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E northernneckvmn.org

edited by Camille



**Virginia Master
Naturalists**
Northern Neck Chapter



President's Message

Hello Northern Neck Master Naturalists! Recently I visited Bethel Beach NAP in hopes of seeing some Northern Gannets but had to be satisfied by the various shorebirds that skitter about playing 'footsies' with waves. Storm waves and currents have altered the southern end of the site tremendously in the past six months, creating an island where the Least Terns nest. I was fascinated by the patterns in the sand and the flow of water through a new channel and took the picture (above right). There is much to marvel at even in winter!

Fawn Palmer and I (Paula) in early March 2008 at WSP nature trail near Visitors Center. When the first class of NNMN wanted to volunteer, the program was so new, staff at the state parks didn't really know how to guide us. We were on our own to evaluate what we could do and where!

Friendly Reminders

- Update your profile on BI to include your birthdate. This information is needed for renewal of your background check every 3 years.
- **Complete re-enrollment for 2024 if not already done!**
- Complete the continuing ed on civil rights/risk management (on Better Impact) and record your CE time (BTC 2023, this does not apply to you).
- **Remember to record your volunteer hours shortly after volunteering!**
- *BTW, please take pictures of your volunteer projects and team for possible inclusion in the NNMN Annual Report "Significant Project" section. The photographer will be given credit and persons in the photo must give permission for their image to be used.*

BREAKING NEWS

The NNMN Annual Report for 2023 was timely filed with VMN. It will be posted on BI SOON for your information and inspiration.

CHAPTER BOARD MEETING January 9, 2024



2024 Committee Chairs were accepted by the Executive Board. These are:

- Programs – Polly Foote (Vice President)
- Membership – Bob Dunstan
- Activities – Lee Arslan
- Communications – Anne Atkins
- Continuing Education – Leslie Fellows
- Diversity & Inclusion – Ellen Hunter
- Historian – Temple Moore
- Hospitality – Joyce Reimherr & Darleen Nelson
- Outreach – Terry Jordan & **(co-chair needed)**
- **BTC – VACANT & NEEDED** (see Help Wanted section for more details).



Photo: American Bird Conservancy

VP Polly announced that the March program on bluebirds will be at Westmoreland State Park and open to the public. Our postmaster, Alice, will send details closer to the date.

Chapter Advisors Report

- Our Chapter Advisors stated that our **birthdates need to be in the Profile section of BI**. Background checks are renewed every 3 years, and complete birthdates will expedite the process. **Please check your profile to make sure complete and correct information is there!**
- Also, NNMNs need to look for emails from **“Sterling Volunteers”** and follow the instructions given to “launch” the background check!
- Information on **NEW Contacts Reporting Rules** will soon be available.

Action Items

A motion was made, seconded, and passed for Northern Neck Master Naturalists to be a named sponsor for the upcoming Winter Waterfowl Count (February 3 & 4). Sponsorship does not cost and gives the chapter publicity in the press releases and announcements about the event.

A motion was made, seconded, and passed that the NNMN chapter establish informal partnerships with the Virginia Bluebird Society and the Rappahannock Tribe.

Paula announced that BTC 2023 graduate Tim Bradshaw would like to work on a chapter logo that could be used on ballcaps for members of our chapter. The Board agreed that this would be worthwhile, and Paula will tell Tim to proceed.

Basic Training Committee

Andy Bailey gave a comprehensive report on BTC 2023 with suggestions for the 2024 BTC Committee. A late summer start, with a holiday break and completion in March-April should be possible. Committee co-chairs for this are essential so that the planning may begin. **Contact Paula (paglb4@gmail.com)** if you are willing to be part of this effort. See more of Andy’s report in the January 2024 Minutes once posted in BI.



Quarterly Volunteer Hours Report 4th Quarter 2023

Report Group	Hours	Volunteers	%Total
VMN Chapter Adminn.	209	20	12.5
VMN Citizen Science	662	40	39.5
VMN Continuing Education	230	46	
VMN Education and Outreach	548	24	32.7
VMN Stewardship	256	26	15.3
Total Volunteer Hours	1675		
Total Hours	1905		

By Pat McMurray, 2023 Membership Chair

Next Chapter Board Meeting Tuesday, March 12, 2024



January 29, 2024 –

Waterfowl ID Zoom Workshop
For those participating in Waterfowl Count
Contact: Jeff Wright, pec11908@mac.com, for
[Zoom link](#)

Feb. 3 & 4, 2024 – Winter Waterfowl Count

Northern Neck & Middle Peninsula

Contact: Jeff Wright, pec11908@mac.com

Feb. 6, 2024 – 9:00-11:00 am, BISP

“Naked Tree Hike” for NNMN (CE),

Contact Camille for information:

cgrabb9@gmail.com

Feb. 16-19, 2024

Cornell's Great Backyard Bird Count

For more information and to participate, click: <https://www.birdcount.org/participate/> (Volunteer hours in BI: in Wildlife & Flora Monitoring, Project Feeder Watch).

March 2, 2024, WSP, Time TBD

Chapter Program Meeting,

“Eastern Bluebirds: Getting Them Started, Getting Them to Stay”

Presented by Valerie Gaffney,

President, Virginia Bluebird Society

More details will follow through BI emails.

March 12, 2024, 9:00-11:00 am, BISP

“Frogs, Salamanders, & Turtles; the importance of park wetlands” for NNMN (CE).

Contact Camille for information:

cgrabb9@gmail.com

March 12, 2024, 3:00 – Zoom Chapter Board Meeting

March 19, 2024, 10:00-noon

Adopt a Highway at Shiloh School
RSVP to Camille (cgrabb9@gmail.com)
to volunteer for this cleanup.



Tipularia discolor,

the Cranefly Orchid

article by Heather Bedford,

certified VMN and NNMN member

(all photos by Heather)

I highly enjoy winter hikes. The underbrush is often bare of leaves, enabling one to have better visibility of the forest floor and the small plants that survive the cold and grow there. One of the plants that I find highly visible in the winter is *Tipularia discolor* or Cranefly Orchids. Cranefly Orchids were one of the first orchids I learned to identify using just the leaves. The purple underside of the leaves was a hidden surprise that sparked my curiosity and fueled my desire to learn more about the story of this abundant orchid. Unfortunately, my search for ethnobotanical resources on the Cranefly Orchid yielded very little. However, learning about the relationships this orchid shares with its environment was equally as fascinating.

First, we can't talk "plant" unless we talk "botany".

Cranefly orchids are perennials that spring from corms. In mid to late autumn, they often produce a single, hibernal, ovate-elliptic leaf that tapers to a point. It is dark green on top and vibrant purple on the underside. The leaf can also have purple spots on the top.



As a side note, I have also seen leaves that were entirely purple. The leaves are also a little plicate, or have a mild folded, fan-like effect. The leaves give way as spring marches forward. Then once the heat of summer hits in July and August, a raceme of tiny, dense, asymmetrical flowers goes on full display. The inflorescence is often a translucent greenish yellow color with purplish pink accents. It has 4-8 small oblong petals and a purplish pink spur which produces

nectar. The fruits are small drooping capsules that can often be seen lingering through the winter months. The name "Tipularia" comes from tipula and aria which means to "resemble a crane fly". Discolor is used to indicate that it will change color. (Weakley, Ludwig, & Townsend, 2012)

Like most orchids, growing Crane fly Orchids requires very specific conditions. They prefer oak and pine forests and acidic soil. They reproduce by seeds and spreading corms. The seeds can only germinate on decomposing wood. Creating seeds also requires an enormous amount of energy so they do not flower every year. There is also a correlation between the summer temperatures and the overall seed fertility. Excessive summer heat has a negative impact on the seed germination rate. It has also evolved an array of features to help itself absorb nutrients in the low light understory of the forest floor. One evolved feature is the relationships it has developed with the other species that share its environment. The other is the unique coloring it has. (Rasmussen & Whigham, 1998)

Mycorrhizal fungi play a key role in providing nutrients to Crane fly Orchids. Like most orchid seeds, mycorrhizal fungi are required for seed germination. However, as the plants mature, protocorm supporting fungi continues to provide support throughout its life cycle. *Tulasnella* sp. and *Protomerulius madidul* are the two fungi that have been discovered growing on the corms. It has even been observed that shade and drought will increase the fungal count. The plant itself seems to parasitize the fungi. I'm not sure how that helps the evolutionary strategy of the fungi, but for orchids in low light conditions, it certainly helps. (McCormick, Burnett, & Whigham, 2021).

Crane fly Orchids rely on nocturnal moths to pollinate their small flowers. The moths are attracted to nectar located in the spur and while feeding, pollinia will stick to its eye, in hopes of being deposited into another flower. Army worm moths and common looper moths are just two of the various noctuidae that

pollinate these orchids. (Whigham & Margaret, 1980).

The unique coloring of the Crane fly Orchid leaf is what originally caught my attention. I noticed a few lingering species, like a woodland aster, that also had purple under the leaves. At the time, I was told that it assisted with photosynthesis in low light conditions. It is a prominent feature in many understory plants in tropical rainforests. In the plant world blue and purple colors are caused by the presence of anthocyanins. In human foods, anthocyanins are the primary antioxidant found in berries, dark colored fruits, and in vegetables bred to display purple coloring, like purple cabbage. They can sometimes be used as dye but since they are water soluble, they really lack staying power. However, in plants, anthocyanins have multiple uses.

"These functions include camouflage and defensive signaling, fungal defense, light attenuation, serving as a carbohydrate sink, reactive oxygen species (ROS) scavenging, and metal chelation. While it is well understood that changes to anthocyanin chemical structure in floral organs can affect pollinator preference, it is less clear why plants would synthesize one anthocyanin rather than another in vegetative organs. In addition to affecting color, anthocyanin chemical structure can also influence antioxidant activity, absorption of green and UVB light, and antimicrobial activity" (Hughes, 2021)

As many of you know, my interest in plants predominantly lies in the realm of ethnobotany, folklore, and their overall relationship to people. Historically, I found no real mention of it as a food or medicinal plant. I discovered that deer would eat the leaves when they face food scarcity. I also learned that small mammals, like moles and voles, consume the corms. I have personally tasted the leaves just to determine the energetic qualities of it. I found it to be dry and cool with a slightly bitter taste. Bitter often indicates the presence of alkaloids and since I couldn't find any real data on the subject, I chose to not

consume them. I did find several adventurous people on the internet that have eaten the corms. They reported stomach discomfort when consumed raw but was very “potato-like” when cooked. I’m not that adventurous.

Scientists are learning more each year about mycelium, forest floor ecology, pollinators, plants, and the web in which they are all interwoven. The Crane fly Orchid is a small piece of a much larger picture we have yet to fully understand. While it may not serve a direct benefit to humans, it does offer a glimpse of beauty and wonder on blustery winter days when exploring the forest.

References:

Hughes, N. M. (2021, Feb). The same anthocyanins served four different ways: Insights into anthocyanin structure-function relationships from the wintergreen orchid, *Tipularia discolor*. *Plant Science*.

McCormick, M., Burnett, R., & Whigham, D. (2021,10). Protocorm-Supporting Fungi Are Retained Roots of Mature *Tipularia discolor* Orchids as Mycorrhizal Fungal Diversity Increases. *Plants*, p.1251.

Rasmussen, H.M., Whigham, D.F. (1998). Importance of Woody Debris in Seed Germination of *Tipularia discolor*. *American Journal of Botany*, pp.829-834.

Weakley, A.D., Ludwig, J.C., & Townsend, J.F. (2012). *Flora of Virginia*. Fort Worth: Botanical Research Institute of Texas Press.

Whigham, D., & Margaret, M. (1980,4). Studies on the Pollination Ecology of *Tipularia discolor*. *American Journal of Botany*, pp. 550-555.



CLASSIFIED ADS



BTC 2024 Committee Co-Chairs and Members

Many of our neighbors and friends are clamoring to join us as Virginia Master Naturalist volunteers. Having gone through the Basic Training Course ourselves, we all realize it requires dedicated leaders to plan and manage the classroom instruction and field experiences necessary for each to become a capable, trained volunteer. There is a lot of work involved, but there are rewards. The enthusiasm and excitement of our new volunteers is infectious. As important as Citizen Science, Outreach, and Stewardship are, training new NNMNs is critical to maintaining our chapter. The more volunteers we have, the more work we accomplish in protecting our area’s natural resources.

Improvements made to BTC in recent years are being built upon. The curriculum is solid and only needs minor tweaking in some topics. As much as we would all prefer in-person meetings, we recognize the positive aspects of Zoom meetings in a chapter as geographically large as ours, reducing travel time and fuel costs for the committee and trainees. There are well over one hundred potential new volunteers on the list from 2023 Outreach events and the Chapter website. The PAY may be lousy, but the intangible rewards are GREAT!

Please step up to chair, co-chair, or become a member of BTC 2024 Committee. Paula is anxiously awaiting your response!
paglb4@gmail.com.

Education/Outreach Co-Chair and Committee Members

Terry Jordan needs a Co-Chair in handling the Outreach Booth events in 2024. The season begins on April 13 with two events on that day: The Colonial Beach Osprey Festival and the Northern Neck Master Gardener Seminar! There are up to ten or eleven such events throughout the spring, summer, and fall. Almost all occur on Saturdays (notable exception: Montross First Fridays, which we attended for the first time in 2023 and found it to be a great event).

In addition to attending local events, usually farmers markets, with one of our displays, creating new displays to be used is also an ongoing part of this committee. Those who enjoy putting together information and pictures or posters about specific topics to share with the public have a place on this committee! We have VCE resources that may be used for handouts as appropriate, but many other sources of information can be found.

Whether you like talking with the public, putting together displays, or carting the booth materials to events, the Outreach Committee could use *your* outreach! Reach out to Paula at paglb4@gmail.com.

Vernal Pools Surveys

Again this year, the Chapter will be involved in vernal pools surveys at Rappahannock River Valley National Wildlife Refuge properties. Two or more people will be sampling sites from February to April-May. The objective is to survey amphibians (frogs, toads, and salamanders) as eggs, larvae, and adults. Surveying will be done by observation and dip nets. Some sites will require walking through woods carrying a dip net and a light bucket of equipment. The plan is to sample every other week or every three weeks (to be determined).

Within four days of warm rain is ideal for surveying. Training will be offered in person at the refuge (Wilna Lodge) and by Zoom by Chapter member Kevin Howe. Please contact Kevin at kevinmhowe@gmail.com to sign up and be kept informed.

Walk on the Wild Side at BISP

Several years ago, Jeff Wright and others were approached by BISP Manager Katie Shepard and asked to do monthly hikes at the park for campers and locals. Now the walks are led by Kevin Howe and Marty Hill with one or two additional NNMNs co-leading each. The hikes are themed by months. The public walks are on the second Thursdays of each month. In addition, there is a pre-walk for each month that serves as continuing education for any chapter member wishing to attend. The pre-walks are on the Tuesday immediately preceding the public walk on Thursday. We would like to increase the number of NNMN volunteers who can **co-lead** these Thursday hikes. If you would like to volunteer as a co-leader, please contact Camille (cgrabb9@gmail.com) to be added to the list. In addition, the Park requests that all NNMN volunteers have the DCR volunteer form on file (link here here: <https://www.dcr.virginia.gov/state-parks/volunteer-form>) Once your application is accepted, you may volunteer at ANY Virginia State Park!



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4 Northern Neck Master Naturalists 2023 Holiday Social and BTC Graduation

Sunday, December 17, 2023, St. John's Episcopal Church, Warsaw

**The Chapter extends Special Thanks to our Hospitality Chairs,
DARLEEN NELSON and JOYCE REIMHERR,
for orchestrating such a lovely, festive event.**



Photo credit: Joyce Reimherr

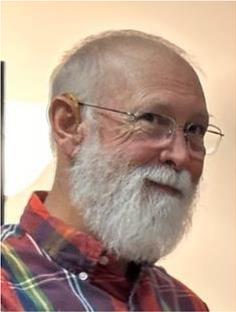
BTC Graduation Cake thoughtfully provided by NNMN Member, Debby Tupper



Photo credit: Mike Foote or Alice Stieve

CONGRATULATIONS and WELCOME TO OUR NEWEST NNMN VOLUNTEERS!

PHOTOS COURTESY OF ALICE STIEVE, ANNE ATKINS, & MIKE FOOTE



TIM BRADSHAW



MIKE BURNS



MOLLY CALLOWAY



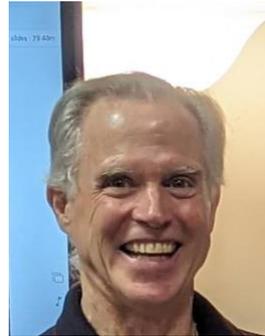
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ROBIN DIDLAKE



KATHIE GILSON



BILL HOOVER



JOANN HOOVER



VICKI KINSEL



ANDREA LEVINE



ROB PAGANO



KAREN PICA MUNJIU



JUDY THOMAS

2023 BTC COMMITTEE: ANDY BAILEY, POLLY FOOTE, PAT MCMURRAY

THANK YOU

