

**GOS WINTER MEETING ABSTRACTS  
13-16 JANUARY 2012  
TYBEE ISLAND, GA**

**CONSEQUENCES OF CLIMATE CHANGE FOR FLEDGLING  
SURVIVAL OF BLACK-THROATED BLUE WARBLERS  
(SETOPHAGA CAERULESCENS) IN THE SOUTHERN  
APPALACHIANS**

**Joanna Hatt\*, Robert J. Cooper, and Jeffrey Hepinstall-Cymerman**

*D.B. Warnell School of Forestry and Natural Resources*

*University of Georgia, Athens, GA 30602*

*\*E-mail: joanna.hatt@gmail.com*

**Abstract:** For many avian species, the most critical life stage is the period after the individual has departed the nest, or the post-fledging period. Few studies have examined this period or the mechanisms that underlie fledgling survival. The Black-throated Blue Warbler (BTBW) is an insectivorous, Neotropical migrant songbird that breeds in interior forests. BTBWs depend almost entirely on insect larvae to provision their young. Warmer spring temperatures caused by climate change could result in a temporal advance in plant leaf-out and larval insect emergence. If a phenological mismatch between the BTBW and its larval insect prey occurs, the mistimed productivity could influence demography and population dynamics for this species. Our study focuses on prey availability and its effects on BTBW fledgling survival in the Nantahala National Forest of western North Carolina. In 2011, 27% of nest attempts fledged at least one offspring. Eighty percent of nests that fledged young produced at least one fledgling that survived to independence. Although one offspring per pair does not achieve individual replacement, this survival rate was higher than expected, since 2011 larval insect availability was lower than average. Plans for the 2012 field season include continued monitoring of fledgling survival and larval insect availability. Results of this research will aid in our ability to predict how habitat changes resultant from increased climatic variability may affect productivity of the BTBW and other migrant species.