



## The White-Footed Ant (*Technomyrmex albipes*)<sup>1</sup>

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The white-footed ant [*Technomyrmex albipes* (Fr. Smith)] (Figure 1) is native to tropical Asia but has been inadvertently introduced into Florida. They are relatively small ants with a black body and yellowish-white tibia and tarsi (feet). In Florida, the white-footed ant was first reported in the Homestead area in 1986 and until recently was considered to be of minor importance in Dade and Broward Counties. During the past few years, white-footed ants seem to have increased in population, and have expanded into new territories within Dade, Broward and Palm Beach Counties. Most likely, additional counties will soon be reporting the presence of the white-footed ant.

White-footed ants do not bite or sting, nor have they been reported to cause any type of structural damage. They are, however, attracted to sweet foods. Thus, it is common to find them foraging indoors and outside on hedges infested with honey-dew producing insects such as aphids and scales.

Several attributes of their biology help make white-footed ants a very successful species and an extremely difficult pest to control. Firstly, established colonies may contain well over a million individuals. Many pest ant species have colonies that consist of only several thousand individuals. About one-half of the individuals in a white-footed ant colony are workers. Workers are sterile females that are responsible for tasks such as foraging for food, brood care, and nest maintenance. The other half of a white-

footed ant colony is made up of "intercastes." Intercastes are wingless males and females, that in addition to the founding king and queen, mate and lay fertile eggs. Thus, the reproductive potential of the multiple queen white-footed ant society is much greater than that of many other ant species.

Like many other ants, white-footed ant colonies produce winged males and females which, at certain times of the year, leave their nest to start new colonies. In addition, white-footed ants can initiate new colonies by budding. Budding is a process where many workers and reproductive males and females leave the mother nest and crawl some distance to start a new colony. Thus, mass movements of white-footed ants may be observed.



Figure 1. White-footed ant.

Workers of many sweet-feeding ants, such as the ghost ant, ingest liquefied food and carry it within their crop (first of three stomachs) back to the nest. Within the nest, workers regurgitate this food and share it with members of the colony that never leave the nest, such

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as workers tending offspring, the queen, and the developing brood. This is why baits are so effective. A worker ingests toxic food and brings it back to the nest where it is shared with others. White-footed ants are unusual in that food ingested by foraging workers is not regurgitated and shared with others. The sterile workers of the white-footed ant are capable of laying unfertilized eggs. These eggs, called trophic eggs, are sterile, and are thinner and more fragile than fertile eggs. Trophic eggs are fed to adults within the colony that are not actively foraging and to the developing offspring. Therefore, toxic baits affect only those members of the colony that directly contact and ingest baits.

Although it appears that they may be impossible to eliminate, improved methods for control of the white-footed ant are being investigated. Prevention is the best line of defense against the establishment of any pest insect. Relatively small ants, such as the white-footed ant can fit through extremely small openings to gain access into the home. If these entry points can be located, they can be blocked by application of caulk or some other exclusion device. This can also help to prevent other insects from gaining access into your home.

Sanitation can also help to prevent infestation by white-footed ants, as well as other ant species. Eliminate ant access to sugars within the home. Clean areas where food is handled and quickly and thoroughly clean up spilled, sugar-based foods. In addition, store food in containers with tight fitting lids. Also, eliminate potential food sources outside, such as by controlling pests in your landscape that produce honeydew. In addition, trim tree branches

away from the structure, this will help prevent ants within the tree from gaining access to the structure. Removal of fallen leaves and compost piles near the structure has also proven to be an effective sanitation procedure by removing desirable habitat.

Residual insecticidal sprays, applied outside the home as a barrier can provide temporary relief from invading ants. Ants that cross the barrier do not die immediately but at some point they will die and carcasses may be found within the home. After the effectiveness of the chemical barrier has subsided, ants may continue to forage inside.

To be completely effective, a treatment must kill the queens or the colony members which feed them. If the nest can be located, it can be directly treated with a toxic material. White-footed ant nests have been observed in attics, under roof shingles, in the petiole bases of palms, under loose bark, in dead wood, and under leaf litter. Many other locations may serve as suitable nest sites for this species.

As previously mentioned, baits are effective for many sweet-feeding ant species. However, they are not as effective for control of white-footed ants because they do not regurgitate materials to other colony members. But like insecticide barriers, baits do provide some temporary relief by killing workers that ingest them.

While white-footed ants are not directly harmful to humans or pets, their presence within the home is a nuisance. At this time, it appears unlikely that white-footed ants can be completely eliminated from infested structures. However, steps can be taken to minimize their intrusion and future efforts by researchers may lead to better control solutions.