Pests and Pesticides in Child-serving Facilities: An IPM Newsletter

There’s a new tick in town, the Asian longhorned tick
Karen M. Vail and Rebecca Trout Fryxell, UT Entomology & Plant Pathology

On May 24, 2019, the Tennessee Department of Agriculture, USDA-APHIS, Tennessee Department of Health and the University of Tennessee Institute of Agriculture jointly announced the detection of a new invasive, the Asian longhorned tick (ALT), *Haemaphysalis longicornis*, in Tennessee. Within a month, the University of Tennessee released the publication, W826 Asian Longhorned Tick [https://extension.tennessee.edu/publications/Documents/W826.pdf](https://extension.tennessee.edu/publications/Documents/W826.pdf), which is already outdated due to the tick’s spread.

Originally from eastern Asia, this tick was first discovered in the US in late 2017 and is now found in 12 states, Virginia, West Virginia, New Jersey, New York, Pennsylvania, North Carolina, Tennessee, Maryland, Delaware, Arkansas, Connecticut and Kentucky. As of today, this tick has been collected in 4 Tennessee counties: Union, Roane, Knox and Jefferson.

Animal health officials are concerned about this tick because it can occur in large numbers on livestock and other animals, reduce animal growth and production, as well as, cause death in severe cases. Where it’s invaded to New Zealand, Australia and other Pacific islands, it can transmit pathogens that cause disease (Anaplasmosis, Babesiosis, Ehrlichiosis, Theileriosis, Rickettsiosis, and Viruses) and is a severe livestock pest. We have not detected these pathogens in the Asian longhorned ticks collected in the US to this date, but cattle have died in North Carolina due to exsanguination (extreme blood loss) caused by many ticks feeding at once. Initially found on sheep in New Jersey, ALT has now been collected from Canada geese, cats, cattle, chickens, coyotes, deer, dogs, elk, goats, ground hogs, horses, humans, opossums, raccoons, red and gray foxes, red-tailed hawk, and skunks. Note that small mammals have been extensively sampled in ALT-infested areas, but have been ALT-free. We expect this list to grow as more ticks are collected.

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If you suspect you’ve found the Asian longhorned tick, please send the tick to us at the address on the back page along with the date collected, the host (human or specific animal) or vegetation collected from, GPS location or address where collected and your contact information. Or, you can deliver the tick with the same information to your local county Extension agent.

![Detection of *Haemaphysalis longicornis* by County](image-url)

Source: thin county and state boundaries, US Census Division UTM5

Map Author: Owen Rows, University of Tennessee
So what does this tick look like? ALT is all brown with palpal flares and extensions which look like fangs. The nymphs look somewhat similar to lone star ticks but lone star tick’s have long palps.

The UT Medical and Veterinary entomology laboratory is sampling for ALTs and are finding all three life stages active at this time. Larvae, nymphs, and females are all abundant, no males have been collected, and it is expected that female population will continue to grow. Later in the year we expect the larvae to become more abundant. The laboratory has created a tick-surveillance network with includes UT AgResearch and Extension, along with collaborators from animal shelters, livestock auctions, USDA-VS, University of Tennessee (farm animal clinical service, field service, necropsy), TWRA, USDA-F&G, Rehabilitation Centers, TDH, and USDA-FS. If you suspect you’ve found the Asian longhorned tick, please send the tick to us at the address on the back page along with the date collected, the host (human or specific animal) or vegetation collected from, GPS location or address where collected and your contact information. Or, you can deliver the tick with the same information to your local county Extension agent.
Female ALT are parthenogenetic meaning they lay eggs without mating. So far, male ALTs have not been found in the US. ALT females can lay between 2000 and 4000 eggs so it’s easy to understand how an animal can easily become overwhelmed with ticks. Find and destroy Asian longhorned tick before they can lay eggs!

Protecting Yourself from Tick Bites

Asian longhorned ticks are found in shaded edges of fields, trails and clearings. Few of the US-collected ALT ticks have been found on humans, but being outside puts you at risk from encountering other ticks such as lone star tick, American dog tick, deer tick and others.

What can you do to avoid tick bites?

Personal Protection
- Wear light-colored clothing with long-pants tucked into socks when going into tick-infested areas.
- Educate students, families, and school staff about ticks, tick-vectored diseases, and the proper use of repellents.
- Keep to the center of trails to minimize contact with brush and tall grasses.
- Inspect for ticks when returning indoors.
- When returning home, place clothing into a dryer for 10 minutes on high before washing to kill ticks quickly. Shower and conduct another tick inspection.

Habitat Modification
- Manage the landscape to reduce humidity where ticks are likely to be found.
- Reduce cover for animals. Eliminate wooded, brush-covered habitat, prune lower branches of bushes, clean-up storage areas, woodpiles and junk piles.
- Reduce deer habitat or erect deer-exclusion fencing.
- Rake leaf litter and place stone or gravel, or plant shade-tolerant grass, under shade trees to reduce tick abundance.
- Trim trees and brush to open up wooded areas in and around areas of human activity, allowing sunlight to penetrate to reduce moisture and thus reduce tick habitat.
- Keep grass mowed.
- Remove leaf litter, brush, and weeds at the edge of the lawn.
- Restrict the use of groundcover such as pachysandra in areas frequented by people.
- Discourage rodent activity to eliminate hosts for ticks other than ALT. Cleanup and seal stone walls and small openings on school properties.
- Move bird feeders away from school buildings.
- Avoid landscape plantings that attract deer or use deer-exclusion fencing to keep deer off school properties.
- Keep playground equipment away from woodland edges and place them on wood-chip or mulch-type foundation.
- Trim trees and shrubs on the school properties and at the woodland edges to permit more sunlight.
- Create a three-foot or wider wood chip, mulch, or gravel border between turf and woods.
- Widen woodland trails/walkways to permit trail-users to avoid contact with woody vegetation and tall grasses.

Modified from
https://extension.tennessee.edu/publications/Documents/W826.pdf
Anonymous. 2012. Ticks (and brown recluse spiders, American cockroaches and stinging pests)
http://schoolipm.utk.edu/documents/newsletters/July%202012.pdf
Partial support for this newsletter provided by the USDA NIFA CPPM EIP grant (# 2017-70006-27287) awarded to the University of Tennessee.

For more information about IPM in Tennessee schools and other facilities, or to view past issues of Pests and Pesticides in Child-serving Facilities, please visit http://schoolipm.utk.edu

NATIONAL IPM INFORMATION

eXtension’s Pest Management In and Around Structures: Urban Integrated Pest Management http://www.extension.org/urban_integrated_pest_management

National School IPM
schoolipm.ifas.ufl.edu/

IPM in Schools Texas
http://schoolipm.tamu.edu/

IPM Institute of North America
www.ipminstitute.org/


National Pest Management Association IPM
www.whatisipm.org/

EPA schools
http://www2.epa.gov/managing-pests-schools

For further information about the IPM program at your school or in your county, contact your county Extension Agent or the school IPM Coordinator. For county agent contact information, please visit https://extension.tennessee.edu/Pages/Office-Locations.aspx

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator’s responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

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