

# Know Your Texas Termites

## "Native subs": *Reticulitermes* subterranean termite



Tom Atkinson

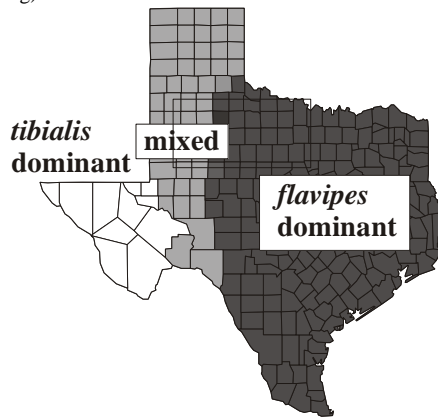
Dr. Tom Atkinson lives in Austin and is a field research biologist for Dow AgroSciences specializing in urban pests in Texas and adjacent states.

One or more subterranean termite species of *Reticulitermes* can be found anywhere within the state of Texas. These are the primary structural pests treated by PCO's and are commonly known as "native subs". The vast bulk of scientific and pest control literature in the U.S. deals with these species.

Four species are found in the state. All are structural pests. Three of these are found in the Southeastern U.S. and gradually disappear westward along gradients of diminishing rainfall and forest cover. A fourth, western species extends its range eastward into central Texas.

At present, the identification of these species is problematic and in practice cannot be done without expert assistance or training. Fortunately, precise species determination is not required for control measures. The main concern for control is distinguishing them from other groups of subterranean termites such as the various species of "desert" or "ag" termites and from the Formosan subterranean termite.

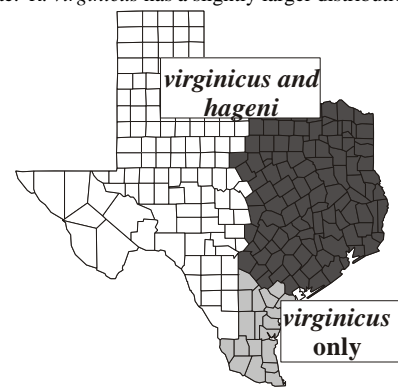
Distribution of *Reticulitermes* species. *R. tibialis* is a western species which enters central Texas (white). *R. flavipes* predominates in eastern and central Texas (dark shading). There is apparently considerable overlap (intermediate shading).



*Reticulitermes flavipes*, the eastern subterranean termite, is the largest species in terms of size of individuals and is the predominant species found attacking structures in eastern, central, and southern Texas. Specimens have been collected throughout the state, but in the far west it is replaced by *Reticulitermes tibialis*, the barren lands subterranean termite. There is likely a large are of overlap. In general, *flavipes* seems

to predominate in moister, warmer climates with higher amounts of available wood and in urban settings. On the other hand, *tibialis* is much more drought adapted and can be found in actual desert conditions, as well as semi-arid scrublands and grasslands.

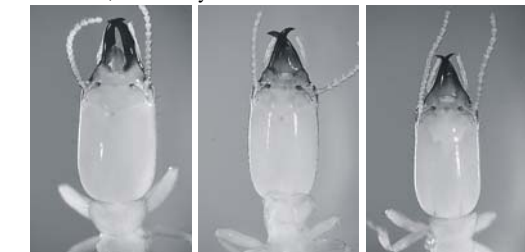
Distribution of *Reticulitermes* species. Both *virginicus* and *hageni* are eastern species, found mostly in the eastern part of the state. *R. virginicus* has a slightly larger distribution.



Two smaller species, *virginicus* and *hageni* are only found in the eastern and central part of the state. . In general, these 2 species seem to be restricted more to wooded and moister sites. Recent work suggests that not only are individuals of *virginicus* and *hageni* smaller than those of *flavipes*, but the number of individuals in colonies are lower as well.

Soldiers of *virginicus* and *hageni* are noticeably smaller than those of *flavipes* and can be distinguished from it by smaller soldier size and shape of mandibles.

Soldiers of eastern *Reticulitermes* spp. Left to right, *flavipes*, *virginicus*, and *hageni*, also in order of decreasing size. Mandibles of *flavipes* are more strongly hooked, *hageni* straightest, with *virginicus* intermediate. Photos by R. Scheffrahn, University of Florida.



Alates of *flavipes* and *virginicus* are quite similar in overall appearance. Alates of *hageni* are pale brown and quite distinct in color from other *Reticulitermes*

Alates of all species are daytime fliers and appear in spring. Actual time of flight is later, the farther north one goes. In southern Texas and in warm years in other areas, some swarming may occur in the fall. In warmer areas of southern Texas this emergence over a longer period may not produce the spectacular swarms of the central and northern parts of the state. Drought and low temperatures can delay swarming.

Alates of eastern *Reticulitermes*. left to right, *flavipes*, *virginicus*, and *hageni*. Note that alates of *hageni* are light brown and much paler than alates of the other species (both with black alates). Photos by R. Scheffrahn, University of Florida.



#### References:

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