

**Reproduction in *Lygisaurus curtus* (Scincidae) from Papua New Guinea**

STEPHEN R. GOLDBERG<sup>1</sup> and CHRISTOPHER C. AUSTIN<sup>2</sup>

<sup>1</sup>*Biology Department, Whittier College, P.O. Box 634, Whittier, California 90608, USA.*

<sup>2</sup>*Department of Biological Sciences and Museum of Natural Science, Louisiana State University, Baton Rouge, Louisiana 70803, USA.*

<sup>1</sup>Corresponding author: sgoldberg@whittier.edu

*Lygisaurus curtus* occurs throughout the Papuan Peninsula of Papua New Guinea where they inhabit disturbed areas in montane rain forests from sea level to 1540 m elevation (Kraus, 2007). It appears *L. curtus* may have an annual lifespan, lasting about fifteen months with eggs hatching in the early months of the year; adult males in breeding colours were collected in October (Kraus, 2007). In this note we provide additional information on the reproduction of *L. curtus*.

A sample of 49 *L. curtus* from Papua New Guinea consisting of 27 males (mean SVL = 35.7 mm ± 3.0 SD, range = 31-41 mm), 18 females (mean SVL = 35.1 mm ± 2.8 SD, range = 30-40 mm) and 4 subadults (mean SVL = 24.0 mm ± 1.6 SD, range = 22-26 mm) was examined from the herpetology collection of the Louisiana State University, Museum of Natural Science (LSUMZ). Lizards were collected under licence in 2006 and 2009 in Milne Bay Province: LSUMZ 92682-92693, 92698-02700, 94099, 94506, 94509-94511, 94517-94519, Northern Province: LSUMZ 94100, and Gulf Province: LSUMZ 94523-94526, 94528-

94530, 94538-94551, 94553-94556.

The left gonad was removed for histological examination and embedded in paraffin. Enlarged ovarian follicles (> 3 mm) or oviductal eggs were counted. Histological sections were cut at 5µm using a rotary microtome and stained with Harris hematoxylin followed by eosin counterstain. Histology slides were deposited in LSUMZ.

Two stages were observed in the testicular cycle; spermiogenesis in which the lumina of the seminiferous tubules are lined by sperm or clusters of metamorphosing spermatids and recrudescence in which there is a proliferation of spermatocytes to be utilized in the next period of spermiogenesis. Seventeen males from August, eight of nine from September and one of one from October all exhibited spermiogenesis. The epididymides were not histologically examined but they were enlarged and convoluted in all males undergoing spermiogenesis indicating the likelihood they contained sperm. The smallest mature male (spermiogenesis in progress) measured 31 mm SVL (LSUMZ 94517). One male (31 mm SVL, LSUMZ 94543) from September exhibited recrudescence. It is not known when spermiogenesis would have commenced but it would appear 31 mm SVL was near the minimum size of maturity for males of *L. curtus*.

Clutch size for 9 females was an invariant 2.0. The presence of two females (LSUMZ 94519, 94548) containing oviductal eggs and concomitant yolk deposition in smaller follicles for a subsequent clutch (Table 1) indicated females of *L. curtus* produce multiple clutches. The smallest reproductively active females measured 33 mm SVL (LSUMZ 92693, 94549, 94556, early yolk deposition; LSUMZ 92692, 2 oviductal eggs).

Month	N	No yolk dep.	Early yolk deposition	Enlarged follicle (> 3 mm)	Oviductal eggs	Oviductal eggs and yolk dep.
August	12	1	4	3	3	1
September	6	1	4	0	0	1

**Table 1.** Monthly stages in the ovarian cycle of *L. curtus* from Papua New Guinea.

The size of hatchlings is not known, however, the four subadults (August  $n = 3$ , September  $n = 1$ ) may have been born in the early months of the year as reported for *L. curtus* (Kraus, 2007).

#### REFERENCE

Kraus, F. (2007). Taxonomic partitioning within Papuan members of the *Carlia novaeguineae* complex (Squamata: Scincidae). *J. Herpetol.* 41: 410-423.

### First country records for *Urotheca decipiens* and *Urotheca pachyura* and range extensions of *Urotheca guentheri* in Nicaragua

MILTON SALAZAR S.<sup>1</sup> and MARCO D. BARQUERO<sup>2,3,4</sup>

<sup>1</sup>*Herpetólogos de Nicaragua (Herpetonica).*  
E-mail: herpetonica@gmail.com

<sup>2</sup>*Asociación para la Conservación y el Estudio de la Biodiversidad (ACEBIO), Casa 15, Barrio Los Abogados, Zapote, San José, Costa Rica.*

<sup>3</sup>*Present address: Department of Biological Sciences, Division of Brain, Behaviour and Evolution, Macquarie University, New South Wales 2109, Australia.*

<sup>4</sup>Corresponding author: marcodba@acebio.org, marco.barquero-arroyo@mq.edu.au

Although the number of amphibian and reptile species reported for Nicaragua is lower when compared to other Central American countries, efforts to revert this situation have been increasing during the last decade. Here, we report the first country records of the collared glass-tail snake (*Urotheca decipiens*) and the Costa Rican glass-tail snake (*Urotheca pachyura*), as well as range extensions for the striped glass-tail snake (*Urotheca guentheri*). These findings confirm the suspected presence of the former two species and increase the country distribution of the latter.

The herpetofauna from Central America has

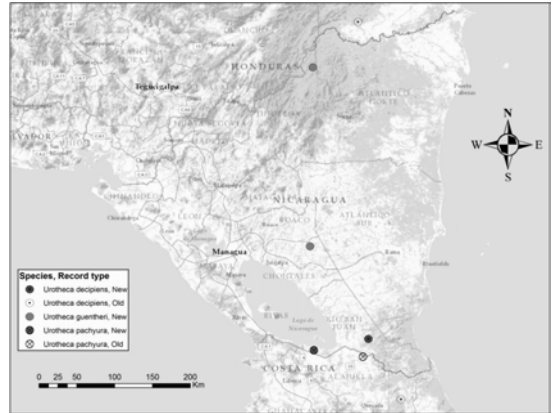


Figure 1. Map of Nicaragua showing the location of new and closest, old records for three species of *Urotheca*.

attracted the attention of many biologists since the 1950's, making this a well explored area. However, exploration in Nicaragua has proven difficult, causing the number of amphibian and reptile species reported for this country to be lower when compared to neighboring countries (Khöler, 2001; Savage, 2002; Ruiz & Buitrago, 2003). Although many species are suspected to occur in Nicaragua, their presence has not yet been confirmed (Sunyer Mac Lennan, 2009) or only a few records are available (HerpNet, 2011). This is the case for snakes of the genus *Urotheca* (Squamata, Colubridae, Dipsadinae), which is composed of 10 species (Savage, 2002), with only two having been recorded in Nicaragua (*U. guentheri* and *U. euryzona*) and two more expected to occur there (*U. pachyura* and *U. decipiens*). Here, we report the first records of the Costa Rican glass-tail snake, *U. pachyura*, and the collared glass-tail snake, *U. decipiens* for Nicaragua. We also report two further records that extend the distribution of the striped glass-tail snake, *U. guentheri*, within Nicaragua.

On 12 August 2005 an adult individual of *U. pachyura* was found at Los Guatuzos Ecological Centre (11°01'50" N, 85°03'12" W, 41 m a.s.l.), Municipality of San Carlos, Río San Juan Department, Nicaragua (Figure 1). This individual (Figure 2a) was found by Marco D. Barquero during a field course and later released at its point of capture. Photographs were deposited (as