The gypsy moth is a non-native, exotic pest. The following overview addresses its biology, feeding preferences, current and possible future spread, and strategies to manage the insect.

### **BIOLOGY:**

The gypsy moth has four life stages.

Egg masses



Larva (caterpillar)



Pupae



Adults



#### What gypsy moths like to eat:

Gypsy moth caterpillars feed on the leaves of over 300 different species of trees. They are especially fond of oak foliage.

#### **HOST PREFERENCES**

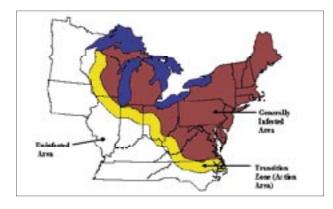
FAVORED	ALSO EATEN	NOT EATEN
Susceptible to defoliation	Resistant to defoliation	Immune to defoliation
oaks	beech	ashes
apple	hemlock	junipers
aspens	butternut	/dogwood/
white birch	maples	cedars
gray birch	spruces	sycamore
hawthorns	walnut	locusts
basswood	cherry	balsam fir
larch	chestnut	horsechestnut
witch-hazel	serviceberry	yellow birch
willows	pines	yellow-poplar
sweetgum	hickories	
cottonwood		



Oak mortality following gypsy moth feeding

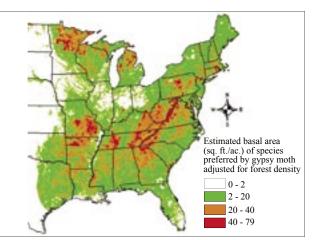
#### Where gypsy moths can be found:

The area where gypsy moths have become established is referred to as generally infested. Gypsy moth treatments in this area are known as suppression projects. The zone between the infested area and the uninfested area is known as the transition zone (action area). Treatments in the action area are Slow the Spread (STS) projects. When moths are found in the uninfested area, they are treated with eradication projects.



#### Where they may be found in the future:

Gypsy moth has the potential to spread into many new parts of the United States\* with high concentrations of trees that the gypsy moth prefers to eat (colored as orange and red in the map below) and countless urban and suburban environments where susceptible host trees have been extensively planted.



\*This map is being updated for the western part of the U.S. and will be available at a later date.

## The USDA National Management Program for gypsy moth consists of three strategies

**Eradication:** eliminates isolated infestations of the gypsy moth that are detected in uninfested areas of the country to prevent the gypsy moth from becoming established.

**Suppression:** reduces damage to trees and effects on people in affected area caused by gypsy moth caterpillars. Suppression activities do not eliminate the gypsy moth from the generally infested area.

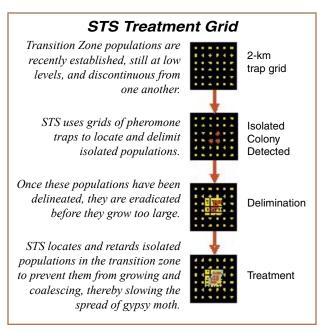
**Slow the Spread (STS):** slows the rate of gypsy moth spread from generally infested areas and delays the impacts and costs associated with gypsy moth outbreaks. Since STS was implemented in 1999, the historic rate of spread of 13 miles/year (20.9 kilometers/year) has been reduced by half to less than 6.25 miles/year (10.1 kilometers/year).



STS projects use pheromone-baited traps deployed on grids just ahead of the advancing population front to detect isolated gypsy moth populations.

When gypsy moth populations are detected, they are further delineated and then treated to eliminate the moths and retard population spread. This strategy decreases the rate of gypsy moth spread caused by "leapfrogging" that occurs when isolated colonies become established in front of the generally infested area. These colonies can grow and coalesce, which contributes to the movement of the population front.

STS treatments primarily involve mating disruption. Female moths produce and release a chemical that attracts male moths. Use of this chemical, called "disparlure," at rates as low as 6 to 15 grams/acre in the action zone confuses the male moths so they cannot locate females with which to mate.



Additional information: This mailing includes a card for you to fill out and return to remain on the SEIS mailing list. Should you not return the card, we will assume you intend to use our Web site (na.fs.fed.us/wv/eis/) for updates and newly developed documents.

#### For more information, contact:

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The Supplemental Environmental Impact Statement [SEIS] augments the analysis and documentation of "Gypsy Moth Management in the United States: a cooperative approach," Final Environmental Impact Statement, 5 vols. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Area State and Private Forestry, November 1995.

Images courtesy of USDA Forest Service Archives www.invasive.org
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# Gypsy Moth Biology and Management Strategies



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