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THE NATURALIST

THE HISTORIC RIVERS CHAPTER OF VIRGINIA MASTER NATURALISTS

The President's Message

by Connie Reitz

The merry month of May has been a cold, grey, and rainy period. The flowers are blooming and birds are nesting. Turtles are crossing the road and the bats are flying overhead. Life continues in all types of weather.

The Basic Training team is busy preparing for the application process for the next cohort. The application period was the month of June. The HRC website is being updated and an informative Zoom presentation is planned for those who have expressed interest. Several of these same individuals have joined the Zoom HRC monthly meetings in April and May. I'm sure we will have another outstanding group of applicants to fill the available positions in the next Cohort.

The Education and Outreach team has had a wonderful start with scheduling community events. April events included The Earth Day celebration at York River State Park, the Spring Fest on the plaza at the Williamsburg Regional Library, and a butterfly walk at New Quarter Park helped promote the visibility of our Chapter in community events. BugFest had more than 500 attendees and the "Bug Hotel" craft was so popular we had to post a NO VACANCY sign for a few children because all the kits had been used. We love kids who

are interested in nature! This was a well-planned event by MJ O'Bryan and supported by members.

The speaker's bureau has been developed and several requests have come from community organizations. We have a wealth of talented and knowledgeable members who are most willing to share with others.

The new "rack" cards have been revised, updated, and readied for distribution as another way to promote our Chapter to the public. Contact Janet Crowther or Jennifer Trevino if you need some of these for



Bumblebee hotel at BugFest

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MJ O'Bryan at BugFest



Rick Brown at BugFest

distribution. If you have photos to share which promote our Chapter, please send those to Deborah Humphries using this email: hrcpublicity@gmail.com. Deborah will get these posted or published in the appropriate places. Remember: NO photos of children under 18 in which the face is recognizable. Take photos from behind or choose a different focus—a bug on a hand or a butterfly on the shoe. Announce you will be taking photos so those who do not wish to be included may separate from the area.

I hope you read the latest edition of *The Pollinator*. Five groups or individuals were highlighted in the Spring 2022 issue. The tree planting efforts of our HRC member Judy Kinshaw-Ellis was shared in an article submitted by Rick Brown. The “Laurels” section of the state VMN newsletter is a wonderful way to celebrate the efforts of our members with those

in other chapters. This project, which demonstrates urban & community forestry activities done by master naturalists, will be included in the VMN annual report to the Virginia Department of Forestry.

<http://www.virginiamasternaturalist.org/home/laurels-spring-2022>

Maybe you helped with the JCC-VNPS Plant Sale. Maybe you helped with the Spring Bird Count. Maybe you are out doing trail maintenance or litter pickup. Every project counts and every volunteer hour is important. Thank you to all for your volunteer efforts! You make our Chapter great.

Until next time.

Connie Reitz, President, HRC

Results of 2018 – 2019 “Poop” Collection from Prothonotary Warbler Nestlings at Northwest River Park

by Shirley Devan

In the spring of 2018, I received an email from Dr. Lesley Bulluck, Associate Professor, Center for Environmental Studies at VCU, asking if my volunteers and I could collect fecal samples (“poop”) from the Prothonotary Warbler nestlings at the Northwest River site where we monitored 80+ boxes. Her new Ph.D. student, Samantha Rogers, was studying diet variations in Prothonotary Warblers across several study sites. Samantha and Lesley were taking fecal samples from the nest boxes at the Rice Rivers Center and at Deep Bottom Park on the James River in Henrico County. They wanted samples from another location for comparison. The Northwest River is the only site with enough boxes to provide sufficient fecal samples from both first and second clutches.

The answer, of course, was an enthusiastic “YES”! So, I traveled to the Rice Rivers Center between Williamsburg and Hopewell and picked up 25 vials, each containing a small amount of alcohol.

This is protocol we had to follow:

1. Collect one (or two if small) fecal samples per nest from nestlings aged 6-9 days old.
2. Label each vial with a unique code that can be tied to the nest and the following should be recorded for each sample:
 - a. date
 - b. location of nest box (GPS coordinates preferred)
 - c. nestling age (days)
 - d. nestling mass (post poop)

3. Poop can go directly from the nestling into the vial (if lucky) but will often occur as the bird is sitting in your hand or on some other surface (weigh cup).

4. Please be sure to wipe the surface that the bird is sitting on thoroughly with an alcohol swab so as to not cross contaminate the sample from a previous bird's poop.

5. If a bird poops on your hand, wipe your hands with alcohol before handling the next batch of nestlings.

6. Feel free to use any extra vials to collect known prey items (caterpillars, mayflies, etc).

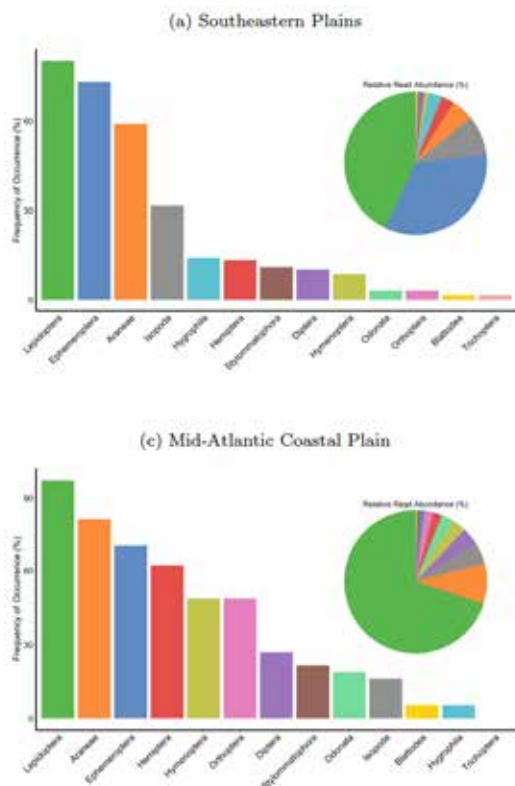
Woohoo! Sounds like fun! Finally, something useful I can do with some of the poop that lands on my hands as I band the nestlings! So, volunteers and I collected fecal samples from Prothonotary Warbler nestlings in June of 2018 and 2019–20 samples each season from both first and second clutches. These samples were delivered in person to Samantha and Lesley at the Rice Rivers Center shortly after we had collected the 20 vials.

On June 30, 2022, I was thrilled to receive this note below from Lesley Bulluck:

“[Samantha Rogers] has been finalizing the diet analysis based on the fecal samples you provided along with other PROW sites.

“Here is a figure showing your site (“Mid-Atlantic Coastal Plain”) compared with the James River sites (“Southeastern Plains”). The bar graph shows frequency of occurrence information (proportion of fecal samples with prey from that taxonomic Order) and the pie chart shows information about relative abundance of the prey items based on the number of reads of DNA sequences associated with that Order. James River sites have higher frequency and abundance of mayflies (Ephemeroptera), but there are a lot of similarities.”

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Credit: Samantha Rogers

Note that the Northwest River is labeled as “Mid-Atlantic Coastal Plain” while the James River sites at the Rice Rivers Center and Deep Bottom Park are labeled as “Southeastern Plains.”

Note that Lepidoptera (includes butterflies and moths) is the most abundant prey item at both sites but comprises well over 90% of the prey items at Northwest River and less than 90% (estimate) at the James River sites.

Keep in mind that adults feed their nestlings mostly caterpillars so the DNA sequences performed on the fecal samples detected the presence of the caterpillar DNA and identified it to Order.

The next most abundant prey items are reversed for the two sites:

- *Mid-Atlantic Coastal Plain [Northwest River]: Araneae [“spiders”] followed by Ephemeroptera [“mayflies”]*

- *Southeastern Plains [James River Sites]: Ephemeroptera [“mayflies”] is second to Lepidoptera with Araneae [“spiders”] third.*

Back in basic training we learned about the Orders of insects and spiders. Note that one plant is included in the list below and on the charts.

- Hemiptera include “true bugs”
- Hymenoptera include “sawflies, wasps, bees, and ants”
- Orthoptera include “grasshoppers, locusts, and crickets”
- Diptera include “mosquitoes, midges, sand flies, blowflies and the House Fly”
- Stylommatophora include air-breathing land snails and slugs
- Odonata include dragonflies and damselflies
- Isopoda include Rol-Polys
- Blattodea include cockroaches and termites
- Hygroptilia, commonly known as swampweeds, is a genus of flowering plants in the acanthus family, Acanthaceae.
- Trichoptera include caddisflies

For me and the volunteers, it is very gratifying to know that our “citizen science” efforts – whether it be butterfly count data or fecal samples from Prothonotary Warbler nestlings – make a difference in the scientific world and to learn how our data are being used.

Much credit goes to the volunteers during the 2018-2019 season who helped collect “poop” (in alpha order): Nancy Barnhart, Rick Brown, Judy Jones, Judy Kinshaw-Ellis, Jan Lockwood, Sue Mutell, Barb Neis, Sharon Plocher, Connie Reitz, Jennifer Trevino. VCU Ph.D. student Samantha Rogers joined us May 30, 2019, at Northwest River to observe our process. I traveled to the Rice Rivers Center June 4, 2018, to accompany Lesley Bulluck and Samantha Rogers as they checked their boxes and banded nestlings and collected poop.

The answer to why is this important is because the 2.9 Billion missing birds are calling us to ACTION NOW.

Monitoring the Prothonotary Warbler Boxes Along Powhatan Creek Trail

by Jim Easton

Shirley Devan, Deborah Humphries, Babs Griffin & I have been monitoring the Prothonotary Warbler boxes along Powhatan Creek Trail. This is a joint project with Coastal Virginia Wildlife Observatory. Brian Taber, CVWO president, joins us.

These photos are from June 4th & 5th, when Shirley weighed, measured and checked band numbers on two females who, after looking up the numbers, she determined had also been here in previous years.



9th Annual Williamsburg Area Butterfly Count — Saturday, August 13.

by Adrienne Frank

Don't Forget!

The 9th Annual Williamsburg Area Butterfly Count will be on **Saturday, August 13, 2022**. Please let me know if you are interested in joining a group, or if you are interested in observing butterflies in your garden or neighborhood.

I have heard from a number of folks that they are interested in participating, and very soon I will need to identify the small group participants. Each group will meet separately, and people will need to sign up ahead of time in order to participate.

Small groups will go to 5 locations within the 15-mile Williamsburg Circle area – Upper James City County, Centerville Corridor, Williamsburg City, Upper York River, and Lower York River. We will also have a group going out in a small section of Gloucester.

Each group will have a butterfly expert, a recorder, photographer, and observers. When you Email me your interest in participating, please let me know your desired role and location.

Butterflies have been a bit slow this year, most likely due to the roller coaster spring weather. However, beginning now, we should see more species, including skippers. For the August count, we have averaged about 50 species, and we hope for that number again this year.

Please let me know if you can participate. Adrienne Frank – adrienne-gary@cox.net.

This spring, there have been a several great sightings of butterflies despite the fewer total numbers. Here are just a few...

Banded Hairstreak — Seen for the first time in Gary and Adrienne's garden (6/16/22).



Edward's Hairstreak — Observed by Shirley Devan at Little Creek Reservoir, a rare species (6/11/22).



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Delaware Skipper — Deborah Humphries at the Marina Garden (6/1/22).



American Snout — Sherry Rollins in Essex County (6/21/22).



Swarthy Skipper — Nancy Barnhart at Warhill Tract (5/30/22).



Orange Sulphurs and Eastern Tailed Blues — A first for so many! Puddling for nutrients, near Elkton, VA taken by Ken Lorenzen (6/25/22).



Photos from the Walker Dam Fishway Field Trip



Longnose Gar (*Lepisosteus osseus*)



Longnose Gar (*Lepisosteus osseus*)



Walker Dam Fishway Field Trip Participants

Quick Announcements!

The **photo exhibit** by HRC members is back! The dates for the exhibit are **July 18-Aug 31**. Stay tuned for information.

KUDOS to the HRC Bat Team — Rick Reynolds, DWR wildlife biologist, spoke about “Virginia Bats” at our May HRC general meeting. He noted Chippokes State Park is one of 10 pilot locations identified to be studied for bat activity using stationary monitoring. Jesse DeLa Cruz (the VT and NABat researcher) and Rick Reynolds (DWR) submitted the project proposal to the state VMN. Historic Rivers Chapter was selected to monitor the Chippokes site. The HRC has monitored the Chippokes transect (mobile monitoring) for the last 3 years.

The Naturalist is the monthly newsletter of the Historic Rivers Chapter of Virginia Master Naturalists. It is a membership benefit for current members of HRC.

Newsletter contributions are due by the 15th of the month for inclusion in the issue distributed to the HRC Google Group by the end of the month. Send your ready-to-publish photos, notices, stories, or reports to The Naturalist's newsletter editor at:

HRCnewsletter@gmail.com

Make sure your work is formatted and labeled properly. Please make sure your copy is error-free. We are happy to help you if you have questions!

The Historic Rivers Chapter is a not-for-profit 501(c)(3) organization.

A financial statement is available on request from the VA Office of Charitable and Regulatory Programs.

HRC-VMN Board of Directors

Chapter Advisor	John Gresham	VMN Appointed September 2018*
Chapter Advisor	Meagan Thomas	VMN Appointed August 2020*
Officers/Executive Committee		
President	Connie Reitz	Elected March 2022
Vice Pres./Programs	Shirley Devan	Elected March 2022
Secretary	Barbara Neis	Elected March 2022
	Bob Thomas	Elected March 2022
Treasurer	Adrienne Frank	Elected March 2022
Additional Board Members		
Immediate Past President	Rick Brown	Effective March 2022
Historian/Publicity/Media	Deborah Humphries	Elected March 2022
Chairs of Standing Committees		
Basic Training	Karen Hines	Elected March 2020**
Membership	Judy Jones	Elected March 2022
Volunteer Service Projects	Jennifer Trevino	Elected March 2022
Continuing Education	Barbara Creel	Elected March 2022
Newsletter	Adam Ferguson	Elected March 2021
Education & Outreach	Janet Crowther	Elected October 2021
	MJ O'Bryan	Elected March 2022
Hospitality	Jennifer Harrigan	Elected March 2022
Field Trips	Sherry Brubaker	Elected March 2022
At-Large Members		
	Suzanne Stern	Elected March 2021
	Nancy Barnhart	Elected March 2022
	Shan Gill	Elected March 2022
	Bill Harper	Elected March 2022
Appointed Committees & Teams		
Risk Management	Roger Gosden	Appointed March 2019
	Patty Maloney	Appointed March 2019
Collections & Resources	Jennifer Trevino	Appointed
Webmaster	Jeanette Navia	Appointed
Williamsburg Landing Liaison	Joe Beene	Appointed
Basic Training	Linda Morse	VMN approved 2019
(W&M Coll of the Wild)		
Better Impact Contact	Shirley Devan	Appointed January 2021
Diversity, Equity, & Inclusion	Adrienne Frank	Appointed October 2021

* Ex-officio

** Elected for a two (2) year term and serving one (1) additional year