Fɪɢ. 1. Female Tropical Tree Lizard (*Urosaurus bicarinatus*) with tail bifurcation found near La Soledad, Oaxaca, México.

California, 353 pp.; Clark 1973. HISS News-J. 1:158). Bifurcated or multiple tail regeneration cases have been published for many species of lizards, including members in the family Phrynosomatidae (see Cordes and Walker 2013. Herpetol. Rev. 44:319; Gogliath et al. 2012. Herpetol. Rev. 43:129; Kumbar and Ghadage 2011. Herpetol. Rev. 42:94; Mata-Silva et al. 2010. Herpetol. Rev. 41:352–353; Mitchell et al. 2012. Herpetol. Rev. 43:650; Tamar et al. 2013. Herptol. Rev. 44:135–136, and citations therein). To the best of our knowledge this is the first report of tail bifurcation in *U. bicarinatus*.

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VICENTE MATA-SILVA, Department of Biological Sciences, The University of Texas at El Paso, El Paso, Texas 79968, USA (e-mail: vmata@utep.edu); **ARTURO ROCHA**, Department of Biological Sciences, El Paso Community College, El Paso, Texas, USA (e-mail: turyrocha@yahoo.com); **JERRY D. JOHNSON**, Department of Biological Sciences, The University of Texas at El Paso, El Paso, Texas 79968, USA (e-mail: jjohnson@utep.edu); **LARRY DAVID WILSON**, 16010 S. W. 207th Avenue, Miami, Florida 33187, USA, and Centro Zamorano de Biodiversidad, Escuela Agrícola Panamericana Zamorano, Depto. Francisco Morazán, Honduras (e-mail: bufodoc@aol.com).

VARANUS GLEBOPALMA (Black-palmed Monitor). **NOCTURNAL ACTIVITY AND FORAGING**. Monitor lizards are thought to be diurnal, based on a body of ecological research and on eye structure. Studies of the eye structure of *Varanus exanthematicus* and *V. griseus* have suggested that prey capture in these species is reliant on visual cues, based on the presence of cone cells in the eyes (Bhattacharjee 1992. Exp. Eye Res. 55:243; Röll and Horn 2000. Mertensiella 2:291–306). The morphological similarity of monitor lizards led Röll and Horn (*op. cit.*) to conclude that all *Varanus* species possess the same or similar eye structure and therefore all are diurnal.

However, a number of observations suggest that some monitor lizards occasionally undertake crepuscular and/or nocturnal activity. Of the 53 known species of monitor lizards, field observations of crepuscular or nocturnal activity have been recorded in nine species (*V. spenceri, V. panoptes, V. tristis V. glebopalma, V. rosenbergi, V. melinus, V. glauerti, V. salvator, and V. dumerilli*), and six species in captivity (*V. acanthurus, V. giganteus, V. indicus, V. keithhorni, V. mertensi, and V. varius*) (Bohme and Ziegler 1997. Herpetofauna 19:26–34; Cota et al. 2008. Biawak 2:152–158; Fyfe 1980. Herpetofauna 12:15; Irwin et al. 1996. Herpetofauna 26:50; Irwin et al. 1996. Herpetol. Rev. 27:192–194; Jones 1998. Herpetofauna, 28:50; Rokylle 1989. Herpetofauna 7:4–8; Trembath 2000. Herpetofauna 30:52; Uyeda et al 2013. Biawak 7:25–30; Valentic 1995. Herpetofauna 25:49–50; Yong et al. 2008. Nature in Singapore 1:21–22).

In particular, there are several reports of crepuscular activity in *V. glebopalma*. Christian (1977. Victoria Herpetol. Soc. Newsl. 6:11–13) suggested that *V. glebopalma* does most of its foraging during the first couple of hours after sunset. Wilson and Knowles (1988. Australia's Reptiles: A Photographic Reference to the Terrestrial Reptiles of Australia. Cornstalk, Pymbie. 447 pp.) stated that "although active by day, it is commonly crepuscular and can often be disturbed foraging just after sundown." Two individuals were spotlighted active at night between 1900 and 2100 h by Shea et al (1988. West. Austral. Herpetofauna 18:16), and Valentic (1994. South Austral. Herpetol. Group Newsl. 87:11) observed an individual active in twilight period (1830–1900 h) catching and swallowing prey. It was thus surprising that the only quantitative study on *V. glebopalma* resulted in a lack of nocturnal behavior. In a radio-telemetry study of the spatial ecology of *V. glebopalma*, Sweet (1999. Mertensiella 2:317–366) failed to record any crepuscular or nocturnal activity other than specimens that had been disturbed after dark, despite considerable effort to support previous accounts. Sweet concluded that previous observations of nocturnal/crepuscular activity were a result of the animal being disturbed by the observer. It is only through the continual documentation of observations that we can fully understand the apparent disparity between these findings. This note presents two further observations of nocturnal activity from *V. glebopalma* in tropical northwestern Australia.

At 2300 h on 6 May 2012, an adult male *V. glebopalma* (SVL 253 mm, TL 751 mm) was observed moving across a large flat rock approximately 0.5 m in height and through a clump of spinifex grass. The animal continued to move for another 8 m across another flat section of rock where it was captured. At the time of the observation, there was a full moon and little to no cloud cover. Although the surrounding area was being burned by a small, slow moving fire, the nearest fire front was 300 m from the animal's location. However, it is possible that the animal detected the fire through olfaction from its roost. In a second observation, while spotlighting at approximately 1950 h 28 June 2012, a frog's alarm call drew the attention of observers to a rocky area on the side of a sandstone gorge. Upon closer inspection a *V. glebopalma* was observed for 15 minutes feeding on a frog (unidentified *Litoria* sp.). When observers moved closer to confirm the species of frog, the animal became wary and swallowed the frog prior to retreating into a hole among fallen rocks and boulders. A short search failed to relocate the animal. The temperature at the time of observation was 19.5°C. Sunset that night occurred at 1722 h, and there was a half moon.

Our observations provide further evidence that *V. glebopalma* may forage nocturnally. The lack of crepuscular and nocturnal behavior in Sweet's (*op. cit.*) study may reflect population and/or seasonal variation. Alternatively, observations of nocturnal activity in the species may reflect lizards that were flushed from their roost sites by potential predators (S. Sweet, pers. comm.). However, the growing number of observations suggests that nocturnal behavior occurs in some populations. Interestingly, Sweet (*op. cit.*) noted that *V. glebopalma* adopts a sit and wait, or ambush, foraging strategy that may be unique to monitor lizards. This strategy may allow *V. glebopalma* to forage during low light

conditions. Investigations into the eye structure of *V. glebopalma* should be undertaken to test for any differences between this and other species of monitor lizards.

DAVID RHIND, Department of Anatomy and Developmental Biology, Monash University, Clayton, Victoria, Australia, 3800 (e-mail: darhi1@student. monash.edu); **J. SEAN DOODY**, Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, Tennessee, USA (e-mail: jse-andoody@gmail.com); **RYAN ELLIS**, Department of Terrestrial Zoology, Western Australian Museum, 49 Kew Street, Welshpool, Western Australia, Australia 6106 (e-mail: r.ellis87@hotmail.com); **AMY RICKETTS**, El Questro Wilderness Park, PO Box 909, Kununurra, Western Australia, Australia 6743 (e-mail: aricketts@dncinc.com.au); **GAVIN SCOTT**, El Questro Wilderness Park, PO Box 909, Kununurra, Western Australia, Australia, 6743, Australia (e-mail: gavin.scott.photos@gmail.com); **SIMON CLULOW**, School of Environmental and Life Sciences, University of Newcastle, Callaghan, New South Wales, Australia 2308 (e-mail: simon.clulow@newcastle.edu.au); **COLIN McHENRY**, Department of Anatomy and Developmental Biology, Monash University, Clayton, Victoria, Australia, 3800 (e-mail: colin.mchenry@monash.edu).

SQUAMATA — SNAKES

***CHILOMENISCUS STRAMINEUS* (Variable Sandsnake). ENDO-PARASITES.** *Chilomeniscus stramineus* occurs in two disjunct populations. The eastern population ranges from southwestern Arizona, south through western Sonora, Mexico to northern Sinaloa, Mexico; the western population is restricted to Baja California (Grismer 2002. Amphibians and Reptiles of Baja California Including its Pacific Islands and the Islands in the Sea of Cortés. Univ. Calif. Press, Berkeley. 399 pp.). To our knowledge there are no helminths reported from *C. stramineus*. The purpose of this note is to establish the initial helminth list for *C. stramineus* as part of an ongoing survey of the helminths of reptiles from Baja California.

The coelomic cavity of one male *C. stramineus* (SVL = 203 mm) collected at 24 km S Loreto (26.0167°N, 111.3500°W, datum: WGS84), Baja California Sur, Mexico in January 1974 and deposited in the herpetology collection of the Natural History Museum of Los Angeles County (LACM), Los Angeles, California, USA as LACM 138142 was examined. Two oval shaped whitish endoparasites ca. 2 mm in length, found in the body cavity, were studied under a dissecting microscope. Based on body shape, pseudoannulation, and hook root morphology, the parasites were identified as an oligacanthorhynchid acanthocephalan cystacanth. It was deposited in the United States National Parasite Collection, Beltsville, Maryland, USA as USNPC 106939. Acanthocephalans require an arthropod intermediate host in which the cystacanth develops (Kennedy 2006. Ecology of the Acanthocephala. Cambridge Univ. Press, Cambridge, UK. 249 pp.). *Chlomeniscus stramineus* likely become infected with cystacanths when feeding on infected insects (Grismer, *op. cit.*). Because development beyond the cystacanth does not occur, snakes likely serve as paratenic (= transport) hosts. *Chlomeniscus stramineus* represents a new host record for oligacanthorhynchid acanthocephalan cystacanths.

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STEPHEN R. GOLDBERG, Whittier College, Department of Biology, Whittier, California 90608, USA (e-mail: sgoldberg@whittier.edu); **CHARLES R. BURSEY**, Pennsylvania State University, Shenango Campus, Department of Biology, Sharon, Pennsylvania 16146, USA (e-mail: cxb13@psu.edu); **JEANETTE ARREOLA**, Whittier College, Department of Biology, Whittier, California 90608, USA (e-mail: jarreola@poets.whittier.edu).

***CROTALUS ADAMANTEUS* (Eastern Diamondback Rattlesnake). ANTI-PREDATOR BEHAVIOR.** Snakes exhibit a variety of defensive behaviors when confronted with potential predators. Among rattlesnakes, the most common defensive behaviors include fleeing, coiling, head hiding, body bridging, body flattening, hissing, tongue-flicking, discharging scent gland secretions, vibrating the tail (rattle), and striking (Klauber 1972. Rattlesnakes: Their Habits, Life Histories, and Influence on Mankind. Univ. California Press, Berkeley. 1533 pp.; Weldon and Burghardt 1979. J. Chem. Ecol. 5:141–151). Although primarily terrestrial, rattlesnakes are adept swimmers and will enter water readily in order to pursue food, mates and refuge, and to escape harassment or danger (Klauber, *op. cit.*). While defensive/anti-predator behaviors of most rattlesnakes have been well-described (Klauber, *op. cit.*), few if any reports exist regarding anti-predator behavior of rattlesnakes while in water. Here we describe anti-predator behavior exhibited by *C. adamanteus* while swimming.

On 28 December 2003 at approximately 1200 h, we observed an adult (Total Length [TL] ca. 150 cm) *C. adamanteus* swimming across a small lake (25.40005°N, 80.65630°W, datum: WGS84) on Long Pine Key in Everglades National Park, Florida, USA. The snake was swimming along the shoreline approximately 30 m from land with its head elevated and majority of its body, though not the tip of its tail, visible above the water's surface. As the snake continued swimming, it passed an adult (TL ca. 210 cm) *Alligator mississippiensis* (American Alligator) in shallow water along the shoreline. The alligator turned and rapidly began to pursue the snake from directly behind. When the alligator was within approximately 2.5 m of the snake, the snake suddenly stopped swimming and raised the tip of its tail out of the water. The alligator, at this point approximately 1 m from the snake, abruptly stopped swimming and ceased moving towards the snake. Due to a strong breeze and moderate wave action, we were unable to discern if the snake vibrated its tail (and rattle). After approximately 15 sec, the rattlesnake lowered its tail and resumed swimming towards the shoreline. The alligator allowed the snake to open up a distance of approximately 5 m between them before slowly resuming pursuit. However, within approximately 1 min the snake reached the shore and crawled into the adjacent pine forest.

It is unclear what component of the rattlesnake's behavior deterred the alligator from attacking. Rattlesnakes, like many snakes when threatened, discharge scent gland secretions from the cloaca and multiple reports contend that alligators can distinguish between venomous and non-venomous snakes, presumably by chemical cues (McIlhenny 1935. The Alligator's Life History. Ten Speed Press, Berkeley, California. 117 pp.; Neill 1971. Last of the Ruling Reptiles. Columbia Univ. Press, New York. 486 pp.). However, controlled laboratory studies with captive alligators and snakes failed to corroborate this suggestion (Weldon and McNease 1991. Herpetologica 47:403–406). Whether the raised tail of the rattlesnake resulted in a chemical (scent gland secretion), auditory (vibrating rattle), or visual (tail color) cue remains unknown, but the behavior clearly appeared to be a deliberate and effective warning display.

In addition to the observed defensive behavior by the rattlesnake, to our knowledge this is also the first report of attempted predation by *A. mississippiensis* on *C. adamanteus* in the wild. Given that these two species are often sympatric, encounters between these animals are likely not uncommon.

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