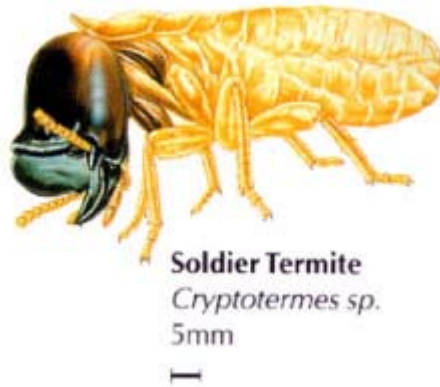


Termites



Jump to Section:

- [Life History](#)
- [Species](#)
- [Habits and Damage](#)

Belong to the order *ISOPTERA*

Some of the oldest fossils known are of termites predating the Dinosaurs

Closest known relative is the cockroach

IMPORTANCE.

Most termite species do not feed on seasoned timber but on grass and debris and not all are subterranean. The subterranean termite is the major pest species in Australia.

The termite food source is cellulose, sugars and starches which are extracted from timber. Bacteria and protozoa break down the timber in the termite gut.

Sapwood is preferred because they contain more of these proteins and less toxins.

Termites also obtain protein from fungi, which thrive in the humid environment created by termite colonies.

Termites groom each other with their mouths and antennae.

Excretions from the anus are thus transferred throughout the colony and it is this habit which gives us one means of controlling colonies of these pests.

Termites enter buildings and structures in search of food and are a major pest of man.

Termites also are much needed in the natural environment they are;

- a) A major food source to many creatures from other insects to mammals.
- b) Aerate the soil
- c) Remove dead wood from the forest and return it to the soil in the form of nutrients without damaging the environment
- d) Hollow out logs and branches providing habitat for small creatures and nesting sites for birds.
- e) Clear grass in dry areas lessening the likelihood of major fires.



BEHAVIOUR

Termites require access to a permanent water supply.

They maintain the workings and nests at approximately 96 percent humidity.

A temperature range of between 26 to 36 degrees Celsius is maintained by their metabolism.

Termites live in colonies with castes which have different functions.

The colony may have from a few hundred individuals to millions.

Termites undergo gradual metamorphosis. **Egg - Nymph - Adult.**

The young nymphs are fed and cared for by the workers.

During moulting the young nymphs gradually emerge into different castes.

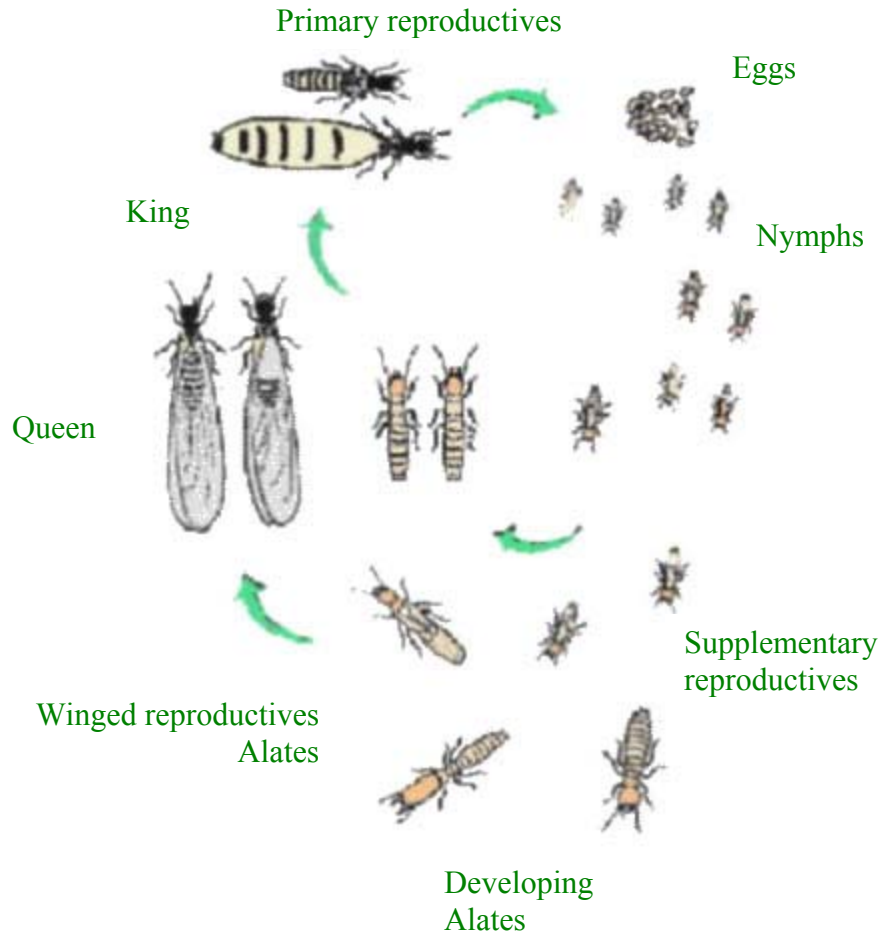
Winged alates leave the nest in humid weather to set up new colonies.

When a new site is selected the future king and queen hollow out a small chamber and the first eggs are laid and cared for by the king and queen.

It may take years until the nest is sufficient in numbers to attack buildings.

The queen will at first lay only a few eggs but eventually can lay in excess of a thousand.

Termites can forage over fifty metres from the central nest site and can create sub-nests in areas where they are feeding.



LIFE HISTORY AND HABITS

Jump to Section:

- [Top](#)
- [Species](#)
- [Habits and Damage](#)

Termites are social insects and live in colonies containing a number of different castes. Each caste has a different form and function from the other; each is vital to the viability of the colony. In general terms the life history of all the economically important subterranean species is similar.

ALATES

On a warm, humid evening large numbers of winged male and female termites, the 'alates' or 'primary reproductives', are released by the colony. A small number survive the flight, drop off their two pairs of distinctive, equal sized wings, pair off, mate and, if they can find a suitable location, start a new colony.



QUEEN



As the other castes take over the running of the colony the young queen of most species becomes 'physogastric'. Her abdomen distends to many times its original size and she becomes an egg laying machine, laying up to 1000 eggs a day. She is confined to her royal chamber, tended and fed by the workers and regularly fertilised by the king.

NURSERY

The eggs are removed from the royal chamber and transferred to a nursery by the workers. Here the brood (the eggs and nymphs) develops into the other castes that the colony requires for development and survival; workers, soldiers and primary or secondary reproductives.



SOLDIERS AND WORKERS



Soldiers and workers are blind and sterile termites. The workers carry out the work of the colony and are responsible for gathering the food the colony needs. In most species the heads of the soldiers are uniquely

armoured and equipped to allow them to defend the colony against attack, notably by ants.

TERMITE SPECIES

Jump to Section:

- [Top](#)
- [Life History](#)
- [Habits and Damage](#)

COPTOTERMES

Coptotermes acinaciformis is found throughout mainland Australia and causes more damage to property than any other species. It is aggressive in its search for food and will attack many items other than wood in its search for cellulose materials. It will damage wall lining boards, electrical wiring and even personal possessions. Colonies often nest in trees or stumps but can form nests without ground contact.



NASUTITERMES



There are several species of *Nasutitermes* which may damage timber in service. Soldier termites are distinguished by their pointed heads. *Nasutitermes exitiosus* usually builds a low mound and is more common across southern Australia. *Nasutitermes walkeri* builds part of its colony as an arboreal nest on the branch of a tree; the rest is constructed in the ground beneath it. This genus will mainly attack hardwood such as that found in fences and timber decking.

MASTOTERMES

Mastotermes darwiniensis, the Giant Northern Termite, is the most primitive of the commercially significant species. It shows an ability for sub-colonies to split off from the main colony and produce queens, without a mating flight. Eventually a network of interconnecting sub-colonies is established, which makes control difficult. These large termites can devastate buildings, bridges, poles, trees and crops such as sugarcane. *Mastotermes* is found mainly north of the Tropic of Capricorn.



SCHEDORHINOTERMES



These termites can cause damage approaching the severity of that caused by the *Coptotermes*. They build fragile nests in old tree stumps, in timber buried in the ground, in filled patios and under fireplaces. The damage they cause is distinctive. Although it can be severe it is often patchy, with huge gouges taken out of sound timber, particularly around nails in floor boards or other timbers. *Schedorhinotermes* colonies contain major and minor soldiers.

HETEROTERMES

Species of this genus occur throughout Australia. They are generally considered to do little damage to timber in service, restricting their attention to weathered timber in fences, decking and posts. Occasionally they can cause superficial damage to sound timber. They may attack timber at the same time as other species, leading to confusion over which species is causing the main damage.



HABITS AND DAMAGE

Jump to Section:

- [Top](#)
- [Life History](#)
- [Species](#)

TERMITE NEST



Termites build a nest that contains the queen and king, the nursery and a large proportion of the soldiers and workers. Some species build a hard shelled mound above or partly below the ground. Others build their nests in the trunk of a tree or below ground in the root crown. A nest can contain several million termites.

TERMITE LEADS

Termites are prone to desiccation. All the significant species that attack buildings construct a system of sealed



leads that connect the nest to the food sources. Termites can move safely from the nest to the food and back, in an environment that will protect them against atmospheric conditions, predators and even pesticides.

DAMAGE TO TIMBER AND OTHER MATERIALS



Timber is the main source of cellulose sought by the commercially important species. Sometimes other, non cellulose, materials are damaged because they are close to feeding activity. Electrical wiring, switches and plug fittings are often attacked and severely damaged by termites. When natural food supplies such as trees run out, the termites will turn to timber in service. Using covered mud tunnels to link the food supply to the nest, termites will work in timbers that are hidden in floor, wall or ceiling spaces and the damage is often not discovered until structural failure takes place or the termites reveal themselves in some way. Termites can cause extensive damage and more than one colony may attack a building at the same time.

In order to minimise the extent of termite damage it is recommended that regular inspections be carried out by a competent and experienced termite inspector.

Jump to Section:

- [Top](#)
- [Life History](#)
- [Species](#)
- [Habits and Damage](#)