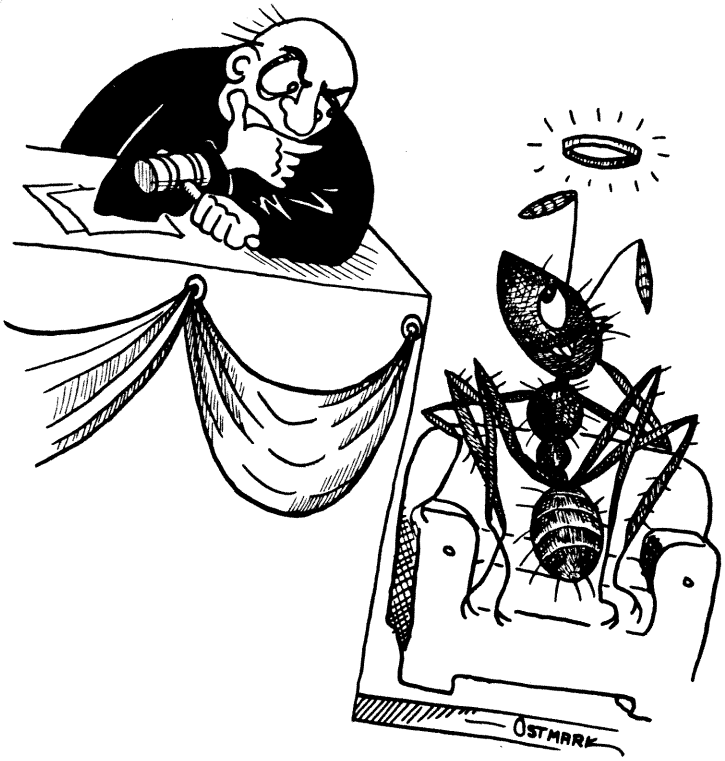

#4

The Case of the Innocent Ants

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Don't waste money fighting harmless ants, thinking they're town ants. Learn the difference!

"INNOCENT until proven guilty!" This ringing phrase has appeal not only to a person's sense of justice, but, in the case of town ant control, directly to his pocketbook.

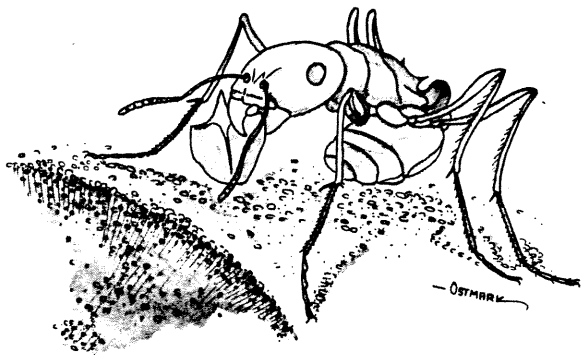
Time and money intended for eradication of the destructive town ant can easily be wasted on two relatively harmless ants—the harvester ant, and Trachymyrmex (pronounced Tracky-mur-mex), which we'll refer to as the 'possum ant because of its tendency to play dead when picked up.

The mixup is understandable. The harvester ant looks a great deal like the town ant and makes similar nest mounds. The 'possum ant, on the other hand, looks less like the town ant, but has somewhat the same feeding habits. All three species inhabit overlapping areas in Louisiana. Money spent to destroy either the harvester ant or the 'possum ant will buy little protection for pine seedings or crops.

Harvester Ant Strictly a Seed-Eater

The harvester ant (Pogonomyrmex comanche) will cause confusion only in or near Bienville Parish for the simple reason that this is the only place it is known to live. It builds nests in well-drained loamy sands of Lakeland and Eustis soil series. The town ant (Atta texana) lives in the same soils in the same area, but is also found on many of the drier, sandy soils in the upland pine area of the state.

Each mound of the harvester ant



The harvester ant gathers only seeds. Workers curl their abdomens between their legs.

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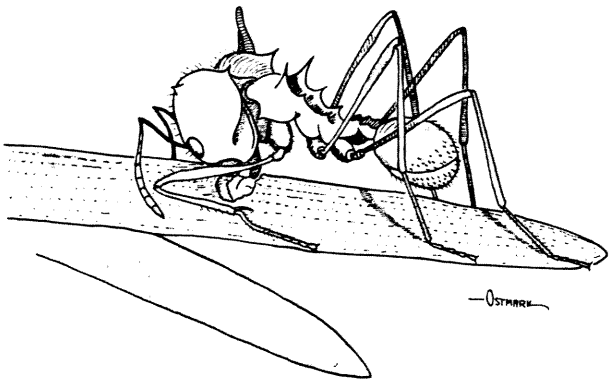
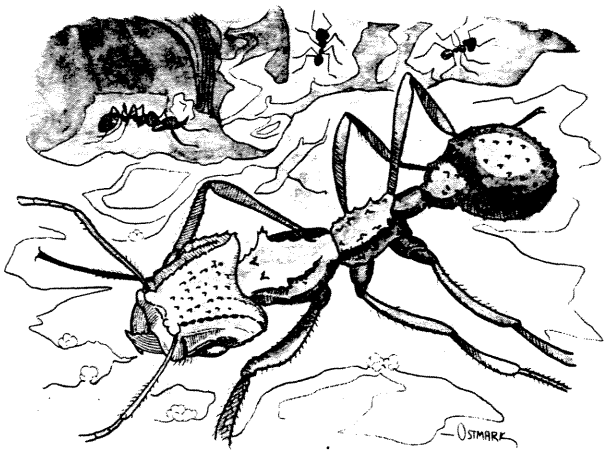


Town ant workers cut off pieces of pine needles and leaves and carry them to underground fungus gardens.



'Possum ants, like the town ant, cultivate underground fungus gardens, but use a different fungus.

	Town Ant	Harvester Ant	Trachymyrmex
Body	2 to 12 mm. long. Major workers have huge, deeply incised heads.	7 to 8 mm. long. Workers have small heads, round on top. Often walk with abdomen tucked forward under thorax.	4 to 5 mm. long. Small heads, slightly incised.
Forage	Mostly leaves.	Seeds only.	Mostly leaves.
Defense	Bite.	Sting.	Often play dead when picked up.
Mounds	Dirt pellets 2 mm. in diameter. Mound is 1 to 1½ feet in diameter, crescent shaped. Active in winter.	Pellets 2 mm. in diameter. Mound is 1 to 2 feet across, round, and nearly symmetrical. Circle of trash around old mounds.	Pellets 1 mm. in diameter. Crescent shaped mound, 4 to 8 inches long. Inactive in winter.
Entrance hole	Surrounded by mound.	In center of mound.	One-half to 2 inches from the inner part of the mound.
Nest structure	Many mounds per nest. Fungus gardens under ground.	One mound per nest. No fungus gardens.	One mound per nest. Small fungus gardens.
Tunnels	Radiate great distances from center of nest.	None.	None.
Trails	Wide, distinct, busy. Active in winter.	Usually indistinct, but busy.	Indistinct, not busy. Inactive in winter.

marks a single, complete nest. In contrast, the towns that provide the common name for Atta texana are made up of numerous mounds, all connected underground, and all part of one huge nest. Their nests would be a simple way of distinguishing between the two if the harvester ant didn't confuse things by building mounds close to one another to form loosely organized clusters that superficially resemble towns. Fortunately, there is one reliable means of identifying older town ant nests: the mounds are usually grouped on top of a pile of excavated subsoil that looks like a small hill.

Established town ant nests are easily identified by the large pile of bare subsoil that marks the central area.

Mature town ant nests are enormous. Underground foraging tunnels radiate for several hundred feet in all directions from the central nest area, which is conspicuously marked with the characteristic hillock. This central area may cover 4,000 square feet. The entire nest, including tunnels, may occupy eight acres.

While old town ant nests can be spotted by the large pile of subsoil, the tunnels are hard to find because their entrances, called feeder holes, are usually inconspicuous. Harvester ant nests do not have feeder holes at all. However, a feeder hole from a nearby town ant nest may show up in the middle of a cluster of harvester ant mounds, making it even easier to mistake one for the other.

When very young, town ant nests do not have the hillock in the center, and confusion with harvester ant nests is perhaps easiest then. Identification will have to depend on the shape of the mounds, as the size is about the same for both species. The harvester makes round, symmetrical mounds about a foot in diameter; the town ant builds a crescent-shaped mound that is about twice as high on one side as on the other.

The feeding habits of each species are also different. The harvester ant, as its name implies, forages only for seeds. Some of these seeds are dropped near the entrance hole. In time, nests become ringed with plants that sprout from seeds in the discard area. If a mound is ringed with growing vegetation and dead trash, it belongs to the harvester ant.

The town ant cuts pieces of green leaves, which it carries to its nest to form "soil" for the fungus gardens that produce its only food. Consequently, the town ant mounds are seldom ringed with living vegetation, although trash often accumulates.

Internally, the nests of the two species differ greatly. The cavities inside the town ant nest are constructed to contain the fluffy fungus gardens, which are typically a foot in diameter, 8 to 10 inches high, and dome-shaped with a flat bottom. Cavities made by the harvester ant, in contrast, are a foot or more in length but rarely more than two inches high, and packed tightly with seed. Town ant nests may extend to a depth of 20 feet or more; those of the harvester ant probably go no deeper than about five feet.

Both species construct trails, and workers often look alike as they carry forage back to their nests down the trails. Town ants vary greatly in size, however, while the harvester ants are all about the same size. Town ants carry bits of green vegetation; the harvester carries only seeds. The head of the town ant is enormous, and so deeply incised that from the front it appears heart-shaped. The harvester ant's head is smaller in relation to body size, and rounded instead of incised. The harvester often carries its abdomen tucked forward under its thorax—somewhat as a frightened dog puts his tail between his legs. This behavior is never observed among town ants. And finally, the harvester ant stings; the town ant only bites.

No damage to vegetation has been attributed to the harvester ant, although it may abscond with some tree seed and grain from farm crops.

Town ant mounds are crescent-shaped, and twice as high on one side as on the other. They completely surround the entrance hole. Distinct pellets indicate fresh mounds. (Photo by Lawrence Breard)

Mounds of the harvester ant are typically ringed with trash. Sprouting seeds in the discard area result in a circle of vegetation around older mounds.

In tests on a closely related species, the red harvester ant in Arizona, ringing the mounds with 5 per cent chlordane dust destroyed the colonies.

'Possum Ant Also a Gardener

Trachymyrmex septentroinalis is the widest ranging of the three ants, occurring throughout the southern states. It is also least fussy about locations, adapting equally well to river bottoms and upland sandy soils.

Like the town ant, the 'possum ant grows its food—a fungus—on bits of greenery that it cuts and carries to underground gardens. Both chew the foliage pieces into "soil" for the gardens. The fungus that 'possum ants plant is different from the one used by the town ant. Both ants are believed to keep unwanted fungi out by their liquid feces, which contain an antibiotic. The desired fungi eventually produce nodules of pinhead size, which are the sole food of the ants.

As with the harvester ant, but in contrast to the town ant, each mound of 'possum ants represents a single colony. The number of workers in single colonies is small, seldom more than 125. Newly formed mounds are crescent-shaped and less than six inches in diameter at their widest point. Older excavations are larger, more circular, and look much more like town ant mounds. Entrance holes of the other two ants are centered in the mound, but the 'possum ant's entrance is usually within two inches of the inside of the crescent, often partially covered with dried leaves and twigs.

The pellets that make up ant mounds are another means of telling the ants apart, but only while they are still fairly fresh. On 'possum ant mounds, pellets are much smaller than on town ant or harvester ant mounds. On fresh mounds, the pellets are distinct; on older ones, the pellets become indistinct as wind and rain break them down.

The 'possum ant, unlike the town ant, is inactive during the winter, and its mounds weather away. Thus a mound that is active in winter belongs to either town ant or the harvester ant. But as soon as the first warm days of spring arrive, the 'possum ant starts to work again, and its fresh excavations can be mistaken for other ant activity.

The interior of the 'possum ant nest resembles that of the town ant, but in miniature. The cavities are about six inches wide and dome-shaped. They usually contain fungus gardens. The galleries that connect the fungus gardens are about one-fourth-inch wide, or about half as wide as those of the town ant. The depth of the nest rarely exceeds five feet.

Trails of 'possum ants are indistinct and contain few workers at a time. Town ant trails are conspicuous and busy.

The ants themselves are about half the size of the town ant workers that are seen above ground. The workers are more timid than those of town ants, and will often play dead when picked up.

The 'possum ant cuts leaves as does the town ant, but causes a minor amount of damage. It has been reported defoliating roses in Alexandria and slash pine seedlings in Florida. It could be a pest of naturally seeded areas if colonies were especially numerous. Five per cent chlordane dust applied around the entrance hole will kill the colony, but this rather inoffensive ant doesn't often warrant control.

From these clues, landowners should find it fairly easy to avoid the expense and the injustice (at least from the ants' viewpoint) of killing innocent ants. When the culprit is "proven guilty" of being identified as the town ant, he is automatically convicted of being a menace to pine seedlings. Suggested methods of carrying out the death sentence are contained in the U. S. Department of Agriculture Forest Pest Leaflet 23 which can be obtained by writing to:

Southern Forest Experiment Station
704 Lowich Building
2026 St. Charles Avenue
New Orleans 13. La.

Fresh mound of Trachymyrmex. The inconspicuous entrance hole is indicated by arrow.