SHORTIA

NEWSLETTER OF THE

WESTERN CAROLINA BOTANICAL CLUB

SUMMER 2015

Shortia galacifolia

Oconee Bells
MEMBER NEWS

Field Trip Cancellations: Occasionally, 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 by 7 AM the day of the field trip. If you do not have email access, please call the leader, co-leader, or recorder (whose phone numbers are listed on the schedule) to be sure that the walk is going to go as planned. Indoor programs are canceled when Henderson County Schools are closed (see http://www.hendersoncountypublicschoolsnc.org) but NOT necessarily cancelled because of delayed opening.

For any change of address, email or telephone number, please inform Alan Graham, 544 Tip Top Road, Brevard, N.C., 28712. 828-884-3947

President's Message

Our activities on WCBC outings consist mostly of identifying and appreciating wildflowers and other plants in natural settings. This is really just scratching the surface of botanical studies. The significance of a plant can be considered from two opposite perspectives. On one hand we have the usefulness of the plant to mankind, which can be quite varied and significant. On the other hand, what role does the plant play in the natural world? It is this latter aspect of plants that I would like to address here, though only superficially in this limited space.

In the natural world, plants grow in communities with other plants, sometimes benefiting from them and sometimes competing with them. From our gardening books, we know that the thermal, moisture, nutrient, and light conditions influence the growth of plants. Within a community, these conditions are modified by the presence of other plants in the community. The interactions between plants in their communities can be quite complex, but ecologists simplify the complexity by defining a limited number of community "types" found in a geographic region.

Timothy Spira of Clemson University has done this for the Southern Appalachians and adjoining Piedmont province. In his book "Wildflowers and Plant Communities of the Southern Appalachian Mountains and Piedmont", he defines twenty-one plant communities ranging from the highest peaks down to the fall line, the upper limit of the coastal plain. In principle, every natural area within this region should fall into one of these communities.
Many (most?) of our botanical forays are to such natural areas, and with an awareness the various plant communities’ species compositions, as enumerated by Spira, we should be able to ascertain which type of community we are exploring. I believe this awareness would give us a greater appreciation of the botanical world here in the Southern Appalachians that we so love.

I suggest that we try to determine which types of communities we are passing through during our outings. This should not be too difficult, though I must admit it will be a learning experience for me. The geographic location of the outing will be a good indicator, and often just the presence of a few key species will indicate the communities we will encounter. Larason has made a spreadsheet of the species Spira lists for each community, and copies can be made available to members wanting to make this effort.

Let's discuss this possible new dimension of our outings, perhaps at both our scheduling meeting or at a board meeting. I would be interested in your responses to such an effort.

New Members

Audrey Stelloh  I moved to Hendersonville from Chapel Hill, NC, in 2010 when I married. I had been employed as a research technician doing DNA sequencing in Chapel Hill. I enjoy gardening and native plants and I make mosaic stepping stones. I love hiking in the woods with my dog Gus.

Robert and Jolene Overbeck  We just moved to Brevard in November from Westchester, New York and Washington DC. We have lived in various parts of the country: Minnesota, Iowa, Illinois, California, Pennsylvania, Arizona, etc. but never in the south. We love mountain biking, hiking, surfing, photography, music, motorcycling, visual arts, birding and are very much looking forward to learning about wildflowers. Jolene was a Chief Marketing Officer at a global law firm, and Robert a computer programmer. We are retired with two children and a grandchild living in the San Francisco Bay area. We are very eager to learn about identifying native plants and hope that we’re not a nuisance with all our questions. [No indeed! All of us in the Botany Club love questions!-ed.]

Is it False Hellebore or is it Appalachian Bunchflower?

by Penny Longhurst

If you’ve been on spring walks with us recently you may have noticed some differing opinions about the identity of those large lily-like leaves we’ve been seeing on some of the trails. When we first moved to Transylvania County I was thrilled to see dozens of these leaves on our property expecting to see some fantastic flowers appear. But years passed and the plants never bloomed, so identification was impossible. Then one day I found a photograph online that was taken at Max Patch by Kevin Adams. It showed large numbers of the same leaves and identified them as Appalachian bunchflowers. Since then I have occasionally found a plant with flowers, and was finally able to identify the “lily that never blooms” as *Veratrum parviflorum*. 
Veratrum parviflorum (Appalachian bunchflower, formerly Melanthium parviflorum) has stalked, mostly basal, elliptical leaves less than 8 inches long. It has a limited distribution, occurring in dry woods in the Appalachians from the Virginias to Georgia and eastern Tennessee. When it blooms, the flowers occur on a stem that is about 3 feet tall. The blooms are small (maybe ½ inch across), yellow-green, and hairless, and the overall appearance is delicate. Large numbers can be seen along the Talking Tree trail at Holmes Experimental State Forest.

In contrast, False Hellebore (Veratrum viride var. viride) has a wider distribution, but is much less common in the southern Appalachians than in the northeastern states. It is my impression that in this area it is located primarily at higher elevations, such as along the Blue Ridge Parkway. It is a stout wetland plant, 2 to 6 feet tall, with large, heavily ribbed, alternate, yellow-green leaves up to 12 inches long, but generally narrower than those of V. parviflorum. The sessile leaves clasp and continue up a thick stem that bears a branching cluster of greenish, star-shaped, hairy flowers at the top. The stems and flowers are larger than those of Veratrum parviflorum. The ribbed, yellow-green leaves of this wetland plant are conspicuous in spring; the plant withers away before summer. Good examples can be seen along the creeks that feed Douglas Falls, at Bear Pen Gap, and on the Mountains to Sea trail near Buckeye Gap.

Veratrum viride is highly toxic to humans and livestock. All parts are poisonous, especially the young, succulent growth in spring. Despite the toxicity, the plant was considered to have magical properties by many Native American tribes who used it for talismanic and ceremonial purposes, as well as to treat conditions including hair loss, pain, and madness. One report says that V. viride was used by some tribes to elect a new leader. All the candidates would eat the root, and the last one to start vomiting would become the new leader! The plant is also used in homeopathic preparations to slow the heart rate and decrease blood pressure. I was unable to find any information concerning the toxicity of V. parviflorum. However, from experience, I can report that deer eat the leaves voraciously; sadly with no apparent ill effects!
A Murder In Passing
by Mark de Castrique
Reviewed by Penny Longhurst

On May 1, WCBC's scheduled walk was the Kingdom of the Happy Land. Coincidentally, I had been reading a series of books by a local author, Mark de Castrique. His Sam Blackman series is set in well-known locations around this area such as the Biltmore House, Grove Park Inn, and Connemara. Book 4, A Murder in Passing, is set in the Kingdom of the Happy Land, and Ed Bell, our co-leader for the WCBC walk and one of the owners of the property, is even a character in the book. In each of the books, historical persons and events are interspersed with the current day mystery.

At the beginning of A Murder in Passing, private eyes Sam Blackman and Nakayla Robinson take part in a Blue Ridge Mushroom Club field trip to the Kingdom of the Happy Land. During the hunt for *Laetiporus sulphureus* (Chicken of the Woods) Sam trips, smashes into a fallen log, and discovers an old human skeleton hidden inside. (There really is a Blue Ridge Mushroom Club as well as an Asheville Mushroom Club).
The following day the story of the grisly discovery runs in both the Asheville and Hendersonville newspapers. Later that morning a young African-American woman, Marsha Montgomery, shows up at the detective agency. She asks Sam and Nakayla to investigate the 45-year-old theft of a photograph by Doris Ullmann, renowned photographer of Appalachian mountain people, which shows her great grandmother, grandmother, 5-year-old mother, and some other children at the site of one of the original cabins in the Kingdom of the Happy Land. The women are descendants of the freed slaves who lived in the Kingdom. A fair amount of time is spent describing the history of the Kingdom as well as the life of Ullman and her relationships with Pulitzer prizewinning author Julia Peterkins and John Jacob Niles, an American composer, singer, and collector of traditional ballads, as they passed through this area.

Sam and Nakayla are suspicious about this coincidence, and it turns out that Marsha suspects the robbery had something to do with the mysterious disappearance of her father at about the same time. Shortly after this Marsha's mother, Lucille, who is now 85, is arrested and charged with the murder of Jimmy Lang, her missing lover and Marsha's father, whose body the police suspect is hidden in the tree.

The plot revolves around the US Supreme Court decision in the summer of 1967 that ruled prohibiting interracial couples from marrying was unconstitutional. Despite this Lucille had refused to marry Jimmy, who was white, because she felt that his family business would be adversely affected if he married a black woman. It was shortly after this that Jimmy disappeared. Lucille and Jimmy's twin brother were never sure if he simply ran away or if something untoward had happened to him.

Solving the mystery involves a trip to the John C. Campbell Folk School, meals at well-known local restaurants, some mysterious assaults on army vets including the president of the Mushroom Club, several return visits to The Kingdom, and of course, finding the missing photograph. There's quite a twist at the end, but if you want to know who dunnit and why, you'll need to read the book yourself!

More information on the Kingdom of the Happy Land can be found at https://kingdomofthehappyland.wordpress.com/history/

Our Native Roses

by Lucy Prim

When the hot summer days come to our mountains, the dainty woodland flowers we see in the early spring have mostly faded away. But there are a host of lovely flowers that bloom in this hot season, and among the loveliest of these are our native roses. Although opinions differ as to the number of native roses we have here in the mountains, we certainly have the Swamp Rose and the Carolina Rose. Depending on what source I read, we might have the Virginia Rose and the Climbing Prairie Rose too.
The Swamp Rose, *Rosa palustris*, is a rose I think we regularly see on our outings to Lewis Creek. A big healthy bush is growing near the road, and we see it just where we leave the parked cars and start our walk across the meadow. As its name implies, this rose likes wet areas. It can even live in standing water! The sweet pink flowers beckon and those of us who walk up close to the bush, hoping no rattlesnakes are hiding under the brambles, can smell the loveliest fragrance from those beautiful pink blossoms.

A rose that grows in drier areas, and whose flower looks very much like the Swamp Rose, is the Carolina Rose, *Rosa carolina*. The Carolina Rose grows in drier areas such as upland forests, and the edges of pastures and woodlands. There are a few features that can help us distinguish it from the Swamp Rose besides the location in which it is typically found growing. It is said to have very straight, narrow prickles, while the Swamp Rose has curved prickles. The flowers of the two look very similar, except the center of the Swamp Rose has a little circular area of flattened pistils that is often a lovely pinkish-orangey color. This little button looks quite pretty surrounded by the pink petals.

The Virginia Rose, *Rosa virginiana*, is very similar to the Swamp Rose. It differs in having dark green shiny leaflets and coarser teeth. It also has wider, leaf-like stipule at the base of each compound leaf while the Swamp Rose has a very narrow stipule. The flowers of the Virginia Rose occur in small clusters more frequently those of the Swamp Rose.
The fourth rose we may have in this area is the climbing Prairie Rose, *Rosa setigera*. The flowers of this rose look very similar to the others, but they do not have the flattened disc of pistils in the center, but instead have a narrow column of pistils. The leaflets are fewer in number. Instead of the usual seven, this rose typically has only three, and rarely five, leaflets. The flowers of the Prairie Climbing Rose are light pink to rosy pink and fragrant. They are 2-3 inches across and grow in clusters at the ends of the stems, often opening one or two at a time. When there are no flowers to guide us in identifying this rose and we wish to distinguish it from the Multiflora Rose, we can look at the stipules at the base of the compound leaves. The Multiflora Rose has comb-like hairs at the base, while this rose has two winged stipules without comb-like hairs. The prickles are short and stout and slightly curved. The canes grow very long, up to 15 feet. Bowers of Prairie Climbing Rose can be 8 feet high.

These four native roses are lovely to have in our woods. But there is a rose we might very well find growing, that has some undesirable features, even though it looks lovely right now, blooming in luxuriant bowers beside Little River Road. It is the Multiflora Rose, an exotic invasive from Asia that was brought here by Europeans in the 1700s to be a pretty garden plant and to create a "living fence" that would help contain animals. This rose could indeed create a living fence the way it climbs and clammers over itself forming the most dense, impenetrable thickets. It has small, one inch wide white flowers which grow in clusters rather than the single blooming bigger pink or pale pink flowers of the Carolina and Swamp Roses.
The feature that may be most useful for distinguishing the Multiflora Rose from our native roses is its stipule. Our native roses have stipules with smooth or faintly ciliated margins. The Multiflora Rose has stipules that have markedly fringed, feathery margins.

What is a stipule?

If you pull a compound rose leaf off the stem, you can easily see the stipule. It is an appendage that extends from the base of the leaf up the leaf an inch or two.

While writing this article for Shortia, I came upon three beautiful pale pink roses on a dainty arching branch in the woods on top of Little Glassy Mountain, at Connemara. I was so delighted to be able to key this rose out, using my newly gathered information on native roses. But much to my dismay, this little rose did not fit any of the descriptions! At first glance, it definitely looked like a Carolina Rose. There were three pale pink flowers open, each about 2 across, blooming singly at the ends of stems. The base of each leaf was sheathed with a smooth stipule, not the fringed stipule of the Multiflora Rose. It had fairly straight prickles, but some were more straight than others, and some were definitely slightly curved. It was growing all by itself in a dry woodland area. It was a wispy little bush, and if the branches hadn't been seven feet long and arching, I would have confidently thought it was a Carolina Rose. Carolina Rose is supposed to be shorter than that. But even with its long branches and slightly curved prickles, I think most of its features point to it being a native Carolina Rose. After all, with the bumblebees going back and forth from rose to rose, it should not surprise us that roses do not always exactly fit their descriptions in books!
A Wild Rose

A blushing wild pink rose,
   By tangled woods and ways,
A passing sweet that goes
   With summer days.

From rosy dawn till night
   Wafted from east to west,
Kissed by the morning light
   To evening rest.

Thy odors faint outlive
   Alike both joy and pain,
Stealing the sweet they give
   To yield again.

Leaving a faint perfume
   Thy memory to fulfill,
Forgotten in thy bloom,
   Remembered still.

Sarah Orne Jewett

Thorns, Spines, and Prickles

Prickle – a structure that derives from the epidermal tissue or outer bark. You can easily detach it by pushing it to the side. Roses have prickles.

The difference between “thorns” and “spines” eludes me.

A thorn is described as “a spiny outgrowth of wood, or a stem modified as such”. Hawthorns have thorns.

A spine is described as “a woody, strong sharp point emerging from the wood of the stem”. Locusts have spines.

Gray's Manual of Botany defines the word “thorn” as “same as spine”. 
Violets and Fritillary Butterflies

by Lucy Prim

There were not many flowers blooming last April third, as we slowly wound our way along the paths at Flat Rock Park. Aside from Dead Nettle, Gill Over the Ground, and lots of Dandelions we saw hundreds of Common Blue Violets growing at the base of the giant Tulip Poplars and along the banks of the little creeks that flow through the park. Bonnie Arbuckle remarked that although she used to pull up the violets in her garden, she now has decided to let them stay because Violets are the host plant of almost all Fritillary Butterflies!

Fritillary butterflies are distant cousins to monarchs, though they do not make a long journey to Mexico the way Monarchs do and their caterpillars do not feed on Milkweeds. Instead of Milkweeds, almost all fritillary caterpillars feed exclusively on Violets. The females mate in the summer, then after taking a several weeks long nap called a diapause, they lay their eggs in the sorts of places where violets can be found. The females seem to be able to find these favorable places even when the violet leaves have completely disappeared. After hatching, the caterpillars nestle into the leaf litter on the forest floor and remain there all winter. When spring arrives, they come out and feast on the newly emerged violet leaves. They eat during the night, then crawl back into the leaf litter in the morning and stay there all day, safe from the eyes of hungry predators. If you look at violet leaves in the woods you can sometimes see irregularly shaped holes, possibly left by these little feeding caterpillars.

One of these Violet eating Fritillaries is the Diana Fritillary, Speyeria diana. The males and females look very different from each other, the female being dark blue and somewhat larger than the orange and black male. Not only is this butterfly remarkably beautiful, it is also rare and considered a threatened species. It has been spotted in the Wilderness Bridge area, where we sometimes go on our Botany Club walks. Maybe one day we will see one!

So, as we tend to our gardens, we might decide to let violets to grow. They are lovely in the spring, covered with their blue and yellow and white flowers. We can watch for irregular holes in the leaves, and wonder what little caterpillars are nibbling at them during the night. On spring and summer days as we hike in the woods, we might catch a glimpse of a fritillary, flitting about and nectaring amongst the Milk Weeds and Joe Pye. And if we’re extremely lucky, we might even see the most rare and exquisite fritillary of them all, the lovely Diana Fritillary.
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 Alan Graham, 544 Tip Top Road, Brevard, NC 28712.

Please send me Botanical Articles or stories or tips on plant identification that you think would be good to include in one of our SHORTIAs. If you see anything that needs correction or if you have additional information about a subject or perhaps a personal experience related to a subject, send that in too, and I can include it in a future SHORTIA. Please try to get this to me by **August 20th** to include in the FALL issue.