

Tetropium fuscum (Fabricius)

Brown spruce longhorn beetle



IDENTIFICATION

Adult beetles have a flattened body, 10 to 15 mm long.^{1, 25, 55, 128} The head is black or dark brown, with a deep longitudinal groove between the antennae. The head is also covered with long, light-coloured hairs.^{1, 25, 55} Their eyes are completely divided.⁵⁵ The slender antennae are half the length of the body and are reddish brown.^{25, 55, 123, 128} The pronotum bulges laterally.¹⁹ The elytra are tan, brown, or reddish-brown with 2 or 3 longitudinal grooves.¹²³ The legs are dark brown or reddish-brown.^{1, 25, 55}

HOST TREES

Picea (main host), *Abies*, *Pinus* and *Larix*.^{1, 25, 55, 128} In North America, only *Picea* has been found infested to date.⁵⁵

LOCATION OF INFESTATION WITHIN THE TREE

Larvae feed on the inner bark and sapwood along the entire stem. However, the lower portions of the bole are the most heavily infested.^{55, 123, 124}

HOST CONDITION

Stressed (e.g. drought, root disease), dying, recently felled, or healthy trees.^{1, 25, 35, 55, 85} Middle aged and mature spruce trees are preferred.¹²⁴

DISTRIBUTION

Europe and Japan. Introduced and under eradication in eastern Canada (Halifax, Nova Scotia).^{1, 55}

SIGNS AND SYMPTOMS

Eggs are laid singly or in pairs in well concealed locations under bark scales or in bark crevices.^{1, 55}

Larvae bore into the inner bark and excavate a network of irregular, 6 mm wide galleries, which become filled with tightly packed, fine-grained frass and short wood fibres.^{1, 55} Larval galleries lightly etch the sapwood.⁵⁵ Much of the tree's inner bark can be destroyed by these wide, irregular and meandering larval galleries.⁵⁵ Mature larvae bore "L-shaped" galleries within the sapwood. Larvae first bore into the sapwood to a depth of about 2 to 4 cm, then turn parallel to the trunk for another 3 to 4 cm.¹²³ These galleries end in an oval-shaped pupal chamber.^{1, 55}

Pupation occurs in the spring either in the bark, between the sapwood and bark or in the sapwood. Pupae lie in a vertical position with their heads pointed upward.⁸⁵ The wood may be stained from the associated *Ophiostoma* fungi.⁵⁵

Adults exit through oval or circular exit holes that are 4 to 6 mm in diameter, which may or may not be plugged with coarse sawdust.^{1, 55} Attacked trees produce excessive white resin down the length of the trunk.⁵⁵ Trees may be re-infested over subsequent years.⁵⁵ Infested tree crowns exhibit progressive yellowing, browning and loss of needles.⁵⁵ Once the tree has died, the remaining foliage changes to reddish-brown.⁵⁵



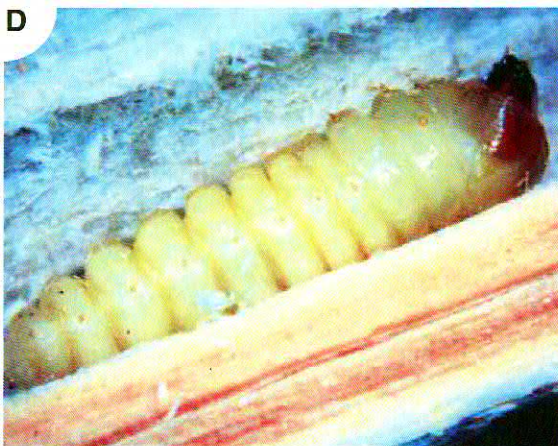
Adult *T. fuscum* (10-15 mm long).



Resin flowing from tree attacked by *T. fuscum*.



Resin flowing from infested tree.



T. fuscum larva.



Irregular shaped *T. fuscum* larval galleries.



T. fuscum larval galleries and oval exit hole (4-6 mm wide). Note fine-grained frass in larval galleries.



Stand mortality caused by *T. fuscum*.

