Brown Spruce Longhorn Beetle *Tetropium fuscum*

Background

The brown spruce longhorn beetle (BSLB) is native to Europe. It was positively identified in red spruce trees in Point Pleasant Park, Halifax in 1999. (Wood packing material arriving at the major port adjacent to the park may have provided the route of entry.) Other than the finds in Halifax Regional Municipality, this insect is not known to be established anywhere else in North America.

Brown Spruce Longhorn Beetle (enlarged) Actual Size =10 mm

Host Plants

Spruce trees are the main hosts. Firs, pines, larches, and occasionally hardwoods are also known to be attacked in Europe. BSLB mainly attacks trees that are dying or stressed but during a population outbreak will attack living, healthy trees.

In Point Pleasant Park, the insect is attacking red spruce.

Insect Identification

Adult: Flattened body that varies in length from 8-17 mm. Head and neck are dark brown to black. The wing covers can be tan, brown or reddish-brown and have 2-3 longitudinal stripes. The antennae are red-brown and about half the length of the body.

Egg: The egg is 1 mm long and oblong. It is white with a tinge of green.

Larva: The larva is yellow-white, about 14-28 mm long, and slightly flattened. The head is reddish-brown and is about 3 mm wide.

Pupa: White, about 17 mm long, 3.8 mm wide.

Life Cycle

Research is still ongoing into the details of the life cycle in NS. The adult beetles emerge in the late spring and early summer. After mating, the females lay eggs underneath the bark scales or in crevices in the bark. Larvae hatch in 10-14 days. They overwinter as a small larvae in tunnels about 4 cm within the wood. They pupate in the spring and after about 2 weeks, the adult beetles begin to emerge.

Damage

Signs of attacked trees include:

- oval to round holes in the bark, approximately 4 mm,
- excessive resin production down the length of the stem (sap weeping),
- networks of feeding tunnels up to 6 mm across, filled with sawdust-like material and located just underneath the bark,
- L-shaped tunnels in the wood about 4 cm deep and another 4 cm parallel to the grain,
- coarse sawdust may be found in and around the tunnels or plugging the entrance/exit hole.

Weeping Red Spruce

Similar Damage

Spruce beetle damage produces similar weeping. BSLB do not produce pitch tubes or nodules.

Any mechanical damage (frost cracks, branch stubs) can also produce large amounts of sap but with no holes, tunnels, or sawdust.

Brown Spruce Longhorn Beetle feeding galleries

This information produced in co-operation with Canadian Forest Service, Canadian Food Inspection Agency, and the Nova Scotia Dept. of Natural Resources.

For further information
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Information Leaflet No. IPM - 6

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