

**SPECIAL SESSION: INSECT PROBLEM AND CONTROL**  
**MEASURES-Buprestids and powderpost beetles**

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The family Buprestidae is well known for the metallic lustre of the adults and their habit of being among the first to arrive at burnt trees. Eggs are laid into slits in the bark chewed by the females and the larvae have their early development in the nutritious tissues of the tree's phloem. The larvae bore into the sapwood of logs and sometimes even reach the heartwood. The larvae are flattened dorsoventrally with the thoracic segments being more prominent. The shape has been described as "horseshoe nail-like". In this presentation I discuss the western redcedar borer, commonly known as powderworm, *Trachykele blondeli*; the golden buprestid, *Buprestis aurulenta*; and the emerald ash borer, *Agrilus planipennis* a current invasive species wrecking havoc on the ash forests of southwestern Ontario.

The western redcedar borer is notorious for reducing the quality of western redcedar logs felled in the coastal areas of British Columbia. The female feeds in the crown of the trees and lays her eggs at the base of twiglets on branches. The young larvae bore into the branch and down to the main trunk of the tree. Here the larvae feed extensively at the sapwood/heartwood interface. Extensive feeding in this area results in a pole of heartwood within a pipe of sapwood. Such a log yields a very low proportion of lumber and makes log buyers wary in areas known to have these insect infestations. Follow an investigation to track down some of these insects in a stand on Texada Island BC or visit [http://www.forestry.ubc.ca/fetch21/FRST308/lab7/trachykele\\_blonдели/gallery/index.htm](http://www.forestry.ubc.ca/fetch21/FRST308/lab7/trachykele_blonдели/gallery/index.htm)

The golden buprestid, *Buprestis aurulenta*, has often been found working away in timbers that were long ago incorporated into building structures. I have received several calls from people who had this bright bronze green adult emerge through painted woodwork 10 to 15 years after a renovation was completed. The grubs of this beetle can take many years to complete their development in dried timbers as the only moisture they can acquire is the metabolic water from their own respiration. During their development the grubs can decimate the sapwood portions of boards.

The buprestids are among the first beetles to colonize fire-killed trees. By the time fire salvaged logs are processed the grubs will still be so tiny that their frass filled galleries escape the eagle eye of the lumber grader. Purchasers of these timbers unwittingly

incorporate this lumber into building where much later, the adults emerge. A classic example is the holes in the roof of an old theatre in Vancouver where the emergence galleries of several of these beetles through a tarred roof made easy access for water which stained the inner ceilings.

The third beetle discussed was the emerald ash borer, *Agrilus planipennis*, an insect that is currently killing ash trees in the southwest region of Ontario and in the neighbouring US states. The beetle was first discovered in Detroit and Windsor in 2002. It has already killed more than 15 million trees in Michigan alone. Every effort is being made to limit the spread in Canada by removing the ash trees in the most threatened areas and to maintain a careful watch on other ash trees on the north shore of Lake Ontario.

Powderpost beetles have accompanied man in his travel around the world. The superfamily Bostrichoidea includes three families that are well known – the Anobiidae, Bostricidae and the Lyctidae. The Anobiids include the cosmopolitan species *Anobium punctatum* which has hitch-hiked around the world in wooden furniture taken by early settlers from the old to the new world. In British Columbia we have a larger native species *Hemicoelus gibbicollis* (= *Habrogemnus*) which has developed notoriety as an infester of subflooring in older wooden houses and from time to time can be damaging to totem poles. Lyctid beetles are recorded from hardwood furniture. Bostrichids are often intercepted in wooden items imported from Asia. See presentation for illustrations of these powderpost beetles.