

## Asian Longhorned Tick Capital Region PRISM Assessment

New York State Integrated Pest Management-Cornell University

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In 2017, the invasive Asian longhorned tick (*Haemaphysalis longicornis*) (ALT) was found on a sheep farm in New Jersey. Like hemlock woolly adelgid and unlike our native tick species, ALT is parthenogenic, meaning that a single female can quickly result in a large population. The tick has expanded its range into 17 states (soon to be officially 18) and has been found as far north as Rensselaer County (2021). This is the farthest north that the tick has been found.



<https://www.aphis.usda.gov/aphis/map/s/animal-health/asian-longhorned-tick>

ALT is a major threat to livestock and possibly some species of wildlife. ALT occur at extremely high numbers when they infest livestock and wildlife, including cases where ALT exsanguinated cattle in North Carolina and Ohio. This new invasive tick can be an extreme economic issue with livestock producers (dairy, beef, sheep, goats and horses) in New York. Grazing livestock like beef, sheep and meat goats that are left unchecked are most at risk. There are already cases of ALT vectoring bovine theileriosis in the U.S. In its home range, ALT have been found to vector similar pathogens that cause borreliosis, anaplasmosis, babesiosis, ehrlichiosis, and viral diseases which are already expanding within NY. Research has found that ALT can transmit our native *Rickettsia rickettsii*. While humans are not a preferred host, ALT will amplify the rates of these pathogens within wildlife populations. This in turn will increase the likelihood that our native ticks will transmit these pathogens to people, pets, livestock, and other wildlife.



ALT is a significant livestock pest and can be found in pastures.

ALT surveys were conducted throughout the eastern portion of the Capital region with the purpose of identifying the distribution and phenology of the ALT on livestock farms and publicly accessible land in the Capital Region. To achieve this objective, we hired and trained a seasonal technician to work 20 hours per week. We worked with CCE livestock educators, PRISM partners, farmers market lists, and the Agricultural Stewardship Association to identify livestock farms that might allow us to conduct monitoring. To expand upon the number of farms, we also visited farmers markets and the Altamont Fair to directly reach producers, 4H, and FFA members. Through these efforts, we spread the word about ALT, it's risks to livestock farmers, and the support of Capital Region PRISM. It was more difficult than expected to receive permission to monitor on farms (there was concern about consequences if the tick was found such as quarantines.)



Monitoring for ticks at Overmountain Conservation Area in Columbia County, NY.

The focus then was shifted to publicly accessible land that receive visitors from downstate where ALT is established. A research permit was granted by NYS Parks to monitor campground locations.

All collected ticks were identified under a microscope and suspected ALT were also evaluated and confirmed at Cornell University. As no ALT were found in May or June, in early July we traveled to Westchester County to continue training where ALT is already established. On this day, we established the first record of ALT on

livestock in NY and the first record on domestic pigs in the U.S. The USDA requires secondary molecular confirmation to officially add them to their records and the ticks were tested for pathogens at Cornell University's Animal Health Diagnostic Center. The pathogen testing came back negative.

No ALT were collected in the Capital Region PRISM survey, although a native look-alike, rabbit tick (*Haemaphysalis leporispalustris*) caused some excitement until it was properly identified. In addition to this survey, an annual Tick Blitz occurred which did collect ALT in a different location than the first find in Rensselaer County. Further monitoring at that location failed to collect any additional specimens. While this is good news, a recent paper on the expansion of ALT on Long Island stated that it took four decades for blacklegged ticks to reach high populations, two decades for lone star ticks to "be noticeable" and three years for ALT to become the "dominant" tick species. They also found it most prevalent in the northeastern coastal zone, an ecoregion that can be found in the Hudson Valley up to Glens Falls.



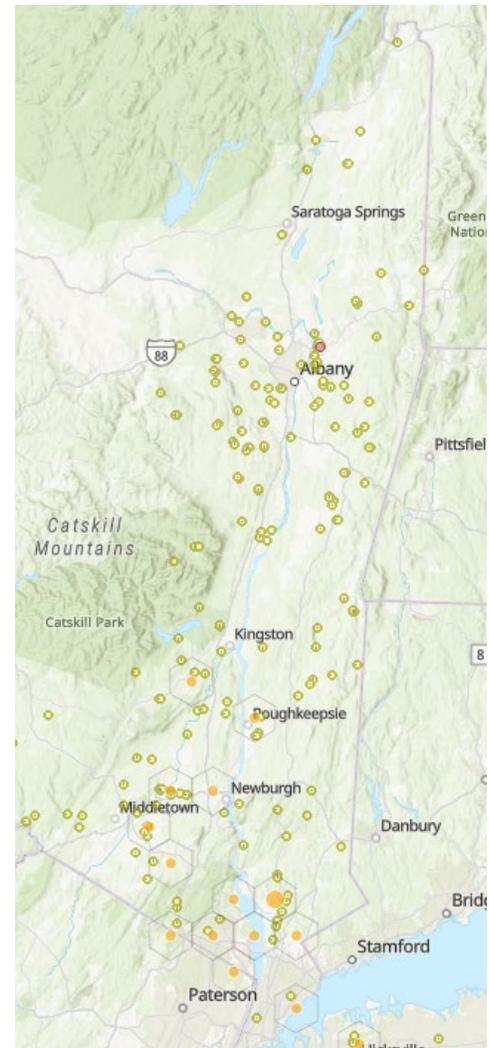
ALT nymph collected in Westchester County.

All records, including searches conducting during an annual Tick Blitz, were entered into iMapInvasives. The pink dot indicates the as-of-yet unconfirmed collection in Rensselaer County. Yellow dots indicate undetected searches.

#### Next steps:

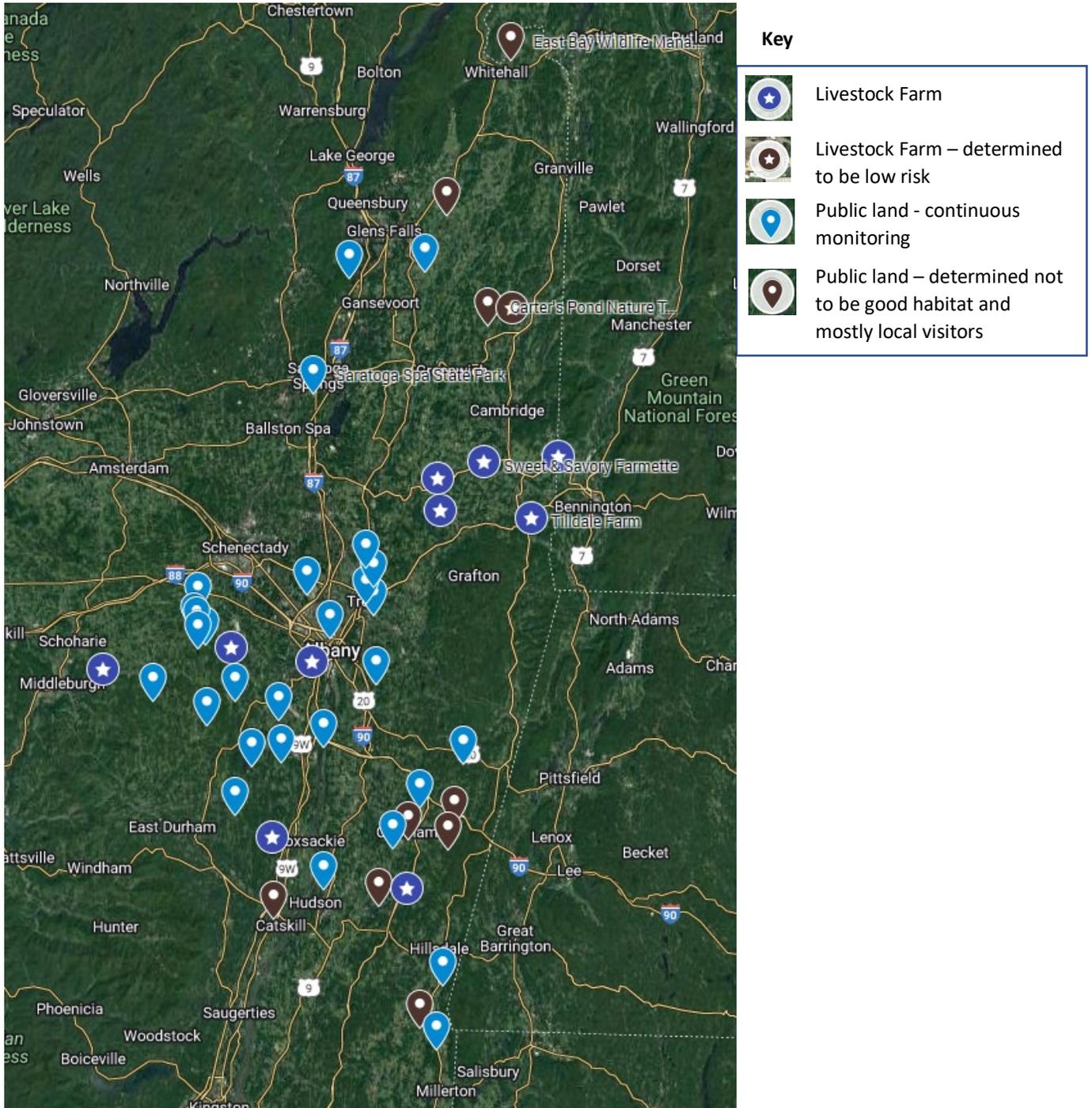
- NYSIPM is hiring a Livestock IPM Specialist
- Spend more time in the lower Hudson valley to determine phenology, habitat, and livestock preferences
- Continue to use the Parks permit to visit campgrounds in 2023
- Explore working with small slaughterhouses to determine if monitoring can occur there
- Reach out to wildlife rehabilitators
- Build upon Tick Blitz to include youth groups involved with agriculture including 4-H and FFA

NYSIPM would like to thank the Capital Region PRISM for the opportunity to explore this new tick in the region. While our efforts were not successful in finding ALT in the region, we were able to spread the word and made many useful contacts.



This project was contracted by the Capital Region PRISM a Partnership for Regional Invasive Species Management using funds from the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation.

A map of all monitored locations, not including the training site in Westchester County, can be found below.



Map of monitored 2022 locations