

# Rover robot kills the ticks

July 24 2013

---

The day may not be too far away when homeowners can schedule monthly tick clearing service, drastically reducing the risk of tick-borne illness in their pets and children.

That's because the "tick rover," a robot invented by three VMI professors, has just cleared a major hurdle. Testing last month indicated unequivocally that the device kills between 75 and 100 percent of the [ticks](#) in its path.

"The only thing more successful is chemical spray," said Col. Jim Squire, professor of electrical and computer engineering and project manager.

Holly Gaff, an assistant professor in the Old Dominion University Department of Biological Sciences, was hired by the VMI team to test the third-generation device. She ran test after test, with controls, in the tick-infested Hoffler Creek Wildlife Foundation in Portsmouth, Va.

The results? So good Gaff initially thought there was an error in her protocol. Only one in 10 ticks had survived. The next time round 100 percent were killed.

That test, however, is not the last word. Squire and the two other professors on the team, Col. Jay Sullivan, mechanical engineering, and Col. Dave Livingston, electrical and computer engineering, will spend the upcoming academic year working with cadets to make mechanical and software improvements ahead of testing of the fourth generation

robot next summer.

[WSLS 10 NBC in Roanoke/Lynchburg Va](#)

What the team still needs to know is how fast a cleared area repopulates with ticks.

"If it repopulates in a day, it's not useful," said Squire. "If it repopulates in a week, homeowners need to own the device."

But the device carries permethrin [insecticide](#), which is usually handled only by professionals. In an ideal situation, the area would repopulate in no less than a month, making the device ideal for commercial pest control companies. Homeowners could schedule their monthly clearing with the local franchise and never have to be concerned with purchasing or maintaining the robots.

If all goes well with next summer's tests, the team will seek grant funding to commercialize the robot.

Over the years of research and development, a number of cadets have gained valuable experience engineering current and previous generations of the [robot](#) and, there are of course, many more ideas waiting to be explored.

"We've got lots of new projects in the wings," said Squire.

Provided by Virginia Military Institute

Citation: Rover robot kills the ticks (2013, July 24) retrieved 6 May 2024 from <https://phys.org/news/2013-07-rover-robot.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.