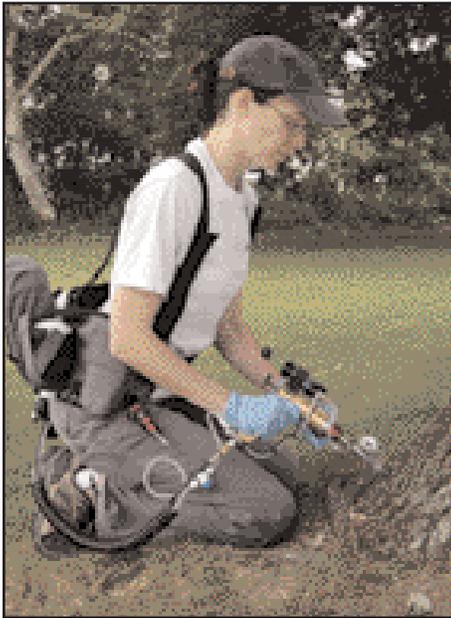


Arborjet & Clippard Help with Hemlock Woolly Adelgid Infestation!

The Hemlock Woolly Adelgid (HWA) is being called the greatest threat in a generation to the Eastern and Carolina Hemlock tree population located from the Smoky Mountains North to the



mid-Hudson River Valley and southern New England. It is believed that these insect pests arrived to the U.S. in the early 1920 from Asia, and began moving up the eastern coast. They are reportedly wiping out most of the 90 million hemlock trees in the area with no known natural enemy.



Hemlock Woolly Adelgid reaches maturity in late Winter/early Spring and emerges from a white cottony egg mass which resembles a Q-tip swab on the underside of the needles. Aphid-like insects, they suck the tree sap causing the needles to lighten in color and eventually fall off. The tree continues to weaken, losing limbs and ultimately dies within several years.

Researchers and arborists alike are in a race with these invasive pests to gain control of



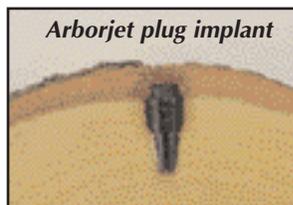
Egg infested tree branch

the future of the hemlock species. Although externally-applied oils, soaps and insecticides can prove helpful in the reduction of HWAs, **Arborjet** of Winchester, MA seems to have developed the most effective and promising tool yet—the **Arborjet VIPER**.



The new **Arborjet VIPER** is a revolutionary tree and plant micro-injection system designed to preserve and protect natural and urban forests from diseases and insect pests. This hydraulic device allows operators to inject a precise dose of product into the trunk of a tree allowing it to move throughout the vascular system, thereby treating the problem from within with no waste or negative environmental impact.

Through the use of Arborplugs and probe-like needles, this method is two-thirds quicker and more cost-effective than external applications and other conventional injection systems. According to David Floyd, Chief Engineer for **Arborjet**, their goal is to bring the injection process up to the 21st century by providing arborists the tools necessary to look inside the tree to make sound decisions on the immediate care and long-term health of the plant.

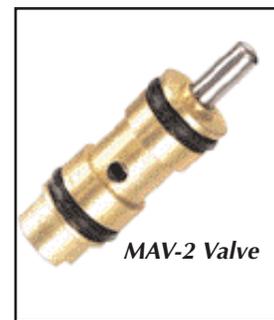


Arborjet plug implant

Arborjet, in conjunction with other professional societies and organizations, is now working on new systems and techniques designed to strengthen and build the trees' defense systems so that they can ultimately co-exist with the Hemlock Woolly Adelgid as they do successfully in other habitats.

“Clippard is #1 in Customer Service!”

Arborjet systems are controlled through the use of Clippard valves, miniature fittings and a custom-designed cylinder. According to Floyd, **Arborjet** uses Clippard's products because they are “#1 in Customer Service!” In the past, **Arborjet** purchased standard cylinders from another supplier, only to have to modify them for their special requirements. They soon began searching for a supplier to design and provide customized cylinders for their specific needs—which is when Clippard stepped in to meet their needs! Clippard was able to quickly design and manufacture the exact cylinder required “with no price increase” to **Arborjet**.



MAV-2 Valve

Clippard is excited to be a part of the continuing advancements being made in the plant injection industry!



1-877-245-6247