

The Recovery of the Eastern Hemlock (*Tsuga canadensis*) Following the Hemlock Woolly Adelgid Outbreak

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Abstract

Invasive exotic species can cause serious harm to ecosystems through the depletion of a native species. The Hemlock Woolly Adelgid (*Adelges tsugae*), one of these exotics, threatens to wipe out Eastern Hemlock (*Tsuga canadensis*) in the Appalachian mountains and its surrounding areas, and has done so in several places. Loss of the Eastern Hemlock would be a great loss of biodiversity and an important landscaping asset. Many organizations are working on many methods to protect the Hemlock such as application of insecticides, modification of resistance, and biological control in order to help the Hemlock recover to its former abundance. By collecting data from various treated Hemlock trees for characteristics such as new growth, abundance ratings, and growth ratings, scientists can record how well the species is recovering following the decline due to the Woolly Adelgid