



FIG. 1. *Nerodia sipedon* scavenged by *Limenitis arthemis astyanax*, Mahwah City, New Jersey, USA.

enough to pass through the proboscis and exposed muscle tissue provides both minerals and salts of appropriate size. The snake was scavenged for two consecutive days (90 min/day), either by the same returning individual butterfly or by multiple individuals.

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PANTHEROPHIS SPILOIDES (Gray Ratsnake), **AGKISTRODON PISCIVORUS** (Cottonmouth), **COLUBER CONSTRICTOR** (North American Racer), **THAMNOPHIS PROXIMUS** (Western Ribbon-snake). **AGGREGATION BEHAVIOR.** Observations of multi-species aggregations of snakes are rare (Gregory 2004. *Herpetologica* 60:178–186) and this behavior remains poorly understood. On 8 November 2013 at 0900 h on a clear, cool, sunny morning (12.8°C) at the Turtle Cove Environmental Research Station of Southeastern Louisiana University on Pass Manchac in southeastern Louisiana, USA (30.294034°N, 90.335046°W; WGS84), a group of students flipped several overlapping pieces of 2' x 12' sheets of tin and found six snakes of four species: two *Pantherophis spiloides*, two *Coluber constrictor*, one *Agkistrodon piscivorus*, and one *Thamnophis proximus*. One *P. spiloides* and one *C. constrictor* were entwined and the other *C. constrictor* and *P. spiloides* were in elongate coils less than an inch apart from each other. The *A. piscivorus* was coiled adjacent to the latter four snakes and the *T. proximus* was separated from the others by ~ 1 m.

Multi-species aggregations are rare, as is speculation on why they occur (Gregory et al. 1987. *In* Seigel et al. [eds.], *Snakes: Ecology and Evolutionary Biology*, pp. 366–395. MacMillan Publ. Co., New York; Gregory 2004, *op. cit.*). Heat retention and water loss prevention have been two proposed explanations. In this case we speculate the snakes shared the cover for thermal reasons. We do not know if the snakes sheltered all night there (all the species mostly exhibit diurnal activity), but it would seem plausible that they used the warm tin as shelter overnight and for rapid warming with the morning insolation. Others have noted that individual snakes in multi-species aggregations are never “strongly dissimilar in size” (Gregory 2004, *op. cit.*). However, of the six individuals, the *A. piscivorus* and *T. proximus* were distinctly smaller than the others. The Cottonmouth was a juvenile still in possession of the characteristic lemon-colored tail.

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PITUOPHIS CATENIFERAFFINIS (Sonoran Gophersnake). **DIET.**

Pituophis catenifer affinis is a common species throughout central New Mexico that has been reported to feed primarily on mammals. However, it will opportunistically feed on a variety of prey items including birds (Ernst and Ernst 2003. *Snakes of the United States and Canada*. Smithsonian Books, Washington, D.C. 668 pp.) and bird eggs (Degenhardt et al. 1996. *The Amphibians and Reptiles of New Mexico*. University of New Mexico Press, Albuquerque, New Mexico. 431 pp.), although eggs might be consumed secondarily (Fitch 1999. *A Kansas Snake Community: Composition and Changes over 50 years*. Krieger Publishing Co., Malabar, Florida. 165 pp.). At ca. 1030 h on 27 July 2010, while conducting *Coccyzus americanus occidentalis* (Western Yellow-billed Cuckoo) telemetry studies (Sechrist et al. 2012. *Western Birds* 43:2–11), we recorded a *P. c. affinis* predated a *C. a. occidentalis* nest containing three eggs near The Narrows, Sierra Co., New Mexico, USA (33.2219°N, 107.1048°W; datum WGS84). The nest was located 6.2 m above the ground, nestled in a fork of a live 10.6-m tall *Salix gooddingii* (Gooding's Willow). A remote camera captured a nine-second video of the predation event, although it is likely the event lasted longer. Nest predation was partial; two of three eggs were missing when the camera was removed. The nest was successful in producing one fledgling. To our knowledge, this is the first report of *C. a. occidentalis* nest predation by *P. c. affinis*. We thank the Albuquerque Area Office of the Bureau of Reclamation for funding.

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REGINA SEPTEMVITTATA (Queensnake). **DEFENSIVE BEHAVIOR / DEATH-FEIGNING.** Death-feigning behavior or thanatosis, a defensive behavior against predation characterized by lack of movement, has been documented in a number of snake species (Gehlbach 1970. *Herpetologica* 26:24–34). Here we report an observation of death-feigning behavior in juvenile *Regina septemvittata*. At 1400 h on 27 June 2014, two juvenile *R. septemvittata* were captured in Little Hickman Creek in Jessamine Co., Kentucky, USA (37.7715°N, 84.5710°W; WGS84), as part of an ongoing capture-mark-recapture project. Upon handling, the snakes exhibited death-feigning behavior, remaining motionless with the ventral parts of their bodies facing upward (Fig. 1). The behaviors lasted for approximately 10 min before the snakes became active.



FIG. 1. Death-feigning in *Regina septemvittata* from Jessamine Co., Kentucky, USA.

Photographs and video were taken of the event and the snakes were subsequently released at capture locations. Prior accounts of the defensive behavior of *R. septemvittata* have included flight, biting, and expelling musk, but to our knowledge, death-feigning has not previously been described (Layne and Ford 1984. *J. Herpetol.* 18:496–498; Gibbons and Dorcas 2004. *North American Water-snakes: A Natural History*. University of Oklahoma Press, Norman. 438 pp.).

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SISTRURUS CATENATUS (Massasauga). CLIMBING BEHAVIOR. A previous study noted six instances of *Sistrurus catenatus* climbing in a shrub-dominated, low-quality habitat (Shoemaker and Gibbs 2010. *J. Wildl. Manage.* 74:504–513). Those authors proposed that thermoregulation in a basking-site deficient habitat was the motive for this behavior. However, at 1109 h on 25 June 2012 (cloudy, 25.9°C), we observed and documented (Fig. 1) climbing behavior during a mark-recapture survey of *S. catenatus* in the same habitat, which as of 2011 had undergone management efforts by the New York State Department of Environmental Conservation (NYSDEC). The snake was basking ca. 1 m off the ground in a *Vaccinium corymbosum* (Highbush Blueberry) and remained coiled even after our initial approach, at which time we recorded an IR temp of 21.5°C. Upon capture, we noted that this snake was a gravid female (total length = 55.5 cm) initially tagged in 2006. The behavior was observed in habitat augmented by the NYSDEC by cutting vegetation to ground level in 32 plots, each 100 m² in area, based on recommendations made by Shoemaker and Gibbs (*op. cit.*). This treatment was followed by cutting of 12 additional 28 m² plots in 2012 after field surveys suggested that the rattlesnakes were using cut plots for basking (Johnson 2013. *Management and Status of an Endangered Massasauga Rattlesnake Population in New York State*. Thesis, SUNY-ESF). Because we observed climbing even after apparently suitable basking habitat had been created,

further research is recommended to identify the motivation for this behavior.

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THAMNOPHIS SIRTALIS (Common Gartersnake). DIET. On 30 April 2014 we found a *Thamnophis sirtalis* (SVL = 26 cm) beneath a board on an empty block at the corner of Vine St and Mulberry St, Cincinnati, Hamilton Co., Ohio, USA (39.11919°N, 84.51722°W; WGS84). We palpated the snake and it regurgitated an adult *Podarcis muralis* (European Wall Lizard; SVL = 5 cm; Fig. 1). *Podarcis muralis* was introduced to Cincinnati in 1951 from its native range in Europe and has subsequently established satellite colonies in British Columbia, Kentucky, and Indiana (Kraus 2009. *Alien Reptiles and Amphibians: A Scientific Compendium and Analysis*. *Invading Nature: Springer Series in Invasion Ecology*. Number 4. Springer, New York. 563 pp.). Within Cincinnati, *P. muralis* inhabits south-facing hillsides flanking the Ohio River and reaches high densities (Brown et al. 1995. *Am. Midl. Nat.* 133:344–359). Other known predators of *P. muralis* in the USA include *Felis silvestris catus* (Feral Cats; Brown et al. 1995, *op. cit.*) and *Mimus polyglottos* (Mockingbirds; Deichsel and Walker 2010. *Herpetol. Rev.* 41:228–229). *Thamnophis sirtalis* is a generalist predator, feeding on invertebrates, fish, amphibians, mammals, birds, and small snakes (Rossman et al. 1996. *The Garter Snakes: Evolution and Ecology*. University of Oklahoma Press, Norman. 332 pp.; Ernst and Ernst 2003. *Snakes of the United*

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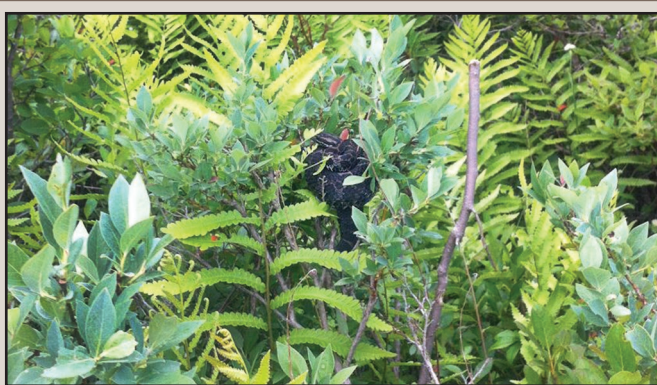


FIG. 1. Gravid female *Sistrurus catenatus* basking in a (~ 1 m tall) *Vaccinium corymbosum* bush.



FIG. 1. *Thamnophis sirtalis* (Common Garter Snake) with a regurgitated *Podarcis muralis* (European Wall Lizard) collected in Cincinnati, Ohio, USA.