

Mammal 24:346–352), is often difficult to distinguish from normal home range movements, but on occasion, it can be clearly recognized as in the following case.

We radiotracked an adult male *Farancia abacura* (770 mm SVL) from April–October 2018 in a small, isolated wetland pond on the Gilliam Biological Research Station of Harding University in Searcy, Arkansas, USA. Whereas most movements were relatively short (<40 m) multi-directional movements confined within a well-defined 0.95 ha Minimum Convex Polygon home range in the pond (Plummer et al. 2020. Herpetol. Conserv. Biol. 15:160–168), a distinct subset of movements was composed of sequential long-distance unidirectional movements along a single trajectory that took the snake out of the pond. From 4 April to 18 May 2018 the male confined its movements to its home range, but on 19 May, the snake left its home range and moved 185 m northeast followed by another 137 m the following day along the same trajectory. The movements took the snake 125 m north of the pond basin in a small ephemeral stream that discharged into the pond. Over the next two weeks, the male moved <10 m/day around a central location. On 7 June, the snake settled into an underground shelter site composed of a cluster of tree roots, soil, and herbaceous vegetation that partially bridged the stream. The snake remained in the shelter site for the next two weeks during which time the stream mostly dried, leaving a small adjacent pool as the nearest standing water. On 22 June, the snake left the shelter site and retraced its northeast sally by moving southwest into its pre-sally home range in the pond. The male remained in its home range until 9 August when, remarkably, it made another directional sally that closely paralleled its first sally in direction and speed of travel. The snake also took refuge in the same shelter site in which it had previously taken refuge from 7–22 June. It remained at the shelter site until 18 August when it retraced its movements south to its home range in the pond in which it moved until tracking ceased on 31 October 2018. No other snake of the eight *F. abacura* radiotracked in 2018 left its home range in the pond (Plummer et al. 2020, *op. cit.*). As is typical when radiotracking the extraordinarily secretive *F. abacura* (Plummer et al. 2020, *op. cit.*), at no time during the two sallies did we directly observe the snake.

Why the male *F. abacura* repeatedly moved to a specific shelter location is unknown. One possibility is that the snake sought a specific site to shed its skin. Another possibility is that the rapid directional behavior resulted from a male trailing the scent of an unseen female (Ford 2000. Chem. Signals Verts. 4:261–278). Individual snakes are known to repeatedly use a specific shelter site because of the presence of other individuals (Whitaker and Shine 2003. Herpetol. Monogr. 130–144). We knew of at least one other *F. abacura*, a 875 mm SVL adult female, that used the same shelter site. We tracked the female from the pond to the site where she was found on six days between 28 April and 17 May 2019 (Plummer et al. 2020. Wetlands 40:2489–2398).

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FARANCIA ERYTROGRAMMA (Rainbow Snake). PLASTIC MESH ENTANGLEMENT. Plastic mesh deployed for soil erosion control has been demonstrated to be a particular hazard to



FIG. 1. Adult *Farancia eryrogramma* in South Carolina, USA, that died from exposure after entanglement in plastic mesh used for soil erosion control.

snakes (Kapfer and Paloski 2011. Herpetol. Conserv. Biol. 6:1–9; Ward et al. 2020. J. Soil Water Conserv. 75:82A–87A). Plastic mesh has been found to be responsible for mortality in numerous snake species (Walley 1963. Herpetologica 19:216; Bonine et al. 2004. Herpetol. Rev. 35:176–177; Barton and Kinkead 2005. J. Soil Water Conserv. 60:33A–35A; Walley et al. 2005. J. Kansas Herpetol. 16:26–28; Low 2005. J. Kansas Herpetol. 13:9; Iverson and Durso 2018. Herpetol. Rev. 49:754; Kapfer and Paloski 2011, *op. cit.*, and references therein) and large-bodied snake species are at greater risk of entanglement (Ebert et al. 2019. Wildl. Soc. Bull. 43:231–237).

At 0900 h on 10 November 2020, AL discovered a recently deceased adult male *F. eryrogramma* (702 mm SVL, 859 mm total length) entangled in soil erosion mesh in a suburban neighborhood in Myrtle Beach, Horry County, South Carolina, USA (33.7416°N, 78.8281°E; WGS 84; 3 m elev.; Fig. 1). An *Agkistrodon piscivorus* (Cottonmouth), also dead, was tangled in the same mesh. The *F. eryrogramma* was collected and deposited in the North Carolina State Museum of Natural Sciences (NCSM 104642). Our observation adds to the list of species susceptible to the hazards of plastic mesh and underscores the need to use alternative erosion control methods or to modify the method of mesh installation (e.g., by burying the edge; Ward et al. 2020. J. Fish Wildl. Manag. 11:273–278). This is the second observation of *F. eryrogramma* in this area within one year (Durso and Laverick 2020. Herpetol. Rev. 51:618–619), which provides some evidence that tidal creeks remain good habitat capable of supporting populations of *F. eryrogramma*, despite population declines of its preferred prey (*Anguilla rostrata*) elsewhere (Haro et al. 2000. Fisheries 25:7–16).

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GLOYDIUS USSURIENSIS (Ussuri Pitviper). DIET. *Gloydius ussuriensis* is a pitviper inhabiting the Russian Far East, northeastern China, and the Korean Peninsula (Orlov et al. 2014. Russ. J. Herpetol. 21:169–178) that feeds primarily on frogs and other amphibians, but also on small mammals and other animals (Orlov et al. 2002. In Schuett et al. [eds.], Biology of the Vipers, pp. 345–360. Eagle Mountain Publishing, Eagle Mountain, Utah; Orlov et al. 2014, *op. cit.*). Regarding the diet of *G. ussuriensis* populations inhabiting Gapa and Jeju islands,



FIG. 1. *Gloydius ussuriensis* in the process of consuming a *Craseomys regulus* in Baekyang-ri, Chuncheon, Republic of Korea.

Republic of Korea, a previous study has identified following prey species: *Scolopendra subspinipes mutilans* (Chinese Red-headed Centipede), *Hynobius quelpaertensis* (Jeju Salamander), *Kaloula borealis* (Boreal Digging Frog), *Rana uenoii* (Ueno's Brown Frog), *Pelophylax nigromaculatus* (Black-spotted Pond Frog), *Dryophytes japonicus* (Japanese Treefrog), *Amphiesma vibakari ruthveni* (Japanese Keelback), *Scincella vandenburghi* (Smooth Skink), *Crocidura shantungensis* (Asian Lesser White-toothed Shrew), *Sorex caecutiens hallamontanus* (Halla Mountain Shrew), and *Apodemus chejuensis* (Jeju Striped Field Mouse; Kim and Oh 2014. Korean J. Environ. Ecol. 28:657–663). However, the diet of mainland Korean populations is not well documented.

At 2310 h on 10 July 2020, we encountered an adult *G. ussuriensis* (ca. 47 cm total length) in the process of consuming a cricetid rodent in Baekyang-ri, Chuncheon, Republic of Korea (37.81774°E, 127.59125°W; WGS 84; 110 m elev.). The rodent was later identified as *Craseomys regulus* (Korean Red-backed Vole), based on location and the following external morphological characteristics: 1) bicolored tail that is dark brown dorsally, and white ventrally, 2) dorsal pelage brown and ventral pelage light grey (Jo et al. 2018. Mammals of Korea. National Institute of Biological Resources, Incheon, Republic of Korea. 573 pp.). Our observation provides the first record of *C. regulus* as prey of *G. ussuriensis*. Given that *C. regulus* is widespread across the Korean Peninsula (Jo et al. 2018, *op. cit.*), it may be an important prey item for *G. ussuriensis*.

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HEBIUS BEDDOMEI (Beddome's Keelback). **DIET.** *Hebius beddomei* (formerly *Amphiesma beddomei*; Guo et al. 2014. Zootaxa 3873:425–440) is a diurnal natricine snake endemic to the Western Ghats of India from south of Tamhini Ghat, Maharashtra, to parts of Tamil Nadu and South Kerala (Shinde et al. 2020. IRCP Rept. Amphib. 27:109–110). It is known to prefer frogs, but also feeds on small toads (Whitaker and Captain 2004. Snakes of India, The Field Guide. Draco Books, Chennai, India.



FIG. 1. *Hebius beddomei* feeding on a *Fejervarya rufescens* in Karnataka, India.

495 pp.). However, there is insufficient information about the specific prey items recorded in the diet of this snake. Herein, I report an observation of *H. beddomei* feeding on a *Fejervarya rufescens* (Reddish Burrowing Frog). The prey was identified as *F. rufescens* using available literature (Purushotham and Tapley 2011. Froglog 16:2; Biju 2017. Zootaxa 4277:451–490).

At 0850 h on 18 June 2019, I observed an *H. beddomei* feeding on a *F. rufescens* (Fig. 1) on a mud path in the vicinity of Agumbe Rainforest Research Station in Agumbe, Karnataka, India (13.51829°N, 75.08906°E; WGS 84). The snake was swallowing the completely motionless prey feet-first, with more than half of its hind-body engulfed. The snake became wary of my presence and moved into the forest, with the prey still in its mouth. To my knowledge, this is the first report of *F. rufescens* in the diet of *H. beddomei*.

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HEBIUS BOULENGERI (Tai-yong Keelback). **DIET.** *Hebius boulengeri* occurs in China, Vietnam, Laos, Cambodia, and Thailand (David et al. 2013. Zootaxa 3694:301–335). This oviparous, terrestrial, and semi-aquatic species is found in primary and secondary forest at ca. 80–1450 m elev., where it is thought to be diurnal and to feed on amphibians and fishes (Jiang and Lau 2016. *Hebius boulengeri*. The IUCN Red List of Threatened Species 2016: e.T192130A96293644). Here, we report the predation of an adult *Ophryophryne cf. synoria* (O'Regan Mountain Toad) by an adult *H. boulengeri*.

At 2145 h on 19 October 2019, near the Suoi Lanh Stream, within Gung Re Commune, Di Linh District, Lam Dong Province, Langbian Plateau, southern Vietnam (11.45125°N, 108.06285°E, WGS 84; 1200 m elev.), we observed a gravid female *Ophryophryne cf. synoria* being eaten by a *H. boulengeri* (Fig. 1). We captured the snake in process of consuming the toad headfirst on a large rock near the stream. Due to the defensive behavior (body inflation) when attacked and large size of gravid toad, the consumption process was difficult, lasting ca. 20 min. This adds to the very limited knowledge of diet and natural history of the genus *Hebius*.