

TERMITES OR WHITE ANTS

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**Redwoods And Eucalyptus Only Commercial Woods Resistant To Termites;
Kerosene And Carbon Bisulphide Used To Destroy Pests**

WEAK and soft-bodied, able to stand little or no exposure to dry air, termites or white ants choose the driest and hardest wood for their diet. Flooring, joists, casements, bookcases, and furniture are all on their list. As a more tender supplement to this menu they frequently add books, carpets, wallpaper, stamps and occasionally green vegetation. But whatever food they choose they invariably work within it, always leaving a shell of protection to keep out light, enemies, and the drying air. This habit usually leaves them undiscovered until the greater part of the damage is done; and the inside of whatever they are working on is found to be a mass of powder and a swarm of small, whitish insects.

Due to their social habits of living in organized colonies termites are often inappropriately called white ants. Structurally and in evolutionary development, however, they are on almost opposite ends of the great and intricate kingdom of insects.

In the social life of the colony there are well defined castes, each caste with its special work to do in the life and development of the community. Nature is not communistic, and the class of workers predominate. They are wingless and blind, with soft bodies and large round beaks. Their routine of labor is to do the excavating, feed and nurse the young, and feed and nurse the reproductive forms. They may be of either sex, but never reach sexual maturity.

Soldiers make up the second caste. They distribute themselves through the colony and along the foraging tunnels and act as defenders against enemies. Their bodies resemble the workers, but their heads carry greatly enlarged jaws, the head and jaws often making a third the total length of the insect. In some species of termites the soldiers can discharge a repellent fluid through a long, beak-like process which takes the place of the jaws on the other soldier species.

The kings and the queens, the reproductive forms, make up the third caste. Of these there are several forms; the first or swarming form, most people are acquainted with. Due to increased temperatures, moisture, over-crowding in the nest and other

factors, the urge falls on the colony to migrate and establish new nests. While swarming affects the whole colony, the most active part is taken by the kings and queens. It is these reproductive forms which actually leave the nest. Sometime before swarming the wings become fully developed and the body becomes toughened and pigmented. When the exodus takes place it is done with thoroughness and dispatch; all the winged forms leaving at once. The queens, as soon as a suitable place is located to found a new colony, cut off their wings and begin egg-laying.

When this first reproductive form leaves the nest, they leave behind them the second group of their caste. These are blind and wingless; but now that the first form have left, they assume sexual maturity and carry on the propagation of the colony.

The third form are worker-like kings and queens; and if need arise these sexed forms can take over the work of the second or first group.

In the tropical regions termites are among the most destructive insects known. In Arizona, our native species on the whole do not become generally serious, yet they frequently invade houses and other wood construction work and do a great amount of local damage.

The writer examined three houses, all in the same block, the past season in which termites had attacked the floors, making it necessary in two cases to replace part of the floor and in the third, the house was raised and an entire new floor put in. These examples were typical of a dozen times as many in the Salt River Valley.

In another instance termites had made their way into a concrete vault through a crack in the floor and tunneled through several thousand dollars worth of documents. In this case simply filling the crack with asphalt paint prevented further damage. Since there was considerable distance for the insects to travel over the concrete, from the entrance crack to the papers, etc., they had built themselves mud galleries, some of which were twelve feet long.

This engineering ability makes it possible for them to bridge an unsuitable area as a concrete foundation and

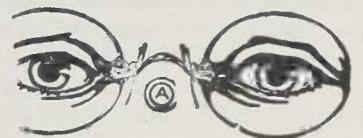
reach the wooden floor without becoming exposed to the light or air.

Once the pests are in there is not much can be done except replace the affected material and take precautions against re-infestation. Where they are detected in time, kerosene or carbon bisulphid injected into their tunnels will oftentimes clean them out. Fumigation with hydrocyanic acid gas may be effective. The individual infestation will determine the best remedial method.

By far the most practical, however, is preventative measures. In the case of timber such as vine stakes, poles, fence posts and others which must come in contact with the ground, treatment with creosote, corrosive sublimate or zinc chloride will prevent injury for a period of time depending on the chemical used and the method of application. Painting or dipping is a simple method. This does not give, as permanent protection, however, as impregnating the wood under pressure with any of the recommended materials.

In the case of new buildings where wood is used in the foundation structure, the sills should be raised high enough above the ground so cross ventilation is effected, and the foundation should be filled or banked so the driest conditions possible will be kept. All lumber scraps should be raked out from under the floors as they furnish the first food when the termites are establishing a colony.

There are several woods which are highly resistant to termites, but of these, redwood for lumber purposes, and eucalyptus for poles and stakes are the only two in commercial use.



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