

## Two-Lined Chestnut Borer

By The Bartlett Lab Staff  
Directed by Kelby Fite, PhD

The two-lined chestnut borer, *Agrilus 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 factors, 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, and storm damage also predispose trees to invasion by this insect.

### Damage

The impact of the two-lined chestnut borer can range from scattered branch dieback to total death of a tree. Larvae feed by constructing galleries in the inner bark of branches and the main trunk (Figure 1). 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: 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 (Figure 2). 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.

**Figure 2: Adult two-lined chestnut borer**



### 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

Trees that are regularly pruned, fertilized according to a soil analysis, and appropriately mulched are generally less susceptible to borer attacks. On trees infested with the two-lined chestnut borer, pruning out and destroying all dead and dying branches will help reduce the infestation. 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.

Please consult your Bartlett Arborist Representative for preventative treatment applications that may be available. Trees that are seriously declining due to borers usually cannot be saved and removal may be necessary.



**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.**