

Study on Deer Tick Questing for a Host



Blacklegged Deer Tick
(*Ixodes scapularis*)

Examining Adult Tick Behavior

Daniel Cameron, MD, reported in his *Lyme Science* blog on a study that uncovers new information about deer tick questing. The study, from the SUNY Broome Community College's Tracy R. Curtis, et al., was published in *Medical and Veterinary Entomology* and looked at how adult blacklegged ticks (*Ixodes scapularis*) move on public trails with "increasing levels of terrain complexity with a potential host nearby."

The study examined the extent to which adult ticks may actively search (vs. sit-and-wait) for a nearby host. The researchers aimed to determine whether or not ticks could locate the position of the host in natural conditions, as well as to better understand the role of terrain complexity on the distance ticks traveled in a brief period of time (30 min).

What did they find?

According to Curtis "Overall, ticks were more often observed moving (72% of observations) than stationary (28% of observations)." This observation, along with other indicative deer tick questing behaviors captured in the study, led the authors to conclude that adult deer ticks will actively search

for their next meal, rather than taking a stationary “sit-and-wait” tactic.

Curtis continued, “Although ticks may indeed utilize a sit-and-wait strategy when no host is detected, this study suggests that adult *I. scapularis* ticks utilize an active-search strategy when a potential host is detected nearby.”

The Importance of Understanding Deer Tick Questing

Dr. Cameron notes that understanding how ticks move is important in developing ways to minimize our risk of tick bites and infection. The researchers caution readers to be particularly wary of adult ticks – since the study showed their ability to actively seek a host – and because they are found to be nearly twice as infected with TBD as nymphal ticks. Adult ticks will be out questing for their next blood meal in spring and fall while nymphal ticks seek a host in summer.

Read the study abstract on *NCBI*.

Visit Dr. Daniel Cameron’s website.

For more information on ticks visit LDA’s Tick Vector page for photos and more.

LDA has received permission from Dr. Daniel Cameron to share this blog information on the LDA website.