

Need to Know

- Straight talk for professionals about pests and pest control products

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Do You Know Where Your Termites Are?

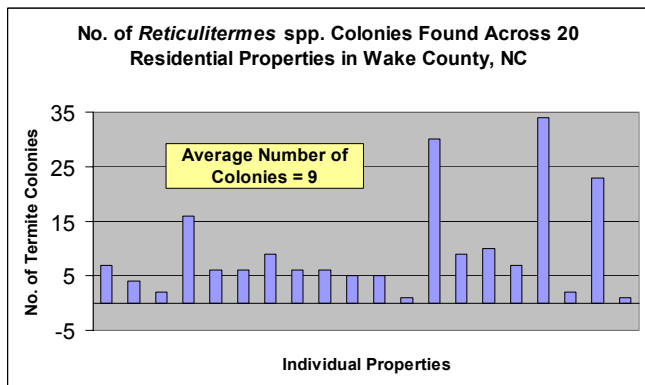
Homeowners frequently ask about the location of termites in their respective homes and around their properties. These questions can come up during an initial inspection and subsequent sale of a termite job, an annual renewal inspection or a callback when termites have reappeared in a structure and a curative treatment is needed.

Objective

This study was designed to monitor termite populations on 20 residential properties, prior to any control treatments, in Wake County, North Carolina. Termite samples were genetically analyzed to identify the different termite species and colonies that were present at each site. The study involved an extensive genetic analysis of termite samples to identify the different species and colonies that were present at each site. DNA technology gives us a unique view of the termite world and provides new details on the abundance and diversity of termite colonies that could exist inside and around a customer's house.

Results and Implications

Large Reservoirs of Termites: In central North Carolina, a large number of subterranean termite colonies can be found on many residential properties. We found the greatest numbers of colonies in the natural and undeveloped areas of yards, including landscaped and mulched areas such as flower beds. The second greatest reservoir existed in the grassy yard surface between the house and the natural areas. Termite colonies infesting the structure were fewest in number, ranging from one to three colonies per structure.



Species Diversity: The predominant species found to be infesting residential properties in central North Carolina was *Reticulitermes flavipes*, which accounted for over 90 percent of the colonies present in most cases.

More Than One Habitat: Many termite colonies were found to reside in more than one habitat at each site. For example, a colony inside a structure might also be found in monitors in the yard and, in some cases, extend into the natural areas as well.

Table 1. Proportion of *Reticulitermes* species observed in three habitats at 20 residential sites in Wake County, NC ¹

Species	Inside Structure (23 total colonies present)	Soil Monitors in Yard (86 colonies present)	Natural Areas Beyond Yard (125 colonies present)
<i>R. flavipes</i>	96%	94%	90%
<i>R. virginicus</i>	4%	2%	4%
<i>R. hageni</i>	0%	4%	6%

¹ Termite colonies that occupied more than one habitat appear more than once in this table.

Spatial Organization: Most termite colonies were limited in terms of the space they occupied and frequently were only found at one monitoring station or sample location in the natural areas. We found no evidence of overlapping between colonies. Feeding sites were not shared during the time that a given colony was found at a particular location. This was true whether the colony was only found at one feeding site, or had an extensive range that covered more than one habitat.

Conducive Conditions: The number of colonies and diversity of locations where termites were found on residential properties speaks strongly to the need to minimize and eliminate conditions that support and promote the development and spread of colonies. Observations made during the course of this study showed that high soil moisture and the presence of food sources can lead to colonies that spread out spatially. Also, natural areas that are left unkempt with wood debris, including fallen limbs and tree stumps, can support greater numbers of colonies than those where these food sources are removed.

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