

LITHOBATES CATESBEIANUS (American Bullfrog). DIET. The American Bullfrog is a voracious predator. While most of their diet consists of small arthropod prey items, they do consume amphibians, fish, and mammals and more rarely, avian and non-avian reptiles (Jancowski and Orchard 2013. *Neobiota* 16:17–31). Prey items can be both numerous and large (Wu et al. 2005. *J. Herpetol.* 39:668–674; Liu et al. 2015. *Asian Herp. Res.* 6:34–44), but relatively few data exist on vertebrate prey size. Here we describe an adult male bullfrog that had consumed an avian prey item approximately 30% of its body weight.

Around 2300 h on 17 July 2018 we captured invasive bullfrogs at Fernhill Wetlands, Forest Grove, Washington County, Oregon, USA (45.50967°N, 123.08489°W; 50 m elev.). Frogs were captured by hand and euthanized the following morning. As we were preserving individuals, we noted the presence of a large prey item with the feet and tail just emerging from the mouth. We measured the SVL and weight of the bullfrog and dissected the individual removing the stomach, small intestine, and large intestine after formalin injection. The bullfrog (117.7 mm SVL, 44.7 mm gape, 225 g with prey) had a distended stomach containing an adult Spotted Towhee (*Pipilo maculatus*). The towhee was ingested headfirst and was only partially digested at the time of dissection. The bird weighed 53.2 g with tarsus length of 30.6 mm, wing length of 84 mm, and tail length of 86 mm. The bullfrog stomach also had evidence of an earwig (Dermaptera) and a single beetle (Coleoptera; 9.6 mm total length).

Specimens are deposited in the teaching collection of Pacific University (LMC 0154) and were collected under Oregon Department of Fish and Wildlife Scientific Take Permit 047–18 and Pacific University IACUC R-0025 to LMC.

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ODORRANA AMAMIENSIS (Amami Tip-nosed Frog). PREDATION. *Odorrana amamiensis* is a relatively large (56–101 mm SVL) terrestrial frog species (Matsui and Maeda 2018. *Encyclopedia of Japanese Frogs*. Bun-ichi Sogo Shuppan, Tokyo, Japan. pp. 156–159). This species is endangered and endemic to Amami-Oshima Island and Tokunoshima Island (Matsui 1994. *Zool. J. Linn. Soc.* 111:385–415). Because this species is in the process of evolutionary diversification between the islands, conservation measures are needed (Komine and Watari 2019. *Zool. Sci.* 36:410–416). This species inhabits subtropical montane forests

and breeds at montane streams from October to May (Matsui and Maeda 2018, *op. cit.*). *Eriocheir japonica* (Japanese Mitten Crab) is a common crab distributed in east Asia including Sakhalin, Japan, Korea, and Taiwan (Miyake 1983. *Japanese Crustacean Decapods and Stomatopods in Color*, Vol. II, Brachyura [Crabs] [In Japanese]. Hoikusha, Osaka, Japan. 277 pp.). This is a large, benthic species ranging from the upper reaches of rivers to coastal areas. This species migrates from freshwater to the sea to breed (Kobayashi 1999. *Jpn. J. Benthol.* 54:24–35).

Here, I report the predation of *O. amamiensis* by *E. japonica* on Amami-Oshima Island, Japan (Fig. 1A). At 2009 h on 3 December 2015, I observed an *E. japonica* (carapace width ca. 60 mm) preying on an *O. amamiensis* (SVL ca. 70 mm) in an upper river on Amami-Oshima Island, Japan (28.33502°N, 129.45127°E; WGS 84; 306 m elev.). A previous study reported that *E. japonica* mainly feeds on detritus and rarely predated animals (Kobayashi 2009. *Plankton Benthos Res.* 4:77–87). In this case it is not clear whether the *E. japonica* predated or scavenged the *O. amamiensis* as the *O. amamiensis* was already dead at the time of observation. At the time, *O. amamiensis* had gathered to breed at the small stream and thus predation may have been opportunistic. The *E. japonica* consumed part of the thigh of the *O. amamiensis* (Fig. 1B). This observation provides insight as to how the endangered *O. amamiensis* fits into the native food web of this subtropical island.

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PROCERATOPHRYS ARIDUS. DIET. *Proceratophrys aridus* is endemic to the Brazilian Caatinga and was described from specimens from the municipality of Milagres, Ceará, Brazil (Cruz et al. 2012. *South Am. J. Herpetol.* 7:110–122). Understanding food networks and energy transfer in a community requires knowledge of the food habits of the species (Brito et al. 2012. *Herpetol. Notes* 5:85–89). Anurans are considered opportunistic predators, their diets reflecting the availability of prey of an appropriate size (Duellman and Trueb 1994. *Biology of Amphibians*. McGraw-Hill, New York. 670 pp.; Giaretta et al. 1998. *Rev. Bras. Biol.* 15:385–388).

As sit-and-wait predators, species of the genus *Proceratophrys* (Giaretta et al. 1998, *op. cit.*; Brito et al. 2012, *op. cit.*) need to consume large and mobile prey (Boquimpani-Freitas et al. 2002. *J. Herpetol.* 36:318–322). Brito et al. (2012, *op. cit.*) reported the diet of *P. criticeps* to be composed mainly of insects (Isoptera, Orthoptera, and Coleoptera). The diet of *P. boiei* included insects (Orthoptera, Coleoptera) and spiders (Araneae) (Giaretta et al. 1998. *Rev. Bras. Biol.* 15:385–388; Klaion et al. 2011. *Anais da Academia Brasileira de Ciências* 83:1303–1312; Teixeira e Coutinho 2002. *Bol. Mus. Biol. Mello Leitão* 14:13–20). Spiders (Araneae) were also found in the diet of *P. appendiculata* (Boquimpani-Freitas et al. 2002. *J. Herpetol.* 36:318–322) demonstrating that the Araneae may be an important part of the diet of this genus. Araújo et al. (2007. *Copeia* 2007:855–865) reported spiders and scorpions (Scorpiones) in the diet of an unidentified species of *Proceratophrys*.

Here we provide information about the diet of *P. aridus*. A single female *P. aridus* (SVL = 45.2 mm) was collected in March 2018 in the municipality of Várzea Alegre (6.86944°S, 39.385°W, WGS 84; 297 m elev.), Ceará, within the Caatinga domain in northeastern Brazil (SISBIO license No. 62017-1). After euthanasia, we analyzed the stomach contents of the specimen,

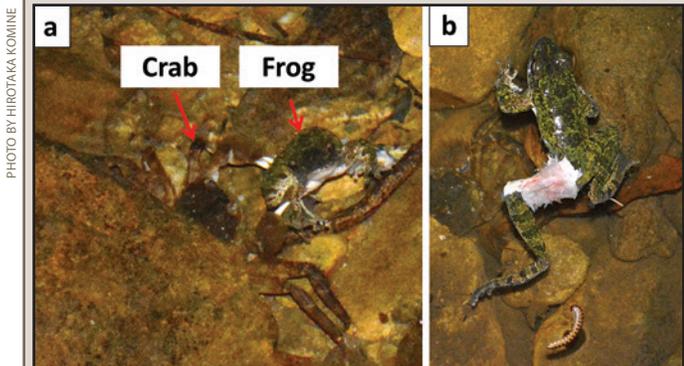


FIG. 1. A) *Odorrana amamiensis* being predated by *Eriocheir japonica* on Amami-Oshima Island, Japan; B) *Odorrana amamiensis* after being predated by *Eriocheir japonica*.

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