

Zooming loggers, HIGH-FIVING NATURALISTS, and forest landowner education:

Extension professionals reach out in new ways

In a typical year, getting training on logging practices in Virginia would mean going out into the woods and talking face to face with natural resource professionals. For a volunteer Master Naturalist, service hours might include leading school groups on a hunt for wild mushrooms. And forest landowners would look forward to getting together with peers and professionals to share ideas and swap success stories.

But in this year of Zoom meetings and social distancing, getting people together to learn about natural resources is a steeper challenge. In response, Virginia Cooperative Extension personnel affiliated with the college are implementing new ways to provide outreach to the individuals and communities they serve. Surprisingly, they are finding that new approaches can yield positive benefits.

“At the foundation of our land-grant mission is our service to the people of the Commonwealth of Virginia,” said Dean Paul Winistorfer. “Our core outreach programs exemplify public service and engagement, and we’ve not missed a beat during COVID.”



The SHARP Logger Program modified its three-module core training in response to the pandemic. The first session, in March 2020, was in person, the second online, and the third (pictured) was held in person in September 2020 according to recommended protocols.

LOGGERS GET SHARP ON VIRTUAL LEARNING

Virginia’s SHARP (Sustainable Harvesting and Resources Professional) Logger Program provides training for loggers and other professionals. “Our programs meet the Sustainable Forestry Initiative’s logger training requirements, and most of the large forest industry companies in Virginia require loggers to attend this training,” explained Associate Professor Scott Barrett, who supervises the program. “The forest industry has a vested interest in the sustainability of forest resources.”

Participants complete an initial core training program and then maintain their status by earning 12 continuing education credits every three years. “We’ve had some online training available for several years, but we’ve had to significantly increase our online and virtual offerings,” said Extension Associate Karen Snape, who provides support for the program. “We’ve adjusted to offer our courses online and asynchronously, and expanded our offerings of continuing education courses.”

Asynchronous courses do not have set meeting times; each individual can learn at their own pace. One benefit is that loggers who would ordinarily have to take days off work can more easily accommodate classes into their demanding work schedules. “Most loggers are working on a production basis. When they have to take a day off for training, that can impact them significantly,” Barrett said.



The Virginia Forest Landowner Education Program was able to offer its popular Fall Forestry and Wildlife Field Tours in person in 2020 by incorporating several COVID-19 mitigation protocols.



In addition to offering many programs online during the pandemic, Virginia Master Naturalists have continued to work on stewardship projects while following health and safety protocols. Photo by Todd Minners, Arlington Regional Chapter of Virginia Master Naturalists.

Snape notes that participants have adjusted surprisingly well to virtual training. “I’ve definitely seen an increase in their comfort level. Maybe it’s having kids doing school online or connecting with loved ones via Zoom, but their capacity to make use of our online resources has improved.”

VIRGINIA MASTER NATURALISTS PITCH IN

The Virginia Master Naturalist Program, a statewide organization of 29 chapters and more than 2,200 volunteers, works to provide education, outreach, and service to individuals and communities through citizen science and stewardship.

“There is still a big demand for people wanting to become Master Naturalists,” said Program Director Michelle Prysby. “But the pandemic put the brakes on a lot of what our volunteers are able to do. A message from me to volunteers is to do what you can, and we’ll do what we can to find alternative ways to keep people engaged.”

Many of the regional chapters have moved their meetings online, and the program has increased opportunities for online learning, providing more than 20 webinars to connect volunteers to new service projects and learning opportunities.

Debbie McDonald (’77 B.S. biology), a Master Naturalist in Fairfax County, has been helping the chapter adjust to the challenges. “We were in the midst of our spring basic training course

when the COVID outbreak struck,” said McDonald, who is a member of Virginia Tech’s Ut Prosim Society. “We had to transition to a virtual classroom for the 12-week course and figure out a way to do smaller field trips that met state guidelines, which was a huge commitment for our trainers and presenters.”

Another outreach effort is the High Five From Nature webinar series, each of which covers five concepts or facts about subjects ranging from stream water quality to invasive insects to Virginia songbirds. “The videos have been really popular,” Prysby said. “People are looking for something to do at home, and one thing that really unites our volunteers is that they love to learn. Some of the videos are narrated by Master Naturalists, so there’s a lot of peer-to-peer learning taking place.”

(OUTREACH continued on page 3)

From the Dean's Perspective

I am very proud of how our college has adapted to continuing our work during the COVID-19 pandemic. You may never realize the strength or quality of your organization until it has been tested. I am surrounded by committed, skilled, quality people who are actively fulfilling our responsibility to deliver the best educational experience, the best science and research discoveries, and a phenomenal outreach program — and are doing it with grace and kindness. Thank you colleagues, and thank you to the many friends, stakeholders, alumni, and others who continue to support us and stay engaged with us.

One group that has been critical in support of our students and faculty during the pandemic is the Advising Center. I want to acknowledge the work of Stephanie Hart, director of academic programs, and the entire team. They have really stepped up in support of our students.

In recent years, Virginia Tech embarked on an important project to update and replace the core curriculum — those courses or categories of courses that are required of all students across the curricula. As part of this process, Pathways minors were developed so that students could fulfill general education requirements while examining an important topic from a variety of perspectives. We now have five of these minors in the college, which are open to enrollment from students across campus (see story on page 4).

Each Pathways minor presents a wonderful opportunity for students from within the college as well as other disciplines to add to their knowledge by exploring a theme, such as learning more about water resources through the Blue Planet minor. Experiencing a discipline in depth is critical for success in today's complex world, but so is gaining exposure to current themes that cut across disciplines. The work we do in the college is important to everyone on this planet, and the Pathways initiative represents yet another way that we are relevant to the mission and success of Virginia Tech and our students.

Also in relation to serving our students, please connect with John Freeborn (freeborn@vt.edu), director of employer relations, if you have or know of employment opportunities for our students: volunteer work, internships, summer jobs, permanent positions, or access to your network where you can help make a connection. Thank you for your help.


We just crossed the fall 2021 admission application deadline, and the college has a record high number of applications. Our degree programs and career opportunities remain in strong demand. I have great confidence in the future knowing there are so many students who want to make a difference.

I hope you, your families, organizations, and businesses are holding up during the many challenges of COVID-19.



Please contact me if we can help you in any way. Brighter days are ahead.

Warm regards from our faculty, staff, and students,

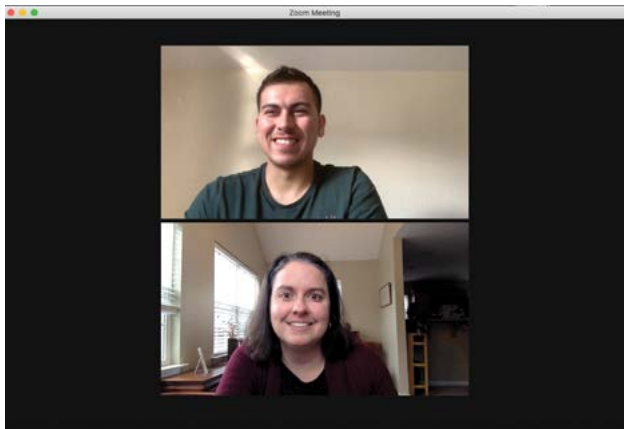

Paul M. Winistorfer
Dean

VIRGINIA TECH.
BOUNDLESS
IMPACT

Academic advising during a pandemic

by Stephanie Hart, director of academic programs

The college's Advising Center provides advising, recruitment, and support services to prospective and current students, as well as faculty, staff, and others in the community. With the onset of the pandemic, we had to rethink how we could support these groups in a virtual world. Although we have encountered some challenges, it has encouraged us to think creatively about how we can continue to accomplish our mission.

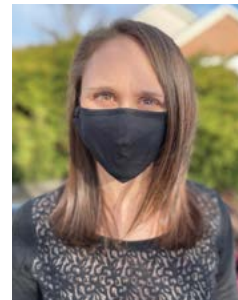


Academic Advisor Lauren Varboncoeur meets with wildlife conservation senior Kyle Hanes over Zoom.

At the start of the pandemic, our academic advisors quickly shifted all advising meetings to Zoom, Google Meets, or phone. While there was an initial learning curve, we all now feel both comfortable and confident meeting with students virtually. Another issue was that we needed to quickly find a new way to manage the flow and submission of forms. Thanks to the DocuSign online platform, we implemented a secure and effective solution. With additional workflow technologies that are being developed, I predict that paper forms will likely remain a thing of the past.

While the spring 2020 semester was winding down, we were also gearing up for new student orientation. We

spent a significant amount of time revising the orientation process from an in-person to a virtual experience, and decided to hold individual meetings with each of our incoming students via Zoom. With approximately 260 new students, it was a significant undertaking, but it helped us connect with our students during a time when we all felt distanced. With each student receiving a 45-minute advising appointment, these meetings accounted for approximately 200 staff hours.



Stephanie Hart

Our work on recruitment has shifted drastically during the pandemic as well. Prior to March 2020, much of our recruiter's time was spent traveling to events and meeting with prospective students in person. Like our advising appointments, we quickly shifted our prospective student meetings to Zoom. Some of the large-scale events, such as Open House, were also moved to a virtual platform.

One unanticipated benefit of these virtual events and meetings is that it increased access for our students. By removing barriers such as travel costs, distance, and time off work or school, we can reach students who may not have been able to join us in person. However, we also understand that for those who prefer an in-person event, a virtual platform may not provide them with the experience they desire. When we move back to in-person operations, we now know how to effectively offer experiences both in-person and virtually.

As I reflect on the past year, I appreciate how the new challenges have helped us grow. I am also extremely thankful to work alongside a resilient team that is committed to the success of our students. We miss our students, faculty, and staff, and we can't wait for the Advising Center to once again be buzzing with activity!



URBAN FORESTRY receives \$5,000 Gear Up Award

Virginia Tech's urban forestry program received a \$5,000 Gear Up Award from STIHL USA and the Tree Care Industry Association. The funds were used to purchase a variety of power equipment and personal protective equipment (PPE) from STIHL for use in urban forestry and arboriculture courses. Virginia Tech, one of five schools selected for the award, was recognized at the TCIA Virtual Summit in January. "Providing students with hands-on learning experiences using the latest technology in tree care equipment gives them a competitive advantage as they enter the urban forestry workforce," said Associate Professor Eric Wiseman.

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New director of INCLUSION AND DIVERSITY



“Dr. Kamran was trained as a scientist first, and she understands the science behind the disciplines of the college.”

Maryam Kamran began work as the college’s new director of inclusion and diversity in January. She is tasked with leading inclusion and diversity initiatives within the college and teaching courses that examine identity and equity through the lens of natural resources and the environment.

Kamran most recently conducted postdoctoral research at Oregon State University on the homing techniques of hatchery-raised salmon. The role required her to do outreach in local communities, fostering relationships between state and federal agencies, indigenous communities, local fishermen, and the broader public. “The nature of my research work has sometimes taken me to places where I am the only person of color in the room. It is an isolating experience, regardless of your level of expertise, and I’ve worked hard to be an advocate for other underrepresented people working in our field.”

She earned her doctorate in biological sciences from Bowling Green State University, where she served on the President’s Advisory Council on Diversity and Inclusion to help improve the recruitment and retention of underrepresented students. She was later selected as president of the Graduate Student Senate and worked to identify barriers for successful recruitment and retention of faculty and students of color.

Dean Paul Winistorfer notes that Kamran’s background as a researcher gives her a unique perspective on the challenges of bringing students from a range of backgrounds to the college. “Dr. Kamran was trained as a scientist first, and she understands the science behind the disciplines of the college,” he said. “She will bring a strong foundation and understanding to her work as she aspires to make a significant contribution in advancing inclusion and diversity in the college.”

Full story: cnre.vt.edu/spring2021mag

(OUTREACH continued from page 1)

Of course, most people who choose to become Master Naturalists do so because they love the outdoors. With outdoor recreation being one of the safest activities during COVID, parks and other natural areas have seen a dramatic spike in visitors, and Master Naturalists have pitched in to help. “There’s a great demand on staff in our state and national parks. While our volunteers aren’t a replacement for those key workers, they at least provide an element of consistency,” Prysby noted.

FROM WOODLAND RETREATS TO ONLINE MEETS

The Virginia Forest Landowner Education Program targets new and experienced forest landowners while also serving as a conduit between landowners and federal, state, and local agencies and partnerships committed to the positive stewardship of natural resources.

“Our goal is to educate landowners so that they can make good decisions about their forestland,” explained Program Coordinator Jennifer Gagnon. “We strive to get new and established landowners involved and informed about how to be good stewards of their land.”

Gagnon stresses that while hands-on, in-person education is the strength of the program, finding alternative ways to reach landowners has pushed her to learn new skills. “Our strength is in-person work, in putting equipment in people’s hands to show them what we’re talking about. Peer-to-peer education is powerful, and it is difficult to replicate online, so we had to take a step back and rethink how to keep landowners engaged.”

One effort that has seen a positive change is Preparing for Generation NEXT, a workshop aimed at helping landowners plan a family legacy for their land. “For 10 years we’ve struggled to get multiple generations of a family in a room together,” Gagnon said. “This year we had to convert those workshops online. To our surprise, we found that the format made it easier for generations of families to participate together.”



Even though SHARP Logger training sessions are currently taking place remotely, there is no replacement for face-to-face interactions and demonstrations. The program plans to resume in-person training over the summer.

Another success is a video series called Fifteen Minutes in the Forest, where experts present forest topics ranging from invasive plant species to how to age deer jawbones to Virginia’s Christmas tree industry. “It’s been a steep learning curve, from figuring out how to use video editing software and how to film effectively in the woods,” Gagnon admitted. “But we now have 45 videos and 350 subscribers on our YouTube channel, and we’ve heard that teachers are using our work in their classrooms. It’s gotten people engaged, and we plan to continue this series going forward.”

RETURN TO (A NEW) NORMAL

Extension personnel are looking forward to getting back to the in-person outreach work that lies at the core of their mission. But if there is a silver lining to a disrupted year, it is that staff and volunteers have been challenged to find new ways to engage with individuals and communities.

“This year has really pushed us out of our comfort zones,” Gagnon said. “We’ve been challenged to learn new technologies and figure out new avenues to satisfy our goals. None of this was what any of us anticipated, but the changes we’ve made will have positive and long-lasting effects.”



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PATHWAYS MINORS

tackle the challenges of the future

NEW MINORS TARGET STUDENTS INTERESTED IN GLOBAL NATURAL RESOURCES

Concepts like sustainability and conservation are not linked to any one discipline. The demand for clean water or the dream of ecologically balanced cities will not be achieved by researchers in any one field. The global impacts of climate change cannot be understood through the lens of any one major.

Instead, the solutions for tomorrow require students of today to be able to think across disciplines, be versed in a range of perspectives, and have the confidence to work collaboratively with others.

Virginia Tech's Pathways to General Education curriculum, which now includes more than two dozen Pathways minors, is structured around core and integrative concepts that provide students with a meaningful education experience.

The Pathways minors offered through the College of Natural Resources and Environment aim to provide students with a base of knowledge on some of the central environmental and natural resources challenges the world faces, while fostering engagement and connection across all of the colleges at Virginia Tech.

"Our five Pathways minors extend the disciplines, knowledge, and expertise of our faculty and college to new student audiences on campus," said Dean Paul Winistorfer. "I am a strong proponent of the Pathways initiative as an educational vehicle for broadening discourse and building bridges to other colleges. Our faculty have put together interesting, exciting, and relevant minors that are central to the global challenges of today and the future."

Helping students with a hard choice

For many students at Virginia Tech, choosing a major is a fraught decision.

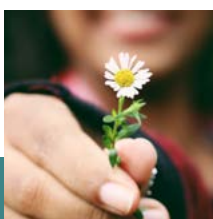
"Coming to college, I was having a big conflict," said sophomore Ella Waide. "I love civil engineering and sustainable urban development, but I also love ecology, biology, and environmental science. I was trying to find an intersection between those two interests, but they don't really converge academically, so I felt like I had to choose."

For Waide, the Pathways minor in Biodiversity Conservation gave her the opportunity to gain a background in conservation challenges through a biological perspective while pursuing a major in civil engineering.

"We have students from different majors in which their careers and the decisions they make will relate to or affect natural resources in some way," said Professor Dean Stauffer of the Department of Fish and Wildlife Conservation, who designed the minor. "It's important for us to provide a way to help them understand how their decisions fit into a broader environmental context."

From silos to themes

The Pathways curriculum requires students to take a total of 45 credits across seven core and two integrative concepts. Students can choose to pursue a Pathways minor as a means of completing a portion of those credits in a thematic program. Pathways minors include a foundational experience that introduces the minor as well as a capstone course that summarizes and offers opportunities to apply and engage with the central focus of each minor.



BIODIVERSITY CONSERVATION

Provides students with a global perspective on how biological diversity impacts broader environmental systems, and why it is crucially important to protect our planet's animal and plant populations.

Faculty lead: Dean Stauffer



BLUE PLANET

Focuses on the role that water plays in connecting society with the environment, with considerations of the challenges of sustainably managing water resources.

Faculty lead: Stephen Schoenholtz



CLIMATE AND SOCIETY

Students learn about the social, environmental, and economic impacts of climate change with an aim at understanding how climate policy at the local, national, and global level is attempting to meet this challenge.

Faculty lead: Carol Franco



SPOTLIGHT on the new Climate and Society Pathway



Carol Franco (second from right) and several other members of the Dominican Republic delegation with former Vice President Al Gore at the 2015 U.N. Climate Change Conference in Paris.

Climate and Society — the newest Pathways minor based in the college — aims to provide students with a global perspective on the science behind climate change, as well as a real-time understanding of the policy efforts taking place to tackle a global challenge.

“Right now, climate change is impacting society across all areas,” said Senior Research Associate Carol Franco, who leads the minor. “From increasing greenhouse gas emissions to stronger storms to health issues like vector diseases, we have interconnected challenges that impact every field you can work in.”

Franco knows firsthand how efforts to mitigate negative outcomes are being trialed: as an active participant in the United Nations REDD+ framework, Franco has contributed to decisions about forest and land conservation efforts, representing the Dominican Republic. In 2017, Franco led a first-ever delegation of Virginia Tech faculty and students to the U.N. Climate Change Conference, and the university was recognized as an observer organization to the meetings.

“It is crucial that students are versed on the science and policy of climate change,” said Franco, who teaches the capstone course Climate Change and the International Policy Framework. “But it is equally important that they understand how change happens, from the local level all the way up to the international level. This Pathway gives students that valuable perspective.”

AL RESOURCES CHALLENGES

“From the outset of these programs, there was a strong call for interdisciplinary opportunities among students,” said Stephen Schoenholtz, professor in the Department of Forest Resources and Environmental Conservation and director of the Virginia Water Resources Research Center, who leads the Blue Planet minor with Research Assistant Liz Sharp. “These minors are academically rigorous: students who take upper-level courses through the minor are expected to meet the same course expectations as students who are majoring in the subject.”

Stepping out of one’s “silo” or area of expertise is a distinct challenge for students. It is also an opportunity for growth.

“Pathways are a step away from our disciplinary obsessions,” noted Associate Professor Timothy Baird of the Department of Geography, who leads the Pathways to Sustainability minor. “One of our goals is to encourage students to learn to deal with subjectivity, which is less about the right answer to a problem and more about what approaches and perspectives are required to tackle a specific challenge.”

In practice, that broadening of perspectives becomes apparent in the classroom, where students coming from a range of majors meet to discuss core and integrative concepts.

“My path has always been in soil and agriculture,” said Aaron Price, a junior majoring in crop and soil sciences who is enrolled in the Blue Planet minor. “A lot of what I do is science-heavy, but this minor has been useful in getting a grasp on the applications side of the field, particularly in regard to policy. There’s a wide range of backgrounds, especially with climate and weather science, and that’s definitely broadened my point of view.”

For educators, having students with different perspectives lends an added dynamism to classroom discussions.

“When you have a class with students from different fields and disciplines, it greatly enriches the experience,” explained Senior Research Associate Carol Franco of the Department of Forest Resources and Environmental Conservation, who leads the new Climate and Society minor. “The best part of having an interdisciplinary group is that, when they discuss among themselves and challenge and learn from each other’s perspectives, I just sit back and let them run the show.”

Preparing for global challenges

Having the capacity to think critically — and broadly — isn’t just important for developing well-rounded students: it is a skill set that is increasingly sought by employers.

“If we’ve learned anything from the past year, it’s that the challenges, experiences, and questions of today cannot be solved with a single set of tools,” said Stephen Biscotte, director of the Office of General Education. “By completing a Pathways minor, our students graduate with knowledge and perspectives that complement their major and broaden their skill set, details that prepare them for — and set them apart in — a job market that is increasingly connected and diverse.”

For senior Murari Parasu, the Biodiversity Conservation minor has given him a crucial perspective on his major in sustainable biomaterials.

“It’s provided a very important dimension to my learning,” he said. “Sustainability doesn’t include one thing: you have to consider how actions impact our lives, our future societies, and the natural world, including wildlife and the environment as a whole. They’re different, fast-moving parts, but it’s an important consideration for sustainability work.”



ECOLOGICAL CITIES

How we design, create, and manage cities and urban areas will have tremendous impacts on our future quality of life, and the impacts our cities have on the global environment. This minor considers how to integrate the natural world into a built world, so that we all benefit.

Faculty lead: Eric Wiseman



PATHWAYS TO SUSTAINABILITY

Understanding sustainability requires students to have a range of perspectives. Students will gain strategies to think objectively and subjectively, while learning how to integrate diverse perspectives towards the goal of a more sustainable future.

Faculty lead: Timothy Baird



**Center for
Emerging,
Zoonotic, and
Arthropod-borne
Pathogens**

NEW CENTER TO TACKLE INFECTIOUS DISEASES

Infectious diseases are constantly emerging and reemerging worldwide, causing immense threats to the health of humans, animals, and plants. This is especially clear as researchers worldwide tackle the COVID-19 pandemic. To meet this challenge, Virginia Tech has created the **Center for Emerging, Zoonotic, and Arthropod-borne Pathogens**, housed in the Fralin Life Sciences Institute.

The center will focus on local and state issues in infectious diseases, such as microbial contamination in drinking water in rural areas, Lyme disease, bat white-nose syndrome, microbe-related food safety, and COVID-19 prevention. It will develop science-based solutions for issues related to infectious diseases, educate graduate students to effectively communicate their research results, and provide interdisciplinary research training opportunities for graduate and undergraduate students.

Professor Korine Kolivras of the Department of Geography, who serves on the center's Advisory and Leadership Committee, said, "With the formation of the center, faculty and students alike now have a central point to build the research, teaching, and outreach relationships necessary to address pressing concerns at global down to local scales. The development of such connections is especially critical and timely during the COVID-19 pandemic."

The center includes faculty from seven Virginia Tech colleges representing over 25 departments. Affiliated faculty in the college include Kathleen Alexander, Willandia Chaves, Luis Escobar, and Mark Ford of Fish and Wildlife Conservation; Luke Juran of Geography; Kevin Edgar of Sustainable Biomaterials; and Peter Sforza of the Center for Geospatial Information Technology.

Full story: cnre.vt.edu/spring2021mag

Student earns **Aspire!** Award

Rachel Spector's drive to make the world a better place through climate justice is evident. She organized the 2019 Blacksburg Climate Strike, co-founded Virginia Tech for Climate Justice, and worked with university administration to rewrite the outdated 2009 Climate Action Commitment. "In the face of climate catastrophe, it is more important than ever that we build a youth movement equipped with the tools to combat it," she said.



Rachel's efforts earned her the Aspire! Award for Courageous Leadership from Virginia Tech Student Affairs. "I felt like I was doing what I was meant to do — organize, inspire, and educate people about the crisis we face. After feeling alone for so long, it was surreal to have finally found my people," said the senior environmental conservation and society major who is also pursuing minors in sustainable natural environments and leadership and social change.

For Rachel, courageous leadership means "stepping outside of your comfort zone to raise your voice against an unjust system. It means breaking social norms and not being afraid to be controversial in order to fight for justice. It means seeing a problem and being motivated to do something about it." We couldn't agree more. Congratulations, Rachel!

Leaping lemurs and **hidden hellbenders:**

DECEMBER GRADUATES GET UP CLOSE TO WILDLIFE

Margot Breiner and **Giovanni Walters** — both wildlife conservation majors in the December 2020 graduating class — had experiences that reflect the Department of Fish and Wildlife Conservation's goal to provide students with hands-on experiences in conservation that go far beyond the classroom.

For Breiner, choosing to study at Virginia Tech meant walking away from a different passion. "While working at a family winery, I got involved in the Virginia Master Naturalist Program. That experience really opened my eyes to the idea that studying wildlife was my passion."

She gained valuable experience in Professor William Hopkins' lab, trading the chemistry of wine for the chemistry of water to support research on hellbender salamanders. "I analyzed water chemistry on samples that the research team brought back to the lab," she said. "I was also really lucky to go out into the field a few times to see the team work with hellbenders in person, which was an incredible experience."

Breiner also excelled in the classroom: she was selected to receive the Phi Kappa Phi Medallion Award, presented to the top graduating senior in each college at Virginia Tech.

Half a world away, Walters got to experience the extremes of the field in Madagascar, where he supported two research projects: one studying the impacts of climate change on the golden crowned sifaka (a species of lemur) and another making population estimates for vertebrates on the African island. "It was a great experience. I got to see a lot of amazing wildlife and interact with the local community, and I really felt that I was making a difference."

More recently, he conducted research with the U.S. Fish and Wildlife Service in New Mexico, surveying several wildlife species and improving habitat conditions for rare animals while adjusting to the challenges of fieldwork in the time of COVID. "It was pretty rough. We got assigned our own vehicles, couldn't share dorms, and had to stay 6 feet apart in the field. There are already a lot of physical demands, from the heat to the biting insects, and to do all of that in a mask while trying to stay at a distance was extra difficult."

Breiner plans to gain experience as a field technician before attending graduate school, while Walters is considering applying to the Peace Corps and hopes to work with wildlife overseas. **Full story:** cnre.vt.edu/spring2021mag



Margot Breiner



Giovanni Walters

**Upcoming
virtual events**

**CNRE LEADERSHIP
INSTITUTE REUNION**

March 25

aimsbbis.vt.edu/CNRE-032521-LI-Reunion

March
25

**CNRE SCHOLARSHIP AND
AWARDS CELEBRATION**

April 8

Details TBA

April
8

WILLIAM HOPKINS

receives Virginia's highest faculty honor



William “Bill” Hopkins received a 2021 Outstanding Faculty Award from the State Council of Higher Education for Virginia (SCHEV) and Dominion Energy. The award, which recognizes commitment to excellence in teaching, research, knowledge integration, and public service, is the highest honor awarded to faculty at Virginia colleges and universities.

Hopkins, a professor in the Department of Fish and Wildlife Conservation, researches the ways that wildlife responds to climate change, habitat loss, and other global

threats, and is spearheading research about how human impacts to the environment influence the physiological processes and behaviors of wildlife.

He was named associate executive director of Virginia Tech’s Fralin Life Sciences Institute last year, a role in which he will help develop and implement the vision and strategic directions for the institute. He is also the founding director of the institute’s Global Change Center and director of the Interfaces of Global Change interdisciplinary Ph.D. program.

One of 12 professors across the commonwealth to be honored this year, Hopkins joins an elite group of three dozen Virginia Tech faculty members who have previously received this award. “To receive this recognition is a tremendous honor,” he said, “but it is only possible because I am lucky enough to be part of an amazing collaborative community. I feel so fortunate to be at a world-class institution, surrounded by innovative colleagues and stellar students, doing what I love most.”

Full story: cnre.vt.edu/spring2021mag

In memoriam: BONHAM RICHARDSON

Professor Emeritus **Bonham “Bon” C. Richardson** passed away on November 18, 2020, at the age of 82. Richardson, a faculty member in the Department of Geography from 1977 until his retirement in 2003, established the graduate program in the department in the 1970s and served as its director for many years. In his academic career as a cultural geographer, he received major grants from the National Geographic Society and the National Science Foundation supporting his field and archival research in Guyana, Grenada, St. Kitts, Barbados, London, and Washington, D.C. Read his full obituary, with generous contributions from former colleagues, at legcy.co/35k3wxC.



ALUM LEAVES A LEGACY

A scholarship recipient himself as an undergraduate, alumnus **William “Bill” Gabriel** (’56 B.S.) endowed the Herman William Gabriel Scholarship many years ago to pay forward for future CNRE students the generosity he received. Upon his recent passing, Gabriel’s estate left a significant gift to grow his endowed fund, thus increasing the number of students whose lives will be positively impacted for years to come. “Dr. Gabriel spent his life committed to service, and his legacy will be remembered and continued because of his generosity,” said Julia Allen, assistant dean for advancement. If you would like to learn about ways to leave a legacy of support for CNRE through your estate plans, contact Julia at juliapallen@vt.edu or 540-231-8859.



New Faculty

Willandia Chaves

Assistant Professor,
Department of Fish and
Wildlife Conservation
Ph.D. (2016), M.S. (2009)
University of Florida; B.S. (2001)
Universidade Federal do Acre
(Brazil)

Expertise and research focus:
how urbanization affects people and biodiversity; wildlife trade; how to increase access to nature and the natural sciences, especially by underrepresented groups



Patrick Corey Green

Assistant Professor, Department
of Forest Resources and
Environmental Conservation
Ph.D. (2020) Virginia Tech;
M.S. (2015), B.S. (2010)
University of Georgia

Expertise and research focus:
forest biometrics, forest
inventory, remote sensing
applications in forest management



Brett Jesmer

Assistant Professor,
Department of Fish and Wildlife
Conservation
Ph.D. (2018) University of
Wyoming; B.S. (2006) SUNY
College of Environmental
Science and Forestry

Expertise and research focus:
behavioral ecology, animal
movement, nutritional ecology, demography,
conservation and management of mammals



VIRGINIA TECH BLACK ALUMNI REUNION

April 12-18
alumni.vt.edu/bar

April
12-18

VIRGINIA TECH COMMENCEMENT

May 14
vt.edu/commencement

May
14

VIRGINIA TECH REUNION WEEKEND

June 10-13
alumni.vt.edu/reunion2021

June
10-13

News from around the college

HOW DO PLANTS affect soil microbiomes?

There are an estimated 1 billion cells and thousands of species of microbes in a single gram of soil, making it an extremely complex microbiome. The soil microbiome has strong effects on how ecosystems function but is difficult to directly alter. Utilizing a \$500,000 USDA National Institute of Food and Agriculture grant, Associate Professor Brian Strahm is co-leading an interdisciplinary team researching whether crop mixtures can be designed to change the soil microbiome indirectly with predictable outcomes and benefits. The underlying principle behind the work is to examine how multiple plant species, like those you might find in cover crops, affect soil. The end goal is to design mixtures that maximize plant diversity in different ways based on results from individual plants.

Full story: cnre.vt.edu/spring2021mag



\$10 MILLION GRANT to foster new sustainable BIOMASS RESEARCH

Funded with a \$10 million grant, a new consortium is bringing together university researchers, government agencies, and industry leaders to develop a new and sustainable economy of renewable agricultural crop and forest biomass products and materials. Areas of focus include land reclamation, biomass crop production, forest residue utilization, supply chain logistics, and bioproduct development. Co-principal investigator Chad Bolding, professor of forest operations and engineering, will focus on the utilization of forest residues — secondary materials such as branches and treetops left behind after traditional forest products are transported to mills. He will examine the option of allowing “green” wood residues to dry on site for a period of months. “We’re working to find the



right balance between reducing moisture content and minimizing processing challenges and associated hauling cost,” he said. Bolding is also involved with the project’s education and outreach components, including an undergraduate scholars program for students from the participating universities.

Full story: cnre.vt.edu/spring2021mag

VIRGINIA'S BIG TREE PROGRAM balances science and community engagement



Photo by Alexandra Cassell

Not only did 2020 mark the 50th anniversary of the Virginia Big Tree Program, but the state also moved into first place on the National Register of Champion Trees! These achievements, however, don’t reflect the entirety of the Big Tree Program. “The central purpose is to promote the conservation and preservation of these heritage trees and to raise the general public’s knowledge and literacy about forests,” said Associate Professor Eric Wiseman, who leads the program. He added that the hard work of finding and documenting big trees is accomplished by outdoor enthusiasts and professionals. “Our success wouldn’t be possible without all of the volunteers who search for trees as a hobby or as part of their profession, and the people who work in arboriculture or land management roles for state agencies or federal parks.” While the program allows

people who are passionate about trees to contribute to a database of information, Wiseman hopes that the program can be a resource for bringing environmental education to young students. Full story: cnre.vt.edu/spring2021mag



Predators form unusual coexistence

Pumas and culpeo foxes are the only top predators in the central Chilean Andes, providing researchers with new insights into how predators coexist in the wild. Professor Marcella Kelly and graduate student Christian Osorio charted the locations and potential interactions between the two predators, focusing on three axes: spatial (location), temporal (timing), and dietary. They found that while pumas and foxes overlapped where they lived and what time they were active, there was little overlap in what they were eating. The two predator species can successfully share a landscape and hunt for food over the same nighttime hours because they are, in essence, ordering from different menus. Understanding how two predatory species can come to coexist has the potential to provide conservationists and ecologists with better ideas for how humans and wild animals can share a landscape. Full story: cnre.vt.edu/spring2021mag

Third Thursday LUNCH & LEARN Webinars

Join us every third Thursday at noon for an in-depth discussion with a faculty expert. Watch for registration details and additional webinars via email and social media. Missed a webinar? Find recordings of all past programs at cnre.vt.edu/getinvolved#webinars.

March 18, 2021
Getting your deck ready for spring, with Joe Loferski

April 15, 2021
Who feeds birds and why, with Ashley Dayer

May 20, 2021
This is home—exploring the trees of Virginia Tech, with Jamie King

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