

SHORTIA
NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB
AUTUMN 2012



Shortia galacifolia

Oconee Bells

WESTERN CAROLINA BOTANICAL CLUB

President Mary Kathryn Hardman Secretary Joy Charlebois
Vice-President Ruth Anne Gibson Treasurer Alan Graham

MEMBER NEWS

Any change of address, email, or telephone number should be sent to Alan Graham, 544 Top Road, Brevard, NC 28712, 884-3947, adgraham@citcom.net.

New member: Jim Poling, Black Mountain

SHORTIA TO BE SENT VIA E-MAIL

At its August 22 meeting, the Board of WCBC approved that the *Shortia* newsletter would be sent electronically to members who now receive their program schedule via email. Members unable to access *Shortia* in this manner will receive a hard copy in the mail from the editor. If you prefer to receive your copy by US mail, contact Paula Robbins at 828-274-4166.



Don't miss the November 9 WCBC meeting at Bullington, where a token of appreciation will be presented to Anne Ulinski for her many years of service as editor of *Shortia*.



Field Trip Cancellations. On occasion field trips must be cancelled or changed either for weather conditions or other reasons such as road closings. Such changes are sent out by email to all members at the latest by 7 AM the day of the field trip. If you do not have email access, we will try to reach local members by telephone by 7 AM. If you are in doubt, contact a leader or co-leader whose telephone number is listed on the schedule. When a field trip is cancelled, no member will be at the contact point.



Members may be interested in a presentation on "Collecting Native Seeds and Plants" at the Butler Room of the Botanical Garden at Asheville on Sunday, October 21 from 2 to 3:30 PM by Ron Lance, Senior Naturalist and Land Manager for Balsam Mountain Trust. To register, call 838-252-5190.

The American Chestnut Foundation and the USDA Forest Service will present the 2012 American Chestnut Summit at The Crowne Plaza Resort in Asheville, October 19-21. The keynote speaker will be Dr. Patrick McMillan, Director of the Campbell Museum of Natural History at Clemson University. For registration information: www.acf.org/summit.



Winter Walks. Three surprise walks are scheduled this winter: for November 16, January 4 and February 22. Leaders will designate the locations close to the date, and information will be sent by email.



FERNHAVEN OPEN GARDEN EVENT TO BENEFIT THE GARDENS AT BULLINGTON CENTER

WCBC members seemed to enjoy their visit to our "Fernhaven" at the end of April, so Juanita and I decided to open Fernhaven to the public on 9 June for the benefit of Bullington Gardens (the new name for "Bullington Center"). [The Lamberts are members of the "Bullington Botanical Bunch," that originally included Bonnie Arbuckle and Frances Jones. Recently, Carol Lim and Sherry Metzger have also participated. More volunteers are always welcome! Ed.]

More specifically, we decided the event should benefit WCBC activities at Bullington, since the Botanical Bunch frequently incurs unreimbursed expenses when working on the Native Woodland Garden, the Azaleas Repository, the Nature Trail, and more. Additionally, we wanted to support the WCBC mission at Bullington Gardens by showing the public another example of use of native plants in a naturalized garden.

Bullington's PR person sent out a brief description to numerous news outlets, but the key publicity was provided by the *Times-News* of Hendersonville. They sent out a photographer who took what seemed like hundreds of photos. I sent a more-detailed description of Fernhaven to a writer, and she called back and interviewed me. In spite of some serious shortcomings, the resulting article produced enough interest or curiosity to draw a little more than a hundred people to wander around Fernhaven over a four-hour period. We collected \$525 to use in development and maintenance of the "naturalistic side" of Bullington Gardens. There were a few disgruntled people and a few that came unprepared for the terrain due to lack of information in the news article, but for the most part, people really enjoyed themselves. Some folks really gushed about Fernhaven, and one person said it was her best experience so far this year.

Given this relative success, perhaps we will try to do this again in five years if we can make enough improvements to take some of the rough edges off and if the azaleas develop enough to put on a good show. Then members who were unable to come to this year's WCBC visit to Fernhaven would have another opportunity to see what they missed.

Larason Lambert



LIKIN' LICHENS

This title was borrowed from a Lichen Workshop presented in the Smokies. Jennifer Love, who presented that workshop, also presented one for WCBC members in March 2012, at Bullington Center. The first thing she did was to dispel the myth that lichens harm trees or indicate that trees are unhealthy. Actually lichens are a good indicator of air quality. If lichens are healthy the air is clean, but beware if lichens are dying!

So what are lichens? "Freddy Fungus took a lichen to Alice Algae... and now their marriage is on the rocks" is an oft-used phrase to remind us that lichens are a combination of fungus and algae and/or bacteria. Lichenologist Trevor Goward uses the phrase "Lichens are fungi that have discovered agriculture" to describe this relationship. The fungus provides the structural framework for the lichen but cannot photosynthesize and thus provide its own food. So it joins into a symbiotic relationship with algae or bacteria that provide food. In the Great Smoky Mountain All Taxa Biodiversity study, over 800 species of lichens have been identified. In the US and Canada more than 3600 species have been identified.

In addition to being a good indicator of air pollution, lichens are important to both wildlife and people. Lichens are used as nesting material for flying squirrels and for as many as fifty species of birds. They are a food source for caribou, deer, and other mammals and birds, including Spruce Grouse and Wild Turkeys. They serve as camouflage for some larvae and invertebrate species, and they are hosts to larvae of butterflies and moths.

Humans have discovered many uses for lichens. Beautiful dyes can be made from them, and they have been widely used as a fixative in perfumes. Harris tweeds dyed with lichens have been discovered to be moth resistant! Ancient medicine used lichens for teas and other remedies, and in modern times antibiotic properties have been found in up to 50% of them. Most lichens are edible, but not palatable, so I suppose we save them for when we have a food shortage!

Although they are very slow growing, lichens can grow on nearly any surface including trees, leaves, rocks, soil, and even man-made structures. For growth they need a substrate, light, moisture, and, of course, clean air. They are very important in our ecosystem, for they serve as pioneer species that begin to prepare the surfaces on which they grow for other forms of plant growth.

There are six growth forms of lichens: Crustose, Foliose, Umbilicate, Fruticose, Squamulose, and Gelatinous. All of these are quite varied in their colors, shapes, and sizes. As the name implies, crustose lichens form a crust that is tightly attached to its substrate. Colorful blotches on tree trunks or rocks are often attributable to this type. Foliose lichens are leaf-like and lobed with top and bottom surfaces that are more loosely attached to their substrate, while umbilicate lichens are attached only at a central point. Fruticose lichens are more branched and appear more three-dimensional, often looking like small shrubs. Squamulose lichens have overlapping scale-like lobes. Gelatinous lichens are just that, gelatinous, produced by a cyanobacterium on the surface of the fungus.

Go out and examine the lichens in your environment. They are varied, interesting and actually quite beautiful. You might even take a likin' to 'em!

Harriet Walls



WCBC, THE CAROLINA MOUNTAIN CLUB AND THE BLUE RIDGE PARKWAY: A PARTNERSHIP?

When WCBC members arrived at Bear Pen Gap for our walk on June 15th, several folks were dismayed at the amount of recent mowing they encountered at the beginning of the Mountains-to-Sea Trail there, which had probably removed flowers of some interesting plants. I remembered that mowing had sometimes wreaked havoc along the trail to Frying Pan Tower, so, in preparation for our June 23rd walk, I contacted Pete Peterson, Maintenance Counselor for the Carolina Mountain Club, who assured me that the trail would not be weed-whacked until after our walk.

Individual members of the Carolina Mountain Club volunteer to be responsible for maintenance of specific sections of the Mountains-to-Sea Trail and the Appalachian Trail in Western North Carolina. For example, for ten years, Ken and Carol Deal of Asheville maintained the section just north of the Mills River Overlook, where we've enjoyed the annual July display of Turk's Cap Lilies and leather flower.

In addition, five groups of volunteers (with an average age of 70!) meet regularly for a day of weed-whacking and other trail maintenance activities. They work on more than 300 miles of trails in other public areas in WNC: four national forests, three state forests, three conservancies, one county, and two towns. They built the Carolina Mountain Trail at the North Carolina Arboretum more than ten years ago. Their work makes it possible for us to access many of the interesting areas along the trails. (If you wish to contribute to the CMC to support their work, annual membership is \$20, and checks may be sent to P.O. Box 68, Asheville, NC 28802.)

Paula Robbins



NORTH CAROLINA NATIVE PLANT SOCIETY

I became the President of the North Carolina Native Plant Society on June 1. The NC NPS was founded in 1951. The NC Wildflower Society (as it was called then) would promote the enjoyment and conservation of native plants and their habitats through education, protection, and propagation. We currently have about 500 members in six chapters across the state. We hold a spring and a fall outing at various places across the state to view the native plants in that region. The local chapters hold wildflower walks and talks about related subjects. The chapters also have booths at Earth Day events, festivals, and home and garden shows. Recently we had a booth at the Green and Growing Show in Greensboro and the Summer Green Show in Hickory. These are shows for the landscape trade; we hope, through our presence, to promote the use of native plants in the landscaping trade and provide information about how to do so.

We also were the impetus, along with the Habitat Stewards of the North Carolina Wildlife Federation and the Botanical Garden at UNCC in Charlotte, in establishing a Certificate in Native Plant Studies offered through the Botanical Garden. This program has been a huge success, with courses filling quickly and drawing from a wide range of people. Landscape designers, plant nursery workers, local faculty from nearby educational institutes, and a wide variety of other people have taken the courses.

In our last calendar year we donated a little over \$11,000 to various botanical and conservation efforts. Our largest donation was \$5,000 to the Natural Heritage Program to complete their Fourth Approximation of their data. We also sponsored four students to the Cullowhee Native Plant Conference. Locally, we donated \$900 for native plants to be used in the landscaping at The Haven, the homeless shelter in Brevard. We also award scholarships to university students who are studying North Carolina native plants, and provide money for grants for conservation work involving native plants.

Our web site, www.ncwildflower.org, has a wealth of information about North Carolina's native plants. We gave about 60 talks last year heard by about 1700 people, led or sponsored 22 wildflower walks involving about 360 people, and had booths at 16 various shows and festivals.

Currently, we are working on our educational materials for children. We have a lot of material for adults but have neglected the young. When the materials are available we intend to share them on our web site, so others can use them. We have also been asked to write a chapter in the NC Master Gardener's Handbook, which is underway. In addition, we are working on a plan that will aid the big box stores to correctly tag native plants.

Here in Western North Carolina, we have about sixty members in the 828 area code and are hoping to have a vibrant chapter in place. If you have any questions, I would love to talk with you about the NC NPS!

Jean Woods



BOOK REVIEW

Ken Cameron, *Vanilla Orchids: Natural History and Cultivation*, Portland, Oregon: Timber Press, Inc., 2011.

We all knew that vanilla comes from a bean, right? Well, no. I've just learned that the source of the flavor and fragrance from the expensive bottle of vanilla extract in my cupboard is the fruit of a highly prized orchid.

Botanist Ken Cameron is an international authority on *Vanilla* and its relatives and was one of the first to apply modern DNA sequencing methods to the study of orchid evolution and classification. He spent ten years as a curator and director of the New York Botanical Garden's molecular systematics laboratory and is now professor of botany and director of the State Herbarium at the University of Wisconsin, Madison.

Cameron describes the fascinating origins and history of domesticated *Vanilla*, its evolution and geographic structure, harvest, processing and its commercial uses. There are also chapters on plant structure, cultivation, and pollination. Along with beautiful color photos, the author describes select *Vanilla* species and its closest orchid cousins.

Paula Robbins

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FIRST CLASS

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Vol. XXXIV No. 2

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Assistants: Nancy Iha, Gordon and Eleanor Rasmussen
Summer 2012

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New members: Marion Capparelli, Tryon
Linda Hawkins, Hendersonville

Don't miss the annual **Bullington Amaryllis Holiday Sale** December 7 – 8.



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ANNE ULINSKI HONORED

At the November 9th meeting at the Bullington Garden, Anne Ulinski was honored for her many years of service to the Western Carolina Botanical Club. Jeanne Smith outlined all of the services that Anne has performed for WCBC and other organizations on behalf of the mountain environment of North Carolina. She was presented with a plaque painted by Lucy Prim and a terrarium that Karen Koelling made with mosses from her garden.

Anne was President of WCBC in 1999 and 2000. During her presidency, she introduced the practice of holding Board meetings at local restaurants, which quickly became a favorite of the eager eaters. Anne often served as a trip leader, co-leader and recorder, especially for the trips to Sky Valley Road and FENCE.

Anne became editor of *Shortia* with the spring 1999 issue, after the Hansens resigned the post, and continued in that job through the spring 2012 issue. She also was responsible for printing and mailing each issue, including maintaining an up-to-date membership list so that labels could be printed. She was assisted in that job by Jean Lenhart, Pat Arnett, Kim Spencer and Elaine Montgomery.

Anne did not limit her volunteer activities to WCBC. She was a founder of the Carolina Mountain Land Conservancy and served as Chair of the Land Review Committee. In that post, she contacted WCBC members Dr. Tom and Glenna Florence, who owned property that had once been the home of about ten different farmers who had farmed or timbered the land years ago. Through Anne's efforts, the Florences donated approximately 600 acres of land in Gerton, in the Upper Hickory Nut Gorge, to the CMLC, now known as the "Florence Preserve."

Anne, together with Millie Blaha, spent a whole year cataloging the many plants throughout Holmes State Forest, which resulted in a plant list and a slide show that is still in use today by the educational programs at Holmes. This project was so successful that the National Historic Site at Connemara, the home of Carl Sandburg requested a similar plant list.



RAMBLINGS 2012

Ken Borgfeldt

We've reached the end of yet another walk season and I think this is my first ramble since early in the year. This means I have not highlighted much of anything so far, so I will attempt an overview of the walks of 2012.

We started the year with the Hardy Souls Hike that Larry Ballard led at **Log Hollow**. There was not much in the way of plants, but we did see two waterfalls and heard a third. Some of the walk required a bushwhack of sorts, so it brought the "hardy" out in the participants.

The early trip to **Jones Gap State Forest** was led by Tim Lee, a guest leader and forest naturalist. The walk was highlighted by a flock of trilliums.

The planned overnight to the Smokies had to be cancelled, but a few diehards wanted to see **Big Creek**, so they made a day trip. The group reportedly was not disappointed as they got to see large patches of Poison Ivy in bloom (sorry I missed that one!).

The walk to **McCall Cemetery** was supposed to provide a chance to see a large crop of Pink Lady Slippers (*Cypripedium acaule*) and it was a success.

Rattlesnake Lodge/Tanbark Tunnel epitomized the early walks from a blooming standpoint. The mild winter had led to early blooming and many of our early walks were “off schedule.” Much of what we expected was gone or almost gone.

Major revisions have been made to the creek in the **Lewis Creek** area to recreate the meandering flow that once was present. In addition, a new trail with boardwalks has been constructed for a better view of the bog. The time for blooming plants wasn't optimal but it indicated a need to revisit the site more.

Montreat was added to our schedule for the first time in our memory. The trail was difficult but worthwhile, as we saw a lot of plants, raising the prospect of scheduling the walk at a more optimal time for the spring blooming season.

The walk on the shut-in trail at **Big Ridge** demonstrated a rich woods area. As with Montreat, it appears it would be a good choice during the early blooming season. Also, a mystery plant stumped us. It was later identified as Great Indian Plantain (*Arnoglossum reniforme*) by Ed Schwartzman through a photograph.

In keeping with an apparent plan to visit sites out of season, we went to **Glassy Mountain** to see what might be there in the fall. As you might expect, our normal plant list was of little use. A mystery plant feature repeated itself, as we found a tree/bush that stumped everyone until lunchtime, when it was identified as Hop Tree (*Ptelea trifoliata*).

We visited **Fletcher Park** where we heard a talk from the Carolina Mountain Land Conservancy about the efforts to restore river cane to the area. The trail took us through the restoration area.

We ended the walk season with instructional walks at **Holmes State Forest** (Winter tree identification) and **Estatoe Trail** (Mosses).

Intermixed in all of these walks were the many old favorites that we do just about every year. We return to those areas because we know we will find a treasure trove of botanical goodies.

For those of you who expect to find a lot of botanical names in this column, I would suggest that you attend the Holiday Fest, Friday, December 14, where there will be a slide show of what we saw this year along with a lot of botanical names.

THE BILTMORE NURSERY

Readers of *Shortia* may not know of the fascinating story of the Biltmore Nursery, established in 1889 and considered, during its twenty-seven years of existence, among the top nurseries in the world in terms of scale and offerings of plant varieties and numbers.

Frederick Law Olmsted recommended to George Washington Vanderbilt the establishment of a nursery to serve a number of purposes to accomplish his magnificent dream for the 125,000 acre Biltmore Estate. There was no large commercial nursery within a reasonable distance of Asheville, and importing plants from afar would have been prohibitively expensive. In addition, many of the suitable trees and shrubs were unavailable from nurseries, and others could not be found in the large quantities that Olmsted wanted.

Olmsted hired James Gall, foreman of his Central Park project, as Director. It soon became clear that the job was too much for one man, and Chauncey Delos Beadle, a young Canadian trained in botany and horticulture who had worked at the Arboretum in Guelph, at Cornell University and at a nursery, was hired to assist him. The Nursery was located on the north side of the Swannanoa River adjacent to Southern Railroad for convenient shipment. It contained two or more samples each of 4,200 species and varieties. Nearly 300 acres were devoted to the cultivation of trees and shrubs, and the greenhouses and cold frames covered an area of 75,000 sq. ft.

The first few years were devoted to experimentation, as little was then known about soil and weather conditions and what plants would thrive in the area. During the first decade, most of the plants grown in the Nursery were used for the Estate and forest. In 1898, the Nursery began to advertise, supplying stock to planters, dealers, landscape architects, and park superintendents throughout the United States and to European botanical gardens. The 1912 catalog consisted of 177 pages.

George Vanderbilt died on March 6, 1914, leaving his widow Edith to make many financial decisions regarding the Estate. Before he died, Vanderbilt had offered some of his land to the United States Department of Agriculture to establish a national forest. Within a few months of his death, Edith sold 90,000 acres to create the Pisgah National Forest and scaled back many of the former operations of the Estate, including the Nursery. The final blow came on July 16, 1916, when the French Broad River and its tributaries flooded, leaving the Nursery and surrounding areas under seven feet of water.

For more information on the fascinating story of the Nursery, see Bill Alexander's *The Biltmore Nursery: A Botanical Legacy*. Charleston, SC: Natural History Press, 2007.

BOOK REVIEW:

*American Canopy:
Trees, Forests, and the Making of a Nation*
Eric Rutkow

American Canopy is not primarily about trees, but about wood, chiefly how North American virgin forest gave rise to a new nation. "No other country was populated because of its trees quite like the United States. Nowhere else has the culture been so intimately associated with wood," writes Eric Rutkow.

Timber is so basic to the American story that it even drove colonization. Seventeenth century Britain needed massive old pines to sustain its tall-ship navy. "Pilgrims and Puritans may have arrived in America to discover an uncorrupted life," Rutkow notes, "but that didn't mean their backers shared this enthusiasm."

The railroads driving westward expansion steadily chewed through genuine wilderness. America's timberlands were felled for railway carriages, bridges and track ties. Husbandry was a foreign concept. By the early 20th century, it was estimated that as much as 45% of America's felled forests had been wasted in off-cuts and sawdust.

As logging industrialized, poor men became rich, and a rich landscape became poor. After arriving in America in 1852 as an 18-year-old German immigrant, Frederick Weyerhaeuser later controlled a logging empire valued at \$70 million. Apart from canny purchasing of timberlands around the Great Lakes, his masterstroke was forming a syndicate of formerly rival lumber companies.

As Weyerhaeuser's saws turned from the Great Lakes to the Pacific Northwest, rival timber barons began working the Southern pine belts in Virginia, Florida, Alabama, Mississippi, Louisiana, southern Arkansas and eastern Texas. The more timber cut and milled by American lumbermen, the more ways an evolving wood industry devised to use it. By the 1870s, newspapers once called "rags" because they were printed on recycled cloth were increasingly printed on wood pulp, a cheap new material about to make the fortunes of Joseph Pulitzer and William Randolph Hearst.

The book ends with a chapter on the Environmental Era, with the establishment of Arbor Day, Earth Day, and the realization of the link between deforestation and global warming.

Paula Robbins

1810 CATALOG OF PLANTS IN THE BOTANICK GARDEN OF SOUTH CAROLINA

The first botanic garden in the United States was established in Charleston in 1805 by the Medical College of South Carolina. The U.S. Botanic Garden was not established until 1820.

The Southern Garden History Society has put a scanned copy of the *1810 Catalogue of Plants in the Botanick Garden of South Carolina* on its Web site: (southern.gardenhistory.org/resources), according to an article by Susan Epstein in the summer 2012 edition of *Magnolia*, the organization's newsletter. The original document is owned by the Missouri Botanical Garden and was purchased in 1988 from a bookseller in London for \$40.

The fourteen-page catalogue lists 494 plants that were being cultivated at the time. A majority of the plants could have been used for medicinal, culinary, or other useful purposes, and they were arranged in the garden according to the Linnaean classification system. The first plant on the list, Alligator Pear-Tree, we know of today as avocado. Other listings included *Hibiscus esculentus*, okra. *Agave virginica*, Virginia aloe or rattlesnake master, was used as a laxative to settle spasms in the intestines and to treat snakebites. *Artium lappa*, common burdock, was used for skin conditions and as a blood purifier. *Allium sativum*, garlic, was used as an antibiotic.



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