

THE GYPSY MOTH IN THE CENTRAL HARDWOODS:  
RESEARCH AND MANAGEMENT NEEDS

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**Abstract:** The gypsy moth, *Lymantria dispar* (L.), is the most serious insect defoliator of trees in the Eastern United States. It is currently established in the area northeast of a line from Michigan to Virginia, and occupies most of the Adirondack and Laurentian Mixed Forest Provinces dominated by northern hardwood, spruce and fir forests. The range of the moth continues to expand to the west and south at a rate of 10-15 miles per year and is beginning to enter the Eastern Broadleaf Forest Province dominated by oak-hickory forests. Evaluation of potential impacts from gypsy moth defoliation on oak-hickory forests must now be based on studies conducted in the Eastern United States. Forest management strategies based on extrapolations from eastern forest types are unlikely to yield satisfactory results in the Central States.

The gypsy moth is expected to reach the Missouri Ozarks by the year 2025. Gypsy moth defoliation will be a new stress factor on the oak-hickory forests of Missouri. Periodic stresses due to drought, frost injury, poor soils, two-lined chestnut borer, and Armillaria root rot currently combine to cause tree decline and mortality. The added stress of gypsy moth defoliation is expected to be significant, although its magnitude is not known. Silvicultural techniques to minimize impacts by improving stand vigor and diversity need to be considered in the context of long term objectives for Ozark resources. Insufficient information is currently available to integrate these practices with proven techniques applicable to the Central Hardwoods.

The Steering Committee of the Missouri Cooperative Gypsy Moth Program is developing a Comprehensive Plan for Missouri. The plan aims to guide gypsy moth survey, detection and management decisions through the transition from an uninfested state to the time when the entire state is generally infested with the moth. The first priority is to delay the establishment of the gypsy moth in Missouri for as long as it is ecologically and economically feasible. The second priority is to define and implement research necessary to provide the basis for sound management decisions within our forest types and growing conditions.

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