Advancing the Science of Sustainability

Students Get Educational Edge

Advising Center boosts student engagement and success

The transition of the college’s Advising Center to a new model for recruiting and advising is nearly complete and showing positive results. “The national trend in higher education is toward the model of professional advisors and centralized advising units because it gives students an academic advantage,” said Stephanie Hart, director of the Advising Center.

Early in the fall semester, advisors visit the college’s First-Year Experience classes during a session in which freshmen work on creating a four-year plan using the Pathways Planner. Stephanie Hart (center) says the advisors are available to provide on-the-spot answers and resolve issues.

Traditionally, the college’s students were assigned a faculty advisor. Now the center’s full-time advisors, who have advanced degrees and proven experience, work one-on-one with students on course selection, scheduling, and career planning. This frees faculty members to concentrate on their academic and research responsibilities while continuing in a mentoring role. A formal faculty mentorship program, including guidance on internships, careers, and graduate opportunities, is being developed.

The college’s transition to a professional advising model began to take shape in 2015, when the Advising Center was established and Hart, who had served as academic advising coordinator, was named director.

John Gray Williams was hired that year as director of recruitment. He has since been instrumental in promoting the college across Virginia and beyond, and driving enrollment. Much of his time is spent on the road visiting prospective students, school guidance counselors, and science teachers.

“Career planning begins on Day 1, when I first meet prospective students,” Williams said. “They are passionate about the environment and science, but they don’t often know about careers related to natural resources and conservation, wildlife and fisheries, geography and meteorology, and sustainable biomaterials. A whole new world opens up when they are introduced to the possibilities and career earning potential.”

Statistics for the spring 2017 semester indicate that students are responding well to the new advising model. The advising team had 725 student appointments, with some students visiting multiple times. “We are excited about those numbers and expect them to increase with our additional advising staff,” Hart said.

Student success is essential as the college advances from current enrollment of about 940 undergraduates to its goal of 1,250 by 2022, which is in step with enrollment growth for the university, according to Winistorfer.

“As the university and college grow, so do the complexity and choices,” he said. “The advisor’s role is to stay current on curricula changes across 11 majors on a daily basis as each student progresses to graduation.”

Aside from the required 120 credits to graduate, “every student’s check sheet of classes is unique,” Hart said. “No two students’ paths are exactly the same. Some may graduate early, some may study abroad. We help each student figure out their own path.”

The college’s transition to a professional advising model began to take shape in 2015, when the Advising Center was established and Hart, who had served as academic advising coordinator, was named director.

Advising Center team, Professor Tom Hammitt, interim associate dean of academic programs, represents the college on university-wide academic and student-centric issues, and works with faculty on curriculum development. Cathy Barkan, student services coordinator, track course proposals, manages enrollment data, and plans commencement. Lisa Lawson, academic support specialist, serves as a resource at the front desk and responds to requests from within the university community and across the country.

Conveniently located at the entrance to Cassell Coliseum, the Advising Center’s inviting glass façade is hard to miss. “Sometimes students don’t know where to turn. Now we have a central spot for them to meet with members of the Advising Center team, who are great resources,” Hart said.

“We are fostering a partnership among the Advising Center’s professional advisors, faculty members, and students,” Winistorfer said. “We enjoy a research-intensive, student-centered culture in the college, and the creation of the Advising Center is a demonstration of our commitment to the success of our students and to preparing them to be highly successful after they graduate.”

Advising Center staff (left to right): Cathy Barkan, student services coordinator; Stephanie Hart, Advising Center director; Maureen Delinger, advisor for geography; Dana McGuire, advisor for sustainable biomaterials; John Gray Williams, director of recruitment; Melissa Cumbia, advisor for forest resources and environmental conservation; Tom Hammitt, interim associate dean of academic programs; Lauren Varboncoeur, advisor for fish and wildlife conservation; and Lisa Lawson, academic support specialist.
I am very excited about the continued evolution and success of the college’s Advising Center (see cover story). In a broad sense, it is about improving and further differentiating our program — and our students — on a national and global scale.

The Advising Center is the front door to the college and the place for answers to all student questions, ranging from admission requirements and course selection to student records and degree completion — nearly any issue a student may face on a daily basis. While many of us did not have such a resource during our college days, I assure you that navigating college and a career path today is much more complex and costly — but with more opportunities for impact and success as long as we can help guide and support our students while they are here.

Mentorship of students by our faculty, who are the experts in their disciplines and hold the key to important relationships with agencies and organizations, is a critical component of education both in and out of the classroom and will not be minimized under our new model. We need to ensure that our students can have access to and develop mentoring relationships with faculty, and that our faculty can interact with and get to know our students. I am confident we are on the right path with the Advising Center — serving our students is the college’s highest priority.

Our 25th college anniversary celebration in September was a huge success, and much fun to boot! Our planning committee did an outstanding job of orchestrating a fantastic weekend. It was wonderful to have alumni and friends back on campus to enjoy conversation and reconnect. Some great stories were told, and an impromptu Sunday breakfast at Gilleys downtown to round out the weekend was a major draw for many.

Over the course of the weekend, we heard from former deans Greg Brown and Mike Kelly, and Professor Emeritus Dave Smith about the early years in the college and reflections on their experiences. Someone needs to write a book! Our video on the history and evolution of the college premiered at the Saturday night jubilee, eliciting both smiles and tears. If you haven't seen it yet, you can find it on the college homepage (cnre.vt.edu).

The Dean’s Advisory Council also met in September for two days of conversation about ways to improve the college. The council is helping the college with advice, advocacy, and access to networks. Many thanks to Mike Miele (’79 B.S. forestry) for his leadership of the council. Members of the council serve as our eyes and ears on the horizon, helping us to see into the future and ensure the relevancy and impact of our work and the success of our students. We talked in detail about student internships and success skills, and ways that we can improve in these areas.

Best wishes for the upcoming holiday season. Thank you for your interest in and support of the college, our faculty, staff, and students. 2017 has been a great year for the college and we look forward to continued successes in the New Year.

Warm regards on behalf of our faculty, staff, and students,

Paul M. Winistorfer
Dean
winistorfer@vt.edu

---

Virginia Tech unveils new brand platform

Virginia Tech is starting a new chapter of its story by unveiling a dramatic platform from which to share its story. The new brand platform and accompanying logo encompass the full scope of the Hokie community.

“I think everyone with a connection to the university understands that Virginia Tech is a special place,” said President Tim Sands. “To me, this brand represents all the good things in our community. From our foundational commitment to service, to our aspirations of solving the world’s most challenging problems and making a difference for future generations. I’m proud to be part of this chapter in Virginia Tech’s history.”

The new brand marks the culmination of more than a year’s worth of qualitative and quantitative research and discoveries that included feedback from current and prospective students, faculty, staff, alumni, friends, and donors. The brand was finalized and presented to the Board of Visitors at its September 7, 2017 meeting, where it was enthusiastically endorsed.

“The new logo encapsulates the spirit of the university’s educational experience and highlights Virginia Tech’s identity as an inclusive community that thrives at the intersection of academic disciplines. Mirroring the shape of the “flying VT” proudly displayed by Hokie student-athletes — which remains as the distinctive mark for Virginia Tech’s athletics program — the new university logo offers a visual expression that unifies the passions for academics and athletics.

What remains unchanged are the key players. For more than a century, Virginia Tech’s story has hinged on the students, faculty, staff, alumni, and friends who have answered the call to become a force of good in the world. As those efforts increase, the new brand will provide the voice to match.

The complete brand rollout, at both the university and the college level, will take place over the course of several months. Read more at bit.ly/2yFBU80 and bit.ly/newVTlogo.

Virginia Tech does not discriminate against employees, students, or applicants on the basis of race, color, gender/gender identity, gender expression, national origin, political affiliation, age, religion, sexual orientation, genetic information, or veteran status or otherwise discriminate against employees or applicants who inquire about, discuss, or disclose their compensation or the compensation of other employees or applicants. To view the Virginia Tech Equal Employment Opportunity Policy, please visit the Department of Equity and Access at 540-231-2011 or Virginia Tech, North End Center, Suite 2200 (0318), 100 Turner St. NW, Blacksburg, VA 24061.
Conservation Management Institute realigns to maximize funding and research opportunities

The college’s Conservation Management Institute (CMI) is being aligned with the Departments of Fish and Wildlife Conservation to maximize funding and research opportunities. “CMI has had phenomenal success as a college-level research center for many years,” said Dean Paul Winistorfer. “As we look forward to greater impacts by leveraging mutual interests with our academic program in fish and wildlife conservation, I am certain that the outcome will be positive from all perspectives.”

CMI provides multidisciplinary expertise in field ecology, geospatial information technology, resource assessment, and logistical support. It is supported by contracts and grants from numerous sources, including fish and wildlife agencies, federal refuges and parks, private conservation areas, and military installations throughout Virginia, across North America, and around the world. CMI has been awarded more than $440 million in research grants since 1999.

Much of CMI’s work has been allied with the fish and wildlife conservation program. “We are strategically aligning resources to be much more competitive for external funding and to raise the impact value of our work,” Winistorfer said.

“CMI has enjoyed many successful collaborations with faculty and students in the college,” said CMI Director Scott Klaper. “The realignment will allow us to build upon those relationships and provide even more opportunities that will benefit our students and partners.”

“We look forward to strengthening our collaboration with CMI,” said Joel Snodgrass, head of the Department of Fish and Wildlife Conservation. “Our alignment with CMI will allow our students and faculty to realize even greater synergies between the department and the institute, and continue to provide our partners with the best scientifically based solutions to the natural resource challenges we face. Providing our students with experiences outside of the classroom contributes greatly to the development of soft skills that are valued by future employers.”

Examining connections between human health and the environment in Central Appalachia

Konnie Kolivras brings a geographic perspective to the interdisciplinary team examining the connections between human health and the environment in Central Appalachia.

Central Appalachia may be home to lush green mountains ranges brimming with diverse plant and animal species, but within those mountains lie some of the most dramatic human health inequities in the nation. A Virginia Tech interdisciplinary research team addressing this inequity argues in a review paper published in Reviews on Environment Health that more research needs to be conducted to determine how the unique topography and industries of Central Appalachia, including coal mining and natural gas extraction, result in environmental exposures that impact the health of people living there. A great deal of research has looked at how environmental exposures from industrial processes affect biodiversity, but little has examined the connection between those exposures and human health disparities.

The team, which includes Konnie Kolivras, associate professor of geography, was originally formed in 2014 and received support from a $200,000 seed grant from Virginia Tech’s Global Change Center and the Institute for Society, Culture, and Environment. This support helped team members continue ongoing research in Tazewell County, Virginia, including interviews with residents and preliminary water and air testing.

Kolivras, who specializes in examining links between environmental variability and human health using geospatial technologies, was surprised by the lack of research on human health in Central Appalachia and hopes to expand on the limited research that does exist. “There’s been little attention on land-cover change impacts on human health in the region in the first place, so that will be a clear improvement on the existing literature,” she explained.

“The few studies that have examined human health impacts, particularly those related to mining, have been conducted at a broad scale, which is not the appropriate scale to examine the spatial patterns and underlying processes related to interactions between human health and land-cover change,” she continued. “We will conduct a fine-scale analysis that will allow us to link localized human health outcomes to environmental exposures related to nearby land-cover change.”

Kolivras says she enjoys collaborating with researchers with different areas of expertise. “Each person on the team provides a unique contribution to this larger puzzle, and our expertise spans the humanities, social sciences, public health, biophysical sciences, and engineering,” she said.

In June, the team was awarded $75,000 to expand and continue their project for another year under Virginia Tech’s Global Systems Science Destination Area. Their project will initially focus on Central Appalachia but may eventually grow to include rural communities worldwide.

Virginia now ranks third for big trees, program earns award

Virginia moved up to third place on the 2017 American Forests Champion Trees national register, with 74 national champion trees, after earning fifth place in 2016. Virginia gained 21 new champion and co-champion trees this year, more than any other state.

Much of this change can be credited to the efforts of Associate Professor Eric Wiseman, coordinator of the Virginia Big Tree Program, which is based in the college’s Department of Forest Resources and Environmental Conservation. Wiseman combed through records and nominated any trees he thought might be a contender. “We had a very significant change this year in our numbers. In several cases, we had trees on our Virginia register that we hadn’t realized were bigger than the current national champ,” he said.

This year, the Virginia Big Tree Program was honored by Scenic Virginia, a conservation organization dedicated to the preservation and enhancement of Virginia’s scenic beauty, with the Paul F. Revell Scenic Trees Award. Revell, one of the founders of and a driving force in Scenic Virginia, passed away in 2016.

“His name is synonymous with Virginia’s forest renewal,” said Michael O’Sullivan, executive director of Scenic Virginia. “We know Eric is carrying on Paul Revell’s tradition with the Big Tree Program. The Virginia Tech program is key to Virginia’s conservation efforts.”

Order 2018 wildlife calendar highlighting students’ research

Students in the college’s Fish and Wildlife Graduate Student Association (FIWGSAs) are selling 2018 calendars highlighting their work around the world. Each month features a photo taken by a student and showcases research on a variety of captivating species, including giraffes, shorebirds, foxes, elephants, lemurs, candy darters, and more.

Proceeds support a guest speaker visit and fund business and social events. The FIWGSAs mentors new students, engages in outreach, and serves as an intermediary between graduate students and faculty. One calendar is $15; two or more are $12 each. They make ideal holiday gifts! Order online at squaresup.com/store/fiwgsa. Email the FIWGSAs at fiwgsa@gmail.com with any questions.

The calendar features photos taken by students of their research around the world.
Ear-stones provide clues to researchers studying migratory habits of Amazonian fish species

Scientists know relatively little about the thousands of fish species -- many of which are rare, endangered, or threatened -- living in the Amazon, the world’s largest river system. Assistant Professor Leandro Castello and colleagues report on the use of chemical analysis of ear-stones or “otoliths” as a way to tease out a fish’s life story, potentially revealing the migratory routes and environments the fish encountered in its travels.

Made of calcium carbonate, otoliths grow as the fish grows, forming rings each year that can be read much the same way as a tree’s rings. Their growth incorporates traces of other elements that reflect the inherent chemistry of the water in which the fish lived. Through X-ray fluorescence and mass spectrometry analysis, scientists can extract the story of the fish’s growth and movements among different environments.

Through her research, Rich discovered that prey availability is one of the fundamental effects of ecosystem change and biodiversity loss. A study led by Lindsey Rich (’16 Ph.D. wildlife conservation) published in Global Ecology and Biogeography demonstrates that camera traps are one of the most effective methods of collecting this type of data on wildlife.

Rich, along with researchers from all over the world, compiled camera-trap data from 12 countries to evaluate impacts on 96 species of mammalian carnivores. Once the data were compiled, the researchers were able to estimate the probability that a particular carnivore species occupied each area, and how these species were affected by prey availability, habitat characteristics, and human influence.

Through her research, Rich discovered that prey availability is one of the fundamental determinants of carnivore distributions, and that carnivore populations are affected by human development and influence. She noted, however, that fine-scale information about landscapes and human development wasn’t readily available for every region represented in the study.

In the future, she explained, a global network collecting similar data will want to standardize camera-trap field methodologies. “We used the best spatial resolution data available at the time, but as information at a pace necessary to keep up with policy and management decisions to address major environmental challenges in the future.”

Despite these limitations, Rich is encouraged by the ease of bringing together so many collaborators from across the globe. “Being able to bring together vast amounts of data in a global network will allow us to ask new questions and provide information at a pace necessary to keep up with policy and management decisions to address major environmental challenges in the future.”

Camera-trap data from 96 carnivore species photographed across 22 countries, including this Sumatran tiger in Indonesia, were used to evaluate patterns in carnivore occupancy and richness across multiple spatial scales. Photo by S. vanware; WWF.

Economic research supports tree cover recommendations

Urban forestry experts have long suggested that tree canopy cover in residential and urban areas is essential to maintaining a healthy ecosystem in those communities, but an interdisciplinary study published in Ecological Economics suggests that tree cover may also contribute to increased property values. The researchers performed a meta-analysis of 16 existing studies from across the country focusing on the relationship between tree cover and property values to discern what the results collectively imply.

The researchers found that the contribution of tree cover to real estate value maximizes at about 30 percent cover at the property level and about 38 percent at the county level. Perceived benefits such as scenery, privacy, shade, and recreation all contribute to this rise in property value. Despite the contributions that trees could make to property value, the study showed that private properties and communities were about 24 percent under-invested in tree cover. “This estimate is consistent with the ecological goal (40 percent) set by the organization American Forests for communities on the East Coast and in the Pacific Northwest,” said Shyamani Srirawarena, a doctoral student in forestry and the study’s primary author.

“When people think about the value of their homes, they tend to focus on the manmade amenities: bedrooms, patios, hot tubs, and so forth,” added Associate Professor Eric Wiseman, a co-author. “While these amenities will always be primary considerations when buying a home, it is important for people to consider the significant financial contribution that trees can make to the largest asset they own. And there are so many other benefits that come with these trees, such as clean air, cool surroundings, and watchable wildlife.”

The researchers found that the contribution of tree cover to real estate value maximizes at about 30 percent cover for residential properties.

Camera-trap research paves the way for global monitoring networks

There have been numerous calls for global monitoring networks to understand and mitigate the effects of ecosystem change and biodiversity loss. A study led by Lindsay Rich (’16 Ph.D. wildlife conservation) published in Global Ecology and Biogeography demonstrates that camera traps are one of the most effective methods of collecting this type of data on wildlife.

Rich, along with researchers from all over the world, compiled camera-trap data from 12 countries to evaluate impacts on 96 species of mammalian carnivores. Once the data were compiled, the researchers were able to estimate the probability that a particular carnivore species occupied each area, and how these species were affected by prey availability, habitat characteristics, and human influence.

Through her research, Rich discovered that prey availability is one of the fundamental determinants of carnivore distributions, and that carnivore populations are affected by human development and influence. She noted, however, that fine-scale information about landscapes and human development wasn’t readily available for every region represented in the study.

In the future, she explained, a global network collecting similar data will want to standardize camera-trap field methodologies. “We used the best spatial resolution data available at the time, but as information at a pace necessary to keep up with policy and management decisions to address major environmental challenges in the future.”

Despite these limitations, Rich is encouraged by the ease of bringing together so many collaborators from across the globe. “Being able to bring together vast amounts of data in a global network will allow us to ask new questions and provide information at a pace necessary to keep up with policy and management decisions to address major environmental challenges in the future.”

Camera-trap data from 96 carnivore species photographed across 22 countries, including this Sumatran tiger in Indonesia, were used to evaluate patterns in carnivore occupancy and richness across multiple spatial scales. Photo by S. vanware; WWF.

Policies protecting the Amazon need updating

While many studies have focused on the dangerous effects of climate change on streams, rivers, lakes, and forests of the world, a study by Virginia Tech and Woods Hole Research Center scientists uniquely evaluated the combined impacts of all these effects, including climate change, across the entire Amazon River basin. “Changes in climate inevitably cause changes in rivers and lakes as well as all life and ecological processes associated with them — including people’s livelihoods,” said Assistant Professor Leandro Castello. “If these trends continue, they will mark the next phase in Amazonian development.”

Castello and Marcia Macedo, assistant scientist at the Woods Hole Research Center, synthesized nearly 200 studies in an article published in Global Change Biology. The study focused on the current state of the Amazon and how the policies surrounding its maintenance are either protecting or failing to protect it. A promising step forward was the use of satellites to monitor the health of Amazonian freshwater ecosystems, which could be applied to similar geographic locations across the world.

The study examined how climate change is affecting the streams, rivers, lakes, and forests of the Amazon.
Research calls for enhancing long-term benefits of Farm Bill programs

Incentive programs within the Farm Bill allow landowners to participate in conservation practices while maintaining land ownership. A recent study by researchers from the college and the nonprofit Point Blue Conservation Science, published in Conservation Letters, finds that it is necessary to sustain the environmental benefits from these practices after programs end.

According to Assistant Professor Ashley Dayer, the lead author, some conservation practices are more likely to continue providing benefits without active management by landowners, while others require a more hands-on approach. Dayer and a team of researchers, including master’s student Seth Lutter, examined existing research to determine what factors contribute to continued landowner conservation efforts after incentive programs end, a practice the study’s authors call “persistence.”

“We often hear assumptions about how landowners gain a stewardship ethic due to involvement in these programs, which may lead them to continue conservation activities after the programs end, but there’s been very little empirical research to support this assumption,” Dayer said.

The authors developed five explanations to predict persistence: landowners’ attitudes toward the conservation practices, their motivations for participating in incentive programs, habit formation, resource access, and social influences. “More research is needed in the social science side of landowner conservation incentive programs,” Lutter noted. “American taxpayers are investing billions in these programs, so it’s essential to understand how to promote the programs’ long-term effectiveness.”

Ultimately, incentive programs that assist landowners with conservation efforts benefit the entire population. “Private lands conservation is critical,” Dayer concluded. “A disproportionately high amount of wildlife is found on private lands, so having landowners engaged in managing their land is critical to having benefits like wildlife habitat or water quality that all of us enjoy.”

Nonnative catfish not primary driver of American shad declines in James River

Virginia Tech researchers (left to right) Joseph Schmitt, Jason Emmel, and Zach Moran hold a blue catfish caught for testing before releasing it unharmed back into the James River. Photo by Donvakk Om

Nonnative species are introduced into ecosystems as a growing concern for scientists and conservationists because they can potentially suppress vital native species, alter food web dynamics, and threaten biodiversity. Researchers from the Department of Fish and Wildlife Conservation, along with Aaron Bunch of the Virginia Department of Game and Inland Fisheries, explored whether nonnative catfish are to blame for declining native fish populations in Virginia’s rivers.

To determine whether predation by nonnative blue catfish and flathead catfish is a major cause in the decline of native species, researchers used a technique called low-frequency electrofishing. The electricity stunns them, and they rise to the surface and begin swimming erratically for a minute or two,” Schmitt explained, adding that the method has been approved as safe. Once a fish was netted, a team member shot a stream of pressurized water into its stomach, making it regurgitate whatever it had eaten to determine which species the catfish were preying on.

In spring 2014 and 2015, Schmitt and his team caught approximately 2,500 catfish and found that American shad, blueback herring, and alewife were present in the stomachs of only 4.46 percent of blue catfish and 17 percent of flathead catfish tested. They concluded that catfish predation could not be considered the main cause of their decline. “Other factors besides predation are also at play, including habitat degradation, bycatch from offshore fisheries, migration barriers like dams, and predation by other fish,” Schmitt said. Their research, which is part of a larger Virginia Department of Game and Inland Fisheries study, will help influence the agency’s future management practices and restoration efforts.

The study, led by Joel Snodgrass, found that stormwater retention ponds are not completely effective at preventing road salts from contaminating streams and wetlands.

Most municipalities rely on road salts to melt ice and keep roadways safe; however, researchers at Virginia Tech and Towson University in Maryland are concerned that the chemicals are not being effectively absorbed and may be reaching waterways.

Snodgrass explained that if the stormwater ponds were working effectively, his team could test the groundwater between the ponds and streams and find very little sodium chloride, the chemical used in road salt. The researchers instead discovered that runoff contaminating with road salt to stormwater ponds actually resulted in plumes of highly contaminated groundwater moving from ponds to streams.

“This was the goal of an international research team from Virginia Tech and Towson University in Maryland are concerned that the chemicals are not being effectively absorbed and may be reaching waterways. The research team completed a study, published in Environmental Science and Technology, to determine how well current stormwater management practices mitigate the effects of road salts and how those salts might be impacting waterways.

“We know that surface waters in many areas are becoming more saline and that salt levels have been rising steadily for at least the past 30 years in reservoirs that provide water for Baltimore,” said Professor Joel Snodgrass. “However, there is still little evidence that stormwater management practices in reducing inputs of salt to surface waters.”

Snodgrass explained that the stormwater ponds were working effectively, his team could test the groundwater between the ponds and streams and find very little sodium chloride, the chemical used in road salt. The researchers instead discovered that runoff contaminating with road salt to stormwater ponds actually resulted in plumes of highly contaminated groundwater moving from ponds to streams.

The study, led by Joel Snodgrass, found that stormwater retention ponds are not completely effective at preventing road salts from contaminating streams and wetlands.

Most municipalities rely on road salts to melt ice and keep roadways safe; however, researchers at Virginia Tech and Towson University in Maryland are concerned that the chemicals are not being effectively absorbed and may be reaching waterways. The research team completed a study, published in Environmental Science and Technology, to determine how well current stormwater management practices mitigate the effects of road salts and how those salts might be impacting waterways.

“We know that surface waters in many areas are becoming more saline and that salt levels have been rising steadily for at least the past 30 years in reservoirs that provide water for Baltimore,” said Professor Joel Snodgrass. “However, there is still little evidence that stormwater management practices in reducing inputs of salt to surface waters.”

Snodgrass explained that the stormwater ponds were working effectively, his team could test the groundwater between the ponds and streams and find very little sodium chloride, the chemical used in road salt. The researchers instead discovered that runoff contaminating with road salt to stormwater ponds actually resulted in plumes of highly contaminated groundwater moving from ponds to streams.

Current stormwater management practices may help slow the movement of road salts to streams, but they don’t completely stop it from getting there,” he said. “On top of that, the road salts are entering these bodies of water in a fashion that causes salt levels in streams to remain elevated year-round.” These elevated levels can have negative impacts on both wildlife and human health.

According to Snodgrass, the solution is complicated. He and his team plan to continue researching how road salts and other chemicals affect wildlife and the environment, while other researchers are exploring the effectiveness of alternatives to road salt and their potential environmental implications. “We’re looking at the balance sheet between economics and the environment and human health,” Snodgrass said. “This is a complex problem that’s going to take an interdisciplinary team to tackle.”
McMullin named president of American Fisheries Society

Associate Professor Emeritus Steve McMullin has been named president of the American Fisheries Society. With more than 8,000 members, the society is the world’s oldest and largest organization dedicated to strengthening the fisheries profession, advancing fisheries science, and conserving fisheries resources.

“I am honored to have been selected by my colleagues to lead such a prestigious organization,” McMullin said. “My plan of work focuses on effectively communicating the science of fisheries conservation to policymakers and stakeholders, increasing diversity in the society and the fisheries profession, and developing a plan to direct society activities through 2024.”

An active member of the American Fisheries Society since the 1970s, McMullin has served as president of the Virginia Tech and Virginia chapters and of the Southern Division, and as a member of several committees. He has organized the annual “Leading at All Levels” continuing education workshop since 2013, reflecting his longstanding interest in leadership development training.

Marion receives Boy Scouts Award

Recreation ecologist and adjunct professor Jeff Marion has received the Distinguished Staff Alumni Award from the Boy Scouts’ Philmont Staff Association. Marion attended the Philmont Scout Ranch in New Mexico as a scout while in high school and worked there summers during college.

As well as leading research projects on human impacts on wilderness, Marion helped develop Leave No Trace, an educational program that guides outdoor recreation nationwide, and bring it to the Boy Scouts. He has been encouraged by the spread of the Leave No Trace message through the Boy Scouts, particularly at Philmont. “The rangers are teaching the older scouts excellent, low-impact outdoor skills and ethics, and it’s really made a big difference in the scouting movement nationwide to have the scouts modeling these behaviors when they return home,” Marion said.

Despite his nearly lifelong work with the Boy Scouts, Marion admitted the award was “a complete surprise. I didn’t even know I was nominated.” The award is presented annually to a current or former staff member to recognize “distinguished or exceptional personal success or achievement on a national or international level . . . that brings honor and credit to the legacy of the Philmont staff.”

“At Philmont, I discovered my own ability to teach and to lead,” Marion said. “It was superb training for my career, so giving back to the scouts is a natural thing for me. They turned me on to my career, and now I can pay them back.”

Hammett appointed visiting professor at Nepal university

Tom Hammett, interim associate dean of academic programs and professor of sustainable biomaterials, has been appointed visiting professor at the Agriculture and Forestry University, Nepal’s first land-grant university. The four-year appointment will allow him to work closely with the university’s administration and faculty while still teaching and conducting research at Virginia Tech.

In addition to teaching courses, helping faculty develop curriculum, and mentoring graduate students, Hammett’s primary role will be to help the university develop administrative systems and foster a new outreach program. “The people there are incredibly engaging and welcoming, and receptive to new ideas,” said Hammett, who first visited Nepal in 1974. In an effort to help the university move toward a more active, project-based learning system, Hammett plans to engage students and faculty on research projects aimed at increasing the sustainable production of nontimber forest products and helping the country rebuild after a 2015 earthquake.

Hammett’s appointment creates a unique opportunity for Virginia Tech faculty and students to become involved in ongoing research and outreach projects in Nepal. He advises the student organization Service Without Borders, which is currently conducting a project there: “I want to get more students and faculty involved in Nepal and the region. There are great opportunities to build on previous projects to create service and educational opportunities for our students,” Hammett explained. “I’ve lost track of how many times I’ve been to Nepal. I’m excited to continue the work that I’ve started and see it through to completion.”
Serving those ‘in the arena’

Although Mike Melo (’79 B.S. forestry) never worked directly with trees after earning his degree, he has relied on the analytical skills and the values he developed through the rigorous training in the forestry program every day since. “College should teach you to think critically, analyze information, and make reasonable decisions, and Virginia Tech taught me all of that,” he said.

After graduation, Melo joined the Navy, where a plan to spend roughly four years in service turned into a 23-year career. “People used to joke with me because I went to school for forestry and then ended up going to sea,” he recalled. “The path I took in life was different from what I thought it would be, but my academic work challenged me to think and digest information, whether I was working as a Naval officer or running a business. It’s been a key element in my ability to do my job.”

Shortly after retiring from the Navy, Melo started his own company, ITA International, providing analysis planning, curriculum development, and training for U.S. Department of Defense customers, including the Navy, Coast Guard, and Marines. The company, based in Yorktown, Virginia, also provides engineering solutions for the Navy and Coast Guard, including equipment acquisition and maintenance services.

“I was a one-man show when I first started, but now we employ over 300 people, and I really get to focus on providing the future and vision for the company and make sure the employees and the customers are happy,” Melo said.

Richard “Dick” Kluender (’66 B.S. forest management, ‘71 M.S. forest economics, ’83 Ph.D. forest operations) has been inducted into the Arkansas Foresters Hall of Fame for outstanding contributions to the forestry profession spanning more than 40 years.

A former Corps of Cadets member, Kluender served in Vietnam before returning to Virginia Tech for graduate school. Shortly after, he held positions as district forester for Stone Container Corporation in Ohio and division forester for the American Pulpwood Association in Mississippi.

Upon earning his doctorate, Kluender joined the faculty at the University of Arkansas–Monticello. In 2000, he became dean of the university’s School of Forest Resources and director of the Arkansas Forest Resources Center, where he oversees the forestry and wildlife research and outreach programs.

Kluender was an active member of the Society of American Foresters, serving on the organization’s Accreditation’s Committee in the early 2000s, and the Arkansas Academy of Science, where he served as president in 2000. He was also appointed by the governor to chair the Arkansas Board of Registration for Professional Foresters.

He credits Virginia Tech and the college for preparing him, and many of his colleagues, for success in their careers. “You can come out of the college and do anything, because the program really is incredible,” he said. “At a National Association of University Forest Resources Programs meeting, I looked around the table of 15 college deans, and only one did not hold at least one degree from the college. It’s quite the testament to the program.”

“I was very surprised and honored to receive this award. My whole life, I’ve continued to come back to the values of the cadets and the US Prosim (That I May Serve) mentality. The measure of a man isn’t what he does himself, but what he allows God and others to do through him,” he added.

The name ITA International is derived from a passage in a 1910 speech by Teddy Roosevelt referred to as “The Man in the Arena” in which Roosevelt lauds those who work hard and demonstrate values of leadership, integrity, and hard work rather than simply sitting on the sidelines. According to Melo, his company is built on the principles of service outlined in Roosevelt’s speech and taught at Virginia Tech. “If Prosim (That I May Serve) captures the essence of the Hokie Nation and of my career,” he said, “All of my work has been about service, from the Navy to owning my own business, which is all about serving those ‘in the arena.’”

In addition to serving those who serve, Melo has made a point of serving future Hokies through annual donations to the college and membership on the Dean’s Advisory Council, of which he serves as chair. “I loved my time at Virginia Tech,” he said. “It was a great experience and it provided me with the tools to be successful. Through donations and service on the council, I’ve been able to share my experience in growing a successful company and help the college continue to grow its academic programs and provide students both a top-notch academic background and research experiences. I’ve had a lot of people help me throughout the years, so now I’m just paying it forward.”

Kluender inducted into Arkansas Foresters Hall of Fame

Tom Straka (left) accepts the Extension Forester of the Year Award from Virginia Tech Professor Emeritus Harry Haney.

Tom Straka (B.S. forest resource management and economics) received the Forest Landowners Association’s 2017 Extension Forester of the Year award. Straka has been a faculty member at Clemson University since 1989 following eight years at Mississippi State University. An active consulting forester and researcher, he is a noted forest economist and prolific writer, contributing to both forestry publications and mainstream media. His research centers broadly on forest resource management and economics, especially the areas of family forest owners, quantitative forest management, forest valuation, and forest policy and history.

Straka received his award from Virginia Tech Professor Emeritus Harry Haney, the former Garland Gray Professor of Forestry who served the university for 28 years. “It is truly an honor to be nominated for this award by Harry,” Straka said. Haney is a former president of the Forest Landowners Association and serves on the organization’s publications committee with Straka.

Tom Straka

Eagle Scout alums help at Boy Scout Jamboree

Lee Spradlin (’73 B.S., ’75 M.S.) of Lynchburg (left), and Bob Radspinner (’77 B.S.) of Blacksburg were among the many volunteers who helped staff the Society of American Foresters (SAF) booth on the Conservation Trail at the 2017 National Boy Scout Jamboree in West Virginia. The two foresters are both Eagle Scouts.

Organized by the West Virginia Division of SAF, the Conservation Trail features exhibits and activities staffed by foresters, wildlife biologists, and other resource professionals from government agencies and the private sector. The trail offers scouts an opportunity to learn about natural resource professions while having fun in a wooded environment. The SAF booth greeted 2,644 visitors from 48 states as well as scouts and leaders from Australia, Aruba, England, Haiti, Japan, Norway, Sweden, Peru, Taiwan, and Thailand.

Showing Their Hokie Pride! Attendees of the college’s 25th anniversary celebration gathered at the Share Fair held at the Duck Pond (see back cover story). Left to right: Vance Wright (’94), Laurie Wright (’96), Professor Emeritus Dave Smith, Shannon McCabe (’10, ’12), James McCabe (’09), and Easton Loving (’89).
Celebrating 25 years and looking ahead to the future

Some 250 alumni, students, faculty, staff, and friends came together to celebrate the college’s 25th anniversary Sept. 15-16.

The celebration kicked off at Smithfield Plantation on Friday night with Fiddles and Vittles, a casual get-together featuring the New Standard bluegrass band and food truck fare.

Saturday was a full day of festivities, starting early with a breakfast for retired and current faculty and staff. Dean Paul Winistorfer shared the podium with former deans Greg Brown and Mike Kelly.

The focus then shifted to a Share Fair at the Duck Pond, where student groups engaged visitors of all ages in activities and demonstrations, including timbersports, tree climbing, fishing, and drone flights. Faculty tours, nature walks, and a student poster session in the afternoon showcased the learning and research that has given rise to the ranking of the college’s natural resources and conservation program as No. 1 in the nation by USA Today College three years in a row.

The grand-finale jubilee, a business-casual reception and dinner, featured speakers who reflected on the post, gave a snapshot of the present, and looked to the future. The emcee for the evening was alumnus Mike Melo, who chairs the Dean’s Advisory Council.

Alumna Beth Ingalls shared her story about the value of giving back to the college. Students Ebene Smith, Eduard Molina Montoya, Ella DiPietto, and Kenny Townsend each spoke about a different aspect of their college experience.

Guest speaker Guru Ghosh, Virginia Tech’s vice president for outreach and international affairs, applauded the college and gave a birdseye perspective of the university. Winistorfer closed the evening by highlighting the goals and objectives of the college going forward.

About two dozen alumni gathered for an impromptu send-off breakfast at Gillies on Sunday, giving them one more opportunity to connect and catch up before saying, “Farewell, for now.”

Leon Kolankiewicz, class of ’77, was among several who expressed their appreciation:

Thank you so much for putting together such a wonderful 25th anniversary celebration. I saw some old friends and acquaintances, and made some new ones. The events were all splendid. And of course, I’m proud to have a continued role with CNRE, through annual giving that supports students in the Leadership Institute, participation in events in the D.C. area, and staying in touch through the college newsletter and social media. It’s great to know the college is in good hands!

Reflecting on the college’s anniversary, Winistorfer said, “Twenty-five years is a significant milestone. Today our graduates are pioneers discovering science-based, sustainable solutions to global issues with new digital technologies and innovative applications. We are appreciative of our heritage and foundation, and our eyes and our focus are on the future.”

CNRE

Visit cnre.vt.edu/25years to see photos from the weekend plus a touching 10-minute video on the history of the college created for the anniversary celebration.

Hawaiian Shirt Day!

In years past, the college celebrated the end of summer and the start of the academic year with Hawaiian Shirt Day. Professor Dean Stauffer (first row, far left) reinstated the tradition this year, and the college responded in full, floral glory. Thanks to all who participated!

Alumnus Mike Melo served as emcee for the Saturday night jubilee.

Forestry specialist John Peterson gave a guided walk at nearby Pandapas Pond.

A Saturday afternoon tour included a stop at the Freshwater Mollusk Conservation Center, where endangered mussels are propagated for release into rivers in the region.

Alumnus Arthur Egolf (’90 B.S., ’92 M.S. forestry) tries his hand at tree climbing at the Share Fair.

Students (left to right) Kenny Townsend, Ella DiPietto, Eduardo Molina Montoya, and Ebene Smith spoke at the jubilee.

Professor Emeritus Will McDowell and his wife, Doris, were among the guests at the Saturday night jubilee.

Associate Professor Maren Roman watches as her daughter, Sophie, makes paper at the Share Fair’s Wood Magic booth with the help of packaging systems and design student Leah Johnson.

Wildlife conservation major Alex Grimaudo discusses his work on incubation behavior in wood ducks at the Saturday poster session.

Wildlife conservation major Alex Grimaudo discusses his work on incubation behavior in wood ducks at the Saturday poster session.

Alumna Beth Ingalls shared her story about the value of giving back to the college. Students Ebene Smith, Eduard Molina Montoya, Ella DiPietto, and Kenny Townsend each spoke about a different aspect of their college experience.

Guest speaker Guru Ghosh, Virginia Tech’s vice president for outreach and international affairs, applauded the college and gave a birdseye perspective of the university. Winistorfer closed the evening by highlighting the goals and objectives of the college going forward.

About two dozen alumni gathered for an impromptu send-off breakfast at Gillies on Sunday, giving them one more opportunity to connect and catch up before saying, “Farewell, for now.”

Leon Kolankiewicz, class of ’77, was among several who expressed their appreciation:

Thank you so much for putting together such a wonderful 25th anniversary celebration. I saw some old friends and acquaintances, and made some new ones. The events were all splendid. And of course, I’m proud to have a continued role with CNRE, through annual giving that supports students in the Leadership Institute, participation in events in the D.C. area, and staying in touch through the college newsletter and social media. It’s great to know the college is in good hands!

Reflecting on the college’s anniversary, Winistorfer said, “Twenty-five years is a significant milestone. Today our graduates are pioneers discovering science-based, sustainable solutions to global issues with new digital technologies and innovative applications. We are appreciative of our heritage and foundation, and our eyes and our focus are on the future.”

CNRE

Visit cnre.vt.edu/25years to see photos from the weekend plus a touching 10-minute video on the history of the college created for the anniversary celebration.

Hawaiian Shirt Day!

In years past, the college celebrated the end of summer and the start of the academic year with Hawaiian Shirt Day. Professor Dean Stauffer (first row, far left) reinstated the tradition this year, and the college responded in full, floral glory. Thanks to all who participated!

Alumnus Mike Melo served as emcee for the Saturday night jubilee.

Forestry specialist John Peterson gave a guided walk at nearby Pandapas Pond.

A Saturday afternoon tour included a stop at the Freshwater Mollusk Conservation Center, where endangered mussels are propagated for release into rivers in the region.

Alumnus Arthur Egolf (’90 B.S., ’92 M.S. forestry) tries his hand at tree climbing at the Share Fair.

Students (left to right) Kenny Townsend, Ella DiPietto, Eduardo Molina Montoya, and Ebene Smith spoke at the jubilee.

Professor Emeritus Will McDowell and his wife, Doris, were among the guests at the Saturday night jubilee.

Associate Professor Maren Roman watches as her daughter, Sophie, makes paper at the Share Fair’s Wood Magic booth with the help of packaging systems and design student Leah Johnson.

Wildlife conservation major Alex Grimaudo discusses his work on incubation behavior in wood ducks at the Saturday poster session.

Alumna Beth Ingalls shared her story about the value of giving back to the college. Students Ebene Smith, Eduard Molina Montoya, Ella DiPietto, and Kenny Townsend each spoke about a different aspect of their college experience.

Guest speaker Guru Ghosh, Virginia Tech’s vice president for outreach and international affairs, applauded the college and gave a birdseye perspective of the university. Winistorfer closed the evening by highlighting the goals and objectives of the college going forward.

About two dozen alumni gathered for an impromptu send-off breakfast at Gillies on Sunday, giving them one more opportunity to connect and catch up before saying, “Farewell, for now.”

Leon Kolankiewicz, class of ’77, was among several who expressed their appreciation:

Thank you so much for putting together such a wonderful 25th anniversary celebration. I saw some old friends and acquaintances, and made some new ones. The events were all splendid. And of course, I’m proud to have a continued role with CNRE, through annual giving that supports students in the Leadership Institute, participation in events in the D.C. area, and staying in touch through the college newsletter and social media. It’s great to know the college is in good hands!

Reflecting on the college’s anniversary, Winistorfer said, “Twenty-five years is a significant milestone. Today our graduates are pioneers discovering science-based, sustainable solutions to global issues with new digital technologies and innovative applications. We are appreciative of our heritage and foundation, and our eyes and our focus are on the future.”

CNRE

Visit cnre.vt.edu/25years to see photos from the weekend plus a touching 10-minute video on the history of the college created for the anniversary celebration.

Hawaiian Shirt Day!

In years past, the college celebrated the end of summer and the start of the academic year with Hawaiian Shirt Day. Professor Dean Stauffer (first row, far left) reinstated the tradition this year, and the college responded in full, floral glory. Thanks to all who participated!