

SUSTAINABLE COMMUNITY OUTREACH: HEMLOCK WOOLY ADELGID IN NYS



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WICKED PROBLEM:

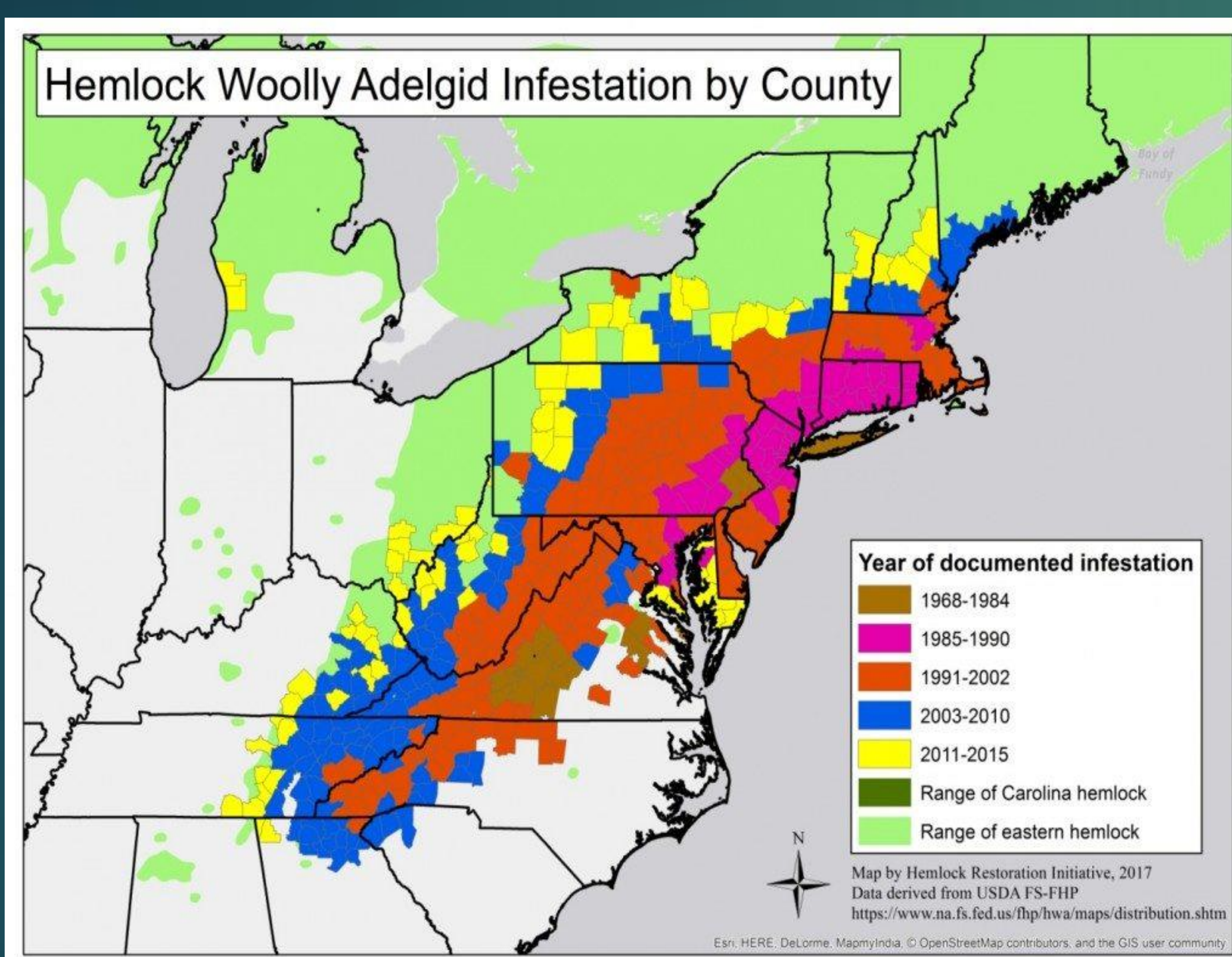
The fall foliage is a valued part of Oneonta's seasonal beauty. But what would you say if I told you, it might not always be that way? The Hemlock Wooly Adelgid is a threat to that beauty. Endemic to Asia, this pest species has found itself in North America, quickly establishing itself as an invasive species among the pine forest of the northeast United States. The HWA feeds on the base of the needles on the North American Hemlock tree, stifling the plants' nutrient flow to its needles and twigs. A large swath of the Hemlock population in the American Northeast, and more recently New York State, has been damaged by this infestation (Hemlock Wooly Adelgid, n.d.)

ABSTRACT:

Public and community outreach are effective tools for impacting public behavior surrounding sustainability issues. In this case, it is used for rallying people to counter the spread of invasive species. The Hemlock Wooly Adelgid, an insect native to Asia and now found as an invasive species in the American Northeast is no different. Feeding on the needles of the Eastern Hemlock tree, the insects are capable of killing an adult tree in as little as four years (Darr, 2019). Materials are created to educate the New York public about the dangers posed to the Eastern Hemlock by this infestation. People are provided the ability to accurately identify these insects and contact experts who can help. Products include poster and video presentations outlining the history of the infestation, methods of identification, and lines of communication to the proper authorities. This poster is presented at the SRCA conference to gauge interest and promote education amongst peers in the field. The video presentation is distributed via text and social media to spread awareness amongst students and residents of Otsego County alike. Based on other sustainability campaigns, the expected result is a heightened public awareness of the issues surrounding this environmental problem, and hopefully an increase in public engagement with those who are combating this infestation.

IDENTIFICATION:

Hemlocks needles are flat and short (Approx. 0.5 inches). Most other pine needles are longer and more rounded; able to be rolled in one's fingers. This is not the case with hemlock needles. The Hemlock needle has pale white stripes on its bottom side, although some other firs and spruces exhibit these stripes as well. The shape of the needle should be used in conjunction with the striped appearance to make an accurate identification. The Hemlock needle is also wider around the base compared to other pine needles, which stay relatively parallel the whole length. The Wooly Adelgid itself can be identified by the waxy egg sac it secretes while feeding. While the adelgid itself is almost invisible to the naked eye, these egg sacs are identifiable as little balls of wool-like substance (Smitley, 2017).



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METHODS

- Present the Sustainable Community Outreach: Hemlock Wooly Adelgid poster at the SRCA conference
 - Use poster in order to estimate peer knowledge of the issue effecting Hemlock forests in the Northeast U.S
 - Educate conference attendees on the proper identifying characteristics of the Hemlock Wooly Adelgid, as well as the proper authorities to report the issue to
- Create short video essay on the history, spread, identification, and reporting of Hemlock Wooly Adelgid.
- Distribute video essay via text, email, and social media for the purpose of informing as many people as possible
- Attach short questionnaire in order to gauge if respondent's:
 - Feel they learned something new
 - Feel they learned something valuable
 - Believe that they could identify Hemlock Wooly Adelgid in the wild
 - Would be likely to report Hemlock Wooly Adelgid

Hemlock Wooly Adelgid (*Adelges Tsugae*)
Clemson College of Agriculture, Forestry and Life Sciences
<https://hgic.Clemson.edu/hemlock-woolly-adelgid/>

RATIONALE

Hemlock trees are a beautiful part of our state's landscape and ecosystem. While you may not notice one when you walk past it, you would certainly notice if they were all gone. In order to preserve our county and state's natural charm and beauty, measures must be taken immediately to preserve the North American Hemlock. There are places that are seeing this destruction already, and there is only so much time to act before it is too late. The biodiversity of New York's

REPORTING

It is important you report Hemlock Wooly Adelgid whenever you see it in the wild. This is especially important if you are in an area that has not experienced HWA infestation prior. You can report a potential HWA infestation to the New York Department of Environmental Conservation Forest Health Information Center by calling **1-866-640-0652** Or by reporting your sighting online at www.iMapinvasives.org (Slelo Prism, 2021)