



North Carolina Forest Stewardship

News

Summer/Fall
2012

Tar Heel of the Week: At NCSU, she pushes environmental awareness

*By Marti Maguire—Correspondent
News & Observer*

RALEIGH -- Renee Strnad spent her college years pursuing a fascination with wildlife in classes that involved catching snakes and chasing kangaroo rats through a Kansas prairie.

But just before graduation, a professor told her that her true skills lay in her interactions with classmates, the way she was always explaining things in ways everyone could understand. He suggested studying to be a teacher. She never did, but teaching found her.

As director of several state environmental education programs based at N.C. State University, Strnad has emerged as a leader in state and national movements toward making sure children are exposed to nature and aware of its limited resources.

She spreads the message by training teachers, students, park rangers and others – and by helping form state and national education policies to encourage interaction with the outdoors. Her work has earned her numerous awards, including a recent honor from a national environmental education organization.

“She is one of the strongest advocates for environmental education in the state,” says Lisa Tolley, program manager with the state office of environmental education and public affairs. “She’s reached a lot of people, and her passion for her work is contagious.”

Strnad, 37, is championing environmental education at a time when it is seen by many as vital, thanks to dire reports on children’s unhealthy attachment to indoor over outdoor pursuits, and increasing concern over the environment. But the field also has found critics among those who see it as a way to push children toward a certain perspective on controversial topics such as climate change.

Strnad downplays this divide, saying she’s focused on engaging children through hands-on learning and fostering an appreciation for the outdoors that will help them balance the needs of people and nature as they grow older.



COREY LOWENSTEIN - Renee Strnad, 37, photographed at Schenck Memorial Forest, where she gives tours, is the Environmental Education Assistant at N.C. State University.

Take a Child Outside Week

September 24—September 30 Annually <http://www.takeachildoutside.org/>

Take A Child Outside Week is a program designed to help break down obstacles that keep children from discovering the natural world. By arming parents, teachers and other caregivers with resources on outdoor activities, our goal is to help children across the country develop a better understanding and appreciation of the environment in which they live, and a burgeoning enthusiasm for its exploration.

Going outside:

- connects children to the natural world
- helps kids focus in school
- reduces chances of obesity
- So take a child outside!

On this site you can:

- **pledge to take a child outside** and record your outdoor experiences
- get ideas for **outdoor activities**
- find **participating organizations** in your area

Come, be a part of this national movement!

For more information or to offer financial support, contact **Liz Baird**, Director of School Programs, at 919.733.7450 x601.

This program is an initiative of the North Carolina Museum of Natural Sciences and is held in cooperation with partner organizations across the U.S. and Canada. Take a Child Outside Week is sponsored locally by Dover Foundation, Inc. and Great Outdoor Provision Company.

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“We want kids to have the critical-thinking skills to weigh these issues and come to their own conclusions,” she says. “We want them to see all sides.”

A Jeep in the woods

Strnad grew up in Kansas, an only child whose parents both worked at the University of Kansas, where her father was chief of police.

Her grandparents on both sides were farmers, and Strnad says her parents shared with her an appreciation for the outdoors on Jeep trips through the Colorado woods and quiet moments following the wildlife in their backyard.

When it came time for college, she thought about being a veterinarian before setting on wildlife biology, drawn by the lure of catching exotic animals.

“It looked really exciting,” she says.

Her interest in this field drew her to Kansas State University, her hometown’s rival school, where she was quickly immersed in hands-on labs, spending much of her time in the field.

It was only after her professor’s comment about her teaching skills that she thought she might find her niche doing the kind of training park rangers go through to help them teach the public about trees and animals.

She added a secondary degree in natural resources and environmental sciences, and did a few environmental education internships, including one on the North Carolina coast teaching children about the coastal water system.

After that job, Strnad moved to Raleigh with a friend and was working in the bookstore on campus when she landed the part-time job in forestry extension that made her the statewide coordinator for environmental education, at the time a fairly obscure field.

The power of nature

In her 12 years in that position, she has steadily expanded her role as an advocate for environmental education at the same time the field has taken on more prominence.

Her job was created as an outreach position overseeing the state’s 4-H clubs and its connection to Project Learning Tree, an arm of the American Forestry Foundation that has run outdoors educational programs nationally since 1976 and in North Carolina since 1986. As program coordinator, Strnad now oversees 800 educators statewide who work at more than 200 environmental education centers.

Early on, Strnad says she conducted workshops statewide herself, leading her to visit nearly every one of the state’s 100 counties. Now, while she still lectures widely, she has focused more of her efforts on recruiting educators and spearheading new programs and policies that expand the reach of environmental education in the state.

In recent years, Strnad has helped develop the N.C. Environmental Literacy Plan, an effort to help teachers work the outdoors into their lessons – by using trees to learn about measuring circumference, for instance, or keeping nature logs in a language arts class.

Over the years, her ability to speak to different audiences has been crucial as she touts the power of nature to teachers, 4-H groups, churches, policymakers and colleagues at international conferences. Even her guest lectures to students in the natural resources department include a wide variety of perspectives.

“There are people who have always wanted to be park rangers and people who are studying to be wedding planners, and you have to figure out how to present environmental education in a way that’s going to interest everyone,” she says.

Even in the realm of K-12 education, environmental education includes subjects from school gardens to a unit Strnad devised on solid waste treatment to an entire course on environmental sciences.

Strnad acknowledges the field has entered a period of controversy when it is often accused of pushing an environmental agenda. As a native of the Midwest, she uses the image of a three-legged milking stool to illustrate the need for balance. Each leg – the environment, economics and people – must be considered equally.

“It’s hard to listen to people talk and see that they’re lengthening one of those legs or cutting the other one short,” she says. “I’m always trying to keep that in mind.”

Silviculture & Fire

Wildfire danger grows as more homes are built in high-risk areas

By Jennifer Oldham—Bloomberg News staff

DENVER - Colorado's most destructive wildfire season claimed 650 homes, yet the state lacks a law requiring homeowners in high-risk areas to use non-flammable building materials and to clear vegetation around their residences.

Like most states, Colorado relies on a hodgepodge of ordinances that encourage municipalities to create plans for protecting homes from fire and don't provide penalties for not doing so.

After a blaze driven by hurricane-force winds consumed 346 homes in a Colorado Springs neighborhood in June, in what's expected to be the state's costliest fire, insurers are calling for tighter restrictions.

"If we have a major takeaway from Colorado's most destructive wildfire season, it is how can we address the issue of safer building codes," said Carole Walker, executive director of the Rocky Mountain Insurance Information Association, a Greenwood Village, Colo.-based nonprofit group that represents property and casualty insurers in Colorado, New Mexico, Utah and Wyoming. "We have different building codes from municipality to municipality, from county to county. Colorado really needs to start looking at how can we consistently make our communities safer."

Almost 40 percent of new U.S. homes in the past decade were built in what's known as the "wildland-urban interface," or residential communities bordering forests or grass lands. Fires in these zones are often ignited by humans using chain saws, firing guns or driving cars that backfire, fueling growth in the number, intensity and average size of blazes and multiplying losses.

About a third of the \$3 billion used to fight such blazes each year goes toward defending homes in high-risk areas - double the cost of a decade ago, said Ray Rasker, executive director of Bozeman, Mont.-based Headwaters Economics, a research firm that analyzes the costs of wildfires.

The financial effects of wildfires on municipalities last for years. Burned homes decrease property values, causing counties to lose hundreds of thousands in tax revenue that in many cases is dedicated to financing local fire districts.

Wildfires also strain state and local resources. City departments lack equipment and gear to fight forest fires, and volunteers who often battle blazes on federal lands are dwindling in number.

"When people are building houses in single increments, the revenue tax base isn't there for expansion of their fire departments," said Bob Roper, a retired Ventura County, California, chief. "We end up stretching the limited resources we have up front with high expectations that the fire service will be there when a fire happens."

Federal funding dedicated to training and equipping local departments to fight wildfires and helping communities draft protection plans is dwindling even as development continues. Homes exist on only 20 percent of the land in the West's wildland-urban interface, Rasker said.

"We're just starting to see the very beginnings of how big this problem is going to get," he added.

Funding for federal programs fell 25 percent to \$73 million proposed in fiscal 2013, from \$97 million in fiscal 2011, said Jake Donnay, senior director of forest policy at the Washington-based National Assn. of State Foresters.

"We're pulling from our fuel reduction and prevention programs to pay for suppression," said Jim Karels, state forester for Florida, where 18 million people live among 26 million fire-prone acres. "It has a snowball effect which makes it worse each year."

In Oklahoma, fire departments are struggling to protect homes built in the past decade in unincorporated forested areas and grasslands outside Tulsa and Oklahoma City that lack building codes requiring non-flammable materials.

"There are million-dollar plus homes built in rural areas on dirt roads - it's hard to get fire equipment there," said Robert Doke, Oklahoma's fire marshal. "There's a lack of high-pressure water lines for the fire hydrants and these structures are built with more light-weight laminates, which causes them to burn quicker."

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In New Hampshire, officials worry that a boom in second- home construction by New Englanders in the White Mountains is a conflagration waiting to happen.

"If we get a real dry spell, I think there will be significant threat to loss of property and life," said Bill Degnan, New Hampshire's fire marshal. "If we have one major incident, we all end up paying for it."

The financial impact can last for years. In Boulder, Colo., where the Fourmile Canyon blaze burned 169 homes in a wooded area northwest of the city in 2010, the county lost about \$100 million in property value, said Jerry Roberts, the county's assessor.

"We lost \$823,000 a year in property tax collections," he said. "These little volunteer fire districts operate on very low budgets and all of a sudden a fire comes through and it wipes out their tax base."

As many as 66,000 communities nationwide are at-risk of a wildland fire, yet only 5.4 percent of these are protected by voluntary fire protection plans or ordinances, according to a report released in January by the National Association of State Foresters.

Even states that mandate defensible space such as California, where homeowners in areas protected by Cal Fire can be fined if they don't clear 100 feet around their homes, rules are not consistently enforced, said Ray Moritz, a San Rafael-based fire ecologist.

"The vast majority of homes I look at do not meet defensible space guidelines," said Moritz, a former firefighter. "On a certain level, firefighter associations are unwilling to alienate the public by enforcing the codes."

About 770 communities in 40 states use the Firewise Communities Program, created by the nonprofit National Fire Protection Association in 2002, to help them write plans to protect homeowners and businesses. These measures aren't cheap to enact.

In Colorado Springs, the state's second-largest city, nestled against the foothills at the base of Pikes Peak, firefighters on the Waldo Canyon blaze credited a decade of work to enact Firewise policies in neighborhoods ringing the city, as well as an ordinance that requires new homes be built with non- flammable roofs, with saving many residences.

In the city's southwest, Cedar Heights residents relied on a \$300,000 grant from Federal Emergency Management Agency to help clear 100 acres of parkland atop the community of a tangle of dead scrub and gamble oak and pine trees.

The effort, which homeowners were required to match by thinning trees and vegetation around 190 homes with expansive views of the city, saved the neighborhood, whose motto is "Minutes Away, Worlds Apart."

Many communities are resistant to Firewise, which seeks to teach homeowners that blazes are ignited by embers fueled by pine needles in gutters, cushions on deck chairs, mulch around flower beds and fences surrounding properties, said Michele Steinberg, Firewise Communities Program manager.

"There's a lot of denial about the actual risk that exists," she said.

North Carolina Tree Farm Workshops

The North Carolina Tree Farm program will conduct a workshop in the fall of 2012. All of the details have not been finalized, but this is the tentative schedule for the workshop.

A workshop will take place on Saturday, October 20, at Goose Creek State Park near Washington, NC followed by a field tour of the Weyerhaeuser Company Tree Nursery and nearby site preparation and reforestation operations.

The Tree Farm Annual Meeting will be held on Saturday October 6th at Asheville at the Biltmore Estate. The tentative plan is to tour Biltmore's forestry operation with afternoon tours of Biltmore house and gardens.

If you have any questions about these workshops or general questions about the North Carolina Tree Farm program, please contact Leslie McCormick at 919-917-8646.

The American Tree Farm System conducts webinar workshops that allows landowners to learn more about various topics through presentations on the computer. To learn more about these workshops and the upcoming topics log onto <http://www.treefarmsystem.org/ATFSwebinarseries>

HEMLOCK BLUFFS BURN

Brian Haines

On January 30th of this year the N.C. Forest Service worked together with the N.C. State Parks and Recreation and the Town of Cary to complete a long planned prescribed fire on three acres of the 158-acre Hemlock Bluffs Nature Preserve in Cary. The prescribed burn was the result of nearly two years of planning by local, county and state officials to rejuvenate the urban forest and prevent any unplanned wildfires from being able to spread to nearby homes.



The location of the burn was difficult because of its proximity to nearby homes and roadways. The N.C. Forest Service, State Parks and Recreation and the Town of Cary formed a committee to plan not only the burn itself but to alleviate public concerns through press releases, media interviews, and a public meeting, held December 5. The public meeting drew a few people who expressed concern over the risks of setting fire to woodland behind their homes. They were given an opportunity to express those concerns and speak with prescribed fire specialists such as Mark Bost, Assistant Regional Forester with the N.C. Forest Service and Burn Boss.

"This was a difficult burn to execute, not because of the fuel loads but instead due to the complexity of burning in the middle of a suburb," said Bost. "However, this burn is a good demonstration of how fire can be used in an urban setting without causing a negative impact to the public, and also helps to show the public that fire in a controlled manner can reduce fuel loads and the associated wildfire hazard to surrounding areas."

Mark Johns, Town of Cary Program Specialist, one of the lead advocates for conducting the burn was also on hand at the public meeting and on the day of the burn. He agrees with Bost's assessment that the burn will help to protect the surrounding neighborhoods and hopes that additional burns can be completed in the future.



"Given that wildfires are common in North Carolina, especially during droughts and high winds, we need to take proactive steps to protect the Preserve and our neighbors," said Johns. "Prescribed burns are a proven and safe way to reduce fuel loads in forests and other areas."

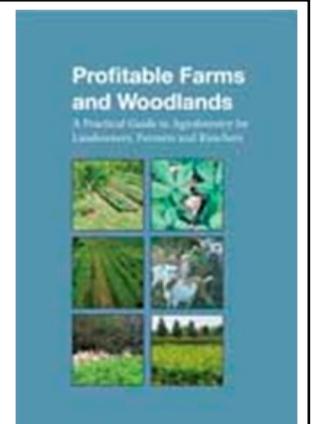
Johns also noted that the area historically burned and that fire had at one time been a natural part of the parks ecosystem. Johns' points out there are added benefits for the park such as the regeneration of native vegetation and oak seedlings, improvement of the forest health, and improved foraging areas for wildlife.

The burn was the first at the center with more planned in the future.

Hemlock Bluffs Nature Preserve is a unique, 158-acre site in southern Cary where 235 Eastern Hemlocks grow along north-facing bluffs far from the Hemlocks' normal range in the foothills and mountains of North Carolina. The Town of Cary, which maintains the Preserve, operates the programs, and owns the structures; the State of North Carolina, which owns most of the land and helps guide the Preserve's stewardship. The Preserve includes three miles of trails and the Stevens Nature Center, a 3,700 square foot visitor and educational facility that opened in 1993.

Profitable Farms and Woodlands: A Practical Guide to Agroforestry for Landowners, Farmers and Ranchers

A much needed practical guide in Agroforestry has been developed by a team of agroforestry specialists from the 1890 and 1862 Land Grant Universities and the USDA National Agroforestry Center (NAC), led by the 1890 Agroforestry Consortium. The purpose of the guide is to assist underserved and limited resources farmers and woodland owners to adopt best management technologies in agroforestry. The guide depicts step-by-step methods and principles on developing agroforestry practices for farmers and woodland owners for the purpose of enhancing the economic and environmental benefits of their farms and woodlands. http://nac.unl.edu/profitable_farms.htm



USDA Releases Agroforestry Guide for Farmers, Woodland Owners

Handbook shows ways to better manage their lands and boost profits

WASHINGTON, July 16, 2012 – Agriculture Deputy Secretary Kathleen Merrigan today released a first-of-its-kind practical agroforestry handbook that contains information to help establish, manage and market agroforestry projects that are profitable and sustainable over time. The handbook, *Profitable Farms and Woodlands*, is written for underserved and limited resource farmers and woodland owners living in the Southeast and includes five main agroforestry practices: alley cropping, forest farming, riparian buffer strips, silvopasture and windbreaks.

"*Profitable Farms and Woodlands* will help landowners make good use of their land in terms of making profits but also as land stewards," Merrigan said. "Our emphasis on agroforestry helps focus on job creation, increasing rural prosperity, support local and regional food systems, and helps to guide stewardship of working farms and forests."

Agroforestry is a unique land management approach for farms, ranches and woodlands that intentionally combines agriculture and forestry to create integrated and sustainable land-use systems.

Among the information in the book are simple explanations of how growing medicinal plants, mushrooms or cultivating bee products can help landowners become part of a multi-billion dollar industry. In Georgia, for example, a forest farmer can grow goldenseal and earn \$6,500 an acre. Or an 800-log shiitake business can reap roughly \$6,000 per year.

Other information focuses on responsible landownership through the use of windbreaks and riparian buffers. Riparian buffers can help a farmer save money or even earn added income because the buffers help protect water quality, improve food and cover for wildlife and fish, and can even be designed to grow profitable products such as berries, nut crops, and timber.

Each practice in the book is brought to life through success stories, including that of Frances and Will Powers of Oconee County, Ga., who faced losing their family farm but are now successful fourth-generation farmers.

Landowner focus group sessions in Birmingham, Ala., and in Atlanta led to the development of the free handbook which is a collaborative effort of a team of agroforestry specialists from the 1890 and 1862 Land Grant Universities and the USDA National Agroforestry Center, led by the 1890 Agroforestry Consortium. The Agroforestry Center is a partnership of the U.S. Forest Service and Natural Resources Conservation Service.

"Resource professionals and small farmers and woodland owners in the Southeast have been yearning for a practical, easy to read agroforestry handbook," said Richard Straight, the U.S. Forest Service lead agroforester for the USDA National Agroforestry Center. "This handbook will do just that. Beginning farmers and woodland owners will find this handbook very helpful, especially the 'Basics' section for each of the five practices."

Straight credits Joshua Idassi for initiating the idea for the book and for his work in the development of the finished product. Idassi is technical coordinator and a natural resources specialist at North Carolina Agricultural and Technical State University.

A limited number of hard copies of the 85-page handbook are available upon request for use in agroforestry training and landowner workshops. Contact the National Agroforestry Center for more information.

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Invasive Species Update

Can the Kudzu Bug Stop the Vine That Ate the South?

Posted by [zhoyle](#) on July 10, 2012—Courtesy of Compass Live

Southern Research Station (SRS) entomologist [Jim Hanula](#) may be the only person in the South who actually wants to keep kudzu alive.

He needs healthy plots of the famous weed to monitor the effect the bean plataspid—a pest that entered Georgia some two years ago and has become known as the kudzu bug—is having on kudzu.

“Kudzu is known as the vine that ate the South. The roots can grow 12 feet deep and weigh 300 pounds,” said Hanula, who also has an adjunct appointment with the [University of Georgia College of Agricultural and Environmental Sciences](#) (CAES).



Kudzu bug nymphs. Photo by Yanzhuo Zhang.

Kudzu, and the new pest that feeds on it, came to the United States from Asia. The U.S. government promoted kudzu for erosion control in the early 1900s and by 1946 the vine had spread or was planted on 3 million acres of land, he said. It now occupies 7 million acres and covers 50,000 new acres each year.

Since the bug arrived in Georgia, Hanula has been knee-deep in Georgia kudzu patches trying to learn about the bug’s life cycle and behavior—and how it affects kudzu health.

Kudzu bug overwinters, lays eggs

The pest eats the vine but it overwinters on the bark of nearby trees. The bugs that survive winter lay eggs on kudzu in the spring. Their young, called nymphs, feed on kudzu and emerge as adults in late June and July. The insects then go through the same process again with the next generation of adults emerging in September and October.

Kudzu bug trap. SRS and UGA researchers found that the bugs are most attracted to the color white. Photo courtesy of UGA CAES Entomology Dept.

Hanula has been taking weekly samples of the pest from research kudzu patches to study its biology.

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Kudzu bug attracted to white

Hanula and SRS entomologist **Scott Horn** tested a variety of colored traps to attract the bug and found it is not attracted to red, purple or black; it favors white most and yellow to some degree. This explains the hundreds of calls UGA Extension agents receive from owners of white homes or cars.

To determine how the pest damages kudzu, Hanula harvests the stems and leaves of infested kudzu patches and compares them to the patches he sprayed to protect them from the kudzu bug.

“The pest caused a 33 percent reduction in kudzu growth after one year,” he said. “In 2011 we saw a 50 percent reduction compared to the 2010 protected plots. We will monitor for several more years to see if the trend continues.”

Hopefully, kudzu will weaken

SRS and UGA scientists hope continual feeding by the pest will deplete kudzu roots and weaken the plants.

“If the bug’s effect is cumulative, kudzu plants will likely weaken, and patches won’t be as thick,” Hanula said. “Hopefully, the bug will reduce kudzu’s ability to climb, which would be good for forestry.”

Kudzu bugs dining on kudzu may sound like a reason to celebrate, but the flipside is that the kudzu bug also loves to feed on soybean plants and other legumes. Georgia farmers grow soybeans for the oilseed and animal feed markets. UGA entomologist **Phillip Roberts** has seen the pest reduce soybean crop yield by 19 percent in untreated fields. On a positive note, the bug does not feed on soybean pods.

Kudzu bug invasion continues

The kudzu bug was first spotted in Georgia in the fall of 2009 when insect samples were sent to the University of Georgia Homeowner Insect and Weed Diagnostic Laboratory in Griffin, GA, by UGA Cooperative Extension agents in Barrow, Gwinnett and Jackson counties. “As of now, the bug has been reported in 154 of Georgia’s 159 counties – only five along the coast remain unconfirmed,” said **Wayne Gardner**, a Griffin-based CAES entomologist who has been studying the pest since it was found in Georgia.

The kudzu bug has also been found in all 47 South Carolina counties, 73 of North Carolina’s 100 counties, 25 counties in Alabama, two counties in Virginia, four counties in Tennessee and six counties in Florida, he said.—*Sharon Dowdy*

[Read an earlier CompassLive story about the kudzu bug research by Hanula and Horn.](#)

(Sharon Dowdy is a news editor with the University of Georgia College of Agricultural and Environmental Sciences.)



Featured Weed: Chinese Silvergrass

By Owen Carson

Most people don't notice invasive exotic plants from their car until someone points them out—then it's a battle to NOT look at them as you cruise by. This phenomenon is all too apparent along I-26 and I-40 and countless other open roadsides in North Carolina, which have been infested with Chinese silvergrass (*Miscanthus sinensis*).

Silvergrass is a tall, densely-tufted, perennial grass that can grow up to 10 feet tall in ideal conditions, occupying roadsides, waste spaces, and other highly-disturbed areas with bare soils. It is most easily recognized by its leaves and flowering stalk: the former are long, stiff and green with a distinct white midvein and sharp margins (they can give you a paper cut), while the latter consists of a tall spike with many loosely plumed pink-to-whitish flower heads.

Like many other invasives, silvergrass was first planted for its ornamental value, and even today it is still sold at almost all landscape nurseries. Thus, *Miscanthus* still spreads from the landscape setting via numerous tiny feathered seeds which are dispersed by wind and other vectors, typically invading scoured areas, hence it's prevalence along roadsides.

It has an affinity for fire as well—when ignited, it burns hot and fast helping wildfires spread quicker than usual, and can also reclaim the subsequent fire-scalded terrain more readily than most native grasses. Additionally, silvergrass can rapidly invade fields and pastures where it is unpalatable to livestock, will out-compete other desirable, native grasses, and can increase the potential for damaging fire in drier seasons.

So, you're probably wondering what's the best way to stop *Miscanthus*? Avoid planting it, or, if it's already established on your property, be sure and remove all flowering stalks before they begin to produce seeds. This will eliminate it's dispersal throughout your yard, as well as it's migration into more open, natural areas, such as nearby national parks or forests.

If your ultimate goal is complete eradication (from your yard, at least), silvergrass also responds well to chemical foliar treatments and/or manual removal. Summer or fall application of a non-selective glyphosate herbicide with a 'sticking' agent, one that will increase the adhesion of the chemical to the leaf surface, can result in total mortality after only one treatment. Similar techniques involve a combination of cutting and spraying to first eliminate seeds then kill the plant through its re-growth. You can also try uprooting smaller clumps with a shovel, but be sure you're getting all pieces of the root system because they can re-sprout from small fragments.

Good luck, and Good riddance!

[WNCA Restores Native Communities @ Richmond Hill Park](#) by Bob Gale

Throughout the spring and early summer, the Western North Carolina Alliance, an integral SACWMP partner, has held three outings in the forest of Asheville's Richmond Hill Park; where volunteers worked to control a significant



*A Forest Service employee uses a brush cutter to cut down mature *Miscanthus* before it goes to seed; he will return to treat the re-growth with an herbicide solution*

infestation of invasive exotic plants. Students from the University of Maryland, UNC-Asheville, and Warren Wilson College, as well as local volunteers, all worked to remove thickets of multiflora rose and European privet from a small tributary of the French Broad River. The park has suffered from major disturbance throughout its history and is overrun in many areas by several species of invasive exotic plants. Nevertheless, areas exist where rich native species have struggled to hold on and/or their roots and seeds are banked in the soil, waiting for an opportunity to come back on their own.



Silvergrass in full flower at Sam's Gap along the Appalachian Trail.

An initial control event held in December 2011 cleared a small area of invasive plants, which, in the following season, resulted in the emergence of spring beauty, trilliums, and May-apples. We followed up on this work by greatly expanding the area in 2012. As a result, many more of these native plants appeared, along with Jack-in-the-pulpit, wild geranium, violets, toothworts, and others that had been shaded out by evergreen clumps of multiflora rose and privet. We also uncovered numerous aromatic spicebush saplings which had been bent over to the ground by the weight of the invasives but are now straightening up and growing new leafy branches - now that's what we like to see!

Biomass

First plant making diesel from wood opens

Posted on 09 July 2012 by Vicky Ellis

The first plant to convert solid biomass such as wood chips and straw directly into diesel fuel opened last week in Austria.

Said to be the first of its kind in the world, the BioCRACK pilot plant at a petrochemical refinery in Schwechat extracts the diesel by heating the biomass with heavy oil to over 400 °C.

Diesel made out of biofuel could be an important alternative to “first-generation” biofuels because these are a threat to food supply, according to Gerhard Roiss, CEO of OMV, one of the firms behind the plant.

Mr Roiss said: “The European fuel market faces considerable challenges: it must meet the growing demand for diesel and raise the renewable energy share in the transport fuel sector to at least 10% by 2020. Conventional first-generation biofuels are not a long-term solution because the cultivation of the necessary raw materials competes with food production.”

Researchers also claim biofuels from wood produce fewer CO2 emissions in production.



Research & Landowner Opportunities

WEYERHAEUSER ESTABLISHES PROCUREMENT PREFERENCE FOR AMERICAN TREE FARM SYSTEM®

CERTIFIED WOOD AN IMPORTANT MARKET SIGNAL FOR CERTIFIED TREE FARMERS

FEDERAL WAY, Wash., July 9, 2012 — Weyerhaeuser Company announced its preference for purchasing wood that is certified under the [American Tree Farm System®](#). This decision aligns with the company's [commitment to responsible fiber sourcing](#).

For more than 89,000 family forest owners sustainably managing 27 million acres of forestland in the American Tree Farm System, the Weyerhaeuser preference for their certified wood can make a real difference in the viability of Tree Farms and the economic health of rural communities.

“Weyerhaeuser’s announcement is just what certified Tree Farmers have been waiting for,” said Tom Martin, president and CEO of the American Forest Foundation. “Healthy forests need healthy markets because protecting your trees against insects, disease and catastrophic fire can be expensive. These landowners are hardworking people who want to keep their forests as forests, and keep them in their family. Weyerhaeuser’s continued commitment to ensuring woodland owners have the tools to manage sustainably is laudable.”

The American Tree Farm System is the largest and oldest woodland system in America. Certified Tree Farmers meet the highest standards of sustainability and manage their lands for water, wildlife, wood and recreation. The system is a program of the [American Forest Foundation](#).

Weyerhaeuser’s [corporate sustainability goals](#) include demonstrating forest stewardship by certifying its timberlands to sustainable forestry standards. All the timberlands Weyerhaeuser owns or manages in North America are certified to the Sustainable Forestry Initiative system. In addition, all the company’s manufacturing facilities in North America are certified to the SFI Certified Sourcing Standard.

The company supports the use of internationally accepted sustainable forestry standards, including the use of independent, external auditors that verify a company's commitment to responsible sourcing. Weyerhaeuser’s responsible fiber sourcing practices are guided by its [wood procurement policy](#) and implementation guidelines.

“Most of our customers want certified wood and paper products,” said Dan Fulton, president and CEO of Weyerhaeuser Company. “There is widespread understanding of the value of certification, and encouraging best practices remains by far the most important role for certification.

“Buyers want to know their wood comes from sustainably managed forests,” Fulton added. “To give our customers what they want, we need more wood from certified Tree Farms.”

The preference for American Tree Farm System-certified wood will be implemented at Weyerhaeuser through a number of measures, including:

Incentives — The company will maintain a priority market for material from certified Tree Farms, especially when suppliers are put on quotas.

Procurement decisions — Where a Vendor Management Plan is used (which scores wood suppliers on a number of metrics) Tree Farm certification will be a positive attribute.

Policies and Tracking — The company will declare support for the American Tree Farm System in its wood procurement policy and it will track its use of wood from certified Tree Farms.

Support expansion of the American Tree Farm System — The company will offer landowner assistance to encourage Tree Farm certification and the management of forests to American Tree Farm System Standards of Sustainability.

“America’s forests need strong industry players like Weyerhaeuser to recognize the value that family forest owners are contributing to sustainable forestry,” Martin said. “Giving preference to wood from certified Tree Farms means more woodland owners have the financial resources to continue their hard work and on-the-ground stewardship.”

Weyerhaeuser and the American Tree Farm System share a long history. The relationship dates back to 1941 when Weyerhaeuser’s Clemons Tree Farm, which was initially established to test fire control and reforestation practices, became the first privately owned forest to be included in the American Tree Farm System. You can learn more and view photos by visiting the [Forest History Society](#), which retains the official archives for the American Tree Farm System.

Weyerhaeuser Company, one of the world's largest forest products companies, began operations in 1900. We grow and harvest trees, build homes and make a range of forest products essential to everyday lives. We manage our timberland on a sustainable basis in compliance with internationally recognized forestry standards. At the end of 2011, we employed approximately 12,800 employees in 11 countries. We have customers worldwide and generated \$6.2 billion in sales from continuing operations in 2011. Our stock trades on the New York Stock exchange under the symbol WY. Learn more at www.weyerhaeuser.com.

For more information, please contact: [Weyerhaeuser Media - Kristen Sawin](#), (253) 924-4154 or American Forest Foundation Media - Jennifer Jones, (202) 459-1394

American ginseng may reduce fatigue during cancer treatment

Mayo Clinic researchers saw improvements, no side effects

By Janice Neumann, Special to the Tribune—July 4, 2012

Already known as a popular herb for its reputed energy-boosting effects, American ginseng may help reduce symptoms of fatigue for cancer patients undergoing chemotherapy or radiation, according to a new study.

Mayo Clinic researchers found that after eight weeks of receiving 2,000 milligrams of ginseng daily, 340 study patients showed a significant decrease in exhaustion compared with participants in a placebo group. Sixty percent of patients had breast cancer. Researchers used capsules with pure, ground American ginseng root for the study because store-bought ginseng can be processed with ethanol.



Study patients were either receiving chemotherapy or radiation or had completed a course of treatment.

"It's actually one of the most common problems for cancer survivors today," said Debra Barton, associate professor of oncology at Mayo Clinic and lead author of the study. "Studies tell us that as much as 100 percent of patients at some point in treatment have a debilitating fatigue and though it does get better once treatment is over, many patients don't get back to their pretreatment energy level," Barton said.

The study results were presented at an American Society of Clinical Oncology meeting in Chicago in June. Other researchers on the study were Breanna Linqvist and Dr. Charles Loprinzi of Mayo, Dr. Shaker Dakhil of Wichita (Kan.) Community Clinical Oncology Program, Dr. James Bearden and Travis McGinn of Spartanburg (S.C.) Regional Medical Center, Dr. Craig Nichols of Virginia Mason Medical Center, Dr. Greg Seeger of Altru Cancer Center, and Dr. Ernie Balcueva of the Michigan Cancer Research Consortium.

Barton said patients suffered no "discernible side effects" from the herbal treatment.

"We found the group going through cancer treatment actually had more benefits than those who had finished, so we're trying to understand that difference better," Barton said. Researchers will probably repeat the study in a group of patients who had completed treatment and had more chronic fatigue, Barton said.

The findings may be especially helpful to fatigued cancer patients because researchers haven't found any other effective treatment for the problem. Some doctors prescribe psychostimulant medications, but Barton said the drugs have side effects and haven't proved especially helpful. Barton said patients are usually counseled to pace their activities to avoid feeling drained.

The herb could end up being more helpful as a preventive measure against fatigue, rather than a way to fix the problem, Barton speculated.

Dr. Chun-Su Yuan, who directs the Tang Center for Herbal Medicine Research at the University of Chicago, said he was excited by the findings.

"We're very encouraged by the Mayo Clinic data about ginseng and fatigue," Yuan said. "It's promising that it potentially may help the quality of life in cancer patients receiving chemotherapeutic agents."

Yuan's center received a \$6 million grant from the National Institute of Health's National Center for Complementary

(Continued from page 14)

and Alternative Medicine several years ago to study the possible anti-tumor effects of the herbs American ginseng (*Panax quinquefolius*) and notoginseng (*Panax notoginseng*). He said their studies found ginseng was able to kill colon cancer cells in lab cultures, and their team is starting a study on humans.

Yuan, who has studied herbs extensively, found ginseng reduced blood sugar levels in obese diabetic mice and showed cardiovascular benefits in animals. The herb was often used in Chinese medicine as a tonic for helping reduce stress and improve endurance.

While the drug is generally "very benign," Yuan said it should always be used at the recommended dosage range of no more than 2 to 3 grams a day.

"For some people in this country, they have the misconception that botanicals are natural and natural is always safe," Yuan said. "But if they take too much, it may cause adverse effects."

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Fish & Wildlife



Study Is More About The Bees Than The Trees

2012 July 17

tags: [cnr](#), [extension](#), [facultystaff](#), [fer](#), [ncstate](#), [research](#)
by CNR Communications

Syrphid fly feeding on False Dandelion

Photo from Watauga County CES

Christmas tree growers might not realize that the diverse mixes of groundcovers growing underneath their trees provide important habitat for pollinators. Pollinators which are responsible for an estimated 75% of the average food products that we eat each and every day!

[Dr. Jill Sidebottom](#), with [NC State University's Christmas Tree Program](#), and county agents are working on a pollinator study specifically looking at tree farms in Watauga, Ashe, Allegheny, Avery and Mitchell counties.

The study will follow these farms for an entire year, taking data on the mix of specific plants growing under the trees, what's flowering and when, and what types of pollinators and other insects are observed. This study is unique in that the majority of the fieldwork is not actually focused on the Christmas trees... but rather what's growing underneath them!

The best practices specific to the Christmas tree industry on pollinator protection and conservation which result from the study will help tree growers and beekeepers collaborate to sustain pollinators.

Adapted from [Christmas Tree Pollinator Study](#), Watauga County Cooperative Extension Blog 7/9/2012

Wildlife Habitat Conservation Success Story

John Peeler, Piedmont Region, Davie County, North Carolina

By Johnny Riley, Technical Assistance Biologist, NCWRC

During the winter of 2006, I was looking for someone to do contract prescribed burning in my work area, and I was having a very difficult time finding someone willing to help. Then a local forestry consultant suggested that I call John Peeler. John is a land management consultant who specializes in wildlife habitat projects. After contacting John and telling him more about our CURE (Cooperative Upland habitat Restoration and Enhancement) program, he was not only willing to help with prescribed burning, but he also wanted to know more about implementing CURE practices on his own property. John owns a small farm south of Mocksville in Davie County. While John doesn't need large amounts of hay each year, he was still interested in establishing native warm season grasses on his property for the benefit of his livestock and wildlife. During the spring of 2007, John converted 14 acres of his hay land into big blue-stem and Indian grass. After having success with this initial planting, John decided to plant an additional 13 acres in 2008. In the years since these first plantings, John has continued to manage his native warm season grass fields with wildlife in mind. The timing of spring hay mowing is crucial for wildlife in grassland habitats. Native grasses allow John to mow later in the spring than with most conventional grasses. Also, when he can, he leaves as much cover as possible throughout the winter by either only cutting once (since the yield is higher than fescue) or by timing his second cutting no later than early August. John's property is a unique mix of well-managed timber and open ground, and his fields are primarily used for hay and grazing for an assortment of livestock. Thanks to John's forestry background, his timber is also providing quality habitat. John majored in Forestry at North Carolina State University, and he manages his timber in such a way as to provide both quality wildlife habitat and timber revenue. This means his timber stands are being thinned and burned on a regular basis to the benefit of plant and wildlife species dependent on such practices. John's benefit to wildlife has reached beyond his property because he has referred other property owners to our CURE program, and in most cases we were able to complete wildlife habitat projects on those properties. Furthermore, some of John's fields are located along a heavily travelled road and are providing much needed exposure for native grasses. There is tremendous value in providing a showpiece for the public that demonstrates common timber and agriculture practices that compliment wildlife management. John Peeler is doing good things for wildlife in and around Davie County, and the benefits extend to the public at large.

N.C. Wildlife Resources Commission Launches Site for Mobile-Device Users

RALEIGH, N.C. — With the launch of a new mobile website, the N.C. Wildlife Resources Commission will put a wealth of information and services at the fingertips of on-the-go hunters, anglers, boaters and other outdoors enthusiasts to get them in the field, in the woods or on the water quickly and easily.

The new site is designed for small screens and touch technology common in smart phones, tablets and other portable devices. Mobile-device users accessing the Commission's full website will be redirected automatically to the mobile site where they can purchase licenses, report harvests, check regulations, find a nearby wildlife service agent, and view interactive maps of boating access areas, shooting ranges and game lands.

From the mobile site, they also will be able to access other information, such as:

A contact list of agency phone numbers and email addresses;

A sunrise/sunset table;

Size and creel limits for saltwater fishes; and

Links to the agency's latest news and events, as well as its social media sites —**Twitter, Facebook, Google+, YouTube** and the **Conserve & Protect** blog.

For more information on fishing, hunting, trapping, boating and wildlife watching in North Carolina, visit www.ncwildlife.org.