**Beech Bark Disease**

The beech scale insect *Cryptococcus fagisuga*, along with *Neonectria* ascomycete fungi form the disease-complex responsible for beech bark disease (BBD) of American and European beech. Beech scale infests mainly larger sized beech trees, feeding on host tissues and causing small fissures on the bark. This initial damage to the tree allows *Neonectria* to enter the tree, which kills host tissue and eventually girdles the tree causing it to die. In North America the main fungi involved are *Neonectria faginata* and *N. ditissima*, whereas in Europe *N. ditissima* and *N. coccinea* are responsible for the disease.

Beech bark disease can dramatically alter forest stand composition and structure, through loss of large trees and proliferation of smaller trees that originate from root sprouting. Reduction of beech nut production and loss of large trees in infected stands may affect mammals and birds that use beech nuts as important food source and old trees as habitat. Around 1% of American beech is estimated to be resistant to BBD. Research is currently focused on modes of inheritance and propagation methods.

Few options are available to manage beech bark disease in natural areas. Most control methods focus on reducing populations of the beech scale, as *Neonectria* are unable to colonize trees that have not been previously infested with the scale, and thus control of *C. fagisuga* is likely to slow the spread of BBD.

A number of factors influence BBD, including species composition and density of stands, history of land-use, and the size, age and vigour of trees. Selecting management options will depend on these factors, as well as the stage of infestation, i.e. not yet infested, within the ‘advancing front’, within the ‘killing front’ or the ‘aftermath forest’. If an area is not yet affected by BBD the distance from the nearest ‘advancing front’ should be taken into consideration.

**Reference:**

Global Invasive Species Database, 2011a. Species profile: *Cryptococcus fagisuga* Lindinger, 1936 [link]