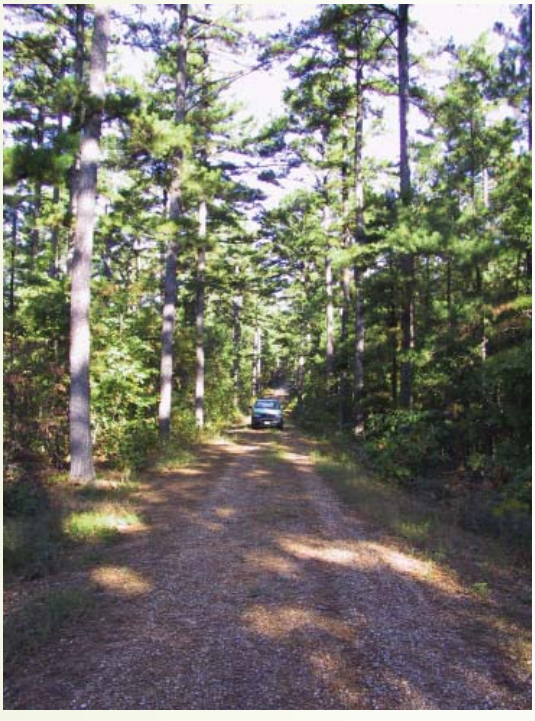
SINKIN EXPERIMENTAL FOREST

Dent County, Missouri

Reprinted from Experimental Forests of
the Northern Research Station NRS-INF-07-09



Located within the Mark Twain National Forest in southeastern Missouri, the 4,100 acre (1,666 ha) Sinkin Experimental Forest was established in 1950 to implement forest research on management and reproduction of shortleaf pine. The headwaters of Sinkin Creek originate in the general vicinity of the experimental forest, hence the name "Sinkin." Current research is focused on methods for restoring oak and oak-pine woodland communities. Many of the silvicultural techniques and management guidelines used by foresters on the surrounding National Forest and throughout the central hardwood region were developed on the Sinkin Experimental Forest.

Assets:

Scientists: 3 Northern Research Station scientists are currently conducting studies on the Sinkin and data from the experimental forest supports research for other Northern Research Station Scientists and university collaborators.

Scientific support: 2 full-time technicians and 2 seasonal employees. Technicians (shared with the Kaskaskia (IL) and Paoli (IN) Experimental Forests) support the work of these scientists.

Cooperators: The University of Missouri, the Missouri Department of Conservation, the Mark Twain National Forest

Needs:

Annual operating costs: $142,000 shared with the Kaskaskia (IL) and Paoli (IN) Experimental Forests.

Long-term needs:

- Additional technician for data collection and a data manager shared with the Paoli and Kaskaskia Experimental Forests - $90,000/yr
- Operating funds to facilitate cooperative research - $50,000

Sinkin Experimental Forest is administered by:
Mark Twain National Forest and
U.S. Forest Service, Northern Research Station
202 Natural Resources Building, University of Missouri
Columbia, MO 65211
609-894-0325
Key Contact: John Kabrick, 573-875-5341 x229, email jkabrick@fs.fed.us

More About the Sinkin Experimental Forest

Location: Lat. 37°30′ N, long. 91°15′ W
The Sinkin EF is located about 25 miles to the northwest of Salem, MO.

Vegetation: Approximately 75 percent of the Sinkin (3,000 acres or 1,214 ha) is dominated by the red oak and white oak groups. Black and scarlet oaks are the most numerous species in the red oak group, with some northern red oak. The most numerous and largest trees of the white oak group are white and post oaks. Other species on the forest include hickory, black tupelo, sassafras, shortleaf pine, black cherry, maple, dogwood, and some black walnut. The youngest stands are 3 years old and the oldest exceed 100 years. The understory is composed of hardwood species and shade-tolerant herbaceous plants.

Climate: Weather data have been collected since the Sinkin Experimental forest was established in 1950. The average annual precipitation is 45 inches (1,118 mm) and falls mostly in the form of rain, with occasional freezing rain, sleet, and snow during the winter months. The coldest month is January and the warmest is July or August. The lowest temperature recorded on the site is -18 °F (-28 °C) and the warmest is 111 °F (44 °C). It is not uncommon during the winter months for temperatures to reach 50 to 59 °F (10 to 15 °C); this is known locally as the January thaw. The wettest months are April, May, and June, and the driest are December, January, and February.

Research—past and present: Initial research on the Sinkin concentrated on solving management and reproduction problems of shortleaf pine. Planting techniques, prescribed fire, use of herbicides to control competition, and thinning methods were developed to address these problems. Later research focused on the silvicultural issues with the management and reproduction of oak stands. Studies were established to answer questions about natural and artificial oak regeneration. Current research entails monitoring the long-term studies, conducting a Joint Fire Science Project with the Missouri Department of Conservation and the U.S. Geological Survey, studying the restoration of shortleaf pine and oak woodlands, and administrative studies of uneven-age management with the Mark Twain National Forest. A savanna management demonstration area highlights techniques for ecological restoration through silviculture.

Research opportunities: Studies of ecology and silviculture of central hardwood forests, oak decline, drought-related stress on tree growth and yield, insect pest and drought relations, and woodland silviculture could be developed.

Facilities: Although there are no physical facilities on the Sinkin Experimental forest itself, the forest has an automated weather station that is accessible by satellite and cell phone.

More information can be found at: **http://www.nrs.fs.fed.us/ef/locations/mo/sinkin/**

Northern Research Station
USDA Forest Service

Updated October 2008

All photos by U.S. Forest Service