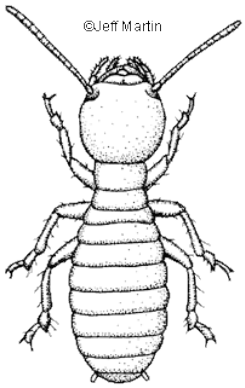

Termites

Class	Order	Family	Species
Insecta	Isoptera	4 in North America	15 in California

Range

The order is distributed worldwide.

Habitat

Tropical, temperate and arid regions

Niche

Some species live in moist subterranean habitats such as wood partly buried in the soil while others live in dryer areas above ground. They sometimes invade buildings made of wood and extensive damage may occur.

Diet

Nature: wood, cast skins, feces, dead individuals
adults - nectar, insects
Captivity: same as above

Reproduction

Growth: gradual, molts several times
Egg: laid singly or in masses along tunnels
Worker: nymphs and sterile adults
Soldier: sterile adults
Queen: may live several years and lay thousands of eggs in a lifetime
Behavior: kings and queens are usually produced in large numbers at certain times of he year. They leave the colony in a swarm (late summer or early fall for many western species), mate and individual pairs establish new colonies. The reproductives shed their wings after mating has occurred.

Physical Characteristics

Mouthparts: chewing
Antennae: 1 pair
Legs: 3 pair
Wings: 2 pairs of equal size may or may not be present
Color: often light in color, yellow to brown, gray to black
Body: soft bodied, about .25-1 inch long in this area
Egg: usually white, kidney shaped, 1-1.5mm long
Worker: pale in color, small mandibles, wingless, usually lack compound eyes.
Soldier: enlarged heads and mandibles (mandibles may be so enlarged that they can't even feed themselves), wingless, may or may not have compound eyes, usually slightly larger than the workers
Reproductive: fully developed wings, compound eyes, black to brown in color. The males are usually quite small while the queens are often large (up to 3 inches in some tropical species).

Ecological Impact

Termites are extremely important to the recycling of nutrients in nature. They break down dead trees and other plant matter into smaller unites for the process of decomposition.

Common Species

Pacific Dampwood Termite (*Zootermopsis angusticollis*, family: Hodotermitidae): The largest yet least destructive termite in California; live in decayed logs and occasionally structural wood if it is damp.

Western Subterranean Termite (*Reticulitermes hesperus*, family: Rhinotermitidae): The most common and most destructive termite to human structures in California; damage to structural wood is common (primarily the understructure of houses).

Western Drywood Termite (*Kalotermes minor*, family: Kalotermitidae): This species also causes structural damage.

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Special Adaptations

Symbiosis: The cellulose in the wood that termites eat is digested by flagellated protozoans or bacteria living in their digestive tracts. If these organisms were not present, the termite would continue to eat but would starve to death because it would not be able to digest the cellulose. The protozoans or bacteria are transmitted by feeding on anal secretions from another termite. One theory suggests that the necessity to exchange flagellates may have resulted in the evolution of their social structure.

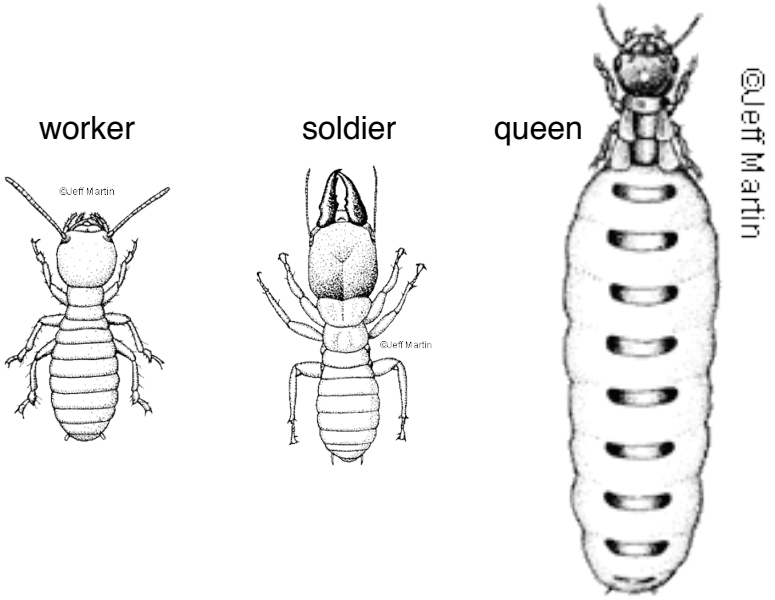
Social Organization

Termites have a complex social structure and live together in colonies of sometimes more than 1 million individuals. There are three main castes: workers, soldiers and reproductives. Which caste a nymph will become is determined by the presence or absence of pheromones which are transmitted through anal and oral secretions by soldiers and reproductives.

Workers: perform most of the work in the colony. They collect food and feed the queens, soldiers and newly hatched young; they construct and care for the fungus gardens which are used for food in some species; they build nests, passageways, tunnels and galleries.

Soldiers: when the colony is disturbed they attach the intruder by blocking up holes in gallery walls with their heads and biting with their large mandibles.

Reproductives: includes kings and queens which start new colonies, as well as supplementary reproductives which are similar to workers in appearance but are able to reproduce and assist the queen in building the colony.



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