



National *Haemaphysalis longicornis* (longhorned tick) Situation Report – July 17, 2018

New information in blue

***Haemaphysalis longicornis* background:**

Haemaphysalis longicornis (*H. longicornis*), an exotic East Asian tick, has never previously established a population in the United States. It is a known serious pest of livestock in the Australasian and Western Pacific Regions where it occurs. It is an aggressive biter and frequently builds intense infestations on domestic hosts causing great stress, reduced growth and production, and severe blood loss. The tick can reproduce parthenogenetically (without a male); as such, a single fed female tick can create a population. It is also a known/suspected vector of several viral, bacterial, and protozoan agents of livestock and human diseases. This three-host tick can spread pathogens among a diverse host range, on which it feeds side-by-side with other tick species. The detections detailed here are the first reports of this tick out of quarantine in the United States.

Recent highlights of tick detections:

- Six states (Arkansas, New Jersey, [New York](#), [North Carolina](#), Virginia, and West Virginia) have NVSL confirmed infestations with *H. longicornis*. Both New Jersey and Virginia have activated a state incident management team (IMT). [However, the New Jersey IMT deactivated June 2018.](#)
- The current host list from this introduction includes a dog, a [cat](#), a cow, a goat, a sheep, a white-tailed deer, an opossum, a raccoon, a horse, and a human.
- July 2018, the National Veterinary Services Laboratories (NVSL) confirmed a nymphal *H. longicornis* from Bergen County, New Jersey. This detection is the fifth confirmed county in New Jersey after Hunterdon, Union, Middlesex, and Mercer Counties.
- June 2018, NVSL confirmed a nymphal *H. longicornis* previously attached to a human from Westchester County, New York.
- June 2018, NVSL confirmed an *H. longicornis* upon reexamination of a sample submitted in 2017 collected from an opossum located in Polk County, North Carolina. This is the first detection of *H. longicornis* from North Carolina.
- June 2018, NVSL confirmed a larval *H. longicornis* upon reexamination of a sample submitted in 2010 from a white-tailed deer from Tyler County, West Virginia. This correct identification backdates the first collection of *H. longicornis* in the United States to August 2010, and is the fourth West Virginia county.

- West Virginia has nine confirmed counties for *H. longicornis*: cows (Hardy County), dogs (Putnam, Ritchie, Lincoln, and Mason Counties), White-tailed Deer (Tyler and Taylor Counties), a cat (Marion County), and the environment (Monroe County).
- Virginia has seven confirmed counties for *H. longicornis*: cows (Albemarle, Page, and Pulaski Counties), horses (Warren County), a goat (Louisa County), and the environment (Fairfax and Smyth Counties).
- On June 2018, NVSL confirmed an *H. longicornis* from Benton County, Arkansas submitted from a dog through a research project at Oklahoma State University. Although, a sample was not available for site identification at NVSL. NVSL was able to confirm via a photograph and via molecular typing to *H. longicornis* at Oklahoma State.

H. longicornis Surveillance and Testing: August 2017 – July 2018

Table 1. Summary of significant *H. longicornis* findings

| | | | | | | |
|----------------------|----------|------------|----------|----------------|----------|---------------|
| Affected States Key: | Arkansas | New Jersey | New York | North Carolina | Virginia | West Virginia |
|----------------------|----------|------------|----------|----------------|----------|---------------|

| Host | Location (county site #) | Date ticks collected | Date ticks identified | Significance |
|---------------------|--------------------------|----------------------|-----------------------|--|
| Sheep | Hunterdon Co, NJ (1) | August-November 2017 | 11/9/17 | First detection of <i>H. longicornis</i> in U.S. outside quarantine. |
| Environment | Hunterdon Co, NJ (1) | 4/13/18 | 4/17/18 | Ticks collected after emerging from diapause |
| White-tailed Deer | Hunterdon Co, NJ (2) | 4/19/2018 | 4/24/18 | First time tick found on wildlife. New host record. |
| Environment | Union Co, NJ | May 2017 | 4/23/18 | Second NJ County. Watchung Reservation |
| Cow | Albemarle Co, VA | March 2018 | 5/14/18 | First detection in VA |
| Environment | Middlesex Co, NJ | 5/10/18 | 5/14/18 | Third NJ County. Rutgers Farm. Tick Blitz. |
| Opossum and Raccoon | Hunterdon Co, NJ (3) | 5/3/18 | 5/25/18 | New U.S. host |
| Horse | Warren Co, VA | 5/10/18 | 5/25/18 | Second VA county and new host |
| Cows | Hardy Co, WV | 5/18/18 | 5/21/18 | First detection in W. Virginia. Two separate premises. |
| Goats | Middlesex Co, NJ | 5/24/18 | 5/29/18 | New host. Rutgers farm |
| Environment | Mercer Co, NJ | 5/10/18 | 6/1/18 | Fourth NJ County. Tick Blitz |
| Dog | Union Co, NJ | 2013 | 6/1/18 | Watchung Reservation. |
| Dog | Benton County, AR | 5/1/2018 | 6/5/2018 | First detection in Arkansas |

| | | | | |
|-------------------|------------------------|-----------|------------|--|
| Environment | Fairfax County, VA | 3/27/2017 | 6/7/2018 | Third VA County |
| Dog | Putnam County, WV | 5/2/2018 | 6/18/18 | Second WV county |
| Dog | Ritchie County, WV | 5/26/2018 | 6/19/18 | Third WV county |
| White-tailed Deer | Tyler County, WV | 8/31/2010 | 6/25/2018* | Fourth WV county. Back dates first U.S. detection to 2010. |
| Opossum | Polk County, NC | 9/15/2017 | 6/25/2018* | First detection in North Carolina |
| Human | Westchester County, NY | 6/4/2018 | 6/28/2018 | First detection in New York. New host. |
| Dog | Lincoln County, WV | 4/19/2018 | 6/27/2018 | Fifth WV county |
| White-tailed Deer | Taylor County, WV | 9/1/2017 | 6/28/2018 | Sixth WV county. |
| Environment | Smyth County, VA | 6/7/2018 | 6/28/2018 | Fourth VA County |
| Goat | Louisa County, VA | 6/12/2018 | 6/28/2018 | Fifth VA County |
| Cow | Page County, VA | 6/25/2018 | 6/29/2018 | Sixth VA County |
| Cat | Marion County, WV | 6/7/2018 | 7/6/2018 | Seventh WV County. New host. |
| Environment | Monroe County, WV | 7/2/2018 | 7/9/2018 | Eighth WV County |
| Cow | Pulaski County, VA | 7/5/2018 | 7/11/2018 | Seventh VA County |
| Dog | Mason County, WV | 7/7/2018 | 7/11/2018 | Ninth WV County |
| Environment | Bergen County, NJ | 7/12/2018 | 7/16/2018 | Fifth NJ County |

*Previously misidentified as *H. leporispalustris* by NVSL. On reexamination, they were correctly identified to *H. longicornis* and confirmed on the date listed.

Figure 1. Map of *H. longicornis* infested counties

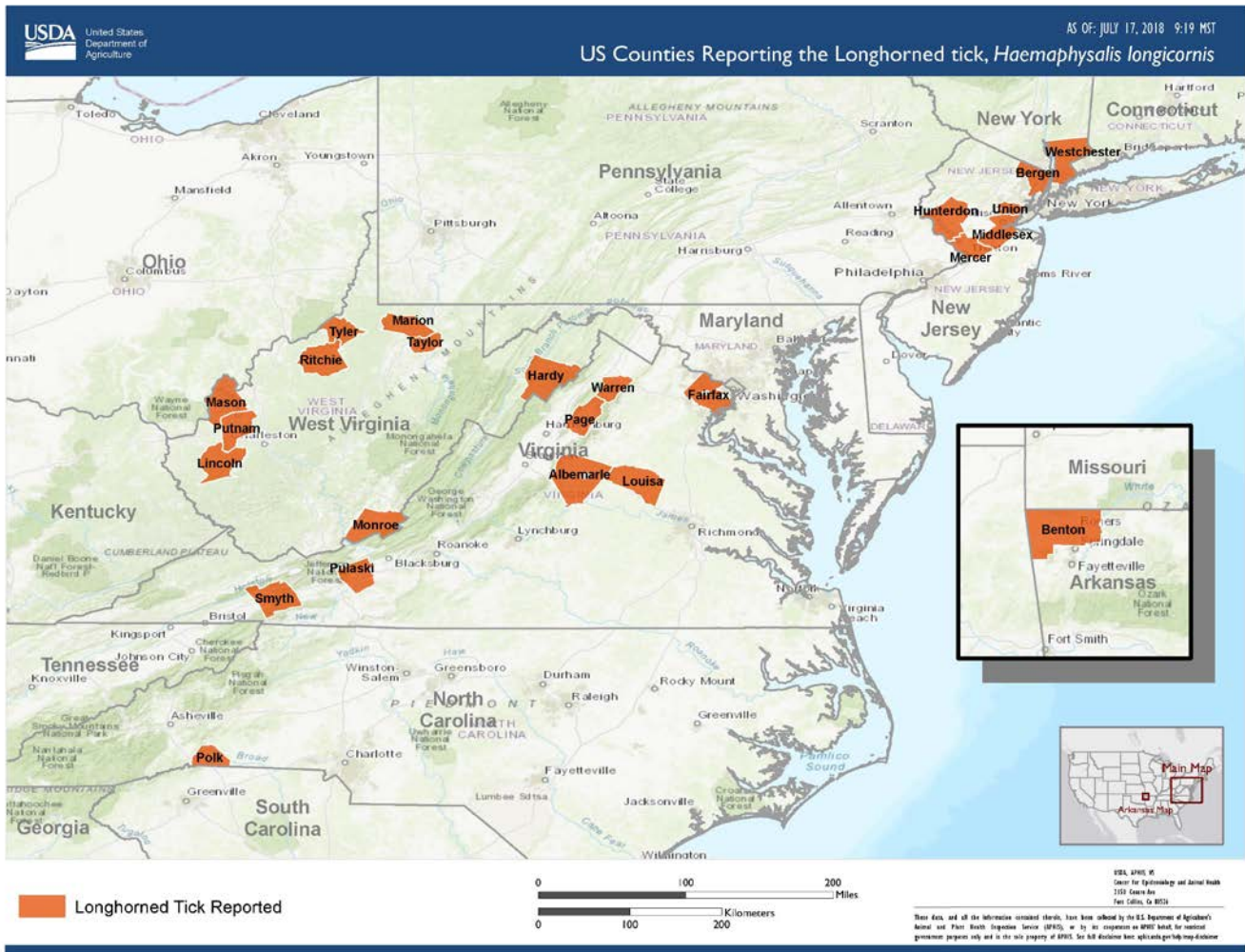


Table 2. Summary of wildlife sampling for *H. longicornis* 11/27/2017 to 6/26/2018

| Host | Number of animals sampled | Number with <i>H. longicornis</i> confirmed | Mode (firearms, trapped, road kill, hunter-killed, live) | Agency | State/County |
|-------------------------------|---------------------------|---|--|---|--|
| Birds | | | | | |
| American robin | 1 | 0 | live | SCWDS | NJ/Union |
| Baltimore oriole | 2 | 0 | live | SCWDS | NJ/Union |
| Brown thrasher | 1 | 0 | live | SCWDS | NJ/Hunterdon |
| Brown-headed cowbird | 1 | 0 | live | SCWDS | NJ/Union |
| Common yellowthroat | 1 | pending | live | SCWDS | NJ/Hunterdon |
| Gray catbird | 3 | 0 | live | SCDWS | NJ/Hunterdon (2), NJ/Union (1) |
| Northern cardinal | 1 | 0 | live | SCWDS | NJ/Union |
| Ovenbird | 1 | 0 | live | SCWDS | NJ/Union |
| Warbler | 1 | 0 | live | SCWDS | NJ/Hunterdon |
| Wild Turkey | 4 | 0 | Firearms | USDA WS, SCWDS | NJ/Hunterdon (4) |
| Mammals | | | | | |
| White-tailed Deer | 73 | 1 | Firearms, dead | USDA WS and NJDFW, SCDNR, TWRA, AGFC, SCWDS | NJ/Hunterdon (45), NJ/Somerset (13), NJ/Warren (3), NJ/Morris (2), NJ/Sussex (1), NJ/Monmouth (1), NJ/Unknown (1), SC/Jasper (1), TN/Hardeman (1), TN/Henderson (1), AR/Sharp (1), AR/Faulkner (3) |
| Red Fox | 2 | 0 (1 pending) | Firearms, live | USDA WS, NJDFW, SCWDS | NJ/Hunterdon (1), NJ/Union (1) |
| Meadow Vole | 1 | 0 | firearms | SCWDS | NJ/Hunterdon |
| Virginia Opossum | 12 | 2 (5 pending) | Trapped, firearm | USDA WS and NJDFW, SCDWS | NJ/Hunterdon (11), NJ/Union (1) |
| <i>Peromyscus</i> spp. (mice) | 14 | 0 (7 pending) | live | SCWDS | NJ/Hunterdon (11), NJ/Union (4) |
| Raccoon | 35 | 1 (19 pending) | Trapped, firearm | USDA WS and NJDFW, SCWDS | NJ/Hunterdon (19), NJ/Union (4) |
| Elk | 1 | Pending | Died | MDC, WVDNR, SCWDS | MO/Carter (3) WV/Logan (1) |

| | | | | | |
|------------|---|---------|------|----------------|-----------|
| Black bear | 1 | Pending | Died | AGFC, SCWDS | AR/Sharp |
| Mule deer | 1 | Pending | Died | NGPC, SCWDS | NE/Furnas |

*Southeastern Cooperative Wildlife Disease Study (SCWDS), United States Department of Agriculture (USDA) Wildlife Services (USDA WS), New Jersey Department of Fish and Wildlife (NJDFW)