SAFE HAVEN
Home Inspections

Pacific dampwood termites

Area of Distribution: The Pacific dampwood termite is the largest and most significant dampwood termite in the United States. They have been found up to 6,000 feet above sea level, but more commonly in the cool and humid coastal areas.

Identification of Swarmers and Soldiers: Swarming may occur throughout the year, but most often from August through October. Swarming usually will occur on warm humid evenings just before sunset. The reproductives are strongly attracted to light. Swarmers are up to 1" in length and are light to medium brown with dark brown wings.

Soldiers have a large head armed with long black toothed mandibles. The anterior portion is black generally shading to a dark reddish-brown in the posterior position. The abdomen and thorax are a light caramel color, the abdomen varying according to the stomach contents at the time. The largest termites in the United States, soldiers may be very large, reaching 5/8 to 3/4".

Identification of Timber Damage: The tunnels vary greatly in size and shape and in sound timber may favour the softer springwood. Faecal pellets are found throughout the tunnels, and are hard small, oval and about 1/25 “ long. The color of the pellets may vary according to the type of wood being consumed.

Biology and Habits: This species will attack wood of all types throughout its range. Timbers in contact with the soil or structures built near or over water are common targets. This species is known to be very tolerant of moist conditions, even being found in pilings subject to tidal flooding. Colony size varies but may contain as many as 4,000 individuals.

Colony growth is aided by the production of secondary reproductives. Like other termites this species aid in the spreading of wood decay fungi, the spores of which are carried in the gut and on their bodies. A well established colony will produce winged reproductives which may infest nearby timber.

The life history of the Pacific dampwood can be summarized as follows. Both male and female swarmers excavate a chamber, they enter, and the chamber is sealed. They mate and within about 2 weeks, eggs are laid and the colony is founded. The queen lays about 12 eggs. The second batch is laid the next spring.

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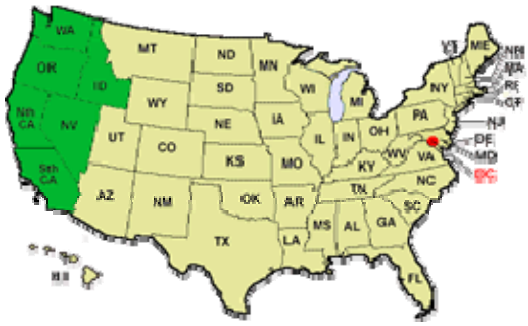
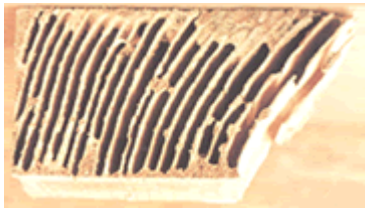
Western subterranean termites



Western subterranean termites regularly infest homes in British Columbia, Washington State, Oregon, Idaho, California, western Nevada and western Mexico.

AREAS OF HIGH RISK IN WASHINGTON include Aberdeen-WA, Anacortes, Arlington-WA, Auburn-WA, Bainbridge Island, Bellevue-WA, Bellingham, Bonney Lake, Bothell, Bremerton, Burien, Camas, Centralia, Covington-WA, Des Moines-WA, Edmonds, Ellensburg, Enumclaw, Everett-WA, Federal Way, Issaquah, Kelso, Kenmore-WA, Kennewick, Kent-WA, Kirkland, Lacey, Lake Forest Park, Lakewood-WA, Longview-WA, Lynnwood, Maple Valley, Marysville, Mercer Island, Mill Creek, Monroe-WA, Moses Lake, Mountlake Terrace, Mount Vernon-WA, Mukilteo, Oak Harbor, Olympia, Pasco, Port Angeles, Pullman, Puyallup, Redmond-WA, Renton, Richland, Sammamish, SeaTac, Seattle, Shoreline, Spokane, Sunnyside, Tacoma, Tukwila, Tumwater, University Place, Vancouver, Walla Walla, Wenatchee and Yakima.

Identification of Timber Damage



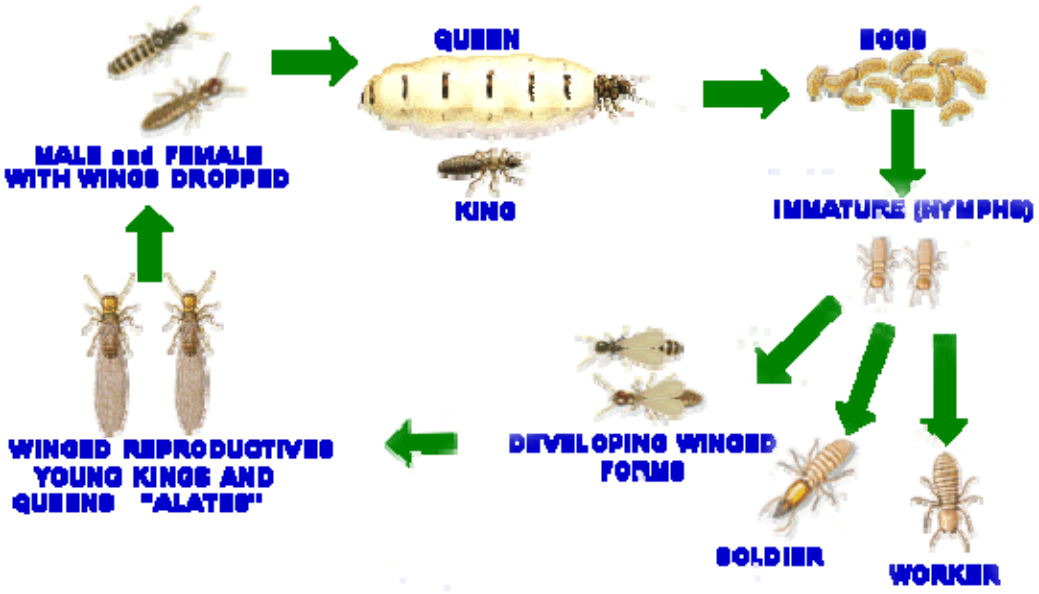
Western subterranean termites are highly destructive to Douglas fir and other common timbers used in the construction of a building. They can rapidly eat out the internal sections of structural timbers - devouring mainly the spring wood, and preferring to leave the harder summer wood sections.

As`a result, infested timbers are often left as a thin shell with a honey-comb of layered hollow sections (as illustrated) packed with moist soil.

Western subterranean termites ... destructive nature

The Western subterranean termite is a serious economic timber pest causing millions of dollars of damage throughout the areas where it is located. It is estimated that more than 1 in 5 homes in the high activity areas have been or will be attacked at sometime by these voracious little insects.

The life-cycle of subterranean termites



Biology of western subterranean termites

Within a termite nest there are members of different castes, each with a different role to perform and all interdependent upon each other for survival of the colony. These include the queen, king, the winged reproductive (young kings and queens), soldier and worker termites.

The king, queen and worker termites.

Worker termites - thin external skin.

The queen termite is an egg laying machine; her body is enormous compared to her off-spring; she can live more than 25 years and produce more that 2,000 eggs a day.

The king and queen live in a central chamber and are tended by the workers.

The workers are by far the largest caste in the western subterranean termite colony and

the one that does the damage; they are a creamy translucent colour, soft bodied and carry out all work in the nest, including gathering food (timber and other cellulose); constructing tunnels; repairing and enlarging the colony nest; grooming each other and feeding the soldiers, the king, queen and also caring for the young nymphs until mature.

IDENTIFICATION: Western subterranean worker termites are small in size, about half the size of match-head or 1/8" long and are soft bodied insects. They have no wings, are sterile, blind and work 24 hours a day for their entire 2 year life span.

The soldiers are the defenders of the colony, particularly against marauding ants - with whom they have engaged in a relentless war lasting 250 million years.

IDENTIFICATION: the soldiers have an orange coloured rectangular armoured head with mandibulate pinchers which they use to crush the ants. On their forehead is a fontanelle (frontal gland pore) used to emit a sticky latex to ensnare the ants.

The soldier termite is usually the first to be seen in large numbers when any active termite workings (mud shelter tubes or damaged timber) are opened. Soldier termites will rush out to guard the opening whilst worker termites repair the breach.

The swarmers (reproductives) are called &quotalates"

and are commonly seen when they swarm during daylight; they have eyes; are poor fliers but are swept along by the wind; they land, drop their wings, find a mate to become king and queen of a new termite colony.

IDENTIFICATION: The western subteranean termite swarmers are about 3/8" long (including wings) with a dark brown body and a small fontanelle (frontal gland pore) on its head. Their wings are brownish grey with two dark solid veins along the forefront of the front wings. The front wing is distinctly larger than hind wing.

WHEN DO THEY SWARM? In the southern part of their range, swarming takes place in the spring, but without rain. In the southern areas, swarming usually follows rain. The swarmers are emitted in their thousands when a mature termite nest is large and well established.

Western subterranean termites swarm in large numbers over a wide area to find a mate from another colony nest to start up a new colony. A suitable location for nesting should provide moisture and a readily available timber food source close by.

Colony nest development is slow in the first few months, with the egg-laying capacity of the new queen termite peaking after a few years.The swarmers are emitted in their thousands when a mature termite nest is large and well established. Swarmers are usually produced after this period and are an indication a large termite nest is in the vicinity, a sure danger sign and a warning that professional protection is required.

The colony nests of Western subterranean termites are usually located in the ground below the frost line, but above the water table. Mud galleries or "shelter tubes" are constructed across hard objects in order to gain access to timber food sources.

Western subterranean termites constantly search for new food sources. They are known to enter buildings through cracks in concrete flooring or to travel under parquetry or tile flooring through gaps of less than 1/16" wide.

Where moisture regularly collects inside the wall or other cavities of a building, say from faulty plumbing or broken roof tiles, the Western subterranean termite can develop a subsidiary colony nest which may not require contact with the ground to ensure it's survival.

They build a central colony nest from which they construct underground tunnels that radiate within a 100 yard radius from a central colony nest in search of a timber (cellulose) food source.

The picture on the left shows a termite inspector examining an above ground termite subsidiary nest built inside a wall cavity of a home.

Termites often build such nests if moisture is allowed to regularly collects inside the wall cavity, say from leaking pipes, shower recess, faulty plumbing, guttering, broken roof tiles, etc.

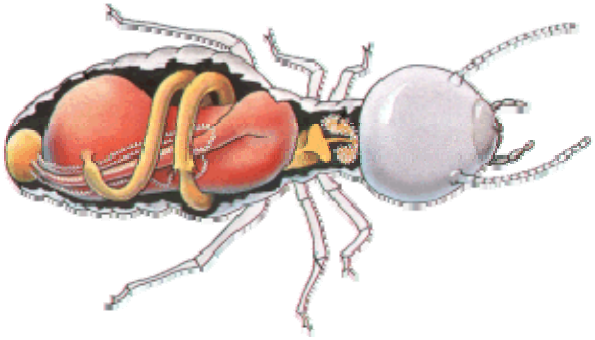
Termites travel in humidified mud-shelter tubes or galleries...
The picture on the left shows a mud shelter tube that subterranean termites have constructed over a solid object, in this case, a brick foundation wall in the sub-floor of a cottage.

Subterranean termites travel in these mud shelter tubes as protection from predators, sun-burn, dehydration and to maintain a high humidity environment which is essential for their survival.

Western subterranean termites are highly secretive, preferring to enter a building through areas inaccessible to inspection, such as, through in-fill patios, fire heaths, expansion joints and cracks in concrete slab (on-ground) flooring.

Western subterranean termites can pass through a 1/8" crack or an expansion joint (eating through the rubber compound) between adjoining concrete on ground flooring. They can also travel under parquetry and floor tiles to get to the wall framing timbers.

Only the worker termite caste can digest timber by the use of symbiotic protozoa in their gut. Worker termites feed their partly digested semi-liquid food, regurgitated from their mouth or passing from their anus, to the other termites, a process known as trophallaxis.



Western subterranean termites have a well ordered social system with amazing engineering capabilities and an acute survival instinct; they obtain moisture from the soil and moist decaying timber, and communicate using pheromone signals.

The mutual feeding, constant grooming and close social habits of termites are used to advantage in modern termite control baiting systems.

Certain hi-tech termite baits are now on the market that have a delayed lethal effect on termites which readily pass on the bait to other termites in the central colony nest during the mutual grooming and feeding.

Western subterranean termites need to maintain a high level of humidity and temperature (75 to 95F) in their central colony nest.

Western subterranean termites eat through the centre of susceptible timbers leaving nothing but a thin veneer of timber and/or paint. They will pack mud in cracks and joints in timber to prevent loss of humidity and resultant dehydration.

As noted above, termites constantly groom and feed each other. A valuable technique for the termite controller is to instal and monitor a termite baiting system next to any live activity found in and around the premises where termite foraging is most likely to occur. Subsequent inspections (preferably monthly) may reveal dead or sick worker termites, they change colour to a mottle look, and spread of the termite bait to other termites leading to elimination of the colony.

The termite baits are designed to be non-repellant to the termites and has a unique delayed effect. Time enough to be passed onto the other termites in the colony including the queen, with a sufficient dosage leading to the elimination of the entire colony. This process is explained in detail in the Termite Control section of this website.

If You find these termites do NOT disturb them

Western subterranean termites have acute survival instincts. If they are shaken up or disturbed, the termites often will abandon the associated area and move on to secretly cause damage in other areas in the building. If you find western subterranean termites in or around your property, it is essential that you do NOT disturb them and promptly arrange for a professional inspection and application of a termite bait to the live termites, if present in abundance.