

## **BIRCH DIEBACK**

Cutleaf weeping birch and native white birch are commonly used for landscape plantings. Since 1976, dieback of these species has been a serious problem, often resulting in complete tree mortality. Several factors, including site, exposure, age, insufficient water and lack of nutrients, contribute to birch dieback and mortality, but usually the ultimate death of affected trees is the result of attack by the bronze birch borer (*Agrilus anxius*). Birch trees growing under unfavourable conditions soon lose their vigor and become weakened, allowing the borer to become established.

The adult of the bronze birch borer is a deep green-bronze winged beetle from 6 to 12 mm long. Adults emerge from D-shaped holes in branches and trunks of infested trees in late May through July and feed on the leaves for about 3 weeks before egg laying. Eggs are laid beneath bark layers or in cracks or crevices of the bark on unshaded sections of the tree. The eggs hatch into tiny white grub-like larvae, which bore directly into the inner bark where they make criss-crossing galleries packed with frass. The galleries often girdle the trunks and branches, cutting off the sap flow causing the tree to die back to the point of girdling. Full-grown larvae are about 15 mm long, slender, white and have a flattened head. In the fall, the larvae construct cells in the sapwood and thick bark in which they over winter and transform to adults the following spring. Only mature larvae survive the winter.

At present, there are no totally effective practical chemical preventative treatments or controls available. Malathion 50 EC or Lindane sprays applied when adults are feeding (early June) will help reduce borer populations.

Under natural conditions, birch trees grow best in cool, moist, shaded locations. Therefore, the most effective preventative measure is to plant birches in protected locations on your property, away from excessive pedestrian and/or vehicular traffic. Then keep them healthy by fertilizing regularly and watering adequately, especially during prolonged drought periods. Vigorous trees are not only unattractive to the bronze birch borer, but can also better withstand other detrimental factors of an urban environment.

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