

Matthew Sailor

Major: Fisheries and Wildlife

University: University of Missouri-Columbia

Faculty Mentor: Dr. John Faaborg

Mentor Department: Biological Science

Funded by: Missouri Ozark Forest Ecosystem Project

The effects of even-aged cutting on density and pairing success of Worm-eating Warblers

Matthew Sailor, Amber Wiewel, Richard Clawson, John Faaborg, and Paul Porneluzi

It is important for researchers to be aware of how timber management practices affect songbird populations. Certain forest management techniques can cause declines in breeding habitat of Neotropical migrant songbirds that require mature forest. The worm-eating warbler (*Helmitheros vermivorus*) is a common mature forest-dwelling species that may experience a decline in density due to habitat alterations such as clear cutting and selection cutting. As regeneration of the clear cuts occurs, mature forest-dwelling species may be able to utilize these areas as suitable habitat. This summer was the first year that worm-eating warblers settled on the 8 year old clear cuts on the sites of the Missouri Ozark Forest Ecosystem Project. We compared the relative abundance of worm-eating warblers that inhabited even-aged sites with those that inhabited control sites by using point counts of each site. In order to determine pairing success, we followed a singing male until the bird was seen interacting with a female or for 90 minutes if no interaction was seen. We hypothesized that the worm-eating warblers will have lower pairing success on even-aged sites (clear cuts) than control sites. We also hypothesized that the densities of worm-eating warblers would be the highest on the control sites and the lowest on the uneven-aged (selection cuts) sites, with the density of the even-aged sites falling slightly below that of the control sites.