

## NOTA

PREDATION OF *LIOLAEMUS HUACAHUASICUS* (SQUAMATA: IGUANIA: LIOLAEMINI) BY *BRACHISTOSTERNUS INTERMEDIUS* (SCORPIONES: BOTHRIURIDAE) IN CUMBRES CALCHAQUIES, TUCUMÁN PROVINCE, NORTHWESTERN ARGENTINA

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Scorpions are often acknowledged as preying on lizards and other small squamates (Bauer, 1990; McCormick and Polis, 1990), but observations of predation are relatively rare under natural conditions. Large scorpions, such as *Centruroides exilicauda* have been reported to eat *Phyllodactylus* sp. (leaf-toed geckos), *Parabuthus villosus* prey on *Pachydactylus rangei* (palmate desert geckos), *Hadrurus* sp. feed on *Leptotyphlops humilis* (western blind snakes), and similar interactions have been reported for other scorpion–vertebrate pairs (McCormick and Polis, 1990).

In the course of a herpetological survey of the summit of the Cumbres Calchaquíes Mountains, on a rocky outcrop facing south east, near Provincial Road 352 (26°22'45.7"S, 65°43'54.7"W, 3612 m), 38.3 km W Hualinchay, Trancas Department, Tucumán Province, on 16 Dec-

ember 2009 at ca. 1500, we found an adult male scorpion (*Brachistosternus intermedius*) under a rock holding with the chelae and eating the remains of a neonate lizard (posterior midbody, missing tip of tail) (Fig. 1). We identified the remnant carcass as *Liolaemus huacahuasicus* with an estimated snout–vent length (SVL) of 30 mm and a tail length (TL) of 75 mm. Voucher specimens were housed in the herpetological collection LJAMM-CNP of the Centro Nacional Patagónico (CENPAT-CONICET), Puerto Madryn, Chubut, Argentina (LJAMM-CNP 13170). *Liolaemus huacahuasicus* is a medium-sized (SVL = 76 mm), viviparous, and insectivorous lizard inhabiting the Puna habitats of Cumbres Calchaquíes Mountains, in Catamarca and Tucumán provinces, Argentina (Ceí, 1993). *Brachistosternus intermedius* is a small scorpion that ranges from southwestern Bolivia to northwestern Argentina from 2500–4000 m (Ojanguren Affilastro, 2003); nothing is known about its natural history.

At the time of our finding, numerous neonates of *Liolaemus huacahuasicus* were observed, sometimes in groups of two or three individuals together under rocks of different sizes, and usually with an adult female. According to Halloy and Halloy (1997) at the beginning of the summer (late December), females give birth to 4–8 young after 8–10 months of gestation. The scorpion was found in a tunnel beneath the rock eating the neonate *L. huacahuasicus*. There was another live neonate lizard at the end of the tunnel. During periods of food shortage, scorpions consume fewer, smaller prey, whereas during periods of food abundance, scorpions consume the most abundant prey available (McCormick and Polis, 1990). Given the abundance of juvenile lizards at this site during our surveys, neonate *L. huacahuasicus* likely constitute a common prey for scorpions when they are

born each summer. To our knowledge, this is the first record of presumed predation of *L. huacahuasicus* by a scorpion (*Brachistosternus intermedius*).

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#### LITERATURE CITED

- CEI, J. M. 1993. Reptiles del Noroeste, Noreste y Este de la Argentina. Scienze Naturali Torino Monografie 14: 1–949.
- BAUER, A. M. 1990. Gekkonid lizards as prey of invertebrates and predators of vertebrates. Herpetological Review 21: 83–87.
- HALLOY, M. & S. HALLOY. 1997. An indirect form of parental care in a high altitude viviparous lizard, *Liolaemus huacahuasicus* (Tropiduridae). Bulletin of the Maryland Herpetological Society 33: 139–155.
- MCCORMICK, S. & G. A. POLIS. 1990. Prey, predators, and parasites: 145–156. In: POLIS, G. A. (ed.), Biology of Scorpions. Stanford University Press, California, USA.
- OJANGUREN AFFILASTRO, A. A. 2003. The genus *Brachistosternus* in Argentina, with a description of a new Patagonian species (Scorpiones, Bothriuridae). Journal of Arachnology 31: 317–330.



**Figure 1.** *Brachistosternus intermedius* and the remains of a neonate *Liolaemus huacahuasicus* found under a stone at the summit of the Cumbres Calchaquíes Mountains, Tucumán Province, Argentina. Photograph by C. H. F. Perez.