

Native Plant News

NEWSLETTER OF THE NC NATIVE PLANT SOCIETY

Native Plant News
Julie Higgin, editor

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INSIDE:

P2 President's
Report

P4 Pollinators
& Native Plants

P6 Book Review

P10 Habitat Report

P12 Society News

P14 Scholar News

P16 Member
Spotlight

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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Go Nuts!

Trees Display Fall Glory in a 'NUTritious' Way

By Lisa Lofland Gould

NUTS HAVE always fascinated me. I was a squirrel for a while when I was around six years old. My best friend and I spent hours under an oak tree in a neighbor's yard one autumn, amassing piles of acorns and dashing from imagined predators. So, it seems I've always known there's nothing like a good stash of nuts to feel ready for winter.



It's not surprising that a big nut supply might leave a winter-conscious beast feeling smug. Nuts provide fats, protein, carbohydrates, and vitamins, along with a number of essential elements such as copper, zinc, potassium, and manganese. There is a great deal of food value in those little packages! All that compactly bundled energy evolved to give the embryo plenty of time to develop; the nut's worth to foraging animals assures that the fruit is widely dispersed. Nut trees pay a price for the dispersal work of the animals, but apparently enough survive to make it worth the trees' efforts: animals eat the nuts and even bury them in storage, but not all are retrieved, and those that the squirrels forget may live to become the mighty denizens of our forests.

The term "nut" is often used loosely. Peanuts are legumes, whose seed cases split open at maturity (= *dehiscent*). Pine nuts are seeds embedded in the scales that comprise a pinecone. Almonds, cashews, and macadamias are the stones of drupes, whose fleshy outer covering surrounds the seed-containing stones; even the hard-shelled coconut is a drupe, not a nut. A true nut is an *indehiscent* (= not splitting open at maturity) dry fruit, usually with a thick, hard wall that surrounds the single seed. Depending on the authority, acorns, which are adorned with a scaly cap known as a *cupule*, may be included among the true nuts or put into a separate category.

(Cont. on P3)

President's Report

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I hope everyone is well.

I would like to write about things that are important to native plants that we do not think about. My column in this newsletter focuses on soils and soil health, and provides links to resources. This will be brief, but I encourage you to learn more about soils and how you can improve the health of your soils.



Steve Kroeger

The [Soil Science Society of America](#) defines soil as a *mixture of minerals, dead and living organisms (organic materials), air, and water*. I particularly like this description since it includes air and water.

The Natural Resources Conservation Service (NRCS) is responsible for inventorying soils. Soils are classified according to the proportions of sand, silt, clay and organic matter present and the slope of the land on which the soils occupy. Each of the 100 counties in NC has a published soils survey. The information in these surveys is available online in the US [web soil survey](#). Here you can delineate areas of interest (AOI) and download maps and descriptions of soils in your AOI. The website's landing page provides instructions on its use.

Elements of health include: 1) organic matter, 2) tillage/disturbance, 3) soil cover, 4) nutrition (pH, nutrients) and 5) porosity/compaction. Great resources on soil health include [Managing Soil Health: Concepts and Practices](#) from Penn State Extension and NRCS's [web page](#) on soil health management. The acidity (pH), nutrient levels and other physical/chemical aspects of your soil can be measured by sending a soil sample to the North Carolina Department of Agriculture and Consumer Services [Agro-nomic Division](#). This can be done free or for a minimum cost.

In Society business, thanks to everyone who voted on the updates to the Society's Articles of Incorporation. Approximately 34% of our members voted and there were only four dissenting votes. The restated articles are now on file with the NC Secretary of State. Our bylaws now need to be revised and a membership vote will be required to approve them. Look for an email to vote on the bylaws sometime before the end of the year.

Go Nuts! (cont.)

The southeastern United States is blessed with many nut-bearing trees and shrubs, including the hickories and walnuts (family Juglandaceae); oaks, beech, and chestnut (family Fagaceae); and birches, alders, hazelnuts, and hornbeams (in family Betulaceae). All produce imperfect flowers, the male (staminate) flowers in catkins or heads and the female (pistillate) flowers in clusters or occasionally catkins. The plants are monoecious (both male and female flowers on the same plant) and are pollinated by the wind. When the fruits of these plants accumulate on the ground, they are known as *mast*. Farmers often relied on mast crops to help fatten pigs before fall butchering. Low mast years can have a significant impact on the animal populations that rely on nuts to survive through the winter.



American Beech



Eastern Black Walnut

Walnuts have thick husks surrounding the nuts. Both Black Walnut (*Juglans nigra*) and Butternut (*Juglans cinerea*) husks are famous for their use as dyes; woe to the person who tries to gather and remove the husks without using gloves! *Juglans* nuts have a high protein content, making them a good food source for people and other mammals, including deer, foxes, squirrels, and rabbits, as well as for birds such as woodpeckers.

North Carolina is home to 10 native hickory species, some of which are tasty, such as Sweet Pignut (*Carya ovalis*) and Shagbark Hickory (*Carya ovata*), and some of which are not so edible, such as Bitternut (*Carya cordiformis*). *Carya tomentosa* is reputed to be

sweet but the small kernels are encased in thick-shelled nuts, making them hard to open and perhaps not worth the effort (hence the common name Mockernut). Although the hickories do not have so high a protein content as walnuts, they are still a valuable food source to a wide variety of birds and mammals.

Unlike the husks of walnuts, which must rot away before the nut inside is exposed, hickory husks eventually split into 4 segments, revealing the smooth-shelled nut within. Pay attention in the winter woods and you can observe what has been eating hickory nuts: shells that have been broken into several pieces have been opened by the strong-toothed squirrels and chipmunks, while those that have a hole gnawed in them were eaten by mice.

Nuts of members of the Beech Family have prickly (beeches) or spiny (chestnuts) outer coverings, or a smooth nut with a scaly cupule (oaks). Like the hickories and walnuts, their fruits are eaten by many birds and mammals and have been a staple of human populations in the region for centuries. The root of the family name, Fagaceae, comes from the Greek *phagein*, meaning “to eat”, referring to the edibility of this group of plants.

The small triangular nuts of American Beech (*Fagus grandifolia*) are enclosed in pairs within a prickly, 4-valved husk. American Chestnut (*Castanea dentata*) and Common Chinquapin (*Castanea pumila*) have larger, spiny fruits that may hold up to 3 shiny, brown nuts. Today, few American Chestnuts live to reach sexual maturity; most succumb to the Chestnut

(Cont. on P7)

Pollinators & Native Plants: Fritillary Butterflies

By **Will Stuart**
(Part 4 of a Series)

Fritillaries are among the state's most common and showy butterflies. All fritillary species are members of the Nymphalidae, the largest butterfly family, often called brush-footed butterflies because they walk on four legs, the third pair of legs reduced to brush-like hairs. The name "fritillary" is derived from the *fritillus*, Latin for "dice-box", seemingly referring to the complicated geometric markings on their wings. Our state is home to six fritillary species, most orange and black, and most with "checkered" dorsal wing patterns composed of dark lines and ovals on backgrounds ranging from light to dark to brilliant orange. Species are found from the mountains to the coast, often in open, sunny habitats.



Male Diana Fritillary on
Butterfly-weed

Colors and patterns of ventral wing surfaces also vary. Some have gaudy silver "spangles" while others display camouflage colors. A good butterfly field guide (I prefer one by Jeffrey Glassberg) is essential to mastery of these often-subtle field marks.



Great Spangled Fritillaries

Sources cite 14 species of greater fritillaries, genus *Speyeria*. All are North American, and many are only found only in the West. Three species, the Great Spangled Fritillary, the Aphrodite Fritillary, and the Diana Fritillary are found in North

Carolina (a fourth, the handsome Regal Fritillary, is considered extirpated from North Carolina and is threatened throughout most of its range).

Great Spangled Fritillaries are common in our mountains, less frequent in the adjacent piedmont, and absent from the coast. As a species of meadows, pastures and fields, populations may have benefited as forests were cleared by early settlers and numbers may have peaked in the 1800s. Today a patch of Common Milkweed (*Asclepias syriaca*) blossoming along the Blue Ridge Parkway often attracts several of these showy butterflies vying for nectar. Aphrodite Fritillaries are nearly identical in appearance and occupy the same habitats but are restricted to higher elevations, where the 2 species are found in roughly equal numbers. These two species are reliably differentiated by the ground colors and bands of spangles on the outer hindwings.

A third species of greater fritillary, the Diana Fritillary, is restricted to woodland openings and is uncommon. Unlike other members of the genus, this species is sexually dimorphic. Males are a handsome orange and black while females are blue, presumably a mimic of the Pipevine Swallowtail. A Diana Fritillary sighting is a special treat for most avid butterflyers. My handful of sightings of males have been along remote gravel forest roads. I have yet to see my "lifer" female Diana.

All three greater fritillary species have similar life cycles. All are single brooded (one gener-

Fritillary Butterflies (cont.)

ation per year) and all use various species of violets as host plants. Females deposit eggs in the vicinity of the host plants in late summer. First instar caterpillars do not feed. They over-winter in the soil and in the spring emerge to feed on violets, then pupate, and finally eclose as adults from late spring into summer.

The Variegated Fritillary is slightly smaller than the 3 above species and colors tends to be a more subdued pale orange to tan. The species occurs statewide but is more common in coastal and piedmont counties. Unlike *Speyeria* species, Variegated Fritillaries produce three or four broods in a year. Their common name is attributable to a variegated pattern of camouflage colors on the underside of their wings. The species is known to use *Passiflora* and *Viola* species as well as pansies as host plants. Most over-winter as caterpillars but a few adults may be seen on warm winter days.

The Meadow Fritillary is a much smaller butterfly than the previous four species. They are only seen in our mountain counties and, as the name suggests, they are usually found in fields, meadows and roadsides, preferring to fly and nectar close to the ground. They fly quickly, exhibiting bright orange and dark black checkered wings. If they pause to nectar, you may see the underside of their hindwings are distinctively mottled and frosted.



Note the bright white markings on the Gulf Fritillary



Variegated Fritillary

The last of the six Fritillary species, often uncommon until late summer, is the very showy Gulf Fritillary. Dorsal wing surfaces are bright orange with dark lines and ovals. The leading edge of the forewing has three bright white spots circled in black and arranged in a triangle. Ventral wing surfaces, especially the hindwing, are decorated with large bright white ovals. The species is highly migratory, flying north from Florida in late spring, breeding in areas across the Southeast where they use *Passiflora* species as their host plant, and flying south in late autumn to over-winter in frost-free Florida. I often see large numbers of Gulf Fritillaries nectaring on autumn wildflowers in the sandhills where managed fields have large populations of "May-pops" (*Passiflora incarnata*).

Getting to know the fritillaries takes a bit of study and finding all six species requires both travel and time in the field. You will learn fritillaries nectar on a variety of native plants.

They are strong fliers and may visit gardens and yards. I like to think of butterflies as our "flying flowers" and each of these fritillaries is among my favorites.

Will is a professional photographer and a longtime member of the Society. His work is featured in the newly released book The Southeast Native Plant Primer: 225 Plants for an Earth-Friendly Garden reviewed on P6.

Book Review

The Southeast Native Plant Primer *225 Plants for an Earth-Friendly Garden*

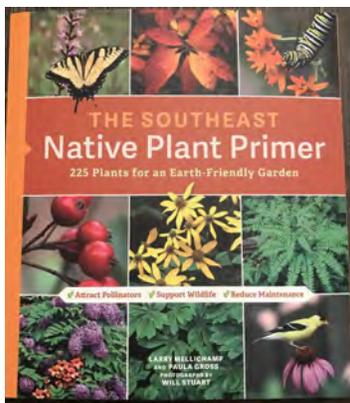
By Larry Mellichamp and Paula Gross,
with photography by Will Stuart
Timber Press, 2020. ISBN 978-1-60469-991-
3. \$24.95.

If only this book had been available 25 years ago, when I was a new transplant to the Southeast and needed a resource like this one.

As its title suggests, the book is an inviting introduction to creating a garden that pleases the eye, provides valuable wildlife habitat, and makes life a little easier on the gardener and on the planet. This would be a fine gift to encourage a budding interest in gardening with natives.

Anyone familiar with Larry Mellichamp's 2014 book, *Native Plants of the Southeast*, will note similarities.

In the primer, the authors begin by distilling a remarkable range of information into 39 succinct pages. After defining native plants and discussing their benefits, they cover the essentials of site analysis and choosing suitable plants, and of planning, preparing, planting and maintaining a garden. Helpful lists of plants to meet specific needs augment the text, and there's even a quick-start guide for the new gardener. An informative and enjoyable read, the book is filled with humor, wisdom and utterly practical advice reflecting the authors' extensive experience as educators and enthusiasts.



On the subject of weeding, for example: “The best way to weed is frequently.” Amen.

Or, when discussing the diversity of life that will populate a habitat garden, the authors gently nudge the reader to be open-minded. “Knowing that all players belong and contribute to a healthy community means that seeing a black snake might make your skin crawl (or tingle with joy), but you allow it. You’ll soon realize it’s not a sign of a problem, it’s a sign of balance—unless roaming rodents are at the top of your wish list.”

In the second and largest section, the book tempts the reader with concise plant profiles organized by type: ferns, grasses and grass-like plants, woodland and sun-loving wildflowers, vines, shrubs and trees. Throughout, the pages are illustrated with the beautifully detailed photographs of Will Stuart.

Hardiness and heat zone charts are included, as well as recommended reading, a list of mail-order nurseries and one of public gardens with notable displays of native plants.

It seems odd to write this, but one positive side effect of the COVID-19 pandemic is that more and more people reportedly have taken up gardening. This book will inspire new gardeners and help them on their way to a deeply rewarding pastime.

Sheilah Lombardo

Sheilah Lombardo is a member of the Triad Chapter and has been gardening with native plants for over 40 years. A retired freelance writer, she has volunteered for 25 years with the North Carolina Extension Master Gardeners in Forsyth County.

Go Nuts! (cont. from P3)

Blight fungus and do not produce viable fruit, even if they manage to bloom. At one time a dominant tree of the eastern deciduous forest, American Chestnuts and the animals that relied on their fruit were devastated by this Asian fungus that first appeared in the US in 1904. In the Great Smokies, by the mid-20th century as much as 50% of the Black Bear population had perished, and up to 90% of the Gray Squirrel population in some areas.

There are over 30 native oaks in North Carolina and one naturalizing species (Sawtooth Oak, *Quercus acutissima*). Unlike the bristly chestnuts and beechnuts, acorns have a smooth, fairly thin outer covering, crowned with a scaly cap. Each species has a characteristic acorn shape and cap type, but the size of acorns may vary considerably within a species. Oak trees are a dominant and often defining component of our forests, and their acorns hold a correspondingly major place of importance to wildlife.

Acorns within the White Oak group, whose leaves lack bristle tips, develop within one year; these are the sweetest of the acorns. Oaks in the Red/Black Oak complex (with bristle-tipped leaves) take two years to develop, and while edible, require more preparation (boiling and soaking in several changes of water, to dilute the tannic acid content) to be



American Hazelnut



White Oak

ready for human consumption.

Hazelnuts—American Hazelnut (*Corylus americana*) and Beaked Hazelnut (*Corylus cornuta*)—are shrubby members of the Birch Family. Higher in protein than nuts from the Beech Family, they are eaten by many kinds of birds and mammals; people are lucky to find the mature nuts before the squirrels have harvested them (the com-

mercial hazelnut, or filbert, comes from the European Hazelnut, *Corylus avellana*, which is a small tree). Hazelnuts have hard shells and are encased in overlapping bracts that surround the nut; in Beaked Hazelnut the bracts extend to form a long, slender beak. Also in the Birch Family, Ironwood (*Carpinus caroliniana*) and Hop-hornbeam (*Ostrya virginiana*) produce small nuts associated with bracts; they are used by a variety of wildlife, especially small mammals and birds, but probably have had little human use.

As autumn approaches, take a woodland walk and see how many different kinds of nuts you can find—you may be amazed at the bounty our forests provide.

Lisa Gould is a longtime Society member known for her devotion to wild plants and plant ecology through her popular field trips, lectures, writings and photographs.

All photos by the author, except for the American Hazelnut photo, which is by Herb Amyx from the NCNPS Plant Gallery.

Natives From Seeds

If I Can Do it, So Can You! (Part 2)

By Charley Winterbauer

In the summer edition of *Native Plant News*, Part 1 of my seed-growing experience dealt with getting started with the proper supplies. Having done so, I gathered up a collection of seeds and started them. Here, I will discuss whether or not I achieved success.

Did I meet my expectations? Yes. I just wanted some new native plants and I ended up with native plants that I would probably never be able to buy at a nursery. Using hundreds of seeds, I created a front yard that is blooming like crazy. The front yard consists of Plains Coreopsis (*Coreopsis tinctoria*), Common Blanketflower (*Gaillardia aristata*) and a cultivated form of *Rudbeckia hirta* called Gloriosa Daisy. I did not plant that one. Several must have tagged along with the other seeds. Some Purple Coneflower (*Echinacea purpurea*) also showed up. My proudest success was Coralbean (*Erythrina herbacea*). I ended up with seven plants from eight seeds.



The Winterbauer Front Yard

-C. Winterbauer

The following is a list of other seeds I used, where they were purchased, and their approximate germination rates:

Nine from NC Botanical Garden

Tall Thimbleweed (*Anemone virginianum*) 80%
Green-and-gold (*Chrysogonum virginianum*) 20%
Cardinal Flower (*Lobelia cardinalis*) 50%
Narrow-leaf Mountain-mint (*Pycnanthemum tenuifolium*) 50%
Lobed Tickseed (*Coreopsis auriculata*) 10%
Eastern Columbine (*Aquilegia canadensis*) 0%
Small's Ragwort (*Packera anonyma*) 70%
Eastern Bottlebrush Grass (*Elymus hystrix*) 75%
Common Marsh-pink (*Sabatia angularis*) 1% (*This was the Botanical Garden Flower of 2020*)

Purchased from Various Sources

Drummond Phlox (*Phlox drummondii*) 20%
Butterfly-weed (*Asclepias tuberosa*) 80%
Lanceleaf Coreopsis (*Coreopsis lanceolata*) % Unknown
Maryland Golden-aster (*Chrysopsis mariana*) 0%
Eastern Milkpea (*Galactia regularis*) 0%

Natives From Seeds (cont.)

Wild Bergamot (*Monarda fistulosa*) 75%

Purple Joe-Pye-weed (*Eutrochium purpureum*) % Unknown

Venus Flytrap (*Dionaea muscipula*) 0% Bad seeds?

Lessons Learned

Simple things like:

Keep good written records (I did poorly. I depended upon photos, which wasn't enough.)

Better labeling. I used plastic with black permanent marker which faded in the sunlight, making some impossible to read.

A few of the grouped seed pods produced several different looking plants so I didn't know what was the intended plant. Lack of knowledge on appearance of expected seedling or perhaps careless planting? This, along with the faded labels is the reason for the question marks on germination percentage.

The seeds (germination code 1) that were spread on the ground in my front yard did much better than the ones in seed pots.

I learned about extensive root development when leaves were still quite small.

I recommend this book: *Native Plant Propagation* by Jan A. Midgley. It is self-published. Her address is 10560 W. Center Ave, Lakewood, CO 80226. Email: midgleyjan23@gmail.com. Some specific plants are detailed but there is a good general tutorial given. The cost is \$25

Failures:

Besides the labeling issue, two failures (the Maryland Golden-aster and the Eastern Columbine) were due to a lack of proper cold stratification.

During the latter part of June and early July, I moved most of my seedlings to a portion of my front yard. So far, they are thriving!

Charley is Southeast Coast Co-Chair.



Successful Plantings

-C. Winterbauer

Native Plant Habitat Report

By **Pat Holder**

This July, I became the new chairman of the Native Plant Habitats Certification Committee. It is a big challenge and honor to step into this slot that has been so capably filled by Larry Mellichamp since 2017. Many thanks to Larry for his attentive work on the certifications!

Like most of my fellow Society members, I love to garden and have been digging in the dirt since childhood. As I have learned more and more about the value of native plants to our ecosystem, I have become passionate

about planting natives. Soon our backyard was filled with mostly all native North Carolina plants, along with the amazing butterflies, bees and birds that love them.

It seemed natural to want to get our garden certified, so we submitted our application. This was an exciting process, filled with lots of research and learning -- a journey that we thoroughly enjoyed. I look forward to working with gardeners who are committed to getting their own gardens certified.

Below is a report from the owner of a recently certified property.

-**Scott Kauffman**

Having recently retired, I was excited to finally have time to dedicate to learning more about the native plants on my property. A year or two earlier, I had begun the process when Pat Holder, the new Habitat Certification Chair accepted my request to visit the property and help me identify some of the native plants. The Randolph County property includes a creek and shaded flood plain, so is a very natural, diverse habitat.

Shortly after I retired, I began to spend time walking the property and taking pictures of the newly blooming plants. It was springtime, so there seemed to constantly be new plants popping up and new flowers blooming. It was a great time to begin the project. I began to keep a file of pictures and plants I had identified. Soon I realized I had nearly enough identified to qualify for the Native Plant Habitat Certification. After removing a few patches of invasive English Ivy and supplementing the plants I had identified with a few additional natives from nurseries, I completed the requirements and submitted my application.

Since obtaining the certification in the spring, it has been a continuing process of adding to my file as I keep finding new summer plants,

two of the most recent being Wild Potato Vine, AKA Man-of-the-earth (*Ipomoea pandurata*) and Carolina Wild Petunia (*Ruellia carolinensis*). I was fortunate to notice the Wild Potato Vine in bloom as the blooms dropped off later the same day.

I still have many plants and large trees to identify. I am having the most difficulty narrowing down the specific species of tree, so this is still an area to continue to learn. I am not sure I'll ever be completely finished, so I will continue enjoying this project for a long time to come.



Help from Mother Nature

By Bettina Darveaux

Gardening with native plants is my way of being able to continue to enjoy the beautiful plants I experience in nature. Having them right outside my door enables me to enjoy them more often and provides me the opportunity to closely observe their subtle, and sometimes not so subtle, changes throughout the seasons, i.e., their phenology. In natural settings, native plants grow in combinations with other species in a thriving ecosystem. Their beauty emanates not only from the individual plant specimens, but from the totality of their biotic and abiotic surroundings as well. My garden falls far short of emulating nature but every so often I get surprised by a glimpse of a lovely native plant grouping that happened rather organically and not by my garden trowel. So even in my garden, Mother Nature is doing her thing!

A plant's life is anything but static and they surely don't seem to like to stay in one place



Honeycups pretending to have pink Wild Bergamot flowers.

either, despite having roots anchored in the soil! The garden is in a constant state of change. A few years back I planted a Honeycups (*Zenobia pulverulenta*) that has become one of my favorite shrubs because of its spectacular fall color, which begins very late and lasts long into winter. During the growing season, it is not as flashy but it does have a nice, soft, glaucous, bluish-green color to the foliage. Apparently some Wild Bergamot (*Monarda fistulosa*) that was growing nearby, decided that the Honeycups needed a bit of sprucing-up so moved in closer for the makeover! A splash of bright pink flowers

against the blue-green foliage made such a pretty combination. Great job *Monarda*!

Some River Oats (*Chasmanthium latifolium*) have now made their way all throughout my shaded garden. Although I had not noticed this dynamic duo earlier in the season, as the leaves of Virginia



River Oats spikelets with Virginia Sweetspire.

Sweetspire (*Itea virginica*) began taking on their warm fall colors, the River Oats grass that had grown up through the shrub created a beautiful contrast of color and texture with their dangling, green spikelets. Great job *Chasmanthium*!

A young Sourwood (*Oxydendrum arboreum*) sapling that I have been nurturing for a few years is protected from the deer by a small enclosure made from chicken wire. Although the chicken wire helps safeguard the tree, it makes it very difficult to cut back the grass and other plant species growing around the Sourwood. I usually give up pretty quickly trying to keep it looking neat. I have to admit, my laziness paid off. Some Goldenrod (*Solidago* sp.) had grown around the Sourwood and with its bright yellow-gold flowers, highlighted the tree's racemes of developing capsules and leaves that were beginning to turn color. It was so picturesque. Great job *Solidago*!

Since I am not getting any younger and Mother Nature seems to do a much better job than myself, I may start leaving more of the gardening to her. Well, that is the excuse I am going with.

Society News!

On June 6, Society President **Steve Kroeger** personally presented the President's Award to Dr. **Larry Mellichamp** in Larry's own backyard, since the Society's picnic/annual meeting was cancelled because of COVID-19. According to **Tom Harville**, Awards Committee Chair, "The stated mission of the Society is 'To promote the enjoyment and conservation of North Carolina's native plants and their habitats through education, cultivation, and advocacy'. No one person embodies the spirit and mission of the Society more than our Dr. M." Tom further explained, with testimony from **Will Stuart** and **Jean Woods**, that Larry has been a Life member of the Society for a long time. He worked throughout his career at UNC



President's Award

Charlotte to further the use of native plants and their protection in the wild. He has done this by classes, lectures, workshops, hikes, walks, auctioneer for plants, sharing plants and writing books about plants. Many of his students have gone on to jobs in the environmental field. Larry, with the support of **Lisa Tompkins**, **Carol Buie-Jackson** and Jean, started the Certificate in Native Plant Studies at UNCC, which has changed the thinking of many people in the Charlotte area who attended. When Larry was director of the UNCC Botanical Gardens, the Society chapter was always welcome to use the gardens and the Greenhouse classrooms. Congratulations!

A Volunteer Opportunity from the Comfort of Your Home!

Being native plant enthusiasts, many of you must have great pictures of native plants in bud, bloom, fruit, emerging, senescing, etc. Here is an opportunity for you to share some of those images by adding to our growing Native Plant Gallery database. The Plant Gallery Database is such a valuable tool in the support of our society's mission by helping others to identify and learn about our beautiful native plant species. We are continuously striving to make our database as robust and comprehensive as possible.

We do require that any pictures you donate will be available for use by other people and organizations free of charge. We ask those that request to use a picture that they annotate by "Used by Permission of the North Carolina Native Plant Society and Photographer Your Name."

Adding digital pictures to the database is very user-friendly but will require a short training

(probably via Zoom). We would like to have a group of volunteers who are willing to add pictures. Some of you have pictures, but do not want to learn the "techie" stuff to add the pictures, which requires resizing, adding captions, having a special login, etc. However, you can still be a part of this by sending the pictures to one of our volunteers to do the job for you.

We are looking for pictures of the plants in our Plant Gallery only. We try to have pictures of the flower, stem, seed, leaves, etc. Some of the species are well represented and others need additional pictures of the parts of the plant. Many have no pictures at all. We are looking for good, clear, representative pictures, not ones so artsy that it doesn't represent the plant. Here is a list of the plants in the Plant Gallery: https://ncwildflower.org/plant_galleries/listings

Contact us, Jean Woods (Jean14424@aol.com) or Bettina Darveaux (bettdarveaux@gmail.com) if you have pictures to share and/or you would like to become a Picture Loader volunteer.

Yard and Garden Tour is Catching!

Blue Ridge Chapter

By **William Dunson**

The pandemic didn't stop Boone Chapter members from enjoying yard and garden tours in small groups this summer. **Chip Williams** and I organized a tour of our two yards to examine gardening practices primarily devoted to wildlife (especially birds and butterflies). I here provide a snapshot of the tour of my yard, which was limited to five or six participants per tour with the tour repeated three times.



Chapter members are well-spaced on tour.

Our 2-acre yard is primarily steep woodlands just above the South Fork of the New River. It includes a relatively level front parcel with the house, a small yard and sloping hillside gardens. There are more than 120 species of plants present, including 18 species of trees. The plot was likely a very steep cow pasture about 30 years ago, based on the age of the shade-intolerant trees such as Tulip Poplar.



A striking salamander, the Red Eft is the terrestrial stage of the aquatic Red Spotted Newt.

The tour was one hour, which was clearly not sufficient time to examine the entire ecological relationships of even such a small area. However, we discussed the wildlife values of a large number of native and non-native, invasive species that are valuable to wildlife as cover, for leaf herbivory, and for fruit, nectar and pollen (the five-fold way). The rear steep hillside has a network of trails that allow one to look at early successional plants of a recently created forest opening compared to extensive adjacent old-growth hardwood forests.

Thanks to all that participated. This field trip design seems to work well for the unusual times we are in at the moment with the COVID-19 pandemic.

All photos by the author.

Society Membership Report as of August 1, 2020

There are 1,136 active membership records listed, including 103 new active members and two pending receipt of dues. Renewal emails went out May 2, June 1, and August 1st. All new, active members who did not select a chapter when joining were added to their closest chapter or are listed as an at-large member. New Memberships by Chapter: Blue Ridge—15, SE Coastal—6, S. Piedmont—22, Triad—6, Triangle—38, WN Carolina—15, At-large—35.
—**DeeDee Clarke**, Membership Chair

Society's Grants & Awards

The short write-ups below highlight the varied and interesting research of three more of this year's **Shinn Grant** recipients. —**Debra Murray**, Scholarship & Grant Chair

Vanessa Gremler, Undergraduate, Appalachian State University

Shining Clubmoss (*Huperzia lucidula*) can be found in moist forests throughout North Carolina, rising up from the leaf litter like mats of tiny pine trees. In addition to their appealing nature, they may harbor a compound useful in the treatment of Alzheimer's Disease. Before interest in Shining Clubmoss here in North Carolina leads to overharvesting, Vanessa is keen to discover whether or not it harbors endophytic fungi that produce the medically relevant secondary metabolites. She is also interested in isolating the symbiotic endophytic fungi that live with Shining Clubmoss, as knowledge may allow others to propagate it in nursery settings.



Jessica Roach, Master's Student, University of North Carolina at Wilmington

Rough-leaved Yellow Loosestrife (*Lysimachia asperulifolia*), found only in fire-maintained Longleaf Pine savannahs in North and South Carolina, is an endangered species. Jessica's research will focus on documenting the genetic diversity within nine known populations. The rhizomatous species appears to reproduce sexually at a low rate, so it is vital to understand how clonal the remaining populations are. Her data will contribute to the management and protection of the species.



Hannah Dinkins, Master's Student, Western Carolina University

Tulip Poplar (*Liriodendron tulipifera*), with its distinctively shaped leaves, is a familiar forest tree found throughout the Southeast. Noticing that the aggressively invasive Princess Tree (*Paulownia tomentosa*), like the Tulip Poplar, can grow quickly in similar forest settings, Hannah decided to directly measure the potential of the Princess Tree to replace it in Southern Appalachians forest communities. To do this, she will use seedlings in burned and unburned research plots that have natural light gradients. After the first year, she will measure various growth parameters to calculate how quickly Princess trees could out-compete the Tulip Poplar.

Society's Grants & Awards (cont.)

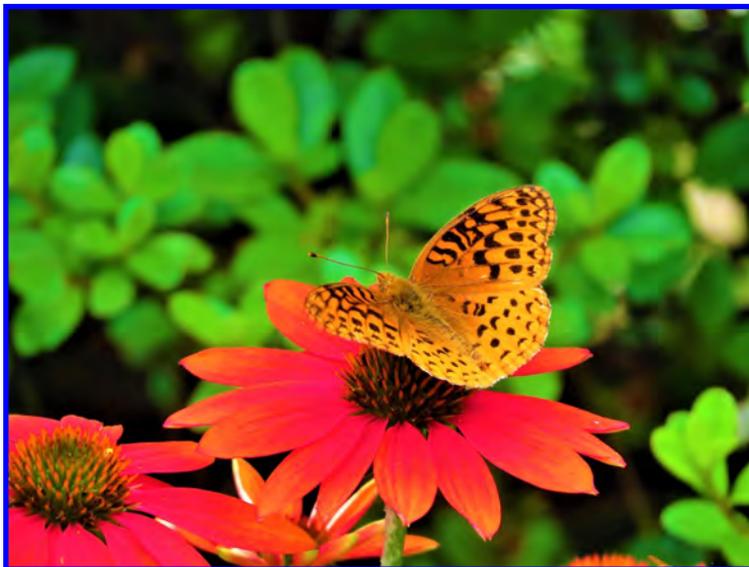
Catawba County Cooperative Extension's Teaching and Demonstration Garden

-Adam Smith, Center Staff

With funds from the **B.W. Wells Stewardship Fund**, Catawba County Cooperative Extension was able to expand their Teaching and Demonstration Garden to include several pollinator gardens. The Catawba Valley Extension Master Gardener Association (CVEMGA) was instrumental in the design and creation of these spaces. The pollinator gardens are filled with numerous perennial and self-seeding annual flowers, and they provide a wonderful environment for learning opportunities for children and adults. With every season, the Teaching and Demonstration Garden becomes larger and more beautiful, a haven for all living things, from insects to birds to human beings. The NCNPS helped make that possible.



Teaching and Demonstration Garden



Great Fritillary Butterfly on Coneflower —William Dunson



North Carolina Native Plant Society

C/O Julie Higgin
209 Hanks Bluff Drive
Mooresville, NC 28117

Membership Spotlight: Dale Batchelor

Known as the Gardener by Nature in Raleigh, Dale received the Society's President's Award in 2019 because of her many contributions to our Society. She is a member of the Margaret Reid Chapter.

How did you get interested in native plants?

I grew up in rural eastern NC. The first "wildflowers" I knew were the Annual Phlox that covered the roadsides and our backyard each spring and the Pinkladies that seemed to pop up everywhere. I loved them. Of course, I later learned that both are actually western species that had naturalized here. I discovered true native wildflowers in the woods surrounding the Orange County dairy farm where I lived in my early 20s.

How do you support native plants in your chapter?

Pre-COVID, I spoke about native plants regularly for garden clubs and Master Gardener groups. I write about natives and sustainable gardens for *Triangle Gardener Magazine*. I participate as a volunteer in Reid Wildflower Garden Workdays, which were the second Saturday of each month.

Do you have a favorite native plant?

I discovered the beautiful groundcover Partridgeberry when I was clearing English Ivy off my property over 25 years ago. It started me on a wonderful journey of discovery about native plants!

