

Termites

Status

-
- Structural Pest
-
-
- No health threat



Western Subterranean Termites
Reticulitermes hesperus

Introduction

Termites are small soft-bodied insects with large heads and pear-shaped bodies. All species are social and live in colonies that may host thousands of individuals. They feed on dead wood or fungi; the colony is either housed in dead wood or in soil. They are important as food for many other animals, their tunnels serve to aerate soil which aids plant growth, and their wood-eating is part of the natural decomposition process that returns nutrients to soil. Unfortunately, they also feed on wood that makes up our homes and other buildings. There are about 2,800 known species of termites in the world, 44 in North America, and 15 in California.

Most termites that you might encounter are pale, soft-bodied workers, which are often mistaken for ants, sometimes nicknamed "white ants." Termites have a broad connection between thorax and abdomen ("waist"); ants have a very narrow "waist." The antennae of termites is thread-like and made up of tiny bead-like segments; antennae of ants is elbowed and made up of cylindrical segments. The reproductive stages of both termites and ants have four membranous wings, however all four wings of termites are nearly identical and very long, while the front wings of ants are larger than the hind wings.

Swarming

During certain times of year and weather conditions, particularly after rainfall followed by warm weather, young reproductive termites exit the colony and fly away in search of a partner. This mass exodus may consist of dozens to hundreds of individuals, all flying away from their parent's colony together. Birds such as phoebes, kingbirds, and other flycatchers are very fond of termites and are seen performing comical acrobatics to catch and devour them out of the air.

Body Forms and Reproduction

Termites have four body forms (castes) that have different functions within the colony. Workers are cream-colored sterile males and females that never grow wings. They perform the day-to-day work of the colony: chew wood, make tunnels, maintain the nest, tend the young, and feed other termites. Soldiers are sterile males and females that have enlarged hardened heads, often equipped with large mandibles for defending the colony. Reproductives are usually tan to dark brown and have functional wings. Both male and female forms are fertile. When mature, they fly from their parent's colony, locate a partner, find a secluded place, drop their wings, mate, and start their own colony. A mated female is called a queen, a mated male is a king. The pair produces offspring that develop to become members of their colony. Since the colony is made up of descendants of a single pair of termites, it is a family unit. Some colonies are made up of multiple pairs of reproductives, making those colonies multi-family units. Subreproductives resemble reproductives but have only wing stubs and can never fly. They are essentially sterile but if the king and/or queen die or are removed from the colony, they become fertile and can reproduce. They are then called a secondary king or queen. The original (primary) queen of some species is known to lay up to 2,000 eggs per day and live up to 45 years.

Management

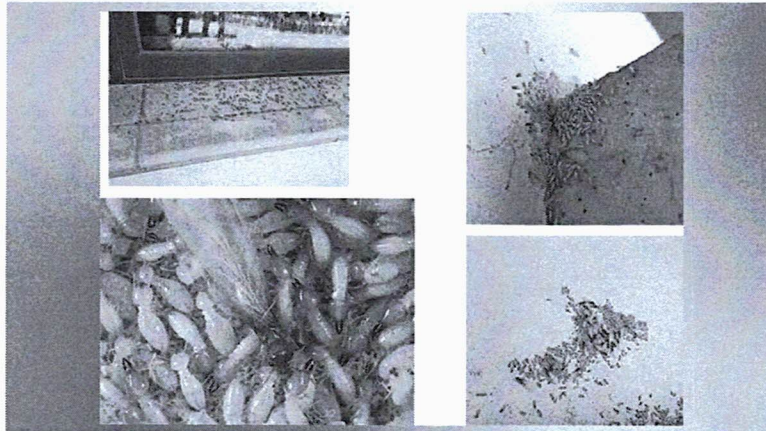
Since termites can damage wood and wood products, care should be taken to prevent them from colonizing structures. Most termite inspection and control should be carried out by a licensed professional pest control company. However, there are some things that homeowners can do to discourage termite infestation and reduce their impact.

- Termites enter small cracks and holes in wood to start a new colony. Seal up cracks and holes in buildings to prevent their entry.
- Watch for swarms of termites flying from their colonies in soil or wood. The exit point reveals the location of the colony.
- Routinely inspect buildings for termite colonies and damage. As they produce and accumulate solid waste ("fecal pellets"), termite workers make holes to the outside and push the pellets out. Look for accumulation of fecal pellets at the base of posts and on the ground.
- As termites feed and hollow out wood, a tap on the wood will sound hollow and may crush inward, revealing the colony's tunnels. Tap suspect wood and listen for the sound.
- Termites often invade firewood piles, especially those stored directly on soil. Stack firewood on a stand to keep the wood at least 18 inches above the ground.



More Formosan Termite Infestations Confirmed in Southern California

BY BRAD HARBISON, Published on: July 29, 2021



Formosan subterranean termites collected at a Rancho Santa Fe, California home.
Photo by Siavash Taravati

Two more new Formosan subterranean termite (*Coptotermes formosanus*) infestations in Southern California were confirmed by Dr. Chow-Yang Lee and researchers from his lab at the University of California, Riverside Department of Entomology.

Joshua Clements, owner of Already a Better Choice Termite & Pest Control, El Monte, Calif., made the Highland Park discovery during a June 10 termite inspection. Clements said he noted swarmer in the customer's bedroom and, upon closer examination, he thought they might be Formosan subterranean termites instead of the commonly encountered Western subterranean termite (*Reticulitermes hesperus*). "The color was just a little off. They weren't completely black, and the wings looked a little different," he said.

Clements collected the termites in a plastic baggy and showed them to Dr. Lee, Greg Kund (staff research associate at UC-Riverside) and Dr Siavash Taravati (urban IPM advisor at UC-Cooperative Extension, Los Angeles County) when they visited the house two weeks later to collect more samples and examine the termite damage. Lee confirmed both morphologically and molecularly that they were Formosan subterranean termites. This was the first discovery of Formosan subterranean termites in Los Angeles County, according to Lee.

UC-Riverside and Clements are currently monitoring the infestation with hopes of treating the home using a termite bait.

Although Formosan subterranean termites are more commonly associated with the southeastern U.S., and thus far are only being reported in pockets in Southern California, Clements thinks they might be more prevalent than previously believed. "I've come to think maybe that there's a lot of companies that probably have seen them and just not realized it. They'll see swarmer from late May to late July and treat them without giving it much thought. I know that I've been doing [termite work] for 19 years now, and this was the first time I found them."

Also in June, about 100 miles to the south of Highland Park, in Rancho Santa Fe, Calif., Troy Hook, termite service manager, Green Flash Pest and Termite Control, was re-inspecting a home that the

company had recently treated for what it believed was Western subterranean termites. Hook collected termite samples from the property and sent them to his local Ag department. The information was subsequently transmitted to Dr Taravati and the samples eventually made their way to Dr. Lee's lab, which confirmed they were Formosan subterranean termites.

"I knew they were Formosan termites because of the different coloration on the body and the winged body size is a lot different than drywood swarmers," said Hook. "The wings were actually really big compared to the body size. The head is a darker color — it's not the orange-reddish color as a drywood swarmer. Also, the number of swarmers; we're talking about thousands of swarmers inside and outside the house."

Since Green Flash already treated the property using a conventional liquid termiticide (Termidor HE), they retreated the area on the structure that had the greatest activity (the back wall). Hook said he and UCR researchers are also considering baiting at this stage if the infestation persists.

Why did this particular home become infested with Formosan subterranean termites? Eric Veronick, director of operations at Green Flash Pest and Termite Control, theorizes it's possible that Formosan termites might have been transported to the area. For example, in the past Formosan termites have been transported to Southern California in infested potted plants from Hawaii, Louisiana, Texas, the southeastern U.S., and even overseas.

Following the Formosan termite discovery, Hook met with his inspectors to give them a refresher on identifying Formosan termites. In addition to biological differences, Hook encouraged his inspectors to be on the lookout for termites swarming at dusk and in summer, a characteristic he has observed of Formosan termites.

Like Clements, both Hook and Veronick think Formosan termites might be more widespread in Southern California than previously believed. "Without a doubt," Hook said. "It might be that they are adapting to the climate. We are seeing a subtropical termite in an area that has a Mediterranean-like climate with warm, dry summers and mild, wet winters."

The Rancho Santa Fe and Highland Park Formosan termite discoveries come on the heels of a June 2020 discovery of Formosan termites in Canyon Lake, California. "Based on population genetics studies, my postdoctoral researcher, Shu-Ping Tseng confirmed that the Rancho Santa Fe and the Highland Park samples are not related to the one from Canyon Lake (Riverside County)."

In response to these recent Formosan subterranean termite discoveries in Southern California, Drs Taravati and Lee created a "California Formosan Subterranean Termite Alert." The document provides photos and identification information as well as a call to action to report findings to UC-ANR and UC-Riverside.