SHORTIA

NEWSLETTER OF THE

WESTERN CAROLINA BOTANICAL CLUB

Shortia galacifolia

Oconee Bells

Fall 2020
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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 send an email to wcbotanicalclub@gmail.com.

Our webpage is located at http://wcbotanicalclub.org

NOTE: All club activities are canceled for the remainder of 2020 due to Covid-19 concerns. All full year ($15) dues for 2020 will be applied to 2021, so memberships will be automatically renewed for 2021 (assuming there are activities in 2021).
Hi everyone. I'm not sure when we'll be getting back together again but it's great that members are pitching in to keep the WCBC spirit alive. Special thanks to Penny Longhurst for inventing the virtual walks and putting them online and to Ken Borgfeldt for keeping communications and Shortia going. Also a special thanks to Joe and Mary Standart for the Buncombe Name Game giving us snippets of local history. All these activities are important in keeping the focus of our club going during these pandemic times.

A special thanks to the following people who have helped brightened our day by sending pictures for the virtual hikes, providing information on where to go to see plants, and contributing articles to Shortia: Jock Alpin, Diane Bauknight, Ken Borgfeldt, Charlie & Alice Brice, Jackie Burke, John & Daudie Colson, Richard Holzman, Betty Jones, Penny Longhurst, Jim Poling, Lucy Prim, Joe Standaert, Aleta Tinsdale, Harriet Walls, and Kent Wilcox. Thank you all. Let's hope we get back to enjoying our favorite hikes and each other's company in the coming spring.
You could say that thistles are misunderstood plants. We hate them because of their spiky spines and perceived invasiveness, but the flowers are beautiful and loved by bees and butterflies. Some thistles are also host plants for insects and seeds and thistle down provide food and nesting material for birds. They just can’t win. We don’t see many thistles on our field trips, but there is a large patch near my home where I’ve often photographed bees and butterflies. This year I’ve been able to spend a lot more time there and finally noticed that there were actually two different types of thistle in the patch! The more abundant and aggressive plant turned out to be the non-native Nodding Thistle. It has large drooping flowers that bloomed in May/June and was dead by the end of July. From the photograph you can see how it got its name. The other plant, Bull Thistle, sadly also a non-native, grows much more slowly and didn’t bloom until August.

Thistle is a generic term applied to many plants in the Aster family that possess spines. They are generally annuals or biennials, and the flower heads contain only disk florets. The Bull Thistle (Cirsium vulgare) is a member of the Cirsium genus, known as True Thistles. According to Weakley, 14 different species of Cirsium may be found in the Southern Appalachians. At least 8 of them are in our database, although we rarely see them on our walks: Tall Thistle (Cirsium altissimum), Carolina Thistle (Cirsium carolinianum), Field Thistle (Cirsium discolor), Yellow Thistle (Cirsium horridulum), Swamp Thistle (Cirsium muticum), and Pasture Thistle (Cirsium pumilum) are native to North America. The invasive spreaders, Canada Thistle (Cirsium arvense) and Bull Thistle (Cirsium vulgare), are non-native.

Linnaeus named the Bull Thistle, a native of Europe and Asia, Carduus lanceolatus. We now know it as Cirsium vulgare. The name Cirsium comes from the Greek for “swollen vein” from the use of thistles to treat swollen veins, and vulgare is from the Latin meaning “common”. I first noticed this plant was different from the Nodding Thistle because the basal leaves formed a large, dark green flat rosette. It didn’t seem to be as aggressive because there were a lot fewer plants. It took over a month to send up a shoot and then another month to flower. The flower heads are large, erect, and distinctive with their nasty spiny involucral bracts. The leaves and stems are also intensely spiny. The club has seen Bull Thistle at Purchase Knob and Sam Knob Meadow.

**Bull Thistle (Cirsium vulgare)**

My Nodding or Musk Thistle (Carduus nutans) is a member of the Plumeless Thistle family. “Plumeless” means the bristles (parachute-like structures) above the achenes (the seed) lack the plumes that are found in True Thistles. Thus they appear less feathery than those of thistles in the Cirsium genus. On close examination of the flower the lack of plumes or “bump-like structures” is also obvious. Four different species of Carduus grow...
here; all are non-native. Two of them, Plumeless Thistle (*Carduus acanthoides*) and Musk or Nodding Thistle (*Carduus nutans*), are in our database. Thistles in the *Carduus* genus have spiny-winged stems which distinguish them from those in the *Cirsium* genus.

The name *Carduus nutans* is derived from the Latin name for “thistle” with “nodding or drooping” flowers. A European native, it was described in several early European texts and included in Linnaeus’ *Species plantarum*. The distinctive characteristics of *Carduus nutans* are the drooping flower-heads surrounded by large involucral bracts, contributing to its common name. Hopefully this feature will help us identify the plant if we encounter it on future field trips.

**Nodding Thistle (*Carduus nutans*)**

![Nodding Thistle](image1)

Recently on my wanderings I have seen two lovely native thistles. They were first described only in the early 1800’s and thus were not seen by Linnaeus. Maybe the early naturalists were not inclined to collect thistles! That’s a pity, because I think that they are real beauties. We usually see the Swamp Thistle (*Cirsium muticum*) on our summer Frying Pan and Sam Knob Meadow walks. Apparently it doesn’t need to be in a swamp to flourish. When flowering, the plants are usually covered with butterflies and bees so they’re obviously a great source of pollen and nectar. The specific epithet, *muticum*, comes from the Latin word *muticus* meaning blunt. *Cirsium muticum* was discovered by Michaux in the “high mountains of Carolina” and included in his *Flora Boreali-Americana*. Swamp Thistles, like most other thistles are biennials; they bloom in their second year of growth and then die. Fortunately there are many of them growing along the trail to Sam Knob Meadow and obviously they produce sufficient numbers of viable seeds to carry on the dynasty.

The second thistle was a real puzzle for me although, in retrospect, maybe it shouldn’t have been. I first spotted it standing alone, tall and proud, and covered with flower buds next to mile marker 430 on the Blue Ridge Parkway at the beginning of August. I was pretty sure it wasn’t Tall Thistle (*Cirsium altissimum*) because the leaves were all lobed and very spiny. I returned several times to see if it had bloomed yet and also sent emissaries, but all it did was grow taller and taller. It looked like a huge candelabra! There wasn’t another thistle anywhere in sight. Finally on September 10th there was a single bloom – at least 6 feet in the air! Fortunately I had leather gloves and a husband in the car and he was able to gently lower the flower far enough for me to take pictures. I believe it to be a Field Thistle (*Cirsium discolor*). Field Thistle was included in Willdenow’s *Species plantarum* under its previous name of *Cnicus discolor*. The specific epithet, *discolor*, probably comes from the Greek word *dis*, and thus means having two colors, of leaf or flower. Like the Swamp Thistle, Field Thistle is a biennial, but sometimes is a short-lived perennial. Sadly, that probably means that my mystery thistle will be missing from this spot next year.
The flowers of the two plants look quite similar with very interesting and attractively textured and colored involucral bracts (the portion of the head below the disk flowers). However, the Field Thistle differs from the Swamp Thistle by having long spiny involucral bracts and a fierce-looking set of leaves just below the flower head. In comparison, the flower head of the Swamp Thistle is more compact and lacks spines. The stems of the two plants differ also; the Swamp Thistle is a much more delicate looking plant compared to the sturdier Field Thistle.

It’s time for us to recognize that many thistles are worthy of being considered wildflowers and not weeds. While we need to pay close attention to the non-native thistles to ensure that they do not become invasive pests, we should enjoy the beauty of thistles and value their important role in supporting birds and pollinators (and if you find a thistle growing nearby, please let me know!).

References

Eckberg, James; Mäder, Eric Lee; Hopwood, Jennifer; Foltz Jordan, Sara; and Borders, Brianna: Native Thistles: A Conservation Practitioner's Guide. Xerces Society, 2017


Walking Oklawaha Greenway as many days as I have this past COVID-19 season, I began to notice that there were several smartweeds, especially in the wetter areas. I decided to look a little further, the operative word being “little”, into the smartweed family. The smartweeds are in the *Persicaria* genus and I found several other species that were familiar to me. All I wanted to do was to be able to label my photos, so I built a cheatsheet for myself which I share as follows:

**Water Smartweed (*Persicaria amphibia*)**

Its adaptations to differing water conditions make it quite variable. Ocreae (tubular sheaths) are transparent (appearing light green), light tan, or brown, depending on their age, upper rims of these ocreae curl outward, and they are often have a wavy edge. The ocreae are covered with spreading bristly hairs. Stems of terrestrial plants are light green, yellowish green, or reddish green, glabrous to pubescent, relatively stout, and terete. Leaf shape is lanceolate-oblong or elliptic-oblong with obtuse tips and rounded bases.

Aquatic form of this plant, the stems and ocreae are similar, except they are less hairy or glabrous.

**Pale Smartweed (*Persicaria lapathifolia*)**

Ocreae (short sheath)1-3cm long, not ciliate, glabrous or minutely strigillose on the nerves. Ocrea (short sheath) brownish, cylindric, chartaceous, base inflated, margins truncate. Leaves often with a triangular reddish blotch in middle of the upper surface.
Long-bristled Smartweed (*Persicaria longiseta*)
Leaves smooth above, sparsely hairy on veins below, elliptic to lance-shaped. Racemes interrupted at least near the base. Deep reddish-pink flowers on erect terminal spikes only 0.2" wide. Base of leaf is wedge-shaped, petiole 1-5 mm long. An erect annual with smooth, ridgeless stems. The cilia on the ocreae are unmistakable: 1/4" to 3/8" long

Pink Smartweed (*Persicaria pensylvanica*)
An erect, branching annual to 4’ tall. Ochrea (short sheath) 5-20mm, paper-like, base inflated, glabrous or appressed-pubescent. Upper stem has numerous hairlike glands. Outer tepals with inconspicuous and irregularly-forking veins. Ochrea (short sheath) not ciliate. Rather tight, erect cylindric racemes, 1-2" long and 0.5" wide. Stems have a tendency to zigzag between the alternate leaves. Leaves up to 5" long.

Dotted Water Smartweed (*Persicaria punctata*)
Flowers white or green, borne in erect, interrupted racemes. Ocrea (short sheath) brown, cylindric, paper-like, base inflated, margins truncate. Leaf blade without dark blotch, lanceolate to lanceolate-ovate or subrhombic.
**Swamp Smartweed** (*Persicaria setacea*)
Racemes densely flowered. Calyx greenish to pinkish or whitish. Leaves lacking a triangular reddish blotch. Blades cuneate to truncate at base. Ocreae (short sheath) strigose & hirsute, at least some hairs loosely ascending to spreading.

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**Spotted Lady's-thumb** (*Persicaria maculosa*)
Spikes of flowers upright. Bristles of ocreae 0.2-1.3 (-2) mm long. Leaves have a purplish triangle in the middle, like a thumbprint. Similar to *P. longiseta*, but bristles on the leaf node collars only 2mm long.

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**Jumpseed; Virginia Knotweed** (*Persicaria virginiana*)
Leaves usually marked with a purplish/blackish, inverted "V" towards base. Leaves tapering to acuminate apices. The base of the leaf stalk forms a ocrea (short sheath) around the stem. Ocrea (short sheath) 10-20mm, margins truncate, surface strigose to tomentose. Flowers strung out along a slender terminal spike up to 18" long. 4 tepals ~ 0.1" long, with base of each flower or its stalk in a sheath. Tension in pedicel articulation is sufficient to throw mature achenes 3-4m.
Mild Water Pepper (*Persicaria hydropiperoides*)
Flowers without dotted glands, in erect spikes with gaps between clusters. Leaves usually less than 15mm wide, 3.5 or more times longer than wide.

Water Pepper (*Persicaria hydropiper*)
The leaves are alternate and almost stalkless. The leaf blades are narrowly ovate and have entire margins fringed by very short hairs. They are tapering with a blunt apex. Each leaf base has stipules which are fused into a stem-enclosing sheath that is loose and fringed at the upper end. The inflorescence is a nodding spike. The perianth of each tiny flower consists of four or five segments, united near its green base and white or pink at the edges. There are six stamens, three fused carpels and three styles. The fruit is a dark brown oval, flattened nut.

Halberd-leaved Tearthumb (*Persicaria arifolia*)
Leaves to 6" long, broadly triangular shape like that of a spearhead with flaring triangular lobes.
**Arrow-leaved Tearthumb (Persicaria sagittata)**
Persicaria sagittata is an annual herb up to 200 cm (80 inches) tall, with prickles along the stem. Leaves are up to 10 cm (4 inches) long, heart-shaped or arrowhead-shaped (unusual for the genus). Flowers are white to pink, borne in spherical to elongated clusters up to 15 mm (0.6 inches) long.

Plants that are non-native to North America are indicated by an asterisk (*) placed after the species name.

The Name That Plant web site, [www.namethatplant.net/](http://www.namethatplant.net/), was used to provide several of the photos and the verbage used in my cheat sheet.
What’s in a Name – *Nuttallii*

Penny Longhurst

One of the earliest plants with blue flowers that we see is Old-field Toadflax (*Nuttallanthus Canadensis*) at Glassy Mountain. This year I noticed it growing near my house too. The *Nuttallanthus* and Nuttall’s Lobelia (*Lobelia nuttallii*), which we see on Sky Valley Road later in the year, honor Thomas Nuttall, a self-taught naturalist who became a leading American botanist.

The epithets *nuttallii* and *nuttallianthus* and the genus *Nuttallanus* are named after Nuttall, who was born in January 1786 and raised in Yorkshire, England. In 1800 he was apprenticed for 7 years to his uncle Jonas who owned a printing business in Liverpool. In his spare time he studied Greek, Latin, and French, and during visits home to Yorkshire developed interests in botany, geology, and minerology. In 1808 he sailed from Liverpool to Philadelphia to learn about the flora of the United States. Nuttall found employment as a printer in Philadelphia, but his spare time was primarily focused on botanical pursuits. He met Benjamin Smith Barton, Professor of Botany at the University of Pennsylvania, and from him gained the fundamentals of plant collecting, access to his libraries, lectures, and herbarium collection, and met many prominent botanists, including William Bartram. During the summer of 1809, Nuttall went on two different expeditions financed by Barton. The first was through Delaware, where he returned with 43 specimens, of which 5 were previously undescribed. His second trip took him north to Niagara Falls and Canada, collecting plants, fossils, and minerals. Nuttall was apparently a frugal collector – wherever possible he walked – but it also meant he had more opportunity to browse plants!

In 1810, Nuttall signed a contract with Barton to go on a 2 year trip to the “Northwest Territories”. He was supposed to travel to Lake Winnipeg and on into Northern Saskatchewan, Canada, collecting flora, fauna, fossils, studying geology, and researching native Indian culture. When he reached Mackinac Island in Lake Huron, Michigan, he met members of the “Astoria” expedition who were preparing to follow Lewis and Clark’s route to the Pacific. A fictional account of that trip was published by Washington Irving in 1836. Nuttall had already realized that travelling alone on foot or by boat in the wilderness was almost impossible and he travelled with the group as they journeyed to St. Louis and then up the Missouri River into the Dakotas,
collecting specimens all along the way. He soon recognized that he could not safely continue alone following Barton’s itinerary through such vast, remote territories, due to his frequent attacks of malaria, encounters with hostile Indians, and the imminent start of the 1812 War between the United States and Canada, preventing northward travel. So he returned to St. Louis with his collections and then continued on to New Orleans where he shipped duplicate specimens to Barton and then sailed for England in mid-December 1811. “Trapped” in England while American ports were blockaded, Nuttall made use of his time attending scientific meetings and identifying and classifying his set of the specimens. Fortunately, from the extensive descriptions in his journals, he was able to name and identify plants he was not familiar with once he had access to books, previously published reports, and herbaria. Some of the plants previously collected by the Lewis and Clark expedition (1803 - 1806) had been lost, so those Nuttall collected were among the first to be seen by fellow botanists. He was unable to publish his findings due to a clause in his contact with Barton. However, he planted the seeds he had collected on his uncle’s property, sold the plants at John Fraser’s nursery in London, and included 89 named species in their 1813 catalog of new North American plants, ensuring that his name was associated with them.

With the war over, Nuttall returned to Philadelphia in the summer of 1815. He probably supported himself by collecting and selling seeds and plants to English gardeners. In the next 2 years he undertook short trips through the Southern states. He visited the Southern Appalachians in September 1816, when he travelled from Cumberland Gap and down the French Broad River to Asheville. He then visited Linville Gorge and possibly Roan Mountain, before turning towards Charleston, SC and the voyage back to Philadelphia. New plants that he found which are included in our database were Long-leavedHoustonia (Houstonia longifolia) and Hairy Mock Orange (Philadelphus hirsutus), both of which we see on field trips along the Blue Ridge Parkway. On that trip, Nuttall also found Elf Orpine (Diamorpha smallii) growing on a rock outcrop (the “Flat-Rock”) north of Camden, NC.

Back in Philadelphia, Nuttall became a member of several scientific societies and a founding member and contributor to the scientific publication, the “Journal”. Botany courses and lectures were becoming increasingly popular, but there were no good textbooks available. In 1818 he published “The Genera of North American Plants, and a Catalogue of the Species, to the Year 1817”, a 600-page book including 834 genera; many of them new species, such as the Elf Orpine. The book was written in English rather than the usual Latin, was based on his field observations of live plants rather than dried herbarium specimens, and included descriptions of each plant and its habitat. His account of what we now know as Nuttall’s Lobelia (named by him L. gracilis) states aptly “It is the smallest and most slender species in the United States”. John Torrey wrote that the Genera was “a work that has contributed more than any other to advance the accurate knowledge of plants in this country”. High praise indeed!

In October 1818, Nuttall left Philadelphia for a solo exploration of what was then the Southwest United States; the region around the Arkansas River. He walked from Lancaster to Pittsburgh, where he bought a skiff to travel down the Ohio River and the Mississippi to St. Louis The trip details are provided in his 1821 book “A Journal Of Travels Into The Arkansas Territory, During The Year 1819: With Occasional Observations On The Manners Of The Aborigines.” Much of the book describes the ordeals of river travel, avoiding sand bars, driftwood, and other debris, as well as the wonders of the geology of the surroundings. Upstream from Little Rock, his trip fell apart due to encounters with blood-thirsty Indians and near death from illness, starvation, and getting lost (several times). However, Nuttall was successful in collecting hundreds of new plant species native to Texas and Arkansas, as well as birds, insects, minerals, etc. After recovering from his illness he travelled down the Mississippi to New Orleans, returning to Philadelphia in April 1820.
In 1823 Nuttall moved to Cambridge, where he was appointed Curator of the Botanic Garden and Instructor in Natural History at Harvard College. He taught botany at Harvard and at public lectures, wrote a student textbook, “Introduction to Systematic and Physiological Botany”, supervised the garden collections, and went botanizing and mineral collecting throughout New England whenever possible. He also went birding with John James Audubon who named the Olive-sided Flycatcher (now Contopus cooperi) Nuttallornis borealis in his honor. In 1830 Nuttall travelled through Georgia, Alabama, and Western Florida, studying and collecting both birds and plants. Then, in 1832 he published the first volume of “A Manual of the Ornithology of the United States and of Canada”, which covered The Land Birds; followed by Volume 2, The Water Birds, in 1834. His descriptions from personal observations included birds passing through or kept as pets at the botanical gardens, as well as those seen and recorded in the field journals of his trips through the Arkansas territories and other states.

However, Nuttall was growing tired of the restrictions of academic life and longed to explore again. In March 1834, he submitted his resignation to the President of Harvard College and joined a group organized by Nathaniel Jarvis Wyeth to travel the Oregon Trail from St. Louis to the lower Columbia River. Nuttall invited his friend, John Kirk Townsend, a naturalist with a special interest in ornithology, to accompany him. This time they travelled from Pittsburgh to St. Louis by steamboat and on April 28, 1834 the group started westward on horseback, passing through Yellowstone and the Tetons and reaching the Snake River, near Pocatello, Idaho, in mid-July. They continued north-west, bypassing the inhospitable landscape now known as Craters of the Moon National Monument, and reaching the Columbia at Walla Walla, Washington in early September. Finally on September 16th, after overcoming near starvation, dehydration, dangerous and/or obscure trails, snow and ice at higher elevations, and turbulent rivers, they arrived at Vancouver, Washington. Both Nuttall and Townsend had been collecting plants, animals, and birds throughout the trip. Near Vancouver Nuttall collected seeds from the spectacular Pacific Dogwood (Cornus nuttalli) which has 6 large white petal-like bracts, compared to the 4 smaller bracts found on our local native C. florida. In early December Nuttall and Townsend sailed to the Sandwich Islands (Hawaii), arriving in Honolulu on January 4, 1835. During their visit they toured the different islands and met the royal family. They returned to the mainland in April, in time to collect spring flowers and migrating birds. At the end of September, Nuttall returned to Hawaii and then sailed to California, collecting plants and shells in Monterey, Santa Barbara, and San Diego. In San Diego he encountered Richard Henry Dana, a former student from Harvard, who had enlisted as a merchant seaman and was returning to Boston after 2 years. Dana published a book about his experiences in 1840, and details their encounter. Nuttall became a passenger on the Alert, Dana’s ship, sailing the southern Pacific, the dangerous iceberg-strewn waters surrounding Cape Horn, and the Atlantic Ocean, finally reaching Boston in September 1836. Townsend returned to Philadelphia in fall 1837 and in 1839 published a book describing their journey. I found this to be the most interesting of the books published during this period, although it includes the disturbing details that Townsend was obsessed with acquiring (i.e. grave-robbing) Native American skulls for his collections. Several western birds and mammals are named after him. Some of the bird specimens he returned with are now very rare due to their extinction. Townsend died in 1851 from exposure to arsenic in the taxidermy preparations he used to preserve his specimens.

Once back in Boston, Nuttall had to organize the many boxes and barrels of specimens he had collected on his trip. He provided bird specimens with descriptions of their habits and distribution, and western plants and trees, including the Cornus nuttalli, to be used as backgrounds for Audubon’s “Birds of America” book. Publications and reports on the different shells, animals, and insects he had collected and given to collaborators soon followed. Nuttall began to identify and characterize his plants for publication and continued to give public lectures. He agreed to describe hundreds of his new plants to be included in Torrey and Gray’s “Flora of North America”. Volume 1 was published in parts between 1838 and 1840. However, probably due to disagreements.
about Torrey and Gray’s editing of his writing, as well as personal animosity between Nuttall and Gray, he did not contribute to the remaining volumes. In 1841 Nuttall started work on a 3-volume appendix to François-André Michaux’s “North American Sylva.” He wrote the text and supervised the drawings, adding western trees and shrubs and others not previously described. Many biographies state that he mentions visiting Roan Mountain in the Sylva, but I could not find any reference to it. He also revised his Ornithology book, including the new western birds that he and Townsend had found on their trip.

His uncle Jonas had become a wealthy man, living on a large property near Liverpool. When he died in 1837, the estate was left to Nuttall on the death of his aunt Frances. A stipulation of the will was that once he inherited he could not be absent from England for more than 3 months in any calendar year. Frances died in 1841 and Nuttall sailed for England at the end of December of that year. He would return to the United States only once, between October 1847 and March 1848. Naturally, in England he continued his interests in botany; growing and identifying plants grown from his seed collections, writing reports on his unpublished plants, improving his land and orchards, and developing a special interest in orchids and rhododendrons. He sent his nephew to the Himalayas to collect unique rhododendron and orchid seeds and specimens, which he propagated at his home, published descriptions of the new species, and sold through a London nursery to enthusiastic buyers. One of the finest of these, with particularly large flowers, was named *Rhododendron nuttallii*. Nuttall died on September 10, 1859 from chronic bronchitis. His herbarium containing 5,759 species, many not reported, and over 3,000 minerals from his collection are now in the British Museum. He was the first naturalist to visit Arkansas, Michigan, Oklahoma, Wisconsin, Wyoming, and other unexplored parts of the US between central New York and the Pacific Ocean. His legacy is as a pioneer in the collection and identification of the plants of the Western United States.

The [International Plant Name Index](http://ipni.org) (IPNI) lists 3,122 names published by Nuttall, including 72 different species of *Oenothera* (and I have trouble sorting out the 10 species in our plant list)! Most of the plants collected and named by Nuttall are from the Midwestern and Western states. However, Weakley lists 19 native species in the Southern and Mid-Atlantic States attributed to Nuttall. Those found in our database are Nuttall's Tick Trefoil (*Desmodium nuttallii*), Nuttall's Lobelia (*Lobelia nuttallii*), Old-field Toadflax (*Nuttallanthus canadensis*), Nuttall's Milkwort (*Polygala nuttallii*), and Heartleaf Hedge Nettle (listed as *Stachys nuttallii* by Weakley, but the ITIS accepted name is *Stachys cordata*). Wild Lupine (*Lupinus perennis*) was previously named *Lupinus nuttallii*. Also, the USDA plants profile shows that Nuttall's Bush Clover (*Lespedeza X nuttallii*), a hybrid of *L. hirta* and *L. violacea*, grows in our area.

The Mountain Cottontail (*Sylvilagus nuttallii*), Nuttall's Woodpecker (*Picoides nuttallii*), the Yellow-billed Magpie (*Pica nuttalli*), and the Common Poorwill (*Phalaenoptilus nuttallii*) are named after Nuttall. In his honor, the Nuttall Ornithological Club was founded in Cambridge in 1873 as America’s first ornithological society and publisher of the nation’s first bird journal. The World Register of Marine Species lists 44 marine genera and species named with the epithet *nuttalli*. The mineral *Nuttallite* is named after Nuttall.
References

Dana, Richard Henry: Two Years Before The Mast. Harper and Brothers, 1840.


Reveal, James L.: Thomas Nuttall. Lewis and Clark Trail Heritage Foundation.


Editor's Note: The three books authored by Nuttall and mentioned in this article are available through Google Books for free in PDF form. They are scanned copies of the original volumes. The following are links to those free copies.

“The Genera of North American Plants, and a Catalogue of the Species, to the Year 1817” - Vol 1
“The Genera of North American Plants, and a Catalogue of the Species, to the Year 1817” - Vol 2
“Introduction to Systematic and Physiological Botany”
“A Manual of the Ornithology of the United States and Canada” - Land Birds

“A Manual of the Ornithology of the United States and Canada” - Water Birds
Milkweed and Monarchs
by Gayle Mercurio

Anticipating the arrival of monarch butterflies and hoping to be helpful with food for the long migration or for the in-between generations, we planted milkweed. The first year it was Butterfly Weed (Asclepias tuberosa) and Swamp Milkweed (Asclepias incarnata). The Butterfly Weed grew and bloomed beautifully and continues to do so. The Swamp Milkweed grew but took two years to bloom.

The second year we bought five small Poke Milkweed plants (Asclepias exaltata). They grew and looked so healthy we were excited. Much to our delight, one day we found three monarch butterfly caterpillars on the little plants. The next day when we went to check on them, there were no plants! The caterpillars had eaten them to the ground and they never grew back.

The third spring we bought a bunch of Common Milkweeds (Asclepias syriaca) and a neighbor heard our sad story and gave us some of hers. Asclepias syriaca grew and bloomed in abundance in the garden with no mishaps. The flowers attracted all kinds of insects, spiders and butterflies but no monarchs. Finally, the milkweeds bloomed themselves out and the plants withered.

Here it is the middle of September, and VOILA, monarch butterflies are flying through our flower gardens. The milkweed we planted for them is long gone but they’re making do with Evening Primrose (Oenothera fruticosa), a native plant, and non native Zinnias. So in an unusual way, we grew milkweed and fed the monarchs. Mission accomplished.
A couple of years ago in late summer when the club was walking along Bear Pen Gap, we saw some Black Cohosh blooming. I was quite surprised to see them blooming so late in the year. These plants looked unusual too, though I wasn’t quite sure why—they just looked a little different, a little fluffier perhaps. I took some pictures, and when I got home I looked up *Actaea* in Weakley’s Flora and was amazed to learn we have two species of Black Cohosh here in our mountains, *Actaea racemosa*, the one we usually see, and another one called *Actaea podocarpa* that blooms later in the year! This other one is rare and is endemic to the Southern and Central Appalachians. According to Weakley’s Flora, this one is most closely related to *Actaea laciniata* of Oregon and Washington!

To be sure this Cohosh was the more rare one, I drove up to Bear Pen Gap a few days later and studied the plants closely. The differences mentioned in Weakley’s Flora matched these plants perfectly! I felt sure I was right—we had found *Actaea podocarpa*!

Here are the features that can help us identify this Mountain Black Cohosh:

There is a very prominent groove in the stem of the lower leaf petioles. This groove is very easy to see, as you can tell in this picture.
Actaea racemosa usually has one single sessile pistil associated with each flower, but with Actaea podocarpa each flower has 3 or more stalked pistils, or carpels.

Here is a picture of the flowers. The multiple carpels are almost impossible to see beneath the jumble of stamens. An easy way to tell is to gently touch a flower with your fingertip. If multiple carpels are present, you can feel them poking up rigidly from their stalks just beneath the myriad of fluffy stamens that cluster around them.

Here is a picture taken when the many fluffy stamens have fallen off and it is easy to see the multiple carpels, each on a stalk.
It is quite fun to look for *Actaea podocarpa* this time of year. The wispy spires of fluffy white flowers gleaming out from a shadowy bank are a lovely sight. Now that I can identify them easily, I’ve found lots of them at Bear Pen Gap, and a few at Skinny Dip too. I have even found one blooming on the trail beside the Davidson River. Since they are normally found at higher elevations, this was quite a surprise!

If you think you might have found one, gently touch a flower. Can you feel several carpels right below your finger tip? If so, you can feel lucky because you have found our very special Mountain Cohosh!
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. Send dues to Western Carolina Botanical Club, 351 Cheestoonaya Way, Brevard, NC 28712