

## Summary of Tick Testing Results for 2020

A total of 4,051 ticks were submitted by residents, health departments, and physicians' offices to the Connecticut Agricultural Experiment Station-Tick Testing Laboratory (CAES-TTL) for identification in 2020. Of these, 3,519 (86.9%) were identified as *Ixodes scapularis* (blacklegged or deer tick), 367 (9.1%) as *Dermacentor variabilis* (American dog tick), 156 (3.9%) as *Amblyomma americanum* (lone star tick), and 9 (0.5%) as other tick species.

Scientific Name	Common Name	Number of Ticks (%)
<i>Ixodes scapularis</i>	blacklegged or deer tick	3,519 (86.9%)
<i>Dermacentor variabilis</i>	American dog tick	367 (9.1%)
<i>Amblyomma americanum</i>	lone star tick	156 (3.9%)
<i>Ixodes cookei</i>	woodchuck tick	6 (0.2%)
<i>Amblyomma maculatum</i>	Gulf Coast tick	1 (0.1%)
<i>Amblyomma oblongoguttatum</i>	-	1 (0.1%)
<i>Rhipicephalus sanguineus</i>	brown dog tick	1 (0.1%)

A total of 3,320\* adult female and nymphal blacklegged ticks were tested for evidence of infection with *Borrelia burgdorferi*, the causative organism of Lyme disease. Testing for additional tick-borne pathogens was established at the CAES-TTL in 2015 in response to an increase in human cases of tick-borne illnesses throughout the state. Blacklegged ticks screened for *B. burgdorferi* were also examined for evidence of infection with *Anaplasma phagocytophilum* and *Babesia microti*, the causative agents of anaplasmosis and babesiosis, respectively. Of the 3,320 ticks screened, 955 tested positive for *B. burgdorferi*, 190 for *A. phagocytophilum*, and 219 for *B. microti*. A total of 207 ticks were simultaneously co-infected with two or more pathogens as depicted in the table below.

Pathogen	Disease	Ticks Infected (%)
<i>Borrelia burgdorferi</i>	Lyme disease	955 (28.8%)
<i>Anaplasma phagocytophilum</i>	anaplasmosis	190 (5.7%)
<i>Babesia microti</i>	babesiosis	219 (6.6%)
<i>Borrelia + Anaplasma</i>	Lyme disease and anaplasmosis	83 (2.5%)
<i>Borrelia + Babesia</i>	Lyme disease and babesiosis	93 (2.8%)
<i>Anaplasma + Babesia</i>	anaplasmosis and babesiosis	20 (0.6%)
<i>Borrelia + Anaplasma + Babesia</i>	Lyme disease, anaplasmosis and babesiosis	11 (0.3%)

\*As of January 1, 2006, un-engorged ticks are no longer tested for tick-borne pathogens. Research has shown that un-engorged ticks (those that have not ingested blood) are unlikely to transmit disease-causing organisms.

In addition, within the framework of a passive tick surveillance program, the CAES-TTL effectively monitors the range expansion of native ticks and incursion of invasive ticks in Connecticut. This year, we discovered establishment of the lone star tick in New Haven county in addition to reported establishment of this tick in Fairfield county in 2019. In August 2020, we reported an established population of the Gulf Coast tick (*Amblyomma maculatum*) in Fairfield County for the first time in Connecticut and the Northeast. This tick is a vector of *Rickettsia parkeri*, an emerging pathogen in the U.S. Our analysis showed that 30% of the Gulf Coast ticks collected in Connecticut were infected with this pathogen. Furthermore, a major population of the invasive Asian longhorned tick (*Haemaphysalis longicornis*) was discovered in September 2020 in Fairfield County. This tick was first reported in 2017 from New Jersey and since then has spread to at least 15 states and is a

major pest and vector of several pathogens in its native range.

The number of blacklegged ticks submitted from each town and the number infected are summarized in the following table for the year 2020. If the town is served by a health district, its totals are included with the town listed in the second column. For example, Ansonia is served by the Naugatuck Valley Health District, which is located in Seymour. Any ticks that may have been received from Ansonia through the health district are included in the totals for Seymour. Any ticks received from individuals in Ansonia would be listed separately for Ansonia. Those totals reflect the data for all the towns served by the health district. For a directory of local health departments and districts, see the state website at: <http://www.ct.gov/dph/localhealth>.

Town	Health District Town	Total Identified	Total Tested	Positive for <i>Borrelia</i> (%)	Positive for <i>Anaplasma</i> (%)	Positive for <i>Babesia</i> (%)
Andover	Mansfield	12	9	5 (56%)	0 (0%)	1 (11%)
Ansonia	Seymour	4	4	0 (0%)	0 (0%)	1 (25%)
Ashford	Mansfield	3	3	1 (33%)	1 (33%)	0 (0%)
Avon	Canton	19	19	8 (42%)	2 (11%)	0 (0%)
Barkhamsted	Canton	3	3	0 (0%)	0 (0%)	0 (0%)
Beacon Falls	Seymour	6	5	0 (0%)	0 (0%)	0 (0%)
Berlin	Wethersfield	10	10	1 (10%)	0 (0%)	0 (0%)
Bethany	North Haven	25	25	9 (36%)	0 (0%)	3 (12%)
Bethel		41	37	10 (27%)	2 (5%)	0 (0%)
Bethlehem	Torrington	4	4	1 (25%)	0 (0%)	0 (0%)
Bloomfield		20	19	5 (26%)	1 (5%)	1 (5%)
Bolton	Mansfield	7	7	0 (0%)	0 (0%)	0 (0%)
Bozrah	Norwich	3	3	2 (67%)	1 (33%)	1 (33%)
Branford		36	35	7 (20%)	0 (0%)	4 (11%)
Bridgeport		4	4	1 (25%)	0 (0%)	0 (0%)
Bridgewater	Newtown	1	1	1 (100%)	0 (0%)	0 (0%)
Bristol		14	14	5 (36%)	1 (7%)	1 (7%)
Brookfield		52	50	15 (30%)	8 (16%)	4 (8%)
Brooklyn		4	3	2 (67%)	0 (0%)	1 (33%)
Burlington	Bristol	4	4	1 (25%)	0 (0%)	0 (0%)
Canaan	Torrington	0	0			
Canterbury	Brooklyn	3	3	2 (67%)	0 (0%)	0 (0%)
Canton		36	36	10 (28%)	1 (3%)	4 (11%)
Chaplin	Mansfield	0	0			
Cheshire		79	78	21 (27%)	5 (6%)	8 (10%)
Chester		2	2	2 (100%)	0 (0%)	0 (0%)
Clinton	Old Saybrook	4	4	0 (0%)	0 (0%)	1 (25%)
Colchester	East Hampton	4	4	0 (0%)	0 (0%)	0 (0%)
Colebrook	Canton	0	0			
Columbia	Mansfield	1	1	1 (100%)	0 (0%)	0 (0%)
Cornwall	Torrington	9	9	4 (44%)	0 (0%)	0 (0%)
Coventry	Mansfield	6	6	0 (0%)	0 (0%)	1 (17%)
Cromwell		7	7	3 (43%)	0 (0%)	0 (0%)
Danbury		44	40	12 (30%)	3 (8%)	2 (5%)
Darien		69	64	14 (22%)	2 (3%)	5 (8%)
Deep River	Old Saybrook	1	1	1 (100%)	0 (0%)	1 (100%)

Town	Health District Town	Total Identified	Total Tested	Positive for <i>Borrelia</i> (%)	Positive for <i>Anaplasma</i> (%)	Positive for <i>Babesia</i> (%)
Derby	Seymour	5	5	0 (0%)	0 (0%)	0 (0%)
Durham		18	17	5 (29%)	0 (0%)	1 (6%)
East Granby	Canton	5	5	2 (40%)	1 (20%)	0 (0%)
East Haddam	East Hampton	18	17	7 (41%)	0 (0%)	4 (24%)
East Hampton		30	26	7 (27%)	0 (0%)	4 (15%)
East Hartford		3	3	0 (0%)	0 (0%)	0 (0%)
East Haven	Branford	8	7	1 (14%)	0 (0%)	0 (0%)
East Lyme	New London	7	7	1 (14%)	0 (0%)	1 (14%)
East Windsor	Enfield	0	0			
Eastford	Brooklyn	1	1	0 (0%)	0 (0%)	0 (0%)
Easton		25	24	5 (21%)	0 (0%)	0 (0%)
Ellington	Enfield	6	6	0 (0%)	0 (0%)	0 (0%)
Enfield		11	10	4 (40%)	1 (10%)	1 (10%)
Essex		14	14	6 (43%)	2 (14%)	1 (7%)
Fairfield		77	72	17 (24%)	4 (6%)	6 (8%)
Farmington	Canton	27	26	9 (35%)	1 (4%)	1 (4%)
Franklin		2	2	0 (0%)	0 (0%)	0 (0%)
Glastonbury		30	28	8 (29%)	1 (4%)	2 (7%)
Goshen	Torrington	8	8	6 (75%)	2 (25%)	1 (13%)
Granby	Canton	10	9	3 (33%)	0 (0%)	0 (0%)
Greenwich		6	4	0 (0%)	0 (0%)	1 (25%)
Griswold	Norwich	1	0			
Groton	New London	9	9	2 (22%)	0 (0%)	1 (11%)
Guilford		51	49	9 (18%)	0 (0%)	2 (4%)
Haddam	Old Saybrook	5	4	1 (25%)	0 (0%)	0 (0%)
Hamden	North Haven	67	62	17 (27%)	1 (2%)	6 (10%)
Hampton	Brooklyn	1	1	1 (100%)	0 (0%)	0 (0%)
Hartford		10	10	2 (20%)	0 (0%)	0 (0%)
Hartland	Canton	0	0			
Harwinton	Torrington	9	8	1 (13%)	0 (0%)	0 (0%)
Hebron	East Hampton	10	10	2 (20%)	0 (0%)	0 (0%)
Kent	Torrington	5	5	3 (60%)	0 (0%)	0 (0%)
Killingly	Brooklyn	3	3	2 (67%)	0 (0%)	0 (0%)
Killingworth		5	4	1 (25%)	2 (50%)	1 (25%)
Lebanon	Norwich	8	8	3 (38%)	1 (13%)	2 (25%)
Ledyard	New London	4	4	2 (50%)	0 (0%)	0 (0%)

Town	Health District Town	Total Identified	Total Tested	Positive for <i>Borrelia</i> (%)	Positive for <i>Anaplasma</i> (%)	Positive for <i>Babesia</i> (%)
Lisbon	Norwich	4	3	1 (33%)	0 (0%)	0 (0%)
Litchfield	Torrington	16	14	4 (29%)	2 (14%)	1 (7%)
Lyme		2	2	1 (50%)	0 (0%)	0 (0%)
Madison		16	15	3 (20%)	0 (0%)	0 (0%)
Manchester		19	18	7 (39%)	1 (6%)	1 (6%)
Mansfield		24	21	8 (38%)	3 (14%)	1 (5%)
Marlborough	East Hampton	11	10	2 (20%)	1 (10%)	1 (10%)
Meriden		19	18	4 (22%)	1 (6%)	1 (6%)
Middlebury	Torrington	12	12	2 (17%)	1 (8%)	0 (0%)
Middlefield		10	10	1 (10%)	2 (20%)	1 (10%)
Middletown		16	16	3 (19%)	2 (13%)	1 (6%)
Milford		59	56	15 (27%)	3 (5%)	7 (13%)
Monroe		46	45	11 (24%)	1 (2%)	2 (4%)
Montville	Norwich	3	3	0 (0%)	0 (0%)	1 (33%)
Morris	Torrington	3	3	0 (0%)	1 (33%)	0 (0%)
Naugatuck	Seymour	8	8	1 (13%)	0 (0%)	1 (13%)
New Britain		9	9	6 (67%)	1 (11%)	2 (22%)
New Canaan		159	148	44 (30%)	7 (5%)	10 (7%)
New Fairfield		14	13	4 (31%)	0 (0%)	2 (15%)
New Hartford	Canton	5	5	1 (20%)	1 (20%)	0 (0%)
New Haven		37	36	9 (25%)	2 (6%)	4 (11%)
New London		66	64	17 (27%)	3 (5%)	5 (8%)
New Milford		57	56	16 (29%)	1 (2%)	3 (5%)
Newington	Wethersfield	1	1	0 (0%)	0 (0%)	0 (0%)
Newtown		172	166	55 (33%)	13 (8%)	7 (4%)
Norfolk	Torrington	0	0			
North Branford	Branford	14	14	4 (29%)	0 (0%)	1 (7%)
North Canaan	Torrington	0	0			
North Haven		40	39	11 (28%)	3 (8%)	4 (10%)
North Stonington	New London	5	5	2 (40%)	1 (20%)	0 (0%)
Norwalk		86	82	22 (27%)	1 (1%)	6 (7%)
Norwich		19	16	5 (31%)	0 (0%)	0 (0%)
Old Lyme	New London	10	10	2 (20%)	0 (0%)	1 (10%)
Old Saybrook		36	31	12 (39%)	0 (0%)	0 (0%)
Orange		44	43	10 (23%)	1 (2%)	3 (7%)
Oxford	Southbury	12	12	7 (58%)	2 (17%)	1 (8%)

Town	Health District Town	Total Identified	Total Tested	Positive for <i>Borrelia</i> (%)	Positive for <i>Anaplasma</i> (%)	Positive for <i>Babesia</i> (%)
Plainfield	Brooklyn	1	1	0 (0%)	0 (0%)	0 (0%)
Plainville	Southington	8	8	2 (25%)	0 (0%)	1 (13%)
Plymouth	Torrington	4	4	2 (50%)	0 (0%)	0 (0%)
Pomfret	Brooklyn	28	16	1 (6%)	0 (0%)	0 (0%)
Portland	East Hampton	3	3	1 (33%)	0 (0%)	0 (0%)
Preston		2	2	2 (100%)	0 (0%)	0 (0%)
Prospect	Cheshire	9	9	2 (22%)	0 (0%)	1 (11%)
Putnam	Brooklyn	6	5	3 (60%)	0 (0%)	1 (20%)
Redding		128	118	39 (33%)	22 (19%)	6 (5%)
Ridgefield		116	111	33 (30%)	14 (13%)	8 (7%)
Rocky Hill	Wethersfield	24	23	5 (22%)	0 (0%)	1 (4%)
Roxbury	Newtown	6	6	1 (17%)	0 (0%)	1 (17%)
Salem	Norwich	1	1	0 (0%)	0 (0%)	0 (0%)
Salisbury	Torrington	9	8	4 (50%)	2 (25%)	1 (13%)
Scotland	Mansfield	0	0			
Seymour		29	29	8 (28%)	2 (7%)	1 (3%)
Sharon		3	3	1 (33%)	0 (0%)	0 (0%)
Shelton	Seymour	22	21	5 (24%)	3 (14%)	3 (14%)
Sherman		13	12	4 (33%)	1 (8%)	1 (8%)
Simsbury	Canton	14	13	3 (23%)	0 (0%)	0 (0%)
Somers		5	4	1 (25%)	0 (0%)	0 (0%)
South Windsor		10	10	2 (20%)	0 (0%)	1 (10%)
Southbury		111	107	42 (39%)	4 (4%)	11 (10%)
Southington		27	27	8 (30%)	3 (11%)	1 (4%)
Sprague	Norwich	0	0			
Stafford	Enfield	9	9	1 (11%)	0 (0%)	1 (11%)
Stamford		145	138	31 (22%)	7 (5%)	6 (4%)
Sterling	Brooklyn	0	0			
Stonington	New London	8	8	5 (63%)	0 (0%)	1 (13%)
Stratford		22	20	8 (40%)	2 (10%)	2 (10%)
Suffield	Enfield	3	2	1 (50%)	0 (0%)	0 (0%)
Thomaston	Torrington	2	2	1 (50%)	0 (0%)	0 (0%)
Thompson	Brooklyn	3	3	0 (0%)	0 (0%)	0 (0%)
Tolland	Mansfield	5	5	0 (0%)	0 (0%)	0 (0%)
Torrington		55	53	18 (34%)	4 (8%)	3 (6%)
Trumbull		120	108	36 (33%)	5 (5%)	9 (8%)

<b>Town</b>	<b>Health District Town</b>	<b>Total Identified</b>	<b>Total Tested</b>	<b>Positive for <i>Borrelia</i> (%)</b>	<b>Positive for <i>Anaplasma</i> (%)</b>	<b>Positive for <i>Babesia</i> (%)</b>
Union	Brooklyn	0	0			
Vernon	Enfield	4	4	1 (25%)	0 (0%)	0 (0%)
Voluntown	Norwich	0	0			
Wallingford		43	36	7 (19%)	1 (3%)	1 (3%)
Warren	Torrington	4	4	1 (25%)	0 (0%)	1 (25%)
Washington		5	4	3 (75%)	0 (0%)	0 (0%)
Waterbury		10	10	2 (20%)	1 (10%)	0 (0%)
Waterford	New London	7	7	2 (29%)	0 (0%)	0 (0%)
Watertown	Torrington	12	12	4 (33%)	0 (0%)	0 (0%)
West Hartford	Bloomfield	21	21	5 (24%)	0 (0%)	1 (5%)
West Haven		7	6	3 (50%)	1 (17%)	0 (0%)
Westbrook		3	3	0 (0%)	0 (0%)	0 (0%)
Weston	Westport	6	5	2 (40%)	1 (20%)	0 (0%)
Westport		82	80	14 (18%)	4 (5%)	3 (4%)
Wethersfield		2	1	0 (0%)	0 (0%)	1 (100%)
Willington	Mansfield	0	0			
Wilton		201	182	53 (29%)	8 (4%)	4 (2%)
Winchester	Torrington	6	6	3 (50%)	1 (17%)	1 (17%)
Windham	Enfield	4	4	0 (0%)	0 (0%)	0 (0%)
Windsor		13	13	3 (23%)	3 (23%)	0 (0%)
Windsor Locks	Enfield	1	1	0 (0%)	0 (0%)	1 (100%)
Wolcott	Cheshire	1	1	0 (0%)	0 (0%)	0 (0%)
Woodbridge	North Haven	33	32	15 (47%)	3 (9%)	4 (13%)
Woodbury	Southbury	5	5	2 (40%)	1 (20%)	1 (20%)
Woodstock	Brooklyn	7	7	4 (57%)	0 (0%)	0 (0%)