



Two-Lined Chestnut Borer

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The two-lined chestnut borer, *Agilus bilineatus*, is a common secondary invader of oak, beech, hornbeam and chestnut throughout the Eastern and Central United States. This pest only invades trees that have been weakened by some other factor, such as an environmental or cultural adversity or another insect or disease organism. Outbreaks of the two-lined chestnut borer usually are severe following extended periods of drought or outbreaks of defoliating insects such as gypsy moth. Other stress factors, such as compaction, construction damage, storm damage, etc., also frequently predispose trees to invasion by this insect.

The impact of the two-lined chestnut borer can range from scattered branch dieback to total death of a tree. Larvae of this insect feed by constructing winding galleries (tunnels) (Figure 2) in the inner bark of branches and the main trunk. The galleries impede water and nutrient transport, resulting in girdling and death of the infested portion of the tree. Borer attacks and subsequent dieback usually occur first in the upper crown and then extend downward to the main trunk (Figure 1).

Figure 1 - Dieback caused by two-lined chestnut borer



Figure 2 - Winding larval galleries in inner bark of branch

DESCRIPTION

The two-lined chestnut borer receives its name from the pair of yellow lines on the thorax and wing covers of the adult. The body is cylindrical, bluish-black and approximately 1/2 inch long. Larvae have a cream-colored, flattened, slender, grub-like body, which is approximately one inch long when fully grown.

LIFE CYCLE

Adults emerge from D-shaped exit holes in the bark during May and June. They feed on the leaves of their host before eggs are laid on the bark in late spring or early

summer. Eggs hatch soon after deposition and larvae bore through the bark and excavate winding galleries in the inner bark. The insect overwinters as larvae in the inner bark. In the North, two years are required to complete development, while one generation per year occurs in the South (Virginia and southward).

CONTROL

Maintaining shade trees in a vigorous condition through periodic fertilization, pruning to remove dead, dying and conflicting limbs, and watering during dry periods will help prevent borer attack. Control of defoliating insects such as gypsy moth or cankerworm during years of heavy outbreaks is also essential in maintaining tree vigor and prevents infestations of the two-lined chestnut borer. On trees weakened by drought, defoliation, etc., applications of an approved pesticide to the trunk and branches will help prevent borer attack. Consult the Bartlett Tree Research Laboratories Insect Control Recommendations or local state recommendations for approved pesticides, rates and timing for control of flatheaded (Buprestid) borers.

On trees infested with the two-lined chestnut borer, pruning out and destroying all dead and dying branches will help reduce the infestation. Increasing tree vigor through fertilization, watering, and applications of an approved insecticide to the trunk and branches will help prevent further attack by borers. Trees that are seriously declining due to borers usually cannot be saved and removal is necessary.