



Cooperative Effort Brings Botanists, Fire Managers, and Foresters Together

New monitoring plots on the Wayne National Forest will enable forest managers to measure results of prescribed burns and adapt management techniques to reach goals.



Botany Technicians take measurements on a fire monitoring plot.

Fire managers have joined forces with botanists and foresters for landscape-level monitoring of prescribed burn areas on the Wayne National Forest. Our goals are to: increase oak regeneration on the Wayne, where oak populations are threatened by shade-tolerant tree species; decrease fuel-load levels in order to lessen the severity of wildfires; and reduce the occurrence of non-native invasive species that compromise natural communities.

Fire is one tool that can be used to advance these interests.

During the winter of 2005–2006 a group of Northeastern Research Station, Ohio Division of Wildlife, and Forest Service program managers met to

discuss fire-monitoring ideas. The group designated a core team that would determine needs, protocols, and other issues.

This team, led by Wayne National Forest Botanist Cheryl Coon, met with Ironton District Botanist Chad Kirschbaum and Ironton District fire program personnel who had previously established some fire-hazard-fuel monitoring plots.

Following the FIREMON model used in the Ironton District, the Athens District installed research plots and collected preliminary data that will help predict both the behavior of the fires themselves, and the effects burning will have on native and exotic plant populations.

Since early June, seasonal botany technicians Linda Hirst and Julie Wnuk, often working with Coon and other Athens District staff, worked to install twenty-five monitoring plots. In each plot they recorded four size-classes of woody debris, as well as, woody and herbaceous plant cover in several sub-plots within each larger plot. In about half of the plots they also recorded plant-species cover and height.

The latter information will help to show both the amount of variation within each plot, as well as, changes in species composition, cover, height, and ground cover over time. Data will be entered into a database and analyzed. Currently, more monitoring plots are being installed on the Ironton District through a contract written by Kirschbaum and funded by the fire program.

The FIREMON Fire Effects Monitoring and Inventory System, developed by Systems for Environmental Management in cooperation with the Fire Sciences Laboratory of the Forest Service's Rocky Mountain Research Station, looks like it will be a powerful tool for determining the significance of collected data.

According to Hirst, "The 'FIREMON' program has been used by management teams across the country, which is beneficial in that it allows us to compare our data to that of other regions."

Accomplishments this year have only been the first step in the process. The Wayne will be able to measure fuel-load levels in the permanent plots again immediately after burns take place, and in subsequent years can monitor trends in oak regeneration and other woody and herbaceous plant communities.

"By establishing pre-implementation, long-term monitoring plots we can quantitatively determine if Forest goals are met, and consider adaptive management to reach goals and desired future conditions," Coon said.

For more information contact Linda Hirst at 740-753-0915