



Claytonia

Newsletter of the John Clayton Chapter, Virginia Native Plant Society

Volume 33, Number 1

January–February 2017

www.claytonvnps.org

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At our January 19 meeting, historian Martha W. McCartney will present a program entitled "John Clayton: Up Close and Personal."



A "whole length" portrait of Joseph Banks, who had recently returned from an expedition to Iceland. In his right hand he holds a botanic drawing, in his left a magnifying glass or lorgnette. His gouty right leg is swathed; from his right wrist hangs a knotted walking stick.

Etching, dated 14 November 1772, and caption from the British Museum's website. (One definition of "macaroni" is "a well-traveled young Englishman of the 1700s and 1800s who affected foreign customs and manners; a fop.")

The colonial era botanist John Clayton, namesake of the John Clayton Chapter of the Virginia Native Plant Society, is lauded for his role in producing the first flora written for Virginia and for his international stature among 18th century botanists, but what do we know about him as a person? Join us on January 19th and become much better acquainted with this important Virginian. Martha McCartney has gathered new information about the life of John Clayton in the course of writing a history of Mathews County, Virginia.

The meeting begins at 6:45 at the **James City County Rec Center, Room A, 5301 Longhill Road, Williamsburg 23188**. See you there!



From the President

Happy New Year to all members. I hope that 2017 will be a good year and that you will have the time to enjoy our Virginia native plants—we are lucky to live in an area that has so many beautiful natural areas full of such plentiful native plants! Speaking of native plants, the *Native Plant Guide*

for Southeastern Virginia including Hampton Roads is published and ready for gardeners of this area. They are the reason this guide exists. The 69-page booklet is full of interesting information. The first page

says *Plant Southeast Natives*, then there is a section which answers the question of why Virginia Natives are the best choice. After the Table of Contents there is a section on how to use the guide. We included pictorial guides to the light and soil moisture requirements, as well as wildlife supported by a particular plant. On page 4 we explain the areas that this guide covers and the different conditions that are found in Southeast Virginia. Then from page 6–51 you will find the photographs and descriptions of the plants highlighted in the guide. From page 52–59 you will find the “Right Plants in the Right Place” section, which includes landscaping in streetside places, small places, dry shade, wet shade, salty and sandy edges, and raingardens. Following this are the sections of places to see Native plants and “Kids and Native plants.” At the end is an Index of Southeast Virginia Native Plants, those included in our own area and those not included, with both Latin and common names. Finally, there are lists of invasive plants of particular concern in Southeast Virginia, with correlating natives that would be a much better choice and would be beneficial to homeowners. This guide is beautiful and filled with photos, many of which were taken by our John Clayton Chapter members. They are gorgeous—I thank all of the photographers on their contributions. It seems amazing when I recall how when we began in the fall of 2015 it seemed just a distant idea, and now here it is. It was a lot of work but I learned twice as much just by working on the plant descriptions. It is our guide and we should be proud of it. Best of all, it is free to you, our members. I will bring copies to our January meeting, so please come and get one.

A few months ago all the chapters voted to name plants and have the Native Plant Society request commercial growers to develop natives not often found in the trade. Our chapter’s choice was merged with



Here are two of many images in the *Native Plant Guide* contributed by John Clayton Chapter members:

Above, Jan Newton’s photo of a Tiger Swallowtail on Butterfly Weed;

Left, Great Blue Lobelia blossoms photographed by Phillip Merritt.

that of other chapters. Our request for more native azaleas was the only one that made it to the final list.

Recently our member Jan Newton, who moved to Alabama, was here for a visit. Even though she does not live here, she participated in the creation of the Native Plant Guide—it was a natural progression from all the efforts she began here. Jan has been busy in Alabama, also. She began her efforts there by creating 5 little brochures to be used by gardeners in Alabama. The titles are *Native Plants for Native Pollinators*, *Attracting Birds with Native Plants*, *Attracting Hummingbirds with Native Plants*, *Creating Butterfly Gardens with Native Plants*, and *Native Plants for Honeybees*. She has been working with Master Gardeners in her new area. While there is no Native Plant Society there, I expect Jan will accomplish her desire to see one created.

From the Division of Natural Heritage Report, I read that 25 teams participated in researching various areas to study 94 rare plant populations targeted for field work. Seventy-four rare plant populations were actively sought (with 20 properties denying access to the teams). They were able to relocate 26 rare plant populations, which then were re-evaluated and their location data refined. Follow-up visits by Staff Botanist Johnny Townsend resulted in the discovery of 4 additional rare plants. They hope to acquire some of those areas in the future.

At our at our November meeting, Patti Gray explained to those present about the 2017 Plant Sale. As mentioned before, we will have our own plant sale on Saturday, April 29 from 10 am to 2 pm. The sale will be held at the Williamsburg Community Building, which is located across from the Williamsburg library, and will be indoors, which will be helpful in case of inclement weather. Because of the cost of renting this building, the sale committee decided to do both the preparation and the sale in one single day. We will begin our setup very early at 7 am when the building opens, in order to open the sale by 10 am. It is an ambitious project, but with our members' help, this will be possible.

Lucile Kossodo

New Members

Welcome to new members **Steve Pope** of Mathews and **Ann Streb** of Williamsburg.

Notes from the Board

As the board met for the last time in 2016, changes to the 2017 plant sale dominated discussion. For many years, our chapter has participated in a joint sale with the local Master Gardeners as well as the Williamsburg Botanical Garden. This partnership has recently dissolved, leaving each group to independently plan their annual sales.

As a result, look for a change in venue and schedule for the 2017 sale. We are planning to rent the Williamsburg Community Building on Boundary Street (across the street from Williamsburg Regional Library) in late April for the sale. Watch for more details in upcoming editions and remember that the John Clayton Chapter's sale is the only one in the Historic Triangle that features only native plants!

Stay warm,

Cortney Langley, Secretary

At our last meeting...

At November's Chapter meeting, **Caitlin Cyrus**, an environmental scientist with VHB, presented the results of her graduate thesis work at William and Mary. In the College Woods, Caitlin documented the changes in vegetation over the past 45 years and the impact of the uncontrolled population of white-tailed deer. A lively speaker, she enhanced her talk with slides and statistics of her research.



Caitlin Cyrus and Chapter President Lucile Kossodo

The Chapter also awarded scholarships for the 2017 Nature Camp session at the meeting. Pictured at right are recipients **Lisa Small** and **Zoe Averett**, photographed with our speaker. **Nash** and **South McDowell** also received scholarships.



A Stonehouse Habitat work day on November 12

Sue Voigt didn't get a photo of the larger group of volunteers at the Stonehouse Habitat that Saturday, but here are 3 representatives: **Gregg Ripple** (teacher), **Rachel Martin** (parent), and **Gary Driscole** (Master Naturalist).



November 20 Fall Color Walk

To those of us who enjoy observing nature, and especially native plants, it will come as no surprise that 2016 was not the best year for fall color. But the walk was scheduled, and most any day is a good day for a walk in the woods. November 20 was windy and cold. As a matter of fact, one registered participant emailed me in the morning to say she would not be coming because of the frigid weather. Several others who registered just didn't show.

So we were a party of ten. The previous weekend probably would have been better for fall color, but overall this fall wasn't great for color anyway. One walker commented that the strong winds we'd just had throughout the previous night took down about as many leaves as had come down before that. We headed into the woods toward Holly Overlook on the Noland Trail.

So what makes leaves change color in the fall? We know that chlorophyll gives leaves their typical green color. Leaves use chlorophyll in the photosynthesis process to produce sugars. Plants that go dormant in winter store those sugars. Chlorophyll is constantly breaking down and being produced in the leaves throughout the growing season, but as the nights get longer the production of chlorophyll slows down and stops. When the chlorophyll is depleted, substances called carotenoids begin to show through as yellow, orange, and brown colors, and anthocyanins begin to show through as reds and purples. The carotenoids have been present in the leaves through the growing season, but as the chlorophyll subsides in the fall, the carotenoid colors become visible.



A pair of differently-colored red maples—on the left, crimson red, and on right, bright yellow

Leaves produce anthocyanins mostly in the fall in response to the combination of excess sugars and bright light. Moisture and temperature combinations have the greatest effect on the development of anthocyanins. A fall with warm, sunny days and cool but not freezing nights normally results in the best color show. During these bright, warm days, lots of sugars are produced in the leaf. The cooling overnight causes veins to constrict, preventing the sugars from moving out of the leaves. Lots of sugar and lots of light result in lots of the brilliant anthocyanins that give us the reds and purples.

Soil moisture factors in, too. Summer drought conditions can delay the onset of fall color, or a warm spell in the fall will diminish color intensity. Ideal spring, summer and fall weather should produce spectacular fall color. With so many variables, every fall is different. Since carotenoids are always present in the leaves, trees that color yellow or gold will show consistent fall color from year to year. But many factors affect anthocyanin production, so the trees that color red and purple can vary in timing, length and brilliance of show.

Different species of trees begin their color changes at various times, and we can expect certain species to show particular colors. For example, our sourwoods can begin to color very early, showing crimson while everything else is green. Tulip tree may be next, always showing yellow to start. Later on the redbud will turn yellow and hickories will turn deep golden yellow. Black gum, flowering dogwood, and sumac will be reliably ruby or crimson. Other species such as red maple and sweet gum vary within the species. Some red maples color yellow, some orange, some burnt orange, some scarlet. Sweet gum may color yellow, scarlet, merlot, or even deepest purple. We did see examples of most of these, as well as many species of oaks, but none of them were at their best. The best color of the day—and probably the best of the 2016 fall—was sourwood. It was especially showy when backlit by afternoon sun.

Late fruits provided a bit of color too. Spicebushes were bare and beautyberry nearly so, but we did see holly berries and swamp rose hips.

There was quite a bit of green around—wax myrtle, holly, pine, and a Southern magnolia or two. We identified scrub pine and loblolly pine, and we're pretty sure we also found short-leaf pine. Our specimen was a small sapling, so no cones to help with identification. Meegan reminded us that Southern magnolia is not native to the Peninsula but



Crimson sweet gum leaves



...and some maroon ones



Susan's favorite tree of the day, a sourwood

was brought in as an ornamental; it flourished and spread beyond the specimens planted. Rand told us that about 80% of the Park's trees are



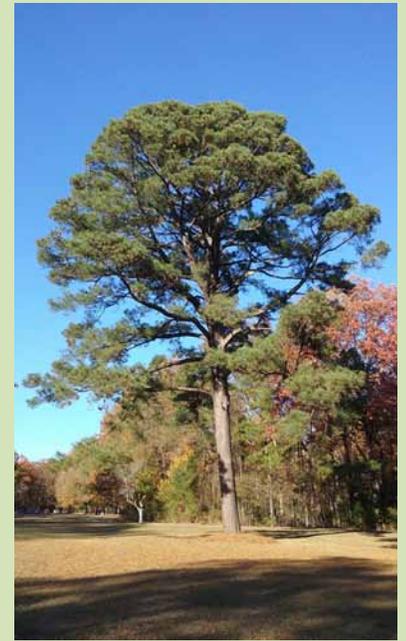
The large live oak at Lion's Bridge

native. Over the Park's long history, ornamentals have been brought in, and many native species were also planted to enhance the Park. We turned the walk around at the Lions Bridge, where a grand old Live Oak inspires children, lovers, and photographers. As

we headed back to our parked cars by way of the meadow trail, an old loblolly pine stood alone and stately. Rand pointed out that in an open setting such as the meadow, where it doesn't have to reach and compete for sunlight, the loblolly doesn't drop all its lower branches.

Since there wasn't an awful lot of bright color to look at, we had a talk as much as a walk. But like I said, most any day is a good day for a walk in the woods.

Susan Yager



The big loblolly pine which had grown up in the open

Upcoming walks...

Saturday, January 28, 10:00 am: Skunk Cabbage walk in Longhill Swamp

Come look for skunk cabbage in Longhill Swamp with **Helen Hamilton**, and **Gus Hall** will lead a walk through nearby up-land woods. Meet at the Christian Life Center on Longhill Road across from Lafayette High School (and wear waterproof footwear). *Snow, ice and bad weather will cancel this walk.*

To register, call Helen at 757/564-4494 or email her at helen48@cox.net.

Saturday, February 18, 10:00 am: Nude Tree walk in the College Woods

Walk with **Charlie Dubay** to learn about identification of trees in winter condition. At the top of the hill is a nice comparison of 3 Virginia pines—loblolly, Virginia, and shortleaf. Participants may park in the William and Mary Hall parking lot, which is open to the public on weekends. Meet Charlie at the Sports Center, 400 Brooks Street, to walk to the College Woods.



And although most trees will be nude at this time of year, it is usually cold in February, so wear enough clothes!

Contact Charlie Dubay at 757/870-0284 to register, and in case of bad weather.

Saturday, March 18, 10:00 am: What is that Weed?

A walk in the **Freedom Park** area with **Helen Hamilton** to identify emerging spring weeds and wildflowers. Learn which weeds are welcome and why others should be eliminated, and expect to see the first flowers of spring! Meet at the Freedom Park Interpretive Center parking lot.

Contact Helen at 757/564-4494 or at helen48@cox.net for more information.

Plant Profile: the Lycophytes

While I was writing about ferns and mosses, I became aware of other plants that could not be ignored, since some, like Ground-pine and Running-cedar, are very common here. And the Lycophytes are on the first page (p. 137) of Taxonomic Treatments in the *Flora of Virginia*, followed by the Pteridophytes, then the Gymnosperms, and last, Angiosperms. So I had to learn about quillworts and clubmosses and spikemosses.

Actually, the major reason I wrote *Ferns & Mosses of Virginia's Coastal Plain* was for my own use—many ferns look very similar before they are reproductive and I wanted to know how to tell them apart. And I cannot remember the distinction between those two species formerly in the genus *Lycopodium*.

The real problem is the names, both common and scientific, because the plants are quite different. Ground-pine is also known as Tree-clubmoss because it looks like a little pine tree, and the yellow cylindrical cones appear on the tips of upper branches to release tiny spores. The current scientific name is *Dendrolycopodium obscurum* (formerly *Lycopodium obscurum*), so that is reasonable. But Running-cedar, formerly *Lycopodium digitatum*, is now *Diphasiastrum digitatum*, which I find impossible to remember. The plant does apparently “run,” from its creeping stems, and separate branches carry forked shoots with spore-bearing cones at the ends.



Helen Hamilton

Tree-clubmoss (*Dendrolycopodium obscurum*)

Confusing the two further are the common names. Ground-pine is also called fan clubmoss, ground-cedar, crowsfoot, running ground cedar, or running pine. Running-cedar is also known as prince's pine, princess pine, or flat-branched Tree Clubmoss. This partial list of synonyms shows much similarity, and the names I have used (Tree-clubmoss and Running-cedar) convey the appearance of these two plants and are those chosen by the *Flora*.



Running-cedar (*Diphasiastrum digitatum*)

The bog clubmosses look like mosses with clubs, and they grow only in wet areas, bogs, swales, and seeps. Two species are common in the Coastal Plain, but probably not often seen when on casual walks that do not go through swamps and marshes where the plants grow.

These plants had been classified with Tree-clubmoss and Running-cedar, but on the basis of molecular evidence, have been reclassified in the genus *Lycopodiella*.

Southern Bog Clubmoss is now known as *Lycopodiella appressa* (*Lycopodium appressum*) and Foxtail Clubmoss is *Lycopodiella alopecuroides* (*Lycopodium alopecuroides*).

Sometimes seen in our area is another plant formerly in the genus *Lycopodium*. Shining Clubmoss (*Lycopodium luciculium*), growing in moist pine woods and along stream banks, is now *Huperzia lucidula*. A cluster of these plants can be identified by erect stems with a bristly appearance due to many small evergreen leaves. Less than 12 inches tall, the leaves are shiny and dark green, and winter buds may form at constrictions along the stems. The *Flora* separates plants in the genus *Huperzia* from all others since the stems are erect and usually unbranched. Other species are prostrate or erect and branched.

Meadow Spikemoss (*Lycopodioides apodum*/*Selaginella apoda*) is one of 300 species that have changed little in the last 300 million years. Most selaginellas grow in the tropics, but some are frost and drought tolerant. Meadow Spikemoss is frequent in Virginia, but often overlooked, growing in shady wet places, often alongside mosses on stream banks and in swamps.

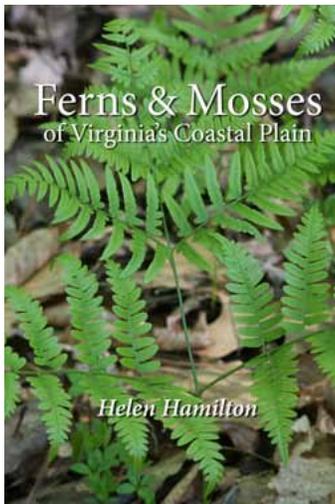
The plant can be mistaken for some large mosses, but it has a true stem carrying water and nutrients. It grows in loose mats of long threadlike

stems without much branching. There are four rows of tiny yellow-green leaves, pointed and with a prominent vein.

Other species and cultivars of selaginella are available in many garden centers as container house plants or as groundcovers in woodland gardens near hosta and other broad-leaved perennials.

The least well-known lycophyte in our area is an unusual perennial with hollow-quill-like leaves, always submerged in streams, ponds, or wet roadside ditches. Superficially, quillworts look like clumps of grass emerging from muddy waters, but the stems are hollow, and the plant is anchored to an underground stem that absorbs nutrients.

In summer fruits appear at the base of the plant as round pouches, with spores inside no bigger than dust particles. The identification of species



depends on the shapes and decorations of these tiny spores. A professor at Old Dominion University has made a lifelong study of quillworts, and can identify many species local to the Coastal Plain.

Photographs and more comments about these interesting plants are in *Ferns & Mosses of Virginia's Coastal Plain*, available from the author.

Contact me at helen48@cox.net.

Helen Hamilton

Our 2017 Plant Sale is coming up in April!

Save the Date

**Annual
Native Plant
Sale**



John Clayton Chapter
Virginia Native Plant Society

**Saturday, April 29, 2017
10am to 2pm**

Williamsburg Community Building
401 North Boundary Street

Volunteers are greatly needed
and deeply appreciated

contact: patriciagray67@gmail.com

John Clayton Chapter Calendar

- Thursday, Jan 19** **6:45 pm: John Clayton Chapter meeting** at the **James City County Rec Center, Room A**, 5301 Longhill Rd., Williamsburg.
Our speaker will be historian **Martha McCartney**, whose subject will be **“John Clayton, Up Close and Personal.”** (Details on Page 1)
- Saturday, Jan. 28** **10:00 am: Skunk Cabbage Walk in College Woods** with **Helen Hamilton** and **Gus Hall**. Meet at the **Christian Life Center** across from Lafayette High School on Longhill Road (and wear waterproof footwear).
To register, call Helen at 757/564-4494 or email her at helen48@cox.net.
(More info on Page 7)
- Saturday, Feb. 18** **10:00 am: Nude Tree Walk in the College Woods** with **Charlie Dubay**. Participants may park in the William & Mary Hall parking lot, which is open to the public on weekends. Meet Charlie at the College’s Sports Center at 400 Brooks Street. (Details on Page 7)
- Saturday, Mar. 18** **10:00 am: What Is That Weed?** A walk in the **Freedom Park** area to identify emerging spring weeds and wildflowers.
Meet **Helen Hamilton** at the **Freedom Park Interpretive Center** parking lot.
Contact Helen at 757/564-4494 or helen48@cox.net for more information. (See Page 8.)

There may be walks in the works which did not make this issue, so keep a lookout for announcements about additional walks and other events on our website at www.vnps.org/john-clayton and in the local newspapers.

Below is a membership renewal form. Please contact Membership Chair **Fred Blystone** at 757/229-4346 or at fredblystone@gmail.com with questions about your membership.

Membership Form for John Clayton Chapter, Virginia Native Plant Society

(Place checks in the boxes below next to your selections.)

I am a **new member** of the John Clayton Chapter **renewing member** of the John Clayton Chapter

Name		
Address		
City	State	Zip
Email*	Phone*	

I would like to receive my newsletters electronically at the email address above.

Membership dues

Individual (\$30) Family (\$40) Patron (\$50) Sustaining (\$100) Life (\$500)

Student (\$15) Associate (\$40) —for groups who designate one person as delegate

I wish to make an additional contribution in the amount of \$ to John Clayton Chapter to VNPS

This is a gift membership; please include a card with my name as donor.

I have time a little time no time to help with activities.

I do not wish to be listed in a chapter directory.

**Please Note:* John Clayton Chapter does not distribute any of our membership information to other organizations. It is used only by the officers and chairpersons of our chapter.

Make your check payable to **VNPS** and mail to: VNPS Membership Chair
400 Blandy Farm Lane, Unit 2
Boyce, VA 22610