Using mathematical modeling, University of Maryland researchers tried to understand how Lyme-carrying ticks might respond to a warming climate. They found the bloodsucking parasites might not just spread but migrate, reducing cases of the disease in coastal Maryland CDC VIA AP

This bloodsucking parasite might head for the hills if Maryland keeps warming

By Karl Hille

"This study helps answer a central question in ecology, whether and how anthropogenic climate change will alter these diseases' distribution and burden"
— Study senior author Abba Gumel

Rising temperatures could cause ticks to migrate westward, abandoning much of Maryland and taking their nasty Lyme disease with them, researchers predict.

Using mathematical modeling, University of Maryland, College Park researchers tried to understand how Lyme-carrying ticks might respond to a warming climate. They found the bloodsucking parasites might not just spread but migrate, reducing cases of the disease in coastal Maryland, where 70% of the state's population lives, while increasing cases in cooler, mountainous Western Maryland.

Diseases carried by insects and rodents make up 16% of all infectious diseases that are transmitted to humans, study senior author Abba Gumel said on the University of Maryland website.

"This study helps answer a central question in ecology, whether and how anthropogenic climate change will alter these diseases' distribution and burden," the math professor said.

They become active in temperatures as low as 40 degrees Fahrenheit but ticks thrive in a narrower temperature range of 63 to 69 degrees, the study states. Outside that range, their survival and disease transmission drop.

They published their findings in the March 1, 2026, issue of the Royal Society Open Science journal.

"Disease elimination is feasible using a hybrid strategy, which combines rodent baiting, habitat clearance and personal protection against tick bites," the authors wrote.

Maryland reported nearly 2,500 cases of Lyme disease in 2023 to the Centers for Disease Control and Prevention, but experts say the true count is likely exponentially higher.

Symptoms of Lyme disease include a rash — which might look like a bull's eye — fever, headache, joint pain and fatigue, according to the Maryland Department of Health website. If left untreated, the disease may spread to the joints and nervous system. Contact your healthcare provider or local health department if any of these symptoms develop after a known tick bite or after spending time in a tick habitat. Most cases can be cured with antibiotics.

Tick nymphs can be as small as the period at the end of this sentence, and usually spend winters on small rodents. In addition to Lyme, ticks can cause a disease called alpha-gal syndrome, which renders its victims allergic to meat. In 2024, a New Jersey pilot became the first documented person to die from this disease.

In 2023, the Maryland Department of Health reported the state's first death from the tick-borne Powassan virus, involving a man who likely caught the disease from a tick bite while traveling in Canada. The CDC reported a steady increase in Powassan deaths, from one in 2004 to 47 in 2024.

Have a news tip? Contact Karl Hille at 443-900-7891 or khille@baltsun.com.