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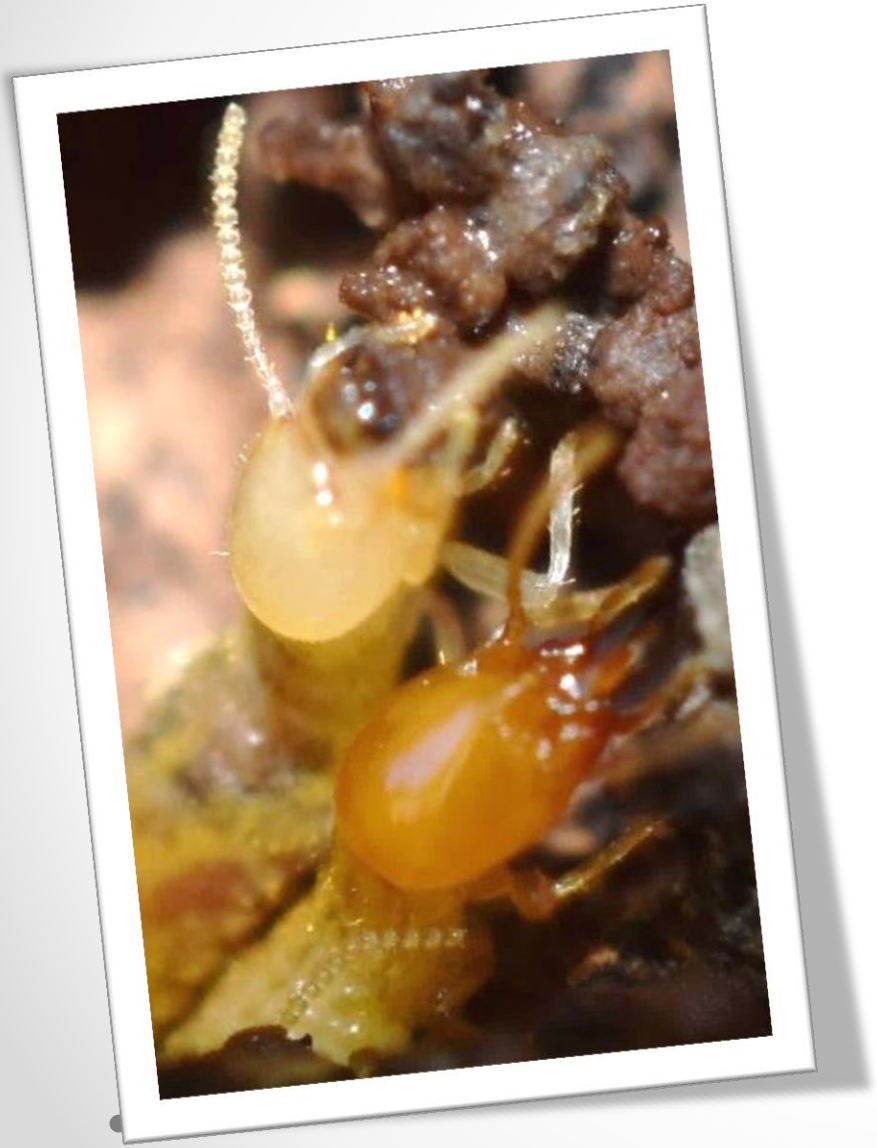

Termites and Trees

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Why Now???

jacksonville.com The Florida Times-Union

81° Now | 92° Tomorrow | 92° Friday

HOME | NEWS | SPORTS | MONEY | LIFE | REASON | OPINION | OBITS | MEDIA | CLASSIFIEDS

HOME/NEWS

Formosan termites trigger fears of impending doom for homeowners in historic Riverside

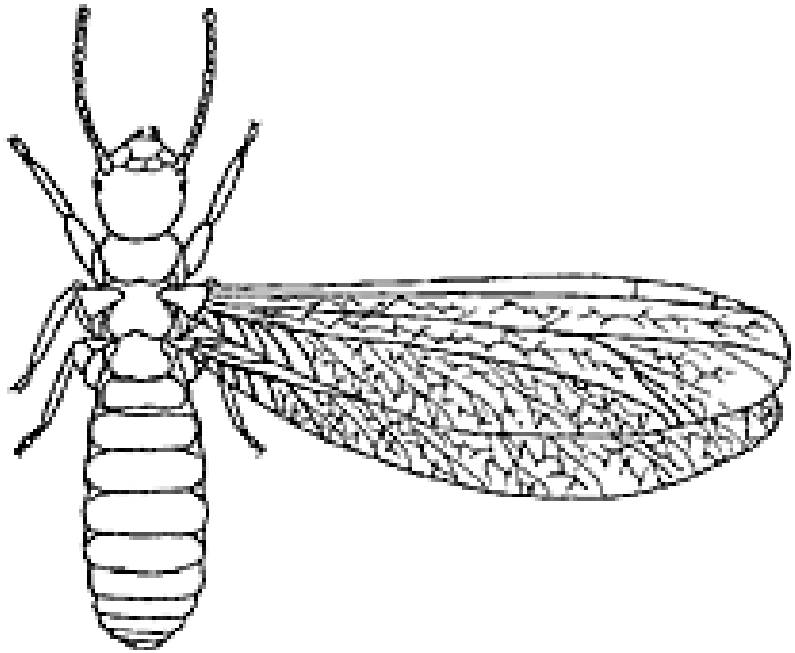
By David Bauerlein & Ariella Phillips Mon, May 30, 2016 @ 9:04 pm | updated Tue, May 31, 2016 @ 9:46 am

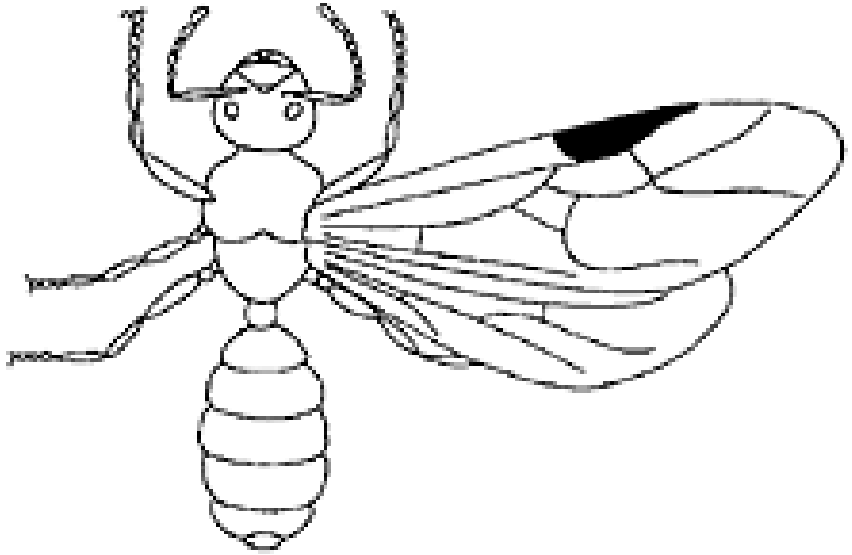
"It's like they [termites] are aliens from another world, and if they get on your property, you are doomed," Brooks said.

First a Little Basics

Termites Vs. Ants

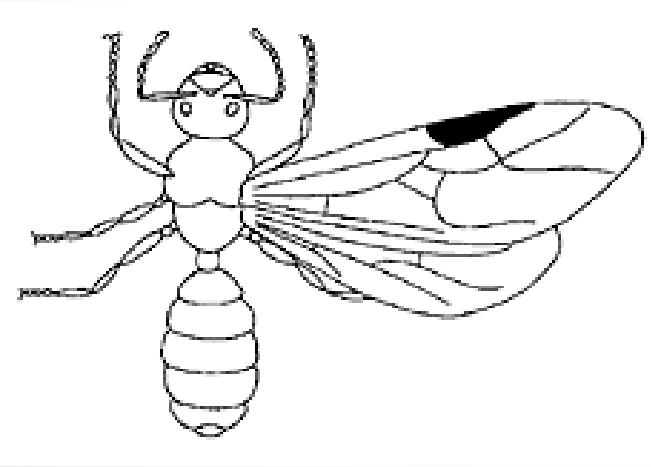
Termite swarmers are often mistaken for flying ants

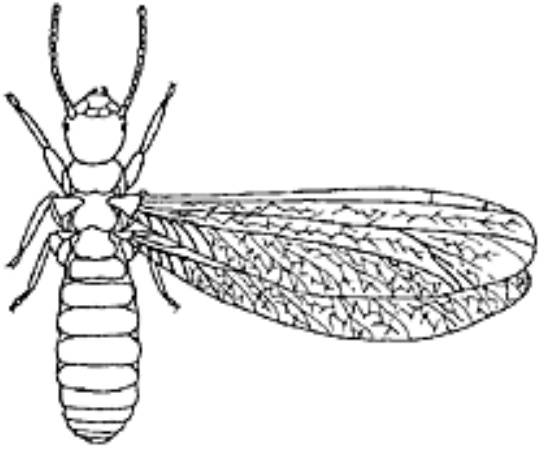




What are the differences?

	Antennae	Waist	Wings	Body hardness
Termite	No bend	Thick	Equal size	Soft body
Ant	Bend in middle	Pinched	Forewings bigger	Hard body





3 Types of Termites

Dampwood

Minor pest

Needs free moisture

Drywood

Usually infest dry, sound hardwood or softwood in coastal areas

Older homes

Subterranean

Typically require soil to wood contact for moisture control

Termite Biology

Worker

Reproductive (Alate)

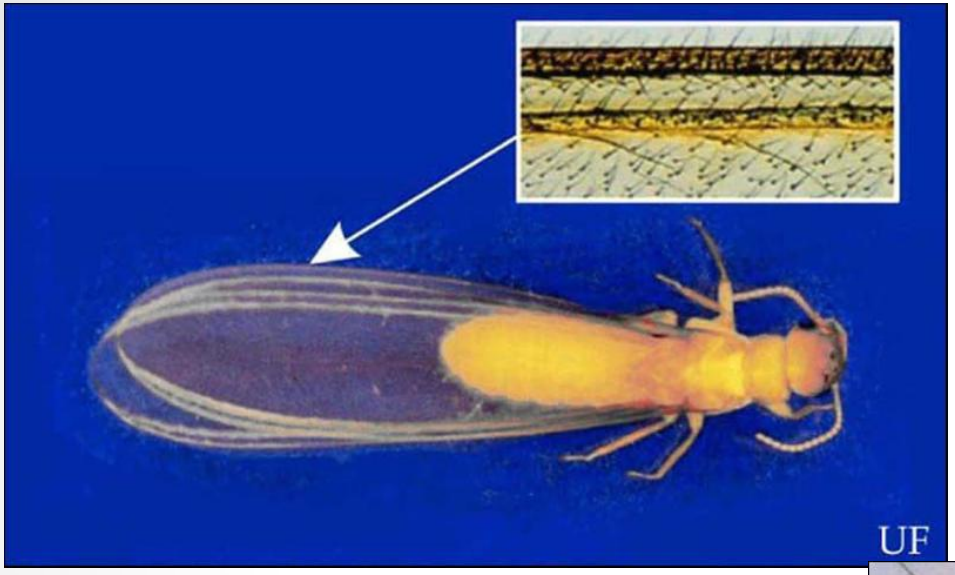
- Cooperative Societies

Solider

Photo Credit: Gerald J. Lenhard, Louisiana State University, Bugwood.org ; Gary Alpert, Harvard University, Bugwood.org

Subterranean Termite Damage

Formosan Subterranean Termite



Two Dark Veins
WITH HAIRY
WINGS

Soldiers with
teardrop shaped
heads

Formosan Termite Biology

(*Coptotermes formosanus*)

Formosan Subterranean

Can have aerial nests that retain moisture

Forage up to 300’

10% soldiers

1 to > 5 million/colony

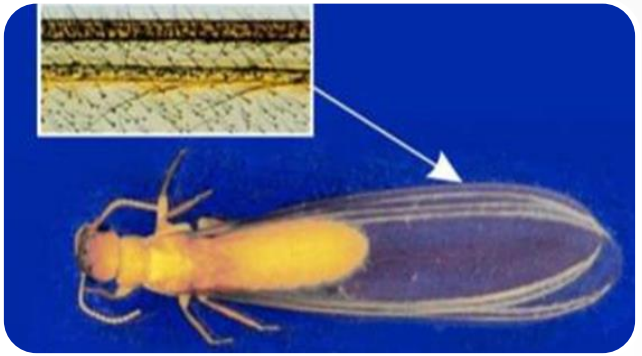
Require moisture

Subterranean Termite Soldiers

- Native Subterranean soldiers
  - Comprise about 1-3% of the colony
- Formosan Subterranean termite soldiers
  - Comprise about 10% of the colony

- Can't feed themselves
- Defend colony

Subterranean Swarming Behavior



Eastern

- Swarm during the day
- January – May

Formosan

- Swarm in Evening
- Excessive numbers
- May-July
- ~ ½” in size

Carton Nest of Formosan Termite

- Termites enter structure from soil
- Often build above-ground nests once in a building or tree
- Carton holds moisture & helps regulates temperature

Termites Feeding

- Feed on wood and other materials that have cellulose
- Subterranean termites can be moved around in potted plants, landscape timbers, infested trees, infested boats

Source of Formosan infestation: Likely railroad ties originally from New Orleans which were used in landscaping.

Termite-ravaged RR tie

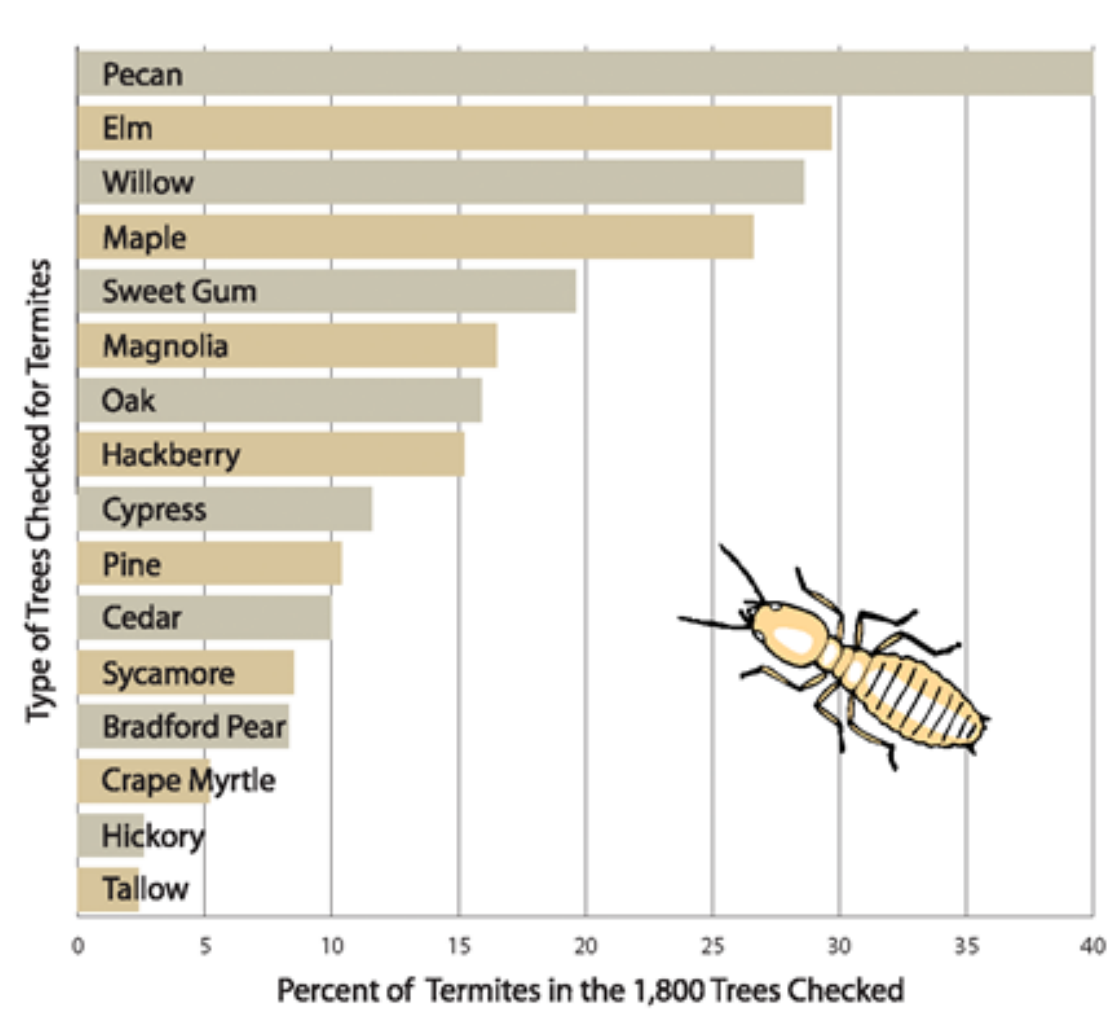
Swarming

Formosan Termites and trees

- Native and Formosan subterranean termites are found on and in trees and woody plants; however, the Formosan subterranean termite eats the centers of live trees and woody plants.

Photo Credit
Troy Perry
Turner Pest Control

Here is a partial list of susceptible tree species found with infestations of Formosan subterranean termites in Louisiana:



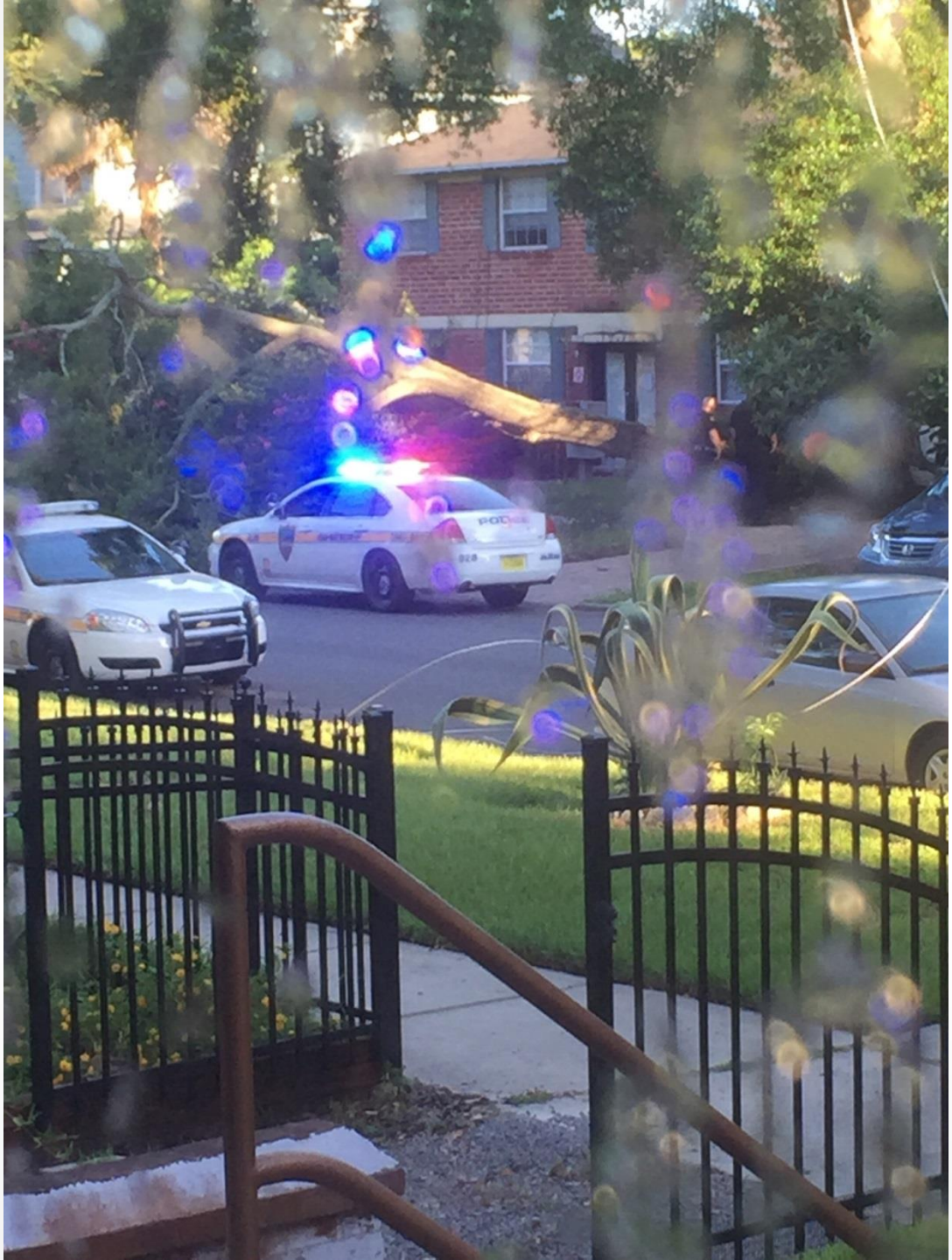
Inspection Protocol

First, look up and down the trunk for evidence of mud tunnels. If they are fresh, living termites may be inside the tunnel.

Sites with living termites may be found at ground level and just below the ground in the crotches at the base of the tree

Photo Credit Chris Dunaway LSU

Living termites also may be in the upper part of the tree where branches form a crotch with the trunk.



Locations where limbs have been cut should be examined for evidence of living termites.

Photo Credit Chris Dunaway LSU

Areas of rotted or loose bark around the trunk of a tree may be locations where living termites may be found. Carefully remove some of the outer bark with a knife or screwdriver in these areas.

Photo Credit Chris Dunaway LSU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Inspection Video from LSU

What if you suspect termites but do not see any signs?

Use survey stakes

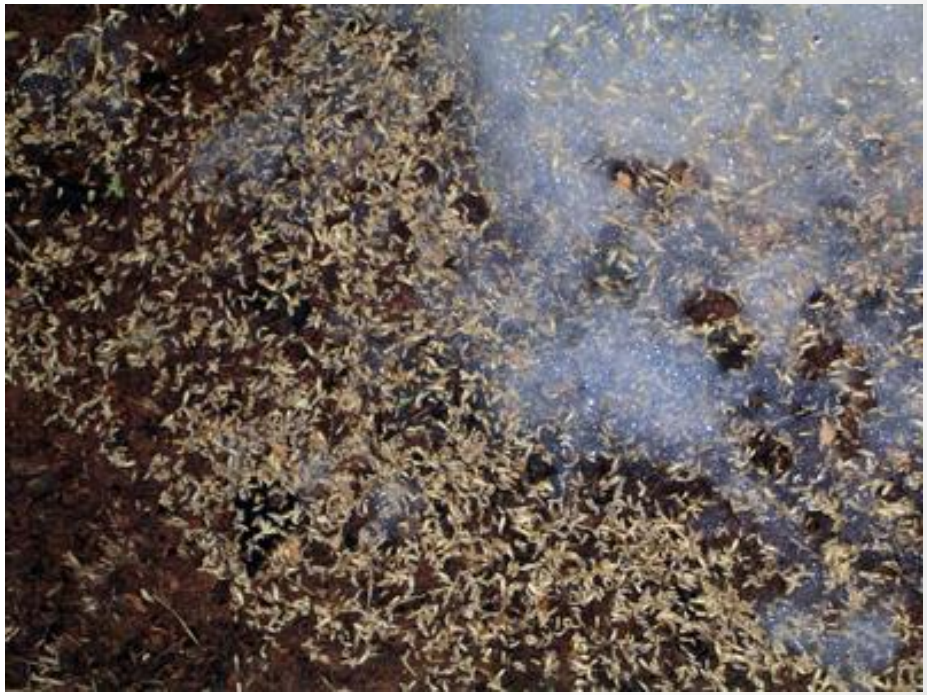
- Survey stakes can be inserted into the ground near trees
- The pine stakes (2 x 4 x 20 cm) on should be placed opposing sides of the base of the tree
- The stakes should be monitored. Preferably every month.
- The presence of termites in a tree base monitoring stake is not considered absolute proof of tree infestation but it is close.

OK, we have found them, what is next

Photo Credit: Turner Pest Control

Treatment Options
Foam

Photo Credit: M. Waldvogel,
Dept. of Entomology, NCSU



There are several termite foams available

Photo Credit: Turner Pest Control

Limitation of Termite Foam

- Where do you apply it?
- It does a good job at killing the nest in the tree
- It is not known how long trees will be protected from termites after treatment.
- If there are still colonies in the ground it is thought that the tree could be re-infested at a later date
- In New Orleans termite infestations were absent in less than 50 percent of these trees after three years.

Treatment Options

Baits

- The idea behind termite baits is that the termite foragers collect the bait and bring it back to the colony.
- There are several products that are proven to be successful.
- Bait stations can be placed around trees

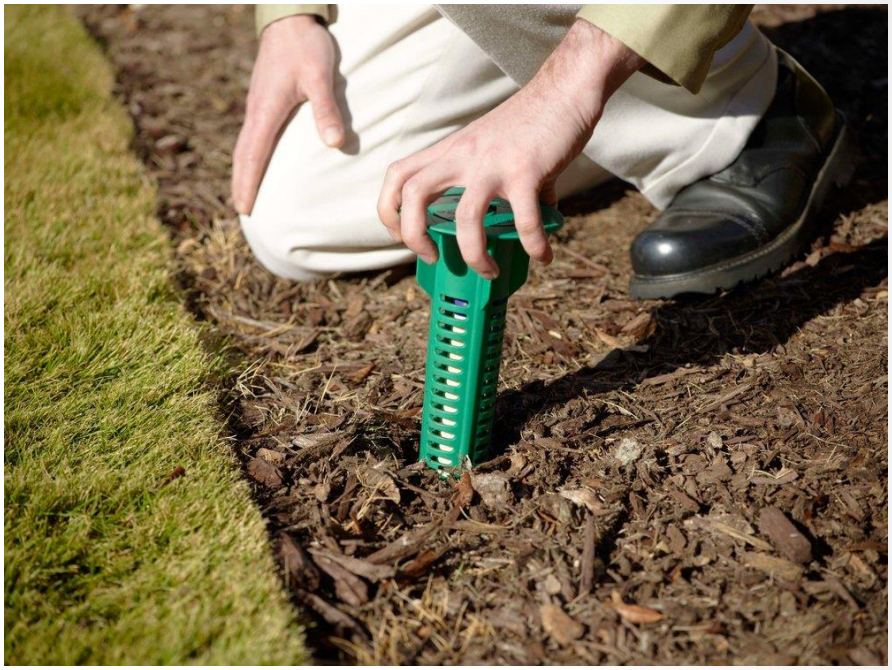


Photo Credit: Peninsular Pest Control

Treatment Options
Above Ground Baits

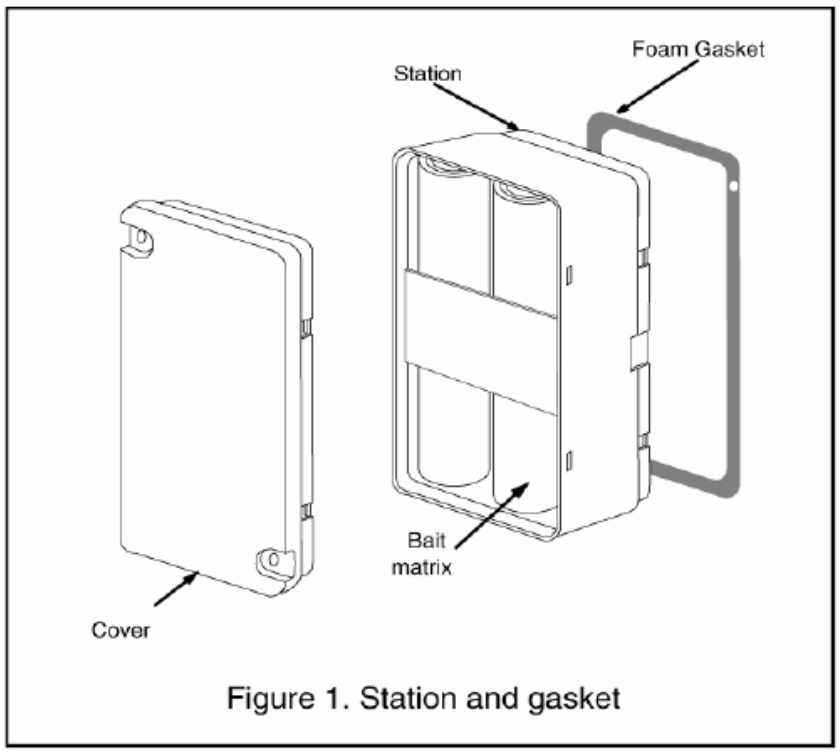


Figure 1. Station and gasket

Target sites for use of this product include interior and exterior surfaces of buildings and crawl spaces, fences, utility poles, decking, landscape decorations, trees, or other features that could be damaged by termite foraging and feeding activity.

Limitation of Termite Bait Stations

- The termites have to come in contact with the bait station.
- They may follow roots to the tree and bypass the station
- Could prove expensive for homeowners, as they require clustering bait stations around the base of a tree

Photo by G. Andrew Boyd/
The Times-Picayune

The take Home Point!!!!

- If a homeowner has trees with Formosan Subterranean termites in their landscape it will continue to be the source of termites unless treated.
- If there are infested trees it makes sense to treat the trees and the home in order to reduce Formosan Termite numbers.
- Discussion?????

Is the tree safe??

- All trees pose some sort of risk
- We do not have a good model of how trees move in wind
- We should look at all defects as potential problems not just termites.
- The latest:

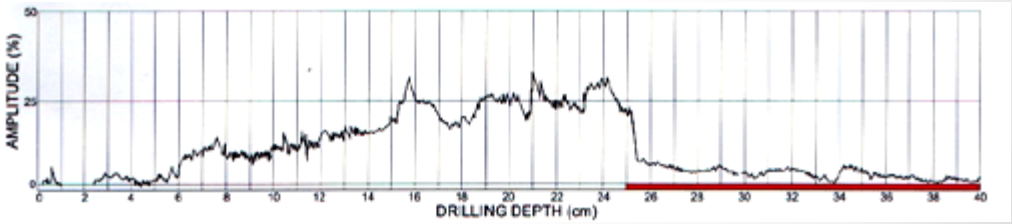
Evaluating Damage
Rubber Mallet

Photo Credit: Chuck Lippi

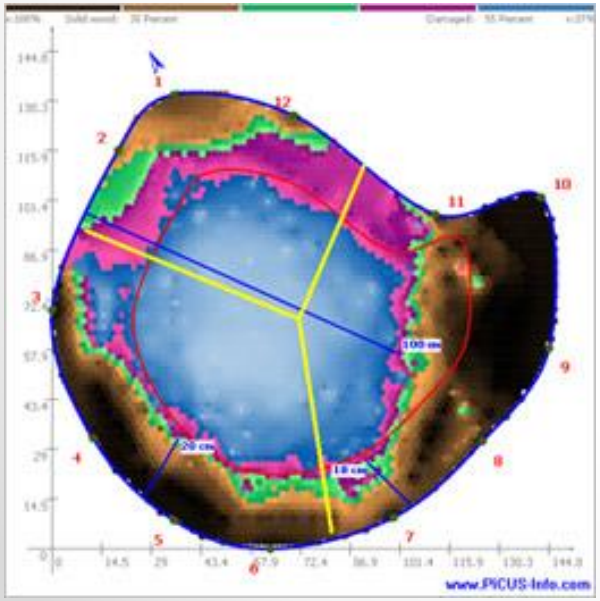
Tapping the trunk/branch with a rubber mallet and listening for a hollow sound may give some indication of critical internal decay. It won't give any percent shell to help evaluate risk potential and may not be effective on thick bark trees

Evaluating Damage Resistograph

- Trunk Formula
- t/R
- R = radius from the center of the gallery to the surface of the tree
- t = thickness of the healthy remaining wall
- The trees were drilled in 4 places (N,S,E,W)
- If average t/R was less than .35 the tree was removed



Evaluating Damage Tomography



A device that listens to how sound waves move through the trunk/branch. A series of listening devices are attached around the trunk/branch and connected to a computer.

Any Questions

References

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- Subterranean Termites: http://edis.ifas.ufl.edu/ig097
- Formosan Termites: http://entnemdept.ufl.edu/creatures/urban/termites/formosan_termite.htm
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- Termites in Florida, A Guide for Homeowners and Building Professionals SP290, UF/IFAS

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http://duval.ifas.ufl.edu/termites.shtml

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