The Identification of Formosan Subterranean Termites

One important key for successful management of a pest is to identify it. Termites are often incorrectly referred to as "white ants" and, because of their similar appearances, people tend to confuse them with ants, especially when winged individuals are encountered. But termites and ants are two very different groups of insects with different threats. Termites feed on cellulose materials, causing damage to houses, but ants do not eat cellulose. Therefore, separating them is very important.

Termites are usually soft-bodied and light in color; ants are hard-bodied and dark. The following shows three major differences between the two groups.

Wings

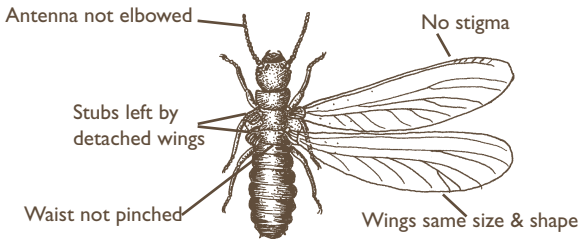
Termite	Wings are equal in size, shed shortly after flying
Ant	Forewings are larger than hind wings, don't shed

Antennae

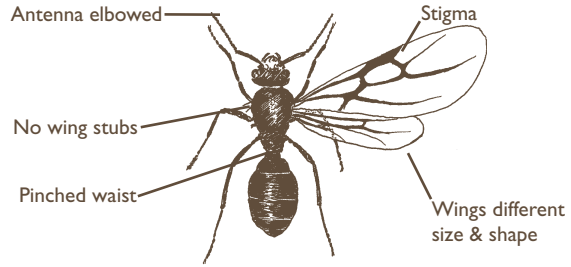
Termite	Straight, bead-like
Ant	Elbowed, usually clubbed

Waist

Termite	Broad
Ant	Narrow



Winged Form Termite



Winged Form Ant

There are about 2,700 identified termite species worldwide. Fortunately only a few are pests. In Louisiana, drywood termites and subterranean termites are the two major groups causing economic damage. Drywood termites live in dry wood and require no external moisture. The subterranean termite group includes several native species and the Formosan subterranean termite (FST), introduced into the United States shortly after WW II.

Subterranean termites need external moisture. They start a colony in the ground and infest nearby structures and trees. Recognizing the types of termites is equally important because of the differences in control methods and destructive potentials. Commercial pest control operators should be able to identify them. Or you can contact the LSU AgCenter.

The Biology of Formosan Subterranean Termites

Like most termite species, FST live in a highly organized society or colony with different forms of individuals performing specific tasks. The different forms are called **castes**. They are reproductives, workers and soldiers.

Reproductives are queens and kings. The **primary** reproductives, developed from alates or swarmers, produce eggs as their sole task and may live up to 25 years. It is believed that there is only one pair of them in a colony. If the queen and king die or part of the colony is isolated from the parent colony, however, other members may transform to be **secondary** reproductives and take over the function of reproduction, thus resulting in multiple queens and kings. Alates are produced when a colony grows large. These alates are the only forms that leave the hidden nests for a short period and are most likely to be seen. They are often used for species identification.

Workers are soft-bodied, creamy-white and wingless (see right on the front picture). They make up most of a colony and perform most of the work such as building the nest, searching for food, feeding others and taking care of eggs and young. Their mouthparts are specifically adapted for chewing and tunneling. They are the caste that causes actual damage. Workers of different termite species look alike. They cannot be used to identify species.

Soldiers have a dark and hard head featuring a pair of large jaws capable of performing scissors-like actions (see left on the front picture). Their function is to protect the colony in case of invasion. Because of their specialized mouthparts, they are not able to chew food and need to be fed by workers. Termite soldiers can be used for species identification. But, it is always best to have samples of soldiers or alates, injured wood and habitat information for species identification.

An FST **colony** starts with a pair of alates finding a good nest site - readily accessible food and moisture sources - normally in or on the ground. The queen lays her first batch of eggs, feeds them and tends to the nest, but such household duties are soon taken over by workers. The queen then develops an enlarged abdomen to increase her egg-laying capacity. As the colony grows, workers accompanied by soldiers tunnel in search of food and infest homes and trees in the process. When colonies become well-established, alates are produced. They are attracted to light and fly out at dusk in warm and moist days from Mid-April through early July in southern Louisiana in an attempt to build new colonies.

Formosan subterranean termites have larger colonies and eat wood faster than native subterranean termites. Once established in a structure, the FST is more likely than native subterranean termites to find a moisture source and survive without ground contact. They are also more aggressive, attacking living trees and chewing through non-cellulose materials.

For prevention and management information, look for other brochures in this series.

Photo credit:
New Orleans Mosquito and Termite Control Board.

Authors:
Alan Morgan, Associate Professor
Dennis Ring, Professor
Lixin Mao, Post Doc
Dale Pollet, Professor

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