

Leaf Cutter Ant

Scientific Name: *Atta cephalotes*

Class: Insecta

Order: Hymenoptera

Family: Formicidae



Leaf-cutter ants are approximately 1/2-inch long. They can be distinguished by a variety of features: hairs on the heads of workers, shinier integument caused by the lack of hexagonal microsculpture, and the lack of small teeth or dents on the head anterior to the posterolateral spines.

Colonies of up to several million ants are found, each established by a single female queen. Each ant in the colony has a designated role. The ants live about 10 to 20 feet below ground in large cavities and tunnels, which they create themselves by carrying the dirt back to the surface. They moisten the walls with saliva to harden them against cave-ins.

Leaf-cutter ants are a unique species of ant. They are unable to directly digest the leaves that they cut, so they have evolved into remarkable fungus farmers. This fungus is found nowhere else in the world, and the fungus is the only food the ants can digest. In order for this fungus to decompose leaves, it needs enzymes from fecal secretions of the worker ants. It is a true mutual symbiosis, since the ants and fungus depend solely on each other to survive.

Range

Louisiana to Argentina

Habitat

Forests and Rainforests

Gestation

Litter

Behavior

Each day patrols of worker leaf-cutter ants, led by scout ants, leave in long files to collect pieces of mature leaves. The ants may collect leaves from nearby or from trees 100 yards away, after climbing 40 feet into the tree's crown. On long journeys they leave a chemical trail for other colony members to follow and to find their way back. Each worker cuts out a portion of a leaf that often weighs 50 times as much as itself for carrying back to the nest. When the leaves are brought into the colony, the ants begin the farming process. They chew up the leaves and mix them with saliva and anal secretions to make mulch on which the fungus will grow. The fungus breaks down the mulch as it grows and the ants (of all ages) eat the spores produced by the fungus. If any other species of fungus forms, the ants weed it out. When young females leave the colony to begin their own they take a mouthful of fungus with them as "seeds" for a new crop of fungus. Mini-worker ants accompany the workers on these leaf-gathering forays, and snap at hunch-back flies that try to lay eggs on the ant's body or leaf. (If the eggs hatch in the nest, the fly larvae will eat the ant larvae.) Soldier ants fight off any enemies. Other ants keep the trails clear of debris, leaves, twigs, etc, and repair them as needed.

Reproduction

Wild Diet

Fungus spores endemic only to leaf-cutting ants' nests