

White-footed Ants¹

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Introduction

The white-footed ant has become a major household pest in Florida. Homeowners, pest control companies, and the news media are constantly asking university researchers and county extension offices for information on how to control these ants. This fact sheet provides information on the white-footed ant and its habits. We also describe ways to reduce white-footed ant problems in your home or building.

Where Did The White-footed Ant Come From And Where Is It Now?

The white-footed ant (*Technomyrmex albipes* Fr. Smith) was first described from Indonesia in 1861. From there it spread to Japan, Australia, New Zealand, Polynesia, Africa, Hawaii (first reported in 1911) and, most recently, the British West Indies in October 2003.

In Florida, this ant was first collected in Homestead in 1986. In 1991, it was found in Miami. As of July 2002, white-footed ants have been collected in Brevard, Broward, Collier, Dade, Hendry, Hillsborough, Lee, Martin, Monroe, Orange,

Palm Beach, Pinellas, Polk, St. Lucie, Sarasota, and Seminole Counties (Figure 1). White-footed ants are found throughout south Florida and well-established in parts of north Florida. Alates have been found from April through November.

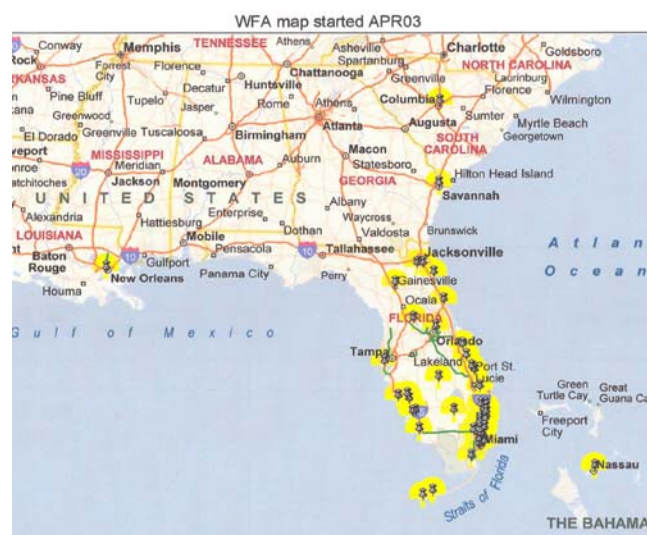


Figure 1. Confirmed and suspected areas with white-footed ants. Credits: J. Warner, University of Florida, Ft. Lauderdale REC

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How Does It Spread From Place To Place?

Like many other pests, the white-footed ant has been spread worldwide by human activities such as travel and the shipment of cargo and other materials. In Florida, transportation of infested home landscape plants and materials, and perhaps nursery stock, appears to be the most common way it is spreading.

Are White-footed Ants Harmful?

No, white-footed ants don't bite or sting nor do they cause damage to structures. However, white-footed ants are a major pest because they invade homes, have huge colonies, and are difficult to get rid of. Large numbers of white-footed ants are often found outside of buildings, too. Some researchers estimate there can be eight thousand to three million ants in a colony.

Why Do They Often Go Inside Buildings?

Because they have such big colonies and many young to feed, large numbers of white-footed ant workers leave the nest to search for food. The inside of a home is a great place to find nest sites and food.

What Do White-footed Ants Look Like?

The white-footed ant is a 1/10 to 1/8 inch (2.5-3 mm) long, black to brownish-black ant (Figure 2). It is called the white-footed ant because the "foot" (which actually is the lower part of the leg known as the tarsus) is yellowish-white. The waist has only one knob-like node and each antenna has 12 segments. The white-footed ant does not have a sting.

The white-footed ant looks a lot like the Argentine ant (*Linepithema humile*) but that ant is not common in central and southern Florida and also does not have white "feet." In South Florida, white-footed ants are often confused with one of the "crazy ants," *Paratrechina bourbonica*, which also lacks white "feet." This crazy ant is a bit larger than the white-footed ant, moves faster, has more hair, and has a slight fruity odor when crushed.



Figure 2. White-footed ant worker. Credits: R. H. Scheffrahn, University of Florida, Ft. Lauderdale REC

The White-footed Ant Life Cycle

White-footed ant colonies can become quite large. Nearly half of the entire white-footed ant colony are fertile, reproductive females called intercastes. Winged males, which live only a short time, and winged females emerge every year from the colony. This usually occurs between July and August in South Florida. They mate while flying and once on the ground females start new colonies. The new queen lays eggs that hatch into maggot-like larvae. The larvae grow and become pupae. As pupae, final development occurs to produce the adult ants. In ant colonies the eggs (Figure 3), larvae, and pupae are known as the brood. The new queen takes care of the brood and colony and over time the number of ants in the colony increases. Eventually, the intercastes replace the wingless queen. The intercastes also can form more colonies by budding. In this process, they leave the old colony with some of their nestmates and brood to create a new nest.

What Do White-footed Ants Eat?

White-footed ants are often found foraging along branches and trunks of trees and shrubs. They feed on plant nectars and honeydew, a sweet substance produced by many sap-sucking insects such as aphids, mealybugs, and scale insects. White-footed ants are known to protect honeydew-producing insects from attack by other insects. White-footed ants are strongly attracted to sweet foods (Figure 4). They also eat dead insects and other types of protein.



Figure 3. White-footed ant workers tending eggs. Credits: J. Warner, University of Florida, Ft. Lauderdale REC



Figure 4. White-footed ants feeding on soda droplet. Credits: R. H. Scheffrahn, University of Florida, Ft. Lauderdale REC

Nestmates are brought to food sources by foragers who lay chemical trails. The same trails between a nest and food source are often observed for several months. In and on structures, foragers tend to follow lines such as an edge of an outside wall panel. This usually leads to some small opening to the inside where foragers that enter are likely to be noticed. Frequently, white-footed ants find their way inside wall voids where they follow electrical cables and emerge into various rooms, especially kitchens and bathrooms. In these places the ants find liquid and solid foods resulting in heavy trailing activity.



Figure 5. White-footed ant trail on a building. Credits: R. H. Scheffrahn, University of Florida, Ft. Lauderdale REC

Trophic Eggs

In most typical ant species, foraging ants feed their nestmates and brood regurgitated food. This behavior is called trophallaxis. Although not known for sure, it is believed that white-footed ants do not engage in trophallaxis. Instead, foragers produce non-fertile eggs (called trophic eggs) that they feed to their nestmates.

Where Do White-footed Ants Nest?

White-footed ants nest at or above ground level. They do not nest in soil. A single colony may have nests in many locations. It is almost impossible to tell one colony from another because different colonies will be connected to each other. The white-footed ant prefers nest sites that are near moisture and food sources, and protected from predators and extreme heat. Nests tend to be found outside of structures more than inside. Indoors they nest in wall voids and attics. Occasionally, clusters of white-footed ants remaining motionless may be observed on walls. Currently, there is no explanation for this curious behavior. There is some speculation they are resting. Outdoor nests are often found

- in tree holes or on the underside of leaves
- on bushes

- under palm fronds and old leaf boots
- in loose mulch
- under debris such as newspaper, fallen coconuts, scrap wood, etc.
- in leaf-litter on the ground and in rain gutters.

How Do I Treat A White-footed Ant Problem?

The white-footed ant is extremely difficult to control because it has such large colonies. In most cases a professional pest control company should be hired to treat infestations. An integrated approach using the following practices should provide the best results. Be aware that satisfactory control requires patience and a bit of work.

Bait, Bait, And More Bait

Baits are effective for many sweet-feeding ant species. So far, scientists at the University of Florida Research and Education Center in Fort Lauderdale have found baits to be the only method that works for controlling the white-footed ant. Some have reported that applying insecticides containing fipronil to trails and nesting sites might help in controlling populations. However, liquid insecticides alone are not effective. Control has been only achieved by treating infested homes with baits containing boric acid or other active ingredients such as imidacloprid. It is critical that all populations of white-footed ants on the property are found so that each has access to bait. Placing liquid baits at the base of infested trees or along branches can also be helpful. Liquid baits can also be placed in or near areas where white-footed ants are hard to get to such as inaccessible attics, wall voids, etc. Ant trails coming from neighboring properties via adjoining vegetation, fences, or across lawns, must also be treated. It is important to know that liquid baits tend to dry out slowly. Therefore, make sure that fresh baits are always available until the target population has been controlled.

Many believe baits don't work on the white-footed ant because the bait can't be spread through the colony by trophallaxis (mouth-to-mouth)

as in other ant species. However, if many workers feed on the bait, enough will be killed to cause the brood to die of starvation. It is also thought that very slow-acting bait toxicants may, after some time, end up in the trophic eggs.

What If I Have Ants In The Attic?

White-footed ant trails going up the sides of houses can often be seen entering soffit vents that lead into attics. Ants usually will not find any food sources up there. Therefore, liquid baits can be placed along trails on the outside of the house. This will cause ants nesting in the attic to come out to feed on the baits. Extreme infestations in the attic may need treatment with an insecticidal dust or spray.

ALWAYS FOLLOW LABEL DIRECTIONS when using an insecticide.

Treat Vegetation

Residual (longer-lasting) and systemic (gets taken up by plants) insecticides applied to vegetation around structures are also helpful. They kill insects that produce the honeydew that white-footed ant feed on. Vegetation favored by white-footed ant in Florida includes

- nearly all palms, especially coconut, sabal, or queen
- most fruit trees
- large ficus trees
- gardenia
- hibiscus
- ixora
- many plants having showy flowers with sweet nectars
- most plants infested with aphids, scales, mealybugs or other sap-sucking insects.

Yard Work

Trim trees and shrubs next to the structure to prevent ants from "bridging" (crawling from the vegetation onto the structure). It is best not to have

any vegetation touching outside walls. Be sure to trim back from structures any overhanging branches of large trees infested with white-footed ants. This keeps white-footed ant nests inside curled-up leaves from falling onto roofs and reinfesting the structure.

Summary

White-footed ants have large colonies with nests scattered throughout the yard and home. Treatment should include plenty of fresh baits with boric acid or other active ingredient, keeping vegetation from contacting the structure, eliminating or reducing honeydew-producing insect infestations, and cutting back overhanging branches of infested trees next to structures. Following these steps should help reduce white-footed ant problems around your home.