



MSU

Helps Balance
Mother Nature,
Military Readiness

By Karen Brasher

When the petite blonde from Mississippi State University speaks, even tank commanders listen.

Jeanne Jones, an associate professor of wildlife and fisheries, has been helping the military with techniques that create harmony between military training and natural resources since 1987.

Erosion control was the initial focus of the Mississippi State effort on more than 280,000 acres of Department of Defense lands, but enhancing wildlife habitat and diversity is Jones' primary mission.

The Vicksburg native and graduate students under her direction have developed Integrated Natural Resource Management Plans for the Department of the Army, Mississippi Army National Guard, Department of the Navy, and National Aeronautics and Space Administration.

"Our research on restoration ecology and conservation of native biological diversity has been used extensively by the Defense Department to meet the natural resource and conservation demands of a diverse public while maintaining lands which accomplish the military training mission," Jones said.

The plans provide land and water management as well as species conservation guidelines for military training areas that host more than 130,000 military personnel each year.

In addition to training military personnel, these lands support more than 80 state and federally listed endangered plants and animals and at least eight unique and rare ecosystems.

"Our main objective is to train troops, but we also have to manage natural resources and be good stewards of the land," said Lt. Col. Robert Piazza of Mississippi National Guard headquarters in Jackson. "That's what we're trying to do through the work with MSU."

The Forest and Wildlife Research Center team has been successful in the effort, receiving a national award for the plan developed for the Mississippi Army National Guard. They also received a Group Achievement Award from NASA for their work at the Stennis Space Center in Hancock County.

Each military base has different ecosystems and needs. The military is concerned with a multitude of natural resource issues, including sustainable forestry management and use, wetland conservation and restoration, outdoor recreation, protection of rare and endangered species, control of noise pollution and ecosystem health.

"The military lands are unique in that they have not been disturbed by development," said Jarrod Fogarty, former student and current postdoctoral associate working with Jones. "Because of this distinctiveness, many species of plants and animals inhabit military reservations, and Camp Shelby near Hattiesburg supports many species that are rare in other parts of the state."

In addition to benefiting the military, the land research has served to introduce MSU graduate students to an array of innovative concepts that will be applied in their future careers.

As an example, Jones said the MSU student team joined

with the Nature Conservancy, University of Southern Mississippi, U.S. Forest Service, U.S. Fish and Wildlife Service, and Natural Resource Conservation Service to develop an ecosystem management plan for the Mississippi Army National Guard's Camp Shelby reservation. The goal of the plan is to restore and protect pitcher-plant wetlands, longleaf pine forests and gopher tortoises.

"Researchers have found that the frequent fires associated with Camp Shelby's artillery firing improve the habitat for many species of the piney woods region, including gopher tortoises, bobwhite quail and pitcher plants," Fogarty said. "Regular fires in longleaf pine forests also present a great opportunity for the restoration of this rare forest type in south Mississippi."

An additional goal is to control the spread of invasive species, such as cogon grass. Lisa Yager, director of the Nature Conservancy program at Camp Shelby and a doctoral student, is studying this invasive grass that can degrade wildlife habitat, forest health and the military training theater, Jones added.

Other findings at the bases include:

- The Army's Redstone Arsenal reservation in north Alabama is home to diverse waterfowl, mammals and nongame birds in bottomland hardwood forests and forested wetlands. Like the Stennis Space Center, Redstone supports large deer populations. Since high security levels limit hunter access, hunting is not generally an appropriate population management approach in restricted areas. Monitoring of deer herds and deer use of roadsides is necessary to reduce deer-vehicle collisions. The Redstone military reservation and the Stennis Space Center have an overabundance of deer, which can be detrimental to the health of the herd.
- Meridian Naval Air Station supports high-bird diversity in bottomland hardwoods and upland pine habitats. Abundance of wildlife, including wild turkey, near station runways must be considered and managed to reduce potential bird/plane collisions.
- At the Tombigbee National Forests in central Mississippi, accumulated information has been adopted for use in forest management planning, federal Streamside Management Zone policy developments and rare-species conservation efforts. A database of rare amphibians and reptiles and stream fish distribution related to habitat conditions on forest service lands has been produced.

"We have found several rare species on public forestlands and have found that they depend on the same habitat types that support gray squirrels, wild turkey and wood ducks. So, habitats for game species can be essential to survival of some of Mississippi's rarest species," Jones said. "It is this concept that we are applying to manage and conserve groups of wildlife species for Mississippians to enjoy today and in the future. We know we can integrate this conservation mission with forest management and military preparedness—it just takes communication, cooperation and teamwork".