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Department of **Forest Resources and Environmental Conservation**

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Society of American Foresters Recognizes Zedaker and Smith

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Pandapas Pond

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Dr. Shepard Zedaker, professor of forestry, has been named a Society of American Foresters Fellow. The Society recognizes less than five percent of its members with this honor, which is

given to those who have demonstrated excellence in volunteer involvement, consistent leadership, and advancement in forestry by education, public policy, research, or technology transfer. "This is an exceptional recognition bestowed upon Shepard Zedaker by his peers for outstanding service to the Society and to the profession. It is an honor that few receive and one that he deserves entirely," remarked SAF President Bernard Hubbard.

Zedaker, one of the nation's experts on forest fires, often travels with the U.S. Forest Service or the Virginia Department of Forestry when a disaster occurs and has headed crews at several large western fires. His research interests include wildland fire ecology and protection, and he is committed to addressing topics involving the effects of fire on the environment, weather and fire behavior, fire danger warning system, fire suppression basics, and prescribed fires.

Zedaker, who received his bachelor's from Humboldt State University, his master's from Purdue University, and his doctorate from Oregon State University, has been a faculty member at Virginia Tech since 1981.



Dr. David Wm. Smith, professor emeritus of forestry, received the Society's Gifford Pinchot Medal, which recognizes outstanding contributions by a forestry professional who has demonstrated excellence in the

administration, practice, and professional development of North American forestry. This honor, which is awarded biennially, is one of six national awards presented by the Society this year. Smith, who was named an SAF Fellow in 1998 and served as the organization's president in 2002, has received a number of national SAF honors.

During his academic career, Smith left an enduring mark on the forestry profession. Consistently demonstrating that "the student comes first," he taught over 5,500 undergraduate students, served as major professor for 36 graduate students, and served as a committee member for 93 others. In his 37 years with the College of Natural Resources, Smith served on numerous department, college, and university student-related committees and held a variety of positions, including the Honorable and Mrs. Shelton H. Short, Jr., Professor of Forestry, associate dean for academic programs, and acting dean.

Smith, who became professor emeritus in 2000, received his bachelor's, master's, and doctorate degrees from Iowa State University.

From The Department Head

Welcome to the fall issue of “Forestry” from Virginia Tech! On behalf of the Department of Forest Resources and Environmental Conservation, I would like to wish you and your family a happy holiday season and joyous 2010.

Let me take this opportunity to share some of the changes we have made to our programs in the department. From the previous newsletter, you may have noticed that the department changed its name to Forest Resources and Environmental Conservation to better reflect the breadth of its teaching, research, and outreach activities. In addition, we have made significant changes to our undergraduate programs to make them more flexible, relevant, and efficient. These include:



Dr. Janaki Alavalapati
Professor and Head
Forest Resources and
Environmental
Conservation

- ✿ A new major—Environmental Resources Management—has been added. This major will have Watershed Management and Environmental Resource Management options. We now have three majors in total.
- ✿ Natural Resources Education option within the Natural Resources Conservation major has been changed to Environmental Education.
- ✿ Industrial Forest Operations option within the Forestry major has been changed to Forest Operations and Business.
- ✿ Credit hours required for graduation are reduced from 128 to 120.
- ✿ To enhance transfer and class scheduling flexibility, “spring camp” has been replaced with a new semester long field skills course by maintaining overall learning objectives.
- ✿ To facilitate transfer from forestry technical schools from Virginia Commonwealth and from Academic Common Market, new transfer guidelines have been worked out. These revised transfer guidelines were shared with students and faculty at Dabney Lancaster Community College and Allegany College of Maryland. Plans are underway to have a dialogue with forestry faculty and students at Mountain Empire Community College.

In order to intensify marketing of our programs, we are in the process of developing a series of You Tubes to market our programs to high school students and other youth. We hope that these changes reflect our programs better and increase our undergraduate enrollments.



**Administrators, faculty
members, and students of
Virginia Tech and Dabney
Lancaster Community College**



**Administrators, faculty
members, and students of
Virginia Tech and Allegany
College of Maryland**



Remarkable Trees Wins Prestigious Award

Remarkable Trees of Virginia, by authors Dr. Jeff Kirwan and Nancy Ross Hugo, was a finalist in the non-fiction category at the 12th annual Library of Virginia Literary Awards Celebration in Richmond in October. The book, which showcases over 100 of Virginia's most remarkable trees photographed by Robert Llewellyn, is now in its third printing. Nearly 30,000 visitors have logged onto the project website since it opened in 2006.

Free Seedlings for Youth Planting Projects

Virginia Cooperative Extension is teaming up with the Virginia Department of Forestry to offer free pine and hardwood seedlings for youth planting projects. Last year nearly 30,000 youth planted seedlings, and most had never planted a tree before. To order seedlings, contact your local county Extension Office by January 10. Seedlings arrive between March 1 and April 30. To see a list of species, go to www.forestry.vt.edu/freeseedlings.

Virginia SHARP Logger Program Offers Online Training

The Virginia SHARP Logger program, in cooperation with the Virginia Department of Forestry, recently completed two online Continuing Education (CE) trainings. The online trainings utilize Adobe Presenter presentations, and the goal is to have online trainings available as another option for SHARP Loggers to earn CE credits in addition to the traditional face-to-face classes we currently offer. The online trainings currently available are "Protecting Water Quality with Best Management Practices in Virginia" and "Laws Affecting Water Quality and Forestry Operations in Virginia." These classes can be accessed at <http://www.sharplogger.vt.edu/onlineCE.html>. In addition to SHARP Logger CE credit, they also qualify for SAF CFE credit.

Bioenergy and Family Forest Sustainability

Virginia Tech's Department of Forest Resources and Environmental Conservation and National Capitol Region Program offered seminars on Forest-based Renewable Energy and Sustainability of US Family Forests. The series was sponsored by the American Forest Foundation. Seminars were scheduled each week during Fall Semester 2009 and offered simultaneously at three sites across Virginia using real-time distance learning technology. Graduate students and continuing education professionals from Falls Church to Danville heard experts from across the country and joined each other twice throughout the semester for special seminars at the Longworth House in Washington, DC, and Virginia Department of Forestry Headquarters in Charlottesville.

Logging Injury Study Underway

Timber harvesting is repeatedly cited as one of America's most dangerous professions. Considerable gains have been made in the past few decades to curtail injury; however, accident rates remain significant. Targeted education programs can be one of the most effective methods for preventing injury. Dr. Chad Bolding recently received funding to conduct a project that investigates timber harvesting injuries and prevention mechanisms in the southeastern United States over a 10-year period from 1996-2006. The study builds upon similar studies conducted in 1996 and 2001 by Dr. Bob Shaffer. A new analysis of 2006 injury claims will provide an updated five-year data point and allow for determining trends in injuries over a 10-year period. This information will assist in constructing detailed and targeted training programs for foresters and timber harvesting contractors throughout the southeastern US. The study is jointly funded by the National Timber Harvesting and Transportation Safety Foundation and the Southeast Center for Agricultural Health and Injury Prevention.

Fall 2009 - Graduate Seminar Series

The Forestry Graduate Seminar (FOR 5004) hosted a total of 11 speakers during fall 2009. The seminars were organized by Dr. Carolyn Copenheaver and coordinated by graduate students enrolled in the class. All seminars were open to all faculty and graduate students within the College of Natural Resources. One of our speakers, Dr. Drew Lanham, was funded on a university-level grant (Women and Minority Artist and Lectureship Series) awarded to Copenheaver and Dr. Marc Stern aimed at bringing women and minority speakers to Virginia Tech.



**Remarkable Trees
of Virginia**



Youth Planting Projects



**Students Attending
Bioenergy Seminars**



Logging



Dr. Chad Bolding



Dr. John Munsell



Adam Downing



Dr. Jason Holliday



Jennifer Gagnon

Landowner Weekend
Retreat

American Society of Agronomy selects 2009 Research Highlight

The American Society of Agronomy selected “Prospective Scope of Forest Management Education at James Madison’s Montpelier” by Dr. John Munsell, Rachel Hamilton, and Adam Downing as a 2009 research highlight for the *Journal of Natural Resources and Life Sciences Education*.

Citizen’s Conference on Urban Stream Restoration

In June, John Munsell, Adam Downing, and Jennifer Gagnon hosted, in association with LEAF partners in Arlington, a citizens’ conference on urban stream restoration. Speakers at the two-day conference included elected officials, managers, planners, and academics; 54 people attended a public meeting on June 18, and 92 attended a technical conference on June 19. Attendees were from Maryland, North Carolina, Virginia, and The District of Columbia and ranged from interested citizens (e.g., Reston, VA, resident) to federal-level natural resources managers (e.g., U.S. Navy Environmental Specialists). Indoor presentations focused on stream restoration in general and Arlington’s Donaldson Run restoration project specifically. Technical conference attendees visited the Donaldson Run site in the afternoon and were provided with small group interpretation.

Dr. Jason Holliday Awarded Project from the Institute for Critical Technology and Applied Science (ICTAS)

The fast-growing deciduous tree *Populus trichocarpa* (common name: poplar) has strong potential as a biofuel crop. However, efficient breakdown and conversion of lignocellulose presents a significant barrier to the commercialization of woody perennials for biofuel production. Whereas engineers typically view the plant cell wall as immutable and chemical processing as the means by which we will ultimately succeed in converting it to fermentable sugars, significant natural variation in wood properties exists in the wild, and a complementary approach is to engineer the plant through molecular breeding. The current project, supported by the Institute for Critical Technology and Applied Science (ICTAS), is aimed at identifying genetic variation relevant to wood properties in poplar, which can then be used in genome-enabled breeding strategies. By employing resources developed through an ongoing Department Of Energy-funded project at Virginia Tech [led by Co-PIs Eric Beers (Horticulture) and Amy Brunner (FREC)] aimed at identifying protein-protein interactions relevant to wood-forming tissues, we will hone in on those regions of the genome that may also control variation in observable traits of interest. This study will take a significant step toward unraveling the complexities of genetic variation in wood properties in poplar and provide valuable resources for genetic improvement of these traits.

Landowner Weekend Retreat: Adding Value to Your Forest

Virginia Cooperative Extension, the Virginia Forest Landowner Education Program, and the Virginia Department of Forestry hosted the second annual Landowner Weekend Retreat at the Appomattox-Buckingham State Forest on November 6-8. Thirty-six Virginia forest landowners attended this 2.5 day event, which was sponsored by a grant from the Ballyshannon Fund. Organizers of the event included Jason Fisher, Neil Clark, Ellen Powell, David Snyder, and Jennifer Gagnon.

A cadre of natural resource professionals combined indoor and outdoor presentations to teach the basics of forest and wildlife management. Topics covered included estate planning, forest management planning, timber sales, hardwood and pine silviculture, tree identification, wildlife needs, and ecosystem services. The highlight of the weekend was a tour of MeadWestvaco’s chip mill, led by Easton Loving.

Participants gave the program 4.9/5 for content and organization. Some of the actions participants plan to take as a result of attending this retreat include writing a forest management plan, improving erosion control on access roads, changing crop tree release strategies, improving diversity, consulting county foresters, cutting firewood, walking over land, developing goals and possible timber cutting, getting with family members to better manage forest lands, and eradicating invasive species.



Dr. Jason Holliday has joined the Department of Forest Resources and Environmental Conservation in July, 2009 as an **Assistant Professor of Forest Genetics and Biotechnology**.

Holliday's research interests focus on understanding the genetic basis for complex adaptive traits in widely distributed tree species, as well as molecular studies of abiotic stress and conservation genetics. His current work includes beginning a recently funded study aimed at enhancing wood properties for biofuels development, writing proposals for future projects, and preparing for field collections of local species such as red spruce.

Holliday received his B.S. in biology from the University of Victoria and his Ph.D. in forestry from the University of British Columbia. Before obtaining his doctorate degree, he was at Stanford University researching basic cell biology.



Dr. Brian Strahm joined the Department of Forest Resources and Environmental Conservation in August, 2009, as an **Assistant Professor of Forest Soils and Ecology**.

Dr. Strahm's research program will focus on providing a mechanistic understanding of the relationships between soil properties and processes in order to better predict how external forces (e.g., forest management, land use or global change) affect soil/ecosystem function (e.g., carbon sequestration, forest productivity).

Dr. Strahm received his B.S. in biology from the University of North Carolina at Chapel Hill and a Ph.D. in Forest Resources from the University of Washington. Prior to joining the faculty at Virginia Tech, he served as a postdoctoral research associate in the Department of Ecology and Evolutionary Biology at Cornell University.



Dr. Jeremy Wimpey joined the Department of Forest Resources and Environmental Conservation in July, 2009, as a **Postdoctoral Associate**.

Dr. Wimpey's main research interests focus on recreation ecology and management of recreation on public lands, with specific foci on natural surface trails and geospatial analyses. His studies span the continent as he works with national parks including Denali in Alaska, Acadia in Maine, and beautiful and remote Great Falls National Park in Virginia and Maryland. Within each of these park units, Dr. Wimpey is assisting research teams to understand the impacts to natural resources associated with foot travel (on and off trail) and develop effective strategies to manage visitor use while protecting those resources from degradation.

Dr. Wimpey received his B.S. in geography and his M.S. in Integrated Science and Technology (ISAT) from James Madison University and his Ph.D. in Geospatial and Environmental Analysis from Virginia Tech.



Sue Snow

Sue Snow Receives 2009 Dean's Award

Sue Snow received the 2009 Dean's Award presented by the College of Natural Resources to a staff member in recognition of exemplary performance and service to the department, college, and the university. Sue is the departmental administrative assistant and staff graduate coordinator. She has been with the Department of Forest Resources and Environmental Conservation since 1983.

Dr. John Munsell Receives 2009 Outreach Award

John Munsell is the recipient of the College of Natural Resources' 2009 Outreach Excellence Award. The award is presented to a CNR faculty member who demonstrates an outstanding commitment to the engagement mission of the college. John's agroforestry service learning projects; statewide bioenergy informational programming; rural, exurban, and urban resource management capacity building efforts; research into novel and innovative natural resources networks and partnerships; and participation in numerous collaborative conservation initiatives across Virginia led to his selection. John received his award at the 2009 Outreach Now Conference held at The Inn at Virginia Tech on September 14.



Dr. Thomas Fox

Dr. Thomas Fox Elected

Thomas Fox was elected to serve as the 2009-10 Chair of the Forest, Range and Wildland Soils Division of the Soil Science Society of America. The Soil Science Society of America (SSSA) is a progressive international scientific society that fosters the transfer of knowledge and practices to sustain global soils.

Assistant Professor of Urban Forestry Receives Forestry Award

The New River-Highlands Resource Conservation and Development Council selected Dr. Eric Wiseman to receive the RC&D Forestry Merit Award for his dedication, cooperation, and assistance to the RC&D Council in 2009. The award comes in recognition of Dr. Wiseman's work with the RC&D Council, Radford City staff and citizens, and Virginia Tech students to better understand urban forest resources in the city and plan for their management.



Dr. Eric Wiseman

Virginia Tech Urban Forestry Student Wins Third Place

Senior Brian Roberts (Forestry major, Urban Forestry option) of Roseland, Virginia, won third place in the collegiate arboriculture skills competition at the 2009 Tree Care Industry Expo in Baltimore, Maryland. Brian competed against students from urban forestry collegiate programs throughout the U.S. in events such as climbing equipment inspection, rope installation, tree ascent, and arboriculture work climb.

Benjamin Hook wins Best Student Poster Award

Benjamin Hook (M.S. candidate studying under Dr. Carolyn Copenheaver) recently received the Best Student Poster Award at the 2009 North American Forest Ecology Workshop--a prize that included a \$500 check.



Benjamin Hook

Service Learning Volunteers Build a New Trail

This fall, volunteers from the Natural Resource Recreation Society and the Outdoor Recreation Planning class built a trail for the new HALE-YMCA Community Gardens in Blacksburg. This service-learning project benefitted from the expertise of Dr. Jeff Marion, who gave a lecture for the Outdoor Recreation Planning class about trail design and management and directed trail construction. Volunteers from the class and Recreation Society spent two afternoons constructing the short trail through a small woodlot on the property. The Natural Resource Recreation Society has volunteered to maintain the trail for the YMCA.

Stormwater Basins – Another Day at the Office

Priscilla Bocskor's (M.S. candidate studying under Dr. Susan Day) research involves looking at the ecology of basins and the impact of tree and cattails on the basins as well as the interaction between the two to help Virginia Department of Transportation manage them more effectively. Pictured are Sarah Dickinson, Priscilla Bocskor and John Peterson working in Lynchburg stormwater basins collecting data from plots.



Priscilla Bocskor, Sarah Dickinson, and John Peterson

College of Natural Resources Has a New Dean

Dr. Paul Winistorfer, former head of the College of Natural Resources' Department of Wood Science and Forest Products, assumed the duties of dean on Aug. 1, when Dr. Mike Kelly stepped down after serving the college with great distinction as dean for the past five years.

Winistorfer came to the College of Natural Resources in 2001 from the Forest Products Center at the University of Tennessee to head up the Wood Science and Forest Products Department. He moved the department forward through the creation of Wood Week at Virginia Tech and by co-leading a biomaterials faculty recruitment initiative with other departments and colleges on campus. He focused new hires in strategic areas, as well as guided curriculum reform.

A native of Marion, Iowa, Winistorfer earned his B.S. at Iowa State University through the university honors program, with emphasis in education and forest products, and his Ph.D. in wood science. Winistorfer and his wife, Jeanette, have twin sons, Jonah and Soren.

Space Grant Consortium awarded nearly \$900,000

A Virginia partnership consisting of the Virginia Space Grant Consortium, Virginia Tech, Tidewater Community College, Virginia Western Community College, and John Tyler Community College has been awarded a \$894,228 grant by the National Science Foundation's Advanced Technological Education Program for the Geospatial Technician Education through Virginia's Community Colleges project. Dr. John McGee, the state's Geospatial Extension Specialist for Virginia Cooperative Extension and an assistant professor in the Virginia Tech Department of Forest Resources and Environmental Conservation, is working on several facets of the project. Dr. McGee will host two seven-day intensive geospatial institutes on the campus of Virginia Tech during the summers of 2010 and 2011 to support the efforts of VCCS faculty members to integrate geospatial tools across their curriculum. These intensive workshops are being held in response to increased demands by Virginia's industry to a geospatial literate workforce.

The Virginia Geospatial Extension Program is also working to develop a geospatial technology web portal and career awareness materials for the community college system.

Forest Nutrition Cooperative Hires Vickers

Lance Vickers, a recent MS graduate from Forest Resources and Environmental Conservation, has been hired as a Research Associate working for the Forest Nutrition Cooperative. In this position, Lance will help coordinate the field work of the Forest Nutrition Cooperative throughout the southern United States. Lance received his B.S. in Forestry from the University of Arkansas and a M.S. in Forestry from Virginia Tech.

Manual Published Provides Solutions to Stormwater Runoff

A group led by Dr. Susan Day has released the manual *Managing Stormwater for Urban Sustainability Using Trees and Structural Soils*. The manual outlines four years of research on a unique system that uses structural soils, which are engineered tree soils, to both detain stormwater and allow tree root growth in confined urban spaces. By utilizing tree root and canopy growth to manage stormwater, this new approach more closely resembles the natural water cycle than traditional stormwater management techniques. This project was made possible in part by a grant from the United States Department of Agriculture Forest Service Urban and Community Forestry Program on the recommendation of the National Urban and Community Forestry Advisory Council.

Jeremy Stovall Wins Best Paper Award

Jeremy Stovall, a PhD student working with John Seiler and Tom Fox, won a "Best Paper" award from the Soil Science Society of America at their recent national meeting in Pittsburgh, PA. He received the award for his presentation made at the 2008 meeting in Houston, Texas, entitled "Short-term photosynthesis, root exudates, and fine root growth response to fertilization and drought in clonal *Pinus taeda*."



Dr. Paul Winistorfer



Dr. John McGee



Lance Vickers



Dr. Susan Day



Jeremy Stovall

Welcome New
Graduate Students!
2009

Ph.D. Program

Yujuan Chen
Gavin Corral
Xiaoyan "Isaac" Jia
Robert "Trip" Krenz
Cindy Devlin Musick
Ram Thapa

M.S. Program

Nicholas Bonzey
Chad Campbell
Miles Groover
Andrew Mueller
Scott McKee
Scott Polewach
Courtney Reijo
Ritchie Vaughan
Adam Watson
Jonathan Wyatt

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Faculty/Staff/Student Spotlight *(continued)*

Congratulations 2009 Graduates!

- Nabin Baral - Ph.D. (Stern)
- Danielle Gift - M.S. (Wiseman)
- Katherine Kovach - M.S. (Zedaker)
- Wen Lin - M.S. (Kelly)
- Brandon Martin - M.S. (Prisley)
- Katie Nelson - M.S. (Hull)
- Logan Park - Ph.D. (Marion and Lawson)
- Christopher Pearce - M.S. (Zedaker)
- Joseph Secoges - M.S. (Aust and Seiler)
- Lance Vickers - M.S. (Fox)

Alumni Corner / Announcements

The Society of American Foresters has announced that Gregory S. Meade will receive its Young Forester Leadership award—one of seven national awards that the Society is giving this year.

The Young Forester Leadership Award recognizes outstanding leadership by a young forestry professional in the development and promotion of an individual program or project or for a sustained leadership role benefiting the practice of forestry and SAF. The recipient receives an engraved award and a cash honorarium of \$500.

Greg graduated from Virginia Tech with a BS in Forestry and Wildlife in 1994 and with a MS in Forestry in 1996. Upon graduation he started his career with Champion International in Roanoke Rapids, NC. After three years there as a land management and procurement forester, he moved onto being a procurement forester for Canal Wood in Nashville, NC, for two years. In 2001 he transitioned to the Virginia Department of

Forestry as an assistant regional forester in Charlottesville. In 2007 Greg began working with The Nature Conservancy in Abingdon, Virginia, as the Conservation Forestry Program Manager, the position he currently holds.

Greg has had the opportunity to work with many young foresters in his role at the Virginia Department of Forestry, as well as provide input into proposed local ordinances for forestry. Greg has also been active in the Society of American Foresters, serving as chapter chair for the Skyline Chapter and arrangements chair for the 2006 APSAF meeting held in Charlottesville.



Greg Meade

Gifts from our clients and friends have a direct impact on the quality of learning, discovery, and engagement programs that the Department of Forest Resources and Environmental Conservation offers. We invite you to become part of our team! To make a tax deductible contribution, send your check, payable to the Virginia Tech Foundation, Inc, to:

Department of Forest Resources and Environmental Conservation, 313 Cheatham Hall (0324), Virginia Tech, Blacksburg, VA 24061

For further information on memorial giving, endowed professorships, gifts of securities, planned or deferred giving opportunities or other contributions, please contact Mr. Bob Mollenhauer, Development Officer, at 540-231-8859 or send an e-mail to bobm5@vt.edu.