

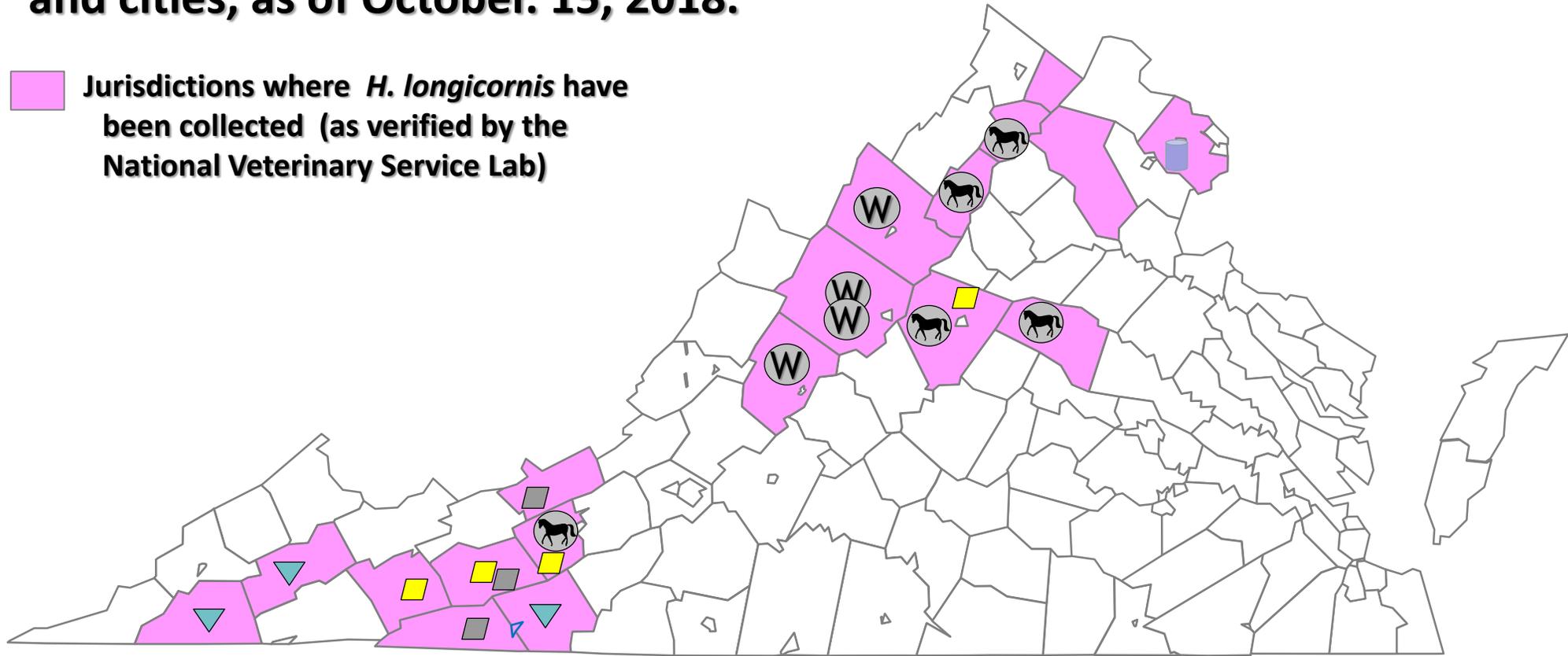
Surveillance of the Asian Longhorned Tick in Virginia



Presented By:
Joshua Bernick
Tick Surveillance Coordinator
Virginia Department of Health

***Haemaphysalis longicornis* ticks have been collected in 18 Virginia counties and cities, as of October. 15, 2018.**

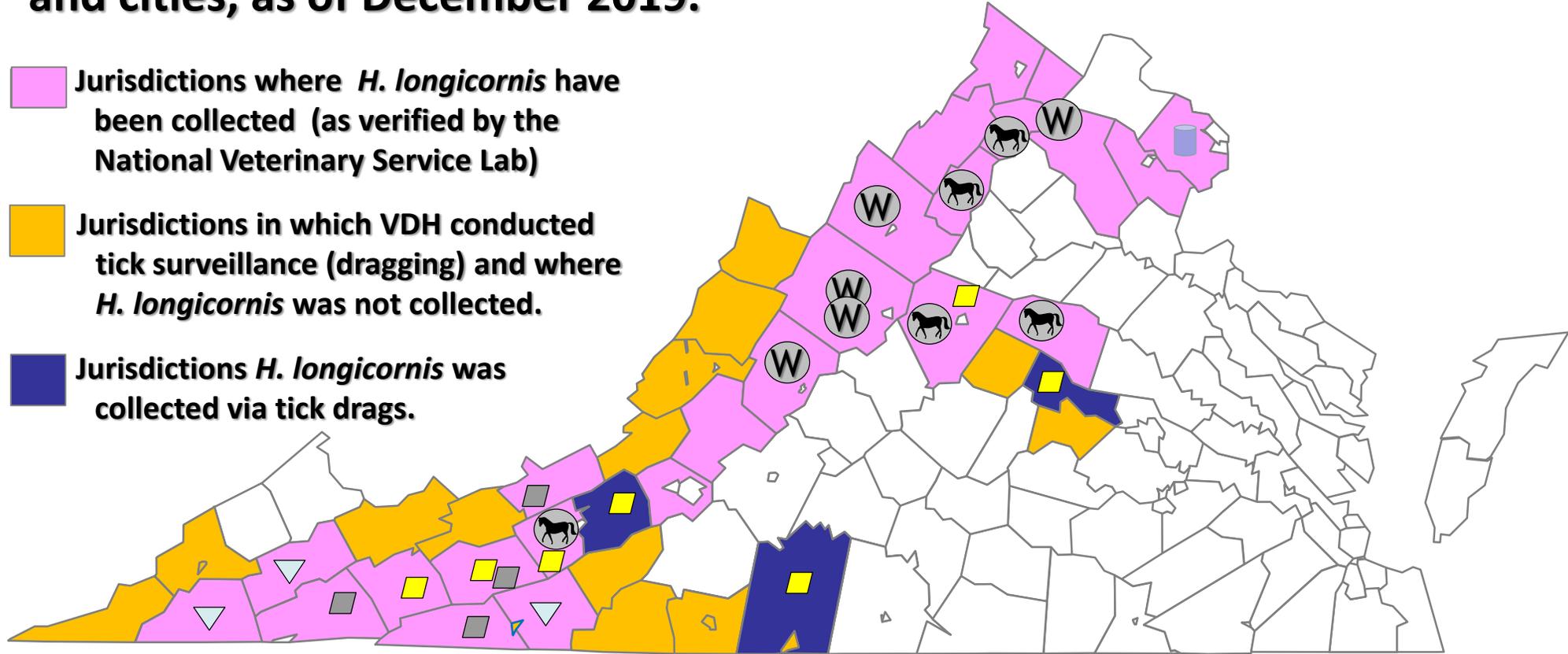
 Jurisdictions where *H. longicornis* have been collected (as verified by the National Veterinary Service Lab)



-  VDH Tick Drag Collections
-  VDH Animal Shelter Collections
-  UTK Tick Drag Collections
-  VDACS Livestock Collection
-  VDACS Wildlife Collection
-  FCDOH Tick Trap

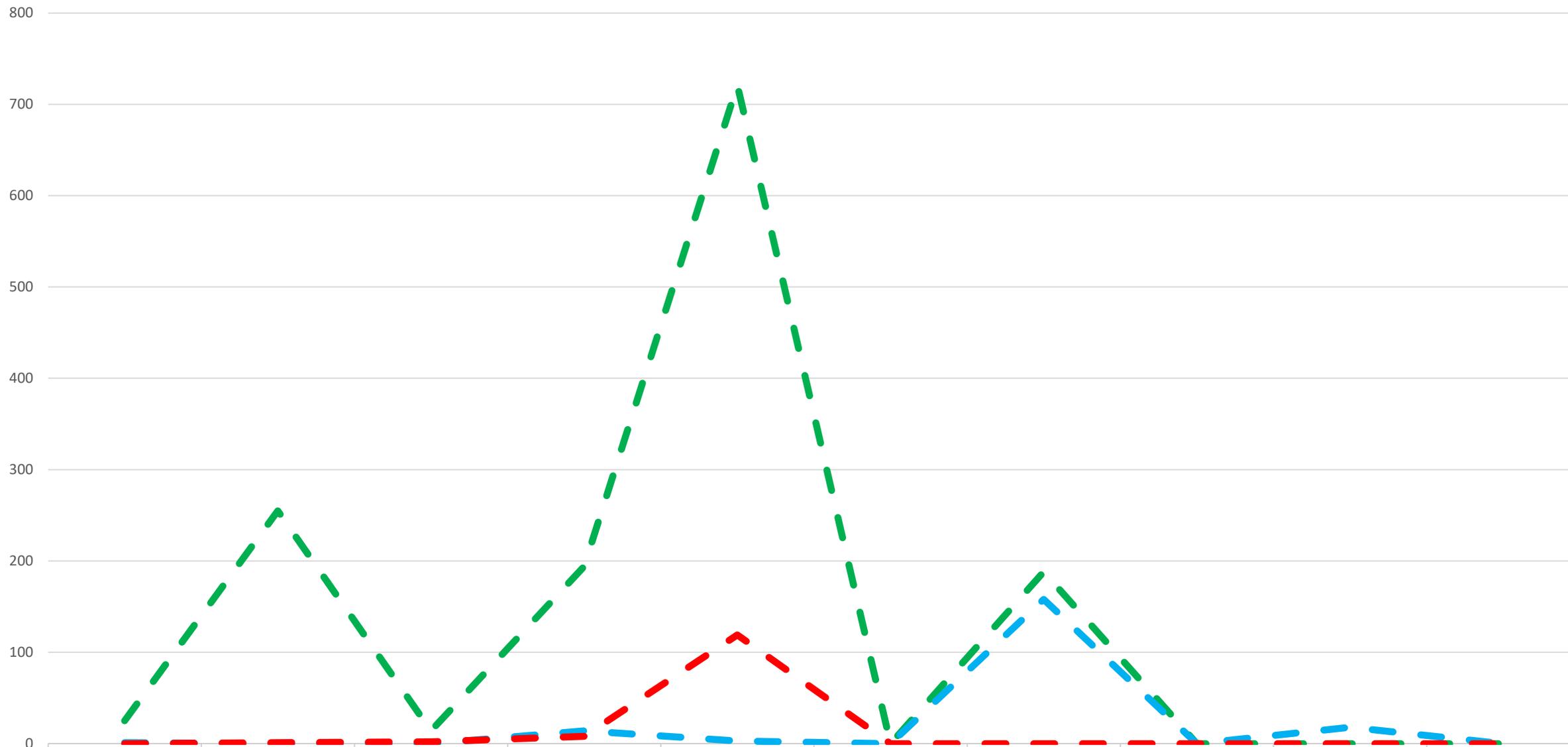
Haemaphysalis longicornis ticks have been collected in 30 Virginia counties and cities, as of December 2019.

-  Jurisdictions where *H. longicornis* have been collected (as verified by the National Veterinary Service Lab)
-  Jurisdictions in which VDH conducted tick surveillance (dragging) and where *H. longicornis* was not collected.
-  Jurisdictions *H. longicornis* was collected via tick drags.



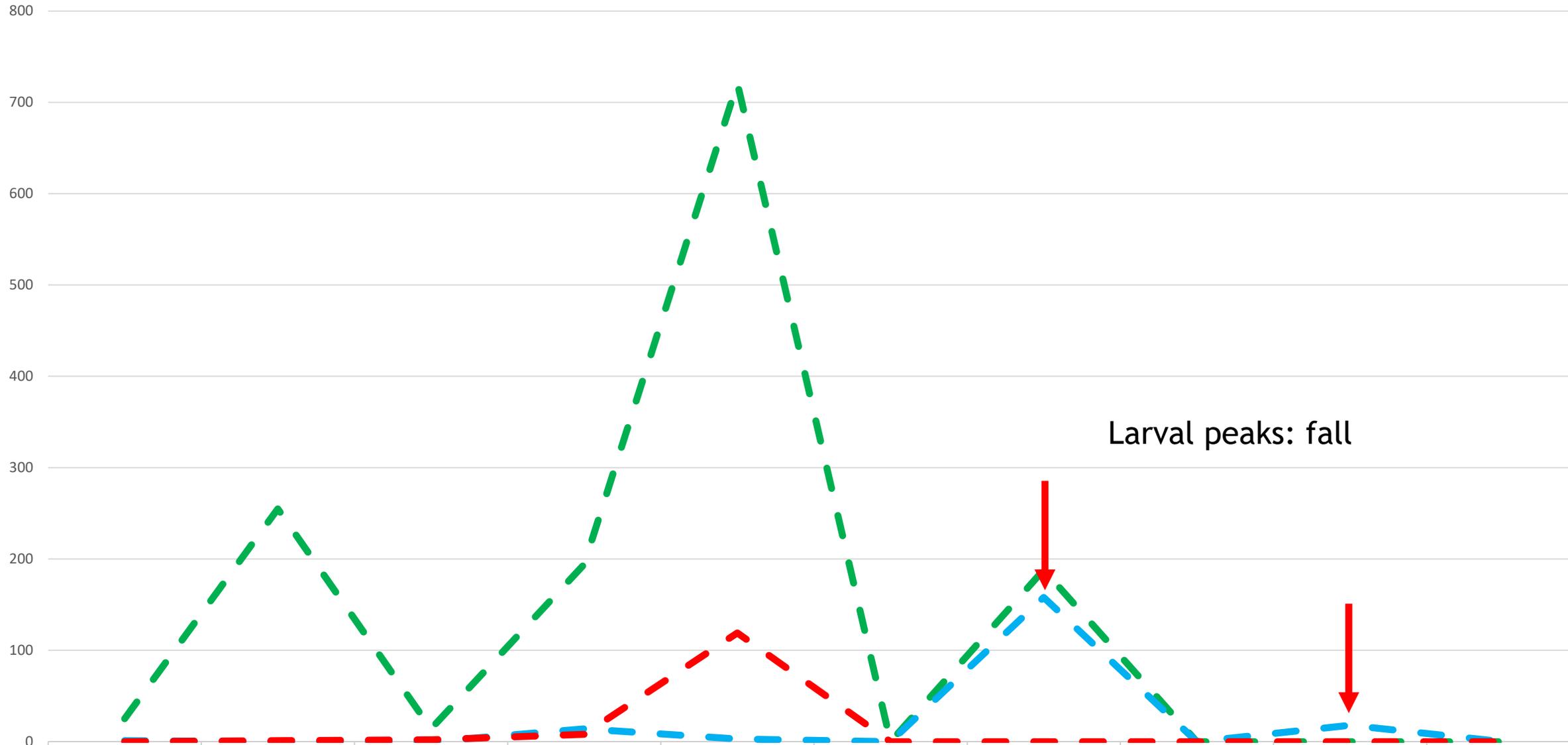
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 UTK Tick Drag Collections		

Observed Seasonal Population Trends for Various Life Stages of *Haemaphysalis longicornis* in Virginia (2019)



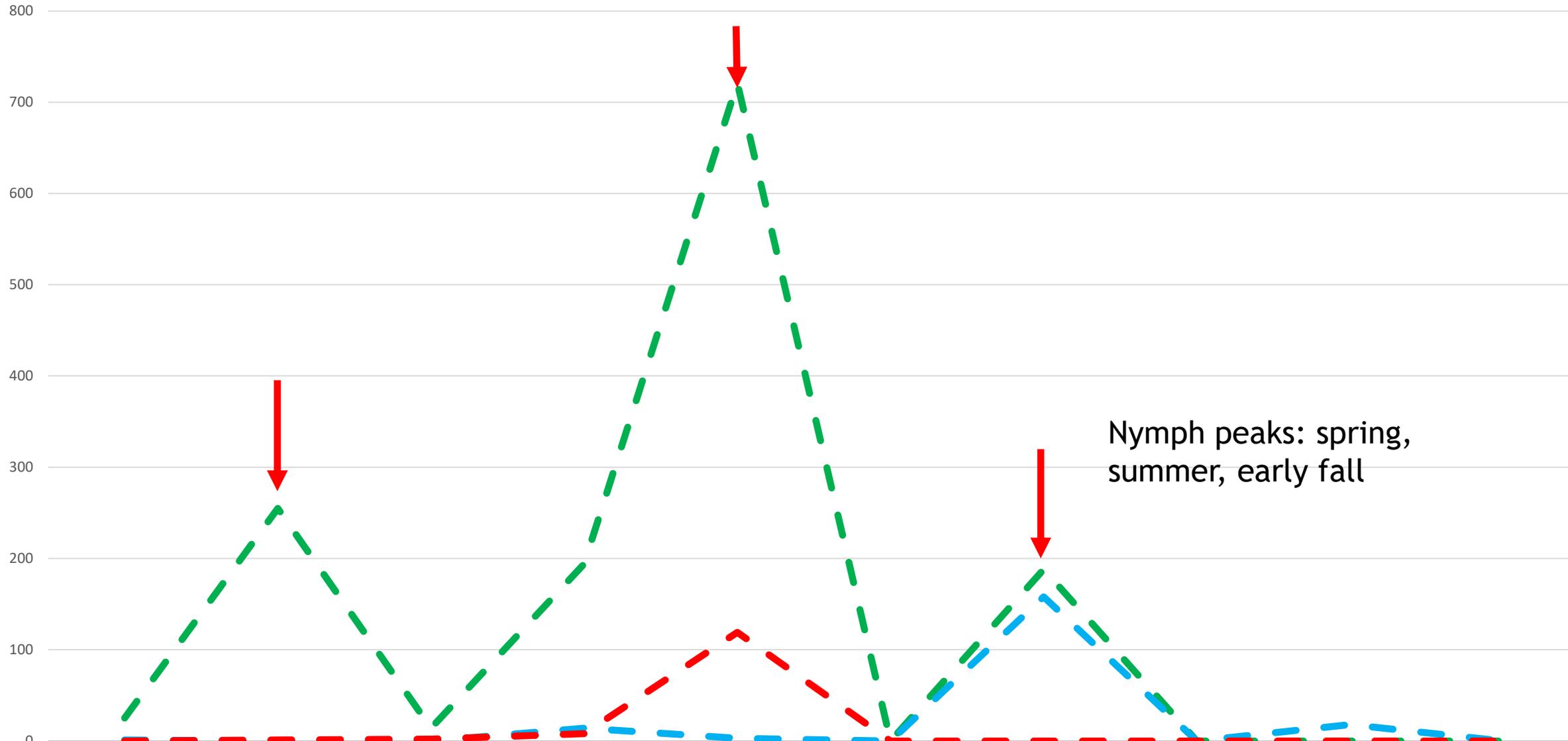
	March	April	May	June	July	August	September	October	November	December
— Nymph	25	255	14	194	721	0	188	0	0	0
— Larvae	1	0	0	14	3	0	158	0	18	0
— Adult	0	1	2	8	119	0	0	0	0	0

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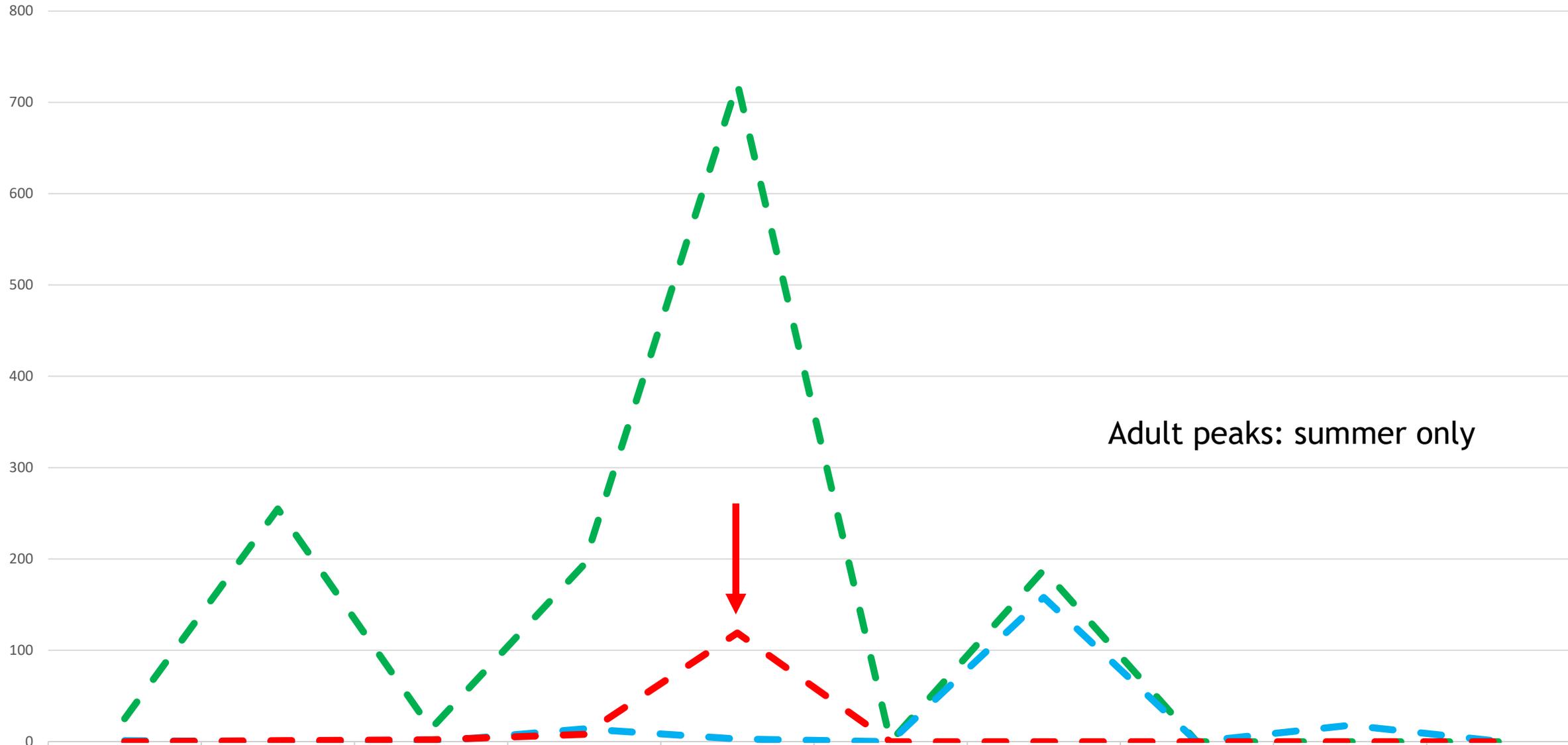
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Host range

Positive hosts for Asian longhorned ticks: dogs, white-tailed deer, raccoon, cows, humans, Virginia opossums, cats, coyote, elk, red fox, sheep, goat, gray fox, horse, Canada goose, chicken, eastern cottontail, groundhog, red-tailed hawk, striped skunk, and woodchuck.

- Other animals have been screened, but the tick has yet to appear on them.



Asian Longhorned Tick as Vector Species

Severe Fever with Thrombocytopenia Syndrome (SFTS) Virus - Asian variant of the Heartland virus, Phlebovirus (Bunyaviridae)

Alpha-Gal

Asian Variants of:

- Lyme disease - Asian variant of *Borrelia burgdorferi*
- Ehrlichiosis - Asian variant of *Ehrlichia chaffeensis*
- Anaplasmosis - Asian variant of *Anaplasma phagocytophilum*
- Japanese spotted fever - *Rickettsia japonica*
- Powassan virus - Flavivirus



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“Failure of the Asian longhorned tick, *Haemaphysalis longicornis*, to serve as an experimental vector of the Lyme disease spirochete, *Borrelia burgdorferi sensu stricto*.” Breuner et. al 2020

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Monitoring the Spread

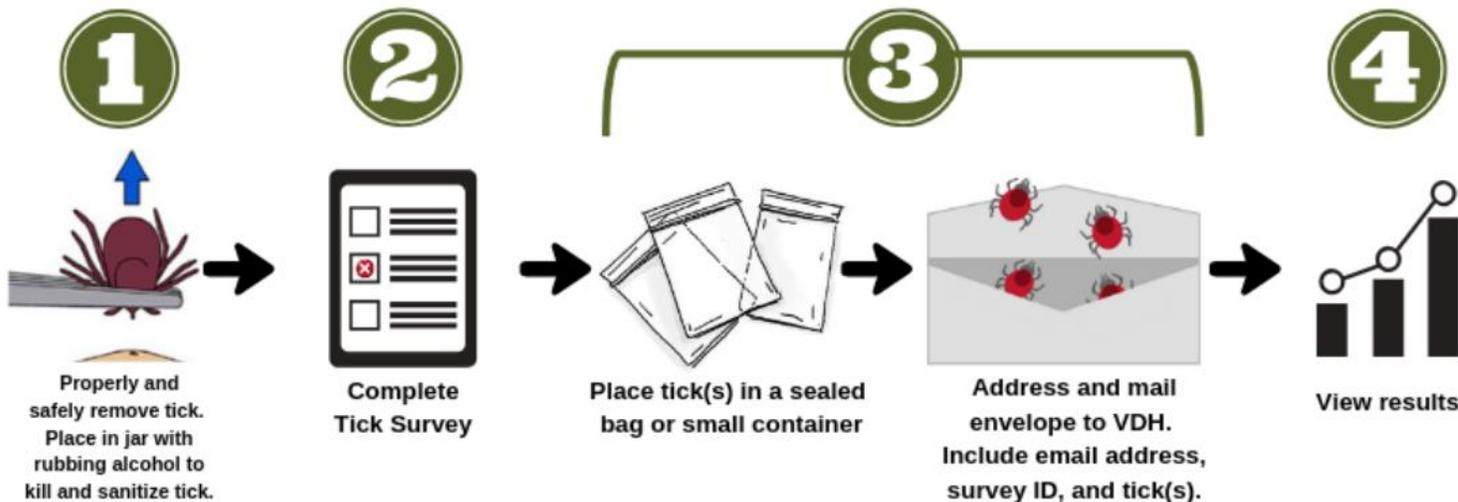
- Our current options:
 1. Active Surveillance
 - Dragging
 2. Passive Surveillance
 - Virginia Tick Survey
 - Animal Hospital Tick Survey
 - In the works



Virginia Tick Survey

Citizen Science Project

- We identify any ticks that are sent to us to species.
- Provide information about potential pathogens that each particular species may carry.
- Goal: to provide expert identification from a reliable source so that if a person becomes ill, they can relay that information to their doctor.



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Questions?

