Gypsy moth is the most serious pest of oak trees in Maryland. Gypsy moth caterpillars prefer oak but will feed on many other trees and shrubs including sweet gum, linden, willow, poplar, birch, blue spruce, apple, alder, boxelder, and hawthorn. Egg hatch begins in late April or early May depending on the temperature. Newly hatched caterpillars are black, hairy and only one-sixteenth of an inch long. Very young caterpillars are carried by the wind from tree to tree. Therefore, it is often wise to wait until the caterpillars reach the second or third growth stage (instar) before insecticidal control is attempted. As they grow they change color and by the third instar the caterpillars are about five-eights of an inch long and have 10 blue spots down their backs. These young caterpillars spend most of their time in the tree tops feeding. The damage looks like shot holes in the leaves and is not easily visible from the ground. The caterpillars are easiest to control with pesticide sprays at this time (early to mid-May).

Fourth instar caterpillars change appearance and behavior from the young caterpillars. They are about one inch long; the first five pairs of dots remain blue but the last five pairs turn brick red. They also rest during the day in shaded areas on the tree trunks and feed at night. Some caterpillars will find hiding places on the ground during the day and crawl up the trunks at night to feed. The caterpillars will continue to grow and by mid to late May begin consuming entire leaves. Male caterpillars have five stages or instars while females have six. The female can grow to about two and one half inches. The last stage caterpillars are responsible for most of the leaf loss in trees and are more difficult to control with pesticides than young caterpillars.

When the caterpillars are finished feeding they migrate out of the trees in search of hiding places to pupate. The caterpillar changes into a smooth, teardrop-shaped, dark brown pupa that is about one inch long. They may be found attached to just about anything around the outside of the home including tree trunks, cars, trailers, around door frames, on the siding overhang above the foundation and in many other protected locations. The adult moths emerge from late June to late July. Female moths have white wings with small dark markings (wingspan is two inches) and do not fly in Maryland. They also have enlarged abdomens covered with light yellow hairs. Male moths are brown with black markings and do fly. They are one of the few day-flying moths found abundantly in Maryland. The moths do not feed. The moths only live a short time during which they mate and the female deposits eggs in masses. Egg masses are felt-like, tan, oval and about one and one half inches long. They are laid in bark crevices, on the undersides of branches, on the ground under loose
stones, boards, firewood, lawn furniture and other structures.

Management and Control.

- Destroy egg masses before April when egg hatching begins.
- Use sticky barrier bands to trap young caterpillars before they enter treetops.
- Use hiding bands to provide a refuge for migrating caterpillars that can then be removed and destroyed. (For detailed information on using both banding methods refer to FS 476, “Controlling Gypsy Moth Caterpillars With Barrier Bands.”)
- Use B.t. (Bacillus thuringiensis) products to control young caterpillars. If you are unable to spray your treetops, hire a professional arborist. The Maryland Department of Agriculture maintains a list of licensed applicators. The Home and Garden Information Center can provide callers with this information.
- Read FS 242, “Gypsy Moth and the Homeowner” for detailed information on gypsy moth management and control.