Rash-causing moth spreading due to warming, scientists find

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This 2017 photo by Holland Haverkamp shows a browntail moth caterpillar in Maine. The caterpillars can cause an itchy rash in humans, and a new study by University of Maine scientists states that their spread appears aided by climate change. Credit: Holland Haverkamp/ University of Maine via AP

A forest pest that bedevils Maine residents and tourists with hairs that

cause an itchy rash appears to be spreading due to warming temperatures, a group of scientists has found.

The browntail moth is a scourge in America's most forested state, where it defoliates trees and causes a rash in humans that resembles poison ivy. The hairs of the caterpillars, which have been the subject of an outbreak in the state for about seven years, can also cause respiratory trouble.

The growth and spread of the moth is tied to increasingly warm weather, especially in the fall, the scientists wrote recently in the journal Environmental Entomology. And, unfortunately, climate trends suggest upcoming years could be even worse, they wrote.

Warmer fall temperatures are especially beneficial to the pesky bugs because that allows them to get fatter before they hibernate for the winter, said Eleanor Groden, professor emerita of entomology at University of Maine and the principal investigator on the study.

"If they come out of those webs as hearty individuals, older individuals maturity wise, then they are better able to withstand that period and you get higher populations," Groden said. "And you get defoliation that spring, and populations are raising havoc for anyone who has them in their yards."

The browntail moth is native to Europe and neighboring countries in Asia and Africa. It was accidentally introduced in Massachusetts in the late 19th century and is now found in coastal Maine and Cape Cod, Massachusetts. The caterpillars become active from April to June and have been identified as "an insect of both forest and human health concern" by the Maine Department of Health and Human Services.

The population of the moths has ebbed and flowed in the decades since it first arrived in Maine in 1904. But the outbreak has been steadily

worsening in Maine in recent years, and entomologists said last year was the worst year for browntail moth infestations in state history. The bugs have been growing in both number and territory, as the Maine Forest Service said they've spread into northern and western areas of the state in the last two years.

The study found early fall temperatures are a key determinant of population levels the following year, and that climate trends "indicate continued increases in fall temperatures" since the moth's resurgence in the state.

It's another example of how climate change can aggravate pest problems and jeopardize human health, said David Wagner, a professor of ecology and evolutionary biology at the University of Connecticut who was not involved in the study. Climate change has already exacerbated problems with disease-causing pests such as mosquitoes and ticks, he said.

"Climate change appears to be an important driver in this system," Wagner said. "So this outbreak can continue to increase, and it could come at great expense to land owners and great nuisance for landowners."

Maine communities have tried numerous strategies to try to slow the spread of the moth, including informing residents about how to safely remove their nests. The Maine Legislature is considering creating a special grant fund to pay for mitigation measures.

They're a tough species to manage because they're spreading fast and not native to the ecosystem, Groden said.

"What we are left with is how can we mitigate the localized problem in our yards and public spaces," she said.

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