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ORANGESTRIPED OAKWORM *ANISOTA SENATORIA*, SATURNIIDAE

Adults: male top, female bottom

Mature larva

Egg mass (photo by Jeff Page)

The orangestriped oakworm is native to Connecticut. In 2005, 4,000 acres in eastern Connecticut were defoliated by this pest. In 2006, nine times that amount or about 31,000 acres were defoliated. Otherwise healthy oaks can tolerate one year of defoliation but over multiple years or in combination with early season attack by gypsy moths, this insect can seriously harm trees.

Description

Adult moths are pale orange as females and a darker rusty orange as males with a single white spot on the forewing. Females are

larger with a wingspan of 5 cm (2”), while males have a wingspan of 3.5 cm (1.4”). The body is furry. Newly laid eggs are bright yellow.

Newly hatched larvae are chartreuse green with dark horns on the thorax. Mature larvae are black with orange longitudinal stripes and many black tubercles that slant posteriorly. At maturity they are 55 mm (2.2”) long. A pair of flexible black horns are found on the thorax. Multiple short black spines are found on the anal end of the body.

Life Cycle

This insect overwinters as a pupa up to 10 cm (4”) deep in the soil. Moths emerge in early summer and are seen at lights at night. After mating the female lays up to 500 flattened round eggs in clusters on the undersides of oak leaves on lower branches. Small young larvae feed as a group and lace the leaves. Older caterpillars are solitary and eat the entire leaf leaving only the midrib. In September, mature larvae drop to the soil, burrow in, and pass the winter as pupae. There is one generation a year.

Hosts

White oak is the preferred host, but larvae will also feed on maple, hickory, and birch.

Management

Plants can be sprayed with *Bacillus thurengiensis* var. kurstaki when small caterpillars have settled in to feed. Usually this will happen in July. This is a bacterial product that is toxic to lepidopterous insects but not mammals or the natural enemies of the orangestriped oakworm. It should not be applied directly to bodies of water.

Additional softer insecticides that can be applied are spinosad and azadirachtin. Spinosad is derived from soil microorganisms and is toxic to butterfly and moth larvae, fly larvae, thrips and some beetles. It has a low toxicity to fish, birds and other wildlife. Azadirachtin is an insect growth regulator and feeding deterrent that is toxic to most insects.

A couple of sprays spaced a couple of weeks apart may be needed because eggs are laid and hatch over a period of time. If needed, later stage, large caterpillars can be treated with spinosad, acephate or deltamethrin. Be sure to read and follow all label directions.

Specimen trees that are worth protecting despite a high cost can be treated with an acephate implant.

Mention of a product is for informational purposes only. It is not an endorsement by The Connecticut Agricultural Experiment Station.