

At 0030 on 21 July 2008, during a field expedition to the Los Tuxtlas region, Rancho los Ramos, municipality of San Andrés Tuxtla, Veracruz, Mexico (18.5861°N, 95.1172°W, datum: WGS84; elev. 431 m.) we found an adult *I. cenchoa* feeding on an *Anolis petersii* (Peters' Anole; Fig. 1). After we photographed the snake, it finished swallowing the lizard and moved away.

We thank Mariana Moreno Casper and Uri Omar García-Vázquez for comments and corrections on the manuscript.

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**IMANTODES CENCHOA (Blunt-headed Treesnake). DIET.** *Imantodes cenchoa* is a common Neotropical arboreal snake that ranges from southern Mexico to Argentina. It is recognized for its long slender body and extremely thin neck. Solorzano (2004. Snakes of Costa Rica. Instituto Nacional de Biodiversidad, Santo Domingo de Heredia, Costa Rica. 791 pp.) states that small lizards (e.g., *Norops* and *Dactyloa*) and small frogs are common prey items. Additionally, Henderson and Nickerson (1976. J. Herpetol. 10:205–210) and Landry et al. (1966. J. Ohio Herpetol. Soc. 5:93–101) suggested that *I. cenchoa* may feed on the eggs of lizards but did not provide confirmation of this phenomenon. Here we report two instances of lizard egg predation by *I. cenchoa*.

On 13 November 2006 at 1901 h, in Parque Nacional G. D. Omar Torrijos Herrera, Coclé Province, Panamá, we found a juvenile *I. cenchoa* (SVL = 326 mm, total length = 466 mm, 3.3 g) that contained a small frog of the genus *Craugaster* (0.2 g) and a lizard egg (Polycrotidae; 0.4 g). The prey items totaled 18.2% of the snake's body mass. The prey items and snake were photographed (UTADC 6524–25) and the snake was released. On 8 March 2007 at 2236 h, in Parque Nacional G. D. Omar Torrijos Herrera, we found a female *I. cenchoa* (SVL = 986 mm, total length = 1439 mm, 56.4 g). This snake contained a *Dactyloa frenata* (19.1 g) and a large anole egg (1.3 g). The prey items totaled 36.2% of the snake's body mass. This snake was weak, but crawling along a branch next to the stream. It died soon after capture and when cut open to identify the prey item, the stomach was found to be perforated, presumably by a claw of the *D. frenata*. Photographs of the specimens were deposited at the Amphibian and Reptile Diversity Research Center, University of Texas at Arlington (UTADC 6526–27).

Sources to date have not confirmed the consumption of lizard eggs by *I. cenchoa*. The second snake reported here also contained a lizard in the gut, but the lizard was fully intact, implying that the egg was ingested on a separate occasion. The first snake did not contain any other lizard parts in the stomach, but contained an intact lizard egg. These records suggest that *I. cenchoa* does in fact feed on lizard eggs independent from consumption of lizards.

We thank J. A. Santana, Parque Nacional G. D. Omar Torrijos Herrera, the Smithsonian Tropical Research Institute, Autoridad Nacional del Ambiente (permit numbers SE/A-44-06), National Science Foundation (IBN-0429223, IOB-0519458), and researchers of the TADS Project for assistance, permission, and/or funding. We thank R. C. Jadin, J. W. Streicher, and J. A. Campbell for depositing the digital images at UTA.

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**LEPTODEIRA SEPTENTRIONALIS POLYSTICTA (Central American Cat-eyed Snake). DIET.** *Leptodeira septentrionalis polysticta* is a nocturnal colubrid that inhabits lowlands up to elevations slightly in excess of 2000 m from Nayarit and southern Veracruz, México, southward to central Costa Rica (Duellman 1958. Bull. Amer. Mus. Nat. Hist. 114:72). This species is known to feed on a wide variety of frogs (adults and eggs), lizards, and small mammals (Cabrer-Guzman et al. 2009. Herpetol. Rev. 40:99; Dehling 2009. Herpetol. Rev. 40:356; Duellman, *op. cit.*).

On 8 July 2008, at 2345 h, we encountered a breeding congregation of several adult *Smilisca cyanosticta* at the edge of an artificial reservoir (3 m × 1 m × 1 m) used for watering cattle along a dirt road near La Perla at Los Tuxtlas, Veracruz, México (18.5634°N, 95.1271°W, datum WGS84; elev. 600 m). We also observed two adult *L. s. polysticta*, one of which was in the process of feeding on a female *S. cyanosticta* (Fig. 1A–D). The snake held the hind leg of the frog and chewed it until the rear fangs were engaged. After three minutes, the frog's movement stopped and the snake swallowed it, starting at the posterior body portion, over the next ten minutes. Another predation event involving these species was observed several days later at the same location. This is the first record of *S. cyanosticta* in the diet of *L. septentrionalis*.

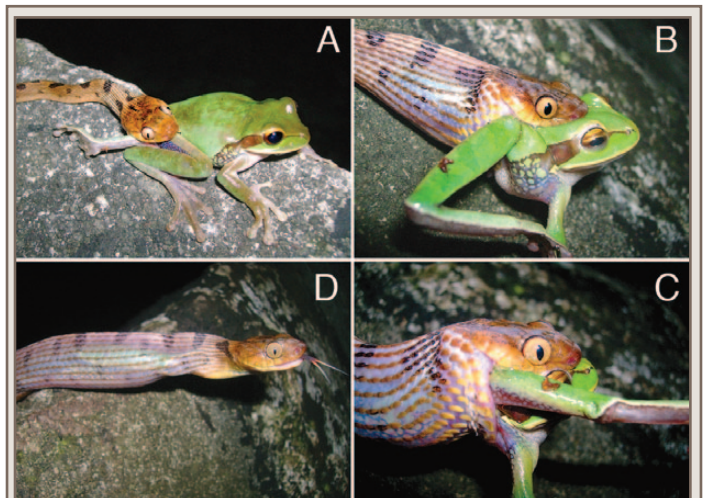


FIG. 1. *Leptodeira septentrionalis polysticta* feeding sequence on a female *Smilisca cyanosticta*, Los Tuxtlas, Veracruz, México. Photos by Alfonso Hernández Ríos.

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**NERODIA FASCIATA FASCIATA (Banded Watersnake). INTERWETLAND MOVEMENT.** Although many animals regularly display seasonal migrations or periodic long-distance dispersal, few instances of long-distance movements by snakes have been

reported (Browne and Bowers 2004. *Landscape Ecol.* 19:1–20; Roe and Georges 2007. *Biol. Conserv.* 135:67–76). Notable exceptions to this generalization are Australian Water Pythons (*Liasis fuscus*), which undertake up to 12 km seasonal migrations between floodplain and high-ground habitats (Madsen and Shine 1996. *Ecology* 77:149–156) and long-distance “wandering” of snakes displaced by humans (e.g., Plummer and Mills 2000. *J. Herpetol.* 34:565–575; Reinert and Rupert Jr. 1999. *J. Herpetol.* 33:45–61). *Nerodia fasciata* is a mid-sized natricine snake that is ubiquitous in the southeastern USA, occurring in virtually all aquatic habitats (Gibbons and Dorcas 2004. *North American Watersnakes: a Natural History*. Univ. Oklahoma Press, Norman. 438 pp.). Although this species is often abundant in isolated wetlands, these habitats may become unsuitable for aquatic snakes when severe droughts render them dry, sometimes for years at a time (Willson et al. 2006. *Wetlands* 26:1071–1078). Large numbers of *N. fasciata* captured leaving wetlands at the onset of droughts (Seigel et al. 1995. *Herpetologica* 51:424–434) have suggested that these snakes may emigrate overland to more permanent wetlands to escape drought conditions, but how far snakes travel and whether or not they successfully reach other aquatic habitats has not been confirmed. Here we report two *N. fasciata* that successfully moved long distances (> 3 km) between wetlands in response to drought.

Between February 2003 and June 2007, two of us (JDW and CTW) captured and marked over 900 individual *N. fasciata* at Ellenton Bay, a large Carolina bay wetland located on the Department of Energy's Savannah River Site in Aiken Co., South Carolina, USA. Ellenton Bay dried partially in the summer of 2006 and fully in June 2007. In 2007, one of us (TML) captured two marked *N. fasciata* in trashcan traps (Luhring and Jennison 2008. *J. Fresh. Ecol.* 23:445–450) at Dry Bay, a Carolina bay with a longer hydroperiod, located approximately 3.1 km N of Ellenton Bay. Both animals had been originally captured and marked with medical cautery units (Winne et al. 2006. *Herpetol. Rev.* 37:52–54) at Ellenton Bay. The first *N. fasciata* was a male (SVL = 449 mm; 94 g), originally captured on 20 September 2005 in a plastic minnow trap within Ellenton Bay. It was captured three more times between 22 and 28 September 2005 at Ellenton Bay, prior to being captured 22 months later on 21 July 2007, at Dry Bay (SVL = 488 mm; 102 g). The second snake was a female (SVL = 603 mm; 170 g), originally captured on 1 April 2003 in a box trap along a terrestrial drift fence surrounding Ellenton Bay as it attempted to enter the wetland following a previous extreme drought that lasted from 2000–2003 (Willson et al. 2006. *Wetlands* 26:1071–1078). This snake was recaptured at Dry Bay on 13 September 2007 (SVL = 802 mm; 486 g), 4 years and 5 months after its initial capture. These two snakes represented 4% (2 out of 56) individual *N. fasciata* captured at Dry Bay in 2007 by TML.

These observations provide the first unambiguous evidence that *N. fasciata* move long distances between wetlands in response to drought conditions. Whether this is a case of directed migration between known habitats or the chance outcome of undirected dispersal, remains unknown. The majority of the intervening habitat between Ellenton Bay and Dry Bay is forested and relatively undisturbed by development, and includes some (mostly temporary and dry during the 2006–2007 period) wetlands that could have been used during transit. However, in addition to > 3 km of distance, the route between Ellenton Bay and Dry Bay is bisected by a well-traveled two-lane highway (SC Hwy 125) and a large (> 5 m across, > 1 m deep) creek (Upper Three Runs Creek). The motivation required to traverse these obstacles (roads) and potential refuges (creek) suggests that these snakes may have been purposefully seeking refuge at Dry Bay.

This interpretation is supported by the fact that other *Nerodia* use wetland complexes on a landscape scale; Copperbelly Watersnakes (*N. erythrogaster neglecta*) regularly move between ephemeral wetlands under normal environmental conditions (Roe et al. 2004. *Biol. Conserv.* 118:79–89). Additionally, at least three species of freshwater turtles have been documented moving between Ellenton Bay and Dry Bay in the past (Buhlmann and Gibbons 2001. *Chelon. Conserv. Biol.* 4:115–127). Neither snake has been recaptured at either location since 2007, leaving unresolved the question of whether the snakes attempted to return to Ellenton Bay when normal water levels resumed.

We thank J. Whitfield Gibbons, Michael E. Dorcas, and John H. Roe for commenting on the manuscript. Snakes were captured under scientific research permits 56-2003, 07-2004, G-05-03, G-06-04, and G-07-03 from the South Carolina Department of Natural Resources. Funding for this research was provided by the American Museum of Natural History (through a Roosevelt Memorial Fund awarded to TML) and the Savannah River Ecology Laboratory under Financial Assistance Award DE-FC09-96SR18-546 between the University of Georgia and the U.S. Department of Energy.

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#### **PSEUDOLEPTODEIRA URIBEI (Uribe's False Cat-eyed Snake).**

**REPRODUCTION.** The genus *Pseudoleptodeira* is endemic to Mexico and presently includes two species. The more recently described species, *P. uribei*, is known from a small series of individuals collected in the state of Jalisco (Ramirez-Bautista and Smith 1992. *Bull. Maryland Herpetol. Soc.* 28:83–98) and subsequent reports on individuals from the states of Guerrero (García and Ceballos 1994. *Field Guide to the Reptiles and Amphibians of the Jalisco Coast, Mexico*. Fund. Ecol. Cuixmala, A.C., Inst. Biol. U.N.A.M., Mexico City, 184 pp.), Michoacán (Mijangos et al. 2007. *Herpetol. Rev.* 37:500), and Colima (Reyes-Velasco et al. 2009. *Herpetol. Rev.* 40:117–120). Many aspects of natural history remain enigmatic for this species. Herein we present, to the best of our knowledge, the first formal report of clutch size in a *P. uribei*.

On 6 July 2009 at 2308 h, we found a gravid female *P. uribei* dead on a road near the city of Ixlahuacán, municipality of Ixlahuacán, Colima, Mexico (19.02558°N, 103.78031°W, datum WGS 84; elev. 309 m). Because of vehicular injuries we were unable to obtain a precise measurement of body size, but conservatively estimate that the animal was over 60 cm total length. The adult female *P. uribei* contained six undamaged eggs which when measured with a digital caliper following preservation in 10% formalin had a mean length of 28.05 mm ( $\pm 2.09$  SD) and a mean width of 11.32 mm ( $\pm 1.67$  SS). Our identification was verified by Jacobo Reyes-Velasco and the specimen and its eggs are deposited in the herpetological collection of the University of Texas at Arlington (UTA R-57503; Field ID, JAC 30668).

Collection and exportation were conducted under SEMARNAT license numbers FAUT-0015 and SGPA/DGVS/8002, respectively. Funding was provided by NSF grant DEB-0613802 to J. A. Campbell.

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