



GREENTREE ANT – WEAVERS AND CONTROL AGENTS EXTRAORDINAIRE!

The Green Tree Ant (*Oecophylla smaragdina*) is Australia's only known species of weaver ant. These weaver ants, so-called because they weave a nest together out of leaves, are to be found in tropical regions of Africa and India through south-east Asia and into northern Australia. In Australia they are found in the forested northern regions of Western Australia, Northern Territory and Queensland. In Queensland they spread down the coastal fringe as far south as Rockhampton and can often be found in fruit orchards. Australia's green tree ant is recognisable by its long pale yellow and/or green body and its numerous mandibular teeth.

Body parts

Mandibles – jaws

Antennae

Mesosoma – middle section

Petiole – flexible junction

Gaster – last section

Colonies

Green tree ants live in colonies and build nests by weaving leaves together with a sticky substance produced from their larvae. Many ants work together to construct these oval shaped nests which can finish up being 300-500mm long. As they are made from the leaves of the tree in which the nest is placed, they are well camouflaged.

A mature colony of green tree ants can hold as many as 100,000 to 500,000 workers and may span as many as 12 trees and contain as many as 150 nests. Green tree ant colonies have only one queen, even though there may be many nests, and a colony can live for up to eight years. The queen ant is located in one nest but her eggs are distributed throughout the other nests of the colony.

Ants recognise each other by smell (pheromones) and that is how they know who has been where. They have very poor eyesight and use their antennae to feel their way around. There are major workers who work on the outside defending colony territory, foraging and assisting the queen and minor workers who remain within the egg chambers of the nest tending the larvae. The ants work mostly at night.

Defenders

Green tree ants aggressively defend their nests biting intruders. Acid from the tip of the gaster (part of the abdomen section) is sprayed causing pain and discomfort which generally drives off an invader. This aggression is towards all





species including green tree ants from neighbouring nests. Consequently green tree ants reduce numbers of insects on the trees they inhabit. This is why green tree ants are sometimes referred to as biological control agents reducing the damage that other insects do, for example, to the citrus and mango trees they inhabit.

Food

Green tree ants eat both plant and animals. The animals they eat are mostly smaller invertebrates.

Teamwork

Green tree ants build chains to reach from one leaf to the next. They work together to defend the nest and to camouflage it by using leaves from the tree they live in. They protect trees from herbivores. Ants work together to pollinate fruit flowers, for example mango and mandarins. This pollination is necessary in order to have fruit in the next season.

Predators

Green tree ants have few predators. Jumping spiders, which look and small like the ants, can invade the nests and eat the ants and larvae. A protected species of butterfly in Australia called **Liphyra brassolis** while in its caterpillar stage can devour the entire brood of a green tree ant nest. It is resistant to attack because of its tough outer hide. Once the caterpillar transforms into a butterfly inside the nest, its soft body is vulnerable to assault by the green tree ants, which can swarm and dismember intruders. To escape this fate, the butterfly quickly moves towards an exit, shedding white scales from its new wings as it goes. These scales stick to the ants, disorienting and distracting them.

Life cycle

Green tree ants have a complete metamorphosis life cycle. After hatching from an egg, they begin life as larvae. It is in this stage that they secrete a sticky substance which is used by worker ants for weaving the leaves together to make nests. The differentiation of the female castes into queen or workers is largely determined by environmental factors such as

- The amount and quality of food
- Temperature
- Hormones produced by workers and the queen

Males usually develop from unfertilised eggs.

The Green tree ant is truly a remarkable creature central to the well-being of our ecosystems and habitats.

