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A Few Words from Bob Smith

Students are trudging through the snow on the ground in Blacksburg as I write. It is always good to be reminded of why I left northern Michigan so many years ago. We had between 16 and 20 inches of snow the week before Christmas and then the cold snap came in. It was the first white Christmas in a number of years; therefore, there was a lot of talk in my home town about the cooling effects of global warming in our area over the holidays. I recently returned from a regional meeting for Extension, and two of the key research areas identified under the new administration are climate change and energy security/bioenergy. Virginia Tech is working in both of these areas. As we know, good forest stewardship has a strong impact on climate change, and there are numerous faculty working in the bioenergy area.

What better way to start a new year than to reflect upon the many opportunities for engagement provided by communities and our college? Our goals are to make Virginia's natural resources more sustainable and economically viable. I have shared with many of you that working with our faculty, students, and staff to partner with our localities is one of the greatest jobs a person could have. These efforts are where we can see a difference being made on the ground. Our university is a leader in engagement across the country, and it is an increasingly important aspect of the work we do. This is where Virginia Tech puts knowledge to work, as our old motto used to say. Whether it is looking at green space in the city of Radford, or the best place to locate a tourist information center along the Blue Ridge Parkway, our engagement efforts aim to improve the lives of our citizens and the natural resources that surround them.

The Blue Ridge Parkway, which includes 12 counties in Central and Southwest Virginia, is celebrating its 75th anniversary this year. The parkway is an economic driver for the region and is the most visited national park in the nation. The College of Natural Resources, in collaboration with Blue Ridge 75 Inc., will host a conference on the future of the parkway from October 14-16, 2010, at the Hotel Roanoke, as part of its year-long celebration. The conference will focus on issues that impact the vitality of the parkway and its communities, and is in conjunction with a conference at Appalachian State University in Boone, N.C., in April. For

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What's Inside

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more information on all the activities for the Blue Ridge Parkway 75th Anniversary celebrations, please visit www.blueridgeparkway75.org.

In this issue we share what John Munsell's students are working on at the Catawba property. Urs Buehlmann, Department of Wood Science and Forest Products, discusses the impact of pallet recycling on local community development, and you will have an inside look at one of the many industry-university partnerships at Virginia Tech through the Wood-Based Composite Center. Dr. John Seiler shares his highly successful dendrology site that is used by people around the world, and Jason Fisher shares Extension news from the Central region.

If you have any questions or suggestions on our engagement efforts, please contact me.

FEATURE

Service Learning and Whole-Farm Agroforestry Planning in the Catawba and North Fork Valleys

John F. Munsell, Forest Management Extension Specialist
Courtney Kimmel, Ph.D. Student
Department of Forest Resources and Environmental Conservation
College of Natural Resources

Ask someone to describe land and its use in the Catawba and North Fork Valleys outside Blacksburg and you will likely hear a range of responses—forests, rocky slopes, pasture, forage, riparian areas, and lawn, among others. Similar descriptions are just as likely if the same person were asked to characterize a single property in either of these valleys. Achieving coordinated regional management across a variety of land types, uses, and ownerships, such as those in the Catawba and North Fork Valleys, requires a collaborative approach, where properties are managed to benefit both the individual owner and larger landscape. Land use practices are not centered on one product or developed in isolation, but crafted with the whole property and sustainability of surrounding resources in mind. Catawba and North Fork landowners are increasingly aware of this need, and students and faculty at Virginia Tech are doing their part to make whole-farm agroforestry planning and coordination possible.

For a second year, a group of students from Virginia Tech's College of Natural Resources worked with landowners and the Catawba Sustainability Center (CSC) in the Catawba Valley via a collaborative service-learning program that is part of the Department of Forest Resources and Environmental Conservation's agroforestry course. The program's primary objective is to facilitate shared whole-farm agroforestry learning by pairing students with landowners throughout the semester. In addition to lectures and laboratories on agroforestry principles, history, and practices (e.g., forest farming, silvopastures, riparian buffer management), students also conduct a series of service-learning property and landscape-level assessments. Students are introduced to permaculture design, agroforestry marketing and economics, and incentive programs, and provided with dedicated whole-farm planning periods.

> This project is a valuable experience, both for the community who can see different options for the land and for students who see the practical value of their training and work.

Of importance to the learning initiative is the semester-long discussion and planning that aims to intentionally integrate trees and crops as part of an agroforestry plan that incorporates the biological, social, economic, and technical aspects of whole-farm management and meets the goals of participating service-learning landowners. Setting the learning process into a practical context, the role of animals and fish, trees, agricultural crops, property-level green infrastructure design, and amenity values in agroforestry systems become animated and

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Service Learning continued from page 2

Working in the pouring rain at her farm in the Catawba Valley are Betty Bailey, a service-learning landowner participant (holding corn), and her student partners (l-r: J. B. Snelson, agricultural sciences, Chris Mernin, Department of Forest Resources and Environmental Conservation, Spencer Blakenship, agricultural sciences, and Bonnie Lawrie, agricultural sciences)

enfolded into a unique whole-farm strategy. Sean Allen, a junior majoring in forestry, commented that "The major concepts of whole-farm agroforestry planning cannot be fully understood from attending lectures and reading our textbooks. There is a need to go on-site, talk to the landowners, and work out what agroforestry applications can be implemented on their property to meet their objectives. This provides an element of community interaction that allows us to gain working knowledge of agroforestry practices while dealing with real world problems." For Heather Taylor, a double major in crop and soil environmental science and philosophy, the project has helped "point me towards what I want to do with my graduate career."

Service learning private property owner participants have had relatively small parcels, averaging around 35 acres, which requires that students think creatively and unconventionally about production enterprise and resource-use efficiencies. Other important learning facets are the different objectives and management intensities associated with participating owners. Students must shape agroforestry whole-farm approaches that correspond to the owner's ability to maintain production regimes. Less is more for some owners, while others prefer to consider highly integrated, intensive possibilities. On the other hand, students assigned to the CSC faced a different set of challenges. They were forced to think in terms of the center's 377 acres and its public outreach and rural business incubation missions.

At the conclusion of the semester, students, participating landowners, and other interested citizens and experts gathered at the Catawba Community Center to celebrate the semester-long collaborative learning experience. Students presented their plans, followed by an open-floor dialogue. As in the past, presentations raised very good and interesting ideas among landowners in attendance. Rob Guiles, a Catawba Valley Landowner and presentation attendee last year, served as a service-learning participant this year. He reflected, "After hearing the class presentations last year concerning the sustainability center, I approached John Munsell about having a student group initiate a study on our small farm should that be desirable for his future classes. That study was initiated in 2009 by one group . . . It is a pleasure to be experiencing this type of class from the 'other side.'"

Some aspects of the plans presented last year have led to actual on-the-ground implementation at Catawba Sustainability Center. For example, the location of bee hives, riparian plantings, and local food plots were all influenced by the planning efforts of service learning agroforestry students. Christy Gabbard, Director of Virginia Tech's CSC, stated, "Working with students is a win-win for CSC and for the students. For the students it provides a unique opportunity for experiential learning with real-world application. For CSC it provides an opportunity for consultation to gain new perspectives and creative means for implementation."

Catawba Landcare, a local organization of landowners interested in sustainable land management and community building, has been very supportive of the project and co-sponsored the final presentation. Asked about the value of such opportunities to work with the university, Catawba Landcare coordinator Courtney Kimmel responded, "From the beginning of our planning sessions

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Hokies Teaching Geography in the Dominican Republic

Stacy Boyer, Adjunct Instructor, Department of Geography
College of Natural Resources

As part of my medical geography course in the fall 2009 Dominican Republic semester abroad program, Virginia Tech undergraduates taught basic geography to Haitian children in a grassroots school on the country's northern coast. The Batey Munoz school in Puerto Plata is funded by Project Esperanza ("hope" in English), an NGO, started by Virginia Tech alumni Caitlin McHale and Kristen Preve.

The Spanish term "batey" traditionally refers to communities of Haitian immigrants who live on or adjacent to sugar cane plantations. These settlements were set up by sugar companies to house Haitians employed to cut cane. Many of the Haitians who live in these communities are without documentation and therefore not recognized by the Dominican government, even though some were coaxed across the border by sugar companies with promises of good wages and a chance at a better life. As a result, most of the batey residents (many whom are women and children) are living in extreme poverty and are denied even the most basic of resources, such as access to education.

Project Esperanza has started three grassroots schools in Puerto Plata and is running a boys' home to help keep homeless Haitian young men off the streets and provide them employment and access to education. The medical geography students worked with Project Esperanza and taught in one of these schools for two days as a service-learning component of the course.

"At the bateyes, it was clearly visible that a good portion of the children were very eager to learn. I feel that it would be extremely frustrating, knowing you are capable of learning, but not having the resources or opportunities to do so. It was very rewarding to teach the children even the small amount that we did. The fact that they didn't know all the continents was shocking. It seems that we have taken our education for granted. We have been given so many chances to further ourselves," commented Jessica Linkous, a Virginia Tech junior, of her experience in Batey Munoz.

Armed with maps and globes donated by the Virginia Geographic Alliance and school supplies donated by a local church, the Virginia Tech students taught about 70 children their first geography lesson ever. With the help of interpreters, students learned about continents and oceans in their native Creole language. They colored maps and flags of their country and participated in their first geography "bee."

We asked the Haitian school teachers to participate with us during the lessons with the hope that they would continue with the lessons and have the materials and foundation to do so.

Biological sciences junior James McWhorter quizzes a group of students on the continents and oceans.

Munoz student proudly shows off his colored picture of the Dominican flag.

Our group was so strongly impacted by this teaching experience in the batey that we sponsored a micro-finance project (a small "seed" loan) to assist women in the community with their candle-making business. In addition, the students plan to begin an Internet center near the school that will provide income for teachers, while at the same time improving the children's education through access to technology. We are actively fundraising and plan to return to Batey Munoz school over spring break to get the center up and running and perhaps teach another geography lesson while we are there!

For additional information about our experience in the batey or how you can help, contact Stacy Boyer at stboyer@vt.edu or 540/239-5801.

Virginia Water Research Conference Addresses Impacts of Changing Climates on Water Resources

Patrick Fay, Communications Manager
Virginia Water Resources Research Center
College of Natural Resources

"My hope is that . . . their new ideas will translate into actions that improve the management of our water resources."

More than 140 water scientists, managers, policy makers, and students gathered in Richmond for the 2009 Virginia Water Research Conference. Hosted by the Virginia Water Resources Research Center (Water Center) at Virginia Tech and the Inger and Walter Rice Center for Environmental Life Sciences at Virginia Commonwealth University (VCU), the conference addressed the environmental, political, and economic changes facing stakeholders, researchers, and managers of water resources.

The October 15-16 conference opened with a plenary session that included speakers Preston Bryant, Virginia secretary of natural resources, and Virginia Burkett, chief scientist for global change research at the U.S. Geological Survey. Stephen Schoenholtz, director of the Water Center, observed, "The plenary session very effectively met our goal of providing an informative, provocative overview of some of the key issues we face in Virginia in relation to climate change."

Also included in the conference were 70 oral and poster presentations. The majority of these presentations focused on environmental challenges, including several sessions devoted to stormwater policy, management, and research. The underpinning for much of the discussion is that stormwater challenges will be exacerbated by most predicted climate-change scenarios in Virginia.

When asked about how this conference could benefit individual communities in the Commonwealth of Virginia and beyond, Schoenholtz replied, "My hope is that people who attended the conference will head back to their communities and their jobs with a new idea or two, and ultimately that their new ideas will translate into actions that improve the management of our water resources."

Proceedings of the conference are available on the Water Center's website at www.vwrrc.vt.edu.

Forest Biology and Dendrology Internet- and CD-Based Educational Material: Serving the Needs of Thousands

John R. Seiler, Professor of Forestry (aka Dr. Dendro)
Department of Forest Resources and Environmental Conservation
College of Natural Resources

Our forest biology and dendrology website and computer software provides a continuous stream of educational opportunities for natural resource professionals, teachers, students, and the general public. Starting with tree identification, we have forest biology educational software, online graduate forest ecology education for public school teachers, and scientific investigations for public school students conducted utilizing the Internet.

L-R: John Seiler and Kevin Riedel work on leaf identification.

Our CD-ROM based woody plant identification program (Woody Plants in North America, Kendall/Hunt Publishing) has over 20,000 color photos covering 840 plants found throughout North America, and we are currently developing plans for a new version with even more species, photographs, and features. The current software contains multiple pictures for each species of leaves, flower, fruit, twig, bark and form of each plant, and allows side-by-side comparisons of similar species. Users are also able to take quizzes from customized tree lists. This software is in use by dendrology programs and professionals across the United States. We also have software for teaching tree biology that contains animations on photosynthesis, diameter growth, water uptake, bud break, and even fall color change.

In addition to tree identification, we also have developed landowner fact sheets. These sheets display, in a very efficient manner, basic silvical characteristics for the tree, wildlife value, regeneration practices and fun facts about the tree. Other web-based educational material includes information on fall color, the meaning of Latin names, scenic panoramas from ecosystems around the United States, a "what's blooming" feature (particularly popular in the spring), various identification keys, online text books, and even a tree identification quiz.

To visit any of the websites mentioned, see more information about our software, or ask Dr. Dendro a question, visit www.cnr.vt.edu/dendro/.

Forest Landowner Retreat of Value

K. Jason Fisher, Extension Agent, ANR Forestry and Natural Resources
VCE Central Region, Halifax County Office

The second forest landowner retreat was held November 6-8, 2009, at Holiday Lake 4-H Center in Appomattox County, Va. This retreat was offered through a collaborative effort between Virginia Department of Forestry (VDOF) and Virginia Cooperative Extension, thanks in part to support from the Ballyshannon Fund, a donor-advised fund of the Charlottesville Area Community Foundation. This year's retreat was entitled "Forest Landowner Retreat—Adding Value To Your Forest," and was attended by 40 participants from 19 counties in Virginia owning approximately 1,900 acres of land, nearly double the attendants from the previous year.

Participants had the opportunity throughout the weekend to peruse a host of educational materials from estate planning, tree identification, sustainable forestry materials, and more. The kickoff topic was centered on estate planning in Virginia and the social implications of proper planning for future forestland management. Too often it seems that the family farm has to utilize timber—usually immature—to pay for poor estate tax planning. An excellent presentation was given by Honeycutt & McGuire CPAs in Farmville, who received numerous questions on estate planning regimes for family forestland.

On Saturday, Assistant Regional Forester David Snyder of the Virginia Department of Forestry (VDOF), presented information pertaining to forest stewardship plans. The group then headed to the field for planned tour stops that included early succession management through intermediate stand treatments hosted by Wayne Bowman, research forester with VDOF, and me.

The first stop included a mulching demonstration by a private contractor for returning abandoned farmland and often untreated forest stands to more manageable situations while maintaining soil integrity. Forestry mulching is one of several alternatives for clearing areas for fire lines, wildlife food plots, dwellings, and site preparation on up to 5-year-old clearcuts.

Forestry mulching is becoming a productive alternative for opening up land to better manage overgrown farmland and undesirable species while maintaining soil stability and a favorable seed bed for plantings.

After returning for lunch, the group learned how to successfully conduct a timber sale and harvest before touring a chip mill at Gold Hill in Dillwyn for the afternoon. The group gained further appreciation for the process that takes place at this particular mill with regards to harvested tree thinnings within an approximate 50-mile radius. Wood chips are loaded on rail cars and freighted to the Covington paper mill—"about 90-100 tons of wood chips per rail car saving approximately $3 per ton versus tractor trailer hauling," stated Easton Loving, procurement manager for the mill. Fulghum Fibres' Gold Hill facility is located just west of Richmond and was constructed in 2005. The facility processes approximately 300,000 tons per year of pine and hardwood for MeadWestvaco.

Host Easton Loving (red cap) addresses the landowners about the procurement process at the MeadWestvaco Gold Hill chip mill in Dillwyn.

Following dinner, each participant conducted an assessment activity to have a starting point for action on their property following the weekend. Later, the group was treated to a series of movies, ranging from a participant sharing his wild mountain flower collection via DVD with music, to 20-minute historical forestry videos from archives from the Southern Research Extension Forestry collections, thanks to committee member Neil Clark.

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Retreat continued from page 6

Sunday morning gave rise to an early tree identification session and brief field walk with Jennifer Gagnon and committee. Morning presentations included my talk on Nuisance Wildlife, Forest Fragmentation presented by Jennifer Gagnon, Virginia Forest Landowner Education Coordinator at Virginia Tech, and Ecosystem Values and Functions by Neil Clark, VCE Southeast Region Extension Forester.

An enthusiastic participant counts the rings in a tree core at a thinned pined stand on the 19,808-acre Appomattox Buckingham State Forest.

The planning committee would like to thank its sponsors, particularly the Ballyshannon Fund and Holiday Lake 4-H Educational Center, for making this event possible. It has been said before that discovering value on your property begins with spending some time walking the property on your own and then consulting with a professional forester who can properly advise you in assessing what you have. Factors such as the history of the stand of trees and consequently the plant life you have present, the geography of the property, including site characteristics and location, and special habitats such as streams and wetlands are important as a starting point in putting a plan in place. Lastly, we are reminded that peace of mind is another factor of immeasurable value fostered by ownership of forestland.

For further information on Virginia's Landowner Education programs and resources, visit www.cnr.vt.edu/forestupdate/ or contact Jennifer Gagnon at 540/231-6391. You may also contact your regional Extension agent. A listing of all Extension staff is located on pages 12 and 13 of this newsletter.

Virginia Tech Urban Forestry Students Lead Campus Tree Planting During Sustainability Week 2009

P. Eric Wiseman, Assistant Professor of Urban Forestry
Department of Forest Resources and
Environmental Conservation
College of Natural Resources

Virginia Tech urban forestry students spearheaded another successful tree planting during Sustainability Week 2009. The club collaborated with staff in the Office of the University Architect and the Grounds Services division to plant over 50 hardwood trees near the intersection of Washington Street and Kent Street. This space is one of several lawn areas on campus that have been recently converted to native meadow in an effort to decrease mowing costs and encourage campus sustainability. Several of these meadows have been selected for reforestation to increase tree canopy cover on campus and enhance urban forest benefits for the community. Tree species planted by the students included black oak, bur oak, green ash, hackberry, red maple, and sourwood. Virginia Tech was one of nine universities accredited as Tree Campus USA by the Arbor Day Foundation in 2008.

Virginia Tech urban forestry students and grounds staff busily planting trees.

Pallet Re-Use and Recycling Saves High Value Material from Landfills

Urs Buehlmann, Associate Professor of Wood Science and Forest Products and Extension Specialist
Philip A. Araman, Adjunct Senior Research Scientist and Project Leader,
USDA Forest Service Southern Research Station Utilization of Southern Forest Resources
Robert Bush, Professor of Forest Products Marketing
Department of Wood Science and Forest Products
College of Natural Resources

Pallets move the world. In the United States, an estimated 4 billion pallets are in daily service. Nationwide, on an annual basis, an estimated 441 million new pallets are manufactured and 357 million pallets are repaired or rebuilt from discarded pallets. Manufacturing these pallets consumes more than seven billion bd ft[1] of lumber annually, roughly two-thirds hardwoods[2]. This makes the pallet industry the single most important user of hardwood lumber (by volume) in North America.

Figure 1. New pallets ready to be shipped. Photo by Urs Buehlmann

Pallet reuse and recycling have increased greatly over the past two decades. While only 51 million pallets were recovered, repaired and reused in 1992, almost triple that number were recovered, repaired, and reused in 1995 (143 million pallets), and in 2006 this number increased to 357 million units. It is estimated that pallet reuse and recycling saved an estimated 5.7 billion bd ft of lumber in 2006, bringing the volume of lumber being saved close to the level of new lumber being consumed (43.8 percent recovered, repaired, and reused versus 56.2 percent new lumber, Figure 2).

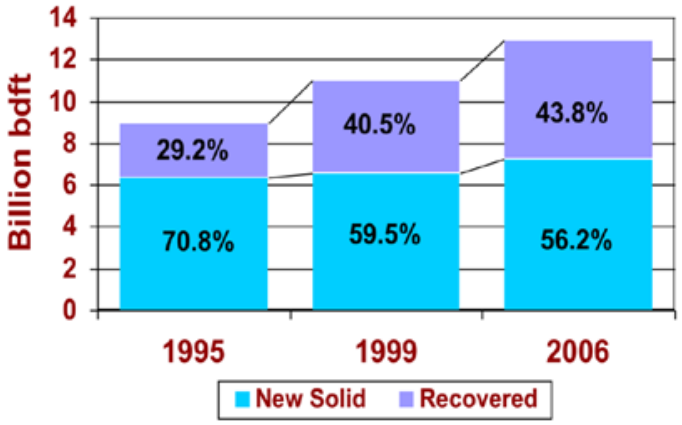

Figure 2. Volumes of lumber used in the United States pallet industry.[3]

Despite all these efforts, Bush and Araman estimate that up to 100 million pallets are still landfilled.[3] However, there is no reason why pallets should end up in landfills. Many alternative uses for discarded pallets exist besides reuse or recycling into pallets, ranging from the production of mulch, animal bedding, or fuel to more value-added opportunities like producing flooring for eco-friendly buildings, as shown in Figure 3.

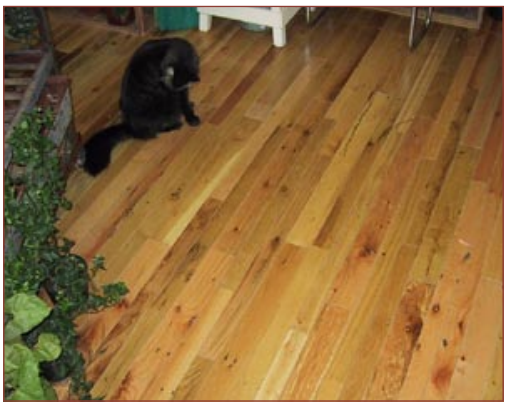

Figure 3. "Green" flooring from recycled pallets installed in Sprig Garden Shop, Grove Arcade Mall, Asheville, N.C. Photo by Urs Buehlmann

[1]A board foot (bd ft) is a volume described by 1'x1'x1".

[2]Bush, R. and P. Araman. 2009. Material Use and Production Changes in the U.S. Wood Pallet and Container Industry: 1992 to 2006. *Pallet Enterprise*. June 2009. pp, 38-43.

[3]Araman, P., B. Hansen, and R. Bush. 2009. Wooden pallet reuse is growing, but more can be done. Workshop presentation. Department of Wood Science and Forest Products, Virginia Tech.

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Wood-Based Composites Center: The Next Ten Years

Linda Caudill, Managing Director, Wood-Based Composites Center
College of Natural Resources

The Wood-Based Composites Center (WBC) was established in 1999 for the purpose of advancing the science and technology of wood-based composite materials. Former Department of Wood Science and Forest Products Professor Fred Kamke, along with the support of ten industrial partners, formed the WBC at Virginia Tech. Over its ten-year history, and in the spirit of service to the industry, the WBC has evolved into a full partnership among four North American universities, each with renowned composites-related research programs: the Universities of British Columbia and Maine, Oregon State University, and Virginia Tech. Industrial members provide financial support for the center and engage regularly with faculty and students. Partner universities share graduate student funding and take turns hosting semi-annual industry advisory board meetings. The center's director, Professor Chip Frazier, and managing director Linda Caudill, remain housed at Virginia Tech.

The WBC has served 22 industrial members over its ten-year history with research and outreach activities. Thirty continuing education short courses have provided training to over 700 industry professionals in such topics as wood adhesion, analytical methods, and wood material science. Academic partnerships allow the WBC to offer courses throughout North America, where training designed to specifically address the needs of the industry combines traditional classroom lecture with hands-on laboratory exercises.

Arguably the greatest accomplishment of the Wood-Based Composites Center is the development of future professionals for its industrial partners. Since 1999, the WBC has provided over 100 undergraduate scholarships and supported nearly 40 graduate research projects. WBC Fellows, graduate students who are supported by WBC members, are introduced early in their studies to industry professionals, and on-going contact often culminates in employment with a WBC member.

WBC member companies work hard to hire WBC students; they are specifically trained to work in the industry, and hiring managers have interacted with them throughout their graduate studies. WBC students, on the other hand, are given the opportunity to get to know and learn about WBC member companies. They benefit from the experience of presenting technical posters and presentations in seminar-like WBC meetings, and frequently enter into desirable careers as scientists, technical leaders, and entry-level managers. It's a win-win for everyone involved.

So, what's next for the Wood-Based Composites Center? As the recipient of a National Science Foundation Planning Grant, the WBC is moving toward establishing an NSF Industry/University Cooperative Research Center (I/UCRC) in 2010, and is looking forward to the next ten years of significant service to the industry. The message of composite wood products is one of responsible use of resources and sustainability, and the WBC is poised to carry this message forward to the world.

Visit the WBC website at www.wbc.vt.edu for additional information, or contact us at wbc@vt.edu.

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for the year, the topic of agroforestry and whole-property planning has been a priority. People in the community who have been involved in the project are excited about the ideas that students come up with, and others want to be involved. This project is a valuable experience, both for the community who can see different options for the land and for students who see the practical value of their training and work."

As community engagement seeps into Virginia Tech's culture, service-learning programs similar to the whole-farm agroforestry planning program in the Catawba and North Fork Valleys will likely increase. Regardless of scope and focus, future efforts will need to incorporate collaborative knowledge building. In the instance of the agroforestry course, this entails students and property owners working hand-in-hand to select productive, sustainable, and preferred management options. Rather than pursue property-level uniformity that is separate from neighboring parcels, the program uses crop, tree, and animal combinations to explore landscape planning across diverse properties. At the property level, the aim is to help achieve important land management objectives such as reducing soil erosion, minimizing nutrient leaching, maximizing marketable crop production, augmenting income, and increasing biodiversity. On a larger scale, the hope is that the program helps shepherd the environmental, social, and economic well-being of the Catawba and North Fork Valleys and thereby demonstrates the remarkable relevance of service scholarship at Virginia Tech.

Pallets continued from page 8

In fact, having pallets commingled with municipal solid waste (MSW) is a loss of valuable resources that reduces available landfill space. For example, pallets cause the Southeastern Public Service Authority (SPSA) in Chesapeake a sizeable amount of problems. They have to be manually removed from the overall waste stream that feeds into the authority's waste-to-energy Refuse Derived Fuel Plant (RDF) powering the U.S. Navy's Norfolk Navy Shipyard. Those pallets, for lack of a better solution, then have to be landfilled at the SPSA's 833 acre regional landfill in Suffolk, a costly and wasteful solution. If local pallet or wood recyclers had use of the discarded pallets, they would not end up in the MSW stream. To help salvage pallets, the Department of Wood Science and Forest Products,

As a consequence of these workshops, two companies have invested in their own pallet recycling operation . . .

in collaboration with the USDA Forest Service, Blacksburg Station, has held workshops in Abingdon, South Boston, Harrisonburg, and Virginia Beach, teaching about pallets and how to recycle them and matching those who have pallets with those who need pallets. As a consequence of these workshops, two companies have invested in their own pallet recycling operation and several companies were able to find a solution to their pallet problems. However, more work remains to be done by the VTWood Recycling team to promote the reuse or recycling of pallets, and future workshops are in early planning stages.

New Geospatial Extension Workshop Targets Marketing Needs of Small, Rural Businesses

John McGee, Virginia Geospatial Extension Specialist
Department of Forest Resources and Environmental Conservation
College of Natural Resources

It is well known that our programs support natural resource efforts, but did you know that we also support other efforts associated with community viability as well? "Marketing in the Virtual World" is a new workshop provided by the Virginia Geospatial Extension Program and Virginia Cooperative Extension. This workshop is designed to "level the playing field" by providing smaller businesses with increased access to a highly mobile customer base.

Small, rural businesses (e.g., tourism and agritourism operators, artisans, craftspeople, "mom and pop" restaurants) face many challenges, especially when it comes to marketing and advertising their products and services. For example, business owners may be preoccupied with "traditional" forms of advertising. These approaches can be expensive and do not always target intended audiences. Furthermore, some areas of Virginia, including regions along the Blue Ridge Parkway, do not permit some forms of traditional advertising (roadside signage).

Location-Based Services

Advances in technology have resulted in a revolution in marketing and advertising. Location and place-based services, made possible through the use of global positioning system (GPS) devices (car navigation systems, smartphone applications) can be used to geographically connect potential consumers with nearby businesses.

These applications provide a technical bridge, linking potential (and often mobile) customers with

nearby businesses and specific products. Likewise, business owners are also able to target and "reach out" to potential customers through the use of virtual coupons and other marketing techniques.

This workshop walks business owners through the process of registering their businesses on multiple national business databases. These databases are then consumed by a variety of location-based service devices and applications (TomTom, Garmin, iPhone/Blackberry/PalmPre, etc.). Throughout the workshop, participants also learn how to leverage free, online tools that can be employed to enhance their exposure.

Additional information about the workshop can be accessed at www.cnr.vt.edu/gep/virtualmarketing.html.

If you would like to organize a workshop in your organization or community, please contact John McGee at the Virginia Geospatial Extension Program at gep@vt.edu or 540/231-2428.

Acknowledgments: This program is modeled after an initiative developed by Adeel Ahmed through the University of Minnesota Cooperative Extension Service.

Events Calendar			For the most complete listing of natural resource education events, visit the online events calendar at www.cnr.vt.edu/forestupdate		
Contact	Date	Location	Event	Time	Fee
DCR	Jan., Feb., March	Virginia State Parks	**A variety of events and activities. For a complete list visit: www.dcr.virginia.gov/parks**	Varies	Varies
TL	Mar. 13-14 April 10-11	Harrisonburg	**Spring 2010 Permaculture Design Course** Understand and work with natural systems to design sustainable environments that produce food, shelter, and energy.	All weekend	$995-$1,200
CG	Jan. 19 - Mar. 9	Roanoke	**Grower's Academy** Vegetable and cut flower production. Learn about low-impact, small-scale farming; learn to develop a business plan and new growing techniques.	6 - 9 p.m. (Tuesdays)	$210
JM	Mar. 12	Stuart	**Marketing in a Virtual World: A Workshop for Small/Rural Business Owners** This workshop walks business owners through the process of registering their businesses on multiple business databases. For additional information, visit **www.cnr.vt.edu/gep/virtualmarketing.html**	1-4 p.m.	$40
MY	Mar. 12		**Cruisin' Through the Woods Part I** A hands-on class that will teach you to estimate timber volumes on your land.	9 - 4	$20 (or $35 for Parts I and II)
MY	Mar. 19		**Cruisin' Through the Woods Part II** A hands-on class that will teach you to estimate timber volumes on your land.	9-4	$20 (or $35 for Parts I and II)
BB	Mar. 25	Madison	**Pesticide Applicators Recertification Training Program, Category 12, Wood Preservation and Wood Product Treatment**	9 a.m. - noon	$7.00
BB	March 26	Lexington	**Pesticide Applicators Recertification Training Program, Category 12, Wood Preservation and Wood Product Treatment**	9 a.m. - noon	$7.00

Events Contacts			
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DCR	Department of Conservation and Recreation	804/786-1712	www.dcr.virginia.gov/parks
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JM	John McGee	540/231-2428	jmcg@vt.edu
MY	Matt Yancey	540/564-3080	yancey@vt.edu
BB	Brian Bond	540/231-8752	bbond@vt.edu

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Events Calendar			For the most complete listing of natural resource education events, visit the online events calendar at www.cnr.vt.edu/forestupdate		
Contact	Date	Location	Event	Time	Fee
BW	April 10	Gate City	**Non-Timber Forest Products: Medicinal Herbs Workshop**	9:30 - 3:30	TBA
GP	April 16-18	Wintergreen	**VFA Annual Convention** Future Issues Impacting the Forest Supply Chain	All weekend	Varies
AD	May 12-19	Rappahannock Co.	**The Woods in Your Backyard** Work through a self-assessment manual that uses a common sense approach for managing small acreages, helps users identify goals for their land, and offers guidance to achieve them.	1:30-4:30	$20 or $25/couple; preregistration is required.
AD	May 20-27	Fauquier Co.	**The Woods in Your Backyard** Work through a self-assessment manual that uses a common sense approach for managing small acreages, helps users identify goals for their land, and offers guidance to achieve them.	6:30-9:00 p.m.	$20 or $25/couple; preregistration is required.
AD	June 1-8	Culpeper Co.	**The Woods in Your Backyard** Work through a self-assessment manual that uses a common sense approach for managing small acreages, helps users identify goals for their land, and offers guidance to achieve them.	6:30-9:00 p.m.	$20 or $25/couple; preregistration is required.
JG	June 1 through August 17		**On-line Woodland Options for Landowners** Visit www.cnr.vt.edu/forestupdate for course details and registration form.		$25/family
AD	August 23 and 30	Warrenton	Family Forestland Short course: Focusing on Land Transfer to Generation "NEXT" Speakers include legal and financial experts experienced in estate planning, as well as natural resource professionals who work with landowners to conserve land and plan for the future.	12:30 - 7:00 p.m.	$50 Registration/ Application Fee
MP			Training to become a **Virginia Master Naturalist volunteer** is offered annually by the 27 Master Naturalist chapters across Virginia. Visit **www.virginiamasternaturalist.org** to locate a chapter near you.		

Events Contacts			
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JG	Jennifer Gagnon	540/231-6391	jgagnon@vt.edu
MP	Michelle Prysby	434/872-4580	mprysby@vt.edu

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