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Warren C. Conway

Christopher E. Comer

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## Artificial Nests Identify Possible Nest Predators of Eastern Wild Turkeys

Haemish I.A.S. Melville<sup>1,2,\*</sup>, Warren C. Conway<sup>3</sup>, Michael L. Morrison<sup>1</sup>,  
Christopher E. Comer<sup>3</sup>, and Jason B. Hardin<sup>4</sup>

**Abstract** - Poor nest survival is a critical limiting factor in the recruitment of wild birds. Nest predation is often cited as one of the main causes of nest failure, especially for ground-nesting species. We monitored artificial *Meleagris gallopavo silvestris* (Eastern Wild Turkey) nests, using time-lapse and motion-sensitive trail cameras to determine which predators were likely to be responsible for preying on Wild Turkey nests in the Pineywoods of East Texas. Sixty-one percent of all artificial nests were preyed upon. *Corvus brachyrhynchos* (American Crow) preyed on 48% of artificial nests and *Procyon lotor* (Raccoon) preyed on 35%. There was a seasonal increase in the number of artificial nests preyed upon from spring to summer. Mammalian mesopredators, Raccoon and *Didelphis virginiana* (Opossum), were primarily responsible for this increase, suggesting an increase in search effort by mesopredators that coincided with increased dietary diversity in a period of reduced prey resources. Predators other than mesopredators—American Crows, *Picoides* sp. (woodpeckers), *Dasyus novemcinctus* (Nine-banded Armadillo), and snakes—were responsible for 53% of all predation on the artificial Wild Turkey nests, with American Crows being the most important of these. After nest deployment, American Crows located and preyed on artificial nests more quickly than other nest predators. We suggest video monitoring of natural Eastern Wild Turkey nests to confirm the identity of nest predators.

### Introduction

The degree to which predators affect their prey resources is central to the study of ecology (Begon et al. 2006). It is of overriding importance when considering the control of abundant prey species, the conservation of endangered prey species (Macdonald et al. 1999), and prey species of ecological, economic, or recreational importance. The effects of predation can make the difference between persistence and local extinction of rare prey species (Caughley and Sinclair 1994, Macdonald et al. 1999). Predation may interact with other causes of mortality, and the additive effect may cause the collapse of prey populations (Macdonald et al. 1999).

Nesting by *Meleagris gallopavo silvestris* Vieillot (Eastern Wild Turkey) is confined to the spring months (late March to late June; Healy 1992, Isabelle 2010). Poor nest survival is one of the primary limitations to the successful recruitment of bird species (Dreibelbis et al. 2008). Predation is often cited as the main cause of nest fatality in avian species (Martin 1993a; Mezquida 2001, 2003; Ricklefs 1969;

<sup>1</sup>Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX 77843. <sup>2</sup>Current address - Number 8 25<sup>th</sup> Street, Zakher, Al Ain, United Arab Emirates.

<sup>3</sup>Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University, Nacogdoches, TX 75962. Texas Parks and Wildlife Department, Oakwood, TX 75855.

\*Corresponding author - haemish.melville@gmail.com.

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