

New tick-borne illness emerging in Connecticut



This image shows a male Gulf Coast tick, *Amblyomma maculatum*. The first human case of *Rickettsia parkeri* rickettsiosis, an emerging tick-borne disease in the Northeast, has been reported in Connecticut, the Connecticut Agricultural Experiment Station said.

BY LIZ HARDAWAY
STAFF WRITER

A tick-borne disease previously seen in the southeastern part of the country had a human case in Connecticut, marking the first report of this disease in the Northeast, according to the Connecticut

Agricultural Experiment Station.

The disease — *Rickettsia parkeri* rickettsiosis — is transmitted by the Gulf Coast tick, which previously was restricted to the southeastern part of the country but has expanded northward in recent decades.

Here's what you need to know:

What is *R. parkeri* rickettsiosis?

R. parkeri rickettsiosis is an emerging tick-borne disease similar to Rocky Mountain spotted fever with relatively milder symptoms in the United States, according to CAES. *R. parkeri* rickettsiosis specifically is transmitted by the Gulf Coast tick, or *Amblyomma maculatum*.

The disease is part of a group of diseases called spotted fever rickettsioses. These are caused by closely related bacteria that are spread to people through bites from infected ticks or mites, according to the U.S. Centers for Disease Control and Prevention.

The first sign of many spotted fevers, including *R. parkeri* rickettsiosis, is a dark scab at the site of a tick or mite bite, which is known as an eschar. These usually develop within a few days to a week after the bite, the CDC said.

Several days after the eschar develops, patients can experience other signs and symptoms such as fever, headache, rashes and muscle aches, according to the CDC. The CDC states that regional lymphadenopathy, or the enlargement of one or more lymph nodes, is detected in about a quarter of reported patients, and gastrointestinal symptoms are rare.

The CDC notes *R. parkeri* rickettsiosis and other diseases in this group are less severe than Rocky Mountain spotted fever, though it can be difficult to distinguish between this and other spotted fevers.

What do we know about the human case in Connecticut?

A 29-year-old woman developed the disease after visiting a beach in Fairfield County in August 2023, according to the scientific journal in which the case was recorded. The finding of the first human case of this disease in the Northeast was published in the October 2024 edition of "Emerging Infectious Diseases," a peer-reviewed journal published by the CDC.

The woman discovered a tick was attached to the nape of her neck, and it was attached four or fewer hours before being removed, according to the article.

Within three days, the patient developed a small lesion at the bite site and then experienced chills, fatigue, cervical lymphadenopathy (or swelling of the lymph nodes), myalgia (or muscle aches and pains), severe headache and mild confusion, the article states. Then, about 10 days later, the patient developed small red spots on her arms and legs.

The article stated that the patient “recovered rapidly” after being treated with doxycycline, an antibiotic.

Where are the infected ticks?

Cases of this disease have been reported in the southeastern part of the country because the ticks that transmit this disease typically have been restricted to coastal regions in the states bordering the Gulf of Mexico and the southern Atlantic coast. However, in recent decades, the species’ range has expanded northward into the mid-Atlantic states, CAES said.

Populations of the Gulf Coast tick have been reported in Delaware and Maryland.

The first established population of this tick species in Connecticut was reported in Fairfield County in 2021, according to Dr. Goudarz Molaei, a research scientist and medical entomologist who leads the CAES Passive Tick and Tick-Borne Disease Surveillance Program. About 30 percent of these ticks were infected with *R. parkeri*.

Additional populations of this tick species with higher infection rates later were reported from New York in 2022 and New Jersey in 2024, CAES said.

“Rising global temperatures, ecological changes, reforestation, and increases in commerce and travel are important underlying factors influencing the rate and extent of range expansion of ticks and associated pathogens,” Molaei said in a statement. “It is anticipated that warming temperatures related to climate change may lead to the continued range expansion and abundance of several tick species, increasing their importance as emerging threats to humans, domesticated animals, and wildlife.”

Scientists believe that migratory grassland birds spread these ticks to the central and northern states, which have favorable environmental conditions for their survival, according to CAES.

While some ticks prefer mostly woodland habitats, Gulf Coast ticks prefer grassland habitats, according to the article published in “Emerging Infectious Diseases.”

“Gulf Coast ticks readily bite humans, posing another risk for tick-borne disease in northeastern United States, particularly among persons who

reside and recreate near or within New York, New York; New Haven, Connecticut; Newark, New Jersey; and Philadelphia, Pennsylvania, where recently established tick populations have been identified in areas where human infections with this pathogen had not been previously documented,” the article states.

How to treat spotted- fever diseases

According to the CDC, some spotted fevers are not life-threatening and can resolve over time, even without treatment. For other diseases, especially Rocky Mountain spotted fever, early treatment can be lifesaving.

The CDC recommends the antibiotic doxycycline for all spotted fevers.

The CDC notes that it can be difficult to distinguish between Rocky Mountain spotted fever and other spotted fevers, especially during their early stages. The signs and symptoms of spotted fevers also are similar to those of many other diseases.

Patients should tell their health care provider if they recently have been bitten by a tick, exposed to mice or have spent time in areas where ticks or mice may be found. Ticks typically are found in grassy or wooded areas and can carry several diseases. Another type of spotted fever — rickettsialpox — is spread by mites carried by the common house mouse, according to the CDC.

Health care providers may order certain blood tests to look for evidence of spotted- fever infections, but the results can take weeks. The CDC states that, “If your healthcare provider thinks your illness might be a spotted fever, they should recommend antibiotic treatment before results are available.”

How to prevent tick bites

The CDC recommends residents know where to expect ticks. The insects live in grassy, brushy or wooded areas or on animals.

“Spending time outside walking your dog, camping, gardening, or hunting could bring you in close contact with ticks,” the CDC states. “Many people get ticks in their own yard or neighborhood.”

The CDC advises people to avoid wooded and brushy areas with high grass and leaf litter. Anyone walking on trails should stay in the center of the trail.

One way to combat this is to treat clothing and gear with products containing 0.5 percent permethrin, an insecticide, according to the CDC. This chemical can be used to treat boots, clothing and camping gear and stays protective

through several washings. Some gear and clothing can also come pre-treated with the insecticide.

People also can use insect repellants registered with the Environmental Protection Agency.

After coming indoors, people should check their clothing for ticks and any ticks should be removed. Clothes should be dried on high heat for 10 minutes to kill ticks on dry clothing and, if the clothes need to be washed, the CDC recommends hot water.

Ticks also can hitch a ride into a home on pets and gear, and then attach to a person later. Carefully check pets, coats, daypacks and other gear, the CDC says.

Anyone who has been outdoors should shower within two hours of returning indoors. This could help wash off unattached ticks and it is a good opportunity to do a tick check. To conduct a full-body tick check, be sure to check under the arms, in and around the ears, inside the belly button, on the backs of the knees, in and around the hair, between the legs and around the waist, the CDC says.

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