

# PestGazette



## Truth about Termites

More than 600,000 U.S. homes suffer termite damage totaling over \$5 billion annually, compared to \$2 billion spent on costs due to fire damage. More than 2 million structures require termite treatment each year. Homeowners insurance can help recover losses from fires, floods and earthquakes, but it is almost impossible to get insurance against termites.

Finding out your home has termites scares most homeowners. You typically can't see them, you can't hear them and frequently only a trained inspector can find signs of infestation. Treatment by the homeowner for the control of termites is virtually impossible.

Specialized equipment is essential and the experts have the knowledge necessary for effective control.

A trained termite control specialist can provide protection from termite infestation. Termites are found in almost every state as well as Mexico and parts of Canada. They eat wood and may also destroy paper products such as books, cardboard boxes, furniture, family heirlooms, and various other items. Even buildings with steel framing and masonry walls are targets because of the wooden doors and window frames, wooden support beams, cabinets, or shelving. To learn more about how we can develop a termite management plan best suited to your situation, call a trained professional today.

## Know Your Enemy

There are more than 2,000 species of termites, 70 of those that invade wooden structures regularly enough to be considered pests. The most damaging are roughly 20 species we call "subterranean" termites, because of their living and foraging habits. Two of these, the Eastern Subterranean Termites and the Western Subterranean Termites, are by far the most common, widest distributed and most damaging in the U.S.

Eastern and Subterranean termites feed on cellulose, a complex chemical in plant cell walls, and are very important in the natural decomposition of fallen trees, leaves and other plant products. Subterranean termites build their colonies in the soil, trees, poles, or even houses, and they rely mainly on the soil for moisture unless there is a moisture source in the structure such as condensation, leaking pipes, etc.

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## Know Your Enemy (continued from page 1)

Subterranean termite colonies are considered large (60,000 to 1.5 million termites), and made up of several “castes”, each with distinct functions and behaviors. These include reproductives (the queen, king, and winged swarmers), soldiers, and workers. Worker termites are small (0.1-0.25 in. long), creamy-white insects. Soldiers are larger (0.2-0.4 in. long), about 1/20<sup>th</sup> as numerous as workers and have a large, dark head with long, strong, sharp-pointed jaws that they use to attack intruders. Property owners seldom see the worker or soldier termites, but in the spring or fall, depending on the species, they may see swarming “winged reproductives.” This form of termite can easily be confused with a winged ant unless you look closely.

### “Swarming” Spreads Termites

After a termite colony reaches a certain population level, usually more than 10,000 for northern temperate subterranean termites, winged (alate) reproductive “swarmers” are produced and leave the colony in a “swarm.” A swarm is a mixed group of roughly half male and female reproductives, which leave the nest together in a short period of time.

Usually triggered by rain in the Spring, warming temperatures and lengthening days, swarms commonly occur around dusk or dawn.

After landing, a female breaks off her own wings, raises her abdomen and emits a pheromone which attracts males of her species. If a suitable male finds her, they touch each other, and he breaks off his own wings. The pair then “run in tandem” for a short time before searching out a suitable piece of wood in which to begin a nest. Their first brood soon takes over the colony maintenance and food gathering, and the queen reverts to only producing eggs. The pair are mated for life and the queen can produce roughly 1,000 eggs per day by her fourth year of life. If either the king or queen dies, other members of the colony can change into reproductives and replace the lost member of the pair.

### Do Not Enter

Subterranean termites live mainly in the ground. They search for wood farther and farther from the center of their colony as their numbers grow. Foragers may make underground tunnels or above-ground “shelter tubes” of mud, feces and debris that are used to search for new food sources and to connect their feeding sites to the soil. They can enter a building without direct wood contact with the soil through such tubes. Termites can enter buildings through cracks, expansion joints, foam insulation below ground, hollow bricks, concrete blocks, or through spaces around plumbing as narrow as 1/32<sup>nd</sup> of an inch. Any building, whether constructed with a slab, basement or crawl space foundation, can be infested by termites.

### Hurricanes Affect On Termites

The hurricanes of 2005 have had various impacts on termites and the damage they caused structures in the effected areas. These effects and their significance may vary from house to house, depending on exact local situations and termite species involved.

### Tell Tale Signs of Termites

Possible signs of a termite infestation may include:

- Pencil-sized diameter, or larger, mud tubes running across bare concrete or masonry between the soil and any wooden part of your building.
- Thin, small, papery wings, all the same size and shape, 3/8 – 1/2 in. long, on your windowsill, counter top or floor (especially if it is late Spring and there has been a recent rain).
- Thin, “bubbled” or distorted areas of paint on wooden surfaces which feel cool to the touch.
- Any wooden building parts (especially if they are support structures) that begin to “sag” unexpectedly.



Although a few termite populations may have been drowned if they were completely under water (especially brackish water) for several days or weeks, most of them are likely to have had many survivors. Those survivors can now thrive on the widespread, wet or very moist, and more exposed (mostly untreated) wood that is readily available throughout most hurricane-affected areas.

Interior structural wood of many buildings may have become soaked, and could take a long time to dry, making a much greater amount of wood available for termites to quickly and easily infest. A lot of repairs have been done with whatever wood was available, and most of that

was not pretreated to prevent or reduce wood destroying insect (WDI) infestations. Buildings, which were physically moved even a short distance from their former foundations or slabs are now sitting above or contacting untreated soil (including untreated backfill), which may make them much easier for termites to infest.

Termite infestations which had been under treatment by baits before the hurricanes may now be released from such treatments. Some baits may have been washed away, or the termites and infested wood have been relocated away from remaining baits, while some of the baits may have not been serviced for the past couple of months. ■

## Some Termite Trivia

- The total weight of all the termites on Earth is estimated to be much greater than the total weight of all humans on Earth.
- Several species of "higher" termites (e.g., *Macrotermes bellicosus*) raise their own fungi, inside their nest, as a food source.
- Termites communicate mainly via chemicals called pheromones, but the majority of species also strike their heads against the sides of their nests, tunnel walls or even their own thorax. Variations in frequency and pattern of such "tapping" seem to constitute "messages" which seem to be understood by (at least elicit responses by) other colony members.
- One species of termites in Australia, *Amitermes meridionalis* Frogg, build large flat mounds up to 4 m. tall, called "compass mounds" which are always oriented with narrow ends pointed North-and-South and the large flat sides facing East-and-West.
- Termites can eat holes in vinyl pool liners, and even penetrate PVC pipes where those have been joined by certain solvents.



## Beware of Beetles

### Flat Grain Beetles

These are some of the smallest beetles commonly found in stored grain. They are very tiny, flattened, reddish-brown beetles, about 1/16-inch long, with antennae two-thirds as

long as their whole body. They are scavengers that usually infest grain which has already been damaged by other pests like the rice weevil. Larvae may eat only the germ of the damaged grain kernel, and



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have been reported feeding on other dead insects. Under good conditions, these pests can develop from egg to adult in about five weeks, but they usually need about nine.

Control and prevention of infestations of this pest require periodic and careful inspection, correct identification, sanitation, and elimination of all infested grain or grain-based products. Occasionally, application of properly labeled residual insecticide products may be needed to eliminate a well established, cryptic or wide-spread infestation of Flat Grain Beetles or similar stored product pests. Proper storage of grain products in tightly sealed, dry containers can help greatly in preventing future infestations.

### Warehouse Beetles

Warehouse Beetles, *Trogoderma variable* Ballion, are small, about 1/8 inch long, oblong beetles, with variable brownish-black with yellowish-brown markings across their rounded hard wing covers (elytra). They have clubbed antennae which fit into grooves under their head. Their legs also fit very compactly into grooves on the bottoms of their bodies. Their species name comes from the adults' variable colors and markings. Their head is held relatively straight forward, with their compound eyes visible from above. Larvae change from creamy white to yellowish to brownish, depending on their developmental stage. Larvae have a lot of hairs, some kinds of which can be very irritating to unbroken human skin.



Development from egg to adult stages can take 32–45 days, depending on temperature, moisture levels (RH), and adequate food. These beetles can infest a wide range of processed grain materials such as cake mix, flour, candy, cereals, or dry dog food. Larvae will feed on dead insects, animal carcasses or other organic matter. An effective control strategy is to follow the measures and techniques recommended for other stored products pest insects, like inspection, correct identifi-

cation, finding and discarding or destroying all infested materials, and possibly focused applications of properly labeled residual insecticides according to their product labels. Recently marketed pheromone traps may be helpful monitoring tools for this species in some situations.

### How Can You Help

You can help manage these and other pantry pests by taking the following steps. Usually, limited treatment is needed for these pests. Finding and disposing of all infested foods can help solve the problem.

You must find the source of the infestation. Check packages you seldom use, especially such foods as cereals, grain products, nuts, flour, raisins, spices, dry pet food and bird seed. Also make it a habit to thoroughly inspect all such items when you first bring them home after purchase from your grocery store. When you find infested packages of food, you should wrap and seal them in a heavy plastic bag and dispose of them with your normal garbage. Store all foods in tightly closed glass, plastic, or metal containers.

Call us if you need help identifying or locating and assessing these or other pest problems. ■

## Chipmunks Are Still Rodents

Chipmunks may be inactive during part of the winter, but come spring they begin to scurry around, hunting for food and tunneling under your mulch, or digging holes under your house or walk. As the weather warms up, they can do a lot of damage to your flowerbeds, gardens and landscaping. They could get inside your house, build nests, scatter their droppings, gnaw electrical wires, and chew holes in boxes, bags, and many other things. Pet foods, birdseed, grass seed, or even boxed cereals can attract them inside. Unfortunately, these cute little critters often bring along biting ectoparasites; and some may be important reservoirs of human disease organisms like St. Louis Encephalitis virus.

Getting rid of things they are attracted to, and physically sealing them out by plugging or covering all entry points can be the most effective and simplest corrective steps you can take to prevent them from causing pest problems in the first place. Our trained, properly equipped and experienced pest management experts can evaluate the problem, perform or advise you about effective rodent exclusion and prevention measures, and institute control efforts when and where needed.