

# MICHIGAN TICK DATA

**Publication Date:** 11/17/2017

## Abstract

Ticks are closely related to insects and spiders, and must feed on the blood of animals to survive. There are over 20 known tick species in Michigan, but only a handful bite people. Ticks have three life stages – larval, nymphal and adult, and are generally found in forested or brushy areas. Ticks feed painlessly by attaching themselves to the skin with their piercing mouthparts. They can attach anywhere on the body, but are commonly found in the hairline, ears, waistline, armpit, and groin. Some ticks may transmit diseases to people so it is important to practice tick-bite prevention, remove ticks immediately, and seek prompt care if experiencing symptoms of illness after a tick bite. For more information, please visit [www.michigan.gov/emergingdiseases](http://www.michigan.gov/emergingdiseases).

## Purpose

This dataset allows for a better understanding of the spatial and temporal patterns of medically-important tick species across Michigan. The public data portal will provide public health professionals, researchers, and the general public with data and information about the [five most common ticks in Michigan](#). The data can be used to calculate the number of ticks submitted for identification through the Michigan Department of Health and Human Services ([MDHHS Tick Identification Program](#)).

## Supplemental Information

Ticks are significant carriers of pathogens that cause human and animal disease. Listed below is a ranked order of the [ticks most likely to bite humans in Michigan](#):

### 1. American dog tick (*Dermacentor variabilis*)

**Distribution:** Widespread throughout Michigan forests and grassy areas

**Key Facts:** These ticks are active from early May-November and bite both humans and companion animals.

**Diseases:** Rocky Mountain spotted fever and tularemia

### 2. Blacklegged tick (*Ixodes scapularis*)

**Distribution:** Emerging in Michigan

**Key Facts:** Found on low forest vegetation, often along human and animal trails. They can bite both humans and companion animals.

**Diseases:** Lyme disease, anaplasmosis, babesiosis, deer-tick virus, and other emerging pathogens

### 3. Lone star tick (*Amblyomma americanum*)

**Distribution:** Occasionally found in wooded and grassy areas across the state

**Key Facts:** An aggressive biter of humans and companion animals. Adult females have distinctive “Lone Star” marks.

**Diseases:** Human ehrlichiosis, Southern Tick-Associated Rash Illness (STARI), and tularemia

### 4. Woodchuck tick (*Ixodes cookei*)

**Distribution:** Found most commonly on pets throughout Michigan

**Key Facts:** Usually found near dens of skunks and woodchucks. Will bite companion animals near animal dens and occasionally humans.

**Diseases:** Powassan encephalitis

#### **5. Brown dog tick (*Rhipicephalus sanguineus*)**

**Distribution:** Occasionally found in Michigan

**Key Facts:** Can survive and breed in indoor environments. Has been associated with kennel, shelter, and breeding facilities. Good hygiene practices can prevent indoor infestations. They may bite both humans and companion animals.

**Diseases:** Rocky mountain spotted fever, canine babesiosis, and canine ehrlichiosis

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#### **Keywords**

Tick, Ticks, Blacklegged, Dog, Lone Star, Woodchuck, Lyme, Lyme disease, Rocky Mountain Spotted Fever, Anaplasmosis, Babesiosis, Deer-tick, Ehrlichiosis, Tularemia, Powassan encephalitis, Tick-borne, Tick-related, Emerging disease, Woods, Wooded, Forest, Outdoor, Vector, Insect, Insects, Bite, Bites, Insect bite, Tick bite

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#### **Bounding Coordinates**

West Bounding Coordinate: -90.418133999999995

East Bounding Coordinate: -82.418394000000006

North Bounding Coordinate: 48.189534000000002

South Bounding Coordinate: 41.696088000000003

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#### **Other Information on Data**

**Level of Geographic Detail:** County

**Currentness Reference (when data were last updated):** 7/19/2017

**Frequency at which the data are updated:** Annually

**Data Status:** Complete

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#### **Completeness Report**

These data are complete for all reports as of 7/19/2017. Data from 2014 are currently unavailable in electronic format. For information about ticks reported in 2014, please contact the MDHHS EZID Section at 517-335-8165.

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#### **Data Processing Description**

This dataset was created through the MDHHS Tick Identification Program. Prior to 2017, the Michigan Department of Agriculture and Rural Development (MDARD) administered the program, and provided data to the MDHHS. As of 2017, the MDHHS has administered the program.

Healthcare providers and the public may submit ticks for identification and potential testing for Lyme disease. Ticks that were submitted from people that were identified as blacklegged ticks (formerly deer ticks) and were alive were forwarded to the MDHHS Bureau of Laboratories for Lyme disease screening at no cost. Ticks that were dead when they were received or were from animals (dog, cat, horse, etc.) were not tested.

Data points relevant to the MiTracking data portal include county where the tick encounter likely occurred, date of collection, and tick species. All new ticks submitted by individuals from Michigan and each Michigan county where the tick was believed to be encountered were counted. Those numbers were filtered by tick species. These steps were repeated for each available year of data.

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### ***Access Constraints***

There are no access constraints for data available through the Michigan Environmental Public Health Tracking program public portal.

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### ***Use Constraints***

It is recommended that all users read and fully comprehend the metadata prior to data use. Efforts have been made to assure the accuracy of the data. MDHHS specifically disclaims responsibility for any analyses, interpretations, or conclusions made by those who access this information.

These data remain the property of MDHHS Emerging & Zoonotic Infectious Diseases Section and cannot be used for commercial purposes and shall not be used to engage in any method, act, or practice to conduct the solicitation or advertisement of goods, services, or real estate to Michigan consumers without first obtaining written permission from MDHHS.

Data users are prohibited from attempting to learn the identity of any person included in the data and from linking these data with any other data for the purpose of matching records to identify individuals or entities (such as hospitals).

The Michigan Environmental Public Health Tracking Program has released these data in collaboration with the MDHHS Emerging & Zoonotic Infections Diseases (EZID) Section, abiding by their suppression rules and quality controls.

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### ***Security Handling Description***

If data are distributed, the use constraints specified in this metadata apply to all recipients of the data.

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### ***Distribution Liability***

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If errors or otherwise inappropriate information is brought to our attention, a reasonable effort will be made to fix or remove it. Such concerns should be addressed to the Michigan Tracking Program.

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### ***Custom Order Process***

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For access to national and multi-state unrestricted or public use data, please see:

<http://ephtracking.cdc.gov>

For access to unrestricted or public use Michigan-specific data, please contact the MDHHS EZID Section at 517-335-8165.

For access to restricted or secure data, please contact the Michigan Tracking Program.

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**Contact Information**

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