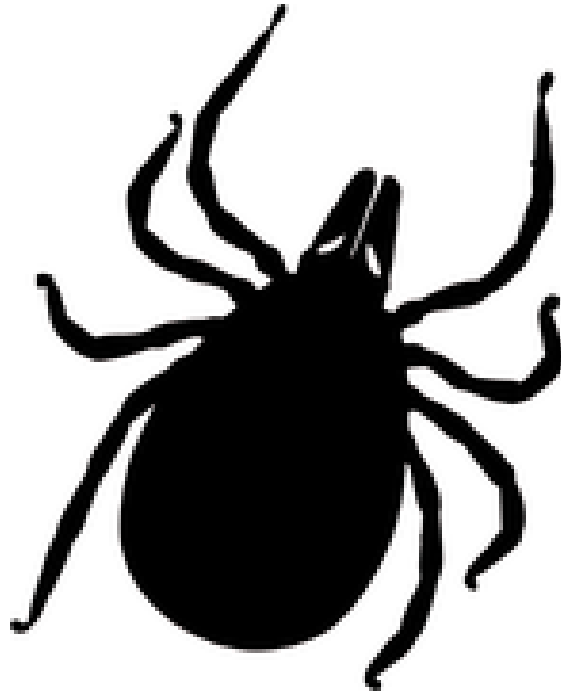


North Dakota Tick Surveillance Program Annual Report



2023

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Division of Laboratory Services
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2023 North Dakota Tick Surveillance Program's Mission

Through tick collection and speciation, the North Dakota Department of Health and Human Services (NDHHS) monitors the risk of infection from tickborne pathogens known to exist in this region. The North Dakota Tick Surveillance Team focuses on *Dermacentor variabilis* and *Ixodes scapularis* for pathogen identification.

North Dakota Tick Surveillance Program Overview

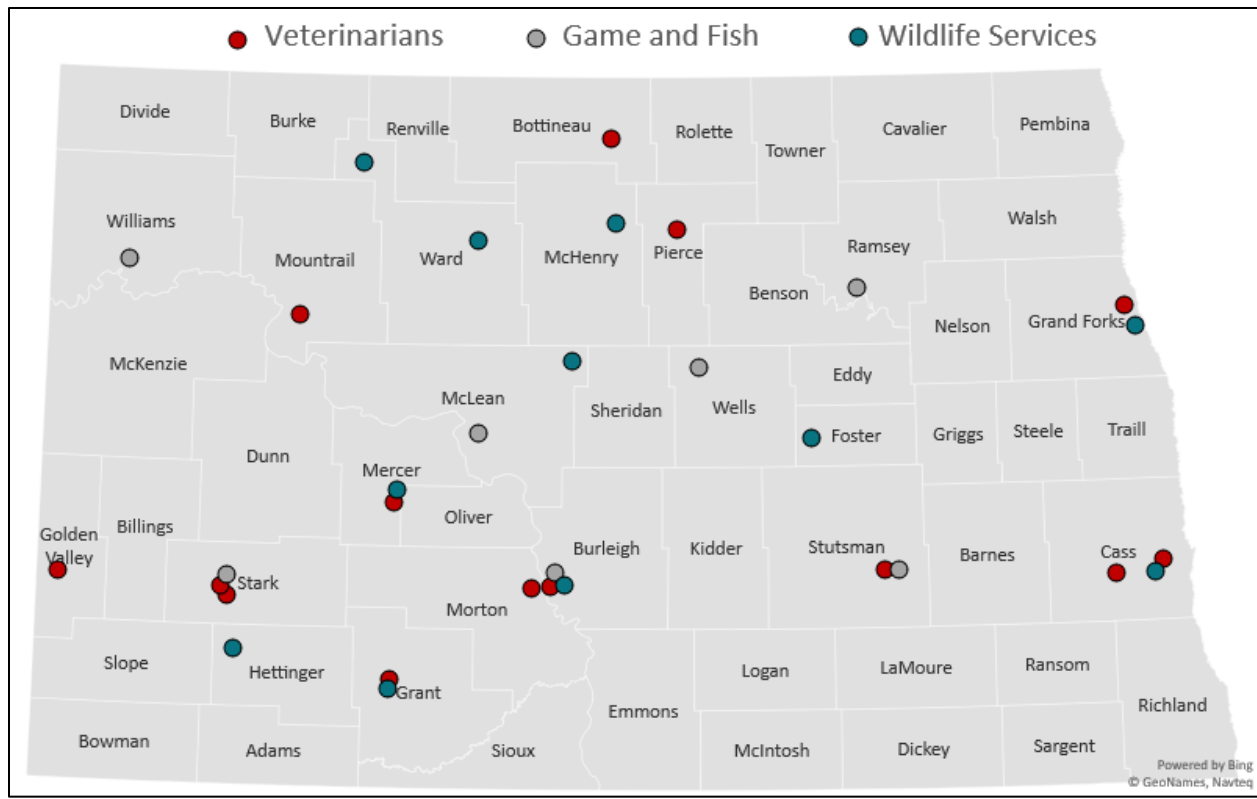
In 2023 passive tick surveillance included 14 veterinarians, 7 Game and Fish staff, and 14 Wildlife Service staff. Passive tick surveillance is when ticks are collected from animals and humans and does not include trapping or active searching for ticks. Submissions were received weekly starting week one of collection on April 16th-22nd and ending week 16 July 30th-August 5th. One additional submitter located in Grassy Butte collected ticks and sent in results starting week three of the season, ending week 10. All weeks and their respective dates are detailed in this report.

Active tick surveillance - ticks that were collected from traps or from dragging a collection cloth across the ground to collect ticks - was conducted from mid-May through the first week of July. CO₂ traps were deployed at three locations, Grand Forks, Devils Lake, and Linton. State employees also conducted two trips to two locations for dragging and CO₂ trapping, one in Little Yellowstone Park in Kathryn, ND, and the other at a private residence outside Wilton, ND.

Lastly, an additional 11 ticks were submitted for identification via the ND Submit a Tick Picture email. The email link can be found on the NDHHS website at: [Tickborne Diseases | Health and Human Services North Dakota](#), with the link located at the bottom of the page. Ticks submitted via email were included in passive and total surveillance numbers. No ticks were submitted via postal mail.

2023 Passive Tick Surveillance Sites

Collection partner locations are seen in the map below. Red dots correspond with veterinarians, gray dots for base locations of Game and Fish staff, and blue dots for base locations of Wildlife Services staff. Ticks passively collected by each partner may have come from other locations depending on where animals going to the veterinarian live, and whether Game and Fish or Wildlife Services staff travel to other locations within their jurisdiction.

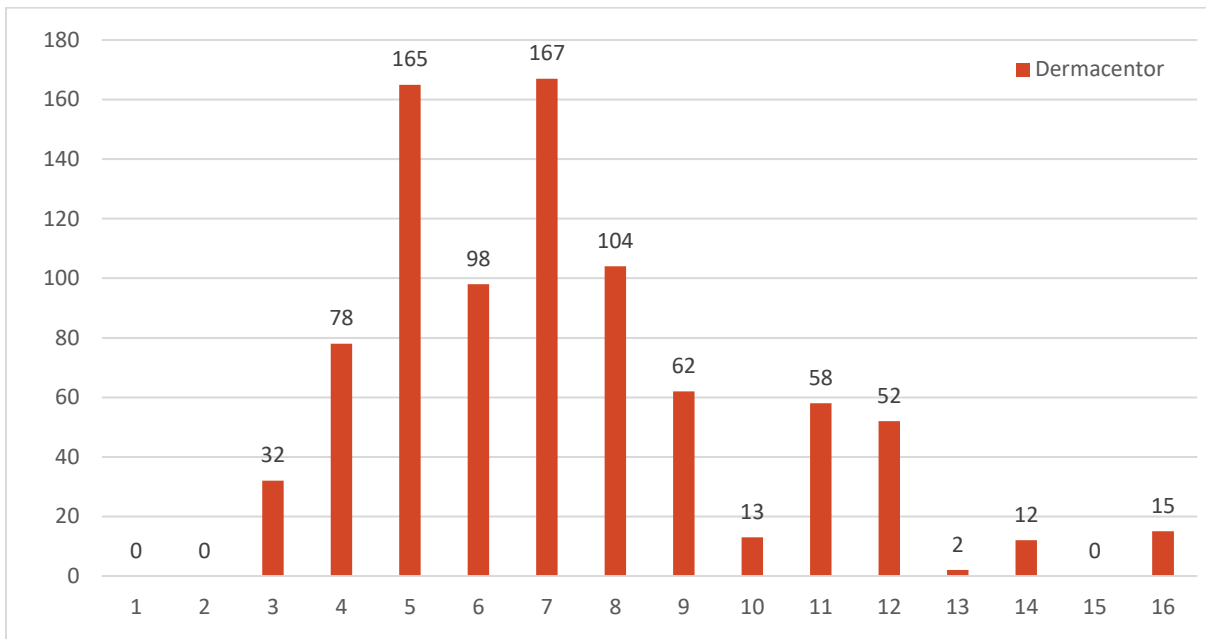


2023 Tick Surveillance Partners	
Veterinarians	
Name	City
All Pets Hospital	Grand Forks
All Pets Veterinary Clinic	Bismarck
Beach Veterinary Clinic	Beach
Casselton Veterinary	Casselton
Casselton Veterinary Service-Fargo	Fargo
Dakota Prairie Veterinary Service	New Town
Dr. Dawn's Pet Shop	Jamestown
Elgin Veterinary Service	Elgin
Heart River Animal Hospital	Mandan
Knife River Veterinary Clinic	Beulah
Rugby Veterinary Service	Rugby
State Ave Vet	Dickinson
Turtle Mountain Veterinary Service	Bottineau
West Dakota Veterinary Clinic	Dickinson

Game and Fish	
Game and Fish- Bismarck	Bismarck
Game and Fish- Devils Lake	Devils Lake
Game and Fish- Dickinson	Dickinson
Game and Fish- Lonetree WMA	Harvey
Game and Fish- Riverdale	Riverdale
Game and Fish- Jamestown	Jamestown
Game and Fish- Williston	Williston
Wildlife Services	
Brent Belland	New England
Jeremy Duckwitz	Moffit
Aaron Freund	Towner
Tyler Haase	Kenmare
Mike Halstead	Elgin
Rick Tischafer	Butte
Dean Janzen	Niagara
Nick Suzda	Minot AFB
Cody Krause	Carrington
Joshua Kuechle	Grand Forks
Nat Bornsen	Larimore
Kirby Morgenstern	Beulah
Wade Jones	Bismarck
Tony Halpin	West Fargo

2023 Tick Submissions by Week

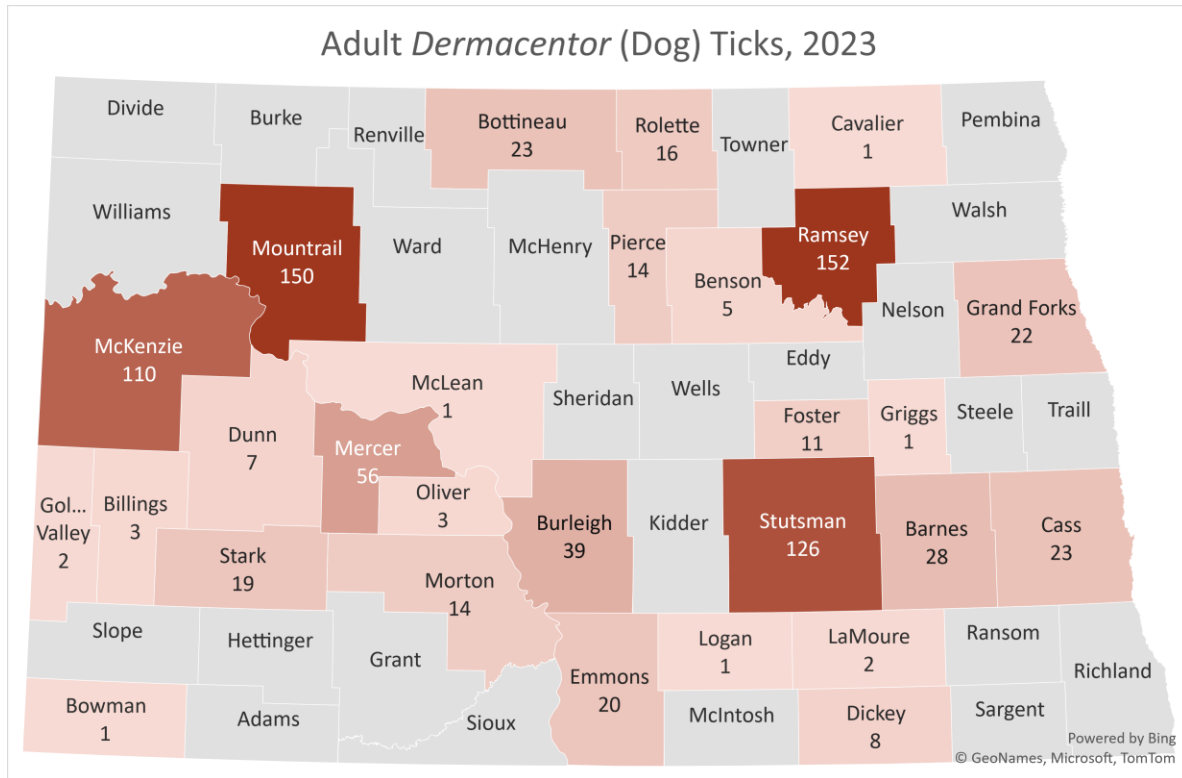
A total of 858 *Dermacentor variabilis* “Dog” ticks, three *Ixodes scapularis* “Deer” ticks, one *Amblyomma maculatum* “Gulf Coast” tick, and one *Amblyomma americanum* “Lone Star” tick were collected via all surveillance methods in 2023. Due to large numbers of dog ticks and small numbers of other ticks, only dog ticks are shown. Values on the x-axis correspond with collection weeks displayed in the table below.

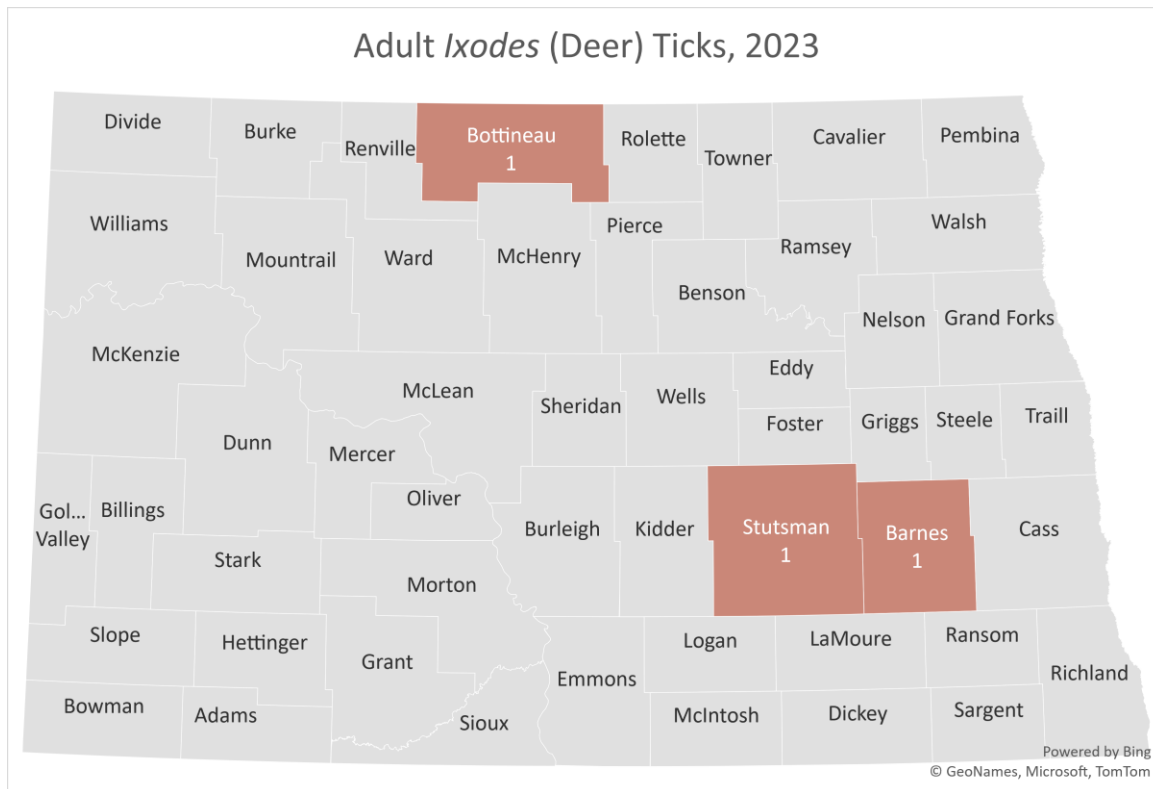


2023 Tick Surveillance	
Week	Collection Week
1	April 16- April 22
2	April 23-April 29
3	April 30-May 6
4	May 7-May 13
5	May 14-May 20
6	May 21-May 27
7	May 28-June 3
8	June 4-June 10
9	June 11-June 17
10	June 18-June 24
11	June 25-July 1
12	July 2-July 8
13	July 9-July 15
14	July 16-July 22
15	July 23-July 29
16	July 30-August 5

Total (Active and Passive) Tick Submission by County

Maps below depict counties in which ticks were collected. Counties without data do not indicate a lack of ticks, rather that surveillance was not taking place in those locations, or no ticks were collected within those counties.





Passive Tickborne Pathogen Testing

Dog ticks were pooled by week and region. Each pool was tested for the following targets: *Francisella tularensis*, *Babesia* spp., *Rickettsia parkeri*, *Rickettsia rickettsii*, *Borrelia burgdorferi*, *Anaplasma* spp., *Ehrlichia muris*, Powassan virus, and Colorado Tick Fever. Only one pool from week 7, region 6, which included Barnes, Dickey, Foster, Griggs, and Stutsman counties, tested positive for *Francisella tularensis*.

Deer ticks were sent to CDC for testing. Each tick was tested for the following targets: *Anaplasma phagocytophilum* (both human and non-human active strain), *Borrelia burgdorferi*, *Borrelia mayonii*, *Borrelia miyamotoi*, *Babesia microti*, and *Ehrlichia muris eauclairensis*. All ticks tested negative for all targets.

Ticks Submitted Via NDHHS Website Link

A total of 10 tick pictures were submitted via the NDHHS website link during the tick season, and one in late October. Six of the ticks were identified as dog ticks. One tick was identified as a lone star tick from Cass County. Three ticks could not be identified due to their engorged state. The tick from late October was identified as a deer tick from a hunter around the Turtle Mountain region. No ticks were mailed to the NDHHS lab for pathogen testing.

Resources

For additional resources on past tick data, tickborne disease, and how to handle ticks, please visit the NDHHS website at: [Tickborne Diseases | Health and Human Services North Dakota](#). Additional information concerning ticks can be found on the CDC website at: [Ticks | Ticks | CDC](#).