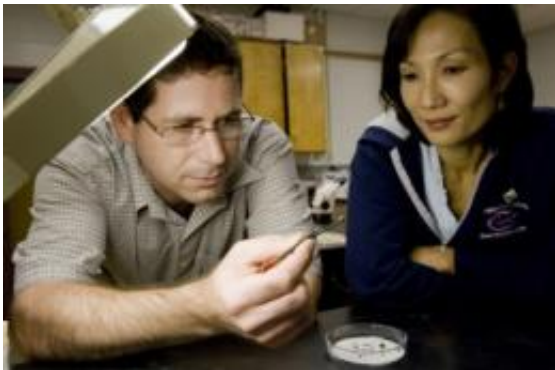


# House-infesting brown dog tick becoming resistant to common pesticides, experts say

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University of Florida entomology researcher Phil Kaufman and assistant extension scientist Faith Oi examine a blood-fed brown dog tick in a lab at the Gainesville, Fla. campus. The researchers and a USDA tick specialist have received a three-year grant to evaluate whether the species has become resistant to the pesticides most commonly used to fight it. ( UF/IFAS Photo by: Tyler Jones)

(PhysOrg.com) -- It's bad enough that the Southeast is bedeviled by a tick that doesn't mind taking up residence inside homes. But now researchers say they believe the brown dog tick has developed resistance to the treatments most commonly used to fight it.

University of Florida researchers Phil Kaufman and Faith Oi will work with USDA tick expert Robert Miller to test the ticks' resistance to permethrin, a chemical found in many pesticides and repellents, and

fipronil, found in Frontline. Both are sold in pet stores.

A \$171,000 grant from the USDA's Southern Region Integrated [Pest Management](#) Center will support the researchers' three-year study. When it ends, they hope to know the tick's level of resistance to both chemicals and to have an array of materials aimed at teaching the public how best to guard against infestations and what to do if they face one.

The brown dog tick has been invading homes across the Southeast for years, Kaufman said, but its resistance to chemical foes seems to have been building the last five to eight years. This study will be the first to document the ticks' resistance in the U.S.

“The challenge now is in people not being able to control or knock out the ticks with some of the pesticides,” he said. “And for controlling this particular tick, pesticides are almost essential.”

Having one's home infested with the brown dog tick is nothing short of miserable. While they're not generally known for spreading disease to humans, they are often described as “predatory,” lying in wait for whatever organism will provide their next blood meal, whether it be dog - or human.

The ticks are small — about the size of a match head — before they get a blood meal and grow noticeably bigger. Before that, they're tough to see, leaving homeowners to often miss the first signs of an infestation, especially when even tinier [larvae](#) and nymphs are present.

The first indication often comes when residents see ticks crawling up the walls or curtains.

“I always tell people it's a minimum of a six-month ordeal and oftentimes, up to a year to clear an infestation,” Kaufman said. “One

female tick can lay 5,000 eggs. And if you miss one tick, and she lays those eggs — you’re starting over.”

Part of the problem likely lies in pet owners’ good intentions, the researchers say. Pet owners don’t like the idea of pets with fleas or ticks, so they buy pesticides that come in handy one-month doses, and then treat for ticks and fleas whether they’re present or not.

That type of preventative spraying and dosing is typically reserved for pests that can kill us or our pets, Kaufman said, such as heartworm.

Under the tenets of Integrated Pest Management, researchers work to keep [pesticides](#) viable as long as possible by encouraging people not to overuse them, and to employ other techniques instead.

That means carefully monitoring one’s dog for any sign of ticks, shampooing the dog and physically removing ticks before they gain a foothold, vacuuming frequently and ensuring that hedges and underbrush where ticks can hide are kept cut back.

While the brown dog [tick](#) isn’t a major disease threat to humans, it falls into the same “creepy crawly” category as bedbugs or fleas, said Faith Oi, an assistant extension scientist with UF’s entomology and nematology department.

“They’re bloodsucking insects,” she said. “It’s a difficult problem once the populations get high because they’re very good at getting into cracks and crevices. If you know where to treat, that’s one thing, but if you don’t even know where they are, it gets more difficult, and then you have to keep going back and back and it’s a very long process to get a handle on.”

Provided by University of Florida ([news](#) : [web](#))

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