

Ants in timber

protecting timber, buildings and furniture

Ants 1

Ants are social insects, living in colonies. There are hundreds of native species, some associated with timber, but none of the ant species present in Australia damages timber that is in good condition. In their natural environment they are important as predators and scavengers and contribute to the recycling of nutrients to the soil. In domestic and industrial situations they can be a problem.

This fact sheet describes the biology, damage and management of several important species of ants that may be associated with timber in Queensland and how to distinguish between ants and termites.

Biology

Colonies are active all year and can become very large. A colony includes a queen, workers and, in most species, soldiers. All are without wings. The queen controls the colony and lays eggs; the workers care for the brood, clean and maintain the nest and forage for food; and the soldiers protect the colony.

At certain times of year winged males and females fly from the nest. After mating the male dies and the female finds a nest site, sheds her wings and begins to lay eggs. She cares for the larvae, which will develop into the first workers of the new colony.

Workers will travel relatively long distances from the nest when foraging. They mark their pathways with chemical secretions and communicate by grooming one another and sharing food, so that once food has been discovered the number of workers around it quickly increases. Adult ants feed on liquids transported internally. At the nest the food is regurgitated and shared, or stored. Solid material collected by workers is fed to the larvae.

Different species prefer different foods. Some are predators and scavengers, feeding on insects and other sources of animal protein and fat. Others prefer sweet foods, taking nectar and honeydew,

and some take a wide variety. Knowing about food preferences can be useful in controlling ants.

In natural situations most species nest in soil, amongst rocks and in decaying timber. Soil nests may be deep under ground. Large nests consist of several interconnecting tunnels and chambers. The nest usually has several entrances that, in some species, may be surrounded by a raised mound or turret of soil.

Many species protect the colony by biting or stinging intruders and the stings can be extremely painful.

Damage

Most ants do not cause problems, but a few are pests in the garden and in buildings. They will infest decaying timber in retaining walls, fences and in buildings, and their activity is often mistaken for that of wood-eating species.

Workers foraging in buildings generally come from external nests. A few species nest in wall cavities, ceiling spaces and behind skirting boards. Internal nests can be very difficult to eradicate.

Small piles of gritty material often appear by door and window frames and skirting boards, and reappear each time they are cleaned up. Similar material falls from timber ceilings and collects on furniture and floor coverings. The debris is produced by ants and can include faecal pellets, wood fragments, dust and fibres and the remains of insects and spiders, as shown by microscopic examination.

Ants keep their trails and nest clean by collecting and dumping waste and litter. Rubbish is often dumped from the same outlet, hence the regular reappearance of debris. Movement and friction in wall frames and ceiling timbers can produce small wood fragments. New houses usually have carpentry dust in the wall cavities and roof space. Ants discard the wood fragments with other debris, giving the



impression that timber is being damaged. However, in Australia ants do not damage sound timber and the wood fragments in debris are associated with cleaning activities.

Management

Hygiene is important. Food preparation and eating areas should be kept free of food particles and waste, and susceptible foods stored in airtight containers or in the refrigerator. Where pets are fed regularly in one place, leftovers should be cleaned up immediately. Decaying timber, which would provide nesting sites, should be removed.

Several insecticides in liquid, powder or granular form are available for use against ground-nesting species. The most effective method is to find the nest and destroy it. Nest entrances can often be located by following ants carrying food and small pieces of sweet food or cooked meat may be used as bait. An insecticide is then introduced. Trails can be sprayed, but this is not effective because surviving ants will mark new trails away from the treated areas.

Pouring boiling water into soil nests does not work. Nests are often deep down and even if the water reaches the nest the water will have cooled. Commercially prepared bait toxicants or ant baits are effective against some species, such as black house ants and minute ants, which take sweet foods. The sweet mixture contains a slow acting poison, and it is carried back to the nest by foragers and shared within the colony. The bait is placed next to an existing trail and should be offered as long as there are ants collecting it. It may take some time to eradicate a large colony. Baits are useful where the colony is inaccessible or the nest cannot be found, for example nests in roof spaces and wall cavities. However, persistent infestations in buildings should be treated by a pest controller.

Important ant species

Black house ant

Iridomyrmex glaber

The black house ant (Figure 1) and a few related species are shining black and 2–3 mm long. Nests are normally in the ground, under bark or in decaying timber. Trails, which are well defined, may extend over long distances and go up into shrubs and trees,



Figure 1 (left). Black house ant *Iridomyrmex glaber*.

Figure 2. Coastal brown ant *Pheidole megacephala*.



Figure 3 (left). Minute ant *Plagiolepis allaudi*.

Figure 4. Greenhead ant *Rhytidoponera metallica*.

where the ants feed on honeydew from sap-sucking insects. They can nest in roof or wall spaces. The group includes species which track across ceilings, beams and joists and drop ant debris onto surfaces below. Black house ants prefer sweet foods.

Coastal brown ant

Pheidole megacephala

These ants (Figure 2) are 2–3 mm long. The soldiers have very large heads. Coastal brown ants often nest between pavers and along pathways and will throw out soil. They also infest wall cavities, leaving piles of debris at the nest entrance. Nests can become very large. Proteins and fats are preferred to sweet foods.

Minute ant

Plagiolepis allaudi

These very small, golden brown ants (Figure 3) are about 1 mm long and can be difficult to see. They nest in soil but will forage in buildings. Minute ants take a variety of foods, scavenging on dead insects, dried dog and cat food, and in the sugar bowl.

Greenhead ant

Rhytidoponera metallica

This ant (Figure 4) and a few related species are 4–6 mm long, with a metallic green head and metallic black-green thorax and abdomen. They do not usually enter houses but can be a nuisance in gardens, where they nest in lawns and rockeries. Nests are easily located. Greenhead ants can inflict a very painful sting.

Are they ants or termites?

Ants and termites are both found in timber. Ants will only infest timber which is already damaged and decayed, they do not initiate damage.

Termites cause serious damage to sound timber. The two groups of insects can be easily distinguished from one another.

Wingless insects

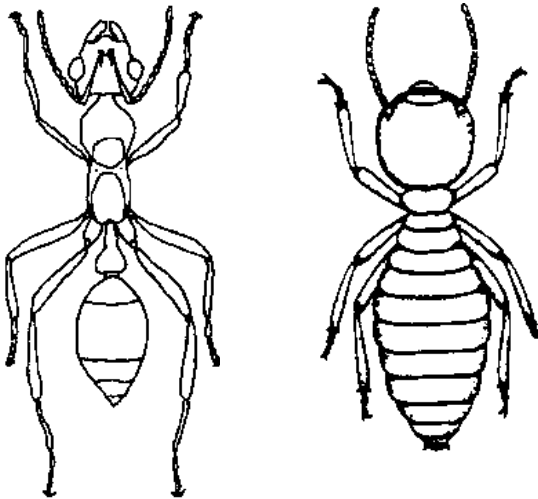


Figure 5. Wingless ant. Figure 6. Wingless termite.

Ants: All species are strongly coloured orange- or red-brown, green, brown or black or a combination of these colours, the integument is not semitransparent. All ants have a distinct, narrow waist (Figure 5).

Termites: All species are creamy white in colour with a thin integument so that the contents of the abdomen are often visible. The sides of the body are parallel, without a distinct waist (Figure 6).

Information current August 2009

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Winged insects

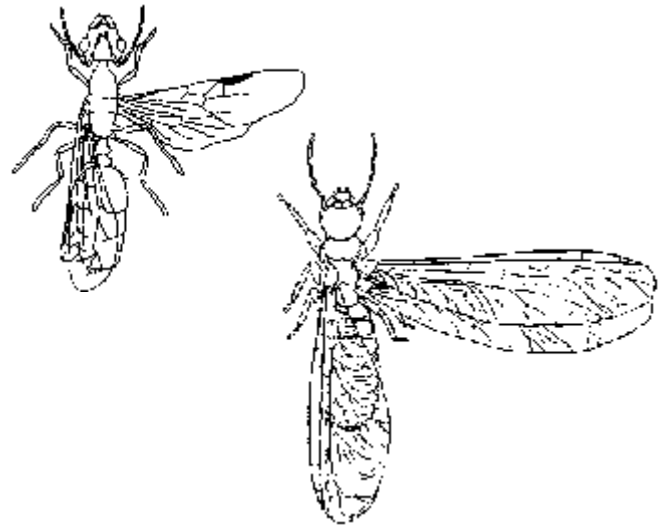


Figure 7. Winged ant. Figure 8. Winged termite.

Ants: The body has a distinct waist (Figure 7). The forewings are larger than the hindwings but are about the same length or slightly longer than the body, with clearly defined dark veins. Winged ants do not readily shed their wings.

Termites: The body is without a distinct waist (Figure 8). The wings are of similar length and are much longer than the body, with a fine, indistinct pattern of veins. Flying termites are usually golden brown, brown or black and readily shed their wings.

Authors

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Source

Peters, BC., J King, & FR Wylie. (1996) *Pests of Timber in Queensland*. Queensland Forestry Research Institute, Department of Primary Industries, Brisbane, 175 pp. Available from the Queensland Government Bookshop: www.bookshop.qld.gov.au

More information

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