

# Longicorn beetles 1

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Longicorn beetles are native insects that attack a wide range of eucalypts and other native plants. There are many species of longicorn beetles. Several have been introduced to other countries where they have become major pests of eucalypts grown in plantations.

It was originally thought that most attack by longicorn beetles was secondary, in other words the attack occurred after trees were drought stressed or damaged in some way or when the trees were growing on poor sites. It is now known that some species, such as *Phoracantha semipunctata* (Fabricius) and *P. tricuspis* Newman, attack dead or dying trees; while others, such as *Tryphocaria acanthocera* (Macleay), *T. mastersi* Pascoe and *T. solida* Blackburn, are found in living, apparently healthy trees.

## Description



**Adults (Pictured left):** Adult longicorn beetles are elongated in shape with straight sides and very long antennae.

They vary in size from approximately 16 to 30 mm in length and are reddish-brown in colour with straw coloured markings on the wing covers. The antennae are long, in females approximately as long as the body, in males much longer, and may have spines at intervals along their length. Adult beetles are nocturnal, active fliers and are often attracted to lights.

**Eggs:** The eggs, which are pale yellow or greenish in colour, elongated and approximately 2mm in length, are rarely seen as they are laid under the bark.

**Larvae (Pictured right):** Larvae are cream in colour with reddish-brown mouthparts. They have no obvious legs. Mature larvae vary in length from 30 to 50mm. Larvae are often called "witchetty grubs", but these are not the true witchetty grubs traditionally eaten by aboriginal people. True witchetty grubs are the wood boring larvae of moths.

**Tunnels:** Tunnels formed by longicorn beetle larvae are oval in shape and tightly packed with frass (a mixture of sawdust and faeces).



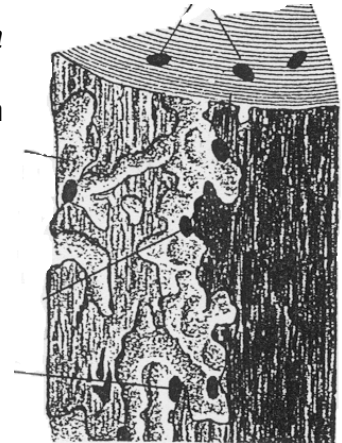
## Life History

The life cycles of most longicorn beetles are similar with development being completed in one year. An exception to this is the Bulls-eye borer which is described in Forest Health

Fact sheet number 18.

Eggs are laid either singly or in batches of from 10-100 in cracks or under loose bark. The larvae hatch and bore into the tree. Some species feed just under the bark, some feed on the sapwood and others bore into the heartwood to feed. Some species only enter the heartwood to pupate. Larvae of *Tryphocaria masters* bore into the upper part of the stem or branch which sooner or later breaks off with the larva in it and pupation occurs in the branch on the ground.

The duration of the larval stage varies according to the species and the temperature. Some species spend from 4-6 months in the larval stage, whilst others spend much longer. Larvae feed in tunnels which may stretch for several metres throughout the tree. Pupation usually occurs in the heartwood. Most adults emerge in spring and summer but others emerge at irregular intervals throughout the year. Adult beetles are mainly active at night.

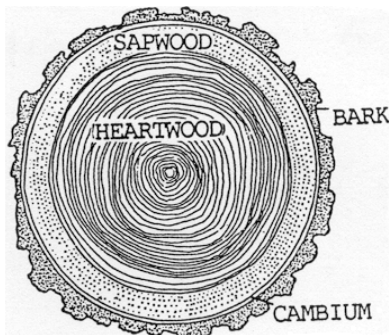


## Damage

Damage to trees by longicorn beetles can be quite extensive before the infestation is noticed. The only signs of attack may be some "kino" bleeding or cracks in the bark. Often the attack is only noticed when the emergence holes of the adult beetles are seen!!

The larval stages do the damage. They tunnel through those parts of the tree which carry water and nutrients. Some species feed in these areas and if the damage is extensive, the

trees may be ringbarked or the flow of nutrients interrupted to such an extent that the tree dies. Damage to the timber may be so severe that it is rendered useless for anything except firewood.



Healthy trees are able to withstand a certain amount of insect attack, due to their natural defence mechanism - a gum secretion, 'kino' which engulfs the invading insect and the insect dies. The presence of kino does not always mean the tree is unhealthy, it may mean the tree is successfully resisting an attack. The moisture content of the tree is also

important in allowing the insect to gain entry. Trees that are drought stricken or stressed in any way have a lower moisture content and produce less kino, thus enabling insects such as longicorn beetle larvae to successfully bore into the wood.

## Control

There is no satisfactory chemical control of longicorn beetle larvae. Systemic insecticides injected into the tree are not a practical option in forest situations and even for specimen trees the chemical is usually unable to reach those parts of the tree where the larvae are feeding. However, it is possible in forest situations to reduce the beetle population by using trap trees, which are then removed and burnt before the adult beetles emerge.

Longicorn beetle attacks generally only succeed when trees are stressed or unhealthy in some way. Controlling such attacks involves good silvicultural practice to reduce stress and improve the health of the trees.

There are several parasites and predators of longicorn beetles but these have little effect on beetle population numbers. Parasites include small wasps and flies; predators include

other beetles, flies and black cockatoos. Cockatoos often do more damage than the beetles by tearing off bark and wood to get to the larvae.

## Summary

**When to look:** All year

**Where to look:** On the main trunk and on major limbs

**What to look for:** "Kino bleeding"  
Sawdust on the trunk or around base of tree  
Evidence of tunnelling under the bark  
Oval emergence holes

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