Claytonia

Newsletter of the John Clayton Chapter, Virginia Native Plant Society

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Our November 21 Meeting: Dennis Whigham will speak on "North American Native Orchids—Ensuring their Survival"

Dennis Whigham measures a rare *Isotria* orchid.

Dennis Whigham is a Senior Botanist at the Smithsonian Environmental Research Center. The ecology of plants has been his primary interest and his research has resulted in journeys through forests, fields and wetlands around the world. Explorations have lead to studies of woodland herbs—including orchids, vines, wetland species, invasive species and studies of forests in the tropics, temperate and boreal zones. In recent years, studies of interactions between orchids and fungi have led in new and exciting directions. Whigham's current focus is on wetlands, including the role of wetlands associated with juvenile salmon habitat in Alaska, the rarest terrestrial orchid in eastern North America, and invasive species. His passion now is to establish the North American Orchid Conservation Center (NAOCC), a Smithsonian Consortia initiative. NAOCC will be based on continentally focused public-private collaborations that will eventually result in the conservation of the genetic diversity of native orchids, initially in the U.S. and Canada.

Dennis Whigham obtained an undergraduate degree from Wabash College and a Ph.D. from the University of North Carolina, and joined the Smithsonian in 1977. Whigham and his collaborators have published more than 225 articles in journals and books and he has co-edited 10 books, including one on terrestrial orchids and a 2009 volume on *Tidal Freshwater Wetlands*.

The meeting begins at **6:45 PM** at the **James City Recreation Center at 5301 Longhill Road**. **See you there!**

President's letter

I have some troubling news to share about one of the chapter's registry sites in James City County. For those of you not familiar with the registry site program, it is a program overseen by a state VNPS committee to recognize properties throughout Virginia that have special biological significance and to make informal arrangements with landowners to protect the sites and allow visits by VNPS.

The John Clayton Chapter has two registry sites in our area: The Greenhaven site in Norge, and the Grove Creek site near Busch Gardens. While the Greenhaven site is in fine condition, the Grove Creek site is not looking as good. A few years ago, it was hit by a storm which opened up the site to invasive plants like Japanese honeysuckle. To make matters worse, the Xanterra corporation, which recently purchased the property, has now requested that it be rezoned from 'Open Space' to 'Residential'.

Donna Ware has studied the area extensively and is very concerned about the future of the site. She recently drafted a letter which I submitted to the county on the behalf of the chapter. Here's a bit of the letter describing the significance of the site.

The forest type on the slopes of the ravines is known as "Coastal Plain Calcareous Ravine Forest", and it is considered globally rare by the Virginia Division of Natural Heritage (as is the type of swamp that occurs in the ravine bottoms). Among the plants present on the slopes and in the swamp are species that are far from their primary range in the mountains.

Through these opportunities and field trips to the site, we continue to learn about these "mountain species" believed to have been residing for thousands of years in the deep ravines of Grove Creek, species such as Mountain Camellia *(Stewartia ovata)*, which is very rare in Virginia, Bishop's Cap *(Mitella diphylla)*, Heart-leaf Skullcap *(Scutellaria ovata)*, Marsh Marigold *(Caltha palustris)*, Basswood *(Tilia americana)*, and the Umbrella Magnolia *(Magnolia tripetala)*.

Another suite of species also represented in these habitats is made up of southern species near their northern limit. The most outstanding among those is the Southern Sugar Maple *(Acer floridanum)*, which is both abundant and grows to a large size in the ravines of Grove Creek. Another state rare plant present in the VNPS Registry Site is Pink Thoroughwort *(Fleischmannia incarnata)*.

James City County is now considering whether or not to allow development of the Xanterra property. If you would like to help keep this area protected, you can express your concern to the county by contacting:

Mr. Jose Ribeiro
Senior Planner, James City County Planning Department
101-A Mounts Bay Road
Williamsburg, VA 23187-8784 planning@jamescitycountyva.gov

For more information on registry sites across the state, please visit:
http://vnps.org/wp/conservation/know-your-vnps-registry-sites/

Phillip Merritt

Our annual meeting on September 19

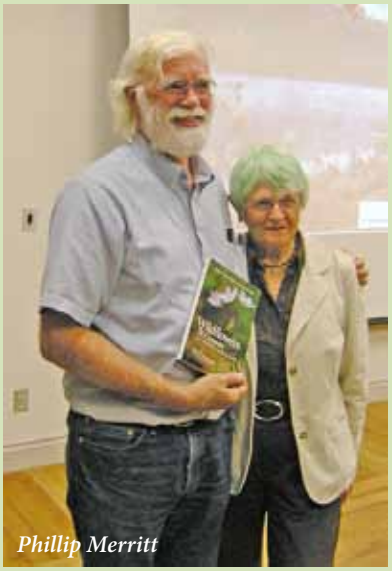
Our speaker, **John Hayden**, **Professor of Biology at the University of Richmond**, explained to his listeners the botany (and unavoidably, some chemistry) behind the display of leaf color we enjoy each fall. Here's just a tiny bit of fascinating information from Professor Hayden's presentation—

Three pigments present in leaves are responsible for the riot of fall colors we see:

Chlorophyll (green), necessary for photosynthesis, captures solar rays and utilizes the resulting energy in the manufacture of the plant's food—simple sugars which are produced from water and carbon dioxide. These sugars are the basis of the plant's nourishment and the sole source of the carbohydrates needed for growth and development.

Carotenoids (yellow to orange) are present in leaves year-round, while **anthocyanins (red to purple)** are only produced towards the end of summer. Both are masked by the green of chlorophyll until its production slows with the approach of fall.

The brown color of some fall leaves is not the result of a pigment, but cell walls, and may be seen when no coloring pigment is visible.



Speaker John Hayden, who reviewed the manuscript of Helen's new book, holds a copy for this photo taken with its author.

Chapter business…

Pat Baldwin was honored at the meeting for his 28 years on the board, during which he has served as Chapter Historian and led many field trips. He is also a volunteer at William & Mary's Herbarium, where he enters data into an electronic file of its herbarium sheets, many of which he has contributed. Pat's plaque reads "Presented to Patrick B. Baldwin in deep appreciation for serving 28 consecutive years on the board of the John Clayton Chapter Virginia Native Plant Society 1984–2012."

Pat Baldwin displays the plaque he was presented in recognition of his many contributions to the chapter during his long tenure on our board.

Each year the John Clayton Chapter recognizes an outstanding member with an award. This year, 3 names were submitted to the committee, and a Community Service Award was presented to **Lucile Kossodo**, **Joan Etchberger** and her husband **Jim**, and **Patti Gray**. These four have borne the responsibility for the chapter's annual plant sale, the only event that generates funds to support the chapter and to offer scholarships to young people attending Nature Camp. The chapter is grateful to them for many months of dedicated, hard work, resulting in very successful events.

Joan Etchberger and Lucile Kossodo with their Community Service Awards

Louise Menges

New members

Welcome to new members **Susan Crockett** of Gloucester, **Judy Jones** of Williamsburg, **Kathryn & Evan Lambert** of Virginia Beach, **Lucy Manning** of Williamsburg, **Judith Michalski** of Hampton, **Randi Trestrall** of Poquoson, and **Mary Lou Ward** of Elberon.

Recent JCC walks

September 14's walk at Longhill Swamp

Here are just a few of the plants we saw as **Donna Ware** led us on a trail around and through Longhill Swamp. More than 60 species in all were spotted, including 6 ferns, several goldenrods, 4 polygonums, hearts a'bustin' *(Euonymus americanus)*, beautyberry *(Callicarpus americana)*, and three orchids—*Tipularia discolor* (cranefly orchid), *Goodyera pubescens* (downy rattlesnake plantain), and *Cypripedium acaule* (pink lady's slipper).

Louise Menges

Blooming Pennsylvania smartweed *(Polygonum pennsylvanicum)*

Fruiting beautyberry *(Callicarpa americana)*

Beefsteak plant *(Perilla frutescens)*, introduced from Asia

Impressively large fronds of sensitive fern *(Onoclea sensibilis)* were visible along our walk.

Donna shows a specimen of ground cherry (*Physalis* species) to participants, including Adrienne Frank, left, and Ginny Carey, center.

Netted-veined leaves of downy rattlesnake plantain, a native orchid

Little Creek Reservoir on October 5

Helen Hamilton actually led two walks around the site that day—the first to acommodate trippers who showed up for a walk mistakenly advertised to begin at 9 am (I'm afraid I may be to blame for that!), and the second with folks who arrived at 10. Helen chose routes approaching the boardwalk over the reservoir from different starting points, so offering views of different flora along the way. **Louise Menges**

Maryland golden aster *(Chrysopsis mariana)*

Big velvety seedpods of the nonnative invasive *Wisteria sinensis* (Chinese wisteria)

The lavender blooms of *Polygala incarnata* (procession milkwort)

Nodding lady's tresses orchids *(Spiranthes cernua)* were in bloom along the water's edge in several places.

Buttonbush *(Cephalanthus occidentalis)* seed heads

Shining sumac *(Rhus copallina)*

Grafton Ponds Natural Area Preserve on October 19

Although rain threatened the entire time, ten of us were able to enjoy our field trip along an abandoned road adjacent to the Grafton Ponds State Natural Area Preserve in York County. As expected, the white fall asters were in full bloom. In some areas, Fall Aster *(Symphyotricum pilosum)* was so thick it resembled snow on the ground. Perennial Saltmarsh Aster *(S. tenuifolium)* occurred in great numbers, but they had wide-spaced blooms, mostly lavender.Also several Calico Asters *(S. lateriflorum)* were seen, characterized by their purplish centers. We soon found on a slope several Eastern Silvery Asters *(S. concolor)*. They made a beautiful sight with blue to purple rays and bright yellow disc flowers. Most were on single erect stems with crowded leaves pointed up, their bases almost clasping. The six to ten blooms were compact and located only at the terminus of the stem. (There were a couple with more than one stem, but the center stem had been broken off.) Although in small numbers, we found both Maryland Goldenaster *(Chrysopsis mariana)* and Grass-leaved Goldenaster *(Pityopsis graminifolia* var. *latifolia*).

Flowers of calico aster

Probably the showiest plant was Purple Foxglove *(Agalinis purpurea)*, with many spreading branches, rose-purple flowers, dark-spotted with two yellow lines down the throat. Although a plant with no outstanding bloom, Clearweed *(Pilea fontana)* was growing on the left side of a small stream. This plant occurs only infrequently in the coastal plain and rarely in the piedmont and mountains.

Eastern silvery aster

Purple foxglove

Very little goldenrod was found. We did see Erect Goldenrod *(Solidago erecta)*, White Goldenrod *(Solidago bicolor)*, and Slender Flat-topped Goldenrod *(Euthamia caroliniana)*. Another interesting plant we found was Meadow Spikemoss *(Lycopodioides apodum)*. The plant

has pale-green flat branches and the new *Flora of Virginia* indicates it is often overlooked because many botanists think it is a moss or a liverwort. It could easily be missed here because it was growing mixed with sphagnum moss.

Other plants we found were Marsh Purslane, Fireweed *(Erechtites)*, Selfheal, Mistflower, Beggarticks, Virginia Tickseed, Marsh Fleabane, False Nettle, White Snakeroot, *Eclipta alba*, and Beautyberry with plentiful fruit. Ferns included Sensitive, Netted Chain, Ebony Spleenwort, Christmas, and Grape. Just off Ft. Eustis Blvd. we saw literally 500-plus Woolly Croton, or Hogwort *(Croton capitatus)* growing in barren compacted soil. The pale gray-green leaves were soft and woolly to the touch, with very hard seedheads. This plant has been previously recorded only from six counties, all north of the James River. This occurrence in York County represents a new Peninsula record, indicating it is the first record from Hampton to Richmond.

Woolly croton's seedhead

Thanks to all who joined me on this walk. **Pat Baldwin**

Pat holds a clump of meadow spikemoss for us to examine.

This colorful little frog sat obligingly on one of Pat's handout sheets for a photo.

October's Potting Parties

Here are some photos taken during our October 5 potting party. The weather was more cooperative than it was for the next party on October 19, which turned out to be a rainy day; participants at the second party worked as fast as they could to finish the job, and didn't stop for photos!

Potters pause for a picture on Oct 5.
From left: Meegan Wallace, Lucile Kossodo, Patrick Teague, Phillip Merritt, Phyllis Putnam, Susan Yager, Patti Gray, Sue Voigt.

Patrick Teague digs plants from the Habitat Garden for potting.

Martha Smith and Sue Voigt, hard at work at the Garden.

Part of the production line at the Etchberger's—from front to back: Edie Bradbury, Meegan Wallace, Patti Gray, Phillip Merritt.

Wildflower profile: Red Chokeberry

This native deciduous shrub of the Rose Family is truly a four-season plant. In the spring clusters of flowers with 5 petals and about 20 stamens appear, borne on hairy stalks. After the flowers, abundant glossy red fruits are densely crowded along the branches. The fruits ripen in late summer and persist throughout fall and into winter. With a low protein content, they are usually overlooked by birds until the end of the season when other foods are unavailable. Leaves are glossy and dark green, to 3 inches long, minutely toothed on the margins and fuzzy, grayish-green beneath. The foliage turns bright red in autumn, similar to that of burning bush *(Euonymus alatus)*.

Red Chokeberry (*Aronia arbutifolia)* is easily grown in average, well-drained soils in full sun to part shade, with best fruit production in full sun. It is multi-stemmed, and will form small colonies from rhizomes. The plant will tolerate a range of conditions including boggy soils. Growing in thickets, bogs, swamps and wet woods, it occurs in every county in Virginia. The range is from Newfoundland to Florida and Texas, especially on and near the Coastal Plain, but also in the mountains, to Kentucky and West Virginia. Blooms March–May; fruits September–November.

Although the fruits can make tasty jams and jellies, this plant is known as "Chokeberry" because the berries are tart, bitter, and very astringent, causing choking if eaten. Red Chokeberry also appears in

references as *Pyrus arbutifolia* or *Photinia pyrifolia,* emphasizing its close relationship with Wild Crabapples *(Pyrus)* or as *Sorbus arbutifolia*, similar to the Mountain-ashes.

Choke**cherry** *(Prunus virginiana)* is a true cherry with stone fruits. A small deciduous tree growing 20–30 feet tall, it characteristically forms thickets from suckers. Five-petaled white flowers appear in spring in elongate clusters (racemes), very similar to the widespread species Black Cherry *(Prunus serotina)*. The red fruits are attractive to birds and small mammals. Leaves are elliptical, 1–4 inches long, and with more triangular teeth, pointing outward, than Black Cherry.

This plant is native in Virginia in the Mountain Region only, growing in dry oak-hickory forests and thin soils around outcrops, especially at middle to high elevations. The range is from Newfoundland south to North Carolina, Texas, and California. Blooms April–June, fruits July–August.

Cultivars are available, but are seldom sold in the Coastal Plain since the plant does not thrive in our area. Native Americans found many uses for Chokecherry, grinding the fruit to make patties, combining with buffalo meat and fat into pemmican, and boiling the bark to make a tea used as a cold remedy. They also ate the fruits, and the seeds, which have an almond flavor from a chemical which forms cyanide. As with Black Cherry, the seeds, bark and leaves can be toxic in large quantities.

Helen Hamilton

Notes from left field

Mystery nonnative invasive of the month

A vanquished villain

At the September Master Naturalists Board Meeting, Sherry Brubaker showed up with a mystery plant from her yard. I recognized it from years of pulling it in my own front yard, but didn't know its name. Next time I saw one in my yard, I yanked it (gently so as to get all the roots), took a quick shot, and sent it to Donna Ware. Donna got back to me with the following email:

Kathi, it looks like an introduced weed that I first encountered near Swem Library several years ago—mulberry-weed or crabweed, Fatoua villosa. *It's even in the mulberry family!*

So, we know the name of the villain, and, perhaps most important, that it is indeed a villain. So pull away!

Kathi Mestayer

Plant (non-)native?

Lance Gardner noticed some (wrong-headed) landscaping advice in an issue of *Cooperative Living*, a publication that goes out to many electric cooperative members throughout Virginia (his coop is Rappahannock Electric Cooperative). An article subtitled "Energy-Efficient Landscaping in Virginia" recommends six shade trees for planting, two of which are introduced species, six bushes or shrubs, none of which is native, and three vines, only one of them native!

Their tree recommendations: American Sycamore (although non-native London Planetree is suggested as a better alternative), Honey Locust, Pin Oak, Lacebark Elm (introduced from Asia), River Birch, and Littleleaf Linden (introduced European).

Their recommended shrubs: Camellia, both *C. japonica* and *C. sasanqua* (both introduced from Asia); Azelea *Rhododendron obtusum* (introduced from China or Japan); Nellie Stevens Holly, an Asian-European hybrid between *Ilex aquifolium* and *Ilex cornuta*; Hollywood Juniper, *Juniperus chinensis* (introduced from Asia); Skip Laurel, *Prunus laurocerasus* (introduced from Asia); and Green Beauty Boxwood, *Buxus microphylla japonica* (introduced from Asia).

Their recommended climbing vines: Carolina Jessamine, *Gelsemium sempervirens*, English ivy species (introduced and invasive!); and Porcelain Berry, *Ampelopsis brevipedunculata* (introduced from Asia).

I'll bet our members could suggest native alternatives to their choices!

To view the entire article, go to http://www.co-opliving.com and click on **Current Issue**, then choose **September 2013** and click on **Energy Bang** in the lefthand list of topics.

A biography of our Chapter's namesake

…contributed by Cynthia Long (*via* Pat Baldwin)

Virginia botanist **John Clayton** was born near London in 1694. His grandfather, Sir John Clayton, was an original Fellow of the Royal Society, a group of amateur and professional scientists founded to promote knowledge. Members would eventually include Isaac Newton, Robert Boyle, Joseph Lister, Christopher Wren and John Ray. Clayton men were educated at Cambridge, and trained in the professions of law and medicine. John's father emigrated to Virginia early in the 18th century, where he served as Attorney General of the Colony. Young John was in Virginia with the rest of his family by 1715, probably having completed his education in England. They lived near the Capitol in Williamsburg.

I couldn't find a likeness of John Clayton, but Cynthia's will certainly do! (Ed.)

John was appointed Clerk of Gloucester Court in 1720, a position he held for life. As Clerk of the Court he was responsible for keeping all records of county court proceedings, land surveys, deeds, wills, and other legal documents. The second courthouse where he worked still stands in Gloucester, as does Ware Church on nearby Route 14, where he married Elizabeth Whiting in 1723.

Although his homesite cannot be identified conclusively, tax records show the family owned 450 acres in Gloucester County, a carriage, and more than 35 slaves. Orders to his factor in England show that the family lived well, exchanging their hogsheads of Virginia tobacco for fine fabrics, wine, and china. His position as clerk allowed him to appoint a deputy to do much of the record keeping, giving him time to manage his plantation, as well as his botanical studies.

It is impossible to assess Clayton's botanical work without describing the larger scientific community of Europe and America. His family's social life led to friendship with William Byrd II, who was a member of the Royal Society, and had introduced his father to Mark Catesby. He also corresponded with John Bartram, and Ben Franklin of Philadelphia. Dr. John Mitchell lived in nearby Urbanna. We see his name in partridge berry, *Mitchella repens*.

The Clayton-Catesby connection led to Catesby's suggestion that Clayton send specimens to Gronovius in Leiden for further study and classification. Catesby was working on his own natural history and was also receiving specimens from Clayton. At the same time Clayton was sending his collections and descriptions to Gronovius, Linnaeus was studying and developing his *Systema Natura* in Amsterdam. The Swedish botanist worked closely with Gronovius identifying and classifying Clayton's specimens. In appreciation of their interest and assistance he compiled and sent to Grovonius for his library "A Catalog of Plants, Fruits, and Trees Native to Virginia." Grovonius proceeded to publish this catalog, unknown to Clayton, under the title of *Flora Virginica* in 1739. He credits Clayton fully in the introduction, as he explains his hasty publication "before the work be destroyed or lost".

Although Clayton used Ray's system of classification initially, he was soon convinced of the superiority of the new Linnean system, and used it in later studies. Clayton wrote to Linnaeus thirty years after his arrival in Virginia, apologizing, "Pardon my inexperience in the use of the Latin language, since I have lived so long in these rich regions without practice and without conversation with learned men that I

have almost forgotten the learning of my youth, such learning as you believe spontaneous." Linnaeus rewarded Clayton for his important contributions to his own work by giving him the ultimate immortality of a genus named in his honor, *Claytonia*. We recognize this today in our delicate Spring Beauty, *Claytonia virginica*.

Quaker wool merchant and amateur botanist Peter Collinson of London acted as catalyst for the international group of plantsmen. He encouraged their work, introducing scientists by mail, and continually fostered their work in letters and loans. Catesby's natural history was completed with financial help from Collinson.

American scientists organized their own societies. The American Philosophical Society, begun by Franklin in 1743, was to be our counterpart to the Royal Society. Franklin complained to Collinson a few years later, "The members of our Society here are very idle Gentlemen: they will take no pains." Another correspondent summed it up, " As to your Philosophical Society, I can say nothing but that it is certain that some have been too lazy, so others may have been too officious; which makes the more prudent afraid of them."

Clayton met Franklin when he was in Williamsburg on Post Office business in 1776. Franklin was in a unique position to subsidize scientific communications, and he offered free postage to his friends, including Clayton. By sending mail under a cover addressed to Franklin, postage (which was paid by the recipient of the mail) could be avoided.

Clayton spent many hours in the field, traveling north to Canada and as far west as Augusta County exploring and collecting plants for himself and his many correspondents. He traveled west to Orange County on a botany trip in 1772, the same year he ordered eyeglasses "to suit a person 77 years old". He was honored in Virginia when he was elected President of the new Philosophical Society organized in 1773 "for the Advancement of Useful Knowledge in this Colony."

Clayton died in 1774, a recognized contributing member of the international natural history circle, and a part of the scientific community to which we claim continuity.

I first saw Spring Beauty blooming profusely on ground covered with dung from heron nests perched in lofty loblolly pines. We were near Burke's Mill Pond, which was very likely a part of John Clayton's homesite in Gloucester County. It was through these field trips with Donna Ware that we eventually formed our chapter of the Wildflower Society. I like to think that John Clayton was our inspiration. **Cynthia Long**

Below is a membership renewal form. **If your renewal date is 08/31/13 or earlier**, this is the last newsletter issue you will receive until you renew.

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

Calendar

Thursday, November 21 **6:45 pm: John Clayton Chapter meeting** at the **James City Recreation Center** at 5301 Longhill Road. Our speaker is **Dennis Whigham**, whose topic will be **"North American Native Orchids—Ensuring their Survival."** (See Page 1.)

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.claytonvnps.org** and in the local newspapers.