

Texas Leaf Cutting Ants

By Celeste Silling

I am normally not a fan of ants, and in fact have a personal vendetta against many ant species. But I was walking along a trail the other day when I saw another trail running parallel to mine. It was a trail made by small errand-runners, all walking the same pathway as they carried large chunks of leaves to some unknown location. These were leafcutter ants, and I was surprisingly thrilled to see them.

There are many species of leafcutter ants in the world, but the one most commonly known here in Texas is the Texas leaf cutting ant (TLC ants), *Atta texana*. The TLC ants are rusty brown in color and their sizes vary widely, even within the same colony.

TLC ants form large colonies underground, with up to over two million members. These colonies can last for many years and can expand to enormous sizes, 50 to 80 feet across. Above ground, the ant colony entrances are small craters in the earth, and look much like any other ant hill. The distinguishing factor, of course, is the presence of hundreds or thousands of leaf clippings being hauled inside.

Aptly named, the TLC ants cut leaves and other parts of plants, then bring the fragments back to their colony in their mouths (mandibles), holding them kind of like a little umbrella. One might expect them to then eat the leaves, but one would be wrong. These ants are farmers!

The ants chew up the plants and bring them underground to their nests, where they use them to raise their fungus gardens. The fungus *Lepiotaceae* grows on the chewed-up leaf tissue and the ants cultivate it, protecting their crop from mold and pests, and clearing away debris. The ants eat parts of the fungus and give it to their larvae as well.

The fungus, grown in the ants' underground garden, is the only known food source for these insects. The ants no longer have the ability to make specific nutrients and so are entirely reliant on the fungus for these nutrients. The fungus benefits from the ants' efforts as well. It can grow in perfect conditions, spread to new colonies, and thrive where it wouldn't normally be able to survive on its own. Because these two species benefit and rely on each other, this is a great example of a mutualist relationship.

To many property owners (and plants), leafcutter ants can be a real nuisance. The ants obviously cause damage to the foliage around their colonies, but their enormous nests can also cause problems. Think of a tunnel system, 50 to 80 feet across, being dug under your garden, parking lot, or building. With enough excavation, foundations have caved in due to these small miners. This level of damage is more rare though, and the ants are mostly known for cutting gardens, crops, and trees.

For those of us who find these ants fascinating and charming, we can forgive their inconsiderate landscaping practices. I for one love watching the ants marching with their little umbrellas and I really enjoy the idea of their underground fungus gardens. Whether you like them or not, you have to admit, these ants are pretty interesting!

Photos by Celeste Silling

Caption 1: Leafcutter ants carrying leaf fragments back to their nest

Caption 2: The entry crater to a leafcutter ant nest, surrounded by leaf fragments