MISSISSIPPI STATE UNIVERSITY EXTENSION

The Asian Longhorned Tick: A New Invasive Tick Species in the Eastern U.S.

The Asian longhorned tick (*Haemaphysalis longicornis*) is native to East Asia and considered an invasive species in Australia (bush tick) and New Zealand (cattle tick). In 2017, this tick was found in the United States, where it infested sheep on a farm in New Jersey. Scientists now believe the invasion of these ticks into the U.S. actually occurred as early as 2010 but was undetected.

Since its introduction into the U.S., this species has now been detected in Arkansas, Connecticut, Maryland, New York, North Carolina, Pennsylvania, Tennessee, Virginia, and West Virginia. This is the first exotic species of tick to become established in the U.S. in about 80 years. The Asian longhorned tick feeds on a wide range of birds and mammals, including people, livestock, wildlife, and pets. One study showed that they can readily be found on white-tailed deer in the late summer. They have been found infesting shaded lawns in neighborhoods.

The Asian Longhorned Tick in Mississippi

The Asian longhorned tick has not yet been found in Mississippi, but it has been reported in Arkansas and Tennessee. Therefore, its spread to Mississippi and other eastern states is likely.

Description

The longhorned tick is a species of hard tick in the family Ixodidae. They are small ticks, about 3–4 millimeters in length (size of an apple seed) as unfed adults. Adult and immature longhorned ticks are reddish-brown with no distinctive white markings (Figure 1). The mouthparts are both short and wide in contrast to the long, narrow mouthparts of other common species of hard ticks found in Mississippi, such as the lone star tick.

In contrast to most tick species, a single female tick can produce up to 2,000 eggs at a time without mating (no males are needed for reproduction). As a result, they multiply rapidly—hundreds of ticks can be found on a single animal, person, or area.

Harmful Effects to Animals and Livestock

This tick is a major pest of livestock. In some parts of Australia and New Zealand, the ticks can suck so much blood from dairy cattle that they cause milk production to drop by 25 percent. They also can transmit serious diseases of cattle, such as bovine theileriosis and babesiosis.

Potential for Disease Transmission to Humans

Health officials are particularly concerned about the longhorned tick's ability to adapt to be a vector for a number of tick-borne illnesses in the U.S. While none of the imported ticks have yet been implicated in human disease in the U.S., longhorned ticks in Asia have been associated with the agents that cause many diseases already present here, including Lyme disease, *Ehrlichia, Rickettsia, Anaplasma,* and Powassan virus.

Figure 1. Asian longhorned tick, *Haemaphysalis longicornis*, adult (A), nymph (B), and larva (C). Specimens courtesy of Dr. Michael Levin, Centers for Disease Control and Prevention; photos by Joe MacGown, Mississippi State University.

It is not yet known if these ticks can transmit these diseases to humans; however, in Asia, the ticks transmit a virus that causes a serious human hemorrhagic fever. Health officials are currently testing the imported populations for these disease agents.

Control

As is the case with other tick species, education is the first line of defense against this tick. Knowing that the tick exists in the area and taking samples for proper identification are first lines of defense. If you suspect you have found an Asian longhorned tick, promptly submit it to your county MSU Extension office; staff will forward samples to Dr. Jerome Goddard at MSU for confirmation.

As with all ticks, use personal protection equipment (PPE), such as long sleeves and long pants; apply repellents such as DEET; and follow veterinarian-recommended tick prevention in pets and livestock.

USDA National Institute of Food and Agriculture
U.S. DEPARTMENT OF AGRICULTURE

This work is supported by Crop Protection and Pest Management, Extension Implementation Program, award no. 2017-70006-27200/project accession no. 1014037, from the U.S. Department of Agriculture's National Institute of Food and Agriculture. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and should not be construed to represent any official USDA or U.S. Government determination or policy.

Publication 3367 (POD-12-25)

By **Jerome Goddard**, PhD, Extension Professor, Kristine T. Edwards, DVM, PhD, Senior Extension Associate (retired), and Michelle Allerdice, former PhD Graduate Student, Agricultural Science and Plant Protection.