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West Indian Drywood Termite

Cryptotermes brevis (Walker)



GENERAL INFORMATION

The West Indian Drywood Termite is a social insect that builds colonies inside of timber structures or other items made of wood. The colony is able to live completely within the wooden structure and without any external source of water. Because of this hardiness, and because of human transportation of wooden items, the species is very widespread, and is the most widespread drywood termite in the tropics worldwide. Items as small as furniture pieces and picture frames can house colonies. Colonies spread when winged reproductive alates leave to find small openings in new wooden structures. Similarities among termite species can make positive identification difficult. *C. brevis* is the most widespread drywood termite in the tropics worldwide. In the United States it is common throughout Hawaii, Florida, and some coastal regions of the Southeast.

SIGNS OF INFESTATION

The galleries of a *C. brevis* colony are generally concealed beneath the wood surface, and as such, can be difficult to detect. Knocking with a hard implement can reveal hollow wood.

In addition, infestations can be detected by the presence of conical piles of waste pellets located beneath small “kick-out” holes 1-2 mm in diameter. These waste pellets are hexagonal in cross-section, with one rounded and one tapered end, a shape which is diagnostic of the species.



Information current as of 21 March, 2017
For more information visit www.museumpests.net

DIAGNOSTIC MORPHOLOGY

Winged Adults: Alates

- Medium-brown, 11 mm in length with two pair of hairless membranous wings of equal length; the wings break off after swarming

Soldiers:

- Head is nearly black in color and deeply wrinkled and are 1.2 – 1.4 mm in width. Overall length is 4-5 mm. Pronotum is slightly wider than head.

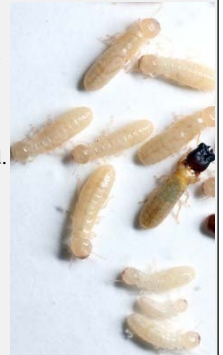
Workers:

- Creamy white in color, 3-4 mm in length, soft-bodies; these are the termites that feed on wood and cause damage

Immature Stage: Nymph



- any newly-hatched termite can develop into a number of different caste levels of termite, depending on the needs of the colony



The frass often takes on the color of the wood. In late stages of infestation, thin wood surfaces can take on a blistered or bubbled appearance.

FOOD SOURCES

Drywood termites subsist exclusively on timber structures and other items made from wood.

LIFE CYCLE

The *C. brevis* queen lays kidney shaped eggs, which develop (after several larger stages) into the pseudergates. The pseudergates differentiate into nymphs and then winged alates on the one hand, and presoldiers and then soldiers on the other. A colony takes no fewer than five years to mature and produce its first flight-capable alates. The emergence of the alates during the swarming season (April through June in the southern U.S.A.) is often the first sign of an infestation. When a male and female pair of alates find a suitable opening in a new timber structure, they excavate a nuptial chamber and seal themselves inside with an intestinal secretion, and a short time later will produce the first eggs of a new colony.

CONTROL & TREATMENT

Prevention of infestations can be effective, but it can be extremely difficult to protect entire structures. Preventative treatments include sealing cracks and voids in wooden structural elements, installing small-mesh screens in attic openings, and treating voids and attic areas with desiccating and/or toxic dusts that prevent the alates from effectively establishing a new colony.

Freezing is an effective and often preferred method for destroying termite infestations within museum objects, as they cannot survive in temperatures below freezing. For books and paper-based infested materials, freeze drying would be a good solution since termites need moisture in order to survive.

Anoxic treatments will also work on individual objects with this pest.

Insect Growth Inhibitors (IGR) are another solution for termite infestations, especially for structures in areas of the globe that are susceptible to termite attack. Please see our section on IGR for termites for more information.

If chemical treatments are the only viable option, these are best applied during construction, when all timber surfaces are easily accessible. A variety of post-infestation treatments is available, including whole-structure tent fumigation, heat or cold treatments for partial structures, and so-called “drill and treat” insecticides injected into holes bored to intersect termite galleries. Microwave energy or high-voltage electricity (administered with specialized equipment) can be effective in limited areas. If the infestation is confined to a single wooden element which can be easily removed, replacement may be the best option. After any treatment, existing pellet piles should be removed and “kick-out” holes should be monitored for any signs of new pellets.



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References

Credits & Acknowledgments

[https://en.wikipedia.org/wiki/Cryptotermes brevis](https://en.wikipedia.org/wiki/Cryptotermes_brevis)

[http://entnemdept.ufl.edu/creatures/urban/termites/west indian drywood termite.htm](http://entnemdept.ufl.edu/creatures/urban/termites/west_indian_drywood_termite.htm)

Image Information

Cryptotermes_brevis.jpg: Located on the lower left corner of page 1

Description: ***Cryptotermes brevis* soldier**

Resolution: 300 x 350 pixels

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[https://commons.wikimedia.org/wiki/File:Cryptotermes brevis.jpg](https://commons.wikimedia.org/wiki/File:Cryptotermes_brevis.jpg)

Colonia_de_Cryptotermes_Brevis_Walker.jpg: Located in the lower center column of page 1

Description: ***Cryptotermes brevis* larvae, pseudergates, reproductives, soldiers**

Dimensions: 900 x 600 pixels

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