

● ALTERNATIVES

PROTECTING YOUR HOME FROM SUBTERRANEAN TERMITE DAMAGE

BY CAROLINE COX

Termites are unique insects. Unlike most other insects, they live in large colonies and feed on wood. This ability to consume wood makes them “among the most important structural insect pests in the Northwest.”¹ There’s no question that the thought of thousands of hungry insects consuming the structure of your house is frightening. Fortunately, you can take pesticide-free steps to make sure that your house is not damaged by termites.

Benefits of Termites

If you’re facing a termite problem in your house, it will probably help to remember that subterranean termites are an important part of the world’s ecosystems. Termites’ recycling of wood and other plant material is crucial. Their soil tunnels help plant health by adding nutrients to the soil and making it more porous.²

No Need to Rush

Subterranean termites have been called the “most important wood-destroying insects in buildings throughout the world.”³ This doesn’t mean that you need to rush into action. Termite colonies develop slowly. Dealing with your termites within six months of finding them is recommended by Oregon State University Extension, but there is “no cause for extreme alarm or undue haste.”³

Termites or Ants?

If you suspect that you have termites in your house, you’ll need to decide if the insect that’s giving you trouble is a termite. Termites and ants are often confused. Take a careful look



Subterranean termites.

at the antennae and “waist” of your insects. Ants have elbowed antennae and narrow waists while termites have straight antennae and thick waists. Both ants and termites are occasionally winged, but termite wings are unique because the front and the hind wings are the same size.¹

Which Termite?

Next you’ll need to decide which termite is causing your problem, because managing different termites requires different techniques. Subterranean termites are one of three termites found in the Pacific Northwest.^{1,2} They are small, require moist conditions, and nest in or near the soil. They feed in wood that is in contact with soil or construct shelter tubes from soil to above ground wood. The tubes are made of soil mixed with bits of wood or other materials, and are not made by other common termites.²

Inspections

To minimize termite problems in your home, regular inspections are important. Look for any conditions that encourage termites. (See next section

for details.) You’ll also need to inspect structural wood near your foundation and crawl space, if your house has one. Wear gloves, coveralls, and a hat. Use a sharp pick or screwdriver to test for damaged beams, joists, and sills. Also look for mud tubes.¹

Making Your House Unattractive to Termites

“Avoiding situations that lead to dampening or rot of structural wood can prevent termite attack and establishment in most cases,”¹ according to Washington State University Extension. Here are a few recommendations from that agency and the UC Statewide IPM Project:^{1,2}

- Make sure no wooden parts of your house are in contact with soil. Underneath your house, wood should be at least 12 inches above the soil.
- Remove tree stumps, stored lumber, fence posts, wood debris, and buried scrap wood near your home. (Include your crawl space if you have one.)
- Stack firewood so that it is not in contact with siding or other wood parts of your house.
- Repair leaky pipes and dripping faucets. Be careful not to overwater near your house.



Inspecting for termite damage.

Caroline Cox is JPR’s editor.

- Make sure downspouts carry water away from your house.
- Trim shrubs that are blocking your foundation vents.

Termite Barriers

Sand grains of the correct size (called 16 grit; with a diameter of 0.06 to 0.1 inches) can be used as a termite barrier because termites are unable to dig through or move sand grains of that size. A field test in northern California showed that installing a sand barrier 18 inches wide and 3 inches deep in crawl spaces along the inside of the foundation wall effectively stopped termites. For long-term success, these researchers recommend careful installation of the barrier and regular monitoring.⁴

Sand barriers have been used successfully under concrete slabs. They are installed during construction before the slab is poured.⁴

Stainless steel mesh is also a successful termite barrier, according to the U.S. Forest Service.⁵ These mesh barriers are installed during construction or remodeling and are currently commercially available in Florida, Texas, and Hawaii.⁶

Destroying Shelter Tubes

Shelter tubes should be broken and removed whenever possible. This will prevent the termites from being able to access wooden parts of your house. Broken shelter tubes will also allow ants to attack the colony.²

Termite Baits

NCAP does not recommend the use of pesticides. However, we recognize that you may feel that pesticide use is unavoidable. If so, termite baits offer the advantage of using small amounts of pesticide² in a small wood or cardboard bait inserted into a stake. If you decide to use a termite bait, consider the following information about the pesticides used in these baits:

- **Diflubenzuron** is an insect growth regulator. It breaks down into a chemical (p-chloroaniline) that causes genetic damage and is classified by the U.S. Environmental Protection Agency (EPA) as a carcinogen. In tests with birds, diflubenzuron

reduced the number of eggs laid.⁷

- **Hexaflumuron** is an insect growth regulator. EPA did not identify any health hazards in the agency's evaluation of this chemical, but many testing requirements were waived because of "the very limited potential for human exposure."⁸ A concentration of less than 1 part per million of hexaflumuron kills fish.⁹
- **Hydramethylnon** is a slow acting stomach toxicant. EPA classifies it as a carcinogen because it caused lung tumors and cancer in a laboratory test. It is highly toxic to some fish, including catfish and trout.¹⁰
- **Noviflumuron** is chemically similar to hexaflumuron. EPA found that noviflumuron can cause anemia, but did not identify many other health hazards in the agency's evaluation of this chemical. As with hexaflumuron, many testing requirements were waived. It is moderately toxic to fish.¹¹

Another less toxic termite insecticide is **boric acid**. For more information about boric acid pesticides, see JPR 24(2):10-15 or www.pesticide.org/boricacid.pdf.



Make sure that your foundation protects your house against termite damage. No structural wood should be close to the soil. Also, there should be no wood debris under your house.



A shelter tube.

Conclusion

It's easy to be anxious if you find termites damaging the structure of your house. Remember that hasty action is not necessary. You can take the time to evaluate your options, and then take pesticide-free steps to prevent termites from feeding on your house. ♣

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