

# Clemson University Department of Pesticide Regulation

## Significance and Treatment Of Drywood Termites

### *A Guide for Applicators and Homeowners*



Department of  
Pesticide Regulation

511 Westinghouse Road

Pendleton, SC 29670

864.646.2150

[www.clemson.edu/dpr](http://www.clemson.edu/dpr)

#### Administration

Dr. Stephen Cole  
Director, Clemson University PSA  
Division of Regulatory & Public  
Service Programs

Dr. Mike D. Weyman  
Deputy Director, Clemson University  
PSA Division of Regulatory & Public  
Service Programs

Dr. Tim Drake  
State Programs Manager, Department  
of Pesticide Regulation

Ryan Okey  
Pesticide Program Chief, Department  
of Pesticide Regulation

Bulletin 26

Many older wooden structures along South Carolina's coast have some degree of drywood termite damage. Many of them also have active infestations. These insects are rare in other parts of the state, but they do occasionally show up in furniture or other wood shipped in from other infested areas.

There are three common kinds of drywood termites that are found in South Carolina: the powderpost or furniture termite, the Southeastern drywood termite, and one named *Kalotermes approximatus*, which has no common name. Another species, the Western drywood termite, is occasionally found in Charleston and Beaufort Counties of South Carolina, but they are not common. The Southeastern drywood termite is the most common species.

#### Drywood Termite Biology

Drywood termites look very similar to subterranean termites, but they are vastly different in their behavior and physiology. Because drywood termites obtain water solely from their own metabolism, they do not need to maintain contact with the soil or with an external source of moisture. There is often little external evidence of their presence.

Drywood termite colonies are much smaller than those of subterranean termites. In South Carolina, a mature colony may only have a few individuals to a few hundred members. It usually takes many years for a colony to have swarmers. If conditions are favorable, a male and female swarmer (king and queen) will begin a colony in a crack or other opening in wood.

Drywood termite infestations are usually confined to a small area and may be found in structural wood, trim, hardwood floors, furniture, or other wood items. These termites can re-infest after producing swarmers, so older structures are more likely to have multiple infestations than newer ones. Unlike subterranean termites, drywood termites eat both across and with the grain of the wood. Drywood termites form their galleries up to the surface of the wood, leaving only a thin layer intact.



Drywood termite frass

Drywood termite colonies are sometimes noticed when their droppings or fecal pellets are found around the infested site. Drywood termites make small, temporary openings ("kick-out" holes) from which they push out fecal material. The holes are later resealed.

#### Damage and Detection

Since drywood termites are able to remain completely inside the wood on which they feed, they are often very difficult to detect and control. For this reason, our Rules and Regulations for the Enforcement of the South Carolina Pesticide Control

Act consider a drywood termite infestation to be active only when at least one of the following criteria have been met (See Section 27-1085 I (4) a.):

- ▶ If there are live drywood termites inside of the structure;
- ▶ If live or dead swarmers are repeatedly found inside of the structure; or
- ▶ If there is a repeated accumulation of fecal pellets in an area.



Drywood termite damage

Even if an infestation is active, damage usually accumulates very slowly. In contrast to other states where drywood termites thrive (such as Florida), they are at the northern end of their range; therefore, here in South Carolina, they are restricted to coastal areas where low temperatures are moderated somewhat by the ocean. Even in these areas, drywood termite colonies (particularly in exposed or unprotected wood) are often killed or significantly reduced by extended periods of near-freezing temperatures, such as temperatures that occur every few years in more severe winters. For example, colonies of drywood termites in Florida may contain up to 3000 individuals, but in South Carolina, there are generally no more than a few dozen to several hundred individuals in a colony. Throughout their range, it is typical for several colonies to infest a structure simultaneously.

Past research has indicated that the rate at which drywood termites damage structural timbers in Florida is about one percent to ten percent of the rate at which damage from subterranean termites accumulates. Like subterranean termites, it takes several years for a colony to mature (or start producing swarmers). That being said, it is unlikely that in a year's time more than a few inches of damage would occur in larger lumber, such as a 2" X 10" board. In smaller lumber, such as a 1" X 6" plank, a foot or two of damage might be expected in a year's time. Keep in mind that these are rough estimates that are based on data from Florida, where the climate is more suitable for drywood termites. The rate of damage in South Carolina could be considerably less, given the smaller average size colony.

### Non-Chemical Control

The starting point for drywood termite control is a thorough inspection to determine the extent of infestation. Infestations are often localized, and treatment can be limited to those areas. One of the best ways to control a localized infestation is to remove it. For instance, if an infestation were confined to a door trim or piece of furniture, the best course of action would be to remove it and destroy the infested wood. If the item is too valuable to discard and it is small enough, it can be placed in a freezer for a week to kill infesting drywood termites. To avoid moisture damage, make sure that the item is wrapped in plastic before it is placed into a freezer; therefore, the item will be protected from condensation when it is removed from the cold environment.

### Chemical Control

If removal is not practical, a localized insecticide treatment may be done by one of two methods. An insecticide can be injected as a dust or a liquid formulation into the termite galleries using a drill-and-treat method or applied as a liquid to the surface of the wood. The label will stipulate the correct method of treatment. In situations where spot treatments have failed or in serious infestations where the drywood termite infestation is extensive, whole-structure fumigation may be the best control option. This, of course, is a last resort. You must be certified in Fumigation before performing any fumigation job.

Please see the Rules and Regulations for the Enforcement of the South Carolina Pesticide Control Act, Section 27-1085, for more information. You may download a copy from our website at <http://dpr.clemson.edu>.

*If you have any questions about drywood termites or other wood destroying organisms, please feel free to contact one of our Field offices and the numbers listed to the right, or call our main office in Pendleton at 864.646.2150. We'll be happy to help!*

Anderson.....	843.494.2332
Aynor.....	843.957.1727
Beaufort.....	843.255.6060 Ext 111
Charleston.....	843.225.7065
Clemson.....	803.260.1462
Columbia.....	803.736.7680 Ext 112
Florence.....	843.667.1393
Newberry.....	803.403.7262
North Myrtle Beach.....	843.360.1512
York.....	803.628.0303

Original article written By Lee Galloway and Cam Lay, "Palmetto Pestalk," July 1993.  
Edited by Tracy E. Outlaw