



Elm Zigzag Sawfly

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Introduction

The elm zigzag sawfly (EZS), *Aproceros leucopoda*, is a non-native defoliator of elms. EZS attacks several different species of elm and is most commonly found on Siberian elm (*Ulmus pumila*). The distinctive zigzag notching made by the larvae while feeding is the basis for its common name (Figs. 1 & 2). Although the larvae resemble caterpillars, sawflies belong to the Order Hymenoptera. EZS is native to east Asia but is now found in Europe and North America.



Figure 1. Larvae and damage from the elm zigzag sawfly. Eric Day, Virginia Tech.

Description

The damaging stage is a sawfly larva that closely resembles a caterpillar (Figs. 1 & 2). It is pale green with a distinctive black strip on the head as well as T-shaped markings on the legs. As EZS prepares to pupate it spins a silken net like case (Fig. 3). The pupae turn from pale green to dark as they pupate. Pupal cases can be found on elm leaves, under an infested tree, and on nearby objects.



Figure 2. Damage and larva of the elm zigzag sawfly. Eric Day, Virginia Tech.



Figure 3. Pupa and case of the elm zigzag sawfly. Eric Day, Virginia Tech.

The adult stage is a shiny black sawfly with pale legs and dark wings (Figs. 4 and 5). They measure 6-7 mm in length. All EZS are female as no males have been found. The females are parthenogenetic and lay viable eggs without mating.



Figure 4. Adult, leaf notch, and egg scar (red arrow) of the elm zigzag sawfly. Eric Day, Virginia Tech.



Figure 5. Adult elm zigzag sawfly. Gyorgy Csoka, Hungary Forest Research Institute, Bugwood.org

Damage

Initial damage starts as a small egg laying scar on the edge of the elm leaf where the female EZS inserted an egg (Fig. 4). As the small sawfly larva begins feeding, it makes the characteristic zigzag notch that extends about 5-10 mm inward from the leaf's edge. Multiple larvae may feed on the same leaf. If multiple larvae on a leaf feed without interruption, the entire leaf may be consumed. Heavily infested trees may have partial or complete defoliation.

Control

EZS rarely needs to be controlled as healthy elms can recover from sporadic defoliation. In addition,

treating large trees is difficult and expensive. If control is desired, a general-purpose insecticide labeled for use on trees and shrubs can be used. Treat as soon as EZS larvae are found feeding in the spring.

Hosts

Elm is the only known host plant for EZS, particularly Siberian elm. In Virginia, EZS has also been found on English, lacebark, and hybrid elms.

History

EZS was discovered in Virginia in 2021 and is most common in the Shenandoah Valley. Its entire range in Virginia is not entirely known to date. EZS is also found in Maryland, Pennsylvania, North Carolina, and Quebec.

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