

Attack of the Elm Sawfly!

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This summer, elm sawflies may be chewing their way through elm leaves near you. While not common in Oklahoma, Dr. Rick Grantham has responded to three reports of elm sawfly within the past week, all centered on the eastern side of the state. Sawflies aren't true flies but are a specialized group of wasps. Sawfly larvae, sometimes referred to as caterpillars, closely resemble true caterpillars, the larvae of butterflies and moths. The simplest way to distinguish the two groups is to count the number of pairs of prolegs, fleshy appendages located on the abdomen that enable the larva to grip plant surfaces. True caterpillars always have five or less pairs of prolegs, while sawfly larvae always have six or more pairs (Fig. 1).

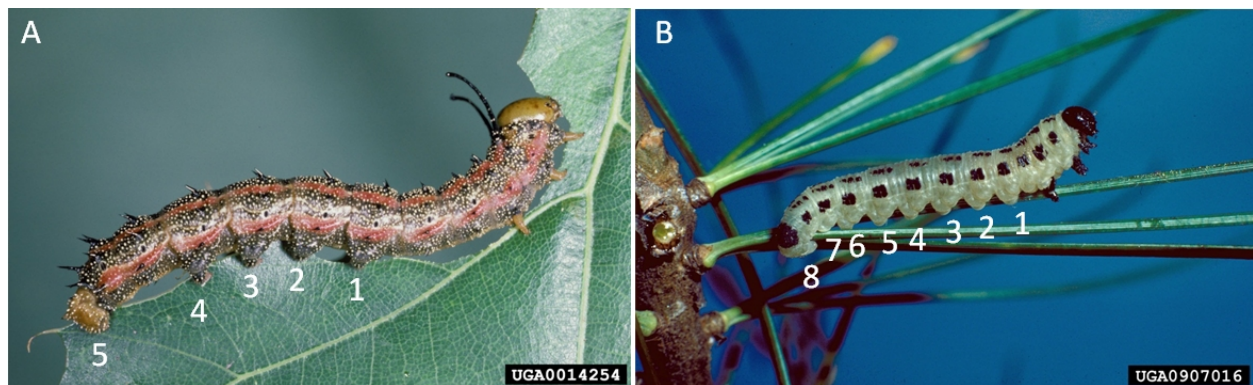


Fig 1. (A) True caterpillars have five or less pairs of prolegs and (B) sawfly larvae have six or more pairs. Images: (a) E. Bradford Walker, Vermont Department of Forests, Parks and Recreation, Bugwood.org, (b) Gerald J. Lenhard, Louisiana State University, Bugwood.org.

Description: Elm sawfly adults are small, stingless wasps. They do not appear to have the constricted waist of many stinging wasps. Adults are the largest North American sawfly, measuring $\frac{3}{4}$ to 1 inch long, and are dark blue with yellow antennae (Fig. 2). Females have four

small yellow spots on each side of the abdomen and possess a short, stout, saw-toothed ovipositor for laying eggs in plant tissue. Fully grown larvae are 1-½ inches long and greenish yellow with a black stripe down the center of the back (Fig. 3). Smaller larvae are translucent green with dark heads that gradually turn yellow as they mature (Fig. 4).



Fig 2. Adult elm sawfly. Image: <http://bugeric.blogspot.com>

Fig 3. Mature Elm sawfly larva. Image: Herbert A. "Joe" Pase III, Texas Forest Service, Bugwood.org.



Fig 4. Young Elm sawfly larvae. Image: Eric Rebek.

Life Cycle: There is one generation of elm sawfly each year. Like many sawfly species, they likely overwinter as pre-pupae in the soil or other protected area and pupate in the spring. By late spring or early summer, larvae can be seen on leaves feeding in large groups. They do not spin tent-like webs in which to feed. Larval feeding results in removal of all leaf tissue between large veins.

Hosts: Host plants include elm (*Ulmus*), maple (*Acer*), birch (*Betula*), willow (*Salix*), and basswood (*Tilia*).

Damage: Elm sawfly is not considered a significant tree pest, but larvae can defoliate shade trees. The adults are known to girdle the bark of twigs.

Inspection and Control: Sawfly larvae are attacked by many species of parasites and predators and several diseases. These beneficial organisms often keep numbers low or cause the collapse of outbreaks. The bacterial insecticide, *Bacillus thuringiensis*, is ineffective, as are other biorational products. Sawfly larvae can be controlled with a variety of insecticides. Specific recommendations can be found in the OSU Extension Agents Handbook of Insect, Plant Disease and Weed Control (publication E-832) and OSU Current Report CR-6209.

References:

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Johnson, W. T. and H. H. Lyon. Insects That Feed on Trees and Shrubs, Second Edition. Cornell University Press.

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