

OLD COVE:

Mississippi's Appalachian Mountains

By Karen Brasher

The Appalachian Mountains stretch from Alabama to Canada with foothills in northeastern Mississippi, and some 100 miles from these foothills, in Webster County, is an area known as Old Cove.

The 350-acre area contains plant and animal diversity in deep ravines and bluff ridges similar to that found in the Appalachians. Owned by Weyerhaeuser Company, Old Cove is home to mature hardwoods, rock outcroppings, reptiles, amphibians and many plant species.

While Old Cove is not a tourist destination like the Appalachians, it is a unique and diverse ecosystem in need of preservation. Foresters in the Weyerhaeuser Company deemed it a "special place" as part of the company's compliance with the Sustainable Forestry Initiative.

"Special place" is the phrase used for areas with unique qualities within the forest landscape that are usually protected. To preserve the rare ecosystem, Weyerhaeuser sought the expertise found in Mississippi State University's Forest and Wildlife Research Center and the Mississippi Nature Conservancy.

"The cove habitats support many species that are not found in other types of forested habitats, and by determining the different species that inhabit the coves, we can learn more about conserving these unique communities," said Jeanne Jones, wildlife and fisheries professor. "The cove



habitats in combination with managed pine forests and streamside management zones support a myriad of animal and plant species.”

It is this type of diverse environment that professionals in the Weyerhaeuser Company and the Mississippi Nature Conservancy are seeking to conserve, and MSU is enthused to be a part of this conservation effort, Jones said.

To help preserve the cove area, scientists and graduate students are conducting surveys to determine the species of plants and animals that inhabit the hardwood forests and the seepages and streams of the forested cove habitats. Aaron Posner, a wildlife and fisheries graduate student under Jones’ direction, has collected data from 14 individual timber stands to compile a list of reptiles, amphibians, birds and plants found in the area.

“We have sampled each stand every two months from April 2008 to June 2009,” Posner said. “The stands range from 5-year-old pine to over 90-year-old hardwoods. We have found a variety of amphibians and plants, including many rare species.

“While we have not found any endangered or threatened amphibians, we have found rarities, including a Southern Red Salamander, a species of concern in Mississippi,” he added. “We have also found some rare and unique plants, such as Solomon’s seal, Green Dragon and several rare orchids. These plants have been found primarily in moist hardwood forests and outflows of the coves.”

In addition to determining the number of species in the coves and pine forests of the Old Cove area, researchers are conducting animal and plant surveys in the streamside management zones. So far, the research has demonstrated that hardwoods in Mississippi—both mature trees in coves and those along streams—provide important habitats for numerous species, especially for rare plants and salamanders.

“By measuring animal and plant communities in streamside management zones and the hardwood forests of the coves, we can

learn what species are supported by these different habitat types,” Jones said. “Both game and nongame wildlife are found in these habitats, and one might be surprised to learn that some of the best habitat for woodland salamanders is also excellent habitat for game species, such as wild turkey and gray squirrels.”

The information being collected will help forest managers understand the role of streamside management zones and cove forests in providing for native species that inhabit the lands they manage in the Old Cove area. This information is important, because professionals of Weyerhaeuser Company are seeking ways to retain native animal and plant diversity and protect water quality on the lands they manage.

Streamside management zones serve as a voluntary best management practice that prevents soil erosion, protects water quality and retains habitat in and along streams and rivers during intensive land use, such as logging or land clearing. The area is at least 90 feet from the water’s edge outward, composed of undisturbed trees and other vegetation.

“Our goal is to increase understanding of how streamside management zone forests and protected cove forests contribute to the overall species diversity of lands managed for timber production,” Jones said. “This understanding will potentially help us integrate multiple goals on timbers lands—from timber production to turkey hunting to successful salamander searches by children rambling in Mississippi’s summertime woodlands.”

The cove forests are important for the survival of selected wildlife and plant species, and they are a beautiful place in which to work.

“Even though Mississippi does not have the grand cove habitats of the Appalachian Mountains, we are fortunate that the Weyerhaeuser Company and the Mississippi Nature Conservancy have worked together to conserve the unique cove areas that remain in our state,” Jones said.

Photos by Araron Posner

