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### From Local Ag Teachers:



Gypsy Moth  
Raymond W. Little  
Horticulture Instructor  
Lancaster County  
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Mount Joy Bldg.

The gypsy moth (*Portheia dispar*) has been the subject of much discussion over the past few years. It is the most serious insect enemy of Pennsylvania's forests. During May and early June, the Department of Environmental Resources through a Federal-State-County funded program treated approximately 30,000 acres to control the gypsy moth. This pest is a native of Europe, Asia, and North Africa and was introduced into Massachusetts from Europe in 1869 by a French scientist hoping to produce a new race of silk-producing insects. Some of the larvae escaped during his experiments. In a few years the gypsy moth became well established in the surrounding woodlands. By 1902 it was widespread in all of the New England states, in eastern New York and in parts of New Jersey. Millions of dollars were spent in an effort to control it. A barrier zone was established in eastern New York in an attempt to halt the westward and southward movement. Any infestations found in this barrier were treated with lead arsenate sprays. This effort however, failed to contain the insect. In 1932 infestations covering 400 square miles were first discovered in northeastern Pennsylvania.

## Thoughts in Passing



Beginning in 1943, all infestations found were treated with DDT. Since 1963, when DDT was abandoned, the insect began its march across Pennsylvania. In 1969 it was found for the first time west of the Susquehanna River. In 1973 the entire state was considered to be infested. Its spread is now being greatly aided by the use of camping trailers and mobile homes. Vehicles that are present in infested areas during June and July frequently carry larvae, pupae, and egg masses to distant states. Federal quarantine regulations are in effect to retard the spread to uninfested states. During the winter the gypsy moth is in the egg stage and has one generation per year. Larvae being hatching after a period of warm weather in late April to early May, and it may take a month or more for all eggs to hatch. In cool locations, initial hatchings may be delayed until late May. The first larval instar or growth stage is the principal time when natural dispersal occurs. They will arch their bodies and string down from the foliage on silken threads. Being light and hairy, they are readily picked up by the wind or convection currents and may be carried 20 miles or more. Feeding larvae remain on the leaves usually through the third instar, constructing a small mat of silk on the leaf for resting and molting purposes. They begin feeding about dawn when the

temperature is above 45 degrees F and continue to 9 or 10 a.m. They may resume feeding in late afternoon, but by dusk they move to the undersides of leaves to rest. In instars 4 to 6, most of the feeding occurs at night. Larvae also then descend the tree to rest in the ground litter during the daytime, or may find a sheltered place in the tree. A caterpillar is capable of devouring several leaves per day in the last two instars. This occurs from mid-June to mid July. The larval stage lasts about 8 weeks. When ready to pupate they crawl to a protected place and change to the pupal stage in 2 to 3 days. This stage lasts about two weeks, after which the adult moths emerge. During a short period around July 1, all four stages of the gypsy moth may be found. The adult moths do not feed as their function is reproduction. The male moth tends to fly upwind, while the female is so heavy with eggs she is unable to fly. The moths die soon after egg laying is completed. The adult moths life span is 7 to 10 days. Most eggs are deposited in July. Though gypsy moths are largely thought of as a woodland pest, their migration out of defoliated woodlands in mid to late June often creates a serious problem to home owners in bordering residential areas. Its most distinguishing characteristic is a double row of colored spots along the back, the first five pairs being blue and the remaining

6 pairs a brick red color in the larval (caterpillar) stage. Some people have an allergic reaction to the hairs of the larva, similar to poison ivy. Defoliation of trees and shrubs may result in death of the plant. One year defoliation of evergreens may be enough to kill while 3-5 years may be necessary to kill deciduous trees.

An insecticide called carbaryl has been in use since DDT was banned. It breaks down quicker than DDT, leaving no residue in milk or on pasture lands or crops. It is low in toxicity to humans, birds, other warm blooded animals, and fish, when directions are followed. The spray material used this year by the Department of Environmental Resources was Dylox oil insecticide and was applied by helicopter. If you have a gypsy moth problem consult knowledgeable dealers of insecticide, county agents, or a vo-ag teachers for more information.

### TRY A CLASSIFIED

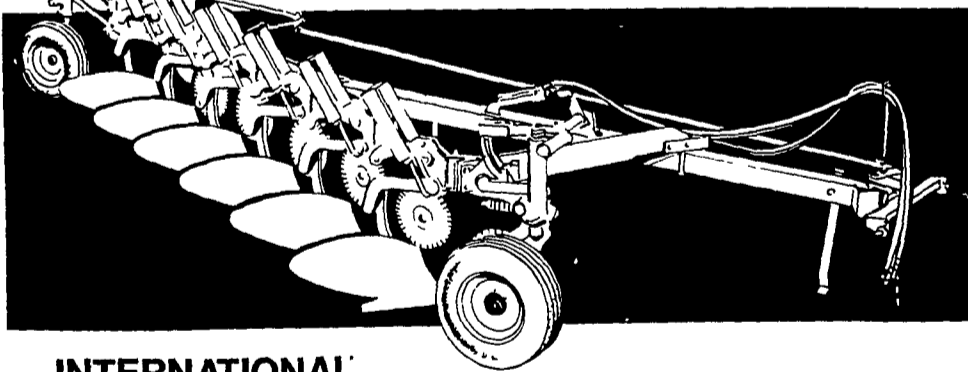
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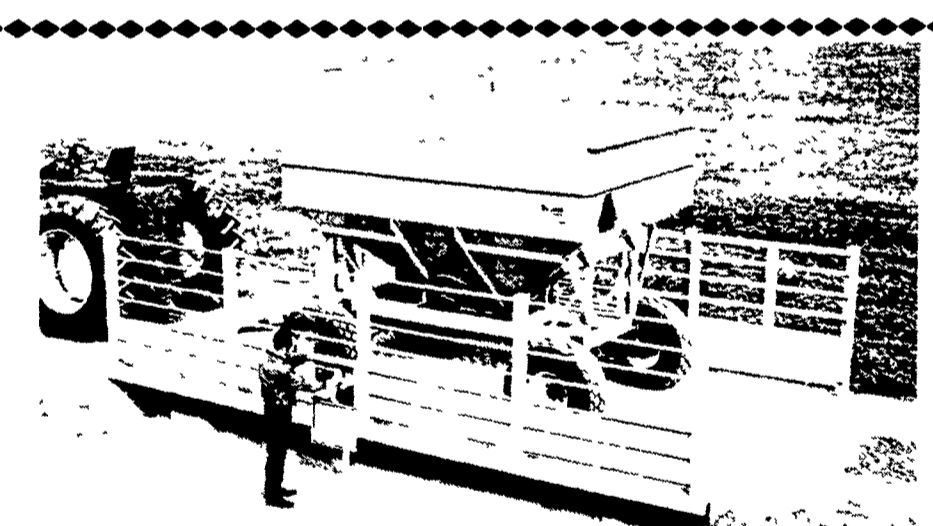
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