HOPE FOR HEMLOCKS

THE Nature Conservancy deploys new technique against tree-killing pest

Two years ago, The Nature Conservancy and Tanglewood Nature Center staff made a frightening discovery: a dense infestation of hemlock woolly adelgid on our Frenchman's Bluff Preserve in Elmira.

The hemlock woolly adelgid (HWA) is an invasive pest that's killing New York's hemlocks at an alarming rate. It can take as little as four years to kill a healthy tree, and HWA spreads quickly. But The Nature Conservancy acted quickly, too, reaching out to Cornell University for help implementing a long-term, natural solution to combat the pest.

This spring, the NYS Hemlock Initiative at Cornell University and The Nature Conservancy made the first operational wild release of silver flies (Diptera: Chamaemyiidae), one of HWA's most important natural predators, at Frenchman's Bluff—a move that may be a game changer across the state and the East Coast.

Over the past century, HWA has spread from the Appalachians all the way to Maine, and mild winters are hastening the invasion. In New York State, we've seen the infestation quickly spread from downstate and the Catskills up towards the Finger Lakes and further west. If not controlled, the infestation could spread to the critical protected forests of the Adirondacks and Tug Hill. Efforts to control the infestation in the South are failing, and the stands of greyed out, dead hemlock trees serve as a warning.

But there's hope. "New York is on the cusp of some great discoveries in the field of biocontrols that use natural predators to combat HWA," says Mat Levine, a Conservation Land Manager at The Nature Conservancy who connected with Cornell Forest Entomologist Mark Whitmore to release silver flies at Frenchman's Bluff.

They released 240 adult silver flies into mesh bags installed on low lying branches of hemlocks infested with HWA. The mesh bags were left in place for 10 days to ensure the silver flies mated and laid eggs, ensuring a new population of HWA predators. Analysis of samples collected from those releases has demonstrated that they have become established and successfully reproduced.

THIS PAGE *CLOCKWISE* Release of hemlock woolly adelgid biocontrol at Frenchman's Bluff preserve © *Bridget Sharry;* Hemlock woolly adelgid sample © *Mat Levine/TNC;* Silver flies for release © *Bridget Sharry*