



## Surveillance of Ticks on Companion Animals in Alberta

### 2017 Summary



2017 marked the 11<sup>th</sup> year for Alberta Agriculture and Forestry's *Surveillance of Ticks on Companion Animals* program. The program originated in 2007 in collaboration with veterinarians in Alberta, and expanded in 2013 through a partnership with Alberta Health and Alberta Health Services. The *Enhanced Tick Surveillance Program* now monitors the types of ticks that attach to companion animals, livestock, and humans, as well as those found in the environment.

Certain species of tick, such as *Ixodes scapularis* and *Ixodes pacificus*, are considered to be possible carriers of *Borrelia burgdorferi*, the bacteria that causes Lyme disease. All ticks received that are possible carriers of *B. burgdorferi* are further tested for the presence of the bacteria to better understand the risk of Lyme disease in Alberta.

#### Program Highlights:

- 1,942 ticks from 1,356 host companion animals were submitted, 78% of ticks submitted between April, May, June and July.
- Ticks were primarily recovered from dogs (89%), with horses (4%), cats (4%), and others (rabbits, cows, etc.) comprising the remainder of submissions.
- Of the 1,356 submissions\*, 413 host animals had associated travel outside of Alberta in the two weeks prior to the submission, 857 host animals had no associated travel, and 86 submissions were received with no travel history.
- Of the 288 ticks identified as possible carriers of *B. burgdorferi*, 50 tested positive for presence of the bacteria.

#### Distribution of Tick Species:

Tick species	# submissions*	%	# ticks	%	Travel outside of Alberta 2 weeks prior to submission?		
					Yes	No	Unknown
<i>Dermacentor variabilis</i>	579	43	880	45	300	249	30
<i>Ixodes scapularis</i>	239	18	248	13	26	202	11
<i>Dermacentor andersoni</i>	147	11	172	9	33	103	11
<i>Dermacentor albipictus</i>	133	10	290	15	4	117	12
<i>Ixodes kingi</i>	110	8	147	8	3	99	8
<i>Rhipicephalus sanguineus</i>	58	4	98	5	20	36	2
<i>Ixodes spp.</i>	34	3	34	2	5	27	2
<i>Haemaphysalis leporispalustris</i>	19	1	36	2		13	6
<i>Ixodes pacificus</i>	15	1	15	<1	13	2	
<i>Ixodes ochotonae</i>	9	<1	9	<1	3	4	2
<i>Amblyomma americanum</i>	4	<1	4	<1	3	1	
<i>Amblyomma maculatum</i>	4	<1	4	<1	1	2	1
<i>Otobius megnini</i>	2	<1	2	<1	1	1	
<i>Amblyomma spp.</i>	1	<1	1	<1			1
<i>Dermacentor nitens</i>	1	<1	1	<1	1		
<i>Dermacentor spp.</i>	1	<1	1	<1		1	
<b>TOTAL</b>	<b>1356</b>		<b>1942</b>		<b>413</b>	<b>857</b>	<b>86</b>

\*A single submission includes all ticks recovered from an individual host animal

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## 2017 Summary continued

### Results of Testing for the Presence of *Borrelia burgdorferi*:

Real-Time PCR Result <sup>σ</sup>	# submissions	%	# ticks	%	Travel outside of Alberta 2 weeks prior to submission?		
					Yes	No	Unknown
Negative	238	83	243	82	39	189	10
Positive	50	17	54	18	5	42	3
<b>TOTAL</b>	<b>288</b>		<b>297</b>		<b>44</b>	<b>231</b>	<b>13</b>

<sup>σ</sup>A positive *Borrelia burgdorferi* result by Real-Time PCR indicates the presence of bacterial DNA. The presence of bacterial DNA does not indicate whether the bacterium is viable or whether the bacterium has caused an infection.

### Locations of ticks submitted by veterinarians in 2017 that tested positive for the *B. burgdorferi* bacteria and were from host animals that had not left Alberta

Hometown	# submissions
Airdrie	1
Ardrossan	2
Athabasca	2
Barrhead	1
Brooks	1
Coaldale	1
Cold Lake	1
Donalda	1
Edmonton	5
Enoch	1
Innisfail	1
Lac La Biche	1
Lacombe	1
Leduc	1
Medicine Hat	1
Ohaton	1
Parkland	1
Sherwood Park	2
Spruce Grove	1
St. Albert	2
Vegreville	1
Vermilion	1
Wetaskiwin	2
Host animal travelled within Alberta (i.e. not sure exactly where they acquired the tick)	10
<b>Total</b>	<b>42</b>

This report summarizes the results of all submissions of companion animal origin in 2017. Submissions are voluntary from provincial veterinarians, who are important partners in monitoring the risk of Lyme disease in Alberta.

Refer to [www.health.alberta.ca/ticks](http://www.health.alberta.ca/ticks) for additional results of the *Enhanced Tick Surveillance Program*.

For more information, visit [www.agriculture.alberta.ca/ticks](http://www.agriculture.alberta.ca/ticks).