

Velvet Longhorned Beetle

Trichoferus campestris

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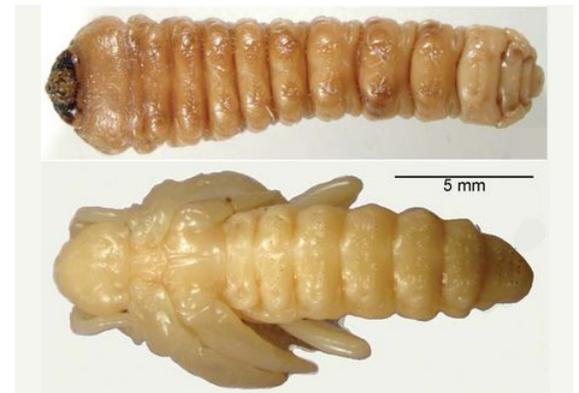
Velvet longhorned beetle, also known as Chinese longhorned beetle, has spread to much of the Northern Hemisphere from its native range in parts of Asia and Russia. Sightings in Canada occurred in Quebec in 2002 and again in 2006. In the United States, velvet longhorned beetle was first detected in 1997 at a port of entry in Seattle, Washington. Over the years since then, at least one dead velvet longhorned beetle has been found in 14 states including Colorado, Illinois, Minnesota, New Jersey, New York, Ohio, Pennsylvania, Rhode Island and Utah. However, velvet longhorned beetle has established itself only in Illinois and Utah. This important nocturnal insect pest can bore into the wood of a wide number of perennial horticultural crops, forest and shade trees — both angiosperms and gymnosperms, even dried wood of grape and citrus. They may show preference for living fruit trees, including apple (*Malus* spp.), cherry and peach (*Prunus* spp.).



Adult Velvet Longhorned Beetle. Photo: Boris Laboda, CC BY-NC-ND 3.0.

Concern

The wide host range makes velvet longhorned beetle a worrisome pest for both the agricultural and forestry industries. It tolerates dry wood better than other beetles in the same family. Accordingly, infested wood imports (furniture, lumber, packing crates, etc.) provide an unintentional source of introducing larvae, pupae, and even adults into new areas. Not only can velvet longhorned beetle tolerate dry wood, it can also tolerate a wide range of climates, USDA hardiness zones 1-9. Infestation by the beetle can impact plant health, growth and longevity, as well as the marketability of wood products. The extent to which infestation of fruit trees affects fruit quality, yield, and tree longevity is not well documented.



Velvet Longhorned Beetle; top, larva, ventral view; bottom, pupa, dorsal view. Photo: Bruce D. Gill, Canadian National Collection of Insects



Description

As their name, longhorned, suggests, they have long antennae, which span about 70% the body length in females and 90% in males. Adult beetles are strong fliers, dark brown to brownish-orange, and range from about 7/16 to 3/4 inches (1 to 2 cm) long. Their legs and antennae may be slightly lighter in color. The body appears velvety, with blotchy or irregular patterns of longer hairs. The 11/16-inch-long (1.7 cm), whitish-beige pupae have small-dark spines especially noticeable on the last body segment. The yellowish white larvae range from 1/2 to 1 1/8 inches (1.3 to 2.9 cm) long and have a dark-brown to black head capsule. Cylindrical and somewhat accordion-like, the first segment after the head capsule is wider than the rest of the segments. Larvae overwinter underneath intact tree bark or in pupal chambers inside the wood and can live for over a year to complete their life cycle. Males and females emerge and fly in late June to early August. Once mated, females lay eggs in the bark of larger diameter branches and tree trunks – though, in laboratory conditions, branches as small as 1 inch (2.5 cm) diameter have been found sufficient.

Damage

Newly hatched larvae chew through the bark into the cambium layer to bore out galleries. From the cambium, they will chew into and feed on the tree wood (xylem). Galleries of overwintering larvae are about 7/16 inches (1 cm) wide. The more numerous the larval infestations, the greater the damage to the infested tree. Damaged trees can express crown thinning, dieback, and adventitious shoot growth. Emergence holes in the trunk and larger branches, as well as frass (sawdust-like deposits), signal a possible velvet longhorned beetle infestation or an infestation by another insect borer.

For More Information

Don'tMoveFirewood.org: Velvet Longhorned Beetle:

dontmovefirewood.org/pest_pathogen/velvet-longhorned-beetle/

Minnesota Department of Agriculture: Velvet Longhorned Beetle: mda.state.mn.us/plants-insects/vlb

University of Minnesota Extension: Velvet Longhorned Beetle:

extension.umn.edu/identify-invasive-species/velvet-longhorned-beetle

Utah State University Extension: Velvet Longhorned Beetle:

digitalcommons.usu.edu/cgi/viewcontent.cgi?article=2976&context=extension_curall

Adirondack Almanack: Forest Pests: Velvet Longhorned Beetle:

adirondackalmanack.com/2018/04/forest-pests-velvet-longhorn-beetles.html



nysipm.cornell.edu



Velvet Longhorned beetle larva. Photo: Clinton Burfitt, USDA APHIS PPQ, OR.



Canopy dieback. Photo: Clinton Burfitt, USDA APHIS PPQ, OR.



Exit holes. Photo: Clinton Burfitt, USDA APHIS PPQ, OR.