

Long Island Confronts Destructive Southern Pine Beetles

by Tatiana Schlossberg • Oct. 28, 2014 • 3 min read • [original](#)

It happens all over the South, and started [in New Jersey](#) more than a decade ago: the needles fading from green to yellow to red until the tree dies. It is the work of [southern pine beetles](#), which invade the bark, lay eggs that hatch into larvae and hijack the tree's circulatory system, stealing its nutrients.

The beetles made their first appearance in New York in late September, when they were found on Long Island, evidence of their unceasing northward march and a result, scientists say, of increasingly balmy winters.

No one yet knows the extent of the invasion on Long Island, but according to the state [Department of Environmental Conservation](#), the beetles have been found in three spots in Suffolk County: the [Wertheim National Wildlife Refuge](#) in Shirley, the [Connetquot River State Park](#) in Oakdale and Henry's Hollow Pine Barrens State Forest in Hampton Bays.

"I first noticed that a lot of the pines were dying, and I looked closer and saw this hardened resin on the bark, so I knew something was wrong," said Monica Williams, a wildlife biologist for the United States Fish and Wildlife Service, who spotted the beetles at the Wertheim Refuge.



A dead pine beetle, left, was trapped by resin, the tree's natural defense mechanism.

They can live in any kind of pine tree, but seem to be partial to pitch pine, which is the species most common on Long Island's South Shore.

[Robert K. Davies](#), the state forester for the [Environmental Conservation Department](#), said he thought this particular insect migration was in its early stages, making it easier to manage, stopping the spread before the beetles wreak regional havoc.

But Kevin Dodds, a biologist who works for the [United States Forest Service](#) and studies the beetles in their native habitat — the Southeastern United States — said that while the beetles had been found in three places, they could be more widespread.

That the southern pine beetle would have been found in the pine forests of Long Island was predictable. "Once they'd gotten to New Jersey, it was only a matter of time before they made it to Long Island," said Matthew Ayres, a biologist at Dartmouth College who studies the beetles in New Jersey.

There, aerial surveys were used to find the flaming patches of dying pines in the forests to see how much territory the beetles had marked. Then, once the areas of diseased trees were mapped, a process called “ground truthing” was employed. The sections were cordoned off, the trees felled and taken to mills.

On Long Island, officials plan to proceed with the aerial surveys, Mr. Davies said, but will have to wait a few weeks. At this time of year, as leaves on maples and other deciduous trees change colors, it is difficult to spot a dying pine.

After the aerial surveys are taken, the departments will devise a battle strategy. Mr. Davies said they had a little time because winter was coming. Adult beetles will not emerge from the trees until spring, and beetles in the pupal stage will stay put, feeding on the trees, he said.

Mr. Davies said the agencies involved in the project — the State [Environmental Conservation Department](#), the Fish and Wildlife Service, the Forest Service, the State Office of Parks, Recreation and Historic Preservation and the Central Pine Barrens Commission in Suffolk County — might fell trees; set controlled forest fires to prevent the further spread of the beetles; or use pheromones, which draw the beetles away from the pines to an enclosed area.

Insecticides are not an option at the Connetquot River State Park, because it is home to an aquifer that provides water to two million residents in Suffolk County.

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The trees also have their own defense mechanisms: They produce resin, which fills the beetles’ burrow trails and collects on the bark of the tree, hardening into little yellow clusters.

“In the South, we call it popcorn, Mr. Dodds said.

Mr. Davies said that he called the beetles “grains of rice,” but that a colleague of his thought they looked more like chocolate sprinkles.

A recent visit to observe the trees yielded a comparison to caramel corn.

Scientists and agencies involved in both New Jersey and Long Island agree that global warming has enabled the beetles’ conquest north of the Mason-Dixon line.

“In New Jersey, in the last 50 or so years, the average coldest night has warmed by seven degrees, while the average temperature over all has warmed by only one degree,” Mr. Ayres said.

“Warming winter temperatures don’t cause the outbreaks, but they permit it.”

The frigid temperatures last winter had some biologists and land managers hoping that infesting populations would be killed off, but Mr. Dodds said the cold snaps did not last long enough to eliminate the beetles, or prevent them from reproducing.

“The cold temperatures were often discussed, but no one saw any notable drop in any other bugs,” he said.

Mr. Davies said he was hoping for a very cold winter this year, not just to daunt the beetles but also for the [hemlock woolly adelgid](#), an insect that is ravaging eastern hemlock trees and is sensitive to cold temperatures.

While he is hoping the agencies can contain the spread, he says they rely on vigilant civilian soldiers in this effort: “We really need people in the public to be our eyes and ears and boots on the ground, and let us know if they see anything unusual here.”

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