



Save Georgia's Hemlocks

Transcript with Thumbnails
“SAVING GEORGIA’S HEMLOCKS”
A documentary by Save Georgia’s Hemlocks
March 14, 2011

Save Georgia's Hemlocks has prepared a 30-minute documentary on the hemlock problem and solutions for broadcast on “Common Cup” program, hosted by Jim Geer on Windstream Cable Channel 4 during the weeks of March 14 and 21. It celebrates the vital role of the hemlocks as a keystone species, explains what's killing them and the disastrous results that may lie ahead, provides information on what property owners can do to save their trees, and highlights the free practical help available through Save Georgia’s Hemlocks.

What follows is a transcript with thumbnails of the visuals. A copy of the DVD is available upon request. Please call the Hemlock Help LineSM 706-429-8010.



AN APPRECIATION OF THE HEMLOCK

Introduction of Donna Shearer and Bob Pledger of Save Georgia's Hemlocks and opening remarks.

Jim, thank you so much for inviting Save Georgia's Hemlocks to be a guest on your program. We have a special message for our viewers that is both a celebration of the hemlock and the vital role it plays in the marvelous area we have the privilege to live in and a dire warning of a looming environmental disaster.



I wonder if Moses standing on the mountain surveyed anything more beautiful than the Appalachian Mountains that form the northern rim of our cradle.



Wearing a coat of many colors, they are ancient and awesome, magnificent and mysterious, rich in resources, and teeming with life ...



... ever changing and yet steadfast, silent witness to eons of history, natural and human.



Season after season the pageant of life and death and renewal continues.



The Southern Appalachians are one of the most bio-diverse ecosystems on earth and one of the most delicate. It's an awesome privilege we have to dwell in a cradle of such abundance, almost a paradise.

THE BAD NEWS

 <p>The Mountain Gazette Georgia's Graceful Giants Are Dying!</p>	<p>But there's some bad news that we think our viewers need to know about</p> <p>Georgia's graceful giants, the Hemlock trees, are dying!</p>
	<p>In just a few short years, our beautiful mountains could go from rolling green majesty as far as the eye can see...</p>
	<p>...to vast swaths of great gray ghosts.</p>
	<p>Our forests that are so lush, healthy, and vibrant with life...</p>
	<p>...could become barren, sickly, and silent.</p>
	<p>Our favorite hiking trails that beckon us to explore and refresh us along the way...</p>
	<p>...could be reduced to ugly scars of devastation and danger.</p>
	<p>And our cool clear mountain streams that are vital to so many forms of life...</p>
	<p>...could suffer from silt, pollution, rising water temperatures, and increased exposure to drought.</p>

THE PROBLEM



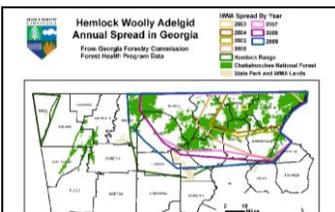
Tell us exactly what's happening to our hemlocks.

They are being attacked and killed by the hemlock woolly adelgid, a tiny aphid-like insect that has no natural predator here and threatening the very survival of the eastern and Carolina hemlocks.



When and where did the problem start?

Native to Asia, the hemlock woolly adelgid was first reported in the eastern U. S. in 1951 near Richmond, Virginia, where it was accidentally imported. It remained confined to Virginia in the early 1950s. Since then it has spread north and south along the Appalachian Mountains chain until it infests almost the hemlock's entire native range.



What is the extent of the infestation in Georgia?

Since entering the northeast corner of Georgia between 2002 and 2003, the adelgid can now be found as far west as the Cohutta Wilderness Area and as far south as Atlanta.

It is expected that by the end of 2011 it will have covered almost the entire hemlock range in Georgia and perhaps spread even into northern Alabama.



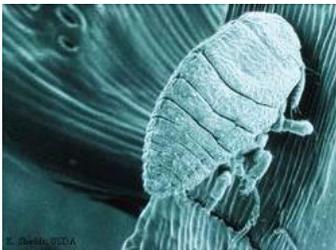
How is it spread?

Adelgids are consummate hitchhikers that catch a ride on animals such as birds, squirrels, and deer. They easily float on the wind, particularly the breezes that blow up and down the waterways. They also hitchhike on our clothes, camping gear, and even our cars when we go to infested areas of the forest and then inadvertently bring them home.



How do adelgids kill a tree?

The adelgid is equipped with a long slender mouth-part called a stylet which it inserts into the tissue of the tree just where the needles are attached to the branch, consuming the starches that are essential to new growth. And unlike the indigenous insects of the eastern U.S., adelgids are active all through the winter.



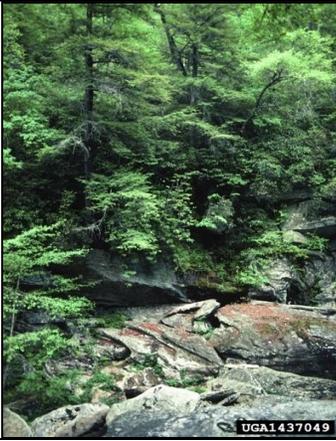
How long does it take an infested tree to die?

Infested hemlocks tend to follow a predictable pattern, as shown in this series of photos. Deprived of nutrition, the needles become more sparse, the color changes from bright emerald green to a drab gray-green, new growth diminishes, branches die back, and ultimately the whole tree dies.

And sadly, in the south this can occur as quickly as 3 to 6 years after infestation.



REASONS TO CARE



We've lost species of trees before. Why should anyone care about losing the hemlock?

There are many reasons to care. One of the most obvious is their aesthetic value.

- Hemlocks are one of our most beautiful trees.
- They contribute so much to the enjoyment of those of us who live, work, and play among them, as well as the many visitors who come to north Georgia for tourism and outdoor recreation.
- Think of your most special natural places in the mountains. Can you imagine them without these magnificent trees?



But there are even more important reasons to care. The hemlock is considered a keystone species, meaning it has a unique and irreplaceable role in the environment.

For example, hemlocks have a tremendous environmental value to wildlife.

- The dense, evergreen canopy associated with mature hemlock forests creates a unique environment that is a critical habitat for about 120 species of vertebrates -- including bear, rabbits, white-tailed deer, wild turkey -- and 90+ kinds of birds.
- They also help maintain the cool stream temperatures necessary for trout and other native fish. Increased stream temperature of even a few degrees or an increased rate of sedimentation in streams can adversely affect the distribution and abundance of these fish.
- We don't know at this point whether the animals that depend on the hemlocks will adapt, go elsewhere, or become threatened and possibly die.



Hemlocks also have great environmental value to other plants.

- Many of the rare and endangered plants in north Georgia are shade lovers that rely on the protection of evergreens such as hemlocks for their very survival.
- Since migrating elsewhere is not an option for these plants and rapid adaptation is unlikely, their future will be very dim without the shade canopy that trees such as hemlocks provide.
- They also help prevent the spread of invasive plant species and maintain the biodiversity that is necessary for healthy forests.



Hemlocks play a significant ecological role in soil conservation and waterway protection.

- Their extensive root systems stabilize the soil, preventing stream bank erosion and stream silting.



- They protect watershed and water quality by filtering out pollutants and preventing the build-up of harmful bacteria.
- And streams lined with hemlocks almost never dry up in summer or freeze in winter.



Something that might not be so obvious is the hemlock's economic value to individuals and communities.

- With the beauty and privacy they provide, healthy mature trees such as hemlocks can add 7-10% to a person's property value.
- Hemlocks can produce the cooling effect of 10 room-sized air conditioners running 20 hrs/day around a home.
- They save communities billions of dollars a year by filtering CO₂ and other pollutants from the air as they produce oxygen for us to breathe.
- And did you know that a hemlock tree just 1 foot in diameter performs thousands of dollars worth of water purification for communities.



Hemlocks also have a direct economic impact on jobs and revenue.

- North Georgia counties with hemlocks enjoy over \$1 billion of tourist spending annually.
- Outdoor enthusiasts account for a quarter of this revenue.





The 90,000 fishermen who enjoy the Chattahoochee National Forest contribute more than \$43 million in annual revenues.



Each \$1.25 million generated by tourism activities funds one job in the tourism industry.



And some people think of trees and the environment in a more personal or spiritual way, particularly as they relate to “teachable moments” with their children, such as:

- Stewardship and preservation
- Respect and responsibility
- Appreciation of interdependencies
- History and sense of place in the world
- Passing values on to future generations



What will happen if appropriate action isn't taken in time?

Infested hemlocks that are not treated will die. Widespread hemlock death has already occurred in states north of us and could result in an environmental and economic disaster here. It is estimated that within the next 10 years, 80-90% of the hemlocks in Georgia could be dead, with results likely to include:



- loss of certain plant and animal species
- increase of soil erosion and decrease of water retention in the land



- degradation of air quality, water quality, watersheds, and trout streams
- ruin of some of our most beautiful and scenic areas in the state

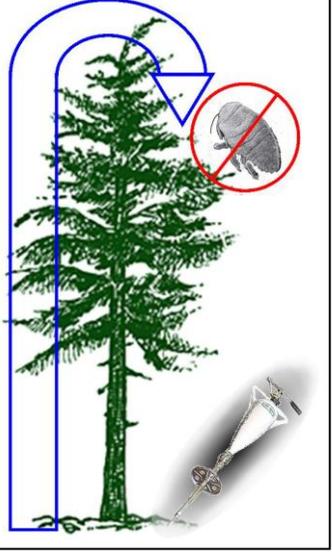


- closure of affected recreation areas, trails, and fishing or paddling streams



- cost of removing large dead trees coupled with a decrease in private property values
- loss of personal income, tax revenue, and jobs

THE GOOD NEWS

	<p>Are there any options for preventing this disaster?</p> <p>Absolutely! The good news is the hemlocks don't HAVE to die. In most cases, infested hemlocks can be treated and saved, so property owners can save as many of their trees as they want. And even better news – it's easy and inexpensive. YOU can make a difference!</p>
	<p>The first step would be recognizing the problem. So how can you tell if a tree has adelgids?</p> <p>Little white woolly egg sacs like the ones shown here are a key indicator of an HWA infestation. These egg sacs look like tiny cotton balls about the size of a peppercorn and are most visible in the spring and early summer.</p>
	<p>Since the adelgids and their egg sacs may be hard to see from a distance, start by inspecting your hemlocks up close. Look on the underside of the branches to see if there are any white woolly egg sacs.</p> <p>Once an adelgid infestation is detected, you basically have 3 choices:</p> <ul style="list-style-type: none">• Do nothing and the trees will die.• Treat them yourself, or• Hire a qualified professional who specializes in treating hemlocks for the woolly adelgid. <p>Obviously my recommendation is to treat your trees as soon as possible.</p>
	<p>What's involved in treating hemlocks?</p> <p>The most effective method involves applying a systemic treatment product. (Systemic in this case means that the tree absorbs the treatment material and circulates it throughout the entire plant so that any insect that bites or sucks on any part of it will ingest the material and die.)</p>



Application can be done in several different ways.

One method is to spray the treatment material onto the foliage where it will be absorbed.



Another way is to pour it into the soil around the base of the tree. This method is called soil drench.



Soil injection involves using a lightweight device that has a pump handle, a small reservoir to hold the liquid, and a metal probe to inject the material a few inches down in the soil where the tree's roots can take it up.

This is a very easy, precise, and reliable method and is the one I recommend in most cases.



And for some trees that are either very large or badly infested, there is a special fast-acting product that can be sprayed directly onto the tree trunk and absorbed right through the bark.

What options are available for property owners to get the treatment done?

There are basically two ways to go about it. Each of the methods I mentioned is fairly easy, and many property owners are able to do it themselves. Often, neighbors join together to help each other take care of the trees in their community, establish the widest possible area of suppression, and share the cost. And for property owners who aren't into doing it themselves, there are several well qualified professionals who can provide the service.



And what about timing? Is there a "best" time to treat?

Yes. It's generally agreed that spring is the best time to treat hemlocks because that's when we have the best steady rainfall and the trees are growing and taking up nutrients most vigorously. Fall is considered the second best.

That said, however, experts tell us that in Georgia treatment can be done pretty much year-round as long as the ground isn't saturated or frozen and we're not in a prolonged drought.

SPECIAL QUESTIONS



You've used the terms "treatment materials or products." Exactly what are they?

There are two primary products that are recommended for treating hemlocks for adelgids, and the decision as to which one to use is based on the condition of the tree.

- For lightly to moderately infested trees, products containing a 75% concentration of Imidacloprid are recommended. It's a powder designed to be mixed with water and is the same material used in flea collars except in a stronger concentration. It was originally sold as Merit 75 by Bayer Corporation, but now there are quite a few generic versions.
- For heavily infested or very large trees, a product called Safari is recommended. It's a highly effective, fast-acting product that can gain control over the adelgids quickly, sometimes in just a few weeks.

Some people may have concerns about the safety of using these products. How safe are they?

That's an important question. Pesticides used improperly can be injurious to humans, animals, and plants. However, these two products have been found to be quite safe when used properly. So always read and follow the directions on the label.



What about around children, pets, and wildlife?

When either of these products is injected into the soil, they become inaccessible to children and animals. If they are sprayed onto the tree, time should be allowed to let the product dry.



What about around waterways?

According to research done by the University of Georgia and the U. S. Forest Service, Imidacloprid injected into the soil normally travels only about 1 foot from the injection point, so it is possible to exercise good control over where it goes.

Safari can travel a bit farther in the soil, so for hemlocks growing in areas *other than* ornamental landscapes, a buffer of 20 ft from surface water is specified on the label.



What about around honeybees?

We have been advised that the use of Imidacloprid for treatment of Hemlock trees by soil injection poses minimal risk to honeybees. The treatment solution is injected below the surface of the ground very close to the base of the Hemlock, so it is not dispersed into the air or onto the surface of plants or placed in the root zones of other trees. The solution is taken up by the tree's roots and distributed through all parts of the tree for total systemic protection. And since Hemlocks are wind pollinated, soil injection of Imidacloprid for treatment of HWA is unlikely to affect insects that pollinate flowering plants.



Are there non-chemical products that can be used?

Yes, there are insecticidal soaps and horticultural oils that can be sprayed to provide some temporary relief, but they have some serious drawbacks:

- They work topically, which means they must fall directly on the exposed insect to be effective. And at least part of the year, adelgids are safely enclosed in their egg sacs.
- They must contact every adelgid, and that's hard to do because the insects are on the underside of the branches, or they may be out of reach in a tall tree.
- And these products offer no residual protection so they must be repeated frequently.

The bottom line is they're not especially effective or economical. I recommend using a systemic product like Imidacloprid or Safari.

Cost of Treatment

Example: a hemlock 16" in diameter



A moment ago, you mentioned cost. On average, what does it cost to treat a tree?

The answer to that question depends on two factors.

First, the treatment product used – Imidacloprid costs a good bit less than Safari. Second, doing the work yourself costs less than hiring a professional. So let me give you an example.

- If you have a lightly to moderately infested hemlock 16" in diameter and you treat it yourself with Imidacloprid, it'll cost about \$4.16.
- If you hire a professional to treat a severely infested tree of that same size, it would probably cost between \$48 and \$64.

\$\$\$ Balancing the Costs \$\$\$



How do you balance that against the costs of NOT treating your trees?

The tangible costs relate to the removal of dead trees down and the loss of property value, and these can be substantial.

- Taking down and hauling away a dead hemlock 16" in diameter could cost between \$300 and \$1500.
- Assuming a home value of \$200,000, the loss of healthy mature trees such as hemlocks could reduce the property value by as much as \$20,000.
- Incidentally, the loss of such trees on one person's property can cause a decrease of about half that amount in his neighbor's property.

The intangible costs – loss of beauty, loss of natural habitat, loss of privacy, and much more – are incalculable.

GETTING STARTED

This all sounds a little complicated. Is it?

Actually, it's pretty simple. The first thing you need to decide is whether you're going to do the work yourself or will need a professional to do it.



To do it yourself:

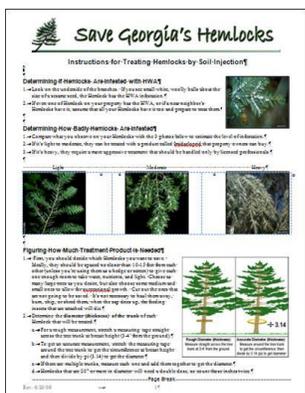
Start by measuring the trees you want to treat because the amount of product needed is based on the number of diameter inches to be treated.



Next, you acquire the treatment product.



Then you buy or borrow the application device.



And last, you just follow the instructions and treat your trees.



For service from a professional:

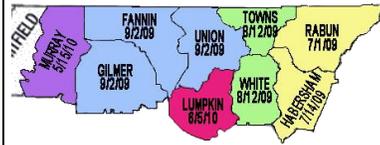
- First ask for an inspection and cost estimate. I recommend talking with more than one professional so you can compare their services and pricing and make a good informed choice. Normally, inspections and estimates are free.
- When you've chosen your professional, get the treatment done.
- It's also a good idea to ask when and what kind of follow-up is recommended.



And lest anyone get discouraged, Save Georgia's Hemlocks can offer a great deal of practical help. Through our web site and the Hemlock Help Line, we can provide:

- Information on how to inspect, measure your trees, and estimate the cost
- Where to buy the treatment products
- Where to borrow soil injectors for free
- And detailed instructions on how to do the treatment yourself.
- Also we have a list of qualified local professionals who we know are properly licensed and ensured, are experienced in treating hemlocks, will travel to your property, and charge reasonable rates.

HELP AVAILABLE FROM SAVE GEORGIA'S HEMLOCKS



What other kinds of help do you offer and what areas do you serve?

We serve all the counties of north Georgia where the woolly adelgid is a serious threat and will be expanding our program into more counties to stay on the leading edge of the infestation.



All through the year we provide free Hemlock Help Clinics to inform people about the problem and available solutions.



We conduct training for volunteers whom we call facilitators to serve as local advisors and help their neighbors take care of their trees.



We enjoy giving special presentations to schools and community groups, so if anyone would like to schedule a program for their organization, just give us a call.



We can help property owners plan neighborhood hemlock help projects.



We have healthy hemlock saplings that are available for landscape planting or reforestation initiatives.



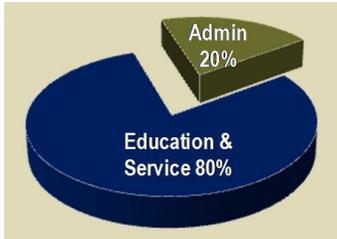
And this year we're hoping to undertake more charitable service projects for hemlock treatment or planting where there is a special need.

CALL TO ACTION



What can our viewers do to help?

- Spread the word.
- Take care of your trees.
- Become a volunteer and help others.
- Support the hemlock cause with your membership in Save Georgia's Hemlocks.
- And support it financially. We are a registered 501(c)(3) nonprofit, so all contributions are tax-deductible. Financial support is much needed and greatly appreciated.



How do you use the money that people contribute?

Let us answer that 2 ways. The first answer is “VERY CAREFULLY.” We are fiscally conservative and value the trust of our donors very highly. So we have a goal that 80% or more of our spending will be for mission-related programs, meaning education and charitable service. And at present, I’m happy to report that so far we’ve spent about 84% of our budget on programs.

The second part of the answer is that while some of our activities don’t cost anything but our time and energy, we do incur expenses for **educational activities** such as Hemlock Help Clinics, Facilitator training, outreach programs for schools, neighborhood associations, master gardeners, and the like.

We also use it for **service activities** such as planting or treating hemlocks on a charitable basis, providing soil injectors that can be borrowed for free, and assisting individuals, communities, or other nonprofits with their hemlock help projects.

As we wrap up our time together, what are the main messages you’d like to leave with our viewers?

First, the **hemlocks are in trouble** and will die unless you take timely action.

Second, **you can save as many of your hemlocks as you want**, and it's easy and inexpensive.

Third, **Save Georgia's Hemlocks can provide** a great deal of free, practical help.

To our viewers, I’d like to say **THE FUTURE IS IN YOUR HANDS.**



Will it be degradation and death along our waterways...

and in our forests?



Or preservation of their health, beauty, and vitality?

YOU CAN MAKE THE DIFFERENCE.



I'm sure our viewers may have questions or concerns they like to discuss with you. Would you give your web site and the Hemlock Help Line?

Yes. The web site is www.savegeorgiashemlocks.org, and the Hemlock Help Line is 706-429-8010. The Help Line is available 7 days a week.

Please call or visit our web site to learn more. And we urge our viewers to join us in the effort to save Georgia's magnificent hemlocks.