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From the President ................................................................. Jenny Lelliger

Shrouded in varying shades and textures of green at a diminutive scale, mosses have reproductive structures and morphological characteristics that result in a descriptive vocabulary that sets them apart from other plants. Dave and I plan to establish a moss garden as part of the native landscape that we envision for our new home. That is why I was delighted when, earlier this year, while at the Spring Wildflower Pilgrimage in the Smokies, I discovered two great books on mosses that complement each other.

**Gathering Moss: A Natural and Cultural History of Mosses**, written by Robin Wall Kimmerer and published by Oregon State University Press in 2003, is a winner of the John Burroughs Medal, an award for natural history writing. The author is a Professor of Environmental and Forest Biology at the State University of New York, State College of Environmental Science and Forestry.

Line drawings illustrate this book that is comprised of a series of essays through which the author enchantingly takes you along on her personal journey of discovery through the Lilliputian world of mosses. She even provides a “moss-milkshake” recipe for moss-gardening enthusiasts. I highly recommend this book for anyone that is curious about the lifestyle of these much-overlooked members of the plant kingdom.

**Outstanding Mosses & Liverworts of Pennsylvania & Nearby States**, written by Susan Munch, was published by Albright College in 2006. The author has a Ph. D in botany from the University of Washington and has taught botany for many years in Pennsylvania, Ohio, and Maryland.

During a Wildflower Pilgrimage walk, I had the privilege of meeting the author, who stated that one of her goals in writing this field guide was to enable beginners to identify the most common mosses and liverworts without the use of a microscope. This she accomplishes admirably. Otherwise illustrated by color photographs, introductory side-by-side line drawings illustrate basic terminology for mosses and liverworts. This book opens the door for those who might dare to take moss ID to the next level. A cursory inspection leads me to believe that I’ve found three moss genera new to me growing just outside the house: *Atrichum*, *Mnium*, and *Entodon*. I think that I just caught the moss bug!!

Cover: The flower on the cover is *Shortia galacifolia*, Oconee Bells. Our newsletter is named for this southern endemic which is now rare in the wild.

P.1
MEMBER NEWS

New Members

Christine Barnes, Etowah. Christine moved to our area about 18 months ago from a small town in New York State near the Pennsylvania border. She belonged to a naturalist club and was also a volunteer for a water conservation education center.

Patsy Mitchell, Rutherfordton. Patsy learned about the Botanical Club during a visit to the Bullington Center. This spring she landscaped her yard with native plants and rocks. She has lived in the Rutherfordton area all her life. She enjoys wild flowers which she paints and uses on her pottery.

Gail Wilcox, Cedar Mountain. Gail and her husband came to this area from Wisconsin after living there for 27 years. In Wisconsin, they naturalized their city yard. She learned about the club from Jenny Lellingier. Kathy Johnson is helping her plan a native plant yard for their new home in Cedar Mountain.

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Fall Overnight Trip
Piedmont Prairie Restoration Sites
Saturday and Sunday, Sept. 29 and 30.

Our fall overnight trip will be a visit to two prairie restoration sites located north of Gastonia and west of Charlotte. We will leave early Saturday morning and go directly to the Latta Plantation where we will spend the day for a guided tour of the restoration site. The Carolina Raptor Center is also at the Latta Plantation and can be visited after the prairie tour. The many birds which can be seen at the Raptor Center have been injured and can no longer live in the wild.

Sunday morning we will go to a private estate to view a different type of prairie restoration. Botany Club member, Jean Woods, will be our guide both days.

Overnight accommodations will be at the Comfort Suites in Gastonia. Ten rooms have been reserved at a special rate of $79 plus taxes until Sept. 22. Members are responsible for their own reservations. Call Comfort Suites at 704-865-6688 and identify yourself as a member of the Botanical Club to get the special rate.

Please register with Bonnie Arbuckle (696-2077) or Anne Ulinski (697-9527) so we can send driving directions and other information as needed.
We had only one cancelled field trip - the one to Wayah Bald due to possible thunder showers.

The trip to Pacolet Falls was highlighted by an abundance of Trilliums, particularly Catesby’s Trillium (Trillium catesbaei), and Canada Violets (Viola canadensis).

The day was overcast and cool for the walk around Jones Farm. Botanizing was excellent as 125 species were identified including 54 “bloomers”.

The scheduled walk to Coleman Boundary had to be changed as the rangers were busy fighting fires in the Smokies and the road was closed. We walked the trail from Tanbark Tunnel to Rattlesnake Lodge. Instead of returning as we had come, we continued to Bull Gap. An abundance of flowering plants were found including Flame Azalea (Rhododendron calendulaceum), Whorled Pogonia (Isotria verticillata), and Dwarf Larkspur (Delphinium tricorne).

We took our first walk on Buck Spring Nature Trail which is our repeat location for this year. We found many spring favorites including Painted Trillium (Trillium undulatum), Wild Lily-of-the-Valley (Convallaria majuscula), and Cream-colored Wake Robin (Trillium erectum (cream)).

The day was cool and windy at Falling Creek Camp. We were treated to a nice display of Pitcher Plants, including Sweet Pitcher Plant (Sarracenia rubra ssp. jonesii) and Green Pitcher Plant (Sarracenia oreophila). The Fairy Wands (Chamaelirium luteum) were a showy addition to much of the trail.

Hexastylis species were the subject of the trip to Ashmore Preserve. It seems that a number were observed and specific identification was brought into question. Other species of note included Grass Pink (Calopogon tuberosus) and Horned Bladderworts (Utricularia cornuta).

It was a pleasant sunny day at Bee Tree Gap. We were earlier than usual so many of our favorites were not in bloom this year but the Glaucous Honeysuckle (Lonicera dioica) did not disappoint.

We visited Pink Beds for the first time since checklist records were kept. Despite a couple of hairy water crossings, the trail was relatively easy. The walk proved challenging to several of our died-in-the-wool botanists who found three species that remain unidentified. Others in abundance included Smooth Southern Bush Honeysuckle (Diervilla sessilifolia) and Large-flowered Heartleaf (Hexastylis shuttleworthii).

Several years ago the club prepared a nature brochure for the Buck Spring Nature Trail. Our second trip allowed us to confirm that several “nature posts” need repair and some wording in the brochure is necessary. Meanwhile, Starry Campion (Silene stellata) was blooming profusely.

On our annual visit to Sky Valley Road, the Yellow Fringed Orchid (Platanthera ciliaris) was not as showy as usual. However, Nuttall’s Lobelia (Lobelia nuttallii) and Fern-leaved False Foxglove (Aureolaria pediculata) were blooming profusely.

The walk on Shut-in Trail to Mills River Overlook was climaxed by an incredible show of Turk’s Cap Lilies (Lilium superbum). We apparently hit the plants at the peak of bloom. In addition, we found the Fringed Campion (Silene ovata), a candidate for federal listing as an endangered plant.
DID YOU KNOW?

Witch’s Broom

Witch’s Broom is a disease or deformity in a woody plant, typically a tree, where the natural structure of the plant is changed. A dense mass of shoots grows from a single point, with the resulting structure resembling a broom or a bird’s nest. They may last several years and can be caused by many types of organisms, such as fungi, insects, mistletoe, mites, nematodes and viruses. Human activity such as a tree pruned improperly may leave the tree susceptible to disease.

Brooms have long been connected with witchcraft, almost universally portrayed as medieval-style round brooms and associated with female witches. Despite the association with women, the first known case of claiming to have flown on a broomstick was confessed in 1453 by the male witch, Guillaume Edelin.

This summer the Club saw a large witch’s broom on a willow oak at Holmes Educational State Forest.

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In the 1600’s many species of native plants traveled from Virginia to Europe. Some of these were:

Sassafras (*Sassafras albidum*) 1608  
Evening Primrose (*Oenothera biennis*) 1621  
Staghorn Sumac (*Rhus typhina*) 1629  
Canada Lily (*Lilium canadense*) 1620's  
Persimmon (*Diospyros virginiana*) 1629  
Spiderwort (*Tradescantia virginiana*) 1629  
Wild Columbine (*Aquilegia canadensis*) 1640  
Poison Ivy (*Rhus radicans*) 1640  
Trumpet Vine (*Campsis radicans*) 1640  
Black Locust (*Robinia pseudoacacia*) 1656  
Tulip Poplar (*Liriodendron tulipifera*) mid 1600s  
Bee Balm (*Monarda didyma*) 1656  
Red Maple (*Acer rubrum*) mid 1600s  
Goldenrod (*Solidago canadensis*) mid 1600s  
Coral Honeysuckle (*Lonicera sempervirens*) mid 1600s  
New York Aster (*Symphyotrichum novi-belgii*) 1661  
Sycamore (*Plantanus occidentalis*) 1636  
Cardinal Flower (*Lobelia cardinalis*) 1670s  
Magnolia spp (*Magnolia virginiana*) 1688  
Sweet Gum(* Liquidambar styraciflua*) 1687

-Marion Lobstein, Biology Dept., No. Va. Community College
Schweinitz's sunflower (*Helianthus schweinitzii*)

Schweinitz's sunflower is a remnant plant of old Piedmont prairies and is listed as rare (US Endangered, NC Endangered, SC Rare). It blooms in late August to October and its range is limited to the Piedmont of N.C. and S.C., primarily within 100 km of Charlotte, N.C. In Mecklenberg county, one discovery of the sunflower was found at Redlair Farm, a Catawba Lands Conservation (CLC) property. It was found by Lisa Gaffney, a botanist and CLC member. She discovered it while leading a nature walk through the area. “It’s the most exciting discovery I’ve made since I’ve been working with plants”, she said.

The sunflower grows in clayey soils of woodlands and roadsides, formerly in post oak-blackjack oak savannas and xeric oak-pine woodlands. On our fall overnight trip we will see the sunflower at two prairie remnant sites: the Latta Plantation and Redlair Farm. Originally not found at the Latta restoration site, it has been introduced there and is thriving.

Schweinitz's sunflower is a rhizomatous perennial plant which grows from 4-5 feet tall. The stems are solitary, branching at or above mid-height. They can be pubescent or glabrous and are often purple. The leaves are opposite, wider near their bases, variable in size but generally larger on the lower stem. Leaf margins are usually entire and the leaves themselves are rather thick and stiff. The lower surface is densely pubescent, with soft white hairs obscuring the leaf surface. It blooms from September to frost and both its ray and disk flowers are yellow.

The specific epithet honors Lewis David von Schweinitz, 1780-1834, a North American botanist whose work on fungi established him as “the patron saint of North American mycology.”

Schweinitz's sunflower can be removed from the endangered list if 10 recovery sites are developed. There are currently 6 such sites in North Carolina. A recovery site is defined as a legally protected property with a thriving population of the endangered plant.

Schweinitz’s Sunflower with beetle

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| **Rhizomatous**, having underground stems, usually horizontal and rooting at the nodes. |
| **Glabrous**, without hairs. |
| **Pubescent**, with hairs, downy. |
| **Entire**, denoting a continuous, unbroken leaf margin without teeth, lobes, etc. |

Sources: NC Native Plant Society newsletter, Weakley's 2006 Draft, and "A Guide to the Wildflowers of South Carolina"
More Prairie Plants

Georgia Aster (*Symphyotrichium georgianum*) was seen in bloom at the Latta site last fall by three of our members. It has composite flowers about two inches wide with deep purple ray flowers, pale white disk flowers and clasping alternate leaves. It is listed as S2 - imperiled, as well as threatened in N.C., and is a Federal candidate for endangered status. This is a beautiful plant and hopefully it will be in bloom for our fall visit.

Pale or Striped Gentian, (*Gentiana villosa*), is another species seen at restoration sites. It is a perennial herb with erect smooth stems. The leaves are opposite and sessile. There are several dark green shiny leaves at the base of the inflorescence. The flowers are 1-2 inches long, greenish white, often striped, the five lobes partially open, and borne in terminal clusters with a few in the leaf axis itself.

Prairie Dock, *Silphium terebinthinaceum*, is a perennial plant growing from a taproot, with leaves very large and mostly basal. The blades are heart-shaped at the base and the flowering stems are often 7-10 feet tall. The flowers are numerous, with yellow rays and disk flowers. Prairie Dock blooms from July to September. It is restricted to the Carolinas and is listed as significantly rare in North Carolina. Jean Woods, our leader for our trip, says it is on the Latta list and suggests we look for it at Redclair.

Indian Grass, *Sorghastrum nutans*, is a native perennial and is one of the dominant species of the tall-gass prairie. In the east it is not common but we should find it in bloom at both prairie sites. During flowering, the inflorescence is tall and narrow; golden brown and shining. It can grow as tall as nine feet.
A Saturday Morning Foray in Manhattan

“There is no end to the odd things that New Yorkers do on Saturday mornings. This, at least, is what drivers must have thought when they had to slow down to avoid a line of a dozen people flattened against the enormous embankment of the Park Avenue railroad trestle, peering with magnifying glasses and monoculars into tiny crevices in the stone.” Police officers stopped their patrol cars and watched with suspicion until they caught sight of the T-shirts most of the group were wearing which had the name “American Fern Society” or “Ferns are Ferntastic”. It was a group from the American Fern Society and the Torrey Botanical Club. These forays, which have been going on for more than a century, usually are to more bucolic sites but today it was the Park Avenue viaduct with its crevices and crumbling mortar which is a perfect place for the chink-finding, xerophytic ferns - ferns that can stand long periods drying out and come to life again after a good rain.

The Torrey Botanical Society was founded in the eighteen-sixties, and The Fern Society a few years later. This Saturday the group was about equally divided by gender with ages varying from twenty to eighty. Besides the pteridophiles were two bryophiles from the Torrey Society, “slumming” among the fern people. The bryophiles are more interested in mosses, liverworts and lichens. Ferns are a bit too modern, too evolutionary advanced for them.

The leader for the day was Michael Sundue, a young botanist and fern expert from the New York Botanical Garden. Michael pointed out the first ferns on a wall where tiny rivulets of water would run down after a rain, dissolving the mortar and making an ideal habitat for the lime-loving Woodsia obtusa, blunt-lobed cliff fern. He discovered a tiny gametophyte in a bed of moss. The gametophyte is a crucial intermediate stage in the fern’s reproductive cycle. Almost at the same time the group saw high above their heads a huge Woodsia specimen, nearly six feet across, clinging to a rock. Sundue said it could be decades old, that some species are very long-lived. He explained that a fern keeps growing until it runs out of food, is outsted by competition, or probably in this case, becomes so heavy that it falls to the ground. But, he said, youth is apparent, even in ferns. He described a young Woodsia as “charming: a bright spring green; tiny, like babies’ toes; and very soft and vulnerable.”

There was nothing but Woodsia between 103rd and 104th Streets, but at the next block Thelypteris palustris, a marsh fern, was seen in a very unmarshy environment. It was perched on a wall about eight feet above the ground. Between 104th and 105th Streets, the ebony spleenwort, Asplenium platyneuron, densely covered the trestle. Sundue said the spleenwort had been much rarer in this area but the rocks in New York are acidic and these alkaline-loving ferns were moving to the Park Avenue Trestle where the mortar provides the lime the plants need.

Between 105th and 106th Street, the group found a sensitive fern, Onoclea sensibilis. It looked dry and someone gave it a drink from a water bottle. As they went on, they identified the last of the ferns, a bladder fern, Cystopteris tenuis and Asplenium rhizophyllum, the remarkable walking fern.

Excerpts and quotations from an article by Oliver Sachs, The New Yorker, August 13, 2007
I call your attention to a paragraph from Pleasant River by Dale Rex Coleman:

"The landscape is neither a fortuity nor a permanent fixture created by fiat. It is a stupendous masterpiece sculptured from rock by blasting heat and icy cold, cut by the wind, molded by rain, and adorned with life. It is an unfinished masterpiece. The elements, having labored at it for millions of years, anticipate uninterrupted toil for millions more to come. It is the greatest of all privileges to behold their creation and to watch them at their work. Go out and look!"

Yes, go out and look. That is just what the Botany Club will be doing all spring, summer and fall.

Look at the trees --- but enjoy the beauty of the forest, too.

Look at the flowers --- but raise your eyes often to drink in the splendor of the hillside.

Look at the stream as it hurries along polishing its rocks --- but enjoy, too, the beautiful music of flowing water.

Come out often and look with us --- it's one of the privileges granted those who have eyes to see.


Written by Bill Verduin
SHORTIA

c/o Anne Ulinski
1212 Chanteloup Drive
Hendersonville, N.C. 28739

FIRST CLASS

SHORTIA

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Editorial Assistant: Jean Lenhart
Member News: Ruth Anne Gibson

Please submit contributions for the next issue by November 15.

The purpose of the Club is to study the plants of the Southern Appalachian Mountains and the Southeast through field trips and indoor meetings. Membership is open to all. Individual/family memberships are $15. New members joining from the period July 1-December 31, pay $8. All memberships are renewable on January first of each year. Send dues to: Larry Avery, 4 Windrush Lane, Flat Rock, N.C. 28731