

## Predation on newly metamorphosed toad *Rhinella ornata* (Anura: Bufonidae) by the spider, *Lycosa erythrognatha* (Araneae: Lycosidae)

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**Abstract.** Herein we report predation by the spider *Lycosa erythrognatha* on a newly metamorphosed anuran *Rhinella ornata*, observed in an aggregation of more than 50 individuals.

**Keywords.** Amphibia, Anura, Aggregate, Lycosid.

Predation is an important way of regulation of terrestrial communities (Duellman & Trueb 1994). For organisms with complex life cycles, predation

pressure may also influence synchrony of vulnerable periods such as reproduction, larval dispersal and metamorphosis (DeVito 2003). For amphibians, most anurans have a period of decrease of locomotor ability, during the metamorphosis, and this probably increases the pressure of predation (Dudley et al. 1991). However predation may select for aggregation and it can decrease the chances of predation on an individual (Hamilton 1971). Anurans are preyed upon by a number of different

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**Figure 1.** Predation of *Rhinella ornata* by the Lycosid spider *Lycosa erythrognatha* in the Aquaculture Division of the School of Veterinary and Animal Science in the Universidade Estadual Paulista at Botucatu municipality, São Paulo state, southeast Brazil. Detail of predation while another individual beneath is still trying to escape.

predators like mammals, birds, reptiles and many invertebrates (Duellman & Trueb, 1994). Amongst the invertebrates, spiders are known to prey on many species of anurans and records on anuran predation are attributed to the spider families Pisauridae, Ctenidae, Lycosidae, Sparassidae, and Theraphosidae (Menin, Rodrigues & Azevedo 2005).

Herein, we report a predation of a newly metamorphosed *Rhinella ornata* in the Aquaculture Division of the School of Veterinary and Animal Science in the Universidade Estadual Paulista (22°50'23.0"S 48 25 40.6 W; WGS84) at Botucatu municipality, São Paulo state, southeast Brazil. On 15 September 2009 at 19:30 h, we observed an adult lycosid spider *Lycosa erythrognatha* (31 mm cephalothorax + abdomen length) preying on a newly metamorphosed *Rhinella ornata*. The spider jumped onto an aggregate of 50 newly metamorphosed individuals, capturing an individual (approximate length 15 mm; fig.1) on the back, while the others escaped.

As mentioned above, frogs are often preyed upon by spiders, but this is the first record of such predation on *Rhinella ornata*. Species of the genus *Rhinella* produce toxic secretions from the skin and especially from the parotoid glands, protecting them from predators (Cardoso and Sazima 1977). The poison glands of *R. ornata* are not large and the quantity of poison stored

by newly metamorphosed individuals can be very small or the toxicity can be very low, thus not affecting the predator. DeVito (2003) suggested that aggregation is an antipredator response in American toads. This in turn suggests that our observation of spider predation on *R. ornata* was an example of this gregarious behavior, since only one individual was preyed upon. However it is necessary that more detailed studies are carried out to confirm this hypothesis.

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