



# National *Haemaphysalis longicornis* (longhorned tick) Situation Report – August 29, 2018

*New information in blue*

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## ***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:**

- [Seven](#) states (New Jersey, New York, [Maryland](#), North Carolina, [Pennsylvania](#), Virginia, and West Virginia) have NVSL confirmed infestations with *H. longicornis*. [Arkansas has a suspected infestation based on molecular identification](#). 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.
- [In August 2018, the National Veterinary Services Laboratories \(NVSL\) confirmed a female \*H. longicornis\* from Monmouth County, New Jersey. This detection is the sixth confirmed county in New Jersey after Bergen, Hunterdon, Union, Middlesex, and Mercer Counties.](#)
- [In August 2018, NVSL confirmed \*H. longicornis\* from a dog from Cabell County, West Virginia. This detection is the tenth confirmed county in West Virginia.](#)
- [In August 2018, NVSL confirmed \*H. longicornis\* from the environment from Richmond County, New York. This detection is the second confirmed county in New York after Westchester.](#)
- [In July 2018, NVSL confirmed \*H. longicornis\* collected from a white-tailed deer in Centre County, Pennsylvania. This is the first detection \*H. longicornis\* from Pennsylvania](#)
- [In July 2018, NVSL confirmed \*H. longicornis\* collected from a white-tailed deer in Washington County, Maryland. This is the first detection \*H. longicornis\* from Maryland.](#)

- In July 2018, NVSL confirmed nymphal *H. longicornis* from Giles, Grayson, and Wythe counties, Virginia. These ticks were collected from the environment as research specimens by the University of Tennessee, Knoxville.
- In July 2018, NVSL confirmed *H. longicornis* from the environment in Bergen County, New Jersey.
- In June 2018, NVSL confirmed a nymphal *H. longicornis* previously attached to a human from Westchester County, New York.
- In 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.
- In 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 **ten** confirmed counties for *H. longicornis*: cows (Hardy County), dogs (Cabell, Putnam, Ritchie, Lincoln, and Mason Counties), White-tailed Deer (Tyler and Taylor Counties), a cat (Marion County), and the environment (Monroe County).
- Virginia has **ten** confirmed counties for *H. longicornis*: cows (Albemarle, Page, and Pulaski Counties), horses (Warren County), a goat (Louisa County), and the environment (Fairfax, Giles, Grayson, Smyth, and Wythe Counties).
- In June 2018, **evidence of a *H. longicornis*** from Benton County, Arkansas **was** submitted from a dog through a research project at Oklahoma State University. A sample was not available for site identification at NVSL. This was a **suspected infestation** via a photograph and via molecular typing to *H. longicornis* at Oklahoma State. **No other *H. longicornis* have been found at this property.**

## *H. longicornis* Surveillance and Testing: August 2017 – August 2018

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

Affected States Key:	Arkansas	Maryland	New Jersey	New York	North Carolina	Pennsylvania	Virginia	West Virginia
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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
White-tailed Deer	Centre County, PA	7/10/2018	7/26/2018	First detection in Pennsylvania
White-tailed Deer	Washington County, MD	6/25/2018	7/26/2018	First Detection in Maryland
Environment	Richmond County, NY	5/22/2018	8/9/2018	Second NY County
Dog	Cabell County, WV	7/10/2018	8/6/2018	Tenth WV County
Environment	Monmouth County, NJ	8/7/2018	8/17/2018	Sixth 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

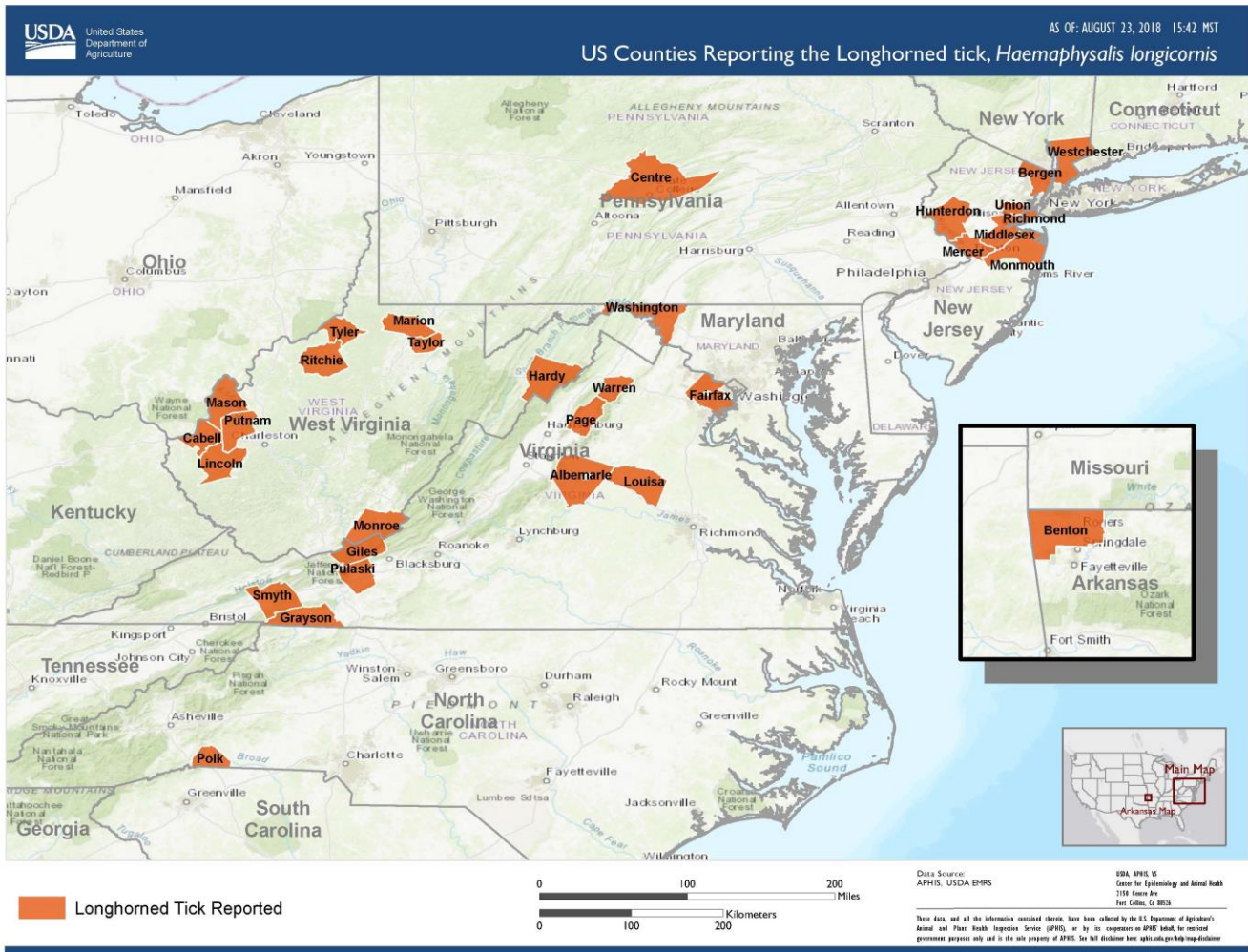


Table 2. Summary of wildlife sampling for *H. longicornis* 11/27/2017 to 8/24/2018

Host	Number of animals sampled	Number with <i>H. longicornis</i> confirmed	Mode (firearms, trapped, road kill, hunter-killed, live)	Agency	State/County
<b>Birds</b>					
American robin	3	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
Carolina Wren	4	0	live	SCWDS	NJ/Union
Common yellowthroat	1	pending	live	SCWDS	NJ/Hunterdon
Forster's tern	1	0	live	SCWDS	NJ/Union
Gray catbird	7	0	live	SCDWS	NJ/Hunterdon (2), NJ/Union (5)
House wren	1	0	live	SCWDS	NJ/Union
Northern cardinal	5	0	live	SCWDS	NJ/Union
Ovenbird	1	0	live	SCWDS	NJ/Union
Red-eyed Vireo	1	0	live	SCWDS	NJ/Union
Yellow Warbler	3	0	live	SCWDS	NJ/Hunterdon (1), NJ/Union (2)
Wood thrush	2	0	live	SCWDS	NJ/Union
Wild Turkey	4	0	Firearms	USDA WS, SCWDS	NJ/Hunterdon (4)
<b>Mammals</b>					
Black bear	12	Pending	Died	AGFC, SCWDS	AR/Sharp (1) VA/Pittsylvania (1) Unknown (2) MD/Frederick (1) VA/Appomattox (2) VA/Nottoway (1) MD/Washington (1) VA/Buckingham (1) GA/Fannin (1) VA/Loudoun (1)
Coyote	2	0 (1 pending)	Dead	SCDWS	LA/St. Tammany (1) WV/Upshur (1)
Eastern Chipmunk	1	0	live	SCWDS	NJ/Union (1)
Eastern Cottontail rabbit	6	0 (2 Pending)	Firearms, trapped	USDA WS, SCWDS	VA/Albemarle (2) VA/Roanoke (2) VA/Staunton (1) NJ/Union (1)

Elk	6	Pending	Died	MDC, WVDNR, SCWDS	MO/Carter (5) WV/Logan (1)
Grey Squirrel	1	Pending	Road kill	USDA WS	VA/Albemarle (1)
Meadow Vole	1	0	firearms	SCWDS	NJ/Hunterdon
Mule deer	9	Pending	Died	NGPC, SCWDS	NE/Furnas (4) NE/Red Willow (2) NE/Hayes (3)
<i>Peromyscus</i> spp. (mice)	19	0 (7 pending)	live	SCWDS	NJ/Hunterdon (11), NJ/Union (8)
Raccoon	44	1 (31 pending)	Trapped, firearm, road kill	USDA WS and NJDFW, SCWDS	NJ/Hunterdon (19), NJ/Union (24), VA/Albemarle (7) VA/Augusta (2) NJ/Somerset (1) KY/Rowan (1)
Red Fox	4	0 (1 pending)	Firearms, live	USDA WS, NJDFW, SCWDS	NJ/Hunterdon (1), NJ/Union (1) VA/Chesterfield (1) VA/Rockingham (1)
Striped skunk	1	Pending	Trapped	USDA WS	VA/Albemarle (1)
Virginia Opossum	22	2 (9 pending)	Trapped, firearm	USDA WS and NJDFW, SCDWS	NJ/Hunterdon (11), NJ/Union (6) VA/Albemarle (3) VA/Augusta (1) PA/College Township (1)
White-tailed Deer	88	1 (2 pending)	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), VA/Albemarle (2) GA/Clarke (2) NC/Brunswick (1) PA/Point Township (1) VA/Fluvanna (1) MS/Scott (2) NC/Stanley (1)

					PA/Potter Township (1) GA/Oconee (1) GA/Telfair (1) GA/Jones (1) VA/Halifax (1)
Woodchuck	13	0 (8 Pending)	Trapped, firearm	USDA WS, SCWDS	VA/Albemarle (7) PA/College Township (3) PA/Dorrence (2) NJ/Union (1)

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