

NATURAL HISTORY NOTES

LIOLAEMUS ELEODORI (San Guillermo's lizard): REPRODUCTION. *Liolaemus eleodori* is a small-medium (75 mm in snout-vent length) iguanid lizard, endemic to the high-Andean San Guillermo National Park in western Argentina (Cei *et al.*, 1983; Chébez *et al.*, 2005). Virtually nothing is known about the natural history of this steppe-dwelling lizard (Cei, 1986). Although viviparity in high-elevation lizards may be reasonably expected for the advantages that it bears (Fitch, 1970; Pianka & Vitt, 2003), the condition remains unknown in many species of the genus *Liolaemus*. Here we report the first account on litter size, and provide confirmation of viviparity, *sensu* Blackburn (1993), in *L. eleodori*.

At 13:00 h on 19th November 2003, during authorised fieldwork for the project "Herpetological Inventory of National Parks of Central Region", JCM captured a gravid female *Liolaemus eleodori* in the western section of the San Guillermo National Park (29°20'12"S, 69°24'19"W; 3650 m of altitude), Iglesia Department, San Juan Province, Argentina. There, *L. eleodori* was abundant, living associated with the extensive rodent burrows of *Ctenomys fulvus*. At the time of capture, many lizards of both sexes were active.

Once in the laboratory, it was housed alone in a glass vivarium with sand as a substrate, under the natural light/dark cycle of the austral summer, and

Figure 1. Three-day old neonates of *Liolaemus eleodori*, born in captivity from a lizard collected in the San Guillermo National Park, western Argentina. © M. R. Cabrera.



fed on larval and adult insects *ad libitum*. On the evening of 26th December 2003, the lizard adopted a motionless posture, and with her hindlegs spread gave birth to four young. The first neonate was born at 19:10 h, and the second one was born within the next 10 minutes. A third lizard was born at 19:40 h, this delay likely provoked by our move of the vivarium into conditions of better lighting for photographic purposes. The fourth lizard was born nine minutes later. Following the last birth, a blood-red chord was expelled through the maternal cloaca. All neonates were born headfirst, each one wrapped in a transparent membrane that the female immediately attempted to tear with her hindlegs, a task she succeeded in completing within 1–2 minutes for each newborn. Until liberated, the neonates remained immobile within the membrane, which was then discarded.

The four neonates were similar in appearance (Figure 1). Dorsally, they were similar in colour to the female, only grayer but with traces of an orange taint as is typical of adults. However, they lacked any trace of the yellow colour on the belly that adults bear. We measured only one neonate (30 mm in snout-vent length, plus 30 mm in tail length), but no obvious difference existed in size among the four young. Soon after parturition the mother ignored the neonates, displaying neither obvious parental care nor aggression towards them. The female died while hibernating in May 2004, and could not be properly conserved. Two neonates (AC 460a, and 460b) died later in the season, and were deposited in the collection of Comparative Anatomy Laboratory (Universidad Nacional de Córdoba, Argentina).

In January 2005, other two pregnant females of *Liolaemus eleodori*, captured at Vega de los Salineros, NE section of the San Guillermo National Park (29°08'06"S, 69°18'14"W; 3355 m of altitude), were transported to our laboratory in Córdoba. One of them gave birth to three young on 8th January 2005, at dawn, and the other gave birth to two lizards five days later. All these newborns were alike in size and pattern to those of the 2003 parturition. The body mass of three of them, two days after birth, ranged between 0.740 g and 0.788 g

(mean = 0.758 g). In the vivarium, the five neonates coexisted without any evident conflict between them, or between the two females and one adult male, and willingly fed on small insects. Days after, both females and young were returned alive to the site where the adults had been captured.

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MARIO R. CABRERA^{1*} and JULIO C. MONGUILLOT²

¹ *Departamento Diversidad Biológica y Ecología, Universidad Nacional de Córdoba, Velez Sarsfield 299, (5000) Córdoba, Argentina.*

² *Delegación Regional Centro, Administración de Parques Nacionales, Avenida Richieri 2298, (5000) Córdoba, Argentina.*

* Corresponding author: mcabrera@efn.uncor.edu