

## **SUMMARY OF ACTIVE TICK SURVEILLANCE TESTING RESULTS 2021**

A total of 2,845 ticks across multiple genera were collected from 40 pre-determined, publicly accessible sites in all 8 counties throughout Connecticut in 2021. Of the more than 2,800 ticks collected, 2,536 (89.1%) were *Ixodes scapularis* (deer or blacklegged tick), 279 (9.8%) were *Dermacentor variabilis* (American dog tick), 23 (0.8%) were *Amblyomma americanum* (lone star tick), 6 (0.21%) were *Haemaphysalis longicornis* (Asian longhorned tick), and only 1 (0.04%) was identified as *Haemaphysalis leporispalustris* (rabbit tick) (Table 2).

Table 2. Tick species distribution in the 2021 sampling year.

| Scientific Name                       | Common Name              | Total Number of Ticks Collected (%) |
|---------------------------------------|--------------------------|-------------------------------------|
| <i>Ixodes scapularis</i>              | Deer or blacklegged tick | 2,536 (89.1%)                       |
| <i>Dermacentor variabilis</i>         | American dog tick        | 279 (9.8%)                          |
| <i>Amblyomma americanum</i>           | Lone star tick           | 23 (0.8%)                           |
| <i>Haemaphysalis longicornis</i>      | Asian longhorned tick    | 6 (0.2%)                            |
| <i>Haemaphysalis leporispalustris</i> | Rabbit tick              | 1 (0.04%)                           |

A portion of the collected ticks were tested, and of the 510 adult female blacklegged ticks screened for infection, 436 (86%) verified positive for at least one pathogen, and 108 (21.2%) verified positive for two or more pathogens. Overall, more than half of all ticks, 269 (52.7%) tested positive for *B. burgdorferi* (Table 3).

Table 3: Statewide infection rate for adult female *Ixodes scapularis* in 2021.

| Pathogen   | Disease  | % Adult female blacklegged ticks infected |
|--|--|---|
| <i>Borrelia burgdorferi</i>  | Lyme disease                                   | 161 (31.6%)                               |
| <i>Borrelia miyamotoi</i>  | Tick-borne relapsing fever                     | 9 (1.8%)                                  |
| <i>Babesia microti</i>   | Babesiosis                                     | 88 (17.3%)                                |
| <i>Anaplasma phagocytophilum</i>   | Anaplasmosis                                   | 66 (12.9%)                                |
| Powassan virus   | Encephalitis and meningitis                    | 4 (0.8%)                                  |
| <i>B. burgdorferi</i> + <i>miyamotoi</i>   | Lyme and Tick-borne relapsing fever            | 2 (0.4%)                                  |
| <i>B. burgdorferi</i> + <i>microti</i>   | Lyme and Babesiosis                            | 61 (12.0%)                                |
| <i>B. burgdorferi</i> + <i>Anaplasma</i>   | Lyme and Anaplasmosis                          | 28 (5.5%)                                 |
| <i>B. burgdorferi</i> + Powassan   | Lyme and Encephalitis/meningitis               | 2 (0.4%)                                  |
| <i>B. burgdorferi</i> / <i>miyamotoi</i> / <i>Babesia</i> / <i>Anaplasma</i> / <i>Powassan</i> | Lyme/TBRF/Babesiosis/Anaplasmosis/Encephalitis | 15 (2.9%)                                 |

Of the 500 nymphal blacklegged ticks tested, a total of 188 (37.6%) tested positive for at least one pathogen, and a total of 25 (5.0%) tested positive for two or more pathogens. Overall, 109 (21.8%) ticks screened were positive for infection with *B. burgdorferi* (Table 4).

Table 4: Statewide infection rate for nymphal *Ixodes scapularis* in 2021.

| Pathogen   | Disease  | % Nymphal blacklegged ticks infected |
|--|--|--------------------------------------|
| <i>Borrelia burgdorferi</i>                                | Lyme disease                                   | 82 (16.4%)                           |
| <i>Borrelia miyamotoi</i>                                  | Tick-borne relapsing fever                     | 10 (2.0%)                            |
| <i>Babesia microti</i>                                     | Babesiosis                                     | 42 (8.4%)                            |
| <i>Anaplasma phagocytophilum</i>                           | Anaplasmosis                                   | 29 (5.8%)                            |
| Powassan virus   | Encephalitis and meningitis                    | -----                                |
| <i>B. burgdorferi</i> + <i>miyamotoi</i>                   | Lyme and Tick-borne relapsing fever            | 1 (0.2%)                             |
| <i>B. burgdorferi</i> + <i>microti</i>                     | Lyme and Babesiosis                            | 14 (2.8%)                            |
| <i>B. burgdorferi</i> + <i>Anaplasma</i>                   | Lyme and Anaplasmosis                          | 6 (1.2%)                             |
| <i>B. burgdorferi</i> + Powassan                           | Lyme and Encephalitis/meningitis               | -----                                |
| <i>B. burgdorferi/miyamotoi/Babesia/Anaplasma/Powassan</i> | Lyme/TBRF/Babesiosis/Anaplasmosis/Encephalitis | 4 (0.8%)                             |

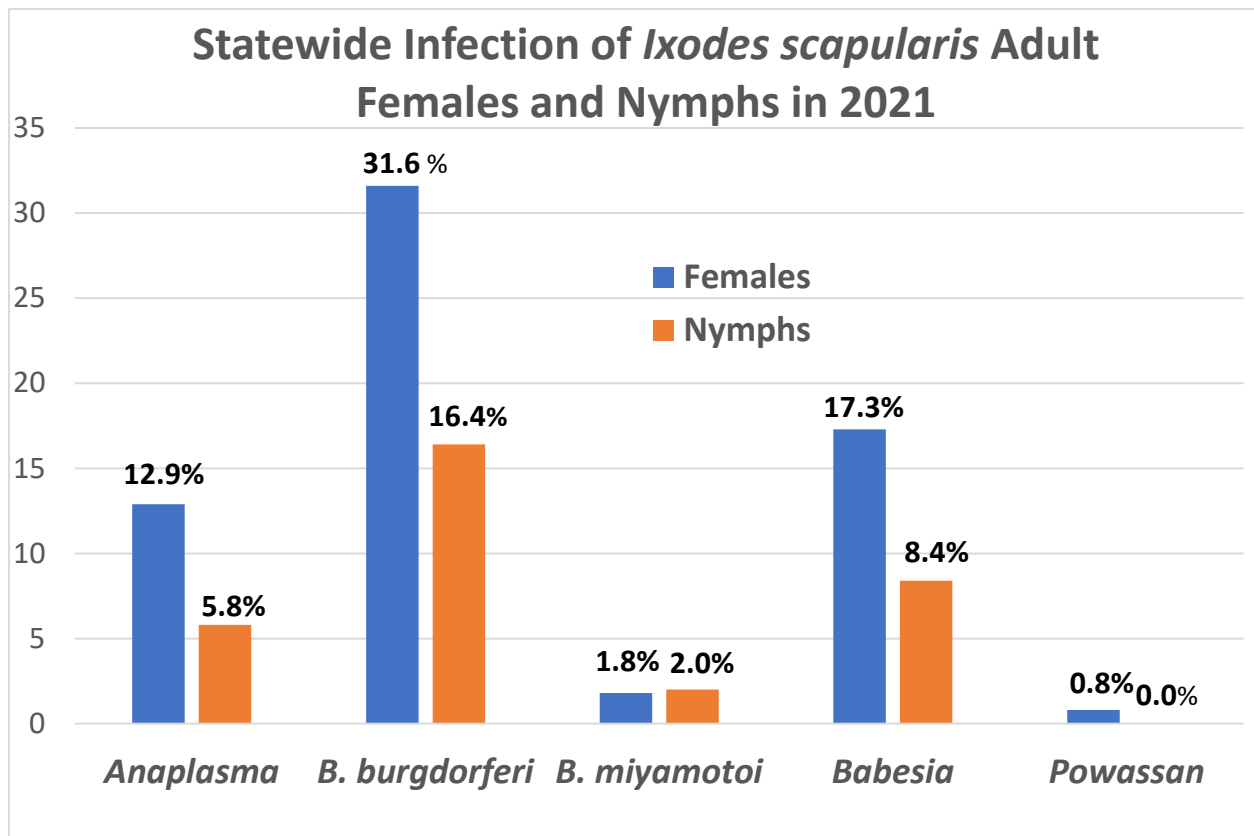


Figure 7: 2021 Statewide Infection Rates for Adult females and Nymphs