

Native Plant News

NEWSLETTER OF THE NC NATIVE PLANT SOCIETY

Native Plant News
Julie Higgin, editor

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MISSION STATEMENT:

Our mission is to promote the enjoyment and conservation of North Carolina's native plants and their habitats through education, cultivation and advocacy.

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Asarum rosei

Society member spots a new wild ginger!

By **Mark Rose**

(Note: Most of us here in North Carolina have known this genus as Hexastylis [Heartleaves/Gingers] for many years but current evidence has concluded that they should now be included in the genus Asarum. There is still much debate on this issue and it may be years until this matter is resolved.)



In late May of 1998, while looking for select flowers of *Asarum shuttleworthii* along Brown Mountain Beach Road next to Wilson Creek in Caldwell County, NC, I was startled to see an *Asarum* species that I had never encountered in this area before.

I had parked my car midway along a stretch of road south of where Harper's Creek and Phillips Branch dump into Wilson Creek. For several years, I had been observing and collecting specimens of *A. shuttleworthii* with extra-large flowers. This section of road over the years contained close to a 1,000 plants, but the highway department had started to mow this road bank on an annual basis and the population had dwindled considerably. I would usually go down to the site in late May and find these beautiful plants—many containing in excess of 30 leaves and flowers per clump—only to return a few months later to have these same plants mowed to the ground.

As most of this genus only produces foliage once a year, it would be the following spring before they would do so again. Meanwhile they spent most of the growing season with no foliage in which to build up reserves for the following year's blooming and growth. After several

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President's Report

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Dr. Larry Mellichamp

Humans are clever at coming up with new ways to solve old problems. Plants can be seen as evolutionarily adaptable in their behavior in solving their life's needs as well. In the lives of humans, sometimes items can be used in ways different from their original design. For example, I use 12-inch bamboo shish kebab

skewers as stakes for holding up floppy potted plants, or a translucent storage box may be used as a propagation chamber for rooting cuttings.

Among native plants you will find numerous examples of familiar parts used for "something else." For example, the leaves and stems of vines can be modified to be "watch-spring" tendrils for grabbing hold onto nearby branches to aid in climbing, such as with grapes and maypops. The roots of most plants are non-green underground structures. However, in epiphytic (tree-dwelling) orchids, such as our native Green-fly Orchid (*Epidendrum magnoliae*), the enlarged photosynthetic roots creep along the surface of tree branches and attach the plant securely to the bark surface with a whitish velamen. In our native prickly-pear cacti (*Opuntia* species), the enlarged stems store water and the leaves are reduced to spines for protection and dispersal. You may have gotten these "jointed stems" attached to your shoes when walking through dry woods or coastal sand dunes.

One additional leaf specialization is seen in basswood (*Tilia*), where an elongate leaf — called a bract — is attached to the fruiting structure and when dried, acts as a "helicopter wing" to transport the mature fruits away from the parent tree. The traditional "wings" of maples and ashes are outgrowth of the fruits themselves.

In some flowers, especially in the buttercup family (*Ranunculaceae*), there are no true petals, but the sepals become showy and function as pollinator attractants, as in *Anemone* and *Enemion* (*Isopyrum*). In the same family, it
(Continued next page)

President's Report (cont.)

is not uncommon to find the showy parts are actually the stamens, as seen in Golden-seal (*Hydrastis canadensis*), meadow-rues (*Thalictrum* spp.), and Black Cohosh (*Actaea racemosa*). In the gingers (*Asarum*/*Hexastylis* spp.), and Dutchman's-pipe (*Isotrema* [*Aristolochia*] *macrophyllum*), there are no petals, but the sepals form characteristic floral tubes as part of attraction and pollination. On the other hand, in most monocots such as lilies, iris, Atamasco-lily (*Zephyranthes atamasco*), and blue-eyed grass (*Sisyrinchium* spp.), the sepals *and* petals are *both* similarly colored, appearing as one set of six parts instead of the expected three green sepals and three colored petals (as in *Tradescantia* and *Trillium* species).

These modifications, or adaptations, have come to be well known among folks who go into the details of floral structure in order to complete tricky plant identifications.

So, now we come to different sort of repurposing. I have been your President for two years, and have proudly watched new developments take place in the Society. I have traveled to most of the local chapters across the state and met with many of you on field trips. Now is time for new officers to come on board, as well as past officers becoming involved again. I will be leaving as president, but continuing to work on plants lists for educational brochures, and I will become new chairman of the Native Plant Habitat Certification Committee, a position that Carolyn Ikenberry has held so effectively for several years. We thank her for her service. And I look forward to seeing more of your gardens. Now is the time to certify your own home garden, and let it fulfill its purpose — or perhaps its re-purpose. Best wishes.



Golden-seal (top) and Basswood (below).



Atamasco-lily



Dutchman's-pipe

A New Wild Ginger (cont.)

years of this regime, many of the plants finally disappeared.

At this same visit and while standing in a small ravine under a thicket of Great Rhododendron (*Rhododendron maximum*), I was startled to see at eye level an *Asarum* with white petals and an almost black eye. The foliage was also unlike any I had ever encountered, with dark green leaves that were minutely ruffled (undulate-crenulate). I collected several plants to move to my garden to see if these traits would remain true in cultivation. I initially thought it was probably just an albino form of *Asarum heterophyllum*. These traits have remained true to form after 18 years in cultivation in my garden. About four years ago I really started studying the flower structure and unique foliage and decided this had to be a totally different species than either *A. heterophyllum* or *A. shuttleworthii*. Over the years I have seen several hundred of these same plants along this stretch of road.

During the ensuing years I had several of Dr. Zack Murrell's (Appalachian State University - Boone, NC) students observing and using the plants in my garden for their research. They had collected leaf samples and pollen samples, and sat for hours observing the plants trying to ID pollinators. As I grow all the currently known species, it made their research much easier having all these plants in one location.

During the North Carolina Rare Plant Discussion meeting at UNC Botanical Garden in Chapel Hill on March 1 of last year, one of the ASU students showed a photo of this *Asarum*. There were some comments made during the presentation about it. After the session I approached Dr. Alan Weakley to discuss the plant with him. I told him that I had a great set of photos of the plant in question and would be glad to send him one the next day, which I did. As I know Alan's schedule is somewhat



*This is the type of habitat where **Asarum rosei** B. T. Sinn and associate species can be found along Wilson Creek Road in Caldwell County, NC.*

slammed it didn't surprise me that I didn't hear back from him. But then when my plants started their incredible flowering a couple of months later in late May, I took a new set of photos which I sent him. This time I heard back from him immediately. He was really surprised at the plants and flowers, and thought he should put me in touch with Dr. Brandon Sinn (New York Botanical Garden,

Pfizer Plant Research Laboratory), who was conducting research on the genus *Asarum*. I then sent him the same set of photos I had sent Alan and he also responded with much excitement after seeing the full set of photos showing all parts of the plant.

After doing some initial investigating of the photos, Dr. Sinn asked that I send him a set of flowers and leaves to examine. Since the plants were in peak bloom the first week in June, I did so the next week along with a large multiple growth plant in flower. I traveled down to Wilson Creek to collect the plant that was to be used as the type plant, in case this was indeed a new species. Brandon had ac-

A New Wild Ginger (cont.)

tually seen these plants with the unusual foliage and had made a note in his records and on a photograph on an earlier visit to the area.

After receiving the material and doing a thorough examination, and then photographing all the materials I had sent, Brandon determined that my find was indeed a new species. He and I were in regular email and phone communications over the next few months discussing various aspects of the manuscript. After some revisions, the final manuscript was submitted to *Phytotaxa*, a peer-reviewed scientific journal for rapid publication on any aspect of systematic botany.

Now came what seemed an eternity for the approval process. Finally, on Jan. 13 of this year, we received word that the submission had been accepted and that ***Asarum rosei*** B. T. Sinn (Wilson Creek Heartleaf/Ginger) is



Asarum rosei showing the entirely white trichomes covering the sepal lobes and the red trichomes occurring within the calyx tube.

now formally the newest member of genus *Asarum* (Aristolochiaceae family). It was formally published on Feb. 14, and here is a link to that manuscript:

<http://www.mapress.com/j/pt/article/view/phytotaxa.296.1.3/10153>

I am very fortunate to have been in the right place at the right time to find this special plant. I think of all the great botanists who have traversed this area and had not been as lucky to visit at the same time it flowered, which is over a month later than most of the other local *Asarum* species. I hope others will be on the lookout for this newest member of the ginger family to try expanding the currently known small range of this species.

Mark Rose is Director of the Flannery Fork Botanical Garden in Boone, NC.

NCNPS 18th Annual Meeting & Picnic

WHEN: June 3, 10 a.m. to 3 p.m. **Where:** The Activity Center, Hagan-Stone Park, Greensboro

Google Map Directions: 5920 Hagan Stone Park Rd., Pleasant Gardens, NC 27313

FOOD: The Society provides fried chicken & BBQ from Smithfield's, tea, water, ice & paper products. Bring a side dish, salad or dessert to share!

BOOK SALE: John Neal will donate proceeds from sales to the Society!

PROGRAM & BRIEF MEETING: Meet officers and committee chairs old and new!

LIVE AUCTION: Your native plant donations should be clearly labeled, and please provide a brief description for the auctioneer. Cash or checks are preferred but credit cards will be accepted.



Spring Trip to Boone

Kudos to the Blue Ridge Chapter for hosting the Native Plant Society's annual Spring Trip! Although Mother Nature did NOT smile on our weekend weather-wise, participants were each able to enjoy at least 2-3 areas of native plant discovery. Guides included Blue Ridge Chapter Chair **Mark Rose**, Society President **Larry Mellichamp**, **Annkatri Rose**, **Matt Estep**, **Dolly Rose**, **Susan McBean**, **Luke Appling**, **Verda Ingle** and **Brandy Belville**. Choice of sites included Flat Rock trail on the Blue Ridge Pky., Appalachian State University Nature Preserve, Tater Hill Preserve, Grandfather Mountain State Park, Elk Knob State Park and Daniel Boone Native Gardens. On this trip, meals were not catered but participants enjoyed making the rounds of local eateries. Also new this year was a silent auction of native plants, instead of a live auction. Plants were put out Friday evening and the auction was concluded just before Saturday's program about Grandfather Mountain. Winners paid for and gathered their plants after the program. On Sunday morning, participants had one more chance to hike before saying goodbye to our beautiful NC mountains. The lucky ones who live there got to stay! A huge thanks also goes to Program Chair **Bobbie Fox** for putting it all together!

—Julie Higgin



Bundled up and ready to go! Hikers gather in the Super Eight Hotel lobby.

—Beth Davis



Cold and windy hike with Matt Estep on Tater Hill Preserve.

—Beth Davis

Spring Trip to Boone (cont.)



Making a discovery!

—Thanh H. Huynh



Learning the difference between "true" Lily-of-the-Valley and the "false" one, the Canada Mayflower.

—Julie Higgin



Auction offerings.

—Robert Jones



Enjoying a beautiful view from Flat Top.

—Julie Higgin



The programs and auction were held at Deerfield United Methodist Church.

—Thanh H. Huynh

CHLOROFIENDS!*

Invasive Plants of the NC Piedmont, Pt. 2: Shrubs

By Lisa Lofland Gould

Like the woody vines discussed in the Spring “Chlorofiends” column, the majority of invasive shrubs in our area come to us via the nursery trade. These plants tend to be easy to grow, free of local pests and diseases, and have fruit that is spread by birds or in runoff water. Some, such as European Privet (*Ligustrum vulgare*) were introduced into North America as early as the 1700s, while others, such as Orange-eye Butterfly-bush (*Buddleja davidii*), didn’t arrive until 1900.

Eight species of Eurasian privet have naturalized in the US, and their identification can be difficult; all have opposite, semi-evergreen to evergreen leaves and panicles of small white flowers, followed by dark blue-black fruits. Most have glossy, deep-green leaves, but Chinese Privet (*Ligustrum sinense*) leaves are smaller and not so shiny; it is one of the worst privet invaders, with horticulturist Michael Dirr calling it “a noxious weed...In the southern states...found everywhere that birds fly”. Privets thrive not only on edges but can form dense stands deep in woodlands, shading out native understory plants and seriously impacting community structure and



diversity.

Two Asian shrub honeysuckles have spread widely in piedmont North Carolina: Amur Honeysuckle (*Lonicera maackii*) and Winter Honeysuckle (*Lonicera fragrantissima*), also called “Sweet Breath of Spring” because its fragrant flowers appear in January or February. Both shrubs mature rapidly, form dense stands, and invade woodlands edges, fields, and disturbed sites; like many non-native shrubs, they tend to leaf out before the natives in the spring, and keep their leaves later into the fall, giving them a competitive advantage.

Multiflora Rose (*Rosa multiflora*) is a familiar, prickly pest throughout much of N. America, found in over 40 states and many Canadian provinces. An Asian species introduced in 1866 as rootstock for cultivated roses, it became popular for its use in erosion control and as a “living hedge” for livestock, and was later used as crash barriers along highways, thanks to its ability to form dense thickets. Once it takes over, little else can grow.



Winter Honeysuckle in bloom.

Autumn Olive (*Elaeagnus umbellata*), which can also be a small tree, and Thorny Olive (*Elaeagnus pungens*), which sometimes appears to be a vine as well as a shrub, are common pests in North Carolina [another relative, Russian Olive (*Elaeagnus angustifo-*

Chlorofiends! (cont.)

lia) is a rare invasive in the NC mountains — it is often confused with Autumn Olive, which has wider leaves and red fruit, while Russian Olive has yellow fruit and is a serious pest farther north and west]. These plants are nitrogen fixers (similar to the legumes), so they enrich the soils where they grow and alter the plant community. Because of this capability, these shrubs have been used in mine reclamation and

planted along highways for erosion control and to reduce headlight glare. Autumn Olive thrives in open, disturbed habitats and can form dense stands; Thorny Olive is very shade tolerant and can grow in woodlands, making it a serious concern for managers of forested areas. Winged Euonymus (*Euonymus alatus*), also called Burning Bush because of its purple-red fall foliage — making it a very popular landscape shrub — is another Asian species that can thrive in undisturbed shaded forests, as well as in fields and along roadsides.

Three other Asian, bird-dispersed, ornamental shrubs are “up and coming” pests in the NC piedmont: Chinese Grape-holly (*Berberis bealei*, formerly *Mahonia bealei*), Heavenly Bamboo (*Nandina domestica*) and Linden Viburnum (*Viburnum dilatatum*) are increasingly seen invading along edges and into woodlands.

Thanks to the current interest in supporting pollinators, Butterfly-bush (*Buddleja* spp.) has



The red-purple foliage of Burning Bush in a suburban understory.



Ripening fruit of Chinese Grape-holly.

become increasingly popular, but while butterflies and other insects relish the nectar of this shrub, it does not serve as a host plant for our native caterpillars. Butterfly-bush seeds are spread by wind and water; the plant is fast growing and matures rapidly, sometimes able to produce seed after only one year. It can form dense stands, and although it does best in well-drained sunny areas, it also thrives on riparian edges and in disturbed sites. Native to China, several states now designate Butterfly-bush a noxious weed, and it is considered invasive in New Zealand and parts of Europe. Alan Weakley shows both *Buddleja davidii* and *B. lindleyana* in North Carolina, although currently only as rare escapes. If you must grow it, you can lessen the likelihood of its spread by deadheading the flowers immediately after they bloom.

Thanks to Larry Mellichamp, Kathy Schlosser, and Ann Walter-Fromson for sharing observations on common invasives in

the North Carolina piedmont. As always, if you are adding plants to your home landscape, it's best to **Go Native!**

If you have information or comments on invasive species in North Carolina, please share them with Lisa Gould (lisalgould@gmail.com).

*Thanks to Jim Butcher's The Dresden Files for the column title.

Chapter News

Mountain Beauty

Photographer and **Western Chapter** Chair **Tracie Jeffries** reported that her chapter enjoyed two April hikes to take advantage of all the gorgeous spring ephemerals found in the mountains. They visited Big Ivy in the Pisgah National Forest and the Porter Creek Trail in the Great Smoky Mountains National Park. The Porter Creek Trail offered a variety of trillium species including the beautiful and bountiful Yellow Trillium (*Trillium luteum*), as well as Pink Lady's-slipper (*Cypripedium acaule*) and many others.

The chapter also recently started a Facebook page! Please visit:

https://www.facebook.com/botanynerds/?ref=aymt_homepage_panel.



The **Triad Chapter** found a few butterfly cuties at the Kathleen Clay Library Earth Day event on April 1st.



More Chapter News



South Piedmont Chapter was present at several Earth Day events around their area. One of them was the March for Science held April 22nd at Marshall Park in Charlotte. Representing their chapter were (from left) **Kelly Prelipp Lojk, Carrie DeJaco** and **Allison Pittman**. Their table (below, left) was quite busy. —**Beth Davis**



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Blue Ridge Chapter Chair **Mark Rose** (right) at the Spring Trip. —**Thanh H. Huynh**

New Native Plant Habitats

NCNPS certified four properties containing private gardens during the first four months of 2017. The properties belong to: **Alicia Berry**, and **Jeff and Brady Kleaveland** in Pittsboro; **Kristy Taylor** in Monroe; **Sharyn Caudell** in Durham; and **Regina Hutchinson** of Hendersonville. Most of these garden-owners are professionals in the botanical field and their properties show their love of plants, both native and non-native.

Alice Berry, and **Jeff and Brady Kleaveland**, have a large 15-acre site in rural Chatham County that is filled with native plants in all categories. The land near the house is fenced to keep out deer. Outside the fence, the land is filled with native azaleas, trillium, trout lilies and other natives. Inside the fence is an extensive home garden, shitake mushroom logs, fruit trees, a beehive and a beautiful greenhouse, as well as numerous beds of native and non-natives. The Berry/Kleaveland family grows much of their own food and clearly enjoy living close to the land. The word that comes to mind to describe this amazing place is “bountiful”.



The Berry/Kleaveland property



The Taylor habitat.

Kristy Taylor has a greenhouse in Monroe, operating out of her home, and her garden is the showplace for her business. She has done most of the landscaping herself and is working to educate her clients on the value of planting natives. I did not get to visit her site so I don't have as much information as with the other two, but the pictures speak for themselves.

Sharyn and Ken Caudell moved into a home that was filled with large pines a number of years ago. After clearing many of those large trees from the lot, they created beds *(continued next page)*

New Native Plant Habitats (cont.)



The Taylor habitat



The Caudell property



The Hutchinson property.

overflowing with a wide variety of both natives and non-natives. I suspect that in addition to Sharyn's extensive knowledge of plants, one of the secrets of their success is their use of a variety of beautiful and well-kept tools, some with razor-sharp edges and all nearly arranged in a very clean tool shed. They have one of the largest sweet shrubs I have seen, blooming profusely in the back of the yard, as well as numerous beds of flowering plants for spring, summer and fall.

Regina Hutchinson describes her interest in cultivating natives as having roots in walking the woods with her grandfather as a child in her home in the Appalachian mountains of Virginia. She and her husband purchased their home six years ago and right away tackled the English Ivy that was abundant on their property. Removing the ivy allowed trillium, Galax and other natives to come back into abundance. She is now planning to start rooting some of the natives to share with others in her area. She also enjoys photographing the many beautiful plants on her property.

This is my last report on habitat certifications in North Carolina, as I am leaving this job in June. It has been an enormous pleasure to meet so many people who love to garden, especially with natives, and who work to make the NC ecosystem healthy. I hope many of you will get to visit the certified gardens in your area. They are treasures, and worthy of the time and effort to see them and get to know those who created them.

— **Carolyn Ikenberry**

Society News

A Special Note from Larry Mellichamp:

Some folks have recently noticed small tags on potted perennials at garden centers and big box stores indicating the plants have been treated with *neonicotinoids* pesticides. These are considered harmful to pollinators and caterpillars, so it is best to avoid them. The Garden Club of America, at least, has sent a strong letter to Scott Pruitt, administrator of the Environmental Protection Agency, and to Sonny Perdue, secretary of the Department of Agriculture, asking them to address this issue. I recently visited a home garden center and found the label show here inserted in the pot, indicating the plant has been treated.



Avoid This!

NCNPS Awards Nominations Reminder!

- ◆ President's Award for Service to the Society
- ◆ William Lanier Hunt Award for Environmental Education
- ◆ BW Wells Award for Excellence in Botany or Horticulture
- ◆ Emily H. Allen Award for Landscape Design with Native Plant Materials
- ◆ H. Roland Totten Award for Advancing Knowledge or Conservation of Native Plants
- ◆ Award for Promoting Native Plants
- ◆ AND OTHERS!

Please check out <http://ncwildflower.org/about/awards> and submit your nomination letters to tom@ncwildflower.org by Jan. 1, 2018. Thanks!

—Tom Harville



Native Places

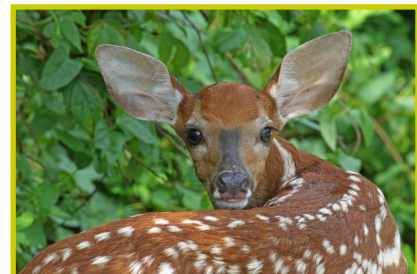


The Pee Dee National Wildlife Refuge preserves and manages 8,500 acres in the North Carolina Piedmont. Located on Route 52 just south of Ansonville, the refuge was established in 1963 to provide habitat for wintering waterfowl. Thousands of migratory ducks winter in the low grounds along the Pee Dee River. But the Pee Dee NWR is much more than waterfowl! Over 100 species of birds, including more than a dozen species of colorful wood warblers, nest and raise young on the refuge. From spring to fall, wildflower species abound on the refuge. A fire-managed tract of piedmont wet Longleaf Pine forest is home to *Trillium pusillum* and *Iris prismatica*. A large population of Schweinitz's Sunflower grows along Route 109 just east of the refuge. A paved 2-mile wildlife drive near the refuge headquarters attracts walker and bikers. Check the refuge website for directions and maps.

—Will Stuart



Visit
www.fws.gov
for more
information.





North Carolina Native Plant Society

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**We're
Wild
About
Natives!**

