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***PANTHEROPHIS SPILOIDES* (Gray Ratsnake). DIET AND MORTALITY.** Snakes are major predators of birds, particularly of their eggs and nestlings (DeGregorio et al. 2014. J. Avian Biol. 45:325–333). As such, snakes frequently face defensive tactics of parent birds while raiding their nests (Fitch 1963. Copeia 1963:649–658). When a snake raids a bird nest and is attacked by the parent(s), outcomes include successful consumption of eggs or nestlings, the parent birds successfully driving off the snake, or both. Perhaps a less likely outcome would be the parent bird(s) killing the snake after the snake had consumed a nestling. Here we report finding a dead *P. spiloides* that was apparently killed by one or more *Picoides villosus* (Hairy Woodpecker), after the snake had consumed a nestling.

At 1302 h on 20 March 2016, we discovered a dead *P. spiloides* in a hardwood bottomland forest in the Bonnet Carre Spillway near New Orleans, Louisiana, USA (30.023996°N, 90.444811°W, WGS 84; 8 m elev.). The snake was on leaf litter at the base of an *Acer negundo* (Box Elder) tree. It had an obvious (bulging) prey item in its stomach, and was freshly killed (it had no foul smell and showed no signs of *rigor mortis*). We dissected the snake with a knife, revealing a nestling *P. villosus* in the stomach (Fig. 1; distinguished from *Dryobates pubescens* [Downy Woodpecker] by the relatively longer bill). The *P. villosus* showed no evidence of being digested other than being wet. Pin feathers indicated that the bird was near fledging. Further inspection of the snake revealed puncture marks that apparently proved fatal. One puncture mark went completely through the body (bloodied holes on either side of the body) and a second puncture that had caved in the top of the skull. There was no evidence of attempted predation on the snake. There were two nest cavities in the tree above the dead snake at heights of 7 m and 8 m. We did not observe any adult birds. The snake was a subadult male (SVL = 76.4 cm, TL = 93.6 cm), based on Blouin-Demers et al. (2002. Can. J. Zool. 256:1–10).

The weight of the evidence suggests that the parent bird(s) killed the snake after it had consumed a nestling, and perhaps as it attempted to consume a second nestling. The snake was found directly below two woodpecker chambers, and the wounds matched those which a woodpecker would inflict; a predator would likely not have abandoned the snake, unless the predator was chased away. An alternative possibility is that a mixed species flock of birds mobbed and killed the snake. For example, Fitch (*op. cit.*) reported Downy Woodpeckers (*Dryobates pubescens*) mobbing *P. obsoletus* (Western Rat Snake) along with up to nine other species of birds. However, while mixed-species mobbing is common (pers. obs.), it rarely includes killing (Lorenz 1966. On Aggression. Harcourt, Brace and World, Inc., New York. 273 pp.). It is also unlikely that any bird species that would not prey upon the snake could inflict the injuries that we observed on the snake.

Predator-prey interactions between rat snakes and nesting woodpeckers appear to be common in North America, and include a diversity of responses. For example, a *Hylatomus pileatus* (Pileated Woodpecker) attacked and probably killed a *P. obsoletus* at the bird's nest (Nolan 1959. Wilson Bull. 71:381–382), and a male *Centurus carolinus* (Red-bellied Woodpecker) successfully defended its nest against a *P. obsoletus* (Boone 1960 *in* Jackson 1970. Wilson Bull. 82:329–330). In two contrasting cases, *C. carolinus* showed limited nest defense as their young were preyed upon by *P. obsoletus* and *P. spiloides* (Stickel 1962. Auk 79:118–119); www.youtube.com/watch?v=Dk2gb3qKsnM). Similarly, a female *Colaptes auratus* (Northern Flicker) perched quietly nearby as a *P. obsoletus* preyed upon three of its nestlings (Jackson, *op. cit.*).

FIG. 1. Dead *Pantherophis spiloides*, showing puncture marks and nestling *Picoides villosus* (Hairy Woodpecker) extracted from its stomach. A deep puncture wound is visible about 7 cm behind the head.

Our observation is the first to document a Hairy Woodpecker apparently killing a nest-raiding *P. spiloides*, and may represent the first record of that species in the diet of *P. spiloides*. Stevenson and Anderson (1994. The Birdlife of Florida. University Press of Florida, Gainesville. 892 pp.) stated that "rat snakes" prey upon Hairy Woodpeckers, but no specific references are given. Fitch (*op. cit.*) reported that birds (mostly eggs and nestlings) comprised 23% of the diet of *P. obsoletus* in Kansas (42% during the peak of bird breeding activity), but did not report woodpeckers. However, based on the anecdotes cited above, and on their shared microhabitat, woodpecker nestlings and eggs, including Hairy Woodpeckers, are likely a common food item of both *P. spiloides* and *P. obsoletus*.

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***PHILODRYAS NATTERERI* (Paraguay Green Racer). DIET.** *Philodryas nattereri* is a medium-sized dipsadine snake that is widely distributed in open landscapes of Brazil and Paraguay, in the Caatinga, Cerrado, and Pantanal biomes (Wallach et al. 2014. Snakes of the World: A Catalogue of Living and Extinct Species. CRC Press, Boca Raton, Florida. 1227 pp.; Smith et al. 2013. Herpetozoa 26:91–94). It is diurnal, mostly terrestrial, and has generalist feeding habits, consuming mainly lizards, small rodents, amphibians, and birds (Vitt 1980. Pap. Avul. Zool. 34:87–98; Guedes et al. 2014. Zootaxa. 3863:1–93). Here we report the second documented event of *P. nattereri* feeding on snakes, and the first of it preying on another species of Dipsadidae.

At 1432 h on 11 July 2005, an adult male *P. nattereri* (SVL = 84.0 cm; tail length = 40.0 cm; 198 g) was collected alive on the grounds of the Seridó Ecological Station, in the municipality of Serra Negra do Norte, state of Rio Grande do Norte, Brazil (6.57944°S, 37.25527°W, SIRGAS-2000; 500 m elev.). When

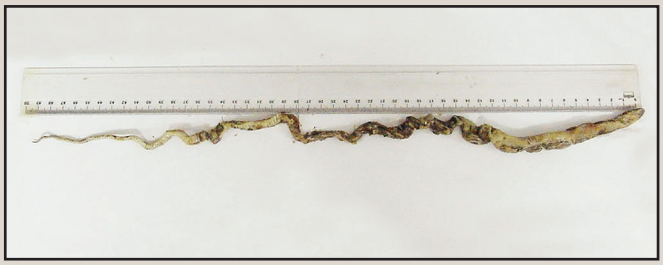

FIG. 1. Specimen of *Leptodeira annulata* removed from the stomach of *Philodryas nattereri*.

dissected, its stomach contained a *Leptodeira annulata* (Banded Cat-eyed Snake), ingested head first. The *L. annulata* was found in an early stage of digestion and had a total length of ca. 50 cm (Fig. 1). *Leptodeira annulata* is a common, arboreal, nocturnal species that is widespread in Latin America (Guedes et al., *op. cit.*; Wallach et al., *op. cit.*). Despite the large and overlapping distribution of both species and the relatively large amount of data on the diet of *P. nattereri* available in the literature (Vitt, *op. cit.*; Vitt and Vangilder 1983. Amphibia-Reptilia 4:273–296), this is only the second report of snake ingestion by this species (first was an *Oxybelis aeneus*; Mesquita et al. 2009. Herpetol. Bull. 108:36–37), which suggests that ophiophagy is rare and perhaps incidental in *P. nattereri*.

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***PITUOPHIS MELANOLEUCUS MUGITUS* (Florida Pinesnake). REPRODUCTION / NEST SITE.** On 24 October 1997, I found a hatchling *Pituophis melanoleucus mugitus* emerging from the soil of an active (i.e., occupied) Gopher Tortoise (*Gopherus polyphemus*) burrow apron in open-canopied and fire-managed xeric Longleaf Pine (*Pinus palustris*) – Wiregrass (*Aristida stricta*) sandhill habitat on Fort Stewart, Evans County, Georgia, USA (32.112943°N, 81.801391°W; NAD 83). The snake (total length = 40.6 cm, still with fresh umbilical scar) was stretched out and stationary when I spotted it, with the anterior half of its body protruding from the sand of the burrow apron. After capturing the snake, I excavated the tunnel (that the snake had occupied) into the burrow apron and at a depth of ca. 20 cm located a cavity containing a clutch of six recently-hatched pinesnake eggs; apparently the other hatchlings had already dispersed. This nest was located in fine, slightly damp sand (the soil type at this locality is Bonifay, a well-drained sandy soil), ca. 75 cm from the entrance of the tortoise burrow; a hatched tortoise nest was also located in the burrow apron, ca. 30 cm from the pinesnake nest. This is the first observation of a *P. m. mugitus* nest in the wild (Krysko et al. *In press*. Amphibians and Reptiles of Florida. University Press of Florida, Gainesville).

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***PLATYCEPS ROGERSI* (Rogers' Racer). REPRODUCTION.** *Platyceps rogersi* occurs in Libya, Egypt, Israel, Jordan, Lebanon, Syria, Iraq, and Saudi Arabia (Bar and Haimovitch 2011. A Field Guide to Reptiles and Amphibians of Israel. Pazbar Ltd., Herzliya, Israel. 246 pp.). *Platyceps rogersi* is mainly diurnal and feeds on lizards and some small mammals (Bar and Haimovitch, *op. cit.)*. Egg deposition occurs in July; a clutch of five eggs is reported for *P. rogersi* in Werner (2016. Reptile Life in the Land of Israel with Comments on Adjacent Regions. Edition Chimaira, Frankfurt am Main. 494 pp.). In this note we present information on the timing of the testicular cycle.

TABLE 1. Monthly stages in the testicular cycle of 10 *Platyceps rogersi* from Israel.

Month	N	Regressed	Late Recrudescence	Spermiogenesis
February	1	1	0	0
April	2	0	1	1
May	2	0	0	2
June	4	0	0	4
September	1	1	0	0

The testes of ten adults and one subadult male of *P. rogersi* from Israel, collected 1952 to 2015, and deposited in the Steinhardt Museum of Natural History (TAUM), Tel-Aviv University, Tel Aviv, Israel were histologically examined. These were by region: Central Negev (TAUM 133, 7668, 8564, 8619, 13245, 15937, 16141, 16904, 17740; Northern Negev (TAUM 17251, 17406). The lower part of the body cavity was opened and the left testis was removed, histological sections were cut at 5 µm and stained by Harris hematoxylin followed by eosin counterstain. Histology slides were deposited at TAUM.

Three stages were noted in the testicular cycle (Table 1): 1) Regressed: seminiferous tubules contain spermatogonia and interspersed Sertoli cells; 2) Late Recrudescence: just prior to sperm formation, germ cells have markedly increased and consist primarily of secondary spermatocytes and spermatids; 3) Spermiogenesis: seminiferous tubules are lined by sperm or rows of metamorphosing spermatids. The presence of 7/8 (88%) of males from April to June) undergoing spermiogenesis (the remaining male exhibited late recrudescence) indicates *P. rogersi* is a spring breeder. The smallest reproductively mature male (spermiogenesis) measured 393 mm SVL (TAUM 8619). One smaller male (TAUM 133) with regressed seminiferous tubules (SVL = 275 mm) was considered to be a subadult. The presence of one September male (TAUM 17740, SVL = 570 mm) with a regressed testis (Table 1) suggests *P. rogersi* does not produce sperm during autumn, although this is the only male we examined from this period. From the above, it appears *P. rogersi* follows a spermatogenesis of mixed type B (*sensu* Saint Girons 1982. Herpetologica 38:5–16) with spermiogenesis and mating in spring.

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