

ingestion of a lizard previously unrecorded as prey for *T. hispidus* in the Forest Fragment of the University of Amapá, in the municipality of Macapá, Brazil.

During an ecological study of a community of lizards in the Forest Fragment (0.006283°S; 51.08265°W; datum WGS84), a total of 25 stomachs were analyzed. A dactyloid lizard, *Norops auratus* (SVL = 46.0 mm; total length = 63.0 mm; volume = 18.5 mm³) was found in the stomach contents of an adult female *T. hispidus* (SVL = 81.3 mm) captured on 26 September 2011, in addition to Hymenoptera, Coleoptera, Orthoptera, and plant matter (fruits and leaves). The voucher specimen of *T. hispidus* was deposited in the Collection of Laboratory of Zoology of the Universidade Federal do Amapá, Brazil (CDLABZOO 111). We thank the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) for financial support (Process 126528/2011-0). ICMBio provided a permit (Proc. Number 31814-2).

CARLOS E. COSTA-CAMPOS (e-mail: eduardocampos@unifap.br) and **NAZIEL S. SOUZA** (e-mail: souzanzziel@gmail.com), Laboratório de Herpetologia, Departamento Ciências Biológicas e da Saúde, Centro de Biociências, Universidade Federal do Amapá, Campus Marco Zero, 68903-280, Macapá, AP, Brazil.

TROPIDURUS HYGOMI. PREDATION. *Tropidurus hygomi* is one of the few species of reptiles endemic to restinga habitat of coastal Brazil, occurring in discontinuous populations along the coast of Salvador, Bahia state, to Santo Amaro das Brotas, Sergipe (Vanzolini and Gomes 1979. Pap. Avul. Zool. 32:243–259). Data regarding the autecology of this species are lacking (Martins et al. 2010. Biotemas 23:71–75) and interspecific relationships with other species are not well understood, with the exception of a report on juvenile predation by *Ameivula abaetensis* (Dias and Rocha 2004. Herpetol. Rev. 35:398–399). The present note reports a predation event on an individual *T. hygomi* (SVL = 71.49 mm) by a juvenile *Boa constrictor* (total length = 49.00 cm; head length = 30.49 mm; head height = 9.75 mm; head width = 14.09 mm) during a field survey at 1140 h on 12 March 2012 at Costa Azul, Jandaira municipality, Bahia, Brazil (11.6621°S, 37.4818°W; datum WGS84). The predatory behavior occurred under a shrub (*Byrsonima* sp.; height = 320 cm). The specimens were captured by hand, euthanized, and deposited in the collection of the Laboratório de Biologia e Ecologia de Vertebrados, at Universidade Federal de Sergipe (collection permission: 31047-1 - IBAMA/RAN).

RAFAEL BARBOSA DA SILVA VIEIRA, Centro Universitário Jorge Amado, Salvador, Bahia, Brazil (e-mail: scubavieira@hotmail.com); **IGOR RIOS DO ROSÁRIO**, Universidade Federal da Bahia, Salvador, Bahia, Brazil (e-mail: rosario.igor@hotmail.com); **LUIZ EDUARDO DE OLIVEIRA GOMES**, Núcleo Integrado de Estudos em Zoologia, Instituto de Ciências Biológicas, Universidade Católica do Salvador, Salvador, Bahia, Brazil (e-mail: luiz.e.o.gomes@gmail.com); **EDUARDO JOSÉ DOS REIS DIAS**, Laboratório de Biologia e Ecologia de Vertebrados, Departamento de Biociências, Campus Alberto de Carvalho, Universidade Federal de Sergipe, Itabaiana, Sergipe, Brazil (e-mail: ejrdias@hotmail.com).

UROSTROPHUS VAUTIERI (Brazilian Steppe Iguana). DIET. *Urostrophus vautieri* is native to Brazil, occurring in all states of the south and southeast regions (Condez et al. 2009. Biot. Neotrop. 9:157–185; Levandeira-Gonçalves et al. 2007. In C. C. de Faria and E. B. V. de Castro [eds.], Ciência e Conservação na Serra dos Órgãos, pp. 137–153. Brasília, Brasil; Souza-Filho 2011. Check List 7:876–877). There are few records of prey items for this species. Prior to this report, arthropods of the orders Orthoptera and Coleoptera have been reported as food items of *U. vautieri*

by Sazima and Haddad (1992. In L. P. C. Morellato [ed.], História Natural da Serra do Japi: Ecologia e Preservação de uma Área Florestal no Sudeste do Brasil, pp. 212–235. UNICAMP, Campinas), and by Condez et al. (2009, *op. cit.*).

In the current study we analyzed the stomach contents of five specimens of *U. vautieri* (two females: CRLZ 000065, 000256, and three males: CRLZ 000077, 000126, 000152) deposited in the Coleção de Répteis do do Laboratório de Zoologia, Centro Universitário de Lavras (CRLZ) - UNILAVRAS. All specimens are from the Reserva Biológica Unilavras Boqueirão (RBUB) (21.346°S, 44.990°W, datum WGS84; 1250 m elev.) in riparian forest associated with phytophysiognomies of Cerrado, in the municipality of Ingá, Minas Gerais state, Brazil. We recorded body parts of specimens of arthropods of the orders Coleoptera (thorax, elytra, and abdomen), Hymenoptera (heads of wasps and ants, and wings), Blattodea (legs and abdomen), and Diptera (heads); and remains of shed skin of these specimens of *U. vautieri*. Hymenoptera, Blattodea and Diptera are novel arthropod taxa reported in the diet of this lizard. Ingestion of shed skin by *U. vautieri* has been previously observed by Ribeiro and Sousa (2006. Herpetol. Rev. 37:348–348).

This work was licensed by Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA) (Process number 24661-2). Israel T. Trindade was supported by a scientific initiation fellowship from Fundação de Amparo à Pesquisa do Estado de Minas Gerais (PROBIC/FAPEMIG).

IARA ALVES NOVELLI (e-mail: iaranovelli27@gmail.com), **GLENDA FERNANDA MORTON** (e-mail: mortongf@yahoo.com.br), **ISRAEL TADEU TRINDADE** (e-mail: israelbiodj@gmail.com), and **FERNANDO ANTÔNIO FRIEIRO-COSTA** (e-mail: ffrrieiro@gmail.com), Núcleo de Pesquisa em Ciências Biológicas, Centro Universitário de Lavras, Rua Padre José Poggel, 506, Centenário, CEP37200-000, Lavras, Minas Gerais, Brazil.

VARANUS PANOPTES (Yellow-spotted Monitor). CANNIBALISM. Intraspecific predation, or cannibalism, is common and widespread in animals, and is important in the ecology and evolution of many species (Polis 1981. Annu. Rev. Ecol. Syst 12:225–251). However, there is limited understanding of the implications of cannibalism for the behavior, ecology, and population dynamics of many species (Hämäläinen 2012. Amer. J. Primatol. 74:783–787).

In reptiles, cannibalism is known from at least 191 species (Mitchell 1986. SSAR Herpetol. Circ. 15; Polis and Myers 1985. J. Herpetol. 19:99–107, and other report since). For the carnivorous monitor lizards, field observations of cannibalism exist for eight of the 53 species (*Varanus bengalensis*, *V. giganteus*, *V. gouldii*, *V. griseus*, *V. komodoensis*, *V. rosenbergi*, *V. salvator*, and *V. storri*), with a further three species engaging in cannibalism in captivity (*V. exanthematicus*, *V. glebopalma*, *V. timorensis*) (Auffenberg 1994. The Bengal Monitor, Univ. Press Florida; Bennett 2000. Bull. Chicago Herpetol. Soc. 35:177–180; Géczy 2009. Biawak 2:61–63; Horn and Schurer, 1978. Salamandra 14: 105–116; King and Green 1979. Copeia 1979: 64–70; reviewed in Mitchell 1986, *op. cit.*; King et al. 1989. Austral. Wildl. Res. 16:41–47; Shine et al. 1996. Biol. Conserv. 77:125–134). The generalized diet of many monitor lizards combined with the ability to swallow large prey items suggests that cannibalism may be more widespread than currently appreciated. Here we present two observations of cannibalism in *Varanus panoptes*, a species in which cannibalism has not been previously recorded.

On 6 May 2012 at approximately 1600 h, a medium-sized male *V. panoptes* (SVL = 40.6 cm; TL = 101.4 cm) was radio-tracked to an

area of open woodland along a permanent wetland at El Questro Wilderness Park in the east Kimberley region of Western Australia (15.980556°S, 127.458889°E). Upon approaching the animal, we noticed a juvenile *V. panoptes* (SVL: 192 mm, TL: 479 mm) in the mouth of the male. The male dropped the juvenile before fleeing a distance of approximately 30 m. The juvenile *V. panoptes* was dead upon discovery and exhibited wounds consistent with being mouthed by another monitor lizard.

On 8 June 2001, we observed a large *V. panoptes* on the bank of the Daly River near Ooloo Crossing, Northern Territory, Australia (14.004391°S, 131.240014°E). The lizard was a male, judging by its size (ca. 60 cm), and was in the act of swallowing a sub-adult *V. panoptes* that was about one-third the size of the cannibal. The head and front legs were inside the larger lizard. The smaller lizard was still struggling, raking at the head of the larger lizard with its hind legs. The larger lizard appeared to be struggling to swallow its prey, and would shake it from side-to-side occasionally. Once the prey stopped struggling, the larger monitor slowly swallowed it until just a portion of tail (ca. 15 cm) was left hanging out of its mouth. At this stage the larger lizard appeared to have difficulty walking, and we did not observe the last portion of the tail being swallowed. During the latter part of the swallowing, a third *V. panoptes* walked past that was a similar size to the one that was eaten.

Although our 2001 observation may reflect scavenging, the prey in our 2012 observation was definitely alive. Moreover, there are observations of *V. panoptes* capturing and eating other monitor species (Christian 1995. *Herpetol. Rev.* 26:146; Rhind and Doody 2011. *Herpetofauna* 41:64–65). Benefits of cannibalism not involving offspring or eggs include nutrition, reduction of competition for resources, or reproductive competition (Polis 1981, *op. cit.*). In tropical ecosystems in Northern Australia, *V. panoptes* plays an important role as a key predator and is responsible for the regulation of a number of prey species (Blamires 2004. *Copeia*, 2004:370–377; Doody et al. 2006. *Wildl. Res.* 33:349–354; Doody et al. 2009. *Anim. Conserv.* 12:46–53; Doody et al. 2012a. *Herpetol. Rev.* 43:339–340; Doody et al. 2012b. *Herpetol. Rev.* 43:491–492; Doody et al. 2013. *Biol. Invas.* 15:559–568; Webb and Manolis 2010. *Freshwater Crocodile, Crocodylus johnstoni*, Status Survey and Action Plan. Crocodile Specialist Group, Darwin). Large male *V. panoptes* may likewise consume conspecifics frequently, but our observations are not sufficient to determine the frequency of cannibalism or its costs-benefits in this top predator.

DAVID RHIND, School of Anatomy and Developmental Biology, Monash University, Clayton, Victoria 3800, Australia (e-mail: Darhi@monash.edu.au); **J. SEAN DOODY**, Department of Ecology and Evolutionary Biology, University of Tennessee, 569 Dabney Hall, Knoxville, Tennessee 37996-1610, USA (e-mail: jseandoodo@gmail.com); **RACHEL PRITCHARD**, c/o Narrawong Post Office, Narrawong, Victoria 3285, Australia (e-mail: the-pritches@gmail.com); **COLIN MCHENRY**, Department of Anatomy and Developmental Biology, Monash University, Clayton, Victoria 3800, Australia (e-mail: colin.mchenry@monash.edu).

ZOOTOCA VIVIPARA (Common Lizard). RECORD WEIGHT. On 25 June 2011 a very heavy adult female specimen of *Zootoca vivipara* was found on the island of Hiddensee near Vitte (54.563816°N, 13.112562°E) at the German coastline of the Baltic Sea underneath a dry-docked sailing boat. The female *Z. vivipara* reported here weighed 10.0 g (live weight), which makes it the heaviest gravid female specimen of the Common Lizard ever recorded (Fig. 1). The examined *Z. vivipara* measured 157



FIG. 1 Gravid adult female *Zootoca vivipara* with a record weight of 10.0 g (found on the island of Hiddensee, Germany).

mm in total length (SVL = 72 mm; tail length = 85 mm). Most adult specimens of *Z. vivipara* express a total length of 110–140 mm with a maximum length of approximately 180 mm (Günther and Völkl 1996. *In R. Günther [ed.], Die Amphibien und Reptilien Deutschlands*, pp. 588–600. Fischer, Jena). Female individuals typically have a SVL measuring between 45 and 70 mm, seldom more than 75 mm (Günther and Völkl, 1996, *op. cit.*). Few reports regarding body weight data have been published for *Z. vivipara*.

FRANZISKA JÄHRLING (e-mail: franziska.jaehrling@gmail.com), **ANJA JUNGHANNS** (e-mail: anja.junghanns@arcor.de), and **FALK ORTLIEB** (e-mail: falk.ortlieb@gmx.de), Zoological Institute and Museum Greifswald, Johann Sebastian Bach-Straße 11/12, 17489 Greifswald, Germany.

SQUAMATA — SNAKES

AGKISTRODON CONTORTRIX (Copperhead). DIET. *Agkistrodon contortrix* is a widely-distributed viperid species that occurs in the eastern and central United States and northern Mexico. The species' diet is known to include many species of small mammals, birds, snakes, lizards, frogs, salamanders, and invertebrates (Campbell and Lamar 2004. *The Venomous Reptiles of the Western Hemisphere*, Volume I. Cornell University Press, Ithaca, New York. 475 pp.). On 19 April 2012, at 2040 h, a male *A. contortrix* (SVL ca. 63.4 cm; Auburn University Museum [AUM] 39901) was collected injured on State Road 503 near CR 20 in Jasper Co., Mississippi, USA (32.13914°N, 89.06058°W; datum WGS84). The snake died overnight. While curating the specimen, the remains of an adult *Plestiodon inexpectatus* (Southeastern Five-lined Skink; AUM 39902) were found in the stomach. The lizard had been ingested headfirst. To our knowledge, this is the first record of *A. contortrix* consuming *P. inexpectatus* (Campbell and Lamar, *op. cit.*).

We thank Craig Guyer for verifying the records and Scott Peyton for assistance in procuring collecting permits.

BRIAN FOLT (e-mail: brian.folt@gmail.com) and **DAVID LAURENCIO** (e-mail: norops@auburn.edu), Auburn Museum of Natural History, Department of Biological Sciences, 331 Funchess Hall, Auburn University, Alabama 36849, USA.

BOGERTOPHIS SUBOCULARIS (Trans-Pecos Ratsnake). OVER-WINTERING BEHAVIOR. Colubrid snakes in North America, especially those inhabiting higher latitudes, typically hibernate during the cold winter months (Ernst and Ernst 2003. *Snakes of*