



FIG. 1. Males of *Phyllomedusa nordestina* in physical attack.

PHYLLOMEDUSA NORDESTINA (Northeast Orange-Legged Leaf Frog). PHYSICAL ATTACK. Sexual selection occurs when there is competition for sexual partners (scarce resource) causing differences in fitness among individuals in the same population (Wogel 2007. Pap. Avulsos Zool. 47[13]:165–174). The territorial behavior combines acoustic interactions, attitudes, and struggles that are the result of male competition for calling sites, favorable spawning, and consequently females (Martins et al. 1998. Amphibia-Reptilia 19:65–73). Studies on agonistic behavior of *Phyllomedusa* show that males exhibit territorial behavior during the reproductive period (Abrunhosa and Wogel 2004. Amphibia-Reptilia 25:125–135), emitting territorial calls and getting into physical combat with the resident male (Costa et al. 2010. Phyllomedusa 9[2]:99–108; Wogel et al. 2004. Herpetol. Rev. 35[3]:239–243).

We observed an event with *Phyllomedusa nordestina* involving a dispute among three males (Fig. 1). This is the first record of physical attack in the genus *Phyllomedusa* in Caatinga. The event occurred on 24 April 2010 at 2038 h, in a temporary pond at Monumento Natural Grota do Angico, Poço Redondo, Sergipe (9.6638889°S, 37.6825000°W, 200 m elev., SAD69). Two males invaded the territory of the resident male emitting agonistic calls until they came into physical contact. Later, they were one above the other emitting advertisement calls. According to Vilaça et al. (2011. J. Nat. Hist. 45[29-20]:1823–1834) males of *P. nordestina* exhibit territorial behavior at vocalization sites, defending their territories through aggressive interactions or vocal activities.

The aggressive behavior of the genus *Phyllomedusa* can be considered a synapomorphy of the group, because it is similar among species and may result for similar reasons, such as disputes over territory or females (Abrunhosa and Wogel 2004, *op. cit.*; Costa et al. 2010, *op. cit.*; Wogel et al. 2004, *op. cit.*).

FRANCIS LUIZ SANTOS CALDAS (e-mail: francisluz_bio@gmail.com), **BRUNO DUARTE DA SILVA**, **CRIZANTO BRITO DE-CARVALHO**, **RAFAEL ALVES DOS SANTOS**, **DANIEL OLIVEIRA SANTANA**, **FABIOLA FONSECA ALMEIDA GOMES**, and **RENATO GOMES FARIA**, Programa de Pós-Graduação em Ecologia e Conservação, Universidade Federal de Sergipe, 49.000-000, São Cristóvão, Sergipe, Brazil.

PLEURODEMA GUAYAPAE. EGG PREDATION. Complex oviposition strategies of tropical anurans, such as terrestrial oviposition or foam nests, are believed to be a fixed trait as a means to limit exposure to aquatic egg predators (Magnusson and Hero 1991. Oecologia 86:310–318). The floating foam nests

constructed by the anurans of the family Leiuperidae are one such oviposition strategy that protects their eggs from predators as well as desiccation (Wells 2007. The Ecology and Behavior of Amphibians. Univ. Chicago Press, Chicago, Illinois. 1148 pp.).

On 7 Feb 2011 at 0800 h I observed the foam nest of *Pleurodema guayapae* in an ephemeral pond (ca. 2 m²) that had been formed during the previous night's rain in the Isoceño community of Kuaridenda, Cordillera Province, Santa Cruz Department, Bolivia (19.17°S, 62.53°W; WGS84). The nest had been blown to the edge of the pond by the wind, where upon closer examination I observed dozens of small red ants (Hymenoptera; Formicidae) swarming the exposed eggs that were in contact with the pond's edge. I returned to the pond at 1500 h to find that the entire nest had been depredated by the ants.

Pleurodema guayapae constructs flattened foam nests, depositing them in temporary ponds that form after heavy rainstorms (Ceï 1980. Monitor. Zool. Ital. Monogr. 2:380–382). By eliminating contact with the water's surface, these nests may provide suitable protection against aquatic predators, such as the carnivorous tadpoles of *Ceratophrys cranwelli*, which commonly occur in temporary ponds in the area (pers. obs.). However, these foam nests do not envelop the eggs completely, and the eggs are often visible and exposed at the top of the nest (pers. obs.). Thus these nests may be inadequate in their protection against terrestrial predators (Schalk 2010. Herpetol. Rev. 41:202). *Pleurodema guayapae* may compensate for this increased vulnerability to egg predators with a shortened egg life stage (Johnson et al. 2003. Can. J. Zool. 81:1608–1613), which could be explored further through experiments.

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CHRISTOPHER M. SCHALK, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, Texas 77843-2258, USA; e-mail: cschalk@tamu.edu.

SACHATAMIA CF. ALBOMACULATA (Yellow-flecked Glass Frog). LIFE HISTORY. *Sachatamia albomaculata* is a glass frog from Central and South America. Savage (2002. The Reptiles and Amphibians of Costa Rica: A Herpetofauna between Two Continents, between Two Seas. Univ. Chicago Press, Chicago, Illinois. 934



FIG. 1. Amplexant pair of *Sachatamia cf. albomaculata*, Bilsa Biological Station, western Ecuador.