

LEAF-CUTTER ANT

ALSO KNOWN AS: Parasol ant

SCIENTIFIC NAME: *Atta cephalotes*



PHYSICAL CHARACTERISTICS AND ADAPTATIONS:

- The highly social leaf-cutter ant is named for its habit of cutting and carrying leaves back to its underground nest. The ants do not eat the leaves. Instead, the leaf fragments are used as compost to grow fungus gardens that feed the ants.
- A leaf-cutter ant colony has a single queen that lays all the eggs, and up to eight million workers that tend the garden, forage for leaves, and defend the nest.
- A forager's jaws vibrate a thousand times a second to shear off pieces of a leaf.
- A leaf-cutter ant can carry leaf fragments that are 20 times their own body weight.
- Leaf-cutter ants build huge nests—up to 50 feet across and 16 feet deep.
- Ants leave behind scent trails to find their way back home or to a food source.

Length	Queen – 1 inch, Worker – 1/16 to 5/8 inches
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RANGE: Northern and central South America

HABITAT: Tropical forest and fields

DIET:

Wild: Fungus

Zoo: Fungus



REPRODUCTION & DEVELOPMENT:

Number of young	Millions!
Development	Complete metamorphosis—egg, larva, pupa, and adult—takes 6 to 10 weeks
Lifespan	Worker – 1 to 2 yrs, Queen – 15 to 20 yrs

Courtship behavior:

A single queen is specialized for mating, starting the nest, and laying fertilized eggs. Fully-grown colonies rear a batch of winged males and virgin queens each year. Mating typically happens in frenzied aerial swarms. Males soon die while the newly-mated queens shed their wings and attempt to start their own colonies.

Raising young:

If a newly-mated queen is successful at raising a first brood (eggs, larvae, and pupae), successive broods are then cared for by some of her daughters (worker ants).

SOCIAL BEHAVIOR:

- All ants are social insects living in organized colonies, or female-dominated groups.
- The workers are the many sterile wingless female ants who are daughters of the queen.
- Worker roles include caring for the brood, maintaining the nest, foraging for leaves, protecting the colony (soldiers), and feeding others.

INTERESTING FACTS:

- Leaf-cutter ants and the fungus they cultivate evolved in close association and formed a symbiotic relationship whereby both species benefit (mutualism). The fungus is sheltered, fed, protected, and dispersed by the ants, and the ants are rewarded with bits of food. Neither ant nor fungus can survive without the other.
- Leaf-cutter ants are the dominant herbivores in tropical regions and literally shape the plant communities around them. They are an integral part of the ecosystem.
- Native plants have defenses against the ant – sticky sap, tough or fuzzy leaves - so that the plants are not defoliated, just pruned.
- Scientists have found that leaf-cutter ant colonies do tend to follow a daily rhythm where there are busier during certain times of day. However, different colonies have different rhythms. Some might be busiest during day while others are busiest at night. Some colonies even change their own rhythms, perhaps based on the season. Scientists are still doing research to find out why these differences exist.

CONSERVATION:

Status in the Wild: Common

What is the Cincinnati Zoo doing?

- The Zoo is dedicated to changing visitors' negative perspectives and attitudes towards insects to those of amazement, respect, and value.
- In 2003, the Zoo claimed AZA's Significant Achievement Award for work with the leaf-cutter ant.

What can people do to help save ants and their habitats?

- Respect every living thing, for even the ant plays an important role in nature.
- Recycle your empty soda cans to cut back on mining in rainforests for bauxite, the source of aluminum.

RESOURCES:

Welcome to the Jungle and the World of Leaf-cutting Ants!, Wildlife Explorer Spring 2007, Randy Morgan