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A Silver Lining to Winter Weather for TN Forests

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The fuzzy white specks on the needles are the larvae of Wooly agelgid, which can kill mature hemlock trees. (Kerry Wixted/flickr)

KNOXVILLE, Tenn. — The frigid temperatures experienced in parts of Tennessee this season - and likely future visits by Jack Frost - have at least one benefit: Low temps help kill the hemlock woolly adelgid, a non-native species responsible for killing thousands of mature hemlock trees.

Forestry experts are in a race against time to preserve the plant species. Nathan Hoover, forest health specialist with the state Division of Forestry, said his department and other conservation groups are working to preserve what they can.

"It's something we're going to deal with for perpetuity. It's going to be forever. We're losing trees rapidly," Hoover said. “We have to treat them to save them to keep them on the land, preserve the genetics, preserve the actual hemlock forest, and then focus on that long-term control objective. It's just about creating that equilibrium."

As the hemlocks die, they are commonly referred to as "gray ghosts" in the forests because of their appearance.

The invasive insect arrived in the U.S. from Japan in the 1950s, and once it reached the northern Appalachian Forest, it spread rapidly to the Southeast. Hemlocks provide valuable ecosystem services in Appalachian forests, including cover for wildlife and cooling shade along waterways.

Josh Kelly, public lands biologist with Mountain True, said if you haven't heard of the problem, there is a dismal reason for that.

"I think the reason it's not in our radar anymore is because most of them have already died,” Kelly said. “Once it was in the Appalachian range where there are a lot of hemlocks, it spread really rapidly north and south, and first arrived in our area in 2001 and was pretty much everywhere by 2007."

Hoover said while it's an uphill battle, there are things Tennessee citizens can do to preserve what is left.

"Private land owners can inventory their property, find the hemlock trees on their property and then put together a treatment plan for those trees in order to protect them,” Hoover said. “You can inform other people about it. You can contact the Tennessee Division of Forestry for that information."

Kelly and Hoover say the origin of the deadly insect - a non-native bug - is a reminder of the importance for the public and private sector to exercise caution when importing plants and trees from other countries. According to the Center for Invasive Species Protection, since European settlement began in North America, nearly 500 non-native tree-feeding insects and disease-causing pathogens have been introduced into the United States. About 80 of these have caused notable damage to our trees.

Stephanie Carson/Cynthia Howard, Public News Service - TN