



## Yellow Poplar Weevil

Authored by Eric Day, Lab Manager, and Theresa A. Dellinger, Insect ID Lab, Department of Entomology, Virginia Tech

### Plants Attacked

Yellow poplar, sassafras, and magnolias.

### Description of Damage

Adult yellow poplar weevils make small (0.06 or 1.5 mm long), somewhat crescent-shaped indentations while feeding on leaf tissue (Fig. 1). The remaining tissue often dries up and falls out, leaving holes about the size of a grain of rice. Heavily damaged leaves will dry up and turn brown and in outbreak years the damage can be seen from a distance. Larvae feed as leafminers that create blotch mines in the leaf tissue. Yellow poplar, sassafras, and deciduous magnolias will shed their damaged leaves in the fall, but feeding damage remains evident on species of magnolia that retain their leaves.



Figure 1. Feeding damage by adult yellow poplar weevils on left side of leaf, which also has larval mines (Lacy L. Hyche, Auburn University, Bugwood.org).

### Identification

Adult yellow poplar weevils are small (0.2 inch or 5 mm long) and dark colored (Fig. 2). The head and thorax are narrower than the abdomen, giving the weevil a short, stubby appearance. The legs and other appendages may be lighter brown. The wing

covers have noticeable grooves down the insect's back. The larval stage, found within the leaf tissue, is a pale-colored grub with a brown head capsule.

Coleoptera: Curculionidae, *Odontopus calceatus*, previously known as Tulip Tree Leaf Miner or Sassafras Weevil.



Figure 2. Adult yellow poplar weevils with their characteristic feeding damage (Lacy L. Hyche, Auburn University, Bugwood.org).

### Life History

Yellow poplar weevils are native to the US. Before bud break, weevils feed on the swelling buds of host trees, making characteristic marks on the developing leaves and flowers. Mating and oviposition occur in May and early June. Females insert eggs in the midrib on the underside of leaves. This weakens the midrib and sometimes causes it to break. Newly-hatched larvae leave the midrib and feed as leaf miners for three to four weeks. Mature larvae create spherical cocoons and pupate within the cleared area of the mine. The first adults emerge in early June. Adults feed heavily on the host leaves but retreat to the leaf litter by mid-summer, where they enter a period of inactivity that continues through winter. There is one generation per year.

## Control

Older, established host trees will likely withstand a year or two of heavy feeding by this sporadic pest without much impact on overall tree health. Smaller, newly planted trees may need some protection from yellow poplar weevil.

Foliar treatments applied in May can help protect susceptible host trees by limiting egg laying by adult females. Adult yellow poplar weevils can be managed with foliar treatments in July, when they have emerged and are feeding on the leaves, but before they retreat to the leaf litter.

Starting when the buds begin to swell on host trees, monitor for fresh feeding damage made by adult weevils after they emerge from their overwintering sites. If heavy feeding is noted on young, susceptible trees, systemic insecticides applied in the spring will protect against larvae mining the leaves in June as well as adults feeding on foliage in July. There should be some material still in the plant tissue for partial protection when overwintering adults emerge to feed on developing buds the following spring.

Use a registered pesticide that includes foliar pests of shade or ornamental trees in the yard or landscape as an application site on the label.

## Remarks

This is a sporadic pest in Virginia, as well as in West Virginia, Ohio, and western Pennsylvania. However, extremely high populations occur in some years with large numbers of weevils showing up on window screens or floating in pools. Due to the size and shape of the adult weevil, many people mistakenly call them “flying ticks.”

Visit Virginia Cooperative Extension: [ext.vt.edu](http://ext.vt.edu)

Virginia Cooperative Extension programs and employment are open to all, regardless of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other basis protected by law. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. Edwin J. Jones, Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; M. Ray McKinnie, Administrator, 1890 Extension Program, Virginia State University, Petersburg.

2020

ENTO-172NP (ENTO-380NP)