The Connecticut Agricultural Experiment Station



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PRESS RELEASE

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The Connecticut Agricultural Experiment Station announces results of the first statewide active tick surveillance effort

New Haven, CT – Scientists with the Center for Vector Biology and Zoonotic Diseases at the Connecticut Agricultural Experiment Station (CAES) are releasing results obtained from the first year of a new federally-funded statewide surveillance program for ticks and associated tick-borne diseases.

Over 2,500 ticks were collected throughout spring, summer, and fall 2019 from 40 different publicly accessible locations in all eight Connecticut counties and screened for five different human disease-causing pathogens: *Anaplasma phagocytophilum* (anaplasmosis), *Babesia microti* (babesiosis), *Borrelia burgdorferi* (Lyme disease), *Borrelia miyamotoi* (hard tick relapsing fever), and Powassan virus (Powassan encephalitis).

Ixodes scapularis (blacklegged or deer tick) were the most commonly collected species (n = 2,068), followed by *Dermacentor variabilis* (American dog tick, n = 437). Two newly identified emerging species, *Amblyomma americanum* (lone star tick, n = 3) and *Haemaphysalis longicornis* (Asian longhorned tick, n = 2) were identified in both Fairfield and New London Counties. This is the first record of Asian longhorned tick in New London County. Statewide, Fairfield County had the highest average adult blacklegged tick density (61 sampled per acre) and Tolland County the highest average nymphal tick density (51 sampled per acre).

Phone: (203) 974-8500 Fax: (203) 974-8502 Toll Free: 1-(877) 855-2237, CAES@CT.GOV PORTAL.CT.GOV/CAES *An Affirmative Action/Equal Opportunity Employer* All adult female and nymphal blacklegged ticks were tested at CAES for the presence of the five different disease-causing pathogens. Fairfield County reported the highest infection rates for all pathogens in adult females and Litchfield County the highest in nymphal blacklegged ticks.

Pathogen	Adults	Nymphs
Borrelia burgdorferi (Lyme disease)	46%	15%
Babesia microti (babesiosis)	13%	6%
Anaplasma phagocytophilum (anaplasmosis)	9%	5%
Borrelia miyamotoi (hard tick relapsing fever)	2%	2%
Powassan virus (Powassan encephalitis)	1%	-

Survey results demonstrate that lone star and Asian longhorned ticks are emerging in Connecticut. According to the Connecticut Department of Public Health, there were three confirmed human cases of hard tick relapsing fever and five human cases of Powassan encephalitis in 2019. Lyme disease (n = 1,221), babesiosis (n = 330), and anaplasmosis (n = 297) continue to be the major tick-borne diseases of concern for Connecticut residents.

The survey was funded by a one-year grant issued by the Centers for Disease Control and Prevention through the Connecticut Department of Public Health and has potential to continue into a multi-year effort to document tick and pathogen abundances statewide to inform the public so that appropriate precautions are taken when spending time outdoors.

Scientists at CAES remind Connecticut citizens to perform regular checks for all stages of blacklegged ticks when they are active in spring through fall and on warm days in the winter, as tick bite prevention is the best strategy to combat tick-borne diseases.



Left to right: *I. scapularis* female, *I. scapularis* nymph, *D. variabilis* female, *A. americanum* female, and *H. longicornis* female (credits USDA and CDC).

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