SHORTIA

NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB

SPRING 2008

Shortia galacifolia
Oconee Bells
From the President .............................................................. Jenny Lellinger

**Favorite Wildflower Walks of Georgia** written by Hugh and Carol Nourse, published by the University of Georgia in 2007, describes some enticing walks that are not very distant from us.

Both Hugh and Carol Nourse have been officers of the Georgia Botanical Society, are members of the Georgia Native Plants Society, and are involved in various other conservation efforts. Over the years they have traveled and botanized extensively throughout Georgia and have selected walks to represent each of Georgia's physiographic provinces.

From west to east, the Cumberland Plateau and the Ridge and Valley provinces in the northwestern corner of Georgia are combined into one chapter, followed by the Blue Ridge, the Piedmont, and the Coastal Plain. Because of their geology and soil composition, the two western most provinces provide opportunities to explore plant communities not found in the Carolinas. The mostly sedimentary underlying rock, much of it limestone or sandstone, hosts several endemics, prairie plants, and other unusual species.

For example, walk #2 takes us through cedar glades in the Chickamauga National Battlefield Park. These glades are "openings in the forest where soils over limestone bedrock are so shallow that hardwood trees cannot grow"—only Eastern Red Cedars can survive these harsh conditions. As in deserts, plants only bloom profusely following well-timed rainfall. The glades host several endemics, such as *Dalea gattingeri* (Purple-tassels) and *Leavenworthia exigua* (Tennessee Glade-cress).

Eleven of the twenty walks are located north of Atlanta! The walks described are all on public lands. Each includes a map, directions, site information, flowering season, peak flowering, walk length, difficulty rating, restroom availability, fee (if applicable), a discussion on the environment or plant communities, most commonly seen plants, and several insets featuring specific plants of interest.

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.
MEMBER NEWS

New Members

Tina Duncan, Hendersonville  Tina has been an amateur naturalist all of her life and has lived in several places in western North Carolina. She is an artist, interested in painting native plants.

Nancy Farley, Haywood County  Nancy grew up in east Tennessee and worked for the Tennessee Valley Authority as a botanist and natural area manager before coming to North Carolina. She works for the National Park Service as a supervisor of Exotic Plant Management.

Emily Fox, Hendersonville  Emily grew up in Rutherford County and has lived in Hendersonville for 33 years. She was in the Master Gardener program but resigned because native plants are her real interest. She is a member of the local plant rescue group.

Mary & Jim Hugenschmidt, Asheville  Mary is a native of the piedmont section of North Carolina. She and Jim have lived in this area for 30 years. Mary is a new Master Gardener and is particularly interested in native plants. Jim plans to join her on some of our field trips.

Pam Humphrey, Mills River  Pam retired to North Carolina from Florida where she worked in veterinary services in Gainesville. She lives on a 180 acre family farm which adjoins Pisgah Forest. She has recently joined the local plant rescue group.

Karen Koeling  Karen grew up on a farm in northern Wisconsin and is happy to be here in western North Carolina to explore the woods. She is a Master Gardener in Transylvania County.

Liz Peeler, Brevard  Liz was an earlier member, and has now rejoined.

John & Muriel Siddall, Asheville  The Siddals came from Ohio about six months ago and are now living at Givens Estate. They are tutoring at an Asheville elementary school on Mondays so won’t be able to join us on that day for our field trips.

Charlie Williams, Charlotte  Charlie is a retired librarian from Mecklenburg County, N.C. He presented a program for the Club in February 2007 on Andre Michaux and *Shortia galacifolia*. Charlie and his wife have property in Transylvania county and hope to be here in July & August to join in the club activities.

Any change of address, e-mail or telephone number please inform Larry Avery at 4 Windrush Lane, Flat Rock, N.C. 28731, Tel. 692-2679, e-mail: alavery@cytechusa.com.

---

Financial Statement for 2007
Western Carolina Botanical Club

Income

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dues</td>
<td>$1,448</td>
</tr>
<tr>
<td>Book Sale</td>
<td>228</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td><strong>$1,676</strong></td>
</tr>
</tbody>
</table>

Expenses

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing</td>
<td>$640</td>
</tr>
<tr>
<td>Postage</td>
<td>184</td>
</tr>
<tr>
<td>Programs</td>
<td>150</td>
</tr>
<tr>
<td>Donations/</td>
<td></td>
</tr>
<tr>
<td>Awards</td>
<td>85</td>
</tr>
<tr>
<td>Supplies</td>
<td>58</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>$1,117</strong></td>
</tr>
</tbody>
</table>

Income over expenses  $559

Submitted by Larry Avery, Treasurer, Western Carolina Botany Club
We had a very successful field trip season in 2007 as we completed 33 outings with very few (4) cancellations. In addition to visiting some of our favorite wildflower spots, we went to eight new locations.

We started the season with the Hardy Souls trip to the Palmetto Trail.

Tom Goforth led two walks. We visited Paw Paw Cove for the first time early in the year and later explored the woods and fields around his home in Pickens, S.C.

The visit to Bonclarken was a first for the club, even though it 's right in our own backyard. In addition to botanizing, we were treated to a historical home tour of the Heidelberg House.

The Velma Haag Property in Brevard was an opportunity to see one woman's lifetime effort to cultivate and to collect a wide variety of rhododendrons. The colors were memorable.

The trail from Flat Laurel Creek to Sam's Knob was another first for the club.

One of the highlights for the year was the overnight trip to Charlotte to view a Prairie Restoration Project. A highlight of the trip was the site of two endangered species Schweinitz's Sunflower (Helianthus schweinitzii) and Georgia Aster (Symphyotrichum georgianum) both in bloom at the time of our visit. After seeing the prairie restoration, some members visited the Latia Plantation home and others the Carolina Raptor Center.

The hunting season forced a change from a new location, Dense Lake, to a new, safer location, Sherwood Forest. The fall time frame yielded many fruit and seed identifications.

Once again in our own backyard, we walked the Oklawaha Greenway, a path connecting Jackson Park to Patton Park in Hendersonville.

This year we had a special focus location, Buck Springs Nature Trail. This trail has a special significance to the club in that a nature brochure was prepared a number of years ago for use on the trail by visitors to Pisgah Inn. We walked the trail about every six weeks through the season for a total of four visits. A focus of the walks was to make necessary changes to the brochure which is still in use. A revised brochure will be published with the results.

Now we look forward to 2008 and what I am sure will be another plant filled experience for us all.

Field Trip Cancellations. When a field trip has to be cancelled because of weather, every effort is made to notify members, either by email or for those without email, by a telephone call. If in doubt, call the contact person. Also, be sure to review page one of the club schedule for information on Botany Club procedures.
Bonnie Arbuckle first told me about Robert Preston’s book, The Wild Trees: A Story of Passion and Daring. I read a positive review of it in a magazine and ordered it. I assumed the book would be mostly a study of Sequoia sempervirens (California Redwood) with the thrilling addition of discoveries about the habitat of their canopies. However the book is crafted around a handful of oddballs who are obsessed with redwoods, especially Steve Sillett, Michael Taylor, and Marie Antoine, and I got much of my information about the trees from their experiences.

Robert Preston tells us about their early years, how they got into exploring the redwood forests in California, what they found, and why their discoveries are so important. Climbing the largest trees on earth -- 32 stories high, with the lowest strong branch often 25 stories high -- is obviously dangerous. Several times while reading I felt acute suspense over the fate of the oddballs. Even walking through a redwood forest requires enormous effort. Among other difficulties, you have to climb over immense fallen trees with gaping cracks and could fall as much as 30 feet inside the log and break your bones.

Sillett is an explorer, compelled to climb the trees to discover new territory; Taylor’s compulsion is to find the tallest redwood. They and Antoine eventually meet and work together, finding groves of giants unknown to loggers and forest rangers, and canopies teeming with species unknown to scientists. High up, redwoods elaborate themselves, sprouting multiple trunks. Here is Sillett describing a tree named Atlas:

“At 190 feet, Atlas splits into four huge trunks. In the center of the trunks is a crotch that contains a layer of canopy soil...one meter deep. It was a garden in the sky, containing tons of dirt, along with sheets and beds of ferns, and thickets of huckleberry bushes. The canopy soil has been accumulating in Atlas for unknown numbers of centuries. It is composed of a mixture of rotted redwood needles, twigs, the roots of plants, and dust from the sky.”

Redwood canopy soil teems with soil mites -- 55 different species identified so far. Fern mats contain tiny aquatic creatures, crustaceans of an unnamed species of copepod. Redwoods also host lichens that don't exist on the ground, moss gardens, plankton, wandering salamanders, and large pink worms. Rhododendrons bloom at 150 feet and currant and elderberry bushes bear fruit.

Small trees of various species grow in trunks and limbs and in crotches hundreds of feet above the forest floor -- canopy bonsai of laurel, hemlocks, Douglas-firs, buckthorn, and Sitka spruce. Until recently, biologists catalogued only the diversity in tropical rain forests assuming that a temperate rain forest's biomass was just big trees. Sillett was the first to climb redwoods and discover their enormous biodiversity.

The characters in Wild Trees are fun to know, including the author who inserts himself into the story. Their achievements have greatly augmented the importance of these ancient trees, "the largest individual organisms to ever exist on our planet, capable of surviving as long as 2,000 to 3,000 years," and providing habitat for life forms completely oblivious to life on the ground.

Frances Jones
PLANT ORIGIN TERMS

Native Plant. A plant species that is found in a region because it developed and evolved in that region over thousands of years.

Exotic (introduced plant). A plant species that exists in a region because it was brought to that region by man, during and since settlement of the region. We are still introducing exotic plants, by intention and by accident.

Naturalized plant. An exotic plant that was introduced into an area, escaped from cultivation and reproduces on its own (includes exotic invasive plants). Many plants commonly thought to be natives were actually introduced by early settlers.

Exotic invasive plant. An exotic plant species that is able to invade and overrun native ecosystems. Some native plants can become invasive under certain conditions, but most invasive species are introduced (exotic).

Variety. Within a species, a naturally occurring sub-group of plants that have one or more minor characteristics that set it apart from the rest of the species. Ex: Solidago odora var. chapmanii.

Ornamental plant. A plant species or cultivar that is grown for its beauty (in its end use), rather than for commercial or production reasons.

Cultivar. Short for “cultivated variety”. A plant “variety” developed by man via plant selection and/or genetic manipulation to exhibit a set of plant characteristics. Cultivars are maintained via controlled pollination or vegetative means, so cultivar characteristics are passed to ensuing generations.

Ecovar. Short for “ecological variety”. A plant “variety” developed by man from a collection of plants of a native species that were selected from several to many natural populations in a specific region. The purpose is to have high genetic diversity in the parent collection which reflects the natural diversity within that species in the defined region. To maintain genetic diversity in ensuing generations, little to no selection is done during the ecovar development process. An ecovar is an intermediate step between a true native plant and a cultivar.

Source-identified seed. Off-spring of plants collected from a single defined natural population of a native species for production of seed. No selection is done during the collections and subsequent seed increase steps, so as to conserve genetic diversity. The genetic diversity is less than for an ecovar.

NOTE: Cultivars, ecovars, and source identified seed are usually named, and that name is used to denote any plant material subsequently marketed from these seed parent sources.

Source: Newsletter of the South Carolina Native Plant Society, Spring 2007
What's In A Name?

Swedish professor and naturalist Carl Linne helped develop and popularize a system of plant classification. Each plant was given a two part name. The first part (Genus) identifies the genus or family group. The second part (species) refers to a plant characteristic, person or place. This system of binomial nomenclature is used internationally. Many names used Latin terms, the official language of that time. Carl Linne latinized his name as well. We know him by Carlos Linnaeus.

It's easier to remember scientific names when you know their meaning and origin. Look for these early spring plants on Western Carolina Botanical Club field trips and practice using the scientific name.

**Tiarella cordifolia** (Foam flower)

*Tiarella* means little tiara. The Greeks thought the yellow pistils formed a golden crown or tiara. *Cordifolia* refers to the heart shaped leaf base.

**Hepatica acutiloba** (Liverleaf)

The leaves of this plant resemble a human liver so Hepar, which is the Greek word for liver, was used to name this plant. According to the doctrine of signatures the plant could be used to cure liver diseases. *Acutiloba* refers to the acute or sharp lobes of the leaf.

**Sanguinaria canadensis** (Bloodroot)

Sanguis is Latin for blood. The reddish brown sap from the root of this plant was used as a dye plant by the American Indians.

**Trillium grandiflorum** (Great white trillium)

Trillix is Greek for triple. Trilliums have three leaves, three sepals and three petals. *Grandiflorum* refers to the large flower size.

**Trillium catesbaei** (Catesby’s trillium) was named in honor of early naturalist Mark Catesby, author of “A Natural History of Carolina”.

**Trillium erectum** (Wake Robin) has flowers that stand stiffly and erectly above the leaves.

**Trillium undulatum** (Painted trillium) has undulating rose colored lines on its petals.

**Trillium luteum** (Yellow toadshade). Luteum denotes the yellow color of the petals.

Bonnie Arbuckle
In 2004, the Norwegian Nobel Committee made an historic decision to honor the environment, and to make a connection between the sustainable management of resources, good government and peace. They awarded the 2004 Nobel Peace Prize to Wangari Maathai and she became not only the first African woman to win the prize, but the first environmentalist.

**Early Years** Wangari Maathai was born on April 1, 1940, the third of six children, the first girl after two sons, in the small village of Ihithe in the central highlands of British Kenya. Her parents were members of the Kikuyu community, one of the forty-two ethnic groups in Kenya. They were peasant farmers living from the soil and kept cattle, goats and sheep. Wangari learned to garden at an early age when her mother gave her a small garden plot of her own. The family lived in a mud-walled house with no electricity or running water. She has described the land at the time of her birth as lush, green and fertile. The slopes were covered with vegetation, the soil was rich, the steams were clear and the nearby forests were clean. The people of the central highlands worked hard and because of the fertile soil, good climate and abundant food, they were healthy. Wangari writes in her memoirs “...the ancestors had conserved a world of plenty and good that came from the soil.”

**Education** It was not usual for girls to be educated, but one of her older brothers persuaded Wangari's mother that Wangari should be educated, so she attended a nearby school, walking barefoot everyday with her older brothers and cousins. (She did not own a pair of shoes until she went to high school.) Finishing 8th grade Wangari was first in her class and won a scholarship to a Catholic high school near Nairobi. She graduated in 1959 and was chosen to attend college in the U.S. under a program financed by the Joseph P. Kennedy Foundation. In 1966 she returned to Nairobi after graduating from Mount St. Scholastica College in Atchison, Kansas. She then worked as a lecturer and researcher at the University of Nairobi and completed her Ph.D. in 1971.

**The Green Belt Movement** On her return to Kenya, Wangari saw how much land had been cleared for development and tea and coffee plantations. Rivers were rushing down the cleared slopes, soil was eroding, paths and roads were silted. Exotic trees were displacing the African native trees. There was little grass, and what there was, was no longer nutritious. This was the beginning of her initiative to encourage the planting of trees, which became the Green Belt Movement. Wangari believed that trees would heal the land and regenerate the earth. Seedling nurseries were established in local communities and rural women began the first tree plantings. Now, thirty years after the start of the Green Belt movement, her followers, mostly women, have planted more than 30 million trees on their farms, and on school and church compounds.
Educated women were still few in Kenya when Wangari returned. The government treated her and the Green Belt Movement with suspicion. Through the years she and her followers suffered opposition which included police harassment, arrest and imprisonment. Despite these problems, she became known internationally for her work, and she received numerous awards from other countries. Among them were honorary doctoral degrees from Yale University and the University of Norway. The French President, Jacques Chirac, awarded her France’s highest honor, the Legion d’Honneur.

In 2002, under a changed government, Kenya’s new President appointed Wangari Maathai the Assistant Minister for the Environment.

References:
The Green Belt Movement: Sharing the Approach and the Experience by
Wangari Maathai. 2003, revised 2006
Unbowed, A Memoir by Wangari Muta Maathai. 2006
Web site: The Green Belt Movement www.greenbeltmovement.org

MORE TREES

Let’s plant One Billion more trees in 2008! In 2007 after the UN climate meeting in Nairobi, the Green Belt Movement, the United Nations Environment Programe (UNEP) and the World Agroforestry Center launched the first One Billion Tree campaign. By year end their goal was met. Now UNEP has launched a 2008 major worldwide tree planting campaign. Under the “Plant for the Planet: Billion Tree Campaign”, people, communities, business and industry, civil society organizations and governments are encouraged to enter tree planting pledges online with the objective of planting at least one billion trees worldwide each year.

...Forests are natural and economically important “sinks”, sequestering carbon from the atmosphere and locking it away in trunks and branches. Globally, forest cover is at least one-third less than what it once was. It is time to reverse trends, it is time to act."

-Achim Steiner, UNEP Executive Director

---

“At first, I thought I was fighting to save rubber trees, then I thought I was fighting to save the Amazon rain forest. Now I realize I am fighting for humanity.”
-Cites Mendes, Brazilian Environmentalist.

---

P.8
SHORTIA

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

SHORTIA

Vol. XXX No. 1  SPRING 2008

A quarterly publication of the Western Carolina Botanical Club

Editor: Anne Ulinski
Editorial Assistants: Pat Arnett and Jean Lenhart
Member News: Ruth Anne Gibson

Please submit contributions for the next issue by May 15, 2008 to: Anne Ulinski
1212 Chanteloup Drive, Hendersonville, N.C. 28739

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