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LITHODYTES LINEATUS (Painted Antnest Frog). ASSOCIATION WITH ATTA ANTS. The first report showing the association between *Lithodytes lineatus* and leaf-cutting ants of the genus *Atta* was described by Schlüter (1980. Salamandra 164:227–247) who heard individuals vocalizing inside the galleries of these ants. Later, other observations involving the association between these genera were published and, until now, involved *L. lineatus* using active nests of *Atta cephalotes* to vocalize and also as breeding sites (Schlüter and Rêgos 1981. Amphibia-Reptilia 2:117–121; Lamar and Wild 1995. Herpetol. Nat. Hist. 32:135–142; Schlüter et al. 2009. Herpetol. Notes 2:101–105). However, the taxonomic identities of other species of *Atta* that *L. lineatus* associates with have not yet been described.

We conducted active searches to find *L. lineatus* in Rondônia, Brazil. At ca. 1800 h on 9 March 2015 in the left bank of the Jaci Paraná river (9.4116°S, 64.4441°W, WGS 84) we saw one individual vocalizing at the entrance to the ant nest of *A. laevigata* (Fig. 1), and heard six other individuals. In the bank of the Madeira river (9.1467°S, 64.5095°W, WGS 84) between 1800 and 2000 h on 12 March 2015, we found four juveniles and one newly metamorphosed froglet (with the remnants of a tail) of *L. lineatus* emerging from entrances of the anthill of *A. sexdens*.

Besides the two species of *Atta* found in this study, *A. cephalotes* also occurs in the region (Della Lucia 2011. Formigas cortadeiras: da Bioecologia ao Manejo. UFV, Viçosa, Minas Gerais. 421 pp.), however, nests of this species were not detected. The taxonomic identity of *Atta* is an important contribution to understand details of the natural history of *L. lineatus* and these are the first records of the use of active nests of ants *A. laevigata* and *A. sexdens* by *L. lineatus*.

We are grateful to Santo Antônio Energia who provided logistical support during fieldwork in Rondônia, to Fabricio Baccaro who helped identify the ants, and to Albertina Lima who indicated the localities.

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FIG. 1. An adult male *Lithodytes lineatus* inside an active nest of the leaf cutting ant *Atta laevigata*.

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MICROHYLA BUTLERI (Tubercled Pygmy Frog). PREDATION. At 2112 h on 15 August 2008, at the Xishuangbanna Tropical Botanic Garden (21.92906°N, 101.25269°E, WGS 84), Yunnan Province, China, we observed the female (bottom member) of a breeding

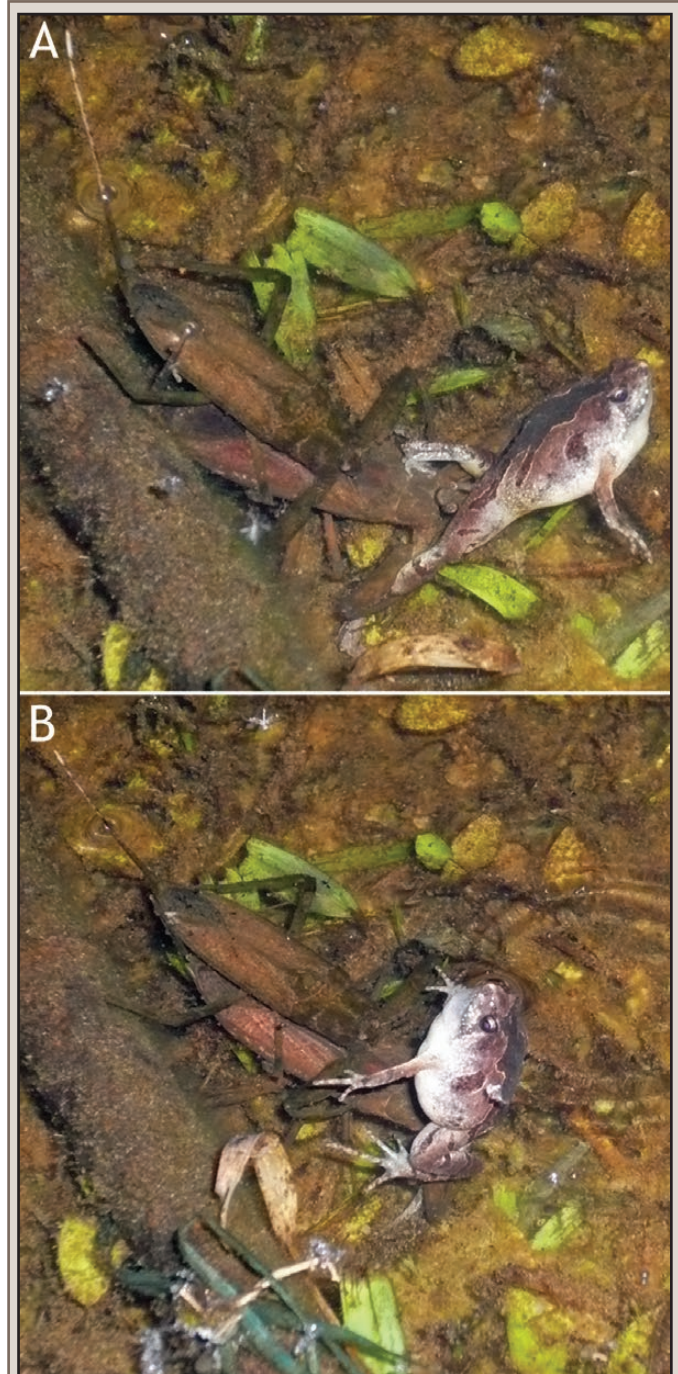


FIG. 1. Female water scorpion preying on an adult *Microhyla butleri*. A) The initial stages of predation; the female nepid (bottom member of breeding pair) grabbed the rear leg of the *M. butleri* and pierced the frog with her rostrum. B) Minutes later, the frog was subdued and immobilized.

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pair of Nepidae (water scorpion) prey upon an adult *Microhyla butleri* (Fig. 1). The female grabbed the frog with her forelimbs and pierced it with her rostrum (Fig. 1). Nepids inject their prey with digestive enzymes from their rostra and we presume this is what occurred here. The frog was quickly immobilized and the female began to feed on the frog (Fig. 1). The male nepid remained attached to the top of the female for the duration of the feeding but did not participate in the consumption of the *M. butleri*. *Microhyla butleri* are small (SVL ca. 21 mm) frogs and this one was easily handled by the nepid female. We have tentatively identified the insects as being from the genus *Laccotrephes* (subfamily Nepinae), however, species determination within this group can be difficult for Southeast Asian species (Polhemus and Polhemus 2013. *Raffles Bull. Zool.* 61:25–45). We observed this behavior in a shallow, still, ephemeral pool with emergent vegetation, the preferred habitat of nepids (Menke 1979. *Bull. California Insect Surv.* 21:70–75). Although nepids frequently consume aquatic prey including insects, gastropods, and tadpoles, to our knowledge, this is the first report of predation on an adult microhylid.

We thank Xishuangbanna Tropical Botanic Garden for access to breeding areas. Funding was provided by Fulbright and NSF DGE-0549369.

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MYERSIELLA MICROPS (*Rãzinha-assobiadora-da-mata; Elongated Frog*). **ANTIPREDATOR MECHANISMS.** *Myersiella microps* (Microhylidae) is a small (20–40 mm) globular frog with a very small head and tapered snout. It is an elusive inhabitant of forest leaf-litter across the Brazilian Atlantic Forest (Izecksohn and Carvalho-e-Silva. 2001. *Anfíbios do Município do Rio de Janeiro*. Editora UFRJ, Rio de Janeiro. 148 pp.). Here, we report on antipredator mechanisms of two individuals of *M. microps* hand-captured from the leaf litter during nocturnal surveys. On 15 February 2015, we captured an individual at Parque Nacional Serra dos Órgãos, Teresópolis, Rio de Janeiro, southeastern Brazil (22.4899°S, 43.0699°W, WGS 84; 1187 m elev.). First, the individual remained motionless but then it fled and hid. After recapture, it fought (i.e., kicked the limbs vigorously) to avoid subjugation. When released back on the ground, it fled away, hid, and remained motionless. After being recaptured again, it simultaneously displayed fighting (i.e., vigorous kicking), body inflation, and release of odoriferous and adhesive secretions. It also emitted a distress call and displayed thanatosis with legs slightly stretched.

On 19 November 2015, we captured another individual at Pedra do Garrafão, Santa Maria de Jetibá, Espírito Santo, Brazil (20.1671°S, 40.9284°W, WGS 84; 1300 m elev.). This individual was a male that stopped calling when we approached it. When we visualized it under the leaf litter, it remained motionless until we hand-captured it. When we released it in a plastic bucket, it displayed stiff-legged behavior (Fig. 1A). It also displayed body-raising with legs vertically stretched when disturbed by a stick (Fig. 1B, C). During both postures, the individual displayed body inflation. The individual tried to flee several times. It is deposited in the Zoological Collection of Museu de Biologia Mello Leitão, Brazil (MBML 8816). We report for the first time a detailed repertoire of antipredator mechanisms of *M. microps*, contributing to the knowledge of behavioral ecology of this species.

We thank Bromeligenous Project for field support and Instituto Chico Mendes de Conservação da Biodiversidade for

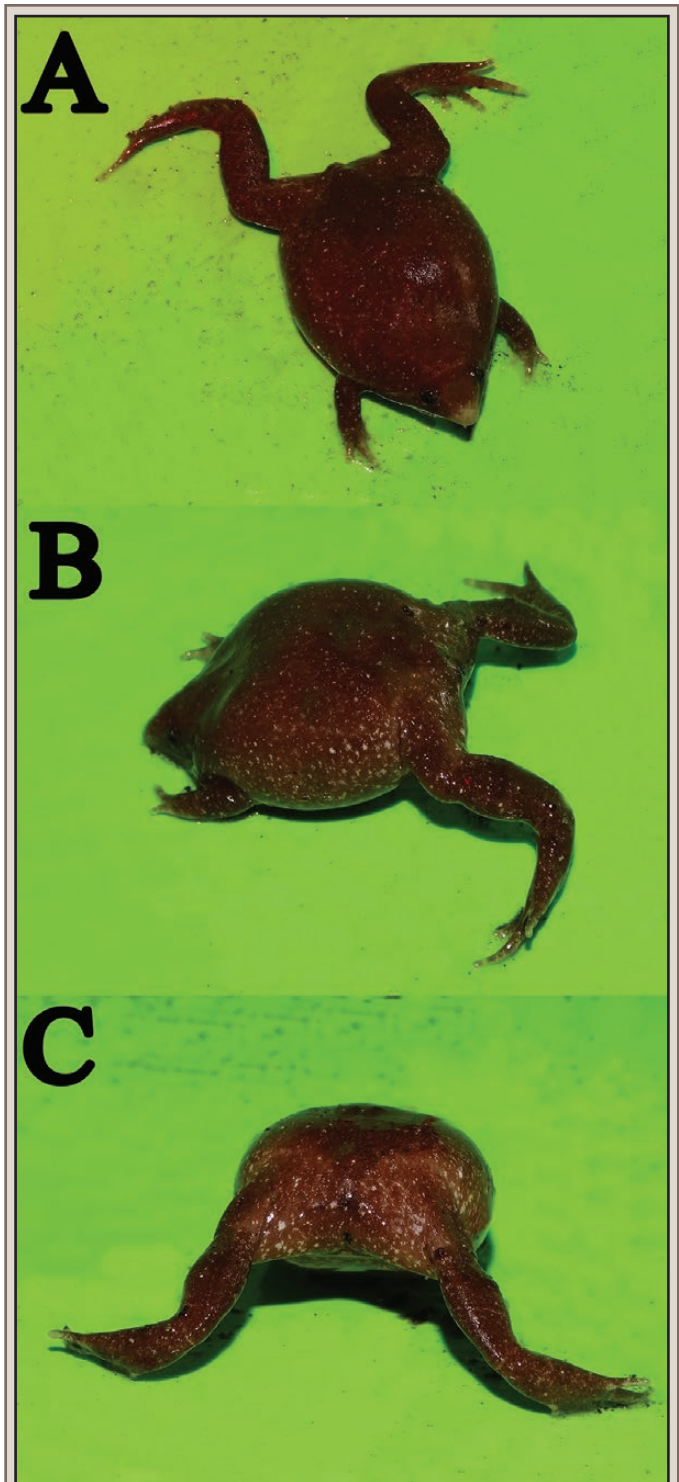


FIG. 1. Antipredator postures of *Myersiella microps* (MBML 8816): A) stiff-legged behavior; B) and C) body raising with legs vertically stretched.

the sampling permit (n° 50.402-3). ATM and RBF thank CAPES/FAPES for scholarships. RLM thanks CNPQ (140710/2013-2).

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