

BUFO NELSONI (Amargosa Toad). **PREDATION.** Reports of predation by ranid frogs on adult toads of the genus *Bufo* are extremely rare (Pearl and Hayes 2002. Amer. Midl. Nat. 147:145–152; but see Smith and Green 2002. Herpetol. Rev. 33:125). For the first time, we document predation of adult *Bufo nelsoni* by non-native bullfrogs (*Rana catesbeiana*). To our knowledge, these observations represent the largest toads that have been reported as prey to ranid frogs—at least in North America.

We used radio telemetry to study habitat use of adult *B. nelsoni* in the Oasis Valley, Nye County, Nevada, USA (UTM 0522204 E, 4083053N; Zone 11S, WGS84). On 25 March 2002, we determined that a radio signal was emanating from a bullfrog (ca. 175 mm SVL), suggesting that the frog had consumed the adult *B. nelsoni* which we were tracking. On 27 March 2002, the bullfrog was captured, euthanized, and its stomach dissected to verify the presence of a partially digested gravid female toad (87 mm SVL). The bullfrog was apparently not negatively affected by ingesting the toad as the frog escaped our initial capture attempt and then eluded capture for two additional days. Indeed, it is possible that the toad was consumed as many as 11 days prior to the capture of the bullfrog (the last time the toad was visually located). However, we cannot conclude that there were no negative effects of consuming a toad on the bullfrog as we euthanized the frog before we could rule out negative effects. Bullfrogs with SVL \geq 175 mm are not uncommon in Oasis Valley, especially in areas with permanent water and dense vegetation.

At a nearby site, on 13 May 2002, Kara Vick captured a bullfrog (ca. 185 mm), which had toad legs protruding from its mouth. We pried the frog's mouth open, and removed an adult male *B. nelsoni* (79 mm SVL). The toad was covered in mucus and somewhat disoriented, but was able to crawl away after a few minutes.

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ELEUTHERODACTYLUS ANTILLENSIS (Coquí Churí). **REPRODUCTION.** *Eleutherodactylus antillensis* is a widespread and abundant species in Puerto Rico and adjacent islands on the Puerto Rico Bank, but no published records of eggs and nests exist from within the species' natural range. Here we report on 8 clutches found in nature, 7 on Guana Island, British Virgin Islands (23 Oct 1993, 17 and 20 Oct 1994, 12 Oct 1997, 14 and 23 Oct 1999, 23 Oct 2001; observed by KO and J. Caldbeck) and 1 in Puerto Rico (on 10 Aug 2002, observed by ARE). Like other species of *Eleutherodactylus*, this species has direct development and eggs are laid on land.

On Guana Island, the egg masses were on the ground in a shrub forest: 6 were under a thin (ca. 2 cm deep) layer of leaf litter, and 1 was under a grass mat. The clutch size of 6 newly laid egg masses (located by following courting pairs) ranged from 25 to 42 eggs

(mean = 31, SD = 5.8); the remaining clutch (found by raking of leaves) contained 9 eggs. Newly laid eggs were round, opaque white, and were laid in a globular cluster. Individual eggs measured ca. 4–4.5 mm in diameter. The development of one clutch, followed from oviposition to hatching, took 15 days at temperatures of ca. 25–30°C at the natural location. No frog was in attendance at any of these clutches during several day- and night-time inspections.

In Puerto Rico, a clutch of *E. antillensis* with 24 eggs was found near Tetas de Cayey, Barrio Cuyón, Salinas (825 m elev). Individual eggs measured ca. 3.2–4.0 mm in diameter. The eggs were in an advanced stage of development (Stage 7 or later; Townsend and Stewart 1985. Copeia 1985:423–436), based on strong, rapid movements of the embryos. The clutch was under a small wood block (20 x 10 x 5 cm) over reddish soil, clean of vegetation, and near a house in construction. An adult male *E. antillensis* was adjacent to and in physical contact with the egg mass. The clutch and frog were held captive in a small plastic terrarium, with soil taken from the site as substrate, and were maintained at 28–32°C with relative humidity of 75–87%. The male frog sheltered under the same piece of bark where the clutch was placed but did not crouch on top of the eggs, as do males of *E. coqui* when attending eggs. Nine to 11 days after collection, the eggs hatched. The froglets measured 4–5 mm SVL. All froglets had a bicuspid egg tooth on the median margin of the upper lip; no vestigial tail was present at hatching.

Our observations indicate two features of particular interest: oviposition on the ground, rather than in vegetation or arboreal locations, and apparent absence of parental care on Guana Island. In contrast, male parental care of eggs occurs in *E. coqui* and several other Puerto Rican species of *Eleutherodactylus* (Townsend 1996. In Powell and Henderson [eds], Contributions to West Indian Herpetology: a Tribute to Albert Schwartz, pp. 229–239. Society for the Study of Amphibians and Reptiles. Ithaca, New York). Our observations also suggest a clutch size that is somewhat larger than reported for *E. antillensis* in captivity (11–32 eggs; Michael 1997. Herpetol. Rev. 28:141–143; Joglar 1998. Los Coquíes de Puerto Rico. Su Historia Natural y Conservación. Editorial De La Universidad De Puerto Rico, San Juan, Puerto Rico) and for an introduced population within residential gardens in Panama City (11–28 eggs; mean = 19 eggs; Castillo and Mayorga 1984. Distribucion, habitos ecologicos, reproduccion y embriologia externa de *Eleutherodactylus antillensis* [Anura]. Unpubl. Thesis. Universidad de Panama [Facultad de Ciencias Naturales y Farmacia], Panama City, Panama). Whether the presence of a male frog in the vicinity of the clutch from Puerto Rico represented parental care remains enigmatic.

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