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NATURAL HISTORY NOTES

CAUDATA — SALAMANDERS

CRYPTOBRANCHUS ALLEGANIENSIS ALLEGANIENSIS (Eastern Hellbender). **UNUSUAL MORTALITY.** On 29 June 2016, an adult female *Cryptobranchus alleganiensis alleganiensis* (SVL = 275 mm; total length = 420 mm; 472 g) was found dead in a stream near a bridge and campsite in a tributary of the French Broad River, Transylvania Co., North Carolina, USA (site information is on file with the North Carolina Wildlife Resources Commission and is withheld to protect the specific location). The hellbender was found ventral side up with sediment covering the body (Fig. 1A) and rigor mortis had yet to set in, indicating the mortality had likely occurred within approx. 2 days. A cut fishing line (40.8 cm) was found protruding from the mouth (Fig. 1B) indicating



FIG. 1. A) *Cryptobranchus alleganiensis alleganiensis* adult mortality as found in the stream; B) same specimen showing fishing line protruding from mouth.

the possibility of death due to internal injury to the stomach and esophagus, as the specimen was not emaciated based on mass and length. The carcass head was palpitated, and no external injuries or trauma were observed outside of a slight reddening at the gill slits. Further examination of the hellbender revealed the hyoid bone was fractured at the center line of the lower jaw. While the exact cause of death is uncertain, one possible explanation for this unusual mortality is that internal injury was sustained to the hellbender's hyoid bone and digestive tract during an encounter with a 2-cm long fisherman's hook (embedded approx. 57 mm deep past the throat in the stomach) and subsequent struggle, as hellbenders are capable of rapidly rotating their bodies when capturing prey (Beck 1965. *Field & Stream* 69:65–66). We examined the specimen for external wounds and palpable injuries, but did not detect any external injuries besides the embedded hook. This observation provides support that anthropogenic mortality is occurring (possibly due to hooking and subsequent internal injury following ingestion of hook and associated behavioral prey capture movements) in a salamander of special concern in North Carolina. Ingestion of hooks has been documented for other herpetofauna experiencing fishing pressure, including freshwater turtles, where up to 33% sampled contained hooks (Steen et al. 2014. *PLoS ONE* 9:e91368). The salamander is deposited in the collections of the North Carolina Museum of Natural Sciences (NCSM 90049).

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NOTOPHTHALMUS VIRIDESCENS (Eastern Newt). **TERRESTRIAL AGGREGATION.** At 1348 h on 14 September 2016, nine *Notophthalmus viridescens* were observed under one small piece of bark (ca. 30 × 14 cm) at Mendon Ponds Park, Mendon, Monroe County, New York, USA (43.02472°N, 77.57277°W, WGS 84; 171 m elev.). Eight of the nine were huddled together (Fig. 1). The aggregation contained five individuals of the juvenile terrestrial eft stage and four adults, which are typically aquatic. It is not clear whether the adults had recently undergone the second metamorphosis to adults, as this typically happens in late August and September (Petranka 1998. *Salamanders of the United States and Canada*. Smithsonian Institution Press, Washington DC. 587 pp.), or were existing adults that were forced to move to terrestrial habitat due to drought. Adults are typically aquatic (Petranka 1998, *op. cit.*) but can be forced to become terrestrial during drought years such as 2016. The aggregation was probably related to the unusually dry conditions in the area in July and August 2016. Rohr and Madison (2003. *Oecologia* 135:657–664) demonstrated that newts in the laboratory would huddle to conserve water during times of potential dehydration. The area where the aggregation was