**Asian Gypsy Moth**



**Description**

There are several subspecies and races of gypsy moth. There is the Asian gypsy moth Lymantria dispar dispar race asian; and the European gypsy moth Lymantria dispar dispar race Europe; and Lymantria dispar japonica the Japanese gypsy moth .

Male Gypsy moths are brown with a darker brown pattern on their wings. Females are slightly larger and nearly white, with a few dark markings on their wings. Newly hatched caterpillars are black and hairy, later developing a mottled yellow to gray pattern with tufts of bristle like hairs and two rows of blue then red spots on their back.

Adult females from Asian strains (west of the Ural mtns.) of gypsy moth are capable of flight but European strains are incapable of flight. Larvae of Asian strains also tend to grow larger. North American populations originated from Europe.

**General Impacts**

The gypsy moth *Lymantria dispar* is a defoliator of mainly deciduous trees. In most areas and in most years, gypsy moths remain at low densities and cause no discernible damage. Occasionally, however populations reach high densities and these outbreak populations may completely defoliate host trees.

Most impacts of gypsy moth are associated with the physiological stress in trees caused by defoliation, especially if it occurs several years in a row or in conjunction with drought. These effects include reduction in tree growth, crown dieback and tree mortality. Tree mortality is usually associated with other insects (wood borers) and pathogenic fungi that attack stressed trees. In extreme situations, nearly 100% tree mortality may occur over large areas. The most important impacts occur in urban/suburban settings. Defoliation and tree mortality may be very serious if impacted trees are valuable shade or street trees in urban settings.

Outbreaks typically last 1 to 5 years. Outbreak populations then decline because of starvation and increased disease. Small mammal predators are considered the most important source of mortality in low density populations and may keep sparse gypsy populations in check for several years before the next outbreak occurs.

**Management**

Preventative measures:

Landscapes may be protected from the gypsy moth in many different ways. Forests can be altered to prevent outbreaks. High-risk forests can be harvested before outbreaks occur to prevent some economic loss. Thinning stands of medium to high quality can increase the vigor of surviving trees, reducing the risk of major outbreak. Thinning to reduce the proportion of primary gypsy moth hosts can also reduce the frequency and intensity of defoliation. After defoliation has occurred, salvage logging can be carried out within 6 to 12 months of tree death to prevent complete economic loss and to advance regeneration.

Monitoring of impact:

Despite efforts to prevent the ongoing spread of the gypsy moth, the affected area of North American forests continues to expand. With the increased area of infestation, ecological, environmental and economic concerns about gypsy moth disturbance remain significant. As such, the pressure on current monitoring tools is greater than ever. Traditional sketch-mapping and observer based programs are likely to become less able to comprehensively quantify the areas of impact.