SHORTIA

NEWSLETTER OF THE

WESTERN CAROLINA BOTANICAL CLUB

Shortia galacifolia

Oconee Bells

Summer, 2019
Board of Directors

President       Susan Sunflower
Vice-President  Gayle Mercurio
Secretary       Mary Standaert
Treasurer       Alan Graham
Members at Large Joe Standaert and John Harrison

MEMBER NEWS

Field Trip Cancellations: Occasionally, field trips must be canceled 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 canceled because of the delayed opening.

For any change of address, email or telephone number, please inform Alan Graham, 42 Autumn Glen Court, Brevard, N.C., 28712. adgraham@comporium.net.

PRESIDENT’S MESSAGE

Susan Sunflower

Time for change! Spring to summer - will this one be dry or wet? And this Presidency … on to Gayle Mercurio! (Did you know we first met her and Vince at Wolf Mountain Overlook?) And we’ll be welcoming new officers, too.

This has been a lovely experience for me, these past two years, thank you all! Especially fun have been the Board meetings; no matter the long list of topics to cover, we did them in 2 hours - much to my surprise! These are excellent workers, and there’s laughter, too. Special thanks go to Ken Borgfeldt for continuing SHORTIA. There are many others among us who quietly do things that support WCBC - much appreciated, too, even if not noted out loud!

Happy Summer - and may you find new treasures in your yard, like the Cleistes divaricata (Rosebud Orchid) mysteriously arrived in mine!

Best wishes, Susan
The 45th meeting of the WCBC was called to order at 11:00 a.m. on July 6, 2018 by President Susan Sunflower. Twenty-six members and guests were in attendance. Minutes of the July 7, 2017 annual meeting were read and accepted as written.

President Sunflower reported that there had been two Board meetings this year. No important issues were ongoing. She invited members to attend the meetings if they wished. In the absence of Joy Charlebois, Scheduler, President Sunflower announced that the next scheduling meeting will be held on July 23 at 10 a.m. at the Etowah Library. She invited interested participants to attend. She reported that Joe Standaert had scanned all Recorder’s reports up to the year 2000 and the old copies had now been discarded. Alan Graham gave the Treasurer’s Report. The club has 92 members. The Club monetary balance stands at around $4,500. Expenses for the current year were $300 over last year and, at this rate of spending the balance will approach zero in about 15 years. The Board decided that when the balance reaches $2,000 an increase in dues may be made. An $800 donation was made by the club to Bullington Gardens.

Lucy Prim, Shortia Editor, asked members to submit articles for Shortia. The next due date is September 1. Jean Kirkland asked if she could use a Shortia article that Lucy had written on the Pawpaw. It was agreed that any article could be used with an appropriate citation. President Sunflower thanked Lucy for the beautiful wildflower greeting cards that she creates and donates to the club.

Ken Borgfeldt, Master Recorder, was away.

Juanita Lambert reported on the club’s work at Bullington Gardens. Currently, Juanita and Larason Lambert are the only members tending the Native Woodland Garden. They work on Tuesdays from 9 to 12 from March to November; new helpers would be welcomed. Two club workdays were held in the past year on July 7, 2017 (12 participants) and May 14, 2018 (14 participants). Planting, weeding, and removal of invasive and aggressive species took place. Numerous members have made donations of native plants. Larason has been busy repairing broken fences, diverting excess water from beds and paths, and maintaining the Vaseyi Society Azalea garden. Juanita and Bonnie Arbuckle led a walk for 8 participants through the Garden. The planned brochure, map, and species list have yet to be completed, due to the amount of work needed in the garden. A moment of silence was held for Ken Anderson, a long-time club member who passed away in January. Ken was a master gardener and an avid naturalist and belonged to several birding and plant organizations. He was an active volunteer at Bullington until old age slowed him down. Donations in his memory may be given to the Bullington Gardens, 95 Upper Red Oak Trail, Hendersonville, NC 28792.

President Sunflower had several announcements:

She invited members to submit suggested walks for the scheduling team.

She invited members to submit suggested plants they would like Christine at Raymond’s Nursery to grow.

She asked members to sign cards for Joe and Mary Standaert and Peggy Polchow.

She invited suggestions on what to do with an original Dick Smith drawing donated to the club by Jeanne Smith.

Larason Lambert invited recommendations on how to improve the field trips at Fernhaven. He will send out an email questionnaire. It was suggested that when field trip groups become large the leader might plant flags next to plants of interest so that people at the rear of the group can see what is being discussed. The sweep or some designated club member will then collect the flags as they pass by. The meeting was adjourned at 11:45 a.m., followed by a potluck lunch and a plant exchange.

Respectfully submitted,
Penny Longhurst, Acting Secretary
Missing Plants

We have plants in our database that we’ve never recorded. Maybe if we knew what they looked like we could find them. The plant for this quarter ........

**Wolfsbane (Aconitum reclinatum)**

Roots slender, elongate, fascicled. Stems erect, reclining or climbing, 6-25 dm. Cauline leaves: blade 3-7-divided with more than 4mm leaf tissue between deepest sinus and base of blade, 12-20 cm wide, segment margins cleft and toothed. Inflorescences open racemes or panicles. Flowers white to cream colored, 18-30 mm from tips of pendent sepals to top of hood; pendent sepals 7-10 mm; hood conic to nearly cylindric, 15-23 mm from receptacle to top of hood, 4-12 mm wide from receptacle to beak apex.

Flowering late spring-summer (Jun-Sep). Shaded ravines of woods in mountains and upper piedmont; to 1700 m; N.C., Pa., Va., W.Va.

**NC Locations:** Ashe, Avery, Buncombe, Cherokee, Graham, Haywood, Henderson, Jackson, Macon*, Mitchell, Transylvania*, Watauga, Yancey* * Extirpated/possibly extirpated

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1 http://lucasland.org/New%20Images%202013/whitemonkshood-1.jpg
Our North Carolina Mountain Saxifrages

by Lucy Prim

One of our Saxifrages, *Micranthes petiolaris*, has been causing me a bit of confusion over the almost fourteen years that I’ve been in the Botany Club. I wasn’t quite sure why I was confused, but I had an ill-at-ease sort of feeling that I didn’t understand something. What was it? Now I have figured it out—that is the benefit of writing an article for Shortia! First of all, the plant is called different names in my various references. Several of my books call it “*Saxifraga michauxii*”, others (including Weakley) call it “*Hydatica petiolaris*”, and others call it “*Micranthes petiolaris*.” No wonder I was confused! ITIS says that the “accepted name” is “*Micranthes petiolaris*”, so that is the one I will use, although we may find one of these days that the name changes to the one Weakley prefers. He no doubt has good reasons! So that is one confusion settled.

Another reason I have been confused by this particular Saxifrage is that it does not match up with the description in one of my favorite reference books, “Wild Flowers of the Southern Mountains” by Richard Smith. This book says it grows on wet rocks and blooms in the summer. I walk at Carl Sandburg’s almost every day, and I see it growing in great abundance on very dry rocks and blooming from early spring on into late summer. Could this be the same plant? Yes, apparently it is! I read descriptions in other books and found that it can grow on both dry and wet rocks and blooms from spring to summer, just as I was observing on my walks. Sometimes the leaves are a remarkably beautiful red color, which also confused me at first. But now I know not to let bright red leaves confuse me. Plants can do that. Knowing what the flower looks like makes this plant easy to identify since it is the only Saxifrage with a flower this unique shape—such an amazingly lovely little flower!

And as I was researching this one Saxifrage, I thought I’d research the others as well and make another chart!
**Micranthes virginiana**

**Early Saxifrage**

- Usually under 1' tall, but sometimes up to 1½' tall.
- Leaves usually toothed, but sometimes serrate. About 2½' long.

**Micranthes petiolaris**

**Michaux's Saxifrage**

- Grows in moist areas, blooms in spring and then again in late summer.
- In 1965 it was placed in the genus *Hydrilla*. Since 1997 this classification has been accepted.
- Leaves can be up to 2½' long.

**Micranthes micranthidifolia**

**Brook Lettuce**

- Usually less than 1½' tall.
- Blooms in late spring and again in late summer.
- Leaves are only visible with a flower in this case.
- Grown as a spring green, served with bacon grease, vinegar, and sugar.
**Micranthes careyana**  
**Carey's Saxifrage**

These two Saxifrages look the same except for two details in the flowers.

- Sepals point up
- Filiform filaments
- Rare, but can be found in our area.

**Micranthes caroliniana**  
**Carolina Saxifrage**

- Sepals point down
- Clavate filaments
- Leaves under 6 inches, margins abruptly curl in to the petiole

**Micranthes pensylvanica**  
**Swamp Saxifrage**

- Sometimes yellow spots on petals
- Grows up to 4 tall
- Flower only 1/4 across
- Green, yellowish purple
- In our mountains, this Saxifrage is very rare, found only in bogs and seeps.

- Leaves 4-8" long and entire or minutely toothed
What’s in a Name – Vaseyi

by Penny Longhurst

Springtime is Vasey-time. Each year we eagerly anticipate our field trips to see Pinkshell Azalea (Rhododendron vaseyi), a shrub that grows only in the North Carolina mountains, and the amazingly deep red colors of Vasey’s Trillium (Trillium vaseyi). It is generally assumed that these plants were named after George S. Vasey, a botanist who worked for the Department of Agriculture and specialized in the study of grasses. However, as you will see, it was probably his son, George Richard Vasey, who first discovered them.

George S. Vasey was born in North Yorkshire, England, in February 1822. His parents immigrated to the USA the following year and settled near Utica, NY. Vasey was interested in botany from an early age, learning botanical names and corresponding with and collecting specimens for eminent botanists such as John Torrey and Asa Gray. Around 1847, Vasey graduated from the Berkshire Medical Institute in Pittsfield, Massachusetts with a Degree in Medicine. After graduation he married and moved near Watertown, NY to practice medicine. In 1848 the Vasey family moved to Illinois, where he continued to practice medicine and botanize in his spare time. He was a founding member and President of the Illinois Natural History Society.

In 1868 he was recruited by John Wesley Powell, who was the curator of the Natural History Museum at the State Normal University of Illinois (now Illinois State University), to be the botanist on an exploratory expedition to Utah and Colorado. Vasey returned to Illinois with hundreds of specimens for his fellow collectors, strengthening his reputation as a botanist. Powell continued his travels in the 1870’s leading The Rocky Mountain Scientific Exploring Expedition, navigating the Grand Canyon, and naming “Vasey’s Paradise” after his colleague. In 1870 Vasey was appointed to replace Powell as curator and then, in 1872, recruited as botanist of the Department of Agriculture and curator of the U.S. National Herbarium at the Smithsonian Institution in Washington, D.C. At the Smithsonian he greatly expanded the herbarium, which contained plants collected on various government-funded expeditions as well as those donated by or purchased from private collectors. Coming from the Prairies, Vasey had always been interested in grasses and sedges, and wrote a
special bulletin on the agricultural grasses of the United States, as well as many monographs. With his exploring days over, he relied on specimens sent to the herbarium by his friends and other collectors, including one of his sons, George Richard Vasey.

Vasey died in Washington D.C. on March 4, 1893 of acute peritonitis. Three genera, Vaseya (now part of Muhlenbergia - Grasses), Vaseyochloa (Grasses), and Vaseyanthus (now Echinopepon - Gourds, etc.), and numerous species (mostly grasses) are named after him.

Little is known of the other naturalist in the family, George Richard, who was born around 1853, the third of Vasey’s 6 children with his first wife. There is a published list of his collected plants and he is mentioned in at least one letter written by his father. Thus, he spent many years collecting in Arizona, California (172 specimens), New Mexico, and Texas between 1868 and 1881, before settling in Washington State. He is thought to have moved to Alberta, Canada around 1905, and died there in 1921.

Of interest to us, on an 1878 expedition to North Carolina, George Richard collected Rhododendron vaseyi, Solidago arguta var. caroliniana, Trillium vaseyi, and Waldsteinia parviflora, which he sent to his father for his collections. Somehow these were missed by earlier naturalists, probably due to the timing of their trips. In January 24, 1879 George S. Vasey wrote to Asa Gray “Your letter respecting the Rhododendron is rec'd. I am glad that you decided to publish it. My son writes that it was collected on the summit of balsam mountain, about 7 miles S.W. from Webster, Jackson Co. N.C. about June 3rd 1878. He does not state the size of the bushes but I will write and inquire…. P.S. As to the name of the Rhododendron use your judgement. I do not much care on my own account, perhaps it might stimulate my son to some new zeal etc. I had thought R. carolinianum would be appropriate…… If it had any commercial value I would like my son to get the benefit – but it would cost 100 or more dollars to go there and then probably not get an ounce of seed.”

Evaluation of the botanical influence of George Richard is complicated by the tendency of writers at that time to lump him and his father together as “George Vasey”, and contribute many of his botanical findings to George S. Even Thomas Harbison seems to have confused father and son when he named Trillium vaseyi, writing “Trillium vaseyi … was collected in the mountains of North Carolina in 1878 by Dr. George Vasey, whose name I take pleasure in associating with this species.”

The specific epithet vaseyana refers exclusively to George Richard Vasey. Two plant species are named for him, Sandpiper Oak (Quercus vaseyana) and Mountain Big Sagebrush (Artemisia tridentata ssp. vaseyana), both collected out West.

References


Calflora.net/botanicalnames – George Richard Vasey & Dr. George S. Vasey


Thomas Grant Harbison: New or Little Known Species of Trillium. Biltmore Botanical Studies 1(1): 24


List of specimens collected by George Richard Vasey, Harvard University Herbaria and Libraries

Letter from George S. Vasey to Asa Gray (Jan 24, 1879) describing the collection of Rhododendron vaseyi
A Message from the Past

Those Latin Names

Betty Jones

Let’s continue our look at body parts that appear in the Latin names of plants. In the Summer 2001 issue of *Shortia*, we started with structures that appear on the head. Now we will consider the rest of the body, in particular, features on the exterior of the body.

*Brachi-* (Greek) means arm. This root appears in *Sabatia brachiata* (Narrowleaf Rose-pink), probably referring to the branches or ‘arms’ coming off the main stem. This root should not be confused with *brachy* which is Greek for ‘short’.

*Ala-* (L) and *Ptero-* (G) refer to wings. In *Lythrum alatum* (Winged Loosestrife), the reference is to the wing-like structures on the stem. The wing-like shape of the fronds gives *Pteridium aquilinum* (Bracken) its name.

*Gonato-* (G) is knee. Polygonatum or ‘many knees’ is the genus name for Solomon’s Seal whose roots have many joints or ‘knees’.

*Digit-* (L) refers, of course, to digits or fingers. One thinks first of *Digitalis* (Foxglove) which was so-named for the finger-shape of its flower. In the wild we have *Penstemon digitalis* (Foxglove Beardtongue) whose flowers have the same finger shape as Foxglove. In *100 Flowers and How They Got Their Names*, author Diana Wells says that “Foxgloves tend to grow on woody slopes where foxes’ burrows are often found.” Combine this with the glove or finger shape of the flower and you have Foxglove.

*-seta* (L) refers to bristles. This root occurs in our plant lists in *Polygonum cespitosum var. longisetum* or Long-bristled Smartweed. Those long bristles (1/4 to 3/8 inches long) appear at the sheath that surrounds the stem at each of the swollen leaf joints.

*Spini-* (L) are spines - the thorny, not the bony kind. The *Sida spinosa* (Prickly Mallow) has a short spine at the base of each petiole. If you are familiar with *Aralia spinosa* (Devil’s Walking Stick), you recognize that it is aptly named.

*-lepis* (G) refers to scales. We find this root in *Bidens polylepis* whose name literally means “two-teeth, many scales”. “Two-teeth” refers to the two barbs that catch on ones clothing as one walks by. I have been unable to find the reason for “many scales”. This plant has several common names: Bur Marigold, (Ozark)Tickseed Sunflower and, my favorite, the name used by Dick Smith - Ditch Daisy.

*-pinna* (L) is the root for feather. We use this root whenever we say that leaves are ‘pinnate’, that is, arranged featherlike on either side of a common axis. The beautiful Purple Phacelia is named *Phacelia bipinnatifida* because its cauline leaves are twice or bi-pinnately divided. In ferns, a *pinna* is the leaflet or first division of the leafy part of the frond. The *pinnules* are divisions of the *pinnae* (plural of *pinna*).

*Pedi-* (L) and *Podo-* (G) refer to foot. *Cypripedium acaule*, literally translated, means Venus’ (Cyprī) slipper (pedium) stemless (acaule); we call it Pink Lady’s Slipper. *Acaule* refers to the fact that it has no leafy stem. *Podophyllum peltatum* (Mayapple) means foot (Podo) leaf (phyllum) with the leaf attached to the stem at the center, not at the edge (peltatum).
Can You Tell? Is it a Petal, a Leaf, or a Bract?

By Penny Longhurst

I’m sure you saw plenty of Dogwood flowering this spring. Their white petals make them hard to miss. But maybe, unlike me, you knew those weren’t petals! How about your Trillium anatomy? Well, it’s a little tricky, and even the experts don’t always agree, but sometimes what we think is an obvious petal or a leaf could really be a bract.

Let’s start with some definitions. Bracts are reduced leaf or leaflike structures found at the base of a flower or inflorescence. They are located above the leaves and below the flowers and sepals, can be large or small, and can vary in color.

Petals are the colored portion we most commonly associate with the flower head (not always correctly). We need to remember that there are two types of flowers, flattened ray flowers (the ones we usually spot first) and tubular disk flowers (often overlooked in the center of the flower head). That’s often important in determining whether a flower part is a bract or a petal. Some bracts are brightly colored to attract insects to a smaller flower head (think Poinsettia or Bougainvillea; those red “petals” are bracts). Dogwood species, including *Cornus florida*, have rounded and notched showy white bracts that surround and extend under the inflorescence. In the photograph on the left you can see the small yellow disc flowers surrounded by white bracts, but no petals.

Some bracts, for instance in the Aster family, have a protective function, curling around new buds to protect them from insects or insulate them from freezing weather while they are growing. The pulpit of Jack-in-the-Pulpit (*Arisaema triphyllum*) is a specialized bract, called a spathe. It forms a protective hood over the spadix, the club-like spike which bears clusters of tiny flowers.

The leaf is the photosynthetic part of a plant. Internally bracts and leaves are indistinguishable. However, leaf-like bracts are typically thinner than true leaves and undergo photosynthesis at lower rates.

Structurally, Trillium differ from most other plants. The Trillium “stem” is an underground, horizontal rhizome. The rhizome is covered with dry, scale-like modified leaves called cataphylls. The stalk that arises from the
rhizome is a leafless scape or peduncle bearing a flower. Thus, by definition, the leaf-like photosynthetic structures on trillium are bracts. Now I know!

References:


Marie Harrison. Bracts: Leaves, Petals, or Something Else? Dave’s Garden, Article 3156, April 20, 2017

Scott Namestnik: Trillium Morphology. Orbis Environmental Consulting, Your Daily Dose of Botany, April 2014

Trillium. In: Flora of North America, eflora.org
The mission of the Club is to identify and study native plants and their habitats and to advocate the protection of biodiversity in our natural world. 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, 42 Autumn Glen Court Brevard, NC 28712.