Haemaphysalis longicornis
In Virginia
Haemaphysalis longicornis
Asian Longhorned Tick

• Reddish - dark brown, no distinctive markings
• Small, hard tick measuring up to 4 mm when not fed
• Grows to size of a pea when engorged
• Nymphs are size of poppy seed
Haemaphysalis longicornis
Asian Longhorned Tick

• Three host tick
  – Larvae, nymphs and adults must have blood meal

• Asian Longhorned ticks in the US are thought to be parthenogenetic; the females do not need to mate in order to produce eggs
HL TICK IN US AND VIRGINIA
First Detection HL Ticks in US

- Not known how arrived in the US
- Not known how long it has been here before it was detected
- Was first known to be established in the mainland US in November 2017
  - Tick was first found in Hunterdon Co., NJ on sheep
Worldwide Distribution

- Native to China, Korea, and Japan
- Established in New Zealand, Australia, Fiji, Samoa, and Hawaii
  - Associated with livestock and human disease
- It has been intercepted previously at ports on animals entering the US
First Detection of HL Ticks in VA

• March 2018
  – Producer found orphaned, bottle fed calf covered in ticks

• May 14, 2018
  – NVSL identified ticks as *Haemaphysalis longicornis*

• May 25, 2018
  – Multiple HL ticks found on a horse in Warren County

• Since then 18 localities have identified HL ticks
IMT Activation

• Activated 5.15.18
<table>
<thead>
<tr>
<th>1. Incident Name</th>
<th>2. Operational Period to be covered by IAP (Date/Time)</th>
<th>CG IAP COVER SHEET</th>
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<tbody>
<tr>
<td>VA Longhorn Tick Response</td>
<td>From October 15, 2016 To:</td>
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3. Approved by Incident Commander(s):

<table>
<thead>
<tr>
<th>ORG</th>
<th>NAME</th>
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<tbody>
<tr>
<td>VOACS</td>
<td>Dr. Carolyn Bisette – Incident Commander</td>
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INCIDENT ACTION PLAN #9
The items checked below are included in this Incident Action Plan:

- [x] ICS 202: Incident Objectives
- [x] ICS 203: Organization List
- [x] ICS 204: Assignment List
- [x] Contact List
- [x] ICS 206 – Medical Plan
- [x] ICS 208 – Site Safety Plan
- [ ] Maps / Charts

Other Attachments

- [ ]
- [ ]
- [ ]
Planning

This report describes the investigation and response to the existence of the NVSL confirmed *Haemaphysalis longicornis* (HL) tick in Virginia. On May 14, 2018, the NVSL identified HL ticks collected from a calf in Albemarle County. The farm from which the calf originated was the source of a foreign animal disease investigation conducted in December 2017 (18VA002), after NVSL confirmed *Thelasis orientalis* in six animals within the herd. The herd experienced illness with clinical signs consistent with anemia, and the death of approximately seven out of 120 animals. While there has been no official confirmation of theileriosis in these ticks or in causing the signs in this herd, the clinical picture is consistent with disease in countries where cattle theileriosis is known to occur. Suspect HL ticks collected from a horse in Warren County were confirmed as HL on May 25, 2018.

HL was discovered in New Jersey in November of 2017, but had previously not been known to exist in the United States. It is an exotic tick, which is a known serious pest of livestock in the Australasian and Western Pacific Regions where it is prevalent. It frequently builds intense infestations (as seen on the calf in this report) on domestic hosts causing great stress, reduced growth and production, and exsanguination. It is also a known/suspected vector of several viral, bacterial and protozoan agents of livestock and human diseases, and is known to carry and transmit *Thelasis orientalis* to domestic animals and wildlife in Australia. In April of 2019, the tick was proven to overwinter in NJ, and the same can be expected in the more temperate climate of Virginia. As the tick can reproduce asexually, spread to other Mid-Atlantic states could occur via people, pets, and livestock movement.

**NVSL Results:**
- *Haemaphysalis longicornis Neumann*, longhorned tick (Ixodida: Ixodidae)

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<tr>
<th>County</th>
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<th>Species</th>
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<tr>
<td>Albemarle County</td>
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<td>Red Fox</td>
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<td>Red-tailed Hawk</td>
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<td>Augusta County</td>
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<td>White-tailed Deer</td>
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<tr>
<td>Fauquier County</td>
<td>9.13.18</td>
<td>Red Fox</td>
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<td>Warren County</td>
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<td>Horse</td>
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Operations

- Passive Surveillance
- Active Surveillance
  - USDA APHIS WS
    - Tick drags
    - CO2 traps
Operations

• Research
  – Virginia-Maryland College of Veterinary Medicine
  – Drs. Kevin Lahmers and Anne Zajac

• Tick presumptive identification

• Theilieria PCR and pathogen recognition
Aspects of Virginia IMT

• ICS is flexible and scalable
  – No logistics or finance branch
    • Operations handled logistics as needed
• Initially began meeting weekly
  – After July, moved to monthly
  – Currently, meet quarterly
Questions?