

## Control of Subterranean Termites in Dwellings

**T**ERMITES, often known as white ants, are found throughout Alabama and cause considerable damage to dwellings in every county in the State.

Termites live together in colonies similar to those of ants. Each colony consists of workers, soldiers, males, and females. Fertilized females, or queens, lay all the eggs in a colony. The workers are milky-white to greyish-white, about one-fifth of an inch long, and are wingless. The soldiers are similar to the workers except that they have a yellowish-white abdomen and a large, cylindrical, brown head with strong jaws developed into pinchers. The males and virgin females are dark brown or black, and have four transparent wings. The fertile queen has a greatly distended abdomen and is wingless. The queens are very rarely seen.

Termites feed upon wood, paper, cotton, and other materials of like nature which contain cellulose.

There are two forms in Alabama; one lives in wood entirely above ground and the other is a subterranean form which cannot live unless it has contact with the soil. The latter form causes most of the damage in Alabama and is the one treated in this leaflet.

### The Nature of the Damage Done by Termites

The subterranean termites work their way upward from the ground into the walls of dwellings and other buildings. They eat out the inside of timbers so that finally only the outer shell remains. Buildings heavily infested with termites soon become unsafe for use. These insects will also work in tables, book-cases, and other heavy furniture, entering them where they rest upon an infested floor.

### Detection of the Presence of Termites

The following indications of the presence of termites should be watched for:

(1) Swarms of what appear to be winged black ants emerge from the woodwork usually in the spring and are often the first indication that serious damage is being done. As termites usually

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M. J. FUNCHES, Director

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work within wood and shun the light at all times, except for swarming, they may be present in a building for a considerable time without being detected. After a colony becomes well established and has increased to a considerable size, swarms of winged males and females emerge. These mate, hunt out suitable locations, and form new colonies.

(2) The weakening or collapse of flooring or other woodwork is often an indication of the presence of termites. This can often be detected first by a warping or blistering of the surface. Upon examination, the small termites or "white ants" can be found within their galleries in the wood (Fig. 1).



FIGURE 1.—Termites in their galleries.

(3) The presence of termites can occasionally be detected by the examination of basement or foundation walls for the presence of small, short, earthen tubes leading from the soil to the house timbers. These are used to conduct moisture from the soil to the timbers upon which the termites are feeding.

### Prevention of Termite Injury to New Dwellings

In the construction of new dwellings, the following precautions against termite attack should be considered:

(1) Clear the ground of all old wood, stumps, and roots before starting construction. These should be burned if they are found to contain termites.

(2) If considerable numbers of termites are found in this refuse wood, additional protection may be secured by drenching the ground around and within the foundations with a one per cent solution of sodium arsenite. Approximately 40 to 100 gallons of solution per 100 square feet will be required. This material is a **violent poison** and care must be taken to thoroughly wash it off of one's skin after the application has been made. Children and stock should not be allowed access to this poisoned soil. The treatment will kill nearby plants and is often objectionable for this reason.

(3) The top of the foundation of a building should be at least one foot from the ground level. A greater distance is desirable.

(4) All timbers, where possible, should be kept out of contact with the soil, and should be placed upon solid masonry at a distance of at least one foot above the soil.

(5) Additional protection may be secured by the use of a continuous layer of copper sheeting between the foundation and the sleepers. This sheeting should extend several inches on each side of the foundation.

(6) All wooden floors should be at least two feet from the soil, and adequate ventilation should be provided under the house. At least two square feet of ventilation should be provided for every 25 feet of linear foundation.

(7) Where timbers must be placed on the soil, or very near the soil, only those properly treated for protection against termites should be used. Timbers impregnated under pressure with crude coal-tar creosote are recommended.

(8) A well-drained basement, under the entire house, is a very good insurance against termite injury, especially if the floor and sides are made of concrete.

(9) In the construction of concrete steps or porches, care must be taken to completely seal these structures from all woodwork. A layer of cement at least two inches thick should insulate all woodwork from the soil used in filling in porches.

(10) Adequate drainage should be provided around the building.

### Treatment for Termites in Old Buildings

**Treatment of Damaged Timbers.**—Where termite injury is severe, the timbers will have to be replaced. Where possible, all woodwork should be separated from the soil by concrete as

was indicated above. When this is not possible, timbers in or near the soil must be treated. Hot coal-tar creosote painted on with a brush will give protection for approximately three years; when it is applied under pressure, for twenty or more years.

**Use of Poisons for Termites in Old Timbers.**—Fumigation or the use of poisons is of no permanent value against subterranean termites in dwellings. While a few are killed, the majority are in the soil and are unaffected by these treatments.

The termites within the timbers may be killed and the injury reduced temporarily by boring small holes into the insects' tunnels and saturating the wood with orthodichlorobenzene. This acts as a fumigant and destroys the termites.

Good results may be obtained by the use of Paris green dust if the wood is not too damp. Holes should be bored into the termite tunnels and the dust forced in with a bellows or small duster. As termites have a habit of licking each other, poisoning of large numbers of individuals often results from the dust picked up on their feet.

It should be understood that while these treatments are effective for short periods, permanent protection against damage by the subterranean termites can be obtained only by proper construction of buildings.

**Killing Termites in the Soil.**—Upon discovery of the point where termites enter the ground, they may be killed by the application of one ounce of paradichlorobenzene crystals per linear foot of foundation. The material should be applied in a shallow trench against the foundation and the dirt tightly packed over the crystals. All termites in the surrounding soil will be killed and this treatment will remain effective for approximately six months. Paradichlorobenzene is harmless to human beings, but will kill plants within a radius of several feet.

**Drainage.**—Injury very often occurs due to the timbers being kept moist either by lack of adequate drainage around the house or by leaky plumbing. These conditions must be corrected if termite damage is to be avoided.