

Dogwood Borer

Jeremy Slone, PhD, Entomologist

Dogwood borer (*Synanthedon scitula*) is a native pest of eastern North America. This pest is a type of clearwing moth that bores into the trunks of a wide variety of hosts including apple (*Malus* spp.), American beech (*Fagus grandiflora*), birch (*Betula* spp.), flowering dogwood (*Cornus florida*), elm (*Ulmus* spp.), hickory/pecan (*Carya* spp.), and oak (*Quercus* spp.), among others.

Life cycle

Adult moths emerge between late spring to early summer and are active into the fall. Eggs are laid singly onto the bark during this time and emerging larvae search for an opening to enter the underlying cambial area. The larvae feed and mature until temperatures drop. Dogwood borer overwinters as larvae and pupation occurs in early spring. Empty pupal cases indicative of successful adult emergence may be found near or extending out from damaged areas. This pest has a single generation per year, but adult emergence may occur over an extended period.

Figure 1: Adult female dogwood borer

Photo credit: James Solomon, USDA Forest Service

<https://www.forestrymages.org/browse/detail.cfm?imgnum=3066009>



Figure 2: Injury to the trunk due to borer attack

Photo credit: Matt Murphy



Damage

Caterpillar feeding below the bark results in galleries (tunnels) that interrupt the flow of water and nutrients through the vascular system. Wounded areas and burls/burr knots along the trunk are preferred sites for egg-laying and larval entry. This pest also reportedly bores into twig galls such as the gouty oak gall. Reddish/brown sawdust-like frass is often found near borer entry sites and on the surrounding ground.

Feeding damage can result in localized swelling and sloughing of the outer bark. Extensive feeding, especially over consecutive years, can result in trunk girdling and ultimately tree death.

Management

Wound prevention is critical to reduce host attractiveness and susceptibility. Additionally, burr knots below grafted unions (*Malus* spp.) should be buried below the soil line to reduce pest attraction. Bark treatments can be applied as a barrier against new infestations when applied to the lower stem and large branches. The use of entomopathogenic nematodes (worms that parasitize insects) has also proven effective. Systemic materials are not effective whether applied preventatively or therapeutically. Pheromones used to disrupt mating have been successful in managing other clearwing moths but are typically only used to monitor flight timing for this pest. Please contact your Bartlett Arborist Representative to learn about management strategies.



Founded in 1926, The Bartlett Tree Research Laboratories is the research wing of Bartlett Tree Experts. Scientists here develop guidelines for all of the Company's services. The Lab also houses a state-of-the-art plant diagnostic clinic and provides vital technical support to Bartlett arborists and field staff for the benefit of our clients.