

Weaver Ants

Guardians of the Canopy

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WEAVER ants are fascinating due to their social behaviour, their use in natural ecosystems, and their potential benefits for sustainable agriculture. The Asian weaver ant (*Oecophylla smaragdina*), native to Southeast Asia and Australia, is a remarkable species of ant known for its complex social structure, sophisticated nest-building techniques, and ecological significance. Weaver ants have been studied for their biological pest control benefits, their unique colony behaviours, and their ability to thrive in various ecosystems.

The most distinguishing feature of the Asian weaver ant is its incredible nest-building capability. Weaver ants build their nests by pulling leaves together and stitching them using silk produced by their larvae. To start with this, worker ants choose leaves and using their mandibles pull them closer. Once the leaves are in the correct position, the worker ants pick up the larvae and bind the leaves together with their silk. Built high in the tree canopy, the nests shield the colony from environmental dangers and predators, enabling the colony to thrive. A colony may consist of

several nests that are interconnected, which creates a vast network of homes spread across trees. This sophisticated nest-building behaviour presents a good example of the high level of cooperation and communication within the colony. Unlike other ant species, that typically construct their nests underground, *Oecophylla smaragdina* has adapted to life in the tree canopy, which shows incredible versatility in habitat selection.

Asian weaver ants demonstrate a highly organised social structure, typical of eusocial insects. The colony is divided into several castes, each with specialised roles; the primary division is between the queen, workers, and soldiers. The queen is the reproductive centre of the colony and is responsible for producing eggs that sustain the growth of the colony. Workers are divided into two castes, major and minor workers. Major workers, which are larger, perform more labour-intensive tasks such as foraging and defending the colony. However, the minor workers are smaller and focus on tending to the queen, the brood, and nest maintenance. The division of labour makes sure that the colony runs efficiently,