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VIRGINIA FOREST LANDOWNER UPDATE

Events, news, and information promoting the stewardship of Virginia's forest resources.

VIRGINIA FOREST LANDOWNER EDUCATION PROGRAM

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INSIDE

RC&D Councils Making Resource Conservation a Priority

By: Anna Cahoon and David Richert, *VDOF RC&D Foresters*

For 40 years, Resource Conservation and Development (RC&D) Councils across the country have partnered with agencies and organizations to improve the quality of life and protect natural resources. In Virginia, these partnerships have built a successful framework that produces a variety of land and energy conservation programs.

Land Conservation in Virginia

In spring of 2006, Gov. Tim Kaine set a statewide goal of conserving an additional 400,000 acres of working farmland, forestland and natural area open space by the end of his administration. The RC&D councils of Virginia, which have a history of successful land conservation projects, responded to Governor Kaine's initiative with a commitment to increase conservation efforts across Virginia.

A farm in Burkes Garden, Tazewell County. Photo by: David Richert.

This winter, when the Virginia Forest Landowner Education Program rolls out the new Forest & Farmland Conservation Strategies Short Course, Virginia's RC&D Councils and the Virginia Department of Forestry will help sponsor five workshops in Eastern Virginia. These workshops will target planning professionals, natural resource managers, and landowners and will educate participants on the current land conservation strategies, including conservation easements and the purchase of development rights. These workshops are listed in the online VFLU calendar with contact information.

The Virginia Department of Forestry and RC&D forestry committees and advisory groups have developed presentations that underscore the economic and ecological impacts of the forest resource. These Value of Forestry presentations describe the status of resources, loss of forest land, and promote appropriate conservation strategies. To date, these presentations have been made in 16 localities in eastern Virginia. Other presentations are planned for the Shenandoah RC&D Council, the New River-Highlands RC&D Council, and the Black Diamond RC&D Council.

Forestry and Renewable Energy in Virginia

Governor Kaine has also declared Virginia's support of the 25 X '25 vision (for more information, visit the Web site: http://www.25x25.org/). This national goal states that "by 2025, renewable energy from America's farms, forests, and ranches will provide 25 percent of the total energy consumed in the United States, while continuing to produce safe, abundant and affordable food, feed and fiber." Renewable energy has been, and will continue to be, a conservation priority for many of Virginia's RC&D Councils.

Jerry Skalsky participates in a biodeisel workshop in December. Photo by: Anna Cahoon.

In 2006, the South Hampton Roads RC&D, Shenandoah RC&D, and the South Centré Corridors RC&D Councils all participated in biodiesel forums. They targeted farmers, small scale producers, and local government to discuss the implications of conversion to renewable energy sources and generate interest in biofuels production. The emphasis was placed on biofuels production from agriculture and forestry residues - which could give rural landowners additional income sources. The workshops were well-supported by the local communities, indicating an increasing interest in biofuels in the coming years. In November 2006, the Tidewater RC&D Council forestry committee formed a renewable fuels committee to explore energy production possibilities from agriculture and forestry.

RC&D cont. page 2

Events Calendar			For the most complete listing of natural resource education events, visit the on-line events calendar at www.cnr.vt.edu/forestupdate		
Contact	**Date**	**Location**	**Event**	**Time**	**Fee**
DCR	Feb., Mar., April	Virginia State Parks	**A variety of events and activities. For a complete listing visit: www.dcr.virginia.gov/parks**	Varies	Varies
PT	Feb.6; Snow date Feb. 8	Tappahannock	**Forest & Farmland Conservation Strategies Short Course ***This session is for professional planners*** (See page 5 for information on this NEW short course)**	8am-4pm	$5; please pre-register
NC	Feb. 15	Isle of Wight	**Conservation Strategies**	9am-4pm	$5 (inc. lunch)
MY	Feb. 16	Augusta County Government Center, Verona	**Farming Fridays: Focus on Forestry**	5-8:30 pm	$20; inc. dinner
JG	Feb. 20, 27 & March 6	Statewide	**Preparing for the Next Owner (see page 5 for more information on this program).**	7-10pm	$45/$25 spouse
MY	Feb. 20, 27 & March 6	Augusta County Government Center; Verona	**Sustainable Timber Marketing & Harvesting Short Course**	6-9pm	$45/each; $60/ household
CCEO	Feb. 23 & 24	Campbell County Extension Office	**Woodland Management in Campbell County**	6:30-8:30pm & 9am-3:30pm	TBA
BCEO	March 15 & 17	Bedford County	**Woodland Options for Landowners Short Course**	6:30-8:30pm & 9am-3:30pm	$25/each; $45 couple
AH	March 30	Grundy	**Producing & Marketing Botanical Herbs**	9:30am - 4:00pm	$12
AH	March 31	Galax	**Producing & Marketing Botanical Herbs**	9:30am-4:00pm	$12
MY	April 13 &20	Augusta County	**Managing & Marketing for the Small Woodlot Owner**	TBA	TBA
NC	April	Dinwiddie	**Managing Small Woodlots on the Urban Interface**	TBA	TBA
NC	April	Franklin County	**Forest & Farmland Conservation Strategies**	TBA	TBA

Event Contacts			
Contact	**Name/Affiliation**	**Phone**	**e-mail/website**
DCR	Department of Conservation & Recreation	804/786-1712	www.dcr.virginia.gov/parks
PT	Pat Tyrrell Tidewater RC&D Coordinator	804/443-1118	pat.tyrrell@va.usda.gov
NC	Neil Clark- FNR Extension SE	757/657-6450 ext 406	southeast@vt.edu
MY	Matt Yancey - FNR Extension NW	540/564-3080	yancey@vt.edu
JG	Jennifer Gagnon - VFLEP Coordinator	540/231-6391	jgagnon@vt.edu
CCEO	Campbell County Extension Office	434/332-9538	www.ext.vt.edu/offices
BCEO	Bedford County Extension Office	540/586-7675	www.ext.vt.edu/offices
AH	Andy Hankins	804/524-5962	ahankins@vsu.edu

If you have a natural resource education event you would like listed, please submit details to forester@vt.edu: Upcoming submission deadlines for calendar:					
Edition	**Events Occurring**	**Submission Deadline**	**Edition**	**Events Occurring**	**Submission Deadline**
Spring 2007	May, June, July	Mar. 8, 2007	Fall 2007	Nov., Dec., Jan.	Sept. 9, 2007
Summer 2007	Aug., Sept., Oct.	June 9, 2007	Winter 2008	Feb., Mar., April	Dec. 9, 2007

RC&D cont.from page 1

Inspiring conservation

In Virginia, we are losing an average of 67,000 acres of land to non-forest uses every year. Large blocks of land with a rural character are becoming fragmented to meet demands of a growing population. By exploring additional agriculture and forestry markets (i.e. biofuels), and pursuing innovative land conservation strategies, Virginia's RC&D Councils will help initiate strategies to conserve natural resources while meeting the growing resource demands. Please join local and statewide efforts to wisely use our natural resources and conserve Virginia's natural landscape for future generations.

Contact information: Anna Cahoon: Anna.Cahoon@dof.virginia.gov; David Richert: David.Richert@dof.virginia.gov

You Ain't From Around Here! Exotic Invasive of the Quarter: Hemlock Woolly Adelgid (*Adelges tsugae*).
By: Jennifer Gagnon, *Virginia Tech Dept. of Forestry*

I will be featuring an invasive plant species in each newsletter. This section will provide resources to help you identify and control these plants and insects, hopefully before they become a problem!

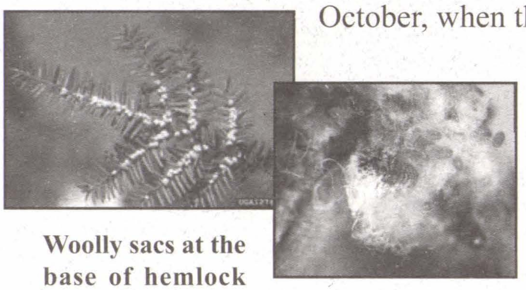
Exotic invasives are non-native plants and insects that are able to thrive and spread aggressively outside their natural range. When spread is extensive, they can alter ecosystem function by replacing native species, changing forest structure, decreasing forest productivity and biodiversity. Some key characteristics include: prolific seeding or reproduction, efficient dissemination, adaptability to different environments, rapid growth, and lack of natural controls. Landowners can help stop invasives before they get out of control by 1. inspecting their property regularly, 2. maintaining a healthy forest with minimal disturbance, 3. treating invasives as soon as they are detected and 4. rehabilitating sites after eradication.

Being an optimist, I have been featuring exotic invasives for which there are some practical and effective means of control; and putting off writing about those for which the outlook isn't so bright (in terms of control). However, every time I go out hiking, I see the devastation caused by the hemlock woolly adelgid (HWA), and so am compelled to tell its story. Upon researching the species, I learned that there are some potentially effective controls being developed and some things landowners can do to protect the hemlock in their yards.

A dead hemlock emerging from the stump of an American chestnut at Bottom Creek Gorge, Montgomery County. Photo by: Jennifer Gagnon

Native to Japan, the first occurrence of the HWA in the eastern U.S. was near Richmond in the 1950's. By the 1980's, significant problems were apparent from Massachusetts to North Carolina, with the insect spreading 10-20 miles a year. HWA has infested more than 50% of hemlock's native range and is in 17 of the 24 states in which hemlock grows. New Hampshire, Vermont and Maine have imposed strict quarantines in an effort to prevent the arrival of the critter in their states. Both Carolina and eastern hemlock are susceptible to HWA.

Like most adelgids, HWA has a complex life cycle. There are two parthenogenic (all female and reproduce without mates) generations of HWA's a year. In October, the over-wintering generation (sistens) begin to feed on new hemlock needles. In February and March, the sistens lay between 100-300 eggs. They lay two types of egg - some will hatch into winged migratory adelgids, which need to reproduce on spruce. Although they have been found in areas with heavy HWA infestations and severely stressed hemlocks, these are generally not considered pests. The rest of the eggs hatch into wingless adelgids (progrediens). These crawlers are dispersed by wind, people, animals and birds. Eventually they settle at the base of hemlock needles and develop a white woolly waxy coating around their bodies – this is what we usually see on infected trees. The settled progrediens, under the waxy coating, are black with a white fringe around the perimeter of their bodies. The progrediens lay eggs in June and July, which hatch out and become the sistens generation. The sistens also develop a waxy coating and are dormant at the base of the needles until October, when they begin feeding and the cycle goes around again.



Woolly sacs at the base of hemlock needles (left) and HWA eggs (right). Photos by: Michael Montgomery, USDA Forest Service.

You can identify infected trees simply by looking for white woolly sacs at the base of the needles. The adelgids damage hemlock by sucking the sap from new needles, first causing a grayish hue, then premature needle fall. They may also inject a salivary toxin into the needles. The stress of premature needle fall eventually leads to death – in as little as four years, although some infected trees can survive 10 years or longer.

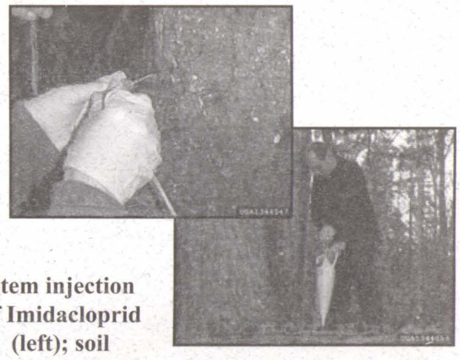
How to Prevent/Control HWA

Protecting hemlock in your yard is possible. First, if HWA is not present, simple things like placing your bird feeders away from hemlocks and being careful when moving equipment from an infected to a non-infected area, can help slow the spread. Keep your trees vigorous by watering them. Fertilizing uninfested trees is ok too – but DO NOT fertilize infested trees – fertilization increases adelgid survival and reproduction.

If your hemlocks are already infested, insecticides can be used to eradicate HWA. Insecticidal soaps and horticultural oils (which are available at garden centers), are effective and pose little threat to the environment. Following the label directions, mix 2 ounces of soap or oil with 98 ounces of water to make a 2% solution (a 1% solution of oil may be all that's needed between May and September) in any type of pump sprayer. The entire tree must be thoroughly sprayed. Treatment is most effective in March and April and late August and September. A few words of caution: do not spray when the new twigs are growing or when temperatures are above 75°F or below 45°F.

Spraying Imidacloprid on forest trees; photo from: Great Smoky Mountains National Park, Resource Management Archives, USDI National Park Service

Another option for both yard and forest trees is Imidacloprid. If you are not a certified pesticide applicator, look for the brand name Bayer Advanced®. Certified applicators will use different name brands. This product should be mixed according to the directions on the label. If the tree is >50 feet from a waterway, the soil surrounding the tree can be "drenched" by pouring a light stream of insecticide over the soil, or the insecticide can be injected into the soil, between September and November. The roots will take up the insecticide and deliver it to the entire tree. If the tree is < 50 feet from a waterway, stem injection should be used. This is more expensive than soil drenching and must be done by a trained arborist, and soil treatment is more effective and longer lasting.



Stem injection of Imidacloprid (left); soil injection of Imidacloprid (right); photos from: Great Smoky Mountains National Park, Resource Management Archives, USDI National Park Service

At the landscape level, some biological control agents hold promise. Two ladybird beetles, *Sasajiscymnus tsugae* and *Scymnus sinuanodulus* (from China), and the *Laricobius nigrinus* beetle, a native to western North America, all adelgid predators, are approved for release on public lands. Additionally, new agents are actively being sought in China, Japan, and the Pacific Northwest. However, there are some difficulties associated with this means of control: the insects must be identified, transported to laboratories for rearing, tested for host-specificity (meaning they ONLY feed on adelgids, and not on beneficial insects), and they must be able to reproduce in the wild. Recent surveys have shown *L. nigrinus* capable of abundant reproduction in the wild but there is little evidence that *S. tsugae* has reproduced significantly outside the lab.

Scientists at Camcore, a non-profit international program housed at NC State University, are collecting seeds from hemlock across its native range in an attempt to preserve genetic material. The idea is to establish populations of hemlock outside the native range until a means for controlling HWA can be found. Then the species can be reintroduced to its native range. Additionally, scientists are looking for hemlocks which are resistant to the HWA, in hopes that a breeding program can introduce the genes for resistance into seedlings.

A healthy hemlock with no sign of infestation on Mt. Rogers. Photo by: Jennifer Gagnon

So, what does the future look like for hemlock? We're still not sure. So just in case, get out there and explore a hemlock stand soon.

Links to more information along with color photos can be found on our website: www.cnr.vt.edu/forestupdate and at www.bugwood.org. Special thanks to Scott Salmon, Associate Professor of Entomology at VT for his helpful comments.

References: Hunter, Elizabeth. 2006. Toolboxes & Trees - The Fight to Save the East's Hemlocks. In: Blue Ridge Country V19 No 9/10.

Salom, Scott. 1999. Hemlock Woolly Adelgid: A Major Threat to Eastern Hemlock. Virginia Forest Landowner Update V13 No 2.

USDA Forest Service. Pest Alert: Hemlock Woolly Adelgid. NA-PR-03-94

USDA Forest Service Northeastern Area: http://www.na.fs.fed.us/fhp/hwa/

Exciting Educational Opportunities Available!

The Virginia Forest Landowner Education Program announces a NEW short course: Forest & Farmland Conservation Strategies

This 6-9 hour course was developed for landowners, county & city planners, natural resource professionals, educators and interested citizens. Forest & Farmland Conservation Strategies will introduce you to a suite of tools which can help you conserve your rural property. You will learn about:

- Forest and farmland loss and fragmentation in Virginia
- Comprehensive planning/subdivisions/zoning
- Right-to-Farm Laws
- Bargain sales
- Conservation easements & Land Trusts
- Purchase/transfer of development rights
- Agricultural & Forestal Districts
- Use-value taxation

VIRGINIA FOREST LANDOWNER EDUCATION

FOREST & FARMLAND CONSERVATION STRATEGIES SHORT COURSE

In addition, you will hear from landowners about their own struggles and successes using some of these tools, and receive a course notebook with reference materials. Courses will be offered statewide, beginning in January 2007 (some are listed in this quarter's calendar of events – see page 2, future offerings will be listed on www.cnr.vt.edu/forestupdate). Please contact Jennifer Gagnon jgagnon@vt.edu (540)231-6391 if you are interested in taking Forest & Farmland Conservation Strategies.

Preparing for the Next Owner: A Satellite/Internet Short Course Series

Are you a landowner with questions about the future of your land and how to pass it on to the next generation? Or are you a natural resource professional working with landowners who have these questions? Cooperative Extension Foresters in the Southern Region are offering a short course designed for people dealing with the subject of preparing forest and farmland for the next owner. Topics in the course will include:

- Understanding heir property and having a clear title
- Basics on how real estate changes ownership
- Inter-generation transfer strategies
- Conservation easements
- Charitable giving
- Generation skipping options
- Shared ownership and limited family partnerships

This short course is scheduled to begin Tuesday evening, February 20, 2007 and continue for two additional Tuesday evenings through March 6, 2007. The live internet and satellite broadcasts (from Clemson University Campus) will begin promptly at 7 pm Eastern Time and continue until 10 pm. The sessions are moderated by regional and national experts and include the opportunity for audience participation via toll free and internet call options. All students receive a course notebook. Registration fees will be $45 for each individual/$20 for a spouse. Host locations will be available statewide. For a host location near you and registration information, please contact Jennifer Gagnon, jgagnon@vt.edu (540)231-6391 or visit the Virginia Forest Landowner website calendar at www.cnr.vt.edu/forestupdate. To ensure adequate seating and notebooks, pre-registration by January 31st is strongly recommended.

The Virginia Forest Landowner Education Program Presents: Web-Based Woodland Options for Landowners

Where: On-line, in the comfort of your own home

When: Eleven-week self-paced course begins Monday, March 19, 2007; materials will be available through August 2007.

Registration: Begins on-line February 1st, 2007 at: www.cnr.vt.edu/forestupdate; Cost: $60

Computer Requirements: Participants will need a computer, web browser (e.g., Netscape or Explorer), internet service provider (ISP), and e-mail account. Access to a printer is desirable. In addition, participants should download the most current versions of Adobe Acrobat Reader (version 5.0 or newer) and RealOne™ (look for the free version link), both available free over the internet.

Who Should Take This Course: Private forest landowners of any acreage; this course is not intended for forest landowners who have substantial experience working alone or with natural resource professionals in the management of their forests. However, veteran landowners are welcome to enroll and may take the course as a refresher on basic forest management.

Why: To gain an introductory level understanding of basic forest management principles and techniques and to use this understanding to become better land stewards.

Action required!

Editor's note: *Virginia Forest Landowner Update* is going electronic! This is the last print edition you will receive - unless you have contacted me to request continuation.

The date has been set – beginning with the spring 2007 issue, the *Virginia Forest Landowner Update* will go electronic. This will save the Virginia Forest Landowner Education Program a large amount of money – which can then be used to develop new landowner education programs and materials. If you want to continue receiving this newsletter, please contact me (contact information is in the top-left corner of the front page) with your e-mail address as soon as possible so I can add you to the Forest Landowner ListServ. Please be sure to include your name and current mailing address so I can update the database correctly.

I will be happy to continue sending out a limited number of print versions to those of you without e-mail access. Please either call or write me to request a print copy. I'd hate to lose any subscribers, so please contact me soon! So far the response to this request has been overwhelming - thanks to all of you!
Jennifer

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