http://www.washingtonpost.com/wp-dyn/content/article/2007/03/17/AR2007031700335.html

ATHENS, Ga. -- Like a bloodsucking mosquito, the hemlock woolly adelgid plunges its needle-like mouth deep into the branches of hemlock trees and slowly sucks out the nutrients. The pest's telltale sign is the touch of frost-like wool it produces near tree needles, but the real signal of its wrath comes when the evergreen trees die about a decade later.

Since the adelgid migrated from Asia to Virginia in the 1950s, it's at once fascinated and frustrated forest researchers who have yet to find a cheap, effective way to keep the pest in check. Since then, wind and birds have spread its eggs as far north as Maine and across the Appalachian Mountains to eastern Kentucky.

At least four centers dedicated to halting the bug's spread have sprung up at major universities around the Southeast, including the University of Georgia, which opened its lab Friday.

"It's a pretty neat insect," sighs Tom Coleman, the forest entomologist who is running the lab. "Too bad it's killing our trees."

Georgia is a bit late in the game because the bug wasn't spotted here until 2003, in the state's extreme northeast corner. Three years later, it had spread to an eight-county swath and sparked widespread fear among Georgia's conservationists and foresters.

To fight the invasion, environmental group Georgia ForestWatch gathered research groups and environmentalists and after a year of discussion _ and a $75,000 donation from the Turner Foundation _ helped create a hemlock lab.

The lab, a white bunker-like building a few miles outside downtown Athens, is now filled with diseased hemlock branches and hundreds of microscopic beetles that could one day be used to halt the scourge.

The first type of beetle, the laricobius, is widely known as a formidable enemy of the pest. In labs and in forests, it's been spotted preying on the pest and it seems to consistently prefer the hemlock variety over other adelgids. But there's concerns that the beetles, about the size of a half-grain of rice, can't hold up to the same temperature range as the resilient adelgid.

A second, less researched bug could hold more promise. Early studies suggest that the scymnus, a type of ladybug, can withstand the same temperature swing as the adelgid and could hold the key to stopping the pest's spread.

However, there's always a risk. Releasing bugs to control other bugs, a process known as biological control, can backfire. In Georgia, for instance, an infestation of yellow aphids in pecan trees prompted scientists to release a type of ladybug to destroy the pest, but residents complained when those bugs started massing around nearby homes when the temperature dropped in the winter.

"It's an inexact science, but we're learning more all the time," said Wayne Jenkins, executive director of ForestWatch. "Bio-control is what nature's been doing for millions of years. But whether we know enough is the big question."

Researchers say they have little other recourse when it comes to the hemlock pests. Individual trees can be protected for a few years by chemical injections of insecticide, but it's too time-consuming to cover an entire forest.

"It seems to be about the only option to control the adelgid," said Wayne Berisford, a retired UGA professor of forest entomology. "If it doesn't work, a high percentage of these trees will be lost."

Eventually, the researchers say it could take three or four different beetles _ sort of like a cocktail of different medicines _ to contain the pest.

"We're not going to eradicate it," Coleman said. "We just hope to keep it at low levels where it's not killing our trees."

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On the Net:

Georgia ForestWatch: http://www.gafw.org

Invasive Species: http://www.gainvasives.org/hwa/