



Cerulean Warbler work highlighted on Audubon.org

The HEE Cerulean Warbler crew from Ball State University was featured in a recent article on Audubon.org. The article talks about their novel discovery and recording of a female Cerulean Warbler singing. Their finding was also recently published in *The Wilson Journal of Ornithology*. You can read the Audubon.org article by clicking [here](#) and find the citation to the journal article below. To find out more about HEE Researcher Dr. Islam's work you can visit his [lab website](#) or the [HEE website](#)!



C. Owings

A banded female Cerulean Warbler
(photo: Brandon Connare)

New HEE and HEE-Related Publications

Hardwood Ecosystem Experiment. 2019. *Oak Woodlands and Forests Fire Consortium Newsletter*, 8(3):5. [Newsletter link](#)

Nelson, D.L., Kellner, K.F., Swihart, R.K. 2019. Rodent population density and survival respond to disturbance induced by timber harvest, *Journal of Mammalogy* 100(4):1253-1262.

MacDonald, G.J., Delancey, C.D., and K. Islam. 2019. Novel vocalizations, including song, from 2 female Cerulean Warblers (*Setophaga cerulea*). *The Wilson Journal of Ornithology* 131(2):366-373.

Caldwell, K.L. and T.C. Carter. 2019. A comparison of bat activity in a managed central hardwood forest. *The American Midland Naturalist* 181 (2):225-244.

Hanna, L., Kissick, A.L., McCroskey, E., and **J.D. Holland.** 2019. Resilience to disturbance is a cross-scale phenomenon offering a solution to the disturbance paradox. *Ecosphere* 10(4). 10.1002/ecs2.2682

2019 HEE Summary (thus far)

2019 has been a busy year for the HEE! This spring we had one prescribed burn take place to officially finish our first round of burn treatments for the research sites! We also had a new graduate student project involving salamanders start up this spring in addition to our normal salamander surveys.

This summer we had 19 technicians and 5 graduate students working on research at the HEE. Crews were busy working on Cerulean Warbler surveys, soil invertebrate sampling, breeding bird surveys, small mammal trapping, bat acoustic monitoring and mist netting, and moth sampling. All of the crews worked very hard and stayed positive despite extremely wet and windy conditions that were prevalent at the start of the summer.



The 2019 HEE small mammal crew. From left to right: Trevor Besosa, Lindsay Finnell, Jacob (Coby) Frame, Reagan Muinzer, Jordan Ward, Tabitha Olsen, and Jacob Linder.

This fall we will again be conducting salamander surveys, mast sampling, and, if weather conditions allow, starting our next round of prescribed burns in the HEE burn areas.

You can find out more about each of the research projects going on as part of the HEE by visiting our [HEE Research Activities page](#).

HEE Update in Numbers

- 14 years of data collection
- 11 years of post-harvest data collected
- 62 publications in peer-reviewed journals
- 28 published theses and dissertations
- >250 undergraduate and post-graduate technicians have worked on the HEE
- 22 different primary investigators have done a project on the HEE from 8 different universities

Photos from the Field Season



Photo captions go clockwise from top-left: A Scarlet Tanager making a quick stop in a creek (*Brandon Con-nare*); a timber rattlesnake making its way across the road (*Ashley Oliver*); an eastern box turtle encountered while out doing field work (*Angela Fletcher*); a white-footed mouse (*Angela Fletcher*); the view across one of the HEE research areas that was clearcut in 2008 (*Charlotte Owings*); an eastern tiger swallowtail (*Ashley Oliver*).

HEE Outreach

Woodland Wildlife Steward Workshops

In June 2019, two Woodland Wildlife Steward Workshops were held; one for woodland owners and one for natural resource professionals. The workshops focused on providing natural resource professionals and private woodland owners with information on how they can manage woodland areas for wildlife. Participants of both workshops had an opportunity to learn about the HEE project, tour some of the HEE research areas, and hear how different forest management techniques affects Indiana wildlife.



Field Coordinator Jeff Riegel talking to woodland owners about birds in Morgan Monroe State Forest during the Woodland Wildlife Steward Workshop.



Purdue Extension Intern Aaron Provencio collecting footage in a HEE prescribed fire treatment area

HEE/Purdue FNR Extension Intern!

This summer, Aaron Provencio, an undergraduate student from Colorado State University, came to Purdue University to work as an extension intern for the Department of Forestry and Natural Resources. As part of his internship, Aaron spent time meeting with a number of HEE Researchers and graduate students to learn about their projects and what they are finding. Aaron created a number of informational videos that will be available on the HEE website at a later date.

Interested in scheduling a tour of the HEE for your group? Please contact the HEE Project Coordinator at freemac@purdue.edu



Hardwood Ecosystem Experiment

Purdue University
Department of Forestry and Natural Resources
Pfendler Hall of Agriculture
715 W. State St.
West Lafayette, IN 47907-2061
www.heeforeststudy.org