



Entomology Insect Information Series

Providing Leadership in Environmental Entomology

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FORMOSAN SUBTERRANEAN TERMITES

Subterranean termites are beneficial insects. In nature they are important recyclers, breaking down cellulose-containing materials such as dead trees and returning nutrients to the soil. Subterranean termites become a problem to humans when buildings are built over or near their colonies and they infest structures.

In South Carolina, there are two major types of subterranean termites: several species of native subterranean termites and the imported Formosan subterranean termite. Since their introduction in Charleston in the mid-1950's, Formosan subterranean termites have caused concern. The following are answers to the most frequently asked questions about these structural pests.

Where are Formosan subterranean termites found in South Carolina? The distribution of Formosan subterranean termites has been well documented by research conducted at Clemson University. Formosan subterranean termites are in many areas of Charleston County and in Beaufort County on Hilton Head Island and near the city of Beaufort. They also are found in parts of Dorchester County, Berkeley County, in Orangeburg in Orangeburg County, and in Rock Hill in York County.

Is the distribution of Formosan subterranean termites in South Carolina increasing? Yes, but no one can predict exactly when or where they will move into an area. On their own, Formosan swarmers are weak fliers and do not travel long distances. Unfortunately, people are the main cause of increasing the range of Formosan subterranean termites by moving materials, especially old railroad ties, that are infested.

Are Formosan subterranean termites, super termites, resistant to termiticides? No. Termites are not resistant to any insecticides. On average, one Formosan termite worker is the same as a native

subterranean termite worker. A bigger problem with Formosan subterranean termites is their potential colony size. Researchers often find Formosan subterranean termite colonies are larger than native subterranean termite colonies. It is possible to have Formosan subterranean termite colonies with several million workers. More workers means more individuals can feed on a structure at a given time. It also means that more individuals may be tunneling and foraging around a building, providing an increased chance of Formosan subterranean termites finding a weakness in a termite treatment.

Don't Formosan subterranean termites make nests with no ground contact? They can, but not as often as most people think. An intensive survey of 50 structures infested with Formosan subterranean termites in Charleston, showed that 94% of the buildings were infested from ground-based colonies. Only 6% were infested by aerial colonies. An above-ground moisture source was the key component for Formosan subterranean termites to establish an aerial nest. Soil treatments will not impact aerial nests, but based on the Charleston study, approximately 95% of the time, Formosans subterranean termites will be invading a structure from the ground.

Can Formosan subterranean termites infest live trees? Yes. Survey data from around the United States reports Formosan subterranean termites in live trees. In Charleston, researchers reported Formosan subterranean termites in 17 different tree species. In most cases, the presence of termites in trees is a secondary indication of a primary problem with the tree due to disease, injury or other pests. However, like a weakness in a termiticide treatment, Formosan subterranean termites will take advantage of a weakness in a tree.

What should I do if I think I have Formosan subterranean termites in my house? County Extension offices furnish information on what is necessary for collecting, preserving, and shipping specimens to Clemson University for identification. Either soldier or winged termites are needed. If possible, collect specimens into a glass or plastic jar

containing rubbing alcohol. Do not use water. Samples must be well-preserved for a correct identification.



Formosan subterranean termite swarmer on a penny. Formosan swarmers usually have a brown body, about 1/4 inch long, and wings with many hairs. Native subterranean termite swarmers usually have a black body, less than 1/4 inch long, and wings with very few hairs. Termite sizes and color can vary. Positive identification should be made by an individual trained to identify termites.

Can Formosan subterranean termites be effectively controlled? Yes. Professional-use termiticides, baits and wood treatments are effective against Formosan termites at the same concentration levels used for native subterranean termites. Remember, individual Formosan workers are not resistant to insecticides and they are not "super termites". Thus professional-use products do

not have special, higher concentration recommendations for Formosan subterranean termites over native subterranean termites. However, it is very important that soil and wood treatments be applied properly (labeled concentrations and volumes) and that baiting systems be meticulously monitored. Seldom is it possible for homeowners to inspect and effectively self-treat their own house for termites without the proper training, equipment and knowledge of termite behavior and habits.

Should I be frightened of Formosan subterranean termites? No. Do not underestimate their abilities, but there is no reason to fear Formosan subterranean termites. Pest management professionals have multiple control methods that are effective, and new and improved methods are being developed.

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