INVERTEBRATE PREDATION ON A MARBLED SALAMANDER (AMBLYSTOMA OPAKUM) Larva IN VIRGINIA -- Predation by aquatic invertebrates and their larvae on amphibian larvae has been reported by many authors (e.g., Hinshaw & Sullivan, 1990; Mitchell, 1990; Rogers, 1996; Owen & Johnson, 1997; McCoy, 2003). Most reports describe spider or insect predation on tadpoles. Several papers describe the effects of the presence of diving beetle larvae on larval amphibian morphology, behavior, and community structure (Bosi, 2001; Laurila et al., 2001; Altwegg, 2003; Johnson et al., 2003). Anecdotal observations can be important because accumulation of such data may lead to a better understanding of the range of predators on different amphibian life history stages and their survival risks in different habitats. Predators and their prey may vary in different parts of the species' range. Invertebrate predation on salamander larvae has been reported, for example, for Spotted Salamander (Ambystoma maculatum) larvae in Connecticut (Kenny & Burne, 2000) and for a Red-backed Salamander (Plethodon cinereus) by a rove beetle in Maryland (Jung et al., 2000). In this note, we provide the first published report in Virginia on a Marbled Salamander larva depredated by a predaceous aquatic beetle larva.

On 15 May 1998, we collected six near-metamorphic Ambystoma opakum larvae in a small pond on Fort A.P. Hill, 6.8 km SW Port Royal, Caroline County, Virginia (38° 08' 40.76" N, 77° 16' 7.52" W). All were large (50-56 mm total length, 0.87-1.24 g) and all but one had external gills. We initially found one of the gilled larvae (52 mm total length, 1.10 g) upside down in the water. Upon capture, we discovered a larva that was being eaten by a water tiger, the larval form of a predaceous diving beetle (Cybister or Dytiscus, Dytiscidae). We also caught 30 Spotted Salamander (Ambystoma maculatum) larvae, tadpoles of the Spring Peeper (Pseudacris crucifer) and Southern Leopard Frog (Rana sphenocephala utricularia), and adult Red-spotted Newts (Notophthalmus viridescens) in the same pond. The two ranid tadpoles (72 mm and 89 mm total length) and the adult newts were likely too large for the water tiger, although the others were small enough to be captured by this predator. The A. maculatum, A. opakum, and P. crucifer larvae were at some level of risk of predation by this aquatic predator. We recommend that all observations of invertebrate predation of amphibians and reptiles in Virginia be described in detail, including identification of the predator.
LITERATURE CITED


