Identifying pests in Tasmania's forests:
information sheet 1

Tasmanian *Eucalyptus* leaf beetle

Scientific name: ***Chrysophtharta bimaculata***

Other common name:
Chrysomelid leaf beetle

Order: **COLEOPTERA (Beetles)**

Characteristic damage

Leaves and buds on the growing shoots of certain eucalypts are partly or completely eaten. **Severe damage:** the crown has a 'broom-top' appearance (Fig. 1).

Figure 1. Severe damage to *E. nitens* by Tasmanian *Eucalyptus* leaf beetles

Less severe damage: the crown looks very thin and the leaves are ragged.
Damage is most noticeable in trees 1 - 6 years old but older trees are also attacked. Leaf beetles cause some damage every summer and most years they appear in outbreak proportions in some areas.

Figure 2. Leaves browsed by *Eucalyptus* leaf beetles

Effect on the trees

Leaf beetle browsing slows growth and reduces wood production for several seasons after severe damage. Tree form and wood quality may be also affected.

Trees most at risk

Ash species are the most susceptible: *E. regnans*, *E. obliqua*, and *E. delegatensis*.
Gum species *E. nitens* is also severely attacked, and *E. globulus* to a much lesser extent, as soon as they start producing the the non-waxy 'adult' type of leaves at 3 – 4 years old.

Time of damage:

Summer; late November to March.

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The insect

Adult beetles: as soon as the weather starts to warm up in spring, red dome-shaped beetles about 1 cm long emerge from over-wintering and start feeding on the new leaves. After a few weeks this native beetle becomes its characteristic shiny, light green colour with two black spots near its head (Fig. 3).

Figure 3. Adult leaf beetles with eggs (about twice life size)

Eggs: about 30 cream-coloured eggs are laid in neat rows on the young leaves of the new season's adult foliage from late November (Fig. 3). There are often two egg laying peaks: usually in December and January.

Figure 4. Young leaf beetle larvae (about life size)

Larvae: within about a week after eggs are laid, tiny black larvae (grubs) hatch out and start feeding (Fig. 4). They feed and grow for about four weeks, becoming yellow-green with black heads until they are about 1 cm long (Fig. 5).

When they have finished feeding they drop off the leaves and burrow into the soil to pupate. After a few weeks the new adults emerge and start feeding on the trees.

Figure 5. Large leaf beetle larvae (about twice life size)

Controlling damage

Natural control

Many natural enemies maintain leaf beetle populations below levels which cause economic losses much of the time. The natural enemies may cause up to 90% mortality of eggs and larvae. Predators include ladybirds, soldier beetles, predatory bugs, spiders, wasps and birds. Parasites include wasps and tachinid flies. Damage can be minimised by planting tree species that are less susceptible.

Chemical control

Leaf beetle populations should be monitored to determine whether they are high enough to cause economic damage before deciding to use insecticides.

Dominex®, a synthetic pyrethroid, is registered in Tasmania to control this leaf beetle on eucalypts. However, it also kills most other insects, including the beetle's natural enemies. Research is currently testing several alternative, more environmentally-friendly insecticides. Refer to entomology staff at Forestry Tasmania for when and how to monitor and control leaf beetle outbreaks.