

YHC Hemlock Project

ABOUT THE YHC HEMLOCK PROJECT

The YHC Hemlock Project is a volunteer organization housed on the campus of Young Harris College. Dr. Paul Arnold, a professor of biology at Young Harris College, began the Hemlock Project in May 2005 in an attempt to stem the growing infestation of a tiny bug called Hemlock Woolly Adelgid (HWA) in the hemlock stands of the north Georgia mountains. Community members and students volunteer their time and energy to help raise *Sasajiscymnus tsugae*, a tiny ladybird beetle that is one of the few natural predators of the HWA. The organization works in conjunction with the USDA Forest Service and the Georgia Forestry Commission to decide where to release the adult beetles.



Dr. Arnold in the field



About HWA

The HWA is an aphid-like parasite that feeds at the base of the needles of both the Eastern and Carolina Hemlock. The HWA withdraws vital fluids from the hemlock, eventually causing the needles to become yellow, die, and fall off. On average, once a hemlock tree is infested with HWA, it will die within three to nine years.

A native of Japan, HWA was unwittingly introduced into the Eastern United States in the 1950s. The HWA began attacking Eastern Hemlocks in Virginia and gradually spread northward into New England. Although the infestation was initially slow to gain a foothold, the tiny bugs began to cause a tremendous amount of ecological damage by the late 1980s.



In the Shenandoah Valley in Virginia, nearly 80% of all Eastern Hemlock trees have been killed, leaving a landscape reminiscent of a devastating forest fire. And as HWA marches southward into Georgia and North Carolina, it leaves a path of ecological devastation that hasn't been seen since the Chestnut Blight of the 1920s and 1930s.

The Plight of the Hemlock in North Georgia

The HWA infestation has rapidly moved southward and westward from Virginia. The infestation entered Rabun County, Georgia in 2002 and Towns County, the home of Young Harris College, first received reports of infestation in 2004. Now the HWA infestation has become widespread in our region, leaving virtually all of the hemlocks on and surrounding campus moderately to heavily infested.

Impact of the YHC Hemlock Project

The north Georgia mountains are populated with stands of hemlock trees which shade trout streams, provide habitat and food for wildlife, and impart aesthetic beauty to these mountains. Young Harris College and Dr. Paul Arnold are hoping to help preserve these trees from the damaging pest that threatens their existence.



By raising the beetle that acts as predator to HWA, the Hemlock Project team works to counteract the destruction of nearby hemlock trees. When the beetles are ready to be released into the hemlock stands, Dr. Arnold and his team of volunteers rely on U. S. Forest Service and Georgia Forestry Commission personnel to perform most of the releases. These tiny beetles are completely dependent on the HWA in order to reproduce. It is hoped that the beetles will provide some protection of hemlock trees in forest ecosystems, since chemical treatment of acres of hemlock trees is economically and ecologically prohibitive.

The first release of beetles raised by The Hemlock Project occurred on March 15, 2006. Since then, nearly 230,000 adult beetles and eggs have been released on dozens of sites throughout northern Georgia and southwestern North Carolina.

The Hemlock Project at Young Harris College is funded through donations from individuals, foundations, and corporations. For more information about the YHC Hemlock Project and how you can help in the battle to save the north Georgia hemlock trees, please contact Dr. Paul Arnold, Director of The YHC Hemlock Project, at (706) 379-5131.



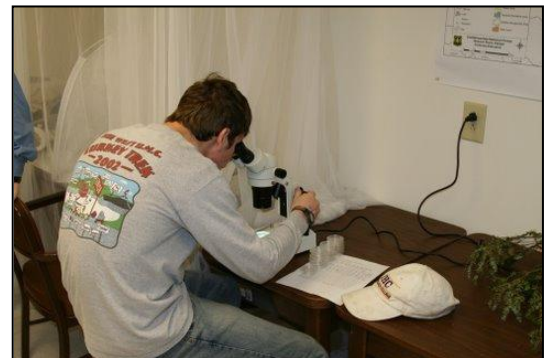
Examining hemlock branches infested with adelgids which serve as food for the beetles



Tending the developing beetles in special rearing tents



Keeping the hemlock branch "bouquets" hydrated during the rearing process



Examining beetles under a microscope