

## New Hope for Saving Hemlocks

By Ralph Heller

Save Georgia's Hemlocks Annual Hemlock Camp Meeting on June 7 introduced very hopeful news about a beetle native to the Pacific Northwest, which could be the answer to help save our Eastern Hemlocks. Most BMTA folks are aware of the destruction of these trees by a tiny exotic insect, the Hemlock Woolly Adelgid (HWA), introduced to the eastern US in the early 50's from Asia. The devastation can be seen just about everywhere these trees are growing in the North Georgia Mountains.

Dr. Richard McDonald, the keynote speaker at the meeting, introduced the audience to information about this predatory beetle called *Laricobius nigrinus* or **Lari**. In the past, it was thought that there was no native predatory insect species in the US that would control the adelgid outbreak. There have been efforts to raise and release several predatory insects native to Asia, but collecting these insects and raising them in labs has been extremely expensive. Their effectiveness and reproduction when released in the wild has been less than what was hoped for.

In contrast, Dr. McDonald's research found that the existence of the *Laricobius nigrinus* beetles in the Pacific Northwest appeared to be at least partially responsible for the healthy Western Hemlocks in that area of the country, even though Hemlock Woolly Adelgids have existed therefor a very long time. He also noted that Eastern Hemlocks planted in parks in Seattle were healthy in spite of the presence of HWA. These beetles only eat adelgids. Based on these observations, he developed a procedure for collecting these insects and has released them to an area around Boone, NC. This procedure has not been inexpensive, but is a lot less expensive than lab raised Asian beetles. Also, it has been documented that they breed and spread once introduced. Dr. McDonald reports that, "Releases since 2003 and natural dispersion have established the *L. nigrinus* beetle in a 5,000 mile radius area; roughly 40 mile in every direction from Grandfather Mountain and spreading 2+ miles on all fronts each year." Most hemlock adelgid predatory beetles are summer feeders, but **Lari** is a winter feeder and the adults and their larvae feed on adelgids from October to May. An adult according to Dr. McDonald can eat 6 or more adelgids a day before laying 200-400 eggs in the adelgids protective egg sacs. Additionally each larva growing in the egg sac can consume 200-250 adelgid eggs or crawlers. In the Pacific Northwest **Lari** beetles reportedly eat about 97% of winter production of adelgids. Dr. McDonald also identified a summer feeding adelgid predator from the Pacific Northwest called *Scymnus coniferarum*. This is a small gold and black ladybug that feeds specifically on adelgids.

Hopefully, the introduction of these two species of predatory insects, along with other efforts to control the populations of Hemlock Woolly adelgids will result in the long term solution for saving these majestic and ecologically valuable trees in our forests. For information on the hemlock problem in Georgia go to [www.savegeorgiashemlocks.org](http://www.savegeorgiashemlocks.org) on the web. There is also much information about *Laricobius nigrinus* and *Scymnus coniferarum* with a search of the web.

Ralph and Marge Heller and Marcia Lehman attended the Hemlock Camp Meeting as representatives of the BMTA. Marcia, our new Publicity Director, set up and attended the BMTA display for the meeting.