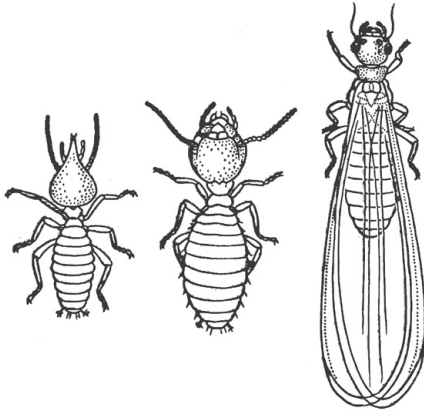




Termites



Termites are social insects that live in colonies that have a distinct caste system. In termites, unlike ants and honeybees, all of the castes are made up of both males and females. The castes include workers, who construct galleries and collect food for the colony, soldiers, who defend the colony and are unable to feed themselves, and winged reproductives. Reproductives shed their wings after mating and begin new colonies.

Termites feed entirely on wood. Because wood is a nearly indigestible food source, termites have microorganisms that live in their gut that help them digest the cellulose in wood. Worker termites pass digested food to the soldiers and the younger members of the colony who are unable to feed.

There are four types of termites that cause damage to wood structures in California. The two that cause most of the damage in California are the Subterranean Termite, *Reticulotermes*, and the Drywood Termite, *Kaloterms*. Two other types of termites that cause structural damage are, at this time, not as much of a problem in California. These are the giant Pacific Dampwood Termite, *Zootermopsis*, and the Formosan Termite, *Coptotermes*. The Pacific Dampwood Termites occasionally damage wooden structures in areas along the northern coast or in mountain areas, but the wood must be damp. The Formosan Termite was recently introduced into southern California and has the potential to become a serious pest in the warmer parts of the state.

Subterranean Termites. Subterranean termites build their nests in the soil, often deep underground. They feed on wood in the soil, such as buried tree stumps or wood debris, as well as on wood structures above the ground

such as homes, piled firewood, wood debris from construction, fence posts and dead parts of trees. To feed on above-ground wood they require a connection between the wood and the soil. These termites construct an earthen tube that provides a protected pathway between the two. This tube is often one of the first indications of termite infestation in a building. They require fairly moist conditions, and are never found in dry wood. The galleries of subterranean termites can often be recognized because they are cut along with the grain of the wood. These termites have four castes. Reproductives, (fertile males and females) have blackish bodies and pigmented compound eyes. Secondary reproductives are pale with compound eyes and wing buds. Sterile workers are grayish white, lack eyes and wings. Sterile soldiers resemble workers, except that they have long narrow heads and long smooth jaws. Reproductives emerge from the nests in flights in the spring after a warm rain. Creating a barrier between the wood structure and the soil can prevent damage from subterranean termites. In homes this would consist of concrete, stone, sand and brick foundations or footings, and timbers near the ground treated with insecticidal compounds or copper flashing. Routine inspection of foundations for these earthen tubes is essential.

Drywood Termites. These termites differ from subterranean termites in a number of ways. First, they build their nests directly in wood and require no soil contact. Second, they have only two castes: reproductives and soldiers. In this group juveniles do the equivalent work of sterile workers. Reproductives are dark with reddish heads. Soldiers are large with powerful, toothed jaws. These insects commonly attack wood structures, such as homes, piled lumber and even furniture. Unlike subterranean termites, drywood termites can feed in dry wood without difficulty. Routine inspection of walls for ventilation holes and fine granular debris is essential if these termites are suspected.

There are a variety of control measures for termites available on the market, including microwaves, biological control using nematode worms and parasitic fungi, carbon dioxide, fumigation, spot insecticide treatments, bait stations and heat. Each of these has some value, but the technique used depends on the location of the infestation and the termite species involved. Therefore correct identification of the termite species is essential.