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An Unusual Prey Item Found in an Eastern Bluebird Nest

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Adult Eastern Bluebirds consume small fleshy fruits in the winter but switch to terrestrial arthropods during the breeding season (Gowaty and Plissner 1998). Prey delivered to chicks also consists mostly of small arthropods (Gowaty and Plissner 1998). In Michigan, Lepidopterous larvae (moths and butterflies) made up 32.4% of the chick diet and included individuals from the families Noctuidae, Arctiidae, Pieridae, Geometridae, Notodontidae, Pyralidae, and Sphingidae. Orthopterans (grasshoppers, crickets, and katydids) made up 25.6% of the chick diet and included individuals from the families Acrididae, Tetrigidae, Tettigoniidae, Gryllidae, and Mantidae. Arachnids (spiders) made up 11.3% of the chick diet, Coleopterans (beetles and weevils) made up 11.0%, and several other insect orders made up very small percentages of the chick diet (Pinkowski 1978). Other studies have found similar results (Pitts 1978, reviewed by Gowaty and Plissner 1998).

From March 2002 to July 2006, graduate students at Arkansas State University have monitored approximately 200 nest boxes. The boxes are located in Brookland, Arkansas in a mixed habitat of open pastures and woodlots. Nest-monitoring methods follow those outlined by Robinson (2005). In brief, nest boxes were checked weekly for nest building activity, then every third day for egg laying, and daily until the last egg was laid. Chicks were visited every third day after hatch.

On 8 May 2005, a dead midwest worm snake (*Carphophis amoenus helenae*), approximately 8 cm in length, was found among chicks in the cup of an active Eastern Bluebird nest box. The snake was intact and well preserved, which facilitated identification. The nest box was located in fairly open habitat, the nest box pole was covered with axle grease, and there were no overhanging branches nearby, making it unlikely for this fossorial snake (Trauth et al. 2004) to have climbed into the box. It was presumably delivered as prey to chicks by an adult bluebird. The chicks were 9 days old at the time and all four chicks successfully fledged from the nest.

There are few records of Eastern Bluebirds taking vertebrates as prey; an unknown species of snake (Flanigan 1971); a shrew (*Sorex* sp.) (Pinkowski 1974); lizards (Gowaty and Plissner 1998); and tree frogs (*Hyla* sp.) (Bent 1949). We are aware of only 1 record of parent bluebirds feeding a vertebrate (*Eumeces* sp.) to their chicks (Pitts 1978). Our record appears to be the second to document delivery of vertebrate prey by an Eastern Bluebird to its chicks, and the first to identify a species of snake as a prey item.

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