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CHIROTEROTITRON CHONDROSTEGA. PREDATION. *Chiropterotriton chondrostega* is an endemic salamander from Mexico, and categorized as Under Special Protection by Mexican laws, and as Endangered according to the IUCN criteria. Its distribution encompasses the states of Hidalgo, Puebla, San Luis Potosí, Tamaulipas, and Querétaro (Dixon and Lemos-Espinal. 2010. Anfibios y Reptiles del Estado de Querétaro, México. Texas A&M University, Universidad Nacional Autónoma de México and CONABIO. CDMX, México. 428 pp.). It is an uncommon species that is distributed at elevations from 2000 to 2300 m, in pristine pine-oak forests. It is believed to be insectivorous (Vega-López and Álvarez. 1992. La Herpetofauna de los Volcanes Popocatepetl e Iztaccíhuatl. Instituto de Ecología, CDMX, México. 128 pp.).

At 1611 h on 17 July 2018, we encountered an adult *Rhadinaea gaigeae* preying on an adult *C. chondrostega* in a pine-oak forest in the municipality of Pinal de Amoles, Querétaro, Mexico (21.13030°N, 99.63140°W, WGS 84; 2430 m elev.). The snake captured the salamander by the head and struggled to immobilize its prey for 15 min before starting to swallow it, starting with the anterior body portion (Fig. 1). This is an unusual record because little is known about the natural history of both species, especially *C. chondrostega*. We did not find previous records of predation or feeding between these two species, but it is known that *R. gaigeae* may feed on other salamanders like *Aquiloerycea cephalica* (Nieto and Pérez 1999. Anfibios y Reptiles del Estado de Querétaro. CONABIO. CDMX, México. 144 pp.), which is a sympatric species with *C. chondrostega*.



FIG. 1. *Chiropterotriton chondrostega* predated by *Rhadinaea gaigeae* in Pinal de Amoles, Querétaro.

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CRYPTOBRANCHUS ALLEGANIENSIS (Hellbender). EGG PREDATION. Fish and crayfish which occupy streams where fully aquatic *Cryptobranchus alleganiensis* (Hellbender) salamanders occur are potential aquatic predators of salamanders eggs (Axelsson et al. 1997. Amphibia-Reptilia 18:217–228; Drake et al. 2014. Herpetologica 70:378–387). Male eastern hellbenders typically guard nest shelters containing eggs for several months, possibly reducing predation (Nickerson and Mays 1973. The Hellbenders: North American Giant Salamanders. Milwaukee Public Museum, Milwaukee, Wisconsin. 106 pp.). In healthy hellbender populations with high concentrations of hellbenders and active nests, loose eggs are often observed outside of guarded nests in streams (Smith 1907. Biol. Bull. 13:5–39). However, outside of a few reports on fish associations with active hellbender nests (Settle et al. 2018. J. Ethol. 36:235–242.) or predation in lotic environments (Monello and Wright 2001. J. Herpetol. 35:350–353), little is known regarding predation of stream salamander eggs in the wild.

While surveying breeding activity in the mainstem and a tributary of the French Broad River of western North Carolina (specific localities on file with the North Carolina Wildlife Resources Commission and withheld due to conservation concerns), we observed three separate events of egg consumption within 48 h by two species of fish and one crayfish. On 8 September 2018, a hellbender egg was dislodged from a nest with a guarding male hellbender (Fig. 1A). This egg floated into the water column and was swept downstream approximately one meter where it was intercepted and consumed by an unidentified juvenile chub (Cyprinidae). From 1045–1130 h on 10 September 2018, we observed two separate feeding attempts of both a juvenile crayfish species (*Cambarus* sp.) and two *Rhinichthys atratulus* (Eastern Blacknose Dace), each predated and consuming a *C. alleganiensis* egg. The crayfish grabbed a single egg with its chelipad and consumed the egg within ~10 min. (Fig. 1B). Two individual Eastern Blacknose Dace initially investigated a separate, single egg for several minutes. After disturbing the outer membrane and

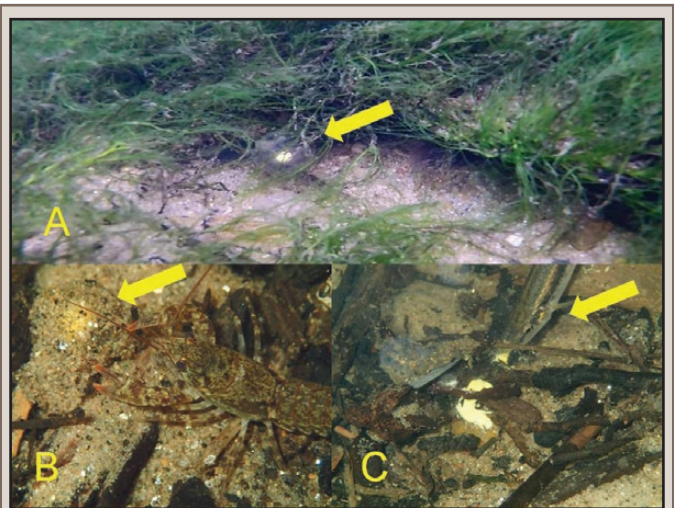


FIG. 1. A) *Cryptobranchus alleganiensis* egg outside of nest immediately before being consumed by a Chub (Cyprinidae); B) *Cambarus* sp. (Crayfish) consuming *C. alleganiensis* egg; and C) *Rhinichthys atratulus* (Eastern blacknose dace) consuming egg of *C. alleganiensis* in French Broad River tributary, North Carolina.

dislodging the embryo, they consumed the yolk within ~10 min. (Fig. 1C). Our report conveys the potential importance of loose *C. alleganiensis* eggs in streams, which may provide valuable nutrient resources for aquatic organisms during the hellbender breeding season.

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PLETHODON PUNCTATUS (Cow Knob Salamander). ARBOREAL BEHAVIOR. A recent review on the climbing behavior of plethodontid salamanders (McEntire 2016. Copeia 104:124–131) reported that many *Plethodon* are facultatively arboreal. Here, we report observations of climbing behavior for *Plethodon punctatus*, a species of conservation concern that is only found on Shenandoah Mountain and Great North Mountain in eastern West Virginia and western Virginia, USA.

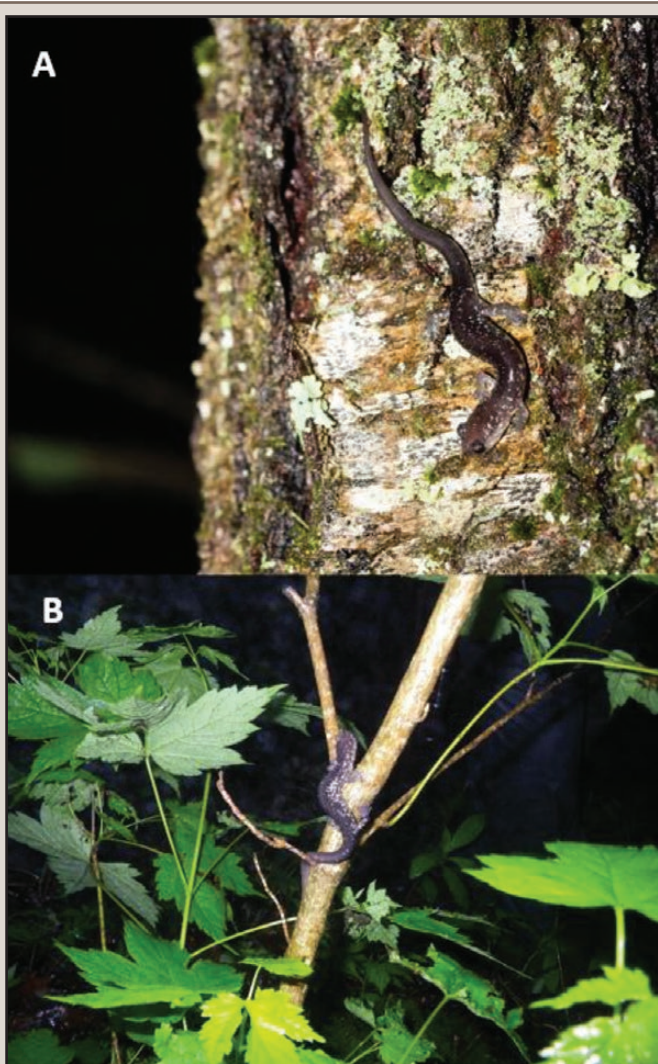


FIG. 1. *Plethodon punctatus* observed on trees in the George Washington National Forest, Pendleton County, West Virginia, USA: A) on a *Betula alleghaniensis* (Yellow Birch); B) on a pole-sized *Acer spicatum* (Mountain Maple).

While conducting field research on *P. punctatus* in the George Washington National Forest in spring and summer of 2018 (precise locations of observations withheld due to conservation concerns), we searched for individuals on the ground and on vegetation in 5 × 5 m plots, and opportunistically measured the height of salamanders (from the ground to the lowest part of the salamander) we detected above ground level in the study area. Out of 25 individuals observed in plots, eight were found climbing on trees, including a single observation of five *P. punctatus* climbing the side of a large multi-stem tree at 2200 h on 3 August 2018. We documented individuals at a mean height of 0.61 m and a maximum height of 1.9 m. We found *P. punctatus* climbing on *Acer pensylvanicum* (Striped Maple), *Acer rubrum* (Red Maple), *Acer spicatum* (Mountain Maple; Fig. 1), *Betula alleghaniensis* (Yellow Birch; Fig. 1), *Tsuga canadensis* (Eastern Hemlock), *Quercus rubra* (Northern Red Oak), and under the bark of dead standing trees. We did not observe *P. punctatus* on the leaves or stems of herbaceous understory vegetation. Our observations contribute to the knowledge of *P. punctatus* ecology, suggest that vertical structure could be an important foraging habitat component, and indicate that tree trunks should be searched carefully while surveying for this species.

This research was permitted by the West Virginia Division of Natural Resources (permit 2018.090), Virginia Department of Game and Inland Fisheries (permit 059581), and U.S. Forest Service (permit 2620), and approved by the West Virginia University Institutional Animal Care and Use Committee (protocol 1612004927).

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ANURA

ADENOMERA HYLAEDACTYLA (Napo Tropical Bullfrog). PREDATION. At approximately 2350 h on 13 October 2018 at the



FIG. 1. Adult *Adenomera hylaedactyla* preyed upon by *Avicularia* sp. at Maracá-Jipioca Ecological Station, Brazil.