



## Ambrosia Beetles (Pinhole Borers)

### Economic significance

Ambrosia beetles are pests of green logs at the forest log dump and mill yard and of freshly sawn timber under very moist climatic conditions. The often stained holes persist through to the finished article, and this defect degrades the value of the timber for many uses. However, mostly it does not affect the strength of the wood. Damage by pinhole borers is often seen in certain timber species (eg. Tallowwood and blackbutt), but apart from the timber's appearance there is usually no reason for concern.

One species, the horizontal borer, *Austroplatypus incompertus*, attacks standing trees that have been injured by fire or stressed in some way and makes extensive gallery systems in one plane only. The fungus it carries breaks down the cellulose in a horizontal plane, causing even large-dimensional timber (100x100 mm) from the affected log to fracture at the plane of past activity.

Pest Controllers are never required to treat pinhole borer attack in buildings and doing so would expose the company and pest controller to charges of possible misrepresentation. Since the damage of some pinhole borers superficially resembles that of the powderpost beetle or furniture beetle, pest controllers must exercise care in identification.

### Biology and species

As soon as a tree is felled it becomes attractive to ambrosia beetles which bore deep into the wood, lay their eggs and leave specific fungal spores on the walls of the moist tunnels. The spores germinate, producing fungal hyphae, which form the food of the larvae that hatch from the eggs laid deep in the parent galleries. The parent beetles often die at the entrance to the gallery system, thus protecting their larvae from predators and sealing the hole against moisture loss. Ambrosia beetle larvae are fungus eaters and do not eat wood. The holes usually penetrate deeply into wood and are free of frass; thus their damage may be readily distinguished from that of dry-wood borers. The holes are often darkly stained on the inner faces as a result of the fungal activity, another feature which separates their activity from that of dry-wood borers. Their life cycles are mostly about 6-12 months, but the horizontal borer has a more extended life cycle of up to some years.

Ambrosia beetles belong to the beetle family Curculionidae, which contains such species as the

polyphagous pinhole borer, *Platypus australis*, the mountain pinhole borer, *Platypus subgranosus*, and the omnivorous pinhole borer, *Crossotarsus omnivorus*.

These are all Australian species, although many other species are intercepted at ports by quarantine authorities.

### Treatment

When infested logs are sawn, the timber dries out, leaving insufficient moisture to sustain the fungal growth inside the holes so the larvae die. Ambrosia beetle attack is therefore not a problem for pest controllers; but as it is frequently encountered in inspections, they should be aware of its significance and be able to allay the fears of clients.

Preventive sprays at the forest log dump or mill yard can be of some real value in reducing the incidence of infestation. Rapid extraction of logs from forest dumps and conversion into sawn timber are the most economic procedures of reducing damage by pinhole borers. Organophosphorus, carbamate compounds and pyrethroids have given some protection for short periods of storage in the forest and mill yards.

