

swallowed the *R. malabaricus*. To our knowledge, this is the first prey item for *D. grandoculis* to be reported at the species level. It is likely that *D. grandoculis* also preys on other sympatric arboreal anurans of the genera *Polypedates*, *Raorchestes*, and *Pseudophilautus*.

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DENDRELAPHIS GRANDOCULIS (Large-eyed Bronzeback Tree Snake). REPRODUCTION and CLUTCH SIZE. *Dendrelaphis grandoculis* is an arboreal colubrid endemic to the Western Ghats of India (Whitaker and Captain 2004. Snakes of India: The Field Guide. Draco Books, Chennai, India. 495 pp.). Beyond the fact that *D. grandoculis* is oviparous (Uetz et al. 2019. The Reptile Database. <http://www.reptile-database.org>, accessed 26 Sept 2019), little is known regarding this snake's reproductive ecology. Here, we present the first report on the clutch size of *D. grandoculis*.

On 1 March 2019, we found a gravid female *D. grandoculis* DOR in the vicinity of Vattehalli, Karnataka, India (13.51384°N, 75.11047°E; WGS 84). Many of the eggs had prolapsed out of the body cavity, presumably after the snake was struck by a vehicle. We counted a total of nine ova, of which at least four appeared to be comparatively larger than the others and ovate in shape (Fig. 1). To our knowledge, this is the first report on the clutch size of *D. grandoculis*. Further research on the reproductive ecology of this cryptic snake species is warranted.

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FIG. 1. Deceased gravid female *Dendrelaphis grandoculis* with nine ova.

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FDIADOPHIS PUNCTATUS EDWARDSI (Northern Ring-necked Snake). COLORATION. *Diadophis punctatus edwardsi* is a small-bodied subspecies found in the northeastern and mid-Atlantic regions of the United States. It typically has a bluish gray to black dorsal coloration and a bright yellow to orange ventral. Axanthism in reptiles is a rare recessive mutation caused by lack of xanthophores, erythrophores, and iridophores (Browder 1968. J. Hered. 59:163–167) known to produce yellow, orange, and red pigments in the skin. The aberrations are characterized by a bluish to grey

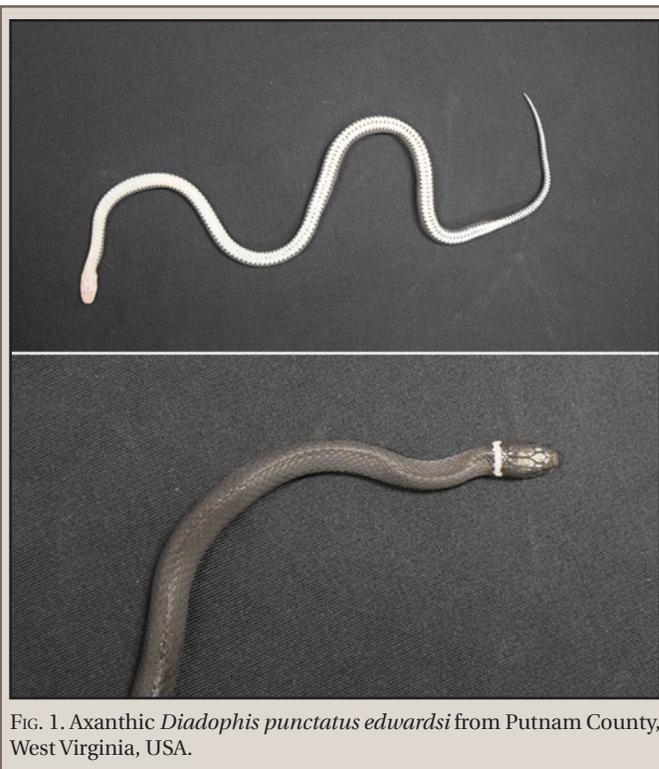


FIG. 1. Axanthic *Diadophis punctatus edwardsi* from Putnam County, West Virginia, USA.

dark body color, dark eyes, and white expressed in areas in lieu of yellow, orange, or red (Bechtel and Bechtel 1989. J. Hered. 80:272–276). Genetic mechanisms and environmental factors (e.g., pollution, temperature fluctuations, etc.) could potentially explain the development of axanthism (Dubois 1979. Mitteilungen aus dem Zoologischen Museum in Berlin 55:59–87; Caballero et al. 2012. J. Exp. Zool. 318:209–223).

An axanthic adult male *D. p. edwardsi* (31.5 cm SVL, 39.4 mm total length, 12 g, 1.2 cm cranial length, 0.6 cm cranial width) was collected 18 May 2019 in Fraziers Bottom, Putnam County, West Virginia, USA (38.52766°N, 82.21447°W; WGS 84) from underneath a discarded sheet of tin near an abandoned structure. The captured individual exhibited a white dorsal ring and ventral side instead of the species characteristic yellow to orange dorsal ring and ventral (Fig. 1). The snake was released at the site of capture. To our knowledge this is the first axanthic *D. p. edwardsi* to ever be reported.

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FARANCIA ABACURA (Red-bellied Mudsnake). OVERLAND MOVEMENT. For some animals, migration or dispersal is a necessity for reproduction, feeding opportunities, or increased survival (Dingle and Drake 2007. Bioscience 57:113–121). However, there have been few observations of migration or long-distance movements by snakes (Browne and Bowers 2004. Landscape Ecol. 19:1–20). *Farancia abacura* is a stout-bodied, semiaquatic colubrid snake endemic to the southeastern United States (McDaniel and Karges 1983. Cat. Am. Amphib. Rept. 314:1–2). Due to its low densities and decreased detectability attributable to its aquatic habits, little is known about its life history (Durso et al. 2011. Biol. Conserv. 144:1508–1515). *Farancia abacura* undertake terrestrial movements to lay eggs and to hibernate below ground or under

woody debris near aquatic habitats (Steen et al. 2013. *Herpetol. Rev.* 44:208–213). Other observations of overland movement have been noted during times of drought or periods of increased rainfall (Hellman and Telford 1956. *Copeia* 1956:257–258; Willson et al. 2006. *Wetlands* 26:1071–1078). Across the southeastern United States, *F. abacura* overland movements average 62 m from the nearest body of water (range: 26–1288 m; Steen et al. 2013, *op. cit.*). Here, we contribute to the few observations documenting overland movement of *F. abacura* in Texas.

On 19 June 2019, in Trinity County, Texas (31.3050°N, 94.9362°W; WGS 84; 75 m elev.), one male *F. abacura* (475 mm SVL, 59 mm tail length, 63 g) was captured in a boxtrap located 159 m from a permanent pond. This pond is located on a crest of a hill in an upland that is adjacent to an ephemeral drainage (31.3027°N, 94.9375°W; WGS 84; 75 m elev.). The boxtrap was located north of the pond at the hill's toe-of-slope near a dry stream bed. The surrounding understory vegetation consists of *Callicarpa americana* (American Beautyberry), *Rubus* spp. (Blackberry), *Liquidambar styraciflua* (American Sweetgum), *Myrica cerifera* (Southern Wax Myrtle), as well as a diversity of herbaceous vegetation and woody debris. With this observation, it can be noted that this *F. abacura* was well over the average distance of 62 m from a waterbody (Steen et al. 2013, *op. cit.*). Also, the temporal window of this observation was consistent with prior observations of terrestrial movements of *F. abacura* in east Texas (Steen et al. 2013, *op. cit.*). In this case, this observation adds to the growing observations on the terrestrial ecology of this semiaquatic snake.

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FOWLEA PISCATOR (Checkered Keelback). DIET. *Fowlea piscator* (formerly *Xenochrophis piscator*; Purkayastha et al. 2018. *Zootaxa* 4514:126–136) is a medium-sized natricine snake that occupies the majority of southern and southeastern Asia (Uetz et al. 2019. The Reptile Database. <http://www.reptile-database.org>, accessed 3 Aug 2019). It is known to primarily feed on fish, amphibians, and arthropods (Hossain 2016. *Bangladesh J. Zool.* 44:153–161) but will also occasionally eat rodents and birds (Whitaker and Captain 2004. *Snakes of India, The Field Guide*. Draco Books, Chennai, India. 495 pp.). Herein, I report observations of *F. piscator* feeding on the eggs of *Rhacophorus malabaricus* (Malabar Gliding Frog), a species endemic to the Western Ghats.

Rhacophorus malabaricus is a tree frog that reproduces by constructing foam nests over standing water (Kadadevaru and Kanamadi 2000. *Current Science* 79:377–380). During the monsoon season (June–August), many pairs of *R. malabaricus* spawn on the walls of a 3 × 1 m rectangular water trough at the Agumbe Rainforest Research Station in Agumbe, Karnataka, India (13.5182°N, 75.0888°E; WGS 84). At ca. 2230 h on 23 June 2019, I observed an *F. piscator*, ca. 30 cm in length, preying on a foam nest on the wall of the water trough. The snake had its forebody extended upward out of the water and it was feeding on *R. malabaricus* eggs with its head in the foam. When I shined my flashlight on it, it retracted its head from the foam, at which point I took a photograph (Fig. 1). To my knowledge, this behavior has only been observed once before, in Amboli, Maharashtra, India (V. Giri, pers. comm.). Here, an *F. piscator* was seen climbing a small branch of a tree, which was overhanging a small puddle, ca. 1 m above the water's surface. The snake eventually went to feed



FIG. 1. *Fowlea piscator* with a *Rhacophorus malabaricus* foam nest that it was preying in Karnataka, India.

on an egg nest of *R. malabaricus*. When the observer decided to take a photo of this behavior, the snake dove into the water.

The nests of *R. malabaricus* represent a seasonal food source for Lion-tailed Macaques (*Macaca silenus*) and many species of arthropods (Vasudevan and Dutta 2000. *Hamadryad* 25:21–28) and likely represent the same for opportunistic predators like snakes. Further studies may potentially reveal that other Indian snake species take advantage of this food source as well, in much the same way that Neotropical snakes of the genera *Leptodeira* and *Leptophis* predate the eggs of *Agalchynis callidryas* (Caldwell et al. 2010. *Anim. Behav.* 79:255–260.). Whether the eggs of *R. malabaricus* have evolved to hatch early in response to snake predation, as have the eggs of Neotropical frogs (Warkentin 2005. *Anim. Behav.* 70:59–71), remains unknown.

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GLOYDIUS SAXATILIS (Rock Mamushi). DICEPHALISM. Dicephalism has been documented in numerous snake species (Wallach 2007. *Bull. Maryland Herpetol. Soc.* 43:57–95). In the



FIG. 1. Dorsal (A) and ventral (B) views of the dicephalic juvenile *Gloydius saxatilis* (EWNHM-ANIMAL 6454).