INDIANA STATE BOARD OF ANIMAL HEALTH

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VETERINARY ADVISORY

Asian Longhorned Ticks Found in Indiana

(26 May 2023)

Within the last few weeks, two immature Asian longhorned ticks (ALHT) were found in Switzerland County, IN—marking the first detections in Indiana. The ticks were not attached to a person or an animal. A medical entomologist at the Indiana Department of Health (IDOH) collected the two specimens individually in the field as part of a routine tick surveillance program.

What You Need to Know

ALHTs are an invasive species first found in the United States in New Jersey in 2017. Since then, they have continued to spread slowly across the country. Indiana is the 19th state to have a confirmed detection of an ALHT. These ticks feed on a wide range of animals including dogs, cats, horses, cattle, sheep, goats, and wildlife (including deer, several species of birds, raccoons, and opossums), as well as humans. They are more often found in tall grass and pasture areas and can adapt well to the environment, away from the host, and in a wide range of conditions. The ticks can carry and spread several tickborne diseases to animals and people.

ALHTs (also known as *Haemaphysalis longicornis*) can carry certain pathogens capable of causing tickborne diseases that affect humans and animals, such as: Rocky Mountain spotted fever, heartland virus, and Powassan virus. However, those diseases have not been confirmed outside of a laboratory setting in the United States. ALHTs collected in other parts of the country have been found to carry *Theileria orientalis (T. orientalis)*, one of the pathogens that cause bovine theileriosis.

A major problem with the ALHT is that the female can reproduce without mating (parthenogenesis) and can lay up to 2,000 eggs at a time. The population of this pest can undergo explosive growth in a short period of time. Cases of severe ALHT infestation of livestock animals have been reported, causing stress, decreased growth and reduced meat or milk production. Death due to blood loss (exsanguination) has been documented.

Identification and Diagnosis

ALHTs have a reddish-brown appearance and measure approximately 0.1 inches (2.5 mm) long, without any markings or distinct coloration. When fully engorged, they are about the size of a pea.

Veterinarians, livestock producers and pet owners who notice severe tick infestations and/or unusual ticks consistent with ALHTs are encouraged to contact an Indiana State Board of Animal Health (BOAH) district veterinarian to report or for assistance with identification. BOAH veterinarians have some

training with identification of ALHTs and possess preserved reference specimens for comparison. IDOH will support BOAH in final tick identification and consultation on control measures, where appropriate.

Suspect ticks may be submitted to the IDOH Entomology Laboratory for identification. Specimens should be as fresh as possible and suspended in ethanol (70% or higher) or isopropyl alcohol in a glass or plastic via with a leak-proof closure. A submission form with mailing instructions is available here: https://www.in.gov/health/idepd/zoonotic-and-vectorborne-epidemiology-entomology/arthropod-identification/

IDOH is conducting enhanced surveillance for ALHTs in and around the initial discovery area.

Differential

Theileriosis in ruminants is especially concerning. The disease closely mimics anaplasmosis (caused by *A. marginale*), but theileriosis can affect young calves and older cattle. This differentiates the disease from anaplasmosis. Theileriosis can cause anemia, ill thrift, abortion, and death in cattle. Cattle that recover become life-long carriers of the disease. *T. orientalis* appears to be very resistant to oxytetracycline. Theileriosis can be spread between animals through used needles, lice, biting flies or any other exposure to infected blood**.**

Of the eleven *T.orientalis* genotypes in the United States, only *Ikedia* and *Chitose* are pathogenic in cattle. The Indiana Animal Disease Diagnostic Laboratory (ADDL) offers PCR testing and typing for *Theileria orientalis*: https://vet.purdue.edu/addl/tests/fees.php?id=465 . The test can be performed on whole blood or spleen.

Human Exposure

If a tick is found attached to a person, the individual should contact his/her healthcare provider for further recommendations. Saving the tick in a plastic baggie to show the healthcare provider may be helpful.

Additional Information

A webinar recording about ALHTs and associated diseases appropriate for veterinarians and livestock producers is on the BOAH YouTube channel at: https://youtu.be/QD6AE5P18cM

Additional questions may be directed to:

- Human health concerns: Kira Richardson, IDOH: kirrichardson@health.in.gov
- Tick identification: Lee Green, IDOH: legreen@health.in.gov
- Domestic animal and livestock health concerns: Bruce Lamb, DVM, BOAH: blamb@boah.in.gov
- Wildlife health: Michelle Benavidez Westrich, PhD, DNR: MBenavidezWestrich@dnr.IN.gov
- Further information may also be found at this link: https://www.aphis.usda.gov/publications/animal_health/alert-asian-longhorned-tick.508.pdf

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