



FIG. 3. Eggshells from failed nest of *Heterodon simus*, Scotland County, North Carolina, USA.

and no longer appeared gravid. On 10 August 2020, she was found dead and partially consumed by a predator. The condition of the remains suggested a raptor.

We suspected eggs had been deposited in the burrow the snake used for the longest period (6 June–14 July). From 25 August–5 October, a hardware cloth nest protector was placed over that burrow, as well as over each of the four additional burrows known to have been used between 6 June and 1 August. Each burrow was monitored daily. No indications of hatching or emergence were noted. On 31 October 2020, we carefully excavated the most-utilized burrow. A nest chamber was located off a side tunnel ca. 61 cm lateral distance from the burrow entrance. The chamber measured ca. 7 × 7 cm and was situated at the interface of the topsoil and roots of a tussock of *A. stricta* and the underlying layer of sandy soil (Fig. 2). The bottom of the chamber was ca. 25 cm below the surface. The chamber contained six non-adherent eggshells in an advanced state of degradation; none appeared to have hatched (Fig. 3). Although it was difficult to determine the precise number of ova visible in the radiograph, it was clearly more than six and may have been greater than 13. It is possible that some eggs were either reabsorbed or never developed fully, were infertile or otherwise deteriorated completely before we discovered the nest chamber, were deposited in another location, or were consumed by an underground predator. JCB and SJH found the shed skin of an adult *Cemophora coccinea copei* (Northern Scarlet Snake), a known reptile egg predator, within ca. 1 m of the nest burrow on 3 July. The remains of the female and eggshells are deposited in the herpetology collection of the North Carolina State Museum of Natural Sciences (NCSM 104650).

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HYDROPHIS PLATURUS XANTHOS (Golfo Dulce Yellow Sea-snake). **HARASSMENT BY DOLPHINS**. Within the true sea snakes (Elapidae: Hydrophiinae), *Hydrophis platurus xanthos* is a recently described subspecies endemic to the inner basin of Golfo Dulce, Costa Rica (Bessesen and Galbreath 2017. ZooKeys 686:109–123). Golfo Dulce is a semi-enclosed embayment with a profound inner basin (>200 m) and effective sill and shallow outer basin that prevent free exchange with the Pacific Ocean masses (Svendsen et al. 2006. Rev. Biol. Trop. 54:147–170). In contrast to black-and-yellow conspecifics residing outside the gulf, the geographically bound *H. p. xanthos* is bright canary yellow with significantly smaller body size (49 cm average total length; Bessesen and Galbreath 2017, *op. cit.*).

At 1239 h on 21 January 2012, two *Tursiops truncatus* (Bottlenose Dolphins) travelling in Golfo Dulce with a larger group broke off and began harassing an adult *H. p. xanthos*. Loose skin covering the snake's body indicated it may have been in the process of ecdysis when it was attacked (Fig. 1). This species employs a knotting behavior to aid shedding (Pickwell 1971. Copeia 1971:348–350; BLB, pers. obs.) which might have attracted the cetaceans. The dolphins tossed the serpent back and forth for 5–7 min in what appeared to be play, and then moved away to follow their group. The snake remained at the surface, knotting itself into a ball. It was netted for brief examination and deemed limp but alive, with teeth marks on the skin, especially around the head and neck (Fig. 1). After being returned to the water, its fate was unknown.

Hydrophis platurus outside Golfo Dulce possess black dorsums with yellow ventral surfaces and black spots or bands on the tail paddle (Bessesen 2012. Herpetol. Rev. 43:22–26). This coloration is considered aposematic as the species possesses neurotoxic venom and appears noxious, having few natural predators (Kropach 1975. In Dunson [ed.], The Biology of Sea Snakes, pp. 185–213. University Park Press, Baltimore, Maryland). Nevertheless, there are reports of *H. platurus* being attacked by octopus (van Bruggen 1961. Basteria 25:73–74), pufferfish (Pickwell et al. 1983. Calif. Fish Game 699:172–177), Lava Gulls (Reynolds and Pickwell 1984. Copeia 1984:786–789), pelicans (Álvarez-León and Hernández-Camacho 1998. Caldasia 20:93–102), Magnificent Frigatebirds (Sheehy et al. 2011. Herpetol. Rev. 42:443), Wood Storks (Solórzano and

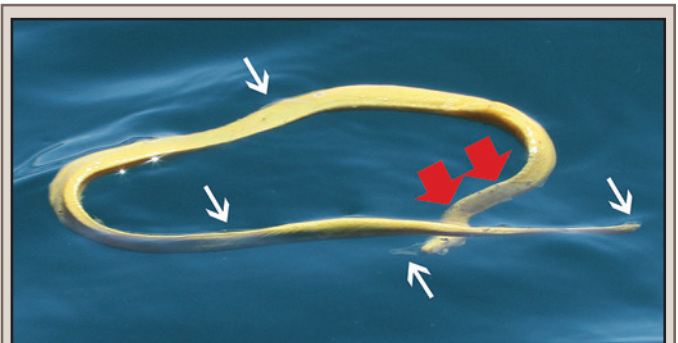


FIG. 1. *Hydrophis platurus xanthos* floating limp in Golfo Dulce, Costa Rica after being tossed around by two *Tursiops truncatus* (Bottlenose Dolphins) and left with multiple tooth marks (red arrows; white arrows point to loosened skin).

PHOTO BY DAVID HERRA-MIRANDA

Kastiel 2015. Mesoam. Herpetol. 2:121–123), and Common Black Hawks (Solórzano and Sasa 2017. Mesoam. Herpetol. 4:431–433), suggesting it is vulnerable to harm by a variety of organisms. Although dolphins apparently do not predate *H. p. xanthos* (Kropach 1975, *op. cit.*), Ineich and Loyer (1998. Bull. Soc. Étud. Océan. 276:86) and Durso et al. (2015. Herpetol. Rev. 46:104) described *T. truncatus* in French Polynesia and Mexico, respectively, playing with one in a similar fashion to our observations. This is the first documented attack on *H. p. xanthos*, but local fishermen have reported seeing dolphins harassing yellow sea snakes on other occasions as well, and it remains unclear whether xanthic coloration has greater or less aposematic effect with respect to marine mammals or other potential assailants.

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LEPTODEIRA NIGROFASCIATA (Black-banded Cat-eyed Snake). DIET. *Leptodeira nigrofasciata* is found along the Pacific versant from Mexico to Costa Rica (Leenders 2019. Reptiles of Costa Rica: A Field Guide. Comstock Publishing Associates, Ithaca, New York. 470 pp.). Rarely encountered, this semi-arboreal snake species is mostly nocturnal, feeding on skinks, anoles, leptodactylid and hylid frogs (Duellman 1958. Bull. Am. Mus. Nat. Hist. 114:1–152; Solórzano 2004. Serpientes de Costa Rica. Instituto Nacional de Biodiversidad, Santo Domingo de Heredia, Costa Rica. 321 pp.). Here, we report the predation of the lizard *Marisora brachypoda* by *L. nigrofasciata*.

On the afternoon of 17 June 2019, in the Heloderma Natural Reserve in the Zacapa Department, Guatemala, we captured an *L. nigrofasciata* by hand and placed it in a cotton bag to hold for photos. While in the bag the snake regurgitated what was later identified as a juvenile *M. brachypoda*. The skink's tail was found separated from the body, most likely occurring after it had been injected. *Marisora brachypoda* is a species of short-limbed skink native to much of Central America, ranging throughout Mexico, Costa Rica, El Salvador, Guatemala, and Nicaragua (Hedges and Conn 2012. Zootaxa 3288:1–244). This species is diurnal and is typically found living in xeric habitats with low vegetation and numerous open basking spots (Leenders 2019, *op. cit.*). Records of predation on *M. brachypoda* by snakes are not well-reported but it may be inferred that most appropriately sized lizard eating snakes would prey upon this species (Hedges and Conn 2012, *op. cit.*). To the best of our knowledge, this is a first report of *L. nigrofasciata* preying upon this species of skink. The snake was released soon after.



FIG. 1. *Leptodeira nigrofasciata* (A) and regurgitated *Mesoscincus managuae* (B) from Zacapa Department, Guatemala.

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LYCODON CAPUCINUS (Common Wolf Snake). ECTOPARASITISM. *Lycodon capucinus* is a common colubrine snake with a wide distribution throughout the Philippines and southeast Asia; it is frequently found in agricultural and residential areas at low elevations (Brown et al. 2013. ZooKeys 266:1–120). Ticks have been recorded parasitizing snakes particularly in captive python, cobras, and rat snakes in India (Catherine et al. 2017. J Parasit Dis. 41:952–958). To our knowledge, there are no records of tick parasitism from Philippine Colubridae.

On 13 February 2017, by a corn field near Mt. Cagua in Barangay Santa Clara, Gonzaga, Cagayan Province, Luzon, Philippines (18.228°N, 122.060°E; WGS 84; 278 m elev.), we found a dead *L. capucinus* with a damaged head (Fig. 1A), likely killed by local residents. Upon preservation, it was found that the snake was being parasitized by a partly engorged tick attached at its anal plate (Fig. 1B), identified as a female *Amblyomma helvolum*. To the best of our knowledge, *L. capucinus* appears to

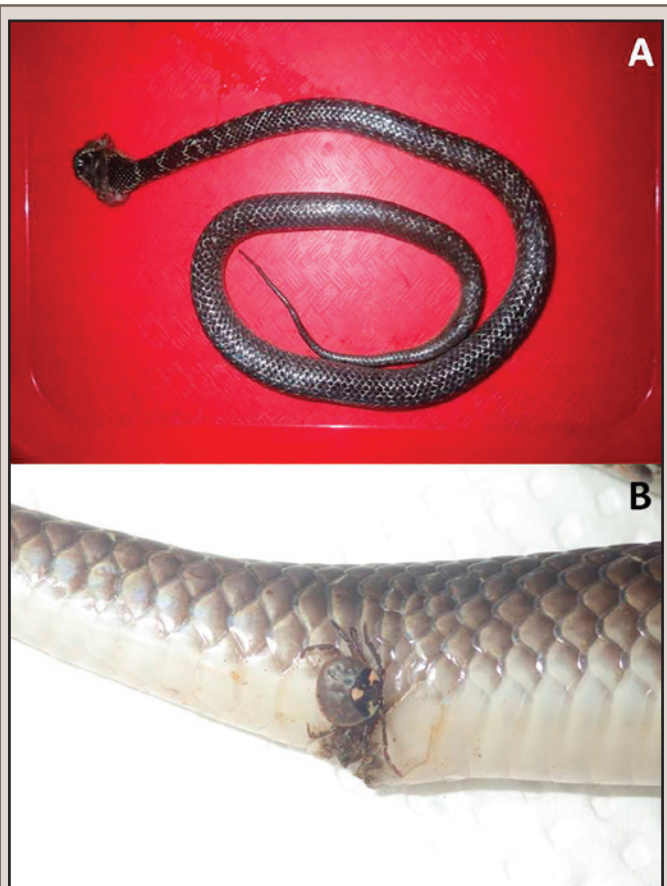


FIG. 1. *Lycodon capucinus* (A) parasitized by female *Amblyomma helvolum* (B) from Luzon Island, Philippines.