To leverage its growing international programs and broadening inclusiveness of global sustainability, the college established the Center for Leadership in Global Sustainability in the National Capital Region in 2008. "Sustainability has emerged as a brand theme for the college," said Dean Paul Winstorfer. "This new center will help us establish a stronger presence in the Washington, D.C. area, as well as globally, for our excellent existing and emerging educational, discovery, and engagement programs."

The center's current and in-development offerings include a series of graduate, certificate, and professional programs, clinics and workshops, and international programs, including the Master of Natural Resources, the Executive Master of Natural Resources, a forthcoming Global Master of Natural Resources, a series of leadership clinics, and international opportunities under the center's Global Sustainability Initiative. More than 30 graduate courses are offered annually, leveraging a roster of 30 adjunct faculty who serve more than 300 graduate students.

"There is room at the table for everyone in the sustainability conversation, and our college has a tremendous amount of knowledge and expertise at the forefront of sustainability — our natural world, the environment, and people’s interaction with natural resources," Winstorfer emphasized. "Leadership will be needed, and we can make a difference."

The center’s name better describes the direction in which the college’s National Capital Region program has been moving since 2008. "We began focusing on the themes of urbanization, policy and institutions, and international issues about four years ago," said Center Director Michael Mortimer. "The center is a natural outgrowth of that strategy and will allow us to move more aggressively and effectively into the future while providing the educational and professional services we believe are in demand."

Education programs offered through the Center for Leadership in Global Sustainability bring together the quality and reputation of Virginia Tech with a nimble and innovative structure to best prepare students and participants with the knowledge and skills to face the dynamic environmental and sustainability challenges of tomorrow. With close proximity to the nexus of national and international policy decisions and influence, the center’s programs draw on a wealth of expert faculty and partners to provide interdisciplinary, inter-sectoral, and real-time perspectives on a range of cutting-edge topics.

The center’s international programs provide opportunities for graduate students and professionals to work on consulting projects in rapidly developing places and regions around the world. Through its Global Sustainability Initiative, the center offers graduate study abroad, research and consulting opportunities, and network building. This program area is dedicated to integrating education and outreach in international settings around the world, focusing on emergent sustainable development challenges and solutions. Working with institutions at all scales, the initiative provides opportunities for graduate students, working professionals, partners, and faculty to build networks and relationships.

"It’s an exciting time that stands to close the poverty gap, improve quality of life, and provide opportunities never imaginable a century ago," said David Robertson, the center’s associate director and a Senior Fellow. "However, this world will be characterized by accelerating urbanization, interdependency, resource scarcity, climate stress, and the rise of new powers in the developing world (multipolar geopolitics). Consequently, the center’s mission is to empower individuals and their respective organizations for leading change to meet the challenges the world of 2050 will present."

Professor Bruce Hull, a center Senior Fellow, summed up the situation: "The challenges and opportunities of sustainable development are enormous — too complex to be solved by any single profession, discipline, business, government agency, or nation state. Sustainable development requires boundary-spanning leadership. This center is developing innovative programs to meet those challenges."

See additional articles on the Center for Leadership in Global Sustainability on pages 2 and 3, or visit the center’s website (clgs.vt.edu) to learn about all of its programs.
Students Advise Top Chinese Hotel on Sustainability

The inaugural cohort of Executive Master of Natural Resources students from the college’s Center for Leadership in Global Sustainability in the National Capital Region traveled to China in March where they designed a sustainability strategy for a top hotel in the Capital Region. They were brought to China to help Linden Centre owners and staff to enhance sustainability. Although the Centre already composts, donates food scraps to local farmers as animal feed, and transports guests’ luggage through town on horse-drawn carts, the owners sought assistance in becoming even more sustainable.

“Sustainability is an organizing framework to help balance decision making and accounts for economic, social, and environmental impacts—oftentimes referred to as the triple bottom line,” said student Kate Fritz. In its drive for modernization and developing tourism for rural economies, China is realizing it must also consider sustainable management of resources and communities, especially in mountainous regions such as where the Linden Centre is located.

Accompanied by Robertson and Mortimer, the students sought to assess the Linden Centre’s progress using the Green Globe international hotel certification standards. They evaluated the hotel’s practices in four major areas: sustainable management, social/economic, cultural heritage, and environmental. “Documentation provides a way for the Linden Centre to see if its practices are working and is an area of opportunity,” said student Glenn ReDaw.

The international residency component of the Executive Master of Natural Resources program gives students the opportunity to apply what they have learned.

In the most important area of our mission—student education—we are meeting with a very positive response to changes we have made; undergraduate enrollment is now over 700 students and climbing, and graduate enrollment is over 300 students. Our students are going abroad, working on research projects, experiencing innovative learning environments, and preparing to lead. They will have to lead—we say that a lot around here. Our obligation is to get them ready.

Our cover story describes our latest effort to inject our expertise into the global conversation on sustainability. The newly established Center for Leadership in Global Sustainability holds great promise for our college and Virginia Tech to assume a strategic leadership role in our nation’s capital and provides a base from which to launch a much larger global presence for the college.

We have a few more changes in store, but we are concentrating now on executing what we set out to do—to make what we do more relevant to the world around us and to bring solutions to mounting global challenges.

Your interest in and support of the college mean a great deal to us. Thank you. On behalf of our faculty, staff, and students, warm regards and best wishes for a pleasant holiday season.

Dean Paul M. Winistorfer
Paul.Winistorfer@vt.edu

The Linden Centre, already a leader in the hospitality industry for its sustainable practices, sought to improve its efforts with the help of the student cohort.

Among their findings, the students recommended that a secondary sewage treatment system be built to remove potential harmful bacteria from the waste stream and applauded the Centre on its commitment to historic preservation and cultural sensitivity.

As China’s top-rated hotel by the travel website TripAdvisor, the Linden Centre holds considerable influence upon the hotel industry. “The leadership provided by the Linden Centre is helping redefine the standard for sustainable tourism in China and beyond,” Robertson said. “We’ve recently begun calling it the Linden Standard.”

“Our chance to collaborate with this cohort of professionals gave us a holistic look at the values of various sustainable practices and practical steps to execution,” said Michael Keefber, Linden Centre marketing and business development director. “Their recommendations have given us a strategic road map for implementation over the next several years. We now have more information and confidence in putting a sustainability plan into action.”

“It was a transformational project for our students as well as a business enhancement for the client,” Robertson said.

FROM THE DEAN’S PERSPECTIVE
As fellow veterans in the Executive Master of Natural Resources program, (L-R) Jay Pinsky, Darin Liston, Aaron Weddle, and Jason Barnwell share a common bond.

“I’ve been very impressed with their ability to work closely in project teams with students from other types of institutions, including business and civil society organizations,” Robertson continued. “I’m confident that the program is helping these students achieve their career change and advancement goals.”

Liston, a 1991 graduate of the U.S. Naval Academy, brings 21 years of Navy leadership experience, including a stint as an arms control advisor in the Office of European Atlantic Security Affairs at the U.S. State Department. After many years of leadership and project manage- ment, he feels his ability to determine objectives, make assignments, and meet project deadlines will be key to his future career success, and the executive master’s program is helping to refine those skills.

Barnwell, who has a solid career as an electrical engineer managing multi-million-dollar development projects, joined the U.S. Army National Guard after 9/11. Pinsky was an award-winning photojournalist for the U.S. Navy after spending the early part of his 20-year career as a machinist’s mate for nuclear-powered submarines. Weddle is handling contracting for the National Guard after recently commanding an aviation company in Afghanistan.

Even these seasoned military professionals have not been immune to the unemployment problems plaguing U.S. veterans returning from service in Afghanistan and Iraq, especially young service members with little professional experience.

“I was unemployed for a year after my last deploy- ment,” Weddle says. “Civilian employers don’t trans- late military leadership into leadership in other fields. They don’t seem to understand the skills I bring to the job. I applied for about 70 jobs with the federal government, but they wanted a master’s degree and recent related experience.”

Although Liston was unemployed for only eight days after his official retirement from the Navy on June 30, 2012, his previously launched full-time job search lasted almost 20 weeks before he landed a senior analyst position at Marstel-Day, an environmental consulting firm, where he helps military bases deal sustainably with encroachment issues. He learned about Marstel- Day from a company employee in his student cohort.

“I feel fortunate to have this job in the field I desire,” Liston said. “Virginia Tech’s Executive Master of Natural Resources program is helping me on the job.”

According to November 2011 data from the Bureau of Labor Statistics, 11.7 percent of U.S. veterans were unemployed, compared with 9.1 percent for the overall population at that time. By June 2012, the youngest vets returning from Afghanistan and Iraq were experi- encing 29 percent unemployment.

“I had a solid career in electrical engineering before I joined the Guard, so I didn’t have trouble finding employment again,” Barnwell said. “But now I’m seeking a position in the nonprofit world. It’s a big change, and I’m ready to do it.”

“It’s a spiritual calling,” he added. “I want to be a part of ensuring the beautiful areas of our coun- try and the diverse wildlife that inhabit them are here for generations to come. By employing my engineering background and the knowledge I’m gaining in the Virginia Tech program, I can be a defender of these fragile areas.”

Pinsky, while enjoying the global travel perks of doing public relations work for FLIR Systems, a thermal imaging firm, says he wants a job that allows him to make a difference in the field of natural resources.

“I agree with what Steve Jobs said in his Stanford com- mencement speech, that you should do what you love, not necessarily what brings you financial success,” Pinsky said. “And I love the outdoors and the animals I hunt. The more I watch the animals and learn about them, the more I care about them and want them to endure. I want to organize others to take better care of wildlife and the environment.”

They all agree with what Liston says of the executive master’s program fulfilling his objectives to launch a career change: “We’re getting a broad overview of sus- tainability and the leadership background to organize programs in this field and run them thoughtfully.”

Finding fellow veterans in their class was a pleasant surprise for all four.

“Vets have some shared experiences and a common language,” said Weddle. “Everyone does — engineers have their language, environmental planners have theirs. Vets are a diverse group, but we work and commu- nicate in a lot of the same ways.”

“I really respect these students’ commitment to sus- tainability,” said Bruce Hull, professor and center Senior Fellow. “By choosing to study for new careers in sustainability, they further evidence their commit- ments to serving society. They bring valuable experi- ences to our program, and they really enjoy working with the diversity of professions and organizations present in our classrooms.”

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How I Spent my Summer Vacation

Strategic efforts at the college and university level are increasing the number of undergraduate students who participate in internships and research projects. In this issue, read about some of the exciting endeavors CNRE students participated in over the summer, representing just a fraction of the opportunities available to students of all majors.

Perkins Interviews Converted Poachers

Senior wildlife science major Stephen Perkins of Altavista, Va., experienced a unique and exciting opportunity during the summer of 2012. As the first-ever intern for a nonprofit conservation organization called Community Markets for Conservation (COMACO) in southern Africa, he encountered tribal chiefs, exotic foods, an annoyed cobra, and some terrifying attention from an AK-47-bearing border guard.

“I entered a place where everything was novel to me—the languages, food, culture, spiritual world, and landscape,” Perkins said. “My curiosity was constantly engaged. It was the experience of a lifetime.”

Perkins spent the summer interviewing former wildlife poachers near Zambia’s North Luangwa and South Luangwa national parks, two of Africa’s prime wildlife sanctuaries. His main task was to document—through sound, video, and print—the stories of ex-poachers who used COMACO’s program to develop sustainable careers. The organization, which found that people poached because they didn’t have skills to make a decent living and feed their families, now trains and provides start-up resources to poachers who surrender their guns and snares.

“Fewer animals are killed,” remarked Perkins. “Elephant numbers are up—so are hartebeests, zebras, and other animals. I interviewed poachers who are raising poultry, goats, or bees, growing soybeans or maize, making furniture, blacksmithing, and running fish farms.”

Poaching is a risky, dangerous occupation. Perkins said he could often identify the village poachers by their wounds. “If they used a homemade muzzle-loading gun made from scraps of wood and metal, they often have eye or head injuries from backfired,” he explained. “They all tell stories of friends killed by game wardens or lions, snakes, or other animals.”

Perkins, who found out about COMACO through his participation in Virginia Tech’s first University Honors Presidential Global Scholars program last spring, plans to do graduate studies in behavioral research with primates, and knows he will be working abroad again. “A big reason I chose wildlife science as a major was because I knew it would allow me to work essentially anywhere in the world,” he says. “The more exotic, the better.”

View a video that Perkins filmed at www.itstwld.org/comaco-transformed-poachers.

Students Help Return Animals to the Wild

Zoe Carroll of Earlsville, Va., and Robert Bilbow of Rocky Mount, Va., both junior wildlife science majors, spent this past summer interning at the Blue Ridge Wildlife Center in Boyce, Va., where they helped nurse injured and abandoned animals back to health so they could return to the wild. The majority of the interns’ time was dedicated to baby birds, which had to be hand-fed every half hour. Carroll and Bilbow also kept track of the birds’ weights and cleaned their enclosures, as well as caring for other animals like baby rabbits, turtles, and opossums.

“One of the most rewarding parts of working at the center was seeing the young animals grow up and become healthy,” explained Carroll. “It was amazing to know they were on their way to being released back into the wild.”

The two students worked with up to four other interns each day. “It’s hard work,” said Bilbow. “The rehabilitators have to take their work home with them sometimes because baby animals must be cared for 24 hours a day.”

“Rehabilitation is difficult, but rewarding,” stated Carroll. “It’s hard to see animals die, but it’s also great to see others being released. Through my internship, I was able to learn so many things about wildlife, handling animals, game department laws, and natural history.”

Carroll was featured in an NBC News story on the wildlife center, one of only two such facilities in the state (http://www.msnbc.com/id/30325192/).
Wilson Uses GIS Skills on Wallops Island

Senior geography major Andrew Wilson of Parksley, Va., analyzed potential sites of wind turbines as part of a summer work-study job at NASA’s Wallops Island facility on Virginia’s Eastern Shore. He wanted to ensure that the 492-foot structures wouldn’t obstruct flight buffer zones, cause interference with the combat systems center, or violate Federal Aviation Administration regulations.

“Although these structures weren’t planned for the island itself, I had to analyze them to determine if they affected our air space or violated FAA rules. It turned out that 13 out of the 62 did,” Wilson said, so the proposed wind turbines will have to be re-sited.

The project is an attempt to develop proper siting of wind turbines along the Eastern Shore and Virginia’s Barrier Islands as energy companies harness the brisk ocean winds. Though not a project of the Wallops Island facility, it has direct impact upon its operations. Wilson also digitized the location of the many island’s wetlands and worked on perfecting his ARC GIS software skills. “I definitely learned a lot about the scope of geospatial and environmental analysis,” he added.

Dingus Returns as Futures Intern

After graduating in May with a degree in forestry, Kyle Dingus of Warrenton, Va., has returned to the college as a futures intern for the Department of Forest Resources and Environmental Conservation. During this 1-year appointment, Dingus visits many different venues in order to reach prospective students and promote the department’s undergraduate programs across the commonwealth and beyond. “By establishing contacts that could originate from high schools, community colleges, county fairs, outdoor expos, Virginia Tech Alumni meetings, and other community-related origins, I hope to spread the word to prospective students about our programs and recruit them for enrollment,” stated Dingus.

Last year, Dingus was distinguished as one of four students nationwide to be awarded a scholarship from the Forest Landowner Foundation. Recipients exhibit high academic standards, are active in forestry-related organizations, and have the desire to practice forestry with private landowners. “I would like to work for landowners in Virginia one day to help them achieve their objectives for their forestlands,” remarked Dingus.

Innovative Software Estimates Benefits of Urban Forest

Trees in residential areas, schoolyards, parks, and along downtown streets provide valuable services to communities—they increase property values, cool buildings, take in carbon dioxide, and mitigate air pollution. To determine a value for the services that urban trees provide, Associate Professor Eric Wiseman used a software tool called i-Tree Eco in a survey of five Virginia communities.

Wiseman and his team used the analysis software, developed by the U.S. Forest Service, to conduct a detailed study assigning value to urban trees, the first such study in the state. “As Virginia becomes increasingly urbanized, managing the state’s urban forests will be increasingly important for conserving natural resources and sustaining communities,” he explained.

Wiseman’s crew of students, assisted at times by volunteers, spent the summers of 2010 and 2011 collecting field data on trees and vegetation on plots in Abingdon, Charlottesville, Falls Church, Roanoke, and Winchester. The data analyses in i-Tree Eco, which estimate the forest’s functional benefits and economic value, showed that there are more than 3.4 million trees in these five communities alone and that these urban forests provide nearly $7 million in annual benefits. The survey also revealed information on tree species diversity in each municipality’s urban forest and the potential impacts of invasive pests.

The results of the study will help municipal officials better manage their community’s trees and forests. “Before the survey, we could only guess at such things, but now we have specific numbers and a reliable data collection method to support the numbers,” said Kevin Siggins, Abingdon town arborist.

Short Course Becomes International Event

The Center for Packaging and Unit Load Design’s biannual unit load design short course last spring drew participants from three continents. The more than 20 attendees, including purchasing agents, sales people, pallet designers, and consultants, came to Blacksburg to learn about the principles of systems-based unit load design. Professor Emeritus Mark White led the course, sharing his extensive experience in the field of pallet and unit load design. Participants got hands-on experience using Best Load®, a newly created unit load design software, and learned about a new systems-based unit load design methodology where the interaction between different parts of the unit load are used to make the unit load more sustainable.

“We are extremely pleased to further our relationship with GMIT-Letterfrack by hosting Muiris O’Sullivan,” said Professor Robert Bush, who arranged the placement and advised O’Sullivan. “Muiris made wonderful contributions to our program and we hope that he is the first of many GMIT student placements with the department. I am looking forward to working with Muiris again when our third study abroad class visits GMIT in spring 2013.”

STUDENT NOTES

Department Welcomes First GMIT Student

The Department of Sustainable Biomaterials welcomed its first intern from the Galway-Mayo Institute of Technology (GMIT) in Letterfrack, Ireland. Muiris O’Sullivan spent the spring semester in Blacksburg as part of GMIT’s on-the-job placement for its third-year students. The college established a partnership with GMIT—home to Ireland’s leading furniture and wood-working design program and one of the top programs in Europe—that facilitates the exchange of students and faculty as well as collaboration on research projects and distance learning modules.

O’Sullivan worked with Professors Joe Loferski and Earl Kline as well as woodshop manager David Jones, teaching students in the Introduction to Wood Design and Craftsmanship course woodworking techniques and the safe use of equipment while helping them design and complete their projects. He also lent his wood manufacturing expertise to the students in the Wood Enterprise Institute.

“Improving the sustainability of unit loads is one of the most important missions of the center,” said Center Director Laszlo Horvath. “These short courses are a great way for us to make the knowledge we generate through sponsored research widely available to the pallet and packaging industry.”
MEASURES Calculates Value of Ecosystem Services

A new tool is available to anyone interested in learning about the effects of changing land use on a particular tract of forest or farmland in Virginia. The free software program, called InFOREST, was developed by the Virginia Department of Forestry in partnership with Virginia Tech and the Virginia Department of Game and Inland Fisheries, with funding from Dominion Virginia Power and a U.S. Forest Service grant.

Virginia Tech’s main contribution to the program was a suite of ecosystem calculators called MEASURES. It provides an estimate of ecosystem services such as water quality and carbon sequestration associated with a proposed change of land use based on user-entered criteria, which can help planners, landowners, and citizens determine how to mitigate any negative impacts that would result from a proposed change.

Several members of the Department of Forest Resources and Environmental Conservation contributed to the project, including Professor Randy Wynne, Associate Professor Valerie Thomas, Research Scientist Christine Blinn, and GIS Programmer Paige Baldassaro. Wildlife Professor Dean Stauffer was also a part of the effort. “We’ve tried to take knowledge that we’ve collectively generated and make it more available to improve our ability to make decisions about the environment,” Wynne said.

Seth Peery, a senior GIS architect in the university’s Enterprise GIS Research and Development Administration; Beth Stoin, a forestry graduate student; and Gene Yagow, a senior research scientist in biological systems engineering, were also heavily involved with development of MEASURES. “A lot of times when people have models, it’s primarily through a lookup table approach, which means the user can only access certain pre-run scenarios,” Wynne explained. “With InFOREST, users can input user-entered criteria, which can help planning, landowners, and citizens determine how to mitigate any negative impacts that would result from a proposed change.”

MEASURES, for many of our tools, the model runs are being made in real time, which is very unique.”

The staff at Virginia Tech had previously designed many of the calculators used in MEASURES, but its incorporation into InFOREST will make these features more readily available to the general public. “You don’t have to use InFOREST to use these calculators, but the program will call up the models for you," said Buck Kline, director of forestland conservation at the Virginia Department of Forestry. “This means it’s a lot easier to access for ordinary people who want to use them, since we’ve taken care of the hard stuff for you.”

Although MEASURES is a prominent component, InFOREST also contains several other valuable functions. Users can create basic maps and view various layers with the program, including aerial imagery, topography, streets and roads, watershed boundaries, and a forest conservation value layer.

Researchers are happy with how InFOREST has progressed since its release in March. “I’m really pleased; we met a lot of our goals," Wynne commented. “If you think about UT Prasim or putting knowledge to work, or any of these kinds of taglines, in the end this is it.”

Collaboration With Korean University

Representatives from Chonnam University in the city of Gwangju, South Korea, visited the Virginia Department of Game and Inland Fisheries in early March. The visit included an exchange of ideas with Virginia Tech scientists and a tour of the department’s Forest Wildlife Conservation Center.

The delegation from Chonnam included Dr. Kwon-Jun Park, director of the Bioenergy Research Center, and Dr. Choon-Young Seo, professor in the School of Forest Resources. The delegation was hosted by Barry Goodell, professor of sustainable biomaterials in the Virginia Tech Department of Forest Resources.

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IN MEMÓRIAM: Robert Weih

Robert “Bob” C. Weih Jr. (’81 Ph.D. in forest biometrics) passed away on June 17, 2012, at the age of 57. He was a professor in the School of Forest Resources at the University of Arkansas at Monticello, where he served for 28 years as director of the Spatial Information Systems Program.

Weih focused his research on the application and development of geospatial models and methods for natural resources and environmental phenomena. “Even now, I use his dissertation results in my graduate GIS class to show students that there is more to understanding a GIS algorithm than simply running a program or procedure,” said Associate Professor Stephen Prislky, who was Weih’s classmate at Virginia Tech. “He will be sorely missed by those who knew him.”

“It taught thousands of students, and I am sure he touched their hearts and minds because he really cared about their learning experience,” said James L. Smith (’81 Ph.D. in forestry). Weih’s advisor at Virginia Tech. Weih is survived by his wife Marilyn, sons Robert and Jeremy, and daughter Melissa.
Jim Schwille

Considering that only one team in the National Football League includes men on its cheerleading squad, it’s rare enough to find a male cheerleader these days. Finding a cheerleader who is a military veteran with a full-time job as a lumber salesman, however, is virtually unheard of.

Jim Schwille (’06 B.S. in wood science and forestry products) has been on the Baltimore Ravens’ cheerleading squad for four years, in addition to his slightly less glamorous position as account manager for Universal Forest Products in Random, W.Va. He also served with Virginia’s National Guard in Afghanistan after graduation.

Though athletically active in high school, Schwille’s path to cheerleading during his years at Virginia Tech still came as a bit of surprise. “I had a couple friends who were cheerleaders, but I was a cadet at the time,” he said. “Eventually, it came down to whether I wanted to sit in the stands for every game or be on the field with the girls.”

His path to becoming a wood science major was similarly unplanned. “I didn’t start off as a wood science major, but I started taking some classes in it because they were due to finish up before I was scheduled to be deployed,” he said, “I ended up enjoying them so much that I switched into the major.”

Although the change in focus might have been unintentional, Schwille credits his education as being a crucial part of his professional success. “I was the first Virginia Tech student from my major ever hired by Universal Forest Products,” he remarked. “They normally hire business majors and have to teach them about wood, but I already had the background in it, which makes it really easy to talk to my customers.”

Client support is a major part of Schwille’s job, requiring him to travel as many as 5,000 miles a month in parts of Maryland, Virginia, Delaware, and Pennsylvania. “I spend a lot of time knocking on doors and trying to get to the people who make the decisions,” he said. His clients cover everything from making windmills to cranes, so he needs to be familiar with a full range of wood products.

Schwille was focused primarily on his career when the opportunity to cheer for the Ravens came along. “One of the girls I cheered with at Virginia Tech was going to try out and asked me to come along and help her,” he recalled. “Once we got there, I realized that I had the ability to make the team, and we both ended up making the squad.”

Balancing the demands of two jobs may seem challenging, but Schwille insists he’s enjoying every minute of both experiences. “In my day job, I get to talk to people all day and help them solve problems,” he commented. “With the Ravens, I get to watch whole games on the field, five feet from the guys making the plays. It’s a really incredible experience.”

Carroll Retires as Deputy State Forester

John Carroll (’77 B.S. forestry and wildlife) retired from his position as deputy state forester after 35 years in the Virginia Department of Forestry, during which time he oversaw many of the department’s operations. “The Virginia Department of Forestry is often recognized as one of the best state forestry agencies in the country,” Carroll said. “I’m proud to have been part of that service.”

Carroll started off his career as a field forester, working with landowners and forestry professionals to help meet their forestry management goals, but he soon transitioned to a management role with the agency and became deputy state forester in 2002. “Natural resource professionals are the finest people in the world, and it has been a real honor to have served with people who have a passion for what they do,” Carroll said.

Carroll met Virginia, his wife of 32 years, while working with the agency, and the couple plans to work on their family tree farm during his retirement. He is also in the process of establishing a new consulting business. “John and Virginia were excellent advocates for forestry for many years,” said Carl Garrison, state forester. “They are a great team, and I hope we haven’t seen the last of them in the forestry community.”

Maness Named Forestry Dean

Thomas Maness (’81 B.S. in forest operations) has been named dean of Oregon State University’s College of Forestry, leading a college with nearly 1,000 undergraduate and graduate students while also serving as director of the Oregon Forest Research Laboratory. Maness, who specializes in developing innovative forest policies and practices to balance traditional production with ecosystem services, has been a professor and head of the college’s Department of Forest Engineering, Resources, and Management since 2009.

The International Spatial Accuracy Research Association named its new Early Career Scientist Award after James L. Smith (’92 Ph.D. in forestry). Beginning in 2014, the award will be presented every four years to a young international researcher with significant potential to contribute to the spatial accuracy research community. “My hope is that the recipients of this award exemplify the true spirit of research,” Smith said.

Smith, who served as a faculty member in the college’s forestry department from 1981 to 1994 and also as the head of Forest Information Systems Development for Champion International Paper Company, currently works as project lead for The Nature Conservancy’s LANDFIRE (Landscape Fire and Resource Management Planning Tools) Project. The U.S. Geological Survey presented Smith the John Wesley Powell Award in 2010 for his work on the project.

“I also recognize that, as with most individual honors, many others contributed to it,” Smith added. “In particular, my wife Belinda helped organize the first international spatial accuracy conference by planning all the unique and wonderful social aspects of that meeting, held in Williamsburg in 1994.”

Maness is passionate about the College of Forestry and he has extensive Industry and academic experience,” said Sahab Randhawa, OSU provost and executive vice president. “He is a broad thinker and understands sustainable, long-term management of forests and the resulting implications for forestry education, research, and outreach. His vision and experience will help us further advance the college and its contributions to the university’s signature area of advancing the science of sustainable earth ecosystems.”

Maness founded the Canadian National Centre of Excellence in Advanced Wood Processing in 1994 and directed the program for five years. Maness also founded the British Columbia Forum on Forest Economics and Policy, a research and outreach center to engage stakeholders in building a strategic vision for the future of British Columbia’s forest sector. During a 2008 sabbatical, he worked as a senior policy analyst with the U.S. Forest Service in Washington, D.C., where he conducted research on climate mitigation and wood energy policy.
The quantity and scope of research opportunities for undergraduates are greater than ever before, due largely to the efforts of the Division of Undergraduate Education. The Scineering program in the division’s Office of Undergraduate Research and the Summer Undergraduate Research Fellowship (SURF) program in the Fralin Life Science Institute offered paid research fellowships to an unprecedented number of students — 82 — this past summer.

Nine students in the college, most of them majoring in fisheries or wildlife science, took advantage of this unique opportunity to advance their education outside the classroom and work directly with faculty members and researchers. The students — whose work reflects the range of research being conducted across the college — also showcased their projects at the Summer Undergraduate Research Symposium held at the Inn at Virginia Tech in August.

Junior Katy Battle of Richmond, Va., conducted antibiotic testing for E. coli isolates from wildlife fecal samples to evaluate levels of antibiotic resistance among wildlife species found along the Chobe River in northern Botswana. “My work will help researchers identify those wildlife more likely to harbor antibiotic resistance so that management strategies aimed to reduce both environmental accumulation of resistance and its transmission may be enacted,” Battle said.

Senior John Woodward of Richmond, Va., examined how elevation affects the growth rates of brook trout and blacknose dace. “The hypothesis is that specimens from higher elevations will naturally experience lower temperatures throughout the year and thus higher growth rates are expected as an evolutionary adaptation to high over-winter mortality of slower growing individuals,” Woodward stated.

Senior Roxzanna Dalton of Barren Springs, Va., studied prey selection strategies of coyotes in Bath and Rockingham counties as part of the interagency Virginia Appalachian Coyote study. “By better understanding the way coyotes select their prey, we may be able to manage coyote populations more effectively,” Dalton remarked.

Senior Alex Garretson of Rockville, Md., studied one of North America’s few captive populations of loggerhead shrike, a bird that feeds on large insects and lizards, while he was stationed at the Smithsonian Conservation Biology Institute in Front Royal, Va. “A theory for the decline is the replacement of warm season grass fields with cold season grass fields in the eastern U.S. in the 1950s and ’60s for cattle feeding purposes,” Garretson said. “It doesn’t bode well for the birds because they need high nutrient levels in mid-summer.”

Senior Jacob Estienne of Suffolk, Va., developed a snare to collect hair samples from coyotes. He also set up baited snares to attract the predators and used cameras to observe how they interact with the equipment. “We will be able to take the combined information from the hair samples and the camera photos and see how effective these snares would be at successfully gathering genetic material from this elusive species,” Estienne said.

Senior Kara Kosarski of Cloverdale, Va., studied the connection between social behavior and disease in eastern house finches. “My work is primarily focused on dominance, an important aspect of social behavior, and the role it plays in the way house finches display sickness behaviors,” Kosarski explained.

Senior Jeronimo Silva of Sao Paulo, Brazil, evaluated the population trends of Florida bog frogs, a species that is believed to exist only in western Florida. “Florida bog frogs are considered a vulnerable species because they are so endemic,” Silva said. “They were discovered in the 1980s and no one knows much about the population, such as whether it is increasing or decreasing.”

Senior Tyler Williams of Wirtz, Va., tested the addition of mineral oil to the fluorescent powder used to track reticulated flatwood salamanders, which are federally endangered in part due to a decline in the habitat where they lay their eggs. “Mineral oil may offer several advantages. Like longer powder retention and increased resistance to moisture, specifically rain,” Williams remarked. “This is important because reticulated flatwood salamanders are commonly active on rainy or moist nights, and that moisture can decrease fluorescent powder tracking abilities.”

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From Forest Products Rep to Ravens Cheerleader

Alumnus Jim Schwille (’06 B.S. in wood science and forest products) combines a full-time career as an account manager for Universal Forest Products with a part-time gig as a member of the Ravens cheerleading squad. Read his story on page 7.