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THE NATURALIST

THE HISTORIC RIVERS CHAPTER OF VIRGINIA MASTER NATURALISTS



The President's Message

By Rick Brown

Here are a few things that have been occurring during this past month in our Historic Rivers Chapter and a look at some things to come:

1. The big news is that the virtual graduation ceremony for Cohort XIV was finally able to occur. These are the folks who cancelled their own graduation event so they could memorialize their mentor Karen Grass. Their unselfish actions epitomized grace and class. Janet Harper and the Basic Training Committee worked with Linda Morse to finally make it happen. There was no playing of Pomp & Circumstance, but it was very well done with bitter and sweet memories of the molding of a great cohort. Those who attended got to hear and meet their new members and learn a bit about each one. We were joined by Michelle Prysby, the VMN Director for the first people to actually complete the 2020 training. We are all pleased and fortunate to have so many



Congratulations to Cohort XIV on their graduation!

interesting formally people join our chapter. Welcome!

2. We have several projects that our members are continuing to volunteer for despite the extremely hot weather and the ongoing restrictions from the Coronavirus. We continue to avoid any gatherings as virus cases increase nationally and our board has made the conscious decision to exercise caution to protect our members. If you do not feel comfortable volunteering you are not alone. We expect everyone to make

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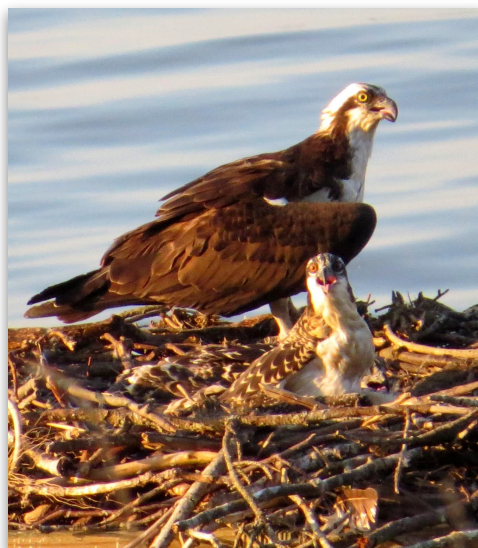
The President's Letter, continued...

individual decisions that respect the most recent guidelines in consideration of what is best for you, your family and those with whom you may be associating. We expect to receive revised instructions from the VMN coordinator's office soon regarding our certification requirements. But whatever those turn out to be they will never be as important as our members' well-being. So continue to exercise due caution.

3. I have received 9 responses to the call for those who may be interested in becoming volunteers at the Cumberland Marsh Preserve in New Kent. County. This is an area owned and maintained by The Nature Conservancy. Nancy Barnhart gave a few of us a guided tour of the area on Tuesday the 21st. Nancy has been a volunteer Trail Steward for the past 2 years and is very familiar with the preserve. It is an interesting area and offers plenty of wildness. We will be setting up a volunteer schedule for volunteers who would like to walk and maintain the trails and we hope to be able to host stewardship work opportunities for small groups in the future. TNC is a great partner organization with a vast number of unique sites throughout the Commonwealth and the United States.
4. Finally, I recently had my annual physical exam and given that I am the same age as that other President, I was given a cognitive exam. Although I admit I did not "ace it", I did manage to pass. Some of the questions were very difficult, and tricky (after all, elephants aren't native to Virginia). My doctor also asked, in light of my advancing years, whether I had considered adding a bar to my shower. Well, I thought that was a damn fine idea so I did, and I now head for the shower at the cocktail hour every evening. If you're looking for a recommendation for great physician I can highly recommend my doctor.

Stay well and take care of each other.

Rick



"One of the two chicks fledged on Sunday. There is still one. It looks like it will be a couple of days before the last one flies. It still not is not flapping its wings."

- Shan Gill, from June 30, 2020

Local Compilation of an Annotated Butterfly Checklist

Adrienne Frank¹, Ken Lorenzen and Brian Taber Historic Rivers Chapter of the Virginia Master Naturalists

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SHORT COMMUNICATION

Since 2015, volunteers from two non-profit organizations, the Coastal Virginia Wildlife Observatory and the Historic Rivers Chapter of Virginia Master Naturalists, have been developing an annotated checklist of butterflies (Superfamily Papilionoidea) and skippers (Superfamily Hesperioidea). The goal of the project is to document details of species in the greater Williamsburg area of Virginia, which encompasses the City of Williamsburg and two adjacent counties (James City and York). This year's fifth edition documents 94 species, providing information gleaned from the literature on flight periods, host plants, habitats, broods, and behaviors, and observations made by volunteers. The idea for the project was based on a similar annotated checklist for birds that was compiled for the same general area.

The area has an impressive diversity of butterflies, and there is an increasing number of people who are interested in documenting them. The core group of butterfly enthusiasts promotes activities that involve novice master naturalists and others in the community. For example, in 2014, members established the Williamsburg Annual Butterfly Count, sponsored by the North American Butterfly Association (NABA) and entered it as a master naturalist citizen science project. Additional spring and fall surveys take place in multiple Williamsburg locations, including Bioblitzes sponsored by the Colonial National Historical Park. Members also promote participation in annual NABA counts in other locations in Virginia. Several members of the group regularly participate in weekly year-round "Wildlife Mapping" activities that provide data on all fauna. In addition, members submit photos of sightings to Butterflies and Moths of North America (BAMONA), eButterfly, and iNaturalist. Photographs of each species document sightings, but not all of these species are posted by the online databases.

The **Butterflies of the Greater Williamsburg Area: An Annotated List of Species** establishes a baseline of information about local butterflies and skippers. At present, 85 species are described as common, uncommon, or rare; three species are described as stray or aberrant (observed only once and not expected to originate in this region); and six species have no recent sightings but were found historically.

The annotated list is used as a workbook to record data and each succeeding draft provides an improved understanding of local butterfly species and their habitat needs. Early and late dates and peak counts are updated each year. Subsequent versions of the checklist will continue to refine data and improve the understanding of butterflies and skippers at the local level. It was intended that eventually the document will be used by a wider audience, for example to help landowners or park employees with guidance about planting and sustaining butterfly habitats.

Below are two examples of species descriptions contained in the annotated listing. The descriptions are written as a work in progress. If the document is to be distributed, then dates, locations, and observers will be removed.

The two examples below are both rare species. For this document, the definition of **rare** is very limited sightings, in limited locations, usually with low individual numbers; as compared to **common** that is

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defined as observed predictably in suitable habitat or **uncommon** as limited sightings, found in several locations, not found consistently from year to year.

Harvester (*Feniseca tarquinius*)

Rare

Broods: Possibly 6 or more

Expected Flight Period: Late Mar. – Sep. (Mar. – Apr. – Sep.)

Reported Sightings:

Sight dates by quarter month ●

Intermittent

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			●	●	●	●	●	●	●		

Earliest: Apr. 8, 2012 (B. Taber, home)

Latest: Sep. 26, 2018 (B. Taber, home)

Peak Count: Apr. 21, 2016 (B. Taber, home) # 2; Jun. 22, 2003 (T. Kain, home) # 2

Other Sightings: Apr. 20, 21, 30, 2013, 2015, Apr. 21-24, 2016, Apr. 22-27, 2019, May 5, 7-10, 12, 2019, May 11, 2013 (B. Taber, BAMONA), May 24, 2010, Jun. 5, 9, 10, 2019 (B. Taber, home); Apr. 18, 2018 (A. Belden, G. Driscoll, Debord); Apr. 18-19, 2018 (G. Driscoll, A. Frank, Warhill); May 24, 2010, Jun. 6, 30, 1996, Jun. 22, 2003, Jul. 8-10, 1996, Jul. 21, 2014 (T. Kain, home); Jun. 11, 2019 (N. Barnhart, A. Frank, NOL, photo); Jun. 11, Jul. 21, 2019 (N. Barnhart, K. Lorenzen, B. Taber, NOL, photo); Sep. 19, 2017 (A. Frank, Debord Tract)

Habitat: Bottom or upland deciduous or mixed forests; usually near streams, ponds, or swamps with alder thickets.

Caterpillar Hosts: Woolly aphids that, in turn, feed on Smooth Alder (*Alnus serrulata*), American Beech (*Fagus grandifolia*), American Hornbeam (*Carpinus caroliniana*), and possibly other woody species. This is our only insectivorous caterpillar.

Notes: Adults never nectar, acquiring nutrients from moist soil along dirt roads and trails or along muddy stream banks near Smooth Alder (*Alnus serrulata*); also acquires nutrients from aphid honeydew, sap, dung, and carrion. Coloration can be bright reddish-orange or muted tan/brown. Can easily be mistaken for a moth when in flight.

Creole Pearly-eye (*Enodia creola*)

Rare

Broods: 2

Expected Flight Period: May – Sep. (May/Jun. – Jul./Aug. – Oct.)

Reported Sightings:

Sight dates by quarter month ●

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				●	●	●	●	●	●		

Earliest: May 16, 2019 K. Lorenzen +, NOL, photos)

Latest: Sep. 29, 2018 (K. Lorenzen +, NOL)

Peak Count: Jul. 26, 2019 (K. Lorenzen +, NOL, photos) #21

Other Sightings: May 18, 21, 24, 28, 31, Jun. 4, 7, 9, 17, 21, Jul. 4, 7, 10, 17, 21, 26, 28, Aug. 6, 11, 16, 20, 22, 27, 29, Sep. 12, 2019 (K. Lorenzen +, NOL, photos); Aug. 9, 2017 (G. Driscoll, A. Frank, K. Lorenzen, B. Taber, NOL); Aug. 15, 2016 (K.

Lorenzen, NOL, photo); Aug. 15, 2017 (K. Lorenzen +, NOL, photo); Aug. 16, 20, 23, 25, 2018 (NOL, photos); Sep. 4, 6, 11, 16, 19, 25, 29, 2018 (NOL, photos)

Habitat: Usually on the periphery of dense, moist or wet bottomland woods and hardwood swamps with cane.

Caterpillar Hosts: Switch Cane (*Arundinaria tecta*).

Notes: Does not nectar on flowers; adults obtain nutrients from moist soil, dung, carrion and other putrefying matter. Males perch to await females. Aug. 15, 2016 was the first known sighting for this area.

This article was originally published in *Banisteria*, Volume 54, the journal of the Virginia Natural History Museum.

THIGMOTROPISM: GROWING TO NEW HEIGHTS

By James Webb

While volunteering at the Williamsburg Botanical Garden (WBG), I have been watching vines (the bean pole) climb a wooden post (See photos 1, 2, and 3). In one, 24-hour period, it was observed that this one particular vine had advanced 3-4 inches. The vine is wrapping itself around the wooden post and climbing further up the post with time at a rapid growth rate. It is amazing that this vine can perform this feat when other plants simply grow upward without the assistance of a wooden post or object. So, what causes these vines to grab, wrap, and climb upward?

Many vines, such as grapes (think wine), kudzu, morning glory, trumpets, and clematis, to name just a few, have that innate ability (or maybe wired biochemistry) to grab and wrap, and climb upward towards the sunlight. Charles Darwin observed how plants were attracted by sunlight (phototropism) and concluded in his writing (See *The Power of Movements in Plants*, 1880), "...in such cases, a stimulus or influence is transmitted through the tissue of plants". Today, the climbing ability of vines is better known as thigmotropism. The Greek translation for thigmotropism is defined as thigmo which means to touch or feel, and tropism means directional movement.

Unlike other plants, vines have a tendril that grows at the tip of the stem of the vine (See Figure 4). The tendril searches for a host, much like a person blindfolded may extend their arms and use their hands to "feel" (and to grab and hold) an object, such as a chair or table. So, vines use touch to grab and wrap, and move upward towards the sunlight. It is suggested that plants are much more sensitive to touch than humans by as much as a factor of 10. This means that if humans can "feel" a thread weighing 0.02 mg, the plant can "feel" a thread weighing 0.002 mg. This may somewhat explain how vines can "grab" a host so quickly. The directional growth movement appears to be a mechanosensory response. According to scientific literature, the mechanistic bases of touch perception and inter and intracellular signaling are not fully well understood. Vines do not have neural sensors in its tissue like humans, that send signals to a brain. So how does the vine know when to "grab and hold" onto its host. Scientific literature and articles suggest that the tendril leaves a chemical residue produced by hormones within the plant on the host so that the trailing vine can then wrap and bend around that area of the host.

Plants (and vines) are amazing organisms that exist in the plant kingdom and will probably continue to evolve. As botanist better understand this stimulus or influence that is transmitted through the tissue of plants, botany will continue to grow to new heights.



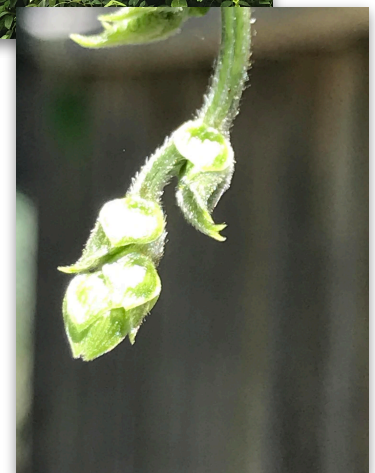
1.



2.



3.



4.

WILDFLOWER OF THE MONTH – JULY 2020

JOHN CLAYTON CHAPTER OF THE VIRGINIA NATIVE PLANT SOCIETY

By Helen Hamilton, John Clayton Chapter, VNPS

This is one of the native perennials highly regarded as nectar food for monarch butterflies. The typical life cycle of monarchs includes four flights each year, the third in July-August, and the last September-October that produces a different butterfly, capable of the long migration south. Monarchs lay their eggs on milkweed, the leaves furnishing food for the growing caterpillars.

The adult butterflies get their energy and maintenance food from the flowers of milkweed as well as many other late summer flowers, such as Cardinal Flower, Blue Vervain, Wild Bergamot, New York Ironweed, goldenrods, bonesets. Plants with massive heads of tiny flowers are favorites of butterflies since they can easily collect nectar from the closely packed blossoms, not using energy to fly to other nearby plants.

Mistflower is an ideal candidate, blooming from July through October to feed insects from late summer into fall. This native perennial is topped with masses of soft, fluffy violet-blue flowers. It's a member of the Aster family, but there are no rays on the flowers. Each flowerhead has as many as 50 little florets, each with 5 tiny lobes and a long style that gives the flowers a fuzzy appearance. Other asters like black-eyed susans, dandelions, and sunflowers have both ray and disk flowers.

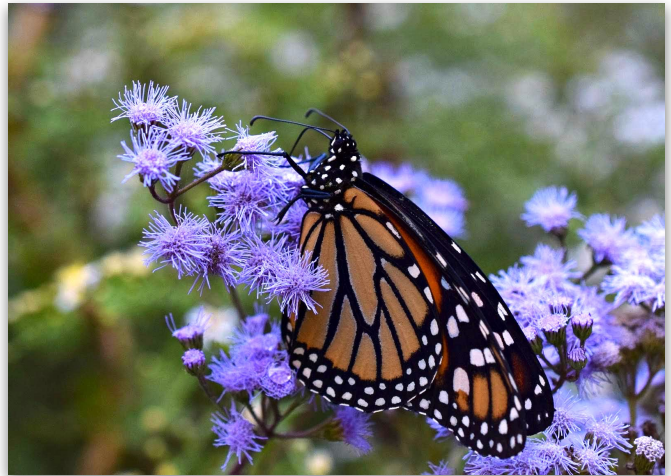
This plant grows 3-4 feet tall, and spreads by creeping roots. It can take over an entire border, but the roots are shallow and easy to pull out. The plant grows best in full sun to light shade, in moist conditions – it does not handle drought well but requires little attention.

A cultivar 'Wayside' is somewhat shorter, but there is little information about butterfly visits to this plant. "Gregg's Mistflower" is native to Texas, Arizona and New Mexico and south and is a good pollinator plant in that region. Our native Mistflower can sprawl and become weedy in appearance by late fall, but it is a butterfly magnet, and is the only mistflower that should be planted here. Deer do not typically browse on the bitter-tasting leaves.

It is also known as Wild Ageratum because the flowers resemble those of the shorter (6-12") annual Dwarf Ageratum (*Ageratum houstonianum*), sold in garden centers as bedding plants. Blue Boneset is another name; the eupatoriums were thought to cure broken bones since the stems of some species grow through the leaves.

Mistflower grows wild in woods edges, stream banks, ditches, meadows, and fields, in nearly every county in Virginia. The leaves grow opposite on the stems with soft toothed edges, 3" x 2".

For more information about native plants visit www.vnps.org.



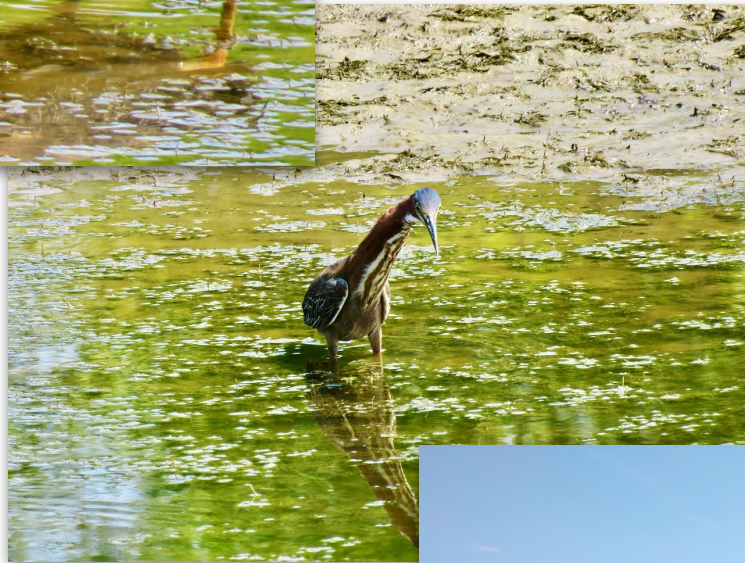
Blue Mistflower (Conoclinium coelestinum)
taken by Helen Hamilton

FUN FIELD NOTES



Two photos of Green Heron at Warhill Pond, July 17, 2020, taken by Shirley Devan.

Photo of Shirley taking the Green Heron photos by Babs Griffin.



"I took this photo of Babs Giffin to celebrate and commemorate her graduation from Cohort XIV!" - Shirley Devan



TREES IN TROUBLE

Gain insight into the forest pest problem and **discover policy actions** we can take to protect our trees in this science conversation featuring forest ecologist **Gary Lovett**.

Trees play a critical role in keeping people and the planet healthy. They filter air pollution, reduce flooding, cool neighborhoods, provide wildlife habitat, and store carbon that would otherwise contribute to climate change. Unfortunately, our trees are in trouble.

Imported forest pests, like the emerald ash borer and spotted lanternfly, are quietly decimating forests, street trees, and parks in every state across the US. Losing trees means we're also losing the essential services they perform.

Removing and replanting lost trees isn't cheap. Damages caused by forest pests cost homeowners and municipalities billions of dollars annually. Costs associated with Asian longhorned beetle alone are projected to reach \$12.7 billion this year.

This conversation will explore the forest pest problem, including updates on the newest threats and policy actions we can take to protect our trees. Together, we can stem the tide of pest invasions.

Watch the video: <https://bit.ly/3fdDrmo>



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, Lisa Reagan, at:

HRCnewsletter@gmail.com

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

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