Citizen scientists, we need your help!
Another pest – *Rosellinia* Needle Blight – is attacking the hemlocks.

The Problem: Hemlocks from Georgia to Maine are being attacked and killed not only by the invasive insect Hemlock Woolly Adelgid (HWA) but also by a type of fungus called *Rosellinia* needle blight. It causes small patches or great swaths of the needles to turn light chocolate brown and appear to be matted and stuck together, as shown in the photo here. Eventually the needles fall off. In some cases, the needles have been observed to regenerate the following year, while in other cases the affected portion of the branch dies.

Disease incidence and severity are linked to environmental conditions and sites associated with moisture and high humidity. Trees of all sizes can be infected, and the damage caused by this fungus can occur even faster than that caused by HWA.

The Research Project: Understanding a problem is a necessary first step in solving it. Unfortunately, very little is known about the biology of this fungus, and there are currently no products labeled for controlling it. Therefore, Save Georgia's Hemlocks has launched a multi-year research project that we hope to conduct in partnership with the Plant Pathology Department at the University of Georgia, and we are seeking the assistance of volunteer "citizen scientists."

The initial activity will be to gather pertinent information such as GPS coordinates, site conditions, and symptoms present; take photos of affected trees; and if funding is available for UGA's research assistance, submit symptomatic foliage samples for analysis. The submissions will be used to help identify the type of blight harming the hemlocks, determine its distribution and severity within the native hemlock range, document its symptoms over time, observe whether it affects any other trees, and hopefully support work toward controlling it. If the pathogen does infect other conifers such as firs and spruces that may be perceived to have more economic value, interest from chemical manufacturers to pursue label revisions for control of the disease on hemlock may increase.

As methods of detection, recovery and growth are worked out within the first year, subsequent studies to elucidate the lifecycle, infection patterns, and tree survival may be pursued. Molecular studies may be conducted to evaluate population genetics of needle blight samples from different geographical regions collected in year 1. In addition, pest management studies may, at some point, be conducted in cooperation with fungicide manufacturers.

The Benefits: Known as a keystone species, hemlocks play a vital role in preserving the biodiversity, health, and beauty of our forests and waterways and maintaining the economic vitality of our communities. This research project will significantly increase the body of scientific knowledge about hemlock foliage diseases that threaten hemlock survival and will provide essential information to researchers, public land managers, pesticide professionals, private property owners, and conservation organizations such as Save Georgia's Hemlocks in their efforts to save the endangered hemlock.

To Participate: It doesn't cost anything to participate and won't take a great deal of time, but you can have a significant impact on the survival of our magnificent hemlocks. If you'd like to help with this research project as a volunteer citizen scientist, please email donna@savegeorgiashemlocks.org or call 706-429-8010. We'll contact you with the details. THANKS!

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