Assessing the Effect of Social Information on Cerulean Warbler Settlement in South-Central Indiana (Poster)

Kevin W. Barnes*, U.S. Fish and Wildlife Service, Region 6 Division of Migratory Birds, Great Falls, MT Kamal Islam, Department of Biology, Ball State University, Muncie, IN

Sasha A. Auer, Department of Biology, Ball State University, Muncie, IN

Breeding bird settlement cues are typically defined by correlating occupancy to habitat related variables; however, social cues can influence breeding bird distributions and confound habitat modeling studies. The cerulean warbler (Setophaga cerulea) is one of the fastest declining songbirds in North America and conservation efforts would improve through a holistic understanding of breeding site selection. I assessed the influence of three forms of social information on male cerulean warbler breeding site selection: 1) pre-breeding cues, 2) post-breeding cues, and 3) clustered locational cues. The experiment was conducted by broadcasting conspecific vocalizations within plots that contain mature deciduous forests and have not contained a breeding territory over the past six years. Song was broadcasted in 2013 from the settlement to the post-fledging period. Song was broadcasted during the settlement period in another location in 2014 using a clustered speaker arrangement to mimic a breeding aggregation. Point counts were conducted every 3-6 days within treatment and control plots (no vocalizations broadcasted). Three males were detected in treatment plots during this study; however, no territories were established in treatment or control plots. Territories were not established in response to pre-breeding locational cues, post-breeding locational cues, or clustered locational cues, despite visitation by a male during these periods. These results suggest that conspecific social information does not have a strong influence on male cerulean warbler settlement. However, this experiment would be more conclusive if conducted in a part of its range where abundance is greater.