" (09°17'S; 72°41'W), State of Acre, Brazil, a spider *Ancylometes* sp. was observed (by MBS) eating an adult *H. minuta* (ac. 20 mm snout-vent length). The spider and frog which were photographed (Fig. 2) were on a fallen trunk near a pond in a secondary forest. The specimens were not collected.

On 1 October 1998 at 20h 40 min. in the "Parque Estadual Mata dos Godoy" (23°27'S; 51°15'W), Municipality of Londrina, State of Paraná, Brazil, a pisaurid spider *Ancylometes vulpes* Bertkau, 1880 (30 mm cephalotorax and abdomen length) was observed (by PSB and MCNK) eating an adult male *H. minuta* (29 mm snout-vent length). The spider and frog which were photographed (Fig. 3) were on a 0.40 m high leaf of *Typha* sp. (Typhaceae) in a permanent pond in forest border. The spider was collected and deposited in the MCTP collection (10359) and the frog in the "Museu de História Natural Capão da Imbuia" (MHNCI 3557), in Curitiba Municipality, State of Paraná, Brazil.

Spiders, principally psaurids and lycosids, are commonly found near aquatic environments (ponds and streams) during the night (WISE, 1993; pers. obs.). Because anurans are found in breeding activities in this same habitat, predation by spiders is likely to be important on adult of small hylid frogs (e.g., *H. minuta*, *H. nana* Boulenger, 1889 and *H. sanborni* Schimdt, 1944), yet few documented.

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#### LITERATURE CITED

1. BASTOS, R.P., OLIVEIRA, O.C., POMBAI, JR., J.P. *Hyla minuta* (NCN). Predation. **Herpetological Review**, Lawrence, v. 25, n. 3, p. 118, 1994.
2. DEL-GRANDE, M.L., MOURA, G. *Hyla sanborni* (NCN). Predation. **Herpetological Review**, Lawrence, v. 28, n. 3, p. 147, 1997.
3. FORMANOWICZ, JR., D.R., STEWART, M.M., TOWNSEND, K., POUGH, F.H., BRUSSARD, P. Predation by giant crab spiders on the Puerto Rican frog *Eleutherodactylus coqui*. **Herpetologica**, Lafayette, v. 37, p. 125-9, 1981.
4. GROVES, J.D., GROVES, F. Spider predation on amphibians and reptiles. **Bulletin Maryland Herpetological Society**, Maryland, v. 14, p. 44-4, 1978.
5. HAYES, M.P. Predation on the adults and prehatching stages of glass frogs (Centrolenidae). **Biotropica**, New Orleans, v. 15, n. 1, p. 74-6, 1983.

6. HEYER, W.R., RAND, A.S., CRUZ, C.A.G., PEIXOTO, O.L., NELSON, C.E. Frogs of Boracéia. **Arquivos de Zoologia**, São Paulo, v. 31, p.231-410, 1990.
7. JOHNSON, S.A. *Hyla temoralis* (Pine Woods Treefrog). Predation. **Herpetological Review**, Lawrence, v. 27, n. 3, p.140, 1996.
8. LUTZ, B. **Brazilian species of Hyla**. Austin and London: Univ. of Texas Press, 1973, 265p.
9. NEILL, W.T. Spiders preying on reptiles and amphibians. **Herpetologica**, Lafayette, v. 4, p. 158, 1948.
10. WISE, D. H. **Spiders in ecological webs**. New York: Cambridge University Press, 1993, 328p.

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Fig. 1. Spider *Ancylometes gigas* eating an adult female frog *Hyla minuta*.



Fig. 2. Spider *Ancylometes* sp. eating an adult frog *Hyla minuta*.



Fig. 3. Spider *Ancylometes vulpes* eating an adult male frog *Hyla minuta*.