

ANIMAL AND HUMAN HEALTH PREVENTION OPPORTUNITIES

Longhorned Tick (*Haemaphysalis lonicornis*)

The longhorned tick, also known as the bush, scrub, or cattle tick, is an invasive tick species whose presence in the United States was confirmed by the United States Department of Agriculture (USDA) in late 2017. The longhorned tick is considered a serious pest to livestock and can transmit certain diseases of livestock and humans. In this edition of *Montana One Health*, we will discuss the geographic distribution, tick life cycle, hosts, disease impacts (both human and animal), economic impacts, and control methods.

Description

The longhorned tick is a species of hard tick in the family *Ixodidae*. This tick species is generally smaller than *Dermacentor* (e.g. American Dog Tick) and *Amblyomma* (e.g. Lone Star Tick) genera. The adult and immature ticks are reddish-brown in color with no descriptive markings and can be confused with the Brown Dog Tick, common in the United States.



*(Photo credit: James Gathany)

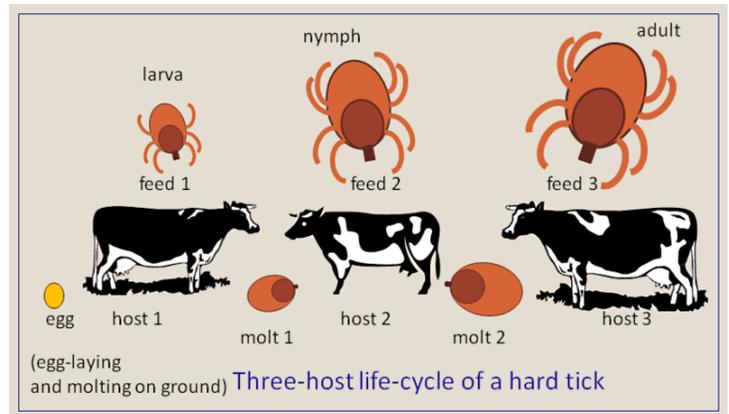
Distribution

The longhorned tick is native to China, Korea, and Japan. Populations have since been established in Australia, New Zealand, Russia, and multiple Pacific Islands. The tick had been previously intercepted at numerous ports on animals entering the United States. Established populations were not confirmed in the United States until 2017. Since the initial detection, the tick has been found in New Jersey, Virginia, West Virginia, and Arkansas. In reviewing past tick submissions, USDA confirmed a longhorn tick from a sample submitted in 2013 and it is unknown how the tick initially entered the United States.

The longhorned tick, like other species of hard ticks, prefers areas of tall grass, brush, and a high humidity level at the soil surface. The tick can develop into high density populations in an area.

Life Cycle

A unique aspect of the longhorned tick is the ability to reproduce sexually or asexually (through parthenogenesis). With sexual reproduction, the tick has a three-host life cycle which is typically completed in 6 months. After the larval stage feeds on a host, it drops off and molts to a nymph. Nymphs molt to an adult after a successful blood meal. Adult females will feed for seven days or longer before laying eggs. An adult female can produce up to 2000 eggs over 2-3 weeks before dying.



*(Photo credit: Alan R Walker)

Females can also lay eggs that will hatch without any male fertilization. The eggs hatch into genetically identical copies of the female. This form of asexual reproduction is completed within 6 months.

Hosts

Longhorned ticks primarily feed on cattle, but have a diverse host range including livestock, wildlife species, and humans. The larval stages prefer small mammals and birds. In the United States, the longhorned tick has been found on sheep, goats, horses, cattle, raccoons, opossums, and deer.

Disease Impacts

In countries outside the United States, the tick has been shown to transmit Anaplasmosis, Babesiosis, Ehrlichiosis, Theileriosis, Rickettsiosis, Thrombocytopenia Syndrome Virus, and other viruses. Currently in the United States, the tick has not been associated with any disease transmission.

Economic Impacts

The tick can cause heavy infestations on hosts causing stress, decreased growth, decreased milk production, weight loss, and in severe cases, anemia and death. Damage also occurs to hides and wool. In New Zealand, the tick has been associated with up to a 25% reduction in dairy production.

Control

The longhorned tick is susceptible to regular tick treatments and prevention measures including removal of preferred habitats (tall grass and brush).

General Tick Prevention

The following steps will help prevent tick bites

- Know where to expect ticks
- Treat clothing and gear with products containing permethrin
- After coming indoors check your clothing and body for ticks
- Shower soon after being outdoors

Additional steps include modifying your landscape to create tick-safe zones (removing tall grasses, brush, and leaf litter) and discouraging wildlife from entering your yard.

Longhorned Tick- Key Points

- New invasive tick species that is associated with many important livestock and human diseases in countries outside the United States is established in the United States
- Large potential exists for economic impacts on the livestock industry from production losses associated with tick infestations
- If you find a tick that appears different from other ones you have seen, submit the tick for identification
- Place the tick in a sealed container of 70% ethanol (if available) and include where the tick was found, what the tick was found on (animal species or human), and the date

References available upon request

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