Western biology professor taking bite out of Lyme disease

Tracking ticks key to disease control

By Robin DeMerell

Dr. Neeta Connally, assistant professor of biological and environmental sciences at Western, finds bugs fascinating. More specifically, the former Yale research scientist relishes being a bug-detective-of-sorts and focuses her study on infectious insects.

An expert on Lyme disease and other tick-borne maladies, Connally joined the WCSU biology department in 2011 and has been hard at work establishing a research program here on the ecology of the deer tick and disease prevention in collaboration with the Centers for Disease Control, the Yale School of Public Health and the state Department of Public Health.

In 2009, Connally co-published the results of a three-year study titled “Peridomestic Lyme Disease Prevention” in the American Journal of Preventative Medicine, in which the authors identified effective disease prevention measures. She holds an undergraduate degree in animal biology from Louisiana Tech University, a master’s degree in public health from Tulane School of Public Health and a Ph.D. in environmental science from the University of Rhode Island.

Connally, who teaches full time at the university, is joined in the WCSU research lab by three undergraduate students who work under a grant to collect and track deer ticks at the Nature Preserve on Western’s Westside campus and several western Connecticut towns, including Ridgefield and Newtown. Biology majors Karen Thompson of New Fairfield and Christopher Madden, a sophomore from New Milford, and recent graduate Michelle Dease of Wappingers Falls, N.Y., are busy monitoring area ticks.

“Fairfield County has the largest number of Lyme disease cases in the state,” Connally said. It is estimated that more than 15 percent of reported cases of the disease in Connecticut are in Fairfield County. That statistic intrigues Connally because it begs for local attention — the kind of attention she’s willing to give. “There hasn’t been a lot of current tick research in the region. I’m trying to establish a tick monitoring system here to track changes in tick populations over time.”

Connally’s ultimate goal is to see a decline in the transmission of Lyme through prevention — and the only way to prevent the disease is to inform people how to protect themselves. Connally said the transmission of Lyme, and other tick-borne diseases, is not immediate. Usually a tick must be on a person’s body for 36 hours before transmission of bacteria occurs. Therefore, the tick specialist said, it is a good idea to bathe within two hours after being outdoors and check for ticks that may have attached onto the body within that 36-hour window.

In addition, Connally said, people don’t have to be hiking to be in contact with ticks: “Most people get ticks in their own backyards,” she said.

Connally, who also volunteers as the scientific adviser for the BLAST program (Bathe, Look for ticks, Apply repellent, Spray your yard, Treat your pets) in Ridgefield, said she is hoping that her research at Western will continue to help people from being infected by ticks through environmental measures and education.