VIRGINIA MASTER NATURALIST STATEWIDE CONFERENCE

FRIDAY, SEPTEMBER 27 - SUNDAY, SEPTEMBER 29, 2024 Online Via Zoom Events





Virginia Master **Naturalists**

CONNECTIONS: HUMANS, NATURE, AND THEIR MUTUAL IMPACTS



Our 2024 Virginia Master Naturalist conference theme focuses on the role that VMN volunteers can play in building positive connections between people and the rest of the natural world in which we exist. Research shows that time spent in nature has positive benefits for human physical, mental, and social well-being. Unfortunately, individuals often face barriers to spending more time in nature or do not have correct information about natural resources. And, humans' impacts on species, ecosystems, and natural resources can be positive or negative, depending on our actions.

Virginia Master Naturalist volunteers are well-positioned to help people build more positive connections to nature. They can provide safe and enjoyable experiences in nature along with research-based information through their educational programs. They can also steward publicly accessible natural areas so that they are better spaces for both humans and native flora and fauna. In addition, VMNs can help increase our understanding of natural resources through science.

Sessions in this conference may be focused on a particular species or ecological system, a natural resource issue or management strategy, a volunteer project, or a skill, but all of them will relate in some way to connections between humans and the natural world.



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SCHEDULE AT-A-GLANCE



Friday, September 27

6:00-6:55 pm - Celebrating Our Connections: A Virtual Reception

7:00-8:00 pm - Ornitherapy : The Power of Mindful Birding - Holly Merker

Saturday, September 28

8:00-8:50 am - Connecting Over Coffee: Chats with VMNs

9:00-10:00 am - Concurrent Sessions Block 1

- Coexisting with Beavers Alison Zak
- Wildlife Rehabilitation Records Reveal Impacts of Human Activities on Wildlife Health *Dr. Tara K. Miller*
- Community Science: Nature Education Through Data Collection *Jaimie Matzko*
- Forest Health Invaders Lori Chamberlin

10:15-11:15 am - Concurrent Sessions Block 2

- Lighting Matters Laura Greenleaf
- Virginia'a New Invasive Plant Coalition: Opportunities for Master Naturalists -Lauren Taylor
- The Insect Apocalypse Dr. Shawn T. Dash
- Virginia Climate Our Synergistic Bond Dr. Andrew Ellis

11:30 am - 12:30 pm - Sponsor News - VMN Sponsoring Agency representatives

Afternoon (various times) - Local Learning and Service Activities - *Chapter-organized or volunteers on their own*

7:00-8:00 pm - VMN Educators Bureau Flash Talks

Sunday, September 29

8:00-8:50 am - Connection Through Service

9:00-10:00 am - Considerations Towards More Inclusive Participatory Science - *Deja Perkins*

10:00 am onward (various times) - Local Learning and Service Activities -*Chapter*organized or volunteers on their own

SESSION DESCRIPTIONS



DAY 1

Friday, September 27

CELEBRATING OUR CONNECTIONS: A VIRTUAL RECEPTION, 6:00-6:55 PM

Grab your preferred evening beverage, settle in at your device, and let's connect. Even virtually, we can find and participate in meaningful interactions. Using our Zoom Events platform, we will work to do just that.

ORNITHERAPY : THE POWER OF MINDFUL BIRDING, 7:00-8:00 PM

Long to-do lists, digital demands, life can be busy! If we allow birds and nature to slow us down, we are practicing "selfcare". Research shows that connecting with birds and nature actively reduces stress, depression, and anxiety, while helping build a stronger heart and immune system.

Wild birds offer the perfect gateway into deeper experiences with nature. Through observation, we can learn not only about birds, but gain insight into our own lives while exploring our connection to the world around us. This fosters stewardship and bolsters conservation.

Within the program, we'll delve into our connections to wild birds, how to maximize the wellness benefits of birding, and learn about the latest research surrounding the impact of birds on human health and why we need birds for overall wellbeing.



Presenter: Holly Merker Mindful Birding Specialist & Certified Nature and Forest Therapy Guide, Ornitherapy & Nature-based Wellness, LLC

Holly Merker is a nature-based wellness specialist, professional birding guide, author, and lecturer who provides programming for people of all ages. Combining backgrounds in art therapy, nature and forest therapy, wellness counseling, and bird identification, she is a global advocate for the practice of Mindful Birding, coauthoring two books which guide readers into optimizing the wellness benefits birds provides us, including the award-winning Ornitherapy: For Your Mind, Body, and Soul (Crossley Books, 2021), and The Power of Birdwatching (Die Kraft Der Vogel Beobachtung, Freya verlag, 2023 - available in Europe only), along with Dr. Angelika Nelson. In 2022, Holly was honored to be the recipient of the ABA Conservation and Education Award given by the American Birding Association for her work in both those areas involving birds, and has been featured in numerous articles and interviews around the world on the subject of Ornitherapy. In her free time, Holly spends every possible moment practicing Ornitherapy, which she credits in helping defeat breast cancer, restoring her health mentally and physically.

CONNECTING OVER COFFEE: CHATS WITH VMNS, 8:00-8:50 AM

While sipping your morning coffee, meander through the VMN Expo Hall in our Zoom Events platform to see and be seen. You can stop and chat with other VMNs you find there and check out exhibits.

CONCURRENT SESSION 1, 9:00-10:00 AM

Coexisting with Beavers

This talk will explore the fascinating behavior, ecology, and life history of the North American Beaver. We will examine historic population trends and the ecological benefits of beavers and the habitats they create. Additionally, we'll offer practical strategies for coexisting with beavers, addressing common challenges such as tree damage and flooding. This talk is perfect for anyone interested in learning more about the industrious beaver and its critical role in Virginia's ecosystems.

Alison Zak, Founder and Executive Director of the Human-Beaver Coexistence Fund, has a background in human-wildlife conflict and environmental education. Previously, Alison studied crop-feeding macaques but has since developed a fascination for beaver coexistence work, as few other animals have such an impact on the world around them. Now, she enjoys working with both human primates and semi-aquatic rodents! Alison holds a BA from the University of South Florida and an MA from San Diego State University in Anthropology. She is the author of Wild Asana: Animals, Yoga, and Connecting Our Practice to the Natural World.

Wildlife rehabilitation records reveal impacts of human activities on wildlife health

Tara Miller conducted the largest study to date of patients admitted at wildlife rehabilitation centers using records from 95 centers across the USA and Canada. Of the more than 600,000 patients included in the study, about 40% were injured due to human activities, including vehicle collisions, lead poisoning, fishing line injuries, and more. These findings point to possible interventions to help conserve wildlife, such as wildlife road crossings, fishing and hunting regulations, lead and pesticide regulations, and disaster management plans.

Tara K. Miller (they/them) received their Ph.D. in Ecology in 2022, studying the effects of climate change and other human impacts on plants and wildlife. They currently work at the intersection of science policy and community organizing, developing solutions for ecosystems and human communities. In their free time, Tara enjoys baking, playing piano, and taking their cat for walks.

Community Science: Nature education through data collection

Explore ways to create and join community science projects and events to engage the public in learning about the natural world and empowering them to collect data! The free app, iNaturalist, is making it fun and easy for anyone to become a community scientist. In this session, we'll go through how Discover Life in America has been using iNaturalist to host and promote a BioBlitz through projects on the website. We'll also share other resources for community science initiatives and free applications, like Merlin Bird ID and Bird.net.

Jaimie Matzko is the Biodiversity Program Specialist for Discover Life in America (DLiA), the nonprofit science partner of Great Smoky Mountains National Park. DLiA has been coordinating the park's All Taxa Biodiversity Inventory for over 26 years. Jaimie has been a naturalist in the Smokies for over 20 years and loves sharing DLiA's mission to connect communities and scientists in discovering, understanding and conserving the natural world.

Forest Health Invaders

Learn about current and emerging invasive species that impact forest health in Virginia. We'll discuss how to identify damage from a number of invaders including the spongy moth and beech leaf disease, and how to minimize damage to our forests.

Lori Chamberlin is the Forest Health Program Manager with the VA Department of Forestry. She received a bachelor's degree in Biology and Environmental Science from the University of Virginia and then a master's degree in Entomology from the University of Kentucky, where she worked in the forest entomology lab and researched host resistance and biological control of the hemlock woolly adelgid. She has led Virginia's Forest Health program since 2016.









DAY 2

CONCURRENT SESSION 2, 10:15-11:15 AM

Lighting Matters

Artificial light at night is essential to our modern lives, communities, and society. But the routine indiscriminate use of too much badly-designed lighting degrades ecosystems, imperils wildlife, and fails to deliver on promises of improved safety and security while also eroding our own health. What do we lose when we obliterate the stars from the night sky and natural darkness below it? This presentation will explore the causes and consequences of light pollution (including ecological harm), explain the basics of responsible outdoor lighting, deliver good news about nightscape conservation, and equip the audience to bring back the night beginning at home. "Because every day needs a night."

Laura Greenleaf is a member of the Class of 2010 Riverine VMN Chapter. She has co-led or led the Virginia chapter of DarkSky International (formerly the International Dark-Sky Association) since 2013, delivering presentations on light pollution, supporting advocates in their own communities, aiding dark sky park efforts, and assisting policy initiatives. She is also the founder of the James River Park System Invasive Plant Task Force and since 2021 has worked part-time for the JRPS as an invasive plant management coordinator. She grew up in the northern Blue Ridge and Shenandoah Valley and lived in the northern Piedmont until moving in 2007 to Richmond where she lives near the James River with her family.

Virginia'a New Invasive Plant Coalition: Opportunities for Master Naturalists

Master Naturalists who are passionate about removing invasive plants from Virginia's landscapes have exciting opportunities to join the work of the new Virginia Invasive Plant Coalition (VIPC). Formed in December 2023 by nearly 80 federal, state, county, city, community, nonprofit and for-profit organizations, VIPC has 10 Action Groups committed to a Common Ground Agenda, guided by "Imagining a Virginia without Invasive Plants." From Awareness & Education to Workforce & Volunteer Development, Removing Invasive Plants and Restoring with Natives, Research, and so much more, you

can find your niche and help us bring our dream into reality. Visit virginiainvasives.org to learn more! Lauren Taylor is the Executive Director of the Blue Ridge Partnership for Regional Invasive Species Management (PRISM). The PRISM covers 12 counties and 3.6 million acres of the northern Blue Ridge Mountains and is the leading organization in Virginia for education and training on invasive plant identification and control.

The Insect Apocalypse

What's happening to our insect populations? This talk will use insects as a case study to understand threats to biodiversity and how such a successful group of organisms is still impacted by human actions. Habitat destruction, invasive species, climate change, and other human impacts will be discussed in the context of conservation.

Dr. Shawn T. Dash is an Associate Professor of Biological Sciences at Hampton University in Hampton. VA. He has been studying myrmecology (the science of ants) for over 20 years. His excitement for nature is broad and he is captivated by the fields of ornithology, herpetology, mammalogy, evolutionary biology, and of course anything to do with invertebrates. Exciting others about science and nature is a passion of his. He believes strongly in giving back and making a difference in the world.

Virginia Climate – Our Synergistic Bond

This session reviews the fundamentals of weather and climate for an explanation of variability and change in the climate of Virginia. The session focuses on the synergism between Virginians and climate, including opportunities for active participation in climate monitoring and reporting.

Dr. Andrew Ellis is Professor of meteorology and climatology within the Department of Geography at Virginia Tech. A hydroclimate scientist, Dr. Ellis has maintained a long-term research agenda focused on climate and water. At the core of his work are precipitation variability and change, drought, and water supply in the middle latitudes, particularly in arid and semi-arid climates. At Virginia Tech, Dr. Ellis teaches advanced courses in atmospheric dynamics and introductory courses in climate science.









SPONSOR NEWS, 11:30 AM - 12:30 PM

Several of the state agencies that sponsor the VMN program will share information that they would like VMN volunteers to know about their mission, current initiatives, and volunteer activities. Learn what's happening in Virginia State Parks, how DWR is supporting wildlife viewing, about Virginia's latest water quality report, and more. You can find additional information from these agencies and all of our other sponsoring agencies in the Expo section on Zoom Events.

LOCAL LEARNING AND SERVICE ACTIVITIES, VARIOUS AFTERNOON TIMES

You didn't think we would make you spend the whole weekend indoors, did you? We have reserved this time for locally-organized learning and service activities. Saturday happens to be National Public Lands Day, so this is a great time to volunteer at one of your local public lands. Contact your chapter leaders to learn what activities they have planned. If your chapter is not organizing any group activities, we still encourage individual volunteers to find an outdoor learning or service activity to do for the afternoon. We would love to know about what you do, so, of course, report any approved continuing education and volunteer service in Better Impact.





VA MASTER NATURALIST EDUCATORS BUREAU FLASH TALKS, 7:00-8:00 PM

Virginia Master Naturalists who are part of our program's statewide Educators Bureau will give talks and demonstrations - each no more than five minutes long. Get inspired by these dynamic educators!



ALDO LEOPOLD APOLOGIZES FOR KILLING PREDATORS

MIKE WALKER (FAIRFAX CHAPTER)

I have been an Aldo Leopold interpreter for many years. With pipe, glasses and some props, I channel words from the Master. Of particular importance is Leopold's realization that his participation in exterminating predators in his early years allowed the deer population to increase but then crash as the range was destroyed. An important lesson for those looking for easy solutions to environmental problems. We only see a small portion of the larger natural system before us!

Bio: Biologist-Botanist turned environmental enforcement lawyer, 39 years with US EPA. Adjunct faculty, Natural Resource Law, William & Mary Law School.

LEAVE NO TRACE - THE 7 PRINCIPLES

DAVID LAUTHERS (TIDEWATER CHAPTER)

What is Leave No Trace? Leave No Trace, sometimes written as LNT, is a set of ethics promoting conservation of the outdoors. Originating in the mid-20th century, the concept started as a movement in the United States in response to ecological damage caused by wilderness recreation. What are the 7 Principles of Leave No Trace and a discussion of what each principle means: Plan Ahead and Prepare, Travel and Camp on Durable Surfaces, Dispose of Waste Properly, Leave What You Find, Minimize Campfire Impacts, Respect Wildlife.

Bio: Retired Navy Chief and Retired Newport News Shipbuilding, Leave No Trace Master Educator, Virginia Leave No Trace State Advocate, Tread Lightly Master Tread Trainer, Butterfly Society of Virginia, Currently working on Environmental Educator Certification State of Virginia

OH NO! NO PHONE! TIPS FOR CAPTURING IDENTIFICATION DETAILS IN THE FIELD CAROLYN DUCKWORTH (RIVERINE CHAPTER)

What to do when you see an interesting plant but you can't take a photo or use Seek or iNaturalist? In less than 5 minutes, you can capture essential details to help identify the plant later. I'll show you how to do this with a sketch; but this works even if you have to remember the essential information. Be ready with paper and a pen or pencil so you can sketch along with me.

Bio: Carolyn Duckworth's Master's paper, "Field Journals: Connecting People to Place," explored how field journals can be used as activist and educational tools. She taught most recently for the Potomac Valley Audubon master naturalists in West Virginia and is a Flora Ambassador.

VA MASTER NATURALIST EDUCATORS BUREAU FLASH TALKS, CONTINUED

RECORDING BIRD SONGS AND CALLS, AND WHEN TO PLAY THEM BACK

ROBIN DUSKA (FAIRFAX CHAPTER)

To document observations of bird species, many people first pick up a camera. Another option is to record a bird's calls and/or songs. Although more expensive equipment is available, it is possible to make decent recordings on a cellphone and to upload them to Cornell Lab of Ornithology's eBird database. Many birders worldwide now keep and share their birding records on eBird. Recordings of bird calls and songs, whether on an app like Cornell Lab's Merlin Bird ID or those recorded by a VMN observer--can be used to learn bird songs and calls. They are also sometimes used to attract birds so they can be observed. This talk will conclude by briefly outlining situations in which it is and is not appropriate to play back recordings.

Bio: After a career working for the U.S. Government and United Nations in 11 countries, Robin Duska now focuses on environmental volunteering and birding. She assists scientists managing the bird specimen collection at the Smithsonian's National Museum of Natural History. She was named Virginia Master Naturalist Volunteer of the Year in 2020; she is also an intern Fairfax Master Gardener. Robin formerly co-directed the Audubon at Home (AAH) program for the Audubon Society of Northern VA (ASNV) and remains an AAH ambassador, helping clients create wildlife sanctuaries on their properties. Robin particularly enjoys leading bird walks and traveling to see and listen to birds.

PLANTING VIRGINIA NATIVE TREES- HOW MUCH ROOM DO THEY REALLY NEED? VALERIE HUELSMAN (MERRIMAC FARM CHAPTER)

Trees are a vital part of our ecosystem and are frequently encouraged in residential landscapes to support wildlife, provide green infrastructure services, for beauty and so much more. Yet confusion still exists about how much space, both for roots within the soil and to accommodate a tree's full canopy, that mature trees really need to be able to thrive. This flash talk will explore research on this topic and give you talking points to share with residents and community members on locations where they can realistically support tree canopy on their property to help maintain healthy trees into the future.

Bio: Valerie is Northern Virginia native who greatly enjoys nature and collaborating with community partners. She is an ISA Certified Arborist (MA5899-AM), DCR Certified Nutrient Management Planner for Lawns and Landscapes, and a Natural Resources Specialist with Virginia Cooperative Extension Prince William Unit.

HOW RAIN GARDENS AND STORMWATER MANAGEMENT CAN HELP SAVE THE WORLD!

DONNA HALEY (ROANOKE VALLEY CHAPTER)

Rain gardens manage stormwater and erosion, but can also be planted with pollinator-friendly native plants to help combat fragmentation of environment and other threats to our pollinators. We can be green space responsible, and show by example how everyone can help with a simple rain garden.

Bio: Donna Haley began her service to Virginia Cooperative Extension in 1996 as a Master Gardener. In 2012, she took on the title of Master Naturalist as well. Donna, as an ethnobotanist, taught horticulture at Virginia Western Community College at Greenfield. Donna is an inaugural member of the Blue Ridge Environmental Educators. Learning new things is what keeps her fueled for adventure. She has recently completed a large ViCAP Rain Garden with MCSWCD, in Botetourt County, where she resides with her husband Dan.

RECOGNIZING THE SYMPTOMS OF THE URBAN STREAM SYNDROME

RIKKI LUCAS (CENTRAL RAPPAHANNOCK CHAPTER)

Signs and symptoms of the Urban Stream Syndrome are as obvious as chicken pox to the experienced fluvial professional. To the family playing in the creek at their local park, however, a vulnerable stream looks like a friendly babbling brook. Get a crash course in the dominant visual indicators of a stream affected by the effects of urbanization so that you can help others recognize similar effects in their own backyards. Awareness is the first step towards a cure!

Bio: Rikki Lucas is the current Vice President of her VMN chapter, and the chair of several committees. She got her Master's studying the hydrology and biogeochemistry of urban streams in Richmond, Va to support their restoration goals. She doesn't get to do that work for a living right now, so she loves to find opportunities within VMN and the community to geek out about it!

VA MASTER NATURALIST EDUCATORS BUREAU FLASH TALKS, CONTINUED

DEMONSTRATION OF PROJECT WET'S EXERCISE A "DROP IN THE BUCKET" MARILYN SMITH (RIVANNA CHAPTER)

Drop in the Bucket is a short, snappy, powerful way to communicate how precious fresh potable water is to our communities. It is a great way to begin a talk or training on water quality or aquatic ecology for students of all ages. Using a beaker and graduated cylinders, it begins with one liter of water representing all the water on earth. Then graduated cylinders are used to extract fresh water from salt water, and then the amount tied up in glaciers and/or too deep underground and out of reach. Finally an eye dropper is used to place one drop of water in a bucket. Everyone has to listen carefully for that drop. That drop represents all that is left for us to use for all the things we need fresh water for. This can be followed by recognizing what we need to do to keep our water clean, or clean it up when we make a mess. The demonstration will be very brief and will address how this can be tailored for young children to adults.

Bio: Marilyn is a geoscientist, a Virginia Watershed Educator, a Project WET facilitator, and a community volunteer. Marilyn participates in watershed education activities with Thomas Jefferson Soil & Water Conservation District and the Rivanna Conservation Alliance (RCA). She and her husband David monitor at least 5 streams twice a year for the RCA's Stream Watch Program. Her passions include clean water, citizen science, and math/science education for all ages.

SPARE THE WASPS!

HENRY "BEEHURRICANE" THOMPSON (MIDDLE PENINSULA CHAPTER) Paper Wasps, Yellowjackets and, yes, Hornets are vital to our ecosystem. Do not rush out to kill them. Instead, rush out to re-locate them and help them flourish. Members of the Wasp Family play essential roles in the ecosystem and contribute to the overall health of our environment. Learn how to live with them while keeping them at a safe distance and while admiring their features.

Bio: Henry "BeeHurricane" Thompson is a retired US Air Force Bioenvironmental Engineer and a Virginia Master Naturalist since 2014. The acronym for his Air Force job title is BEE and he is drawn to this insect species, primarily the native bees and the underappreciated members of the Wasp Family.

GROUNDHOGS AS INCLUSION MENTORS

LESLEY NEWMAN (HEADWATERS CHAPTER)

Though groundhogs are sometimes considered nuisances to humans, they are wonderful neighbors to their fellow wildlife. In this interpretive flash talk, you will learn a variety of facts about groundhogs. The three main things you will remember about groundhogs afterward are also principle guidelines for increasing diversity and inclusion in your chapter.

Bio: Lesley has been a Virginia Master Naturalist since 2019 when she completed her basic training in the Northern Neck chapter. She is a writer and educator and currently works at the Virginia Department of Forestry as the state coordinator for Project Learning Tree. She learned about groundhogs while volunteering at Belle Isle State Park in Lancaster and diversity and inclusion throughout her 15+ year career as an educator. She has a certificate in Diversity, Equity, & Inclusion from Cornell University.

CONNECTION THROUGH SERVICE, 8:00-8:50 AM

Drop in anytime to share with other VMN volunteers what you did during Saturday's Learning and Service Activity or what you like to do for your volunteer service at other times of year. Get inspired by what other VMNs across the state have to say about their volunteer service.

CLOSING PLENARY, 9:00-10:00 AM CONSIDERATIONS TOWARDS MORE INCLUSIVE PARTICIPATORY SCIENCE

Participatory Science is often thought of as a way to democratize science. While it can and does lead to the advancement of science, participation is often homogenous, leading to a variety of challenges. This talk will review the current landscape of participatory science and the biases that can skew participatory data and its interpretation. During this talk, reflect on your motivations for participation and learn how to overcome barriers to recruit new participants. While this presentation primarily focuses on biodiversity projects, it can be applied to other large-scale environmental contributory projects.



Deja Perkins is a doctoral candidate in geospatial analytics at NC State investigating patterns of participation and bias in participatory data. Outside of academia, she leads bird walks and workshops to train people to use app-based participatory tools for outdoor exploration and monitoring neighborhood nature. Deja also helps curate community and learning through coorganizing the annual #BlackBirdersWeek initiative.

Presenter: Deja Perkins, PhD candidate, North Carolina State University Center for Geospatial Analytics

LOCAL LEARNING AND SERVICE ACTIVITIES, VARIOUS TIMES

This time slot is another one that we have deliberately left available for locally-organized learning and service activities. Contact your chapter leaders to learn what activities they have planned. If your chapter is not organizing any group activities, we still encourage you to find an outdoor learning or service activity to do on your own. We would love to know about what you do, so, of course, report any approved continuing education and volunteer service in Better Impact.

THANK YOU

The Virginia Master Naturalist program is based in Virginia Cooperative Extension and cosponsored by six additional agencies that provide funding, oversight, and support for the program. We also thank all of our program donors for their financial support.



Virginia Cooperative Extension is a partnership of Virginia Tech, Virginia State University, the U.S. Department of Agriculture, and local governments. Its programs and employment are open to all, regardless of age, color, disability, sex (including pregnancy), gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, military status, or any other basis protected by law.

If you are a person with a disability and desire any assistive devices, services or other accommodations to participate in this activity, please contact VMN Program Assistant Tiffany Brown at 540-231-0790/TDD*) during business hours of 9 a.m. and 5 p.m. to discuss accommodations 5 days prior to the event. *TDD number is (800) 828-1120.