

# ...in the Ozark Mountains

For many years, extensive field surveys and biota inventories near Foushee Cave in Independence County verified its rich biological diversity, including 10 significant cave species. Two federally endangered species, gray bats and Indiana bats, are known from the site, and the Foushee Cave snail occurs only in this cave system.

The significant biodiversity makes protecting this site an acquisition priority for the System of Natural Areas. Using the results of recharge zone studies conducted by Ozark Underground Laboratory, in FY2011 commission staff negotiated with landowners toward the purchase of 1,677 acres containing the mouth of Foushee Cave and a significant portion of its recharge zone. County roads and a state highway will offer excellent public access to the proposed new natural area, and the property will be open for public hunting. The acquisition process should be finalized in early FY2012, with the addition of Foushee Cave Natural Area to the System of Natural Areas.



Above: ANHC staff John O'Dell (left) and Bryan Rupar (right) inventory Foushee Cave for rare animals.



Above left: Devil's Knob-Devil's Backbone Natural Area. Above right: Katie, one of the mules used to remove invasive eastern red-cedar from glades.

The commission develops management plans for each of the 69 properties in Arkansas's System of Natural Areas. Each plan is unique and dictates habitat conservation strategies. Stewardship staff use new and innovative land management methods, but at times, they also find it necessary to return to the old ways. A portion of the limestone-dolomite glades at Devil's Knob-Devil's Backbone Natural Area had become overrun with eastern red-cedar trees. A local contractor felled the invasive trees by hand, then used a mule team to remove the logs. This method minimizes disturbance to the sensitive glade ecosystem. Video of the mules in action was shared with e-newsletter subscribers and posted on our website. We now have plans to follow up with a prescribed fire regime to help the glades return to their native condition.

As an agency that uses science to make conservation and management decisions, we believe it is important to inspire Arkansas's up-and-coming scientists. Programs on Arkansas's endangered bats to 78 students, including the science club, at Westfork Middle School, are examples of 35 such educational programs offered to 1,265 students throughout the state this year.



The commission's staff also judges local, regional, and state science fairs (above) and sponsors four natural heritage awards for students demonstrating commitment to further conservation research.

The commission's botanists conduct field inventory throughout Arkansas. Working individually and with conservation partners, they often traverse difficult terrain searching for rare plants and natural communities on public and private lands. At one unique privately-owned site in Benton County, they documented 22 plant species of conservation concern. A forested portion of this property became the only confirmed location of the rare black maple tree (below). In addition, preliminary aquatic animal species inventory noted the presence of the rare ringed crayfish at this location.



Searles Prairie Natural Area (above) is a 10-acre remnant of a once expansive 10,000-acre tallgrass prairie. The property was generously donated to the commission by Mrs. Anna Mae Searles in 1988, who knew this unplowed prairie was a rare jewel. Located within the city limits of Rogers, this natural area presents a number of unique management hurdles. In FY2011, a new partnership with the Arkansas Master Naturalists brought volunteer workers to Searles Prairie. The group organized a trash pickup and worked to remove woody vegetation from the prairie mounds. The commission's staff conducted a prescribed burn at the property this year in an effort to control non-prairie plant species.



The Ozark karst ecosystem hosts a diverse array of 62 organisms adapted to cave and karst habitats found nowhere else in the world. Inventory shows three areas of caves in the Arkansas and Oklahoma Ozarks sustain the world's population of the Ozark big-eared bat (left). The Slippery Hollow cave system near Yellville is the eastern anchor to this suite of caves. Two FY2011 land acquisitions, funded by the Natural and Cultural Resources Council, increased the size of Slippery Hollow Natural Area (left) to 995 total acres. Connectivity is important when protecting karst ecosystems as many of the rare plants and animals require large swaths of undisturbed landscape for feeding and reproduction.