Inspect-It 1st®
PROPERTY INSPECTION

Whitepaper:

Everything You Need to Know (but may not WANT to know!) About Termites

The different types, the signs of infestation, and the preventative measure every homeowner should take

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Introduction

For many parts of the country, termites, aka wood destroying organisms (WDOs), are a significant problem that cause millions in property damage annually and create unsafe living conditions. If you are buying a home in one of these areas, your REALTOR will advise you to get a termite inspection along with your home inspection. If you are a current homeowner, a termite inspection is a great way to be proactive about your home maintenance and safety measures. Properties in moderate infestation areas should have a termite inspection every two to three years; those in high termite areas should have the home inspected annually.

Termites cause $5 billion in property damage annually

To be clear, a termite/WDO/pest inspection is not within the scope of a standard home inspection; it is an entirely separate service and inspection process that requires additional licensing in many states. Many Inspect-It 1st offices across the country have added termite inspections to their property inspection service suite, to give clients 'one-call' convenience for all their inspection needs. As such, we know first hand the damage termites are capable of and want to educate our clients and communities about the different types of termites and preventative measures. New homeowners should find this information especially useful, but even long time dwellers will benefit from the Termites Signs & Remedies Chart provided.

Types of Termites

While they are rarely seen (which makes them so hard to detect), the damage termites can cause is extensive. Their workers are often described as "little white things" or "little white ants" and are occasionally seen in damp, rotting wood, but mostly, they toil unnoticed. They are social insects that have a strict caste system or colony hierarchy, which consists of the Queen, King, Winged Reproductive, Soldiers & Workers (for those interested, an in-depth description of the caste system can be found at the end of this whitepaper).

The Most Common Culprits: Subterranean Termites

Subterranean termites are highly adaptable and individual members have the ability to change from one caste type to another during their immature stages. This allows the colony to change the proportion of different caste members as the need arises or situations dictate.


Subterranean Termite Mud Tubes

At the soil surface, subterranean termite workers create mud tubes from the soil to wooden portions of a structure. Subterranean termites die rather quickly from dehydration when exposed to the environment due to their thin exoskeleton. To maintain the needed humidity and protect them from predators they build protective mud tubes and remain unseen most of the time. These tubes provide a protective "highway" or "tunnel" for termites to gain access and consume one's home. Other less

obvious access points include: construction joints, retaining wall joints and cracks, floor cracks over 1/16th of an inch, and plumbing, electrical, or other slab penetrations.

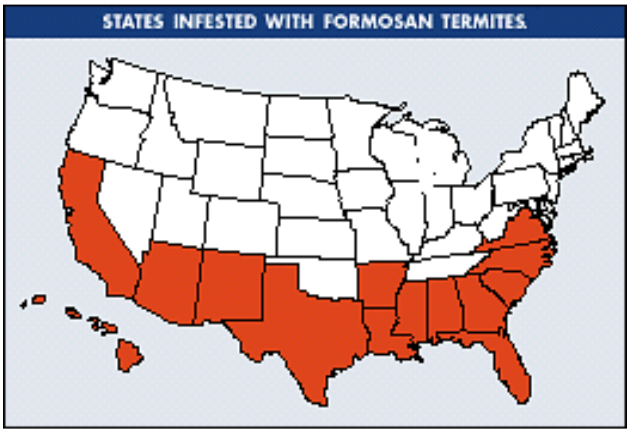
Subterranean termites require three things to survive:

1. Food (wood or other cellulose material like cardboard boxes or the paper on drywall).
2. A consistent source of moisture (roof, plumbing and fixture leaks).
3. And a moderate to tropical environment (most states in the US).

Subterranean termites produce a chemical odor called a pheromone, which signals other termites in the colony to the location of food and water. They can also create secondary nests above the ground called "aerial colonies". These separate colonies may survive independently, and above the ground if a water source is available. Aerial infestations must be located for effective overall control.

Subterranean Termites can consume over 15 pounds of wood in a single week and can be a very destructive species. Their hard, saw-toothed jaws work like shears and they are able to bite off extremely small fragments of wood, one piece at a time. These termites, left undiscovered and untreated, can structurally damage a building, but if discovered relatively early and properly treated, can be limited to largely cosmetic damage.

There are many species of Subterranean termites and they can be found nationwide. A particularly destructive type are Formosan termites, an exotic species not native to the continental U.S., but imported from Asia in various wood products.



Drywood Termites

There are many species of termites, not all of which are Subterranean. Commonly called “Drywood” termites, these termites are airborne, meaning they spread by flying through the air and can be very difficult to treat, occasionally requiring full house fumigation (i.e. tenting) to effectively eradicate them.

Unlike Subterranean, Drywood termites do not require large amounts of moisture to survive. They therefore do not require a soil contact point, and instead will live directly within the wood/food source.

The chart on the following page describes some of the varying characteristics of Drywood vs. Subterranean Termites.

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TERMITE COMPARISON CHART

	DRYWOOD TERMITES	SUBTERRANEAN TERMITES
FOOD	CELLULOSE (derived from wood and wood based products).	CELLULOSE (derived from wood and wood based products).
MOISTURE	No outside moisture needed. Can survive on a small amount of moisture within wood.	Require an outside moisture source. This may be from the soil, leaky plumbing, roof leaks, etc...
ENVIRONMENT	Colonies live within the wood and do not require contact with the soil.	Normally live and forage in the soil. Can establish a nest above the soil if an acceptable moisture source is found. Build protective mud tubes that lead from the soil to the home.
COLONY SIZE	SMALL (few hundred to a thousand termite members).	LARGE (A well established colony may contain over 7 million termites. Some species have numerous smaller colonies of several thousand termite members).
EVIDENCE OF ACTIVITY	1) "Sand-Like" pellets or "droppings". 2) Kick-out holes on the walls, ceilings or wood. Infestation may take two years before evidence of droppings is present.	1) Mud tubes ascending from the ground to the structure or protruding from walls and/or trim. 2) Heavy termite swarming within the structure. 3) Slits in the wood (flight slits). 4) Uncharacteristic waviness in the wood.
PREVENTIVE MEASURES	1) Use treated lumber during construction. 2) Coat any untreated wood or exposed wood end cuts with an appropriate termiticide. 3) Seal all cracks and crevices with caulking.	1) Install a termite monitoring or detection system at the home or structure. 2) Perform treatment to the soil before construction with an appropriate termiticide. 3) Eliminate conditions conducive to infestation.
CONTROL MEASURES	Light Activity: 1) Locate kick-out holes. 2) Lightly puncture kick-out hole. 3) Inject appropriate insecticide in kick-out hole. 4) Seal kick-out hole with caulk. Heavy Activity: 1) Whole house tent fumigation.	Prevention through education, detection and elimination of conducive conditions are the most effective and cost efficient control measures. When activity is already present, treat the structure with a liquid termiticide.
DAMAGE LEVEL	Minimal when compared to subterranean (ground) termites. Takes up to two years for evidence of activity to be present.	Some species of subterranean termites can consume 15 pounds of wood per week.

Benefits of a Termite Inspection

The primary benefit of a termite inspection is simple: early detection allows for early treatment/elimination before significant structural damage can occur. This will not only save you money, but will also prevent unsafe living conditions. If you are buying a home, you want to know about any termite infestations in advance, so you can budget or negotiate accordingly. In some parts of the country, financial institutions will even require a termite inspection prior to closing. For homeowners, regular termite inspections will ensure these unwanted inhabitants aren't secretly eating away at your investment (remember, evidence of some types of termites can take up to two years to become apparent to the naked eye).

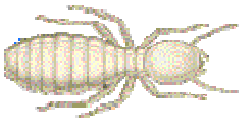
A word of caution: Be careful of selecting a termite inspection company that also provides treatment services. This can represent an inherent conflict of interest. Your best option is to select an independent inspection firm that is completely objective.

Many states now regulate termite inspection companies, and have set standards for training, continuing education and licensing. If you live in one of these states, you want to ensure your termite inspection company has secured and maintained its license.

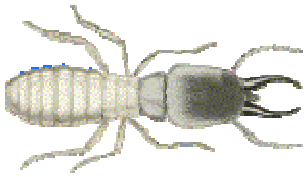
For more information, please contact your local Inspect-It 1st office. Even if the office is not currently providing termite inspection services, he/she may be able to provide you with a good recommendation regarding which companies to use. And remember, your REALTOR is also an invaluable resource!

[See next page for a written and pictorial explanation of the termite caste system.]

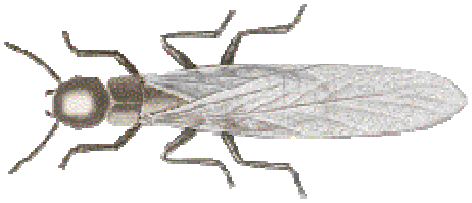
The Termite Caste System



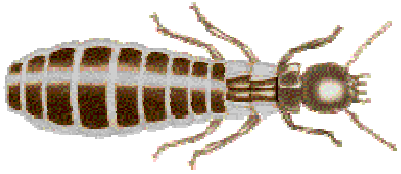
Workers represent the majority of the colony population and are responsible for caring for eggs, constructing and maintaining tunnels, foraging for food and feeding and grooming of other caste members. They are white and soft bodied.



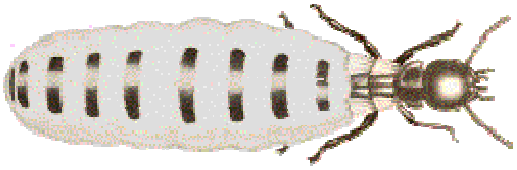
Soldiers are responsible for defending the colony. They are white, soft bodied with an enlarged, hardened head containing two large jaws, or mandibles, which are used as a weapon against predators.



Winged reproductive termites produce the offspring in the colony and swarm at certain times of the year. Colonies can have both primary reproductive (one king and one queen), and hundreds of secondary reproductive termites to assist in egg laying and colony growth.



The King termite assists the queen in creating and attending to the colony during its initial formation. He will continue to mate throughout his life to help increase the colony size.



And at the top of the hierarchy, there is, of course The Queen. The Queen termite creates the colony by laying eggs and tending to the colony until enough workers and nymphs are produced to care for the colony. She can live for more than ten years. Colonies can reach several million termites with the help of secondary queens whose primary purpose is to produce eggs.

Links

Termite Web: http://www.termiteweb.com/

Texas A&M University, Entomology Dept.:
http://insects.tamu.edu/fieldguide/aimg26.html

University of Kentucky Entomology Dept:
http://www.ca.uky.edu/entomology/entfacts/ef604.asp