orests are dynamic systems with interactions between trees and wildlife that change through time, in the presence or absence of timber harvesting. Looking at the changes that occur in both harvested and unharvested areas will help us to understand how trees and wildlife respond to forest management. This knowledge is vital to the sustainability of our forest resources.



Project Partners



Purdue University is an Affirmative Action, equal access/equal opportunity institution.

Sustainably Managing Forests for Our Future



What will our forests be like in 100 years?

*

Hardwood Ecosystem Experiment

A long-term, large-scale experimental study of forest management and its impacts on plants and animals

The Hardwood Ecosystem Experiment (HEE) is a long-term, large-scale scientific research project focused on understanding how our forests change over time. In fact, our intent is for future researchers to still be reporting results in 100 years! HEE is studying the following aspects of the forest:

- Ways to maintain oak and hickory dominance in forests,
- Understanding how harvesting and natural disturbances affect plant and animal populations, and
- Evaluating the social and economic impacts that forests have on their visitors and nearby communities.

Our study, concentrated in Morgan-Monroe and Yellowwood State Forests, is comprised of nine 200-

acre study areas. Each area has been randomly assigned a treatment - even-aged management (clearcut and shelterwood areas), uneven-aged management (group openings and singletree selection), or control (no harvest). These treatments will be maintained throughout the study. **Extensive plant and wildlife** surveys were conducted prior to treatment, and will continue to be monitored for years to come.



After three years of collecting baseline, pre-harvest data, our harvests began in July

2008. Post-harvest data will be collected to determine how various species of plants and animals change in abundance due to movement, births, and deaths after a harvest. The data will also show when original resident species return to these areas in the future. On a larger scale, these data will indicate the changes in the forest ecosystem in response to the different treatment types.

One hundred years is a long time! It will only take a few years, however, for us to begin to see the effects of the first harvests. We will make necessary changes to the project to continue to answer questions that address the need for maintaining the forest's biological diversity for future generations.



What does this mean for you?

HEE will help us understand how plants and animals respond to timber harvesting, and to adjust and improve harvest practices to assure biological sustainability. This information will allow us to:

- Have a greater understanding of how to manage forest resources to meet short- and long-term objectives,
- Develop management guides and improve how harvests are conducted, and
- Help private landowners maintain biological diversity on their property.

