



Twig Girdler and Twig Pruner

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

Plants Attacked

Pecan, hickory, oak, persimmon, elm, poplar, gum, basswood, honey locust, dogwood, and some fruit trees.

Description of Damage

Both twig girdler, *Oncideres cingulata* and twig pruner, *Anelaphus villosus*, produce conspicuous damage to their host plants that becomes noticeable when leaves on large numbers of twigs and branches wilt and turn brown prematurely in late summer. The twigs eventually break and hang or fall, accumulating under the host tree.

Close examination of these twigs will show one of two kinds of damage. The female adult twig girdler neatly gnaws a straight cut completely around the twig, but leaving a small center core (Fig. 1). The incision has a faint beveled edge and a rough texture due to chewing. The core of cut twigs still on the tree will weaken and break with time, allowing the twig to drop to the ground. The twig girdler favors pecan and hickory.

The twig pruner damages twigs in a different manner during its larval stage. The larva hatches from an egg laid at the tip of the branch and tunnels through the twig. If split open, the twig has a long tunnel down most of its length. Mature larvae in their tunnels will make several cuts from the interior to sever the twig, but leaving the bark intact. The twig, structurally weakened, breaks once the thin bark dries out. These twigs show a smooth cut to the internal wood but with ragged scraps of dried bark. The cut end has an oval opening plugged with sawdust-like frass. In comparison, twigs cut by the twig girdler have smooth cuts through both the bark and the wood. The twig pruner is more commonly found on oak.



Figure 1. An adult twig girdler preparing a twig for oviposition (Clemson University, USDA Cooperative Extension Slide Series, Bugwood.org).



Figure 2. Larva of the twig pruner in its tunnel (James Solomon, USDA Forest Service, Bugwood.org).

Identification

Both the twig girdler and the twig pruner belong to a group of beetles called the longhorn borers, a reference to the very long antennae of the adult beetles. The larvae of longhorned borers are commonly called roundheaded borers. Because of their relatedness, both twig girdlers and twig pruners

share some common characteristics in their appearance.

The larvae of both the twig girdler and twig pruner are creamy white in color with a brown head capsule. Their bodies are highly segmented, cylindrical, and up to 2 inches (5 cm) in length.

The adult twig girdler has a stout, cylindrical body that measures about 0.63 inch (1.6 cm) long. The long antennae have spines on the segments closest to the head. The reddish-brown body has irregular patches of yellowish hairs. Variable sized areas of faint gray pubescence colors the thorax and the wing covers, The adult twig pruner is cylindrical and elongate, but somewhat flatter than the adult twig girdler. It measures 0.5-0.75 inch (12-18 mm) in length. The body is reddish-brown covered with scattered dense patches of short yellowish pubescence amid longer, sparse hairs. The long antennae have spines on the first few segments closest to the head.

Life History

The adult female twig girdler selects a small twig with thin bark about 0.4 inch (10 mm) in diameter and very carefully cuts a circular incision through the bark and deep into, but not completely through, the wood. She lays an egg in the bark in the severed portion above the incision. The larva hatches and tunnels into the cut section of the twig, developing there during the late summer and fall. The twig soon dies after being girdled but remains on the tree for a period of time. The partially-grown larva overwinters inside the twig and resumes development the following spring until the middle of the summer. By then the twig is full of frass and may have fallen to the ground under the host tree. The mature larva pupates in the twig whether the twig hangs on the tree or falls to the ground, and the new adult emerges in late summer.

In contrast, the female twig pruner lays an egg in the axil of a leaf near the tip of a twig. The young larva mines down into the twig, increasing in size as it matures. Infested branches range from 0.25 to 2 inches (0.6 to 5 cm) in diameter. Late in the summer the mature larva severs the branch from inside the tunnel, leaving only the thin bark intact. The branch breaks in the wind and falls to the ground. In

autumn, the larva inside the fallen branch positions itself between two clumps of frass and pupates until the new adult emerges the following spring or fall.

Control

Since the larvae of both species are in the twigs when they fall to the ground, rake up and destroy these severed twigs to reduce the pest population. Branches and twigs can be burned or chipped to kill the developing larvae. This control method is effective provided that fallen twigs are raked and destroyed under all the host trees in both the immediate area and extending into the surrounding area. This method is less effective if the area is adjacent to or surrounded by wood lots with populations of twig pruners and twig girdlers. Even so, raking and destroying the fallen twigs should be continued as spraying insecticides has not shown much promise for control of these species.

Remarks

Mulberry bark borers, oak stem borers, spined bark borer, and the mulberry borer cause damage similar to the twig pruner and twig girdler. Control: pick up fallen branches and either burn or chip them.

Revised

Theresa A. Dellinger, April 2, 2020.

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