

TASMANIAN TREE CARE

Elm Leaf Beetle Fact Sheet

Elm Leaf Beetle (*Xanthogaleruca luteola*)

Xanthogaleruca luteola, Elm Leaf Beetle is a major pest of Elm (*Ulmus sp.*) trees.

Identification

Eggs are tiny and lemon-yellow in colour, found in clumps on the underside of leaves.

Larvae begin very small and black, growing to approximately 12mm long through the summer months, by which point they will have yellow markings and the appearance of caterpillars, see Figure 2.

Adult beetles are around 6mm and gold-yellow to olive green in colour with black stripes see Figure 1.

Life Cycle

Adult female beetles lay their eggs on the underside of leaves in spring, and the larvae hatch after approximately 7 days. These larvae spend the summer feeding on the soft tissues of the leaves and around December/January they migrate down the tree to find shelter in which to pupate. They may hide in crevices in the bark at the base of the tree or in the soil. Here they pupate after 1-2 weeks and may continue to breed if temperatures are warm enough. The new beetles continue to feed on the leaves and seek shelter in sheds, wood piles or similar when cooler Autumn and Winter temperatures appear.

Host Species

All Elms (*Ulmus sp.*) are potential hosts of Elm Leaf Beetle.

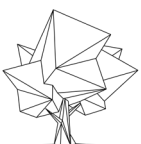




Figure 1. Adult Elm Leaf Beetle (top)



Figure 2. Elm Leaf Beetle larvae making "shot-holes" in the leaf (right)

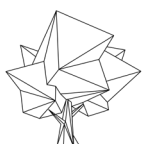
Symptoms and Damage

A common indicator of the beetle's presence is skeletonised and "shot-holed" foliage. This is caused by the feeding larvae and beetles and quickly leads to severe defoliation in large infestations. Consecutive years of defoliation can cause great stress to the tree and leave it vulnerable to other pests or diseases, as well as making it less able to cope with environmental factors such as low rainfall and high temperatures.

Control

Maintaining the health of your tree is one of the most important factors in reducing the effect of the beetles. A layer of mulch should be created around the base of the tree, ideally from just outside the trunk to the edge of the crown. This, along with regular watering can go a long way in reducing the impact of foliage loss caused by the feeding beetles.

There are several other control methods to directly target this pest. A layer of adhesive tape can be applied around the trunk, with the sticky side facing out, to trap the larvae as they migrate down the stem. Timing is vital with this control method.



Control cont.

Soil injections involve the application of insecticide dissolved in water directly into the soil around the base of the tree. The tree then takes up this water and transports it into the leaves, killing the beetles and larvae as they feed. Soil injection is an effective method of controlling the pest, but is also detrimental to soil-inhabiting animals and plants, including worms and mycorrhiza.

Stem injection is the most common control method used. It is generally the most effective and is the most long-lasting of treatment available. It involves drilling a series of small holes around the lower stem and directly injecting insecticide into the tree. This is then transported to the leaves where it kills the feeding pest. Because it is directly injected and not applied to the soil, there is little if any negative effect on the surrounding area or non-target species of flora and fauna. One downside of stem injection is the invasive drilling required, but the use of small diameter drill bits can reduce the negative effect.



Figure 3. Tasmanian Tree Care conducting stem injections at the base of an infected Elm (left)
Figure 4. A small diameter drill bit can reduce the risks caused by invasive drilling (right)

Figure 1 & 2 courtesy of Getty Images/iStockphoto and Didier Descouens, sourced from Wikipedia under Creative Commons license.

