

Predator or prey? Predatory interactions between the frog *Cycloramphus boraceiensis* and the spider *Trechaleoides biocellata* in the Atlantic Forest of Southeastern Brazil

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Most anurans feed primarily on invertebrates, but being a predator or a prey may depend on the size of the anuran (Lima et al., 2006), i.e., the role frogs play in food webs may vary depending on their size. Predation events on anurans by invertebrates have been increasingly reported (e.g. Toledo, 2005; Barbo et al., 2009; Barej et al., 2009; Maffei et al., 2010), and spiders are suggested to be the most important invertebrate predators of terrestrial frogs (Hayer, 1983). Here we describe two events of predation involving the frog *Cycloramphus boraceiensis* (Cycloramphidae) and the spider *Trechaleoides biocellata* (Trechaleidae).

Cycloramphus boraceiensis (Heyer, 1983) is a common torrent frog in streams of the Atlantic Forest of southeastern Brazil (Heyer, 1983). On 13 June 2008, at approximately 21:15h, during a monthly monitoring of a frog population at Núcleo Picinguaba of the Parque Estadual da Serra do Mar, São Paulo state, Brazil, we recorded an adult spider *Trechaleoides biocellata* (ca. 50mm) preying upon a juvenile (ca. 20 mm) *C. boraceiensis* (Fig. 1). The event was observed in a stream (23°21'S; 44°47'W) at 18.1°C of air temperature and 100% air humidity. When first seen, the spider was apparently foraging on a rock on the margin of a small pond. As the observers approached, the frog jumped into the water, and the spider rapidly grabbed it (Fig.1). The frog did not attempt to escape. On 4 July 2008 at around 19:04h, at the same site, but on another stream (23 ° 21'S; 44 ° 46'W), we observed an adult *C. boraceiensis* (ca. 50mm) preying upon an individual of the same spider species reported above (Fig. 2). The air temperature was 18 °C and air humidity, 91%. Since there was ongoing population monitoring in the sites,

none of the specimens were collected.

Some arthropods are known to prey upon several vertebrates (McCormick and Polis, 1982), and due to the apparent high density of these spider species in the study site, *Trechaleoides biocellata* could play an important role in *C. boraceiensis* population dynamics. Besides supporting the importance of spiders as frog predators in the Neotropics (Menin, Rodrigues and Azevedo, 2005), these observations illustrate a change in the ecological role of these organisms in the food web



Figure 1. *Cycloramphus boraceiensis* (ca. 50mm) preying upon *Trechaleoides biocellata*. Photo by Marcio Martins.



Figure 2. *Trechaleoides biocellata* (ca. 50mm) preying upon a juvenile (ca. 20 mm) *Cycloramphus boraceiensis*. Photo by Marcio Martins.

of these streams, and as *C. boraceiensis* grows, its role changes from prey to predator.

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