Hemlocks' mortal enemy spreads

By **LEE SHEARER** - lee.shearer@onlineathens.com

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An exotic insect pest that devastates hemlock trees has now spread to almost the entire range of hemlocks in Georgia and the Eastern United States.

But there's a glimmer of hope in the battle to contain the wooly adelgid, said University of Georgia entomologist Mark Dalusky.

For years, scientists have been raising beetles that prey on the adelgids at labs at UGA, Young Harris College and other places, then turning the beetles loose in the wild. The adelgids, natives of Asia, have no native predators here.

In a few places in the North Georgia mountains, survey teams have found the adelgid-eating beetles a year after they were released in the wild. The beetles could be reproducing on their own in the forest, though it's really too early to say, Dalusky said.

For now, though, the only reliable way to combat the adelgids is by chemically treating trees one at a time, said Jann George of AdelRid, one of several North Georgia businesses that treat hemlocks with pesticides to protect them from the adelgids.

"We are in the midst of a pretty ferocious fight with it now," Dalusky said. "Pockets have been saved with insecticide treatment."

The only long-term hope is a biological control such as the beetles, Dalusky said.

"Right now, frankly, the adelgid has the upper hand," he said. "I wouldn't say we've got a good shot. I'd say we're fighting the good fight. We have a shot."

Since first reaching Georgia's Rabun County in about 2002, the invasive Asian insect has reached the southern limits of the hemlock's natural range in Stephens and Banks counties, and west nearly to Interstate 75.

Once the adelgids infest a tree and begin feeding on the sap of young hemlock shoots, the trees lose needles and stop producing new growth.

"It's a sad thing to see," said hiker and retired minister George Owen, who saw new evidence of the adelgid devastation this week on a hike near Helen.

Owen, maintenance director for the Benton MacKaye Trail Association in Georgia, led a group hike to Dukes Creek Falls on Wednesday, he said.

"All across the face of that waterfall, all the hemlocks are dead. They're not dying, they're dead," Owen said.

Some fear the massive hemlock die-off will affect not just the natural beauty of North Georgia forests, but trout fishing and water quality as well.

The hemlocks' shade helps keep trout streams cool enough for the fish to live, and the trees help keep stream banks stable, preventing erosion, said Joshua Barnett, president of the Oconee River chapter of Trout Unlimited.

But over time, the forests will recover and new kinds of trees will shade the streams, predicted Scott Griffin, a forest health specialist with the Georgia Forestry Commission.

"The old forest is pretty resilient. There's always something waiting to fill that void," Griffin said.

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Reader Comments

Posted by: **Samuels** at Jul. 23, 2010 at 1:47:54 am

Dear Editor,
Actually there is no species 'waiting to fill that void' when the Hemlocks are gone. All tree-sized evergreens (White Pine being the only native candidate in such riparian settings) are less shade-tolerant and create somewhat lighter shade as well. This means the streams are kept much cooler and year-round with Hemlocks growing along the banks. This fact is true for native trees as well as exotics. There are other species of Hemlock and those from the Pacific Northwest are more tolerant of the adelgid than the two eastern species (Canada and Carolina Hemlock). The species from northeastern Asia are most tolerant as would be expected.
Aside from the practical and ecological role Hemlock plays in our forests, it has an important aesthetic role as well. It is the only large-sized non-pine evergreen conifer in any large numbers in Georgia. It is a symbol of the mountains. Look at so many paintings and other representations of trees in our southern mountains and the 'Christmas-tree' image is that of Canada Hemlock. It's dark spire is unlike any other tree in the state or in the South. Sometimes it is a conical spire and sometimes a narrow pyramidal form with tiers of branches. Close-up it is the epitome of grace and beauty with short flat needles of dark green on top with silver bands beneath, and tiny cones (the smallest in the larger pine-family which includes spruce, fir, douglas-fir, pine, larch, and a few others. Canada Hemlock is also a remnant of a much more dominant population in our pre-colonial past and a reminder of cooler 'sweeter' air some North Georgia natives especially love.
I've had conversations with forest rangers and other officials which leave me astounded by their lack of knowledge of the forests they are supposed to protect. I fear that some in the U. S. Forest Service and some in the State Forestry Commission do not understand or appreciate the consequences of Hemlock loss which in my estimation is far greater than that of the loss of the American Chestnut trees a century before. This relative lack of concern allows one who should be vigorously fighting this menace to be more comfortable, complacent, and philosophical.
I applaud the work being done at UGA, Clemson, North Georgia College and State University, and Young Harris College, as well as at colleges and other research facilities outside our immediate region. Hopefully a biological control will achieve balance with the tree-killing adelgid and prevent complete loss of this wonderful tree in its native range. Certainly Canada Hemlock and Carolina Hemlock (both being mountain species and preferring cooler areas) cannot achieve the same size and majesty when grown in the Athens area as compared with those presently (and fleetingly) seen in our mountain valleys, but I will treasure those which live in my Athens yard for as long as I live!
Sincerely,
L. Samuels