

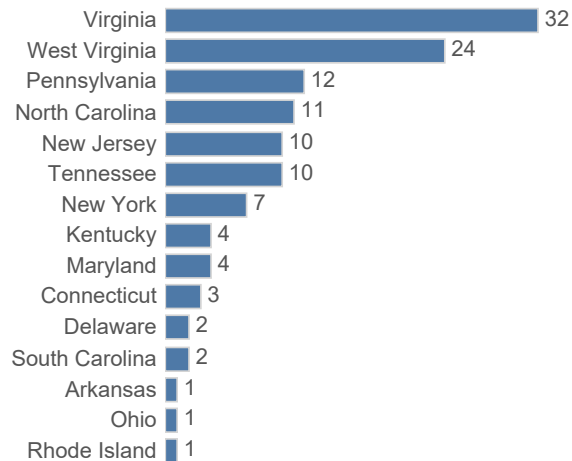
# National *Haemaphysalis longicornis* (Asian longhorned tick) Situation Report

As of February 3, 2021

*Haemaphysalis longicornis* (Asian longhorned tick), 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.

## States with confirmed local Asian longhorned tick populations with number of counties in each state



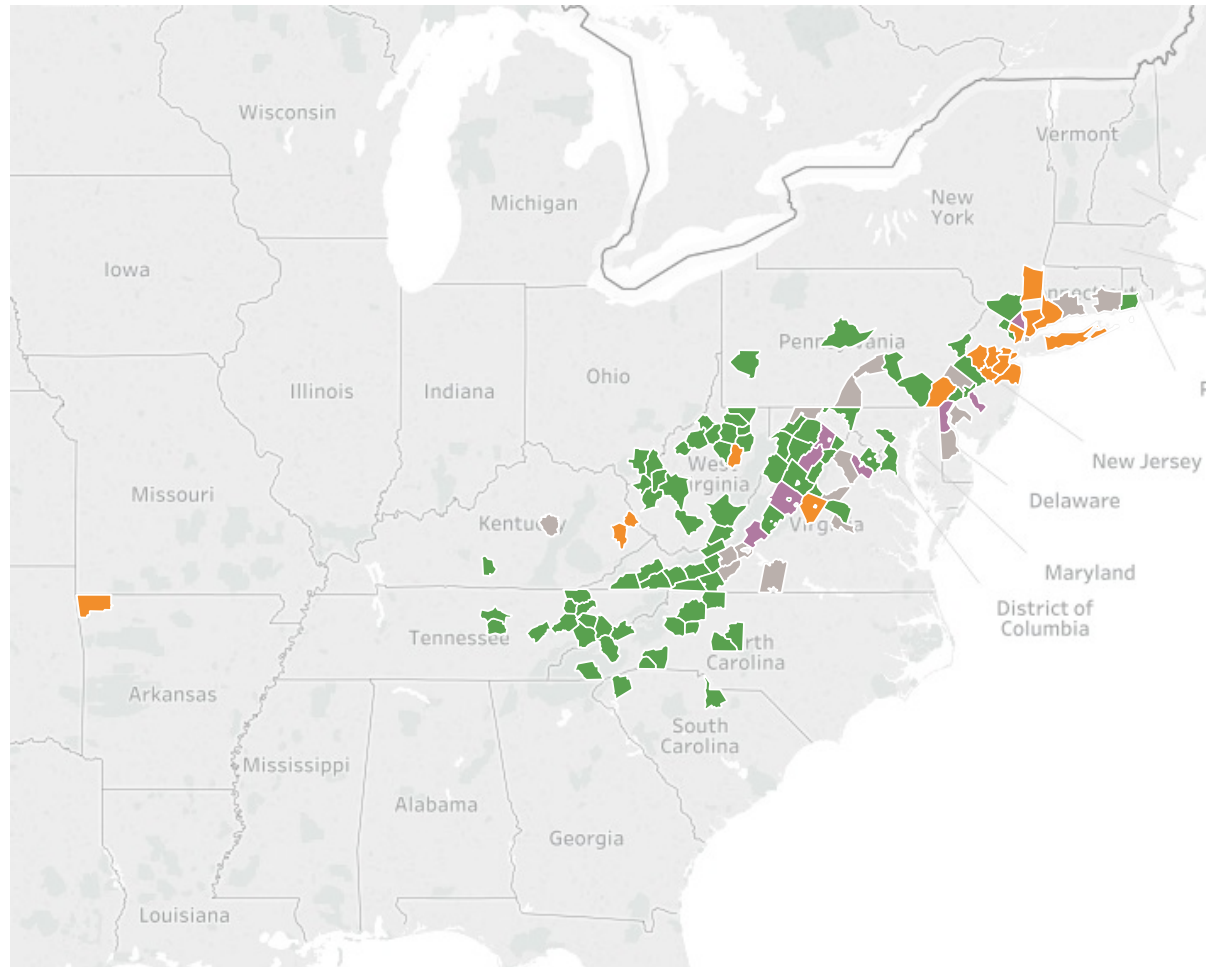
### Type of identification\*

■ Molecular and NVSL

■ NVSL

■ Molecular

■ Taxonomic

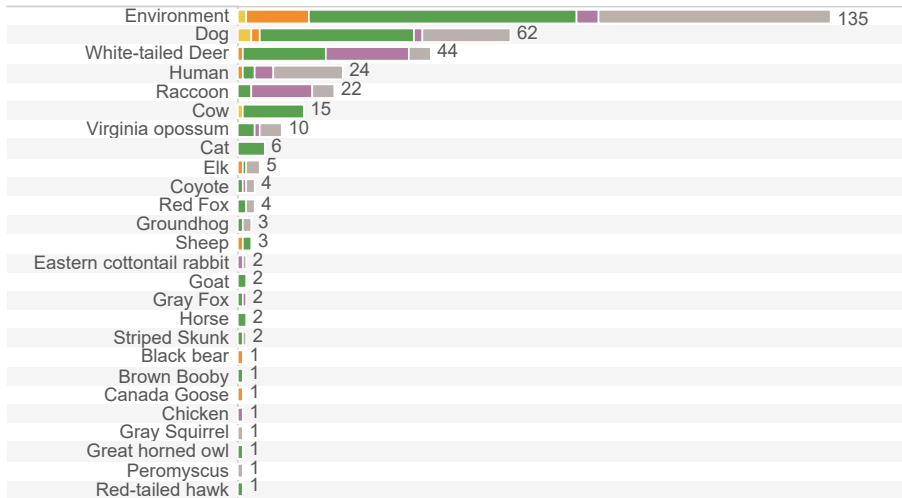


\* *H. longicornis* identification: NVSL= USDA, National Veterinary Services Laboratories. NVSL performs taxonomic identifications and is the preferred lab for confirmation of new states, counties, and hosts. Molecular= Confirmation of tick species by polymerase chain reaction (PCR) or other DNA-based technology. Taxonomic= Identification by key tick features at a lab other than NVSL.

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# Asian longhorned tick positive hosts information

## Number of positive hosts



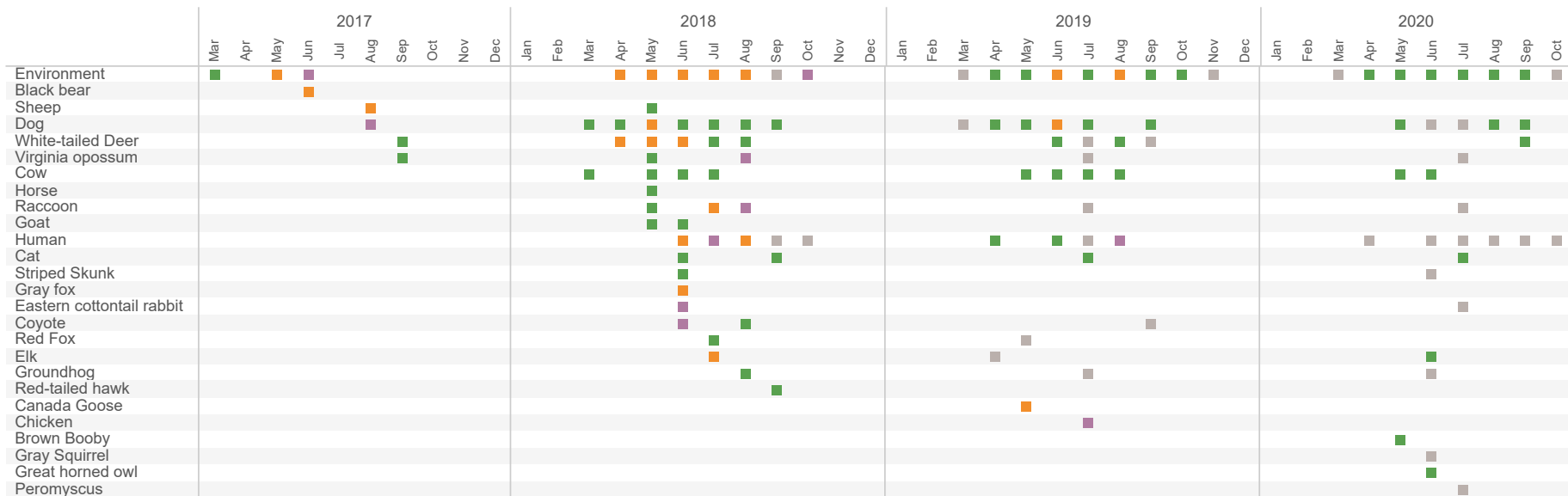
Type of identification (single) - Not aggregated

- No identification provided
- Molecular and NVSL
- NVSL
- Molecular
- Taxonomic

\* Confirmed since last situation report.

Prior to 2017, ticks were collected from a white-tailed deer in 2010 and a dog in 2013.

## Timeline of Asian longhorned tick host positives



## First date of Asian longhorned tick detections by state, county, and host

State	County	Host	Earliest collected	Earliest confirmed	
Arkansas	Benton	Dog	5/1/2018	6/5/2018	Molecular
		Environment	4/5/2019	4/10/2019	NVSL
Connecticut	Fairfield	Environment	7/3/2018	8/28/2018	Molecular and NVSL
		Human	8/21/2018		Molecular
	New Haven	Environment	6/9/2020		Taxonomic
Delaware	New London	Environment	9/27/2019		Taxonomic
	Kent	Environment	7/26/2019		Taxonomic
	New Castle	Dog	6/27/2020		Taxonomic
Environment		6/22/2019		Molecular	
Kentucky	Floyd	Black bear	6/2/2017	4/21/2020	Molecular and NVSL
	Madison	Human	7/15/2020		Taxonomic
	Martin	Elk	7/15/2018	3/7/2019	Molecular and NVSL
	Metcalfe	Cow	5/25/2020		NVSL
Maryland	Allegany	Cow	6/4/2020		No identification provided
		Environment	6/12/2019		Taxonomic
	Howard	Environment	5/27/2020	6/19/2020	NVSL
	Prince George's	Human	4/7/2019	5/3/2019	NVSL
New Jersey	Washington	White-tailed Deer	6/25/2018	7/26/2018	NVSL
		Environment	5/4/2020		NVSL
	Bergen	Brown Booby	5/4/2020		NVSL
		Dog	8/25/2017		Molecular
		Environment	7/12/2018	7/16/2018	NVSL
		Human	7/5/2018	7/25/2018	Molecular
	Camden	Red Fox	7/31/2018		Taxonomic
		Human	8/2/2019		Molecular
	Hunterdon	Dog	6/11/2019	7/19/2019	NVSL
		Environment	5/10/2018	6/8/2018	NVSL
		Raccoon	5/3/2018	5/25/2018	NVSL
		Sheep	8/1/2017	11/9/2017	Molecular and NVSL
		Virginia opossum	5/3/2018	5/25/2018	NVSL
		White-tailed Deer	4/19/2018	4/24/2018	Molecular and NVSL
	Mercer	Environment	5/10/2018	6/4/2018	Molecular and NVSL
	Middlesex	Dog	9/6/2018	9/26/2018	NVSL
		Environment	5/10/2018	5/14/2018	Molecular and NVSL
		Goat	5/24/2018	6/4/2018	NVSL
		Sheep	5/17/2018	5/23/2018	NVSL
	Monmouth	Environment	8/7/2018	8/17/2018	Molecular and NVSL
Passaic	Dog			No identification provided	
	Environment	10/28/2019	11/12/2019	NVSL	
Salem	Environment	5/27/2020		Taxonomic	
Somerset	Cat	9/28/2018	10/26/2018	NVSL	
	Dog	7/31/2018	9/6/2018	Molecular and NVSL	
	Human	6/6/2019	7/9/2019	NVSL	
	White-tailed Deer	5/27/2018		Molecular	
Union	Dog	5/30/2013	6/4/2018	Molecular and NVSL	
	Environment	5/1/2017	4/23/2018	Molecular and NVSL	
	Groundhog	8/4/2018	9/4/2018	NVSL	
	Horse	5/1/2018	6/1/2018	NVSL	
	Human	8/3/2018		Molecular	
	Raccoon	5/6/2018		Molecular and NVSL	
	Virginia Opossum	8/1/2018		Molecular	

# First date of Asian longhorned tick detections by state, county, and host

State	County	Host	Earliest collected	Earliest confirmed		
New York	Bronx	Environment	6/18/2018		Taxonomic	
	Dutchess	Environment	8/1/2018	3/25/2019	Molecular and NVSL	
	Orange	Environment	5/17/2020		NVSL	
	Richmond	Environment	6/3/2017	8/14/2018	Molecular and NVSL	
		Gray Squirrel	6/1/2020		Taxonomic	
		Groundhog	6/1/2020		Taxonomic	
	Rockland	Striped Skunk	6/1/2020		Taxonomic	
		White-tailed Deer	6/3/2018		Molecular	
		Dog	6/12/2020		Taxonomic	
		Environment	6/21/2018	8/27/2018	Molecular	
		Human	6/14/2020		Taxonomic	
	Suffolk	Environment	8/24/2018	10/4/2018	Molecular and NVSL	
	Unknown	Canada Goose	5/21/2019	7/19/2019	Molecular and NVSL	
	Westchester	Dog	5/19/2020		No identification provided	
		Environment	6/2/2017		Taxonomic	
		Human	6/4/2018	6/28/2018	Molecular and NVSL	
	North Carolina	Alexander	Dog	7/12/2019	7/25/2019	NVSL
		Caldwell	White-tailed Deer	9/2/2020	12/4/2020	NVSL
		Davidson	Human	8/1/2018	9/20/2018	NVSL
Haywood		Dog	3/28/2019	11/22/2019	NVSL	
		Environment	5/1/2019		Taxonomic	
Macon		Cow	6/30/2020	7/10/2020	NVSL	
Madison		Dog	3/28/2018		NVSL	
Polk		Virginia opossum	9/15/2017	6/25/2018	NVSL	
Rowan		Elk	6/10/2020	7/10/2020	NVSL	
Rutherford		Dog	8/14/2018	9/14/2018	NVSL	
Surry		Cow	6/20/2019	7/3/2019	NVSL	
		Environment	3/9/2020		Taxonomic	
		Dog	7/26/2019	12/31/2019	NVSL	
Ohio		Gallia	Dog	5/28/2020	7/29/2020	NVSL
		Environment	8/7/2020	10/29/2020	NVSL	
Pennsylvania	Allegheny	Human	6/18/2019		Taxonomic	
		Environment	5/23/2018	9/4/2018	NVSL	
	Bucks	Human	4/7/2020		Taxonomic	
		White-tailed Deer	7/10/2018	7/26/2018	NVSL	
	Chester	Chicken	7/5/2019		Molecular	
	Environment	5/3/2019	12/6/2019	NVSL		
	Dauphin	Environment	4/28/2020	10/29/2020	NVSL	
	Delaware	Environment	9/9/2019	12/6/2019	NVSL	
	Franklin	Environment	4/19/2019		Taxonomic	
	Lancaster	Environment	5/28/2020	10/29/2020	NVSL	
	Montgomery	Environment	5/3/2019		Taxonomic	
		Human	7/19/2019		Taxonomic	
	Northampton	Environment	9/27/2019	12/6/2019	NVSL	
	Perry	Dog	5/12/2019		Taxonomic	
	Philadelphia	Environment	5/3/2019	12/6/2019	NVSL	
	Rhode Island	Washington	Environment	6/21/2018		NVSL
	South Carolina	Lancaster	Dog	8/24/2020	12/15/2020	NVSL
		Pickens	Dog	8/12/2020	9/25/2020	NVSL
	Tennessee	Claiborne	Dog	7/29/2019	9/10/2019	NVSL
Cocke		Cow	8/24/2019	8/29/2019	NVSL	
		Environment	10/17/2019		Taxonomic	
Grainger		Cat	7/18/2020	7/30/2020	NVSL	
Jefferson		Dog	7/19/2019	7/22/2019	NVSL	
Knox		Cow	6/7/2019	6/11/2019	NVSL	
		White-tailed Deer	6/7/2019	6/11/2019	NVSL	
Putnam		Dog	9/17/2019	9/27/2019	NVSL	
Roane		Cow	5/22/2019	5/24/2019	NVSL	
		Environment	6/14/2019		Taxonomic	
Sevier		Cow	8/31/2019	9/10/2019	NVSL	
Union		Dog	5/13/2019	5/21/2019	NVSL	
White		Dog	5/15/2020	7/10/2020	NVSL	



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## First date of Asian longhorned tick detections by state, county, and host

State	County	Host	Earliest collected	Earliest confirmed		
Virginia	Albemarle	Cow	3/1/2018	5/14/2018	NVSL	
		Coyote	9/8/2019		Taxonomic	
		Eastern cottontail rabbit	7/8/2020		Taxonomic	
		Environment	6/6/2018	7/3/2018	NVSL	
		Groundhog	7/19/2019		Taxonomic	
		Human	7/7/2020		Taxonomic	
		Peromyscus	7/13/2020		Taxonomic	
		Raccoon	7/11/2019		Taxonomic	
		Striped Skunk	6/10/2018	11/30/2018	NVSL	
		Virginia opossum	7/10/2019		Taxonomic	
		White-tailed Deer	6/2/2018		Molecular and NVSL	
		Augusta	White-tailed Deer	6/23/2018		Molecular
		Botetourt	Environment	10/4/2018		Molecular
		Carroll	Dog	7/1/2018	8/31/2018	NVSL
			Environment	6/3/2019	8/14/2019	NVSL
		Clarke	Great horned owl	6/1/2020	8/12/2020	NVSL
			Red Fox	7/4/2018		NVSL
		Fairfax	Environment	3/27/2017	6/7/2018	NVSL
	Human		9/20/2018	7/18/2019	Taxonomic	
	Fauquier	Environment	8/5/2018		Taxonomic	
		Red Fox	5/7/2019		Taxonomic	
	Floyd	Environment	5/26/2020		Taxonomic	
	Frederick	Gray fox	6/21/2018		Molecular	
	Galax City	Environment	6/21/2019		Taxonomic	
	Giles	Environment	6/23/2018	7/27/2018	NVSL	
	Goochland	Environment	9/13/2019		Taxonomic	
	Grayson	Environment	5/8/2018	7/27/2018	NVSL	
	Greene	Red Fox	7/11/2018		NVSL	
	Louisa	Goat	6/12/2018	6/28/2018	NVSL	
	Montgomery	Environment	6/24/2019		Taxonomic	
	Orange	Environment	10/27/2020		Taxonomic	
	Page	Cow	6/25/2018	6/29/2018	NVSL	
		Red-tailed hawk	9/17/2018		NVSL	
	Pittsylvania	Environment	6/5/2019		Taxonomic	
	Prince William	Environment	8/5/2019		Molecular	
	Pulaski	Cow	7/5/2018	7/11/2018	NVSL	
		Environment	8/15/2019	7/10/2020	NVSL	
		Gray Fox	6/13/2018	9/13/2018	NVSL	
	Roanoke	Dog	4/10/2019		Taxonomic	
	Rockbridge	White-tailed Deer	5/25/2018	9/13/2018	NVSL	
	Rockingham	White-tailed Deer	7/25/2018		NVSL	
	Russell	Dog	6/1/2018	8/31/2018	NVSL	
Scott	Dog	7/1/2018	8/31/2018	NVSL		
Shenandoah	Eastern cottontail rabbit	6/15/2018		Molecular		
Smyth	Environment	6/7/2018	6/28/2018	NVSL		
Staunton City	White-tailed Deer	6/15/2018	9/13/2018	NVSL		
Warren	Horse	5/10/2018	5/25/2018	NVSL		
Washington	Environment	5/17/2019		NVSL		
Wythe	Environment	6/23/2018	7/23/2018	NVSL		

## First date of Asian longhorned tick detections by state, county, and host

State	County	Host	Earliest collected	Earliest confirmed	
West Virginia	Barbour	Dog	8/31/2018	11/16/2018	NVSL
	Cabell	Dog	7/10/2018	8/7/2018	NVSL
	Doddridge	Dog	9/18/2019	10/21/2019	NVSL
	Grant	Dog	8/26/2020	10/29/2020	NVSL
	Greenbrier	Environment	5/27/2020	7/14/2020	NVSL
	Hampshire	White-tailed Deer	8/1/2018	5/1/2019	NVSL
		Cat	6/21/2018	7/10/2018	NVSL
	Hardy	Cow	5/18/2018	5/21/2018	NVSL
		Dog	6/21/2018	7/23/2018	NVSL
		White-tailed Deer	9/4/2019		Taxonomic
	Harrison	Environment	8/19/2020	9/16/2020	NVSL
	Kanawha	Environment	4/11/2020	4/14/2020	NVSL
	Lewis	White-tailed Deer	8/30/2018	4/17/2019	NVSL
	Lincoln	Dog	4/19/2018	6/27/2018	NVSL
	Marion	Cat	6/7/2018	7/6/2018	NVSL
	Mason	Dog	7/7/2018	7/11/2018	NVSL
	Mineral	White-tailed Deer	8/27/2019	3/2/2020	NVSL
	Monongalia	Cat	7/25/2019	8/13/2019	NVSL
	Monroe	Environment	7/2/2018	7/9/2018	NVSL
	Pendleton	Dog	9/12/2020	10/5/2020	NVSL
	Putnam	Dog	5/2/2018	6/18/2018	NVSL
	Raleigh	Environment	6/3/2020	7/13/2020	NVSL
		cow	6/2/2019	6/11/2019	NVSL
	Ritchie	Dog	5/26/2018	6/19/2018	NVSL
		Environment	7/6/2018	7/23/2018	NVSL
	Taylor	White-tailed Deer	9/1/2017	6/28/2018	NVSL
	Tyler	White-tailed Deer	8/31/2010	6/25/2018	NVSL
	Upshur	Coyote	6/22/2018	8/24/2018	Molecular and NVSL
	Wirt	White-tailed Deer	8/28/2018	5/1/2019	NVSL

# Summary of wildlife sampling for Asian longhorned tick

Animal groups	Host	Number of animals			Number confirmed		
		SCWDS	Tufts et al., 2019 & 2020	USDA, Wildlife Services	SCWDS	Tufts et al., 2019 & 2020	USDA, Wildlife Services
Bird	American Crow	1					
	American Robin	7	11				
	American Yellow Warbler		1				
	Bald Eagle	6					
	Baltimore Oriole	4					
	Barred Owl	1					
	Black Vulture	1					
	Blue Jay	2					
	Brown Booby	1					
	Brown Thrasher	3					
	Brown-headed Cowbird	3					
	Canada Goose	2					
	Carolina Wren	13					
	Common Grackle	2					
	Common Yellowthroat	2	1				
	Cooper's Hawk	2					
	Eastern Phoebe	2					
	Eastern Screech Owl	1					
	Forster's Tern	2					
	Grackle	2					
	Gray Catbird	15	20				
	Great Blue Heron	1					
	Great-horned Owl	4					
	House Sparrow	1					
	House Wren	3	2				
	Indigo Bunting		1				
	Northern Cardinal	16	3				
	Ovenbird	3					
	Red-eyed Vireo	2					
	Red-shouldered Hawk	2					
	Red-tailed Hawk	5			2		
	Sparrow, Unknown Spp.	3					
	Swainson's Thrush	1					
	Veery	1					
Warbler	3						
White-throated Sparrow	1						
Wild Turkey	86						
Wood Thrush	4						
Yellow Warbler	4						
Grand Total		212	39		2		

Tufts, D. M., VanAcker, M. C., Fernandez, M. P., DeNicola, A., Egizi, A., & Diuk-Wasser, M. A. (2019). Distribution, Host-Seeking Phenology, and Host and Habitat Associations of *Haemaphysalis longicornis* Ticks, Staten Island, New York, USA. *Emerging Infectious Diseases*, 25(4), 792-796.

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# Summary of wildlife sampling for Asian longhorned tick

Animal groups	Host	Number of animals			Number confirmed		
		SCWDS	Tufts et al., 2019 & 2020	USDA, Wildlife Services	SCWDS	Tufts et al., 2019 & 2020	USDA, Wildlife Services
Mammal	Black Bear	300					
	Bobcat	16					
	Brown Rat		1				
	Canada Goose	1					
	Cotton Rat	7					
	Coyote	20			6		
	Desert Big Horned Sheep	1					
	Domestic Dog	13			4		
	Eastern Chipmunk	2	2				
	Eastern Cottontail	75		1	1		1
	Eastern Gray Squirrel	9					
	Eastern Woodrat	6					
	Elk	66			5		
	Fox	4					
	Gray Fox	9			3		
	Hispid Cotton Rat	6					
	Hog	3					
	Human	26			3		
	Human (Attached)	1					
	Meadow Vole	2					
	Mexican Free-tailed Bat	1					
	Mule Deer	72					
	Northern Short-tailed Shrew		14				
	Peromyscus Leucopus		87				
	Peromyscus Sp.	214					
	Raccoon	208	39	5	37	36	5
	Red Deer	1					
	Red Fox	31			3		
	Skunk	1					
	Southern Red-backed Vole	1					
	Striped Skunk	12	2	1		2	1
	Virginia Opossum	199	21	3	11	20	3
	White-footed Mouse	1					
	White-tailed Deer	1,184	16	2	49	16	2
	Woodchuck	33			2		
	Woodland Jumping Mouse	2					
Grand Total		2,527	182	12	124	74	12

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