

ELEUTHERODACTYLUS MIMUS (NCN). **DIET.** On 13 Jan 2003 at 1600 h at the La Selva Biological Station, Heredia Province, Costa Rica, an adult female *Eleutherodactylus mimus* (~45 mm SVL) captured and consumed an anole, *Norops limifrons* (~40 mm SVL; ~80 mm total). *Eleutherodactylus mimus* is not previously reported to take vertebrate prey.

The *E. mimus* jumped 13 cm vertically from the leaf litter to a small arching stick, apparently in response to movement of the *N. limifrons*. The frog bit the anole at midbody and dropped to the ground. The frog sat without moving, occasionally clenching its jaws while the anole struggled and appeared to gasp for air. After 15 min, the *E. mimus* used its forelegs to push the anole's head into its mouth with a lunging motion. Over a three-minute period, the *E. mimus* then swallowed the anole with quick, lunging bites followed by pauses. Once the anole had been completely consumed, it continued to move inside the frog for ca. 5 min, when the frog was captured by hand to verify identification.

Diet samples from 14 individuals of this species listed by Lieberman (1986. *Acta Zool. Mex.* 15:1–71) included no vertebrate prey. Lieberman reported that the greatest proportion of the diet is made up of termites (30%), orthopterans (20%), and miscellaneous larvae (20%). My observation suggests that occasional small vertebrate prey may be an important protein source for *E. mimus*.

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FEJERVARYA LIMNOCHARIS (Boie's Wart Frog). **OPHIOPHAGY.** Diet studies of *Fejervarya limnocharis* have been carried out in Japan (Hirai and Matsui 2001. *Current Herpetol.* 20[2]:97–103), China (Zhao 2001. *Chinese J. Zool.* 36[5]:43–45), and Vietnam (Kuzmin and Tarkhnishvili 1997. *Adv. Amphib. Res. Form. Sov. Un.* 2:103–109). None of these studies report *F. limnocharis* ingesting reptiles. On 27 July 2003 at 1914 h after heavy rains, in Myanmar, Shan State, Taung Gyi District, near Mine Thaug Village (20°34'39.8"N, 96°57'24.1"E datum WGS 84), G. Wogan and Kyi Soe Lwin found an adult *F. limnocharis* (California Academy of Sciences CAS 226161) on the ground with a half-ingested *Ramphotyphlops braminus* (CAS 226162). The *R. braminus* measured 122 mm total length and weighed 0.9 g. The *F. limnocharis* measured 40.6 mm SVL and weighed 7.8 g (after preservation). A second *R. braminus* (CAS 225157) was found within 3 m of the above animals, suggesting that they were active that night. Ophiophagy in *F. limnocharis* is likely opportunistic.

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HYLA CINEREA (Green Tree Frog). **DIET.** *Hyla cinerea* is commonly found on low-growing vegetation throughout the southeastern United States (Phelps and Lancia 1995. *Brimleyana* 22:31–45). Documented prey include 35 families of arthropods, with noctuid moth (Lepidoptera: Noctuidae) and soldier beetle larvae (Coleoptera: Cantharidae) the most commonly observed prey recorded from stomach samples (Freed 1982. *Oecologia* 53:20–26).

In August 2001, small forest gaps were created in bottomland hardwood forests on the Savannah River Site, Barnwell Co., South Carolina, USA. These gaps provide valuable habitat and resources for plants and animals that prefer open areas. In a recent survey, we found *H. cinerea* to be 7.5 times more abundant in the forest gaps than in the interior forest (unpubl. data). Previous researchers have noticed a similar preference for clearings by this species (Phelps and Lancia, *op. cit.*).

On 4 Sept 2003 (ca. 1030 h) we observed an immature *H. cinerea* (3–4 cm SUL) on switchcane (*Arundinaria gigantea*) in a 0.26 ha flooded canopy gap. The tree frog was observed consuming a narrow-winged damselfly (Odonata: Coenagrionidae). To our knowledge, this is the first record of *H. cinerea* preying upon this group of insects.

Dragonflies and damselflies (Odonata) occur in a number of habitats including streams, ponds, and swamps (Borror et al. 1981. *An Introduction to the Study of Insects*, 5th ed. Saunders College Publ., Philadelphia. 827 pp.). They seem to have benefited from the creation of forest gaps as they are much more abundant there than in the forest (pers. obs.). The most common prey of *H. cinerea* are immature insects, ants, spiders, or beetles which are weak fliers commonly found walking on vegetation (Freed, *op. cit.*). Although the majority of its prey may be small and slow-moving, our observation of *H. cinerea* catching and consuming such a large and actively flying insect shows it to be an opportunistic predator.

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LEPTODACTYLUS FRAGILIS (White-lipped Foamfrog). **COURTSHIP.** Female reciprocal calling is a rare phenomenon in anurans and has been reported in only 14 species (Schlaepfer and Figueroa-Sandí 1998. *Copeia* 1998[4]:1076–1080). Two of these species are in the family Leptodactylidae, but none are *Leptodactylus*. Here we report an observation of courtship behavior and potential female reciprocal calling in *L. fragilis*. The observation took place in the canal area, Gamboa, Panama (9°07.0'N, 79°41.9'W).

During a rainy evening on 16 July 2003 we observed two *L. fragilis* apparently courting. One frog, almost surely a male, while hopping, intermittently emitted a characteristic advertisement call (Ibañez et al. 1999. The Amphibians of Barro Colorado Nature Monument, Soberania National Park and Adjacent Areas. Editorial Mizrachi & Pujol, Panama). The male called from open, exposed areas and kept moving, covering a distance of ca. 1.5 m during the period of observation. The other individual, presumably a female, followed him ca. 20 cm away. While this occurred, we heard a second type of call. This call was a rapid series of notes or short trill, longer and softer than the advertisement calls. Some of these calls were synchronized with movements of the abdomen of the male. Other calls were not and may have been given by the presumptive female. The second type of call, in contrast to the advertisement call, was barely audible at a distance of 2 m. While the male was broadcasting the second type of call, the other individual approached him until they were side to side, touching each other laterally. The male disappeared under some vegetation, apparently entering a burrow on the ground, and the other frog followed him. They were not seen again.

In *L. fragilis* males call during late afternoon and night during the rainy season (Ibañez et al. 1999, *op. cit.*). They construct burrows next to pools, where females deposit eggs (Heyer 1969. *Evolution* 23:421–428). Early development takes place within a foam nest until the burrow is flooded and the tadpoles reach the water (Ibañez et al. 1999, *op. cit.*; Prado et al. 2002. *Copeia* 2002:1128–1133). This reproductive mode is shared by members of the *L. fuscus* species group (Prado et al. 2002, *op. cit.*). We are aware of descriptions of courtship behavior in *Leptodactylus* only for *L. fuscus* (Freitas et al. 2001. *Comun. Mus. Ciênc. Technol. PUCRS, Sér. Zool.*, Porto Alegre 14:121–132) and *L. mystacinus* (Sazima 1975. *Dissertação de Mestrado, USP Sao Paulo*. 71 pp.). Touching was described to be present in both species. If the calling behavior that we observed in *L. fragilis* is associated with their reproductive mode, it is likely that female reciprocal calling occurs in other species of the *L. fuscus* group as well. The absence of previous reports may be explained by their secretive underground behavior that makes them difficult to locate and observe while breeding.

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LEPTODACTYLUS OCELLATUS (Rã-manteiga). **TADPOLE ALBINISM**. Because they are more conspicuous to predators, albino individuals are expected to be relatively rare in nature (Sazima and Pombal 1986. *Rev. Biol.* 46[6]:377–381; Sazima and Di Bernardo 1991. *Mem. Inst. Butantã*. 53[2]:167–173).

On 4 Oct 2002, in the municipality of Uberlândia (Minas Gerais,

Brazil), we found an albino *Leptodactylus ocellatus* tadpole. The tadpole was in a dense school of black siblings (>150 individuals) which was attended by an adult female, as is typical for the species (Vaz-Ferreira and Gehrau 1975. *Physys* 34, 88:1–14). The albino was in Gosner stage 25 (Gosner 1960. *Herpetologica* 16:183–190) and measured ca. 25 mm TL. Survival of this albino tadpole to a large size may have been facilitated by the schooling behavior and by maternal care.

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MEGAELOSIA BOTICARIANA (NCN). **ADULT SIZE.**

Megaelosia boticariana is a rare and threatened species from south-eastern Brazil (Giaretta and Aguiar 1998. *J. Herpetol.* 32:80–83). This species was diagnosed chiefly by its karyotypical features and the holotype is a female of uncertain degree of maturity; the two paratypes are juveniles. Herein we describe an adult male topotype (Parque Florestal do Itapetinga, Atibaia, São Paulo), housed at Museu de História Natural da Universidade Estadual de Campinas (ZUEC), Campinas, São Paulo. This male was found dead, from unknown causes, in a forest rivulet on 9 July 2000. Decomposition of this individual was not far advanced so that reliable measurements could be taken and morphological details analyzed as follows: adult male *M. boticariana* (ZUEC 11843); 100.4 mm SVL; vocal sacs visible externally as a thin whitish skin on each side of the head, slightly distended (inflated); each vocal sac with its correspondent vocal slit; tympanum ovoid, its diameter (parallel to the main body axis) being about 24% of the eye diameter; back smooth, uniformly gray; lower surfaces of thighs entirely smooth. Body proportions, in relation to SVL are: head length 37.8% (from posterior border of tympanum to tip of snout); head width 42.4%; thigh length 48.1%; shank length 47.8%; foot length 49.2%. In addition to the karyotypical features, the smaller size (about 13% in SVL) and lighter dorsal coloration help differentiate *M. boticariana* from *M. massarti*. SVL of this male *M. boticariana* (ZUEC 11843) is about 25% larger than the holotype (ZUEC 9561), which suggests the latter is a juvenile.

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NYCTIXALUS PICTUS (Cinnamon Tree Frog). **DEFENSIVE**

BEHAVIOR. *Nyctixalus pictus* is a common and widespread species from the Sunda regions of Southeast Asia, from southern Thailand, the Malay Peninsula, Sumatra, Borneo, and Palawan (Inger and Stuebing 1997. *A Field Guide to the Frogs of Borneo*. Natural History Publications [Borneo] Sdn Bhd., Kota Kinabalu, Sabah, Malaysia. 205 pp.). In our experience with this relatively com-