



The Trillium

Piedmont Chapter
North American Rock Garden Society
Chapel Hill, Durham, Raleigh, NC
www.facebook.com/piedmontchapterNARGS

Trillium Hunting in the Southeast Part 1 of 3: Taxonomy

By Jeremy Schmidt, Research and Grounds Supervisor
and Zac Hill, Taxonomist, Juniper Level Botanical Garden

Trilliums have been celebrated and studied since the birth of modern taxonomy. In 1753, Linnaeus included the Southeast U.S. natives *Trillium erectum* and *Trillium sessile* in the pages of the Species Plantarum. Despite centuries of attention, however, the genus proves to be largely unsettled, undocumented, and unexplored. Four new species have been published since the 1990s and several more new species in the *T. cuneatum* and *T. pusillum* complexes are pending publication.

Trillium hunting still results in discovering new trillium species! Where are so many new species being discovered? *Trillium oostingii*, published in 2008, was first discovered within sight of McDonald's golden arches in central South Carolina. Published in 2013, *Trillium tennesseense* was discovered growing in the edge of a lawn. The soon-to-be published *Trillium telmacola* was discovered at a nuclear plant in South Carolina. Holotypic to a public hunting preserve in central Georgia, *Trillium delicatum* was published in 2019. This beautiful *T. stamineum* relative was mistaken for a disjunct population of *T. decumbens*.

New species are discovered every few years, and we discover new and distinct populations nearly every time we botanize. Walking up on hybrid swarms and traversing population gradients have been some of our most satisfying experiences...not just because we are looking at something that may not have ever been documented, but because we possess the taxonomic perspective to recognize something magnificently unique.

In 2017, we received a tip from a fellow trillium hunter about a newly discovered population in northeast GA, near a tributary of the Savannah River. After two thorough trips to document the unsettled low elevation region, JLBG has identified seven distinct populations, which contain at least one—and maybe more—undescribed species to be defined.



Vaguely similar to *Trillium maculatum*, the population range and diversity in these 20 square miles of northeast GA is wildly exceptional, with variable leaf shapes and flower colors. One site is populated primarily by narrow-petaled red-flowered single-stemmed trillium [NE GA 1]. Another site





we explored had tens of thousands of large trilliums with wider leaves and petals, more frequently clumping habit, and about 1% with green to yellow flowers [NE GA 2].

The westernmost population we documented had narrowly lanceolate and open petals reminiscent of *T. ludovicianum*, a species with a Cajun-centric

range no closer than 500 miles to this site. This trillium patch also contained a few exceptional anthocyanin-free specimens [NE GA 3].



We were pleasantly surprised to find a healthy and unique population of trillium in a dense stand of young pines near the center of the northeast GA region we explored. This small population hosted the entire range of flower and form characteristics from all seven sites we explored along with the most narrow petaled forms we encountered. Seven distinct populations in 20 square miles...so much taxonomic sorting to be done along Savannah River back roads [NE GA 4]!

After further research on the northeast GA population via herbaria records, it appears that this complex trillium was fairly common in the bottomlands before the creation of the Richard B. Russell Dam, one of many Savannah River impoundments. Former botanists were as uncertain about these trilliums as we are, listing them as *cuneatum*, *maculatum*, and even *viride*! Our best guess is “none of the above”—these trilliums are speciating!

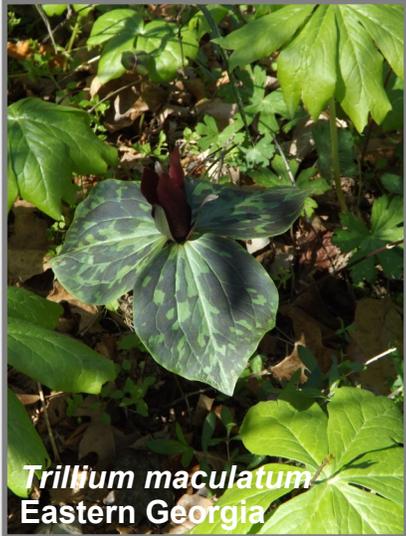


Like so many other trillium sites, we are still trying to wrap our brain around a small hybrid-looking trillium population in eastern GA, south of Augusta. Best described as a hybrid swarm, this exceptional patch of trilliums is only about 1/4 acre in size, clinging to a steep 150 foot limestone Savannah River bluff towering above a dead-end road. The population is so small that we missed it twice before by only 300', finding only scattered *Trillium maculatum* in the area. These stunning new trilliums are radically different from any



natural population we've seen before and we knew it from 50 paces away! Each headlong step through a roadside barrier of greenbriar and then sharply upwards brought amazement and discovery—far more than the greenbriar brought pain. And then, we stood for a moment, ogling the decadent treasures below us then glancing briefly at each other as if to say “Are you seeing this!?” And there we were, lost in time and space long enough for the shadows to change direction through the naked oak and beech. Our imagination accessing with clarity every bit of taxonomic knowledge we had gained during several trillium hunting excursions and a decade-long immersion in JLBG's immense *ex-situ* trillium collection.

Was this a weird *Trillium lancifolium* or an oddly flowered *Trillium maculatum*? It seemed neither. *Trillium maculatum* occurs sporadically at the base of the bluff on the other side of the road and *T. lancifolium* is documented within a few miles of the site. The two Southeast species, it seems, conspired to hybridize so that not a single plant in the population was unaffected by adventurous pollen. The majority of the *lancifolium* types at this site had typical inward facing stamens, with the typical clawed petal base leading up to a very wide petal tip comparatively, and reflexed sepals.



Trillium maculatum
Eastern Georgia



Lancifolium hybrid
Eastern Georgia



Lancifolium hybrids
Eastern Georgia

However, their wide leaves and chunky rhizomes were closer to those of *T. maculatum*. Inhabitants ranging toward *maculatum* sported leaves widest near the tips and petals shorter and wider than typical in the species. The hybrid vigor was undeniable as the entire gradient was larger than their supposed parent species. And there could be more species hidden in the mix—perhaps a species never documented and extinct. We don't know but we'll keep hunting for answers! [E GA]



Lancifolium hybrid
Eastern Georgia

A site we discovered in 2015 on the TN/AL state line (literally) encompasses the most population diversity within a single “species” we have ever witnessed in our many years of trillium hunting. Nestled in a contiguous region of the *Trillium cuneatum/freemanii* complex, this one acre population demonstrates



Stateline

that a single herbarium sheet cannot define a population. The petal shapes at this site varied dramatically plant-to-plant where three pressed samples might point to three different species. We found narrow lanceolate petaled plants that could be mistaken for *T. luteum*, wedge-shaped petals similar to *T. cuneatum*, and several spatulate-petaled flowers leaning toward *T. maculatum* (of which an herbarium record from the region is erroneously titled). We also observed



Stateline

this population flowering 10-14 days later than a similar population ten miles down the road and a noticeably different floral scent. Allowing for the possibility that this pop-



ulation is a cryptic overlap between *T. luteum* and *T. cuneatum*, we believe there is sufficient evidence to suggest a speciation event [State Line].



The science of taxonomy is defined as: *the classification of something, especially organisms*. JLBG believes that taxonomy is a conversation to be had with entire living populations. We explore trilliums *in situ* where, much like humans, every group of trilliums speaks a different dialect that cannot be thoroughly and accurately understood or classified in herbaria alone. The taxonomic conversation continues every spring as trilliums emerge *ex-situ* in Juniper Level Botanic Garden. From a single climate, a single elevation, a single soil condition, and a single vantage point, we continue the taxonomic discussion with representatives from trillium populations spanning 25,000 square miles across the southeastern U.S. The environmental consistency within a single botanic garden provides a stable scientific foundation for our continued classification of Southeast trilliums. At JLBG, *ex-situ* conservation is where taxonomy meets “pointillism.” Each population paints a dot on a map. With so many dots, JLBG is painting a detailed, groundbreaking pointillist picture of the genus *Trillium* as it occurs in the Southeast. We organize our thoughts and compare notes with other researchers of *Trillium*. Linnaeus composed a universal language to name, communicate, and celebrate the living world. Species of *Trillium* were among the first words spoken in this language of love. We passionately share our love and understanding of the genus freely in hopes that everyone will know *Trillium* by name. ↪

Great Opportunities to Visit Lovely Gardens

Piedmont Chapter goes Garden Tripping!!

We are planning a garden trip to celebrate our chapter's year end!!!

Saturday, May 18 all Piedmont chapter members, spouses, and partners, are invited to visit member, Graham Ray's garden in Greensboro. After enjoying Graham's extensive garden we will have a box lunch before continuing our trip to Paul J. Ciener Botanical Garden in Kernersville, www.cienerbotanicalgarden.org. We plan to leave Raleigh in the morning, stopping in Chapel Hill to pick-up members there, returning in late afternoon.

This is a wonderful opportunity to see the garden of a meticulous and avid gardener who knows and loves a wide variety of plants. And Ciener Botanical Garden is relatively new, with planning begun in 2001. Plan to see how much has been created and accomplished in just 18 years!

You will have received a short survey by email, concerning plans for the trip and transportation. We would love to have a full bus for making the trip, 50 people. The more people who sign up, the lower the cost per person and we get a fun bus trip to visit and chat with other members. As soon as we have all the information gathered we will have departure times, pick up points, and final cost available.

Look for the Trip Survey in your inbox, it's short and simple. If you have questions, please email me – amelia.lane@gmail.com. ↪



Getting to Know Chapter Members: Charlie Kidder Revealed

By Charlie Kidder

First, a few basic facts. I joined the Piedmont Chapter around 2004. (Bobby Wilder would know the exact date!) I became a board member a few years later, then served as Chapter Chair for three years immediately before Amelia Lane took that position. Currently I head up our Plant Sales Committee.

Both of my parents were gardeners, but I can't claim to have had much interest in horticulture as a kid. Being sent out with a screwdriver to remove plantain from our not-very-perfect lawn may explain that. Pure drudgery. I guess something clicked, however. To this day I'm not very fond of lawns, although I am a dedicated weeder.

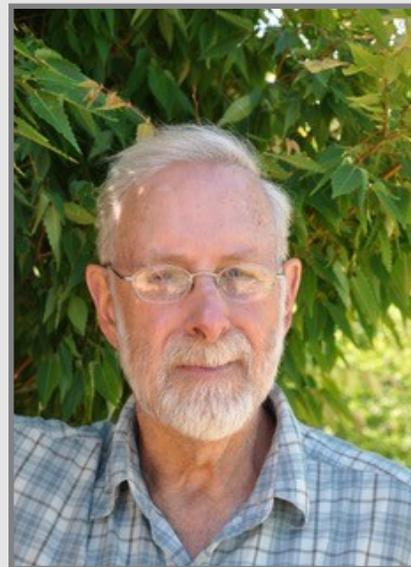
I became more aware of the plant world when I headed south from my native New York to the University of Virginia. I was marveling at the gigantic rhododendrons on the campus—officially known as the Grounds—when my Louisiana roommate informed me that they were Magnolias. So something new and different to a Yankee.

If absolutely forced to choose, I favor woody plants over the herbaceous. I appreciate their permanence and structure. I never tire of looking at a mature white oak, especially when the fallen leaves reveal its ash-gray skeleton. As something of a compromise between woody and herbaceous, agaves rank as some of my favorite plants. Wonderful structure, a spectacular inflorescence, and permanence if you have one that offsets. I attempt to grow some in my unamended clay—an act tantamount to plant torture—and some tough species actually succeed.

When not gardening, my wife Jane and I enjoy going to concerts, especially those with vocal music. We also like to travel, taking in not only gardens and natural wonders, but also the typical castles, museums, ruins, and local culture.

A little-known fact about me: for about one year in the eighties, I was a television weatherman. I studied some meteorology and climatology in college and grad school and was able to talk my way into a very part-time job at a station in Richmond, Virginia. I filled in when the regular weekday or weekend weather people were off—or in one case, threatening to quit. Hardly what one would call a career, but something I had wanted to do since I was a kid.

I truly enjoy the talks and trips that the Piedmont Chapter continues to offer, and appreciate the efforts of our members that make all of that possible. ↻



Open Garden Invitation Saturday, March 23, 8-3

5304 Deep Valley Run, Raleigh 27606.
Visit Cyndy Cromwell's new crevice garden and learn how it was created and see how it has matured.

*Rain date, Saturday,
March 30, 8-3.*





Introducing Another Chapter Member: Elsa Liner

by Cyndy Cromwell

Our current Secretary, Elsa Liner, has been a member of the Piedmont Chapter for over 23 years, joining in October of 1994. She has helped with three NARGS national meetings hosted by our chapter, in 2004, 2013 (in Asheville) and 2017.

In her working life, Elsa managed International Development projects for USAID, including agricultural and health projects in developing countries. She lived in South Africa working on AIDS projects for year in the nineties, while her husband was there on a Fulbright scholarship.

Elsa's garden was originally a very challenging, deeply shaded hillside. Over the years she has limbed up and removed trees, creating woodland and shade gardens, along with an area devoted to native plants. She prefers woody plants, with her favorite being Edgeworthia species, which she appreciates in all four seasons.



Elsa enjoys quite a few herbaceous plants, including *Cyclamen*, ferns, *Dentaria* and *Arisaema*, the latter genus becoming a favorite during botanical trips to China in 1996 (Yunnan) and 1998 (Szechuan). Led by Paul Jones of Sarah P. Duke Gardens, the trips took place in October, long past bloom time for most plants, other than *Gentiana* and some *Primula* species, in order to facilitate seed collection. Elsa recalls the challenge of trying to identify and select likely taxa based on brown stems!

Most of those traveling were horticulture professionals, including Dan Hinkley, Tony Avent, and Darrell Probst, guided by the Director of the Kunming Botanical Garden. Accommodations were basic at that time, with primitive community restroom facilities. Evenings were spent washing seeds in cold water. With no heating and nighttime temperatures of about 25 degrees F, at altitudes up to 15,000 feet, the trips were physically challenging, but unforgettable. ❧

Tony Avent Receives Well Deserved Prestigious Award

Tony Avent received the 2019 Don Shadow Award of Excellence at the Southern Nursery Association meeting in Baltimore on January 8.

It is given to an individual that has provided exemplary service, leadership, and generosity in the development, promotion, and use of new and improved landscape plants.

Recipients must demonstrate a sincere commitment to and passion for expanding knowledge and use of new and improved plants for the landscape. ❧

Submitted by Mark Weathington and Bobby Ward

Introducing New Member: Rob Thornton

Why did you join? Information, ideas and events.

Plant you love? Anything that my brain says "That is pretty and smells wonderful!"

Plant you hate? Smilax and native Bermuda.

Labeling? Never did in the past, now beginning to phase in aluminum.

Woody or Herbaceous? Yes

What do you like most about NARGS? The variety of people and plant interests.

I wish you had asked me about...my interest in helping people avoid long term Lymes Disease complications. ❧





Bulbs and Their Habitats

By Jane McGary

Rock gardeners know that choosing a site for a plant involves more than the common “sun or shade.” Soil, slope, and moisture are all taken into account. In the case of geophytes – plants with bulbs, corms, or tubers that store nutrients during a dormant season – we must also consider the climatic cycle. Do the plants grow and flower in winter, spring, summer, or fall? Do they tolerate moisture during their dormant seasons? Understanding where geophytes come from is crucial to growing them well.

Usually, though not always, such storage organs have evolved to carry the plant through a time when some important environmental factor is limited. No moisture may be available at certain seasons, either because of no precipitation or because the plant is under winter-long snow cover. Some geophytes are adapted to growing through frosty winters (e.g., snowdrops, *Galanthus*), while others, such as most lilies (*Lilium*) are summer-growing. The first thing bulb enthusiasts look at is the geographical origin of a species and the annual climatic cycle of that region. Species adapted to arid regions may not tolerate summer water (though some can), and those adapted to summer rainfall will need irrigation in summer-dry gardens.



Iris sisyrinchium

Gardeners always want to know if a plant is “hardy” in their area. This isn’t a very useful factor where geophytes are concerned. The USDA “hardiness zones” are fairly meaningless for them. A system developed for trees east of the Rocky Mountains is almost useless here, and anyway, commercial bulb merchants usually lie about hardiness. Many geophytes will survive in much colder winters than they experience in nature, but they may not thrive or develop to a good size. If it can be done without great expense, it’s worth experimenting; you will have some nice surprises.

One mistake novice rock gardeners often make is to equate elevation with cold hardiness. Many alpine plants spend a long part of the year under snow, close to the soil and rock, where the temperature is much warmer than ambient. This holds for geophytes as well as perennials. High-alpine geophytes can be very challenging to grow in the absence of constant snow cover, especially if they also have to cope with high temperature and humidity while in growth.

“Sun or shade” isn’t very important for siting your bulbs. Most of them grow among grasses, taller perennials, and shrubs in nature. Early species may be found under deciduous trees, flowering in sun and finishing their growing cycle in shade. This aspect of siting is most important for a few kinds that keep their bulbs close to the soil surface; some of these actually have chlorophyll in the exposed upper part of the bulb, aiding in nutrition. Shade may even protect some bulbs by deterring insect pests such as the Narcissus Fly.



Rhodophiala araucana

An environmental factor rock gardeners understand especially well is soil aeration and drainage. Very few geophytes (other than aquatic ones) do well in places that are wet during their dormant period. However, many are adapted to seasonally wet conditions. Moisture tolerance is best on slopes, not in stagnant hollows. Bulbs from arid-summer regions and higher elevations are likely to grow quickly during mountain snowmelt and can be



Ranunculus semiverticillatus



seen flowering in wet soil of silt and rock fragments, just below melting snowfields. There are also species or subspecies that inhabit permanently wet sites; for instance, one form of *Narcissus tazetta* grows in coastal marshland, and *Liliium occidentale* from southern Oregon is seasonally submerged.



Leontochir habitat

In the garden, you can mitigate excessive moisture by planting bulbs within the root zone of a shallow-rooted tree, such as a deciduous magnolia or Japanese maple. It isn't necessary to try to match the native soil of a geophyte. I grow more than a thousand species in much the same soil, a mixture of coarse granitic sand, ground volcanic pumice, and organic compost (preferably leafmold, but moving away from my woodland has left me searching for suitable ingredients). The pH is slightly acidic, but this doesn't matter to the bulbs as long as they get adequate fertilizer. In the garden, a great many different bulbs will accept whatever soil is present. In containers, however, take care that the soil drains freely.

What habitats, then, can we provide bulbs in the garden? Widely adapted ones such as large *Narcissus* (daffodils) can go in the mixed border. Small ones such as *Crocus* species (perhaps not the giant Dutch varieties) are suitable for the rock garden. Various species of *Cyclamen* are particularly suitable for difficult sites under dense conifers; I use *C. hederifolium* to surround Douglas firs and recommend them for use under nasty hedges such as English laurel or arborvitae. If you have a bit of lawn that can be left unmown into early summer, you might want to try a bulb meadow. Many crocuses grow in grassy meadows, and by adding other small bulbs, daffodils, and anemones, you can create a succession from fall into late spring there. Where voles and field mice are a problem, planting small bulbs in thick grass seems to help. (In nature, bulbs may escape animals by growing in rock crevices.)



Cyclamen graecum

Because you live in an area with summer rainfall, some species may not tolerate your gardens. Still, try a wide variety, and not just the ones imported from the Netherlands for the mass market. Growing bulbs from seed takes patience, but many can be raised to flowering size in three or four years. About 80 percent of the species I grow came from seed. Start with *Narcissus* and *Scilla* (the latter is now split into many genera), which are especially quick. Keep them in pots until they're flowering size.



Anemone coronaria

My talk "Bulbs in Their Habitats" focuses on natural bulb populations around the temperate world. It helps me to know whether they grow on rocky slopes, in forests, in meadows, in deserts, or in coastal sands. I don't try to duplicate these habitats in detail in the garden, but I can choose the best sites I have. The garden includes two large rock gardens (one basalt, one tufa), a shrubbery with leafy soil, numerous deciduous and coniferous trees, moist and dry perennial areas, an open raised bed with mats and cushions among the bulbs, and a bulb lawn. I keep species that are rare, possibly tender, or of which I have only a few bulbs in a "Mediterranean" house with a solid polypropylene roof and wire mesh sides, in raised beds. Some are in plunged pots (see below) and some are directly planted in the sandy raised bed. I grow very few bulbs that aren't hardy to 20 degrees F.



If you want to move on with rare and unusual bulbs, you may want a dedicated site where those from summer-dry regions can be protected. A simple cold frame will do. It's best to make a raised bed of sand and grit and sink ("plunge") your pots up to the rim to moderate temperature and moisture. Ignore recommendations to give bulbs "a good baking." They don't get it in nature, because they are deep below the surface. They may need to be dry, but they don't need to be hot. And most important, they should never be hot and wet at the same time. If you can't plunge your pots of summer-dormant species, put them in a dry, shady place during dormancy.

In the US Southeast you have the opportunity to grow many species I don't deal with: those native to your region, and those from Japan and other mild parts of East Asia. Even with irrigation, my dry summers are unsuited to plants from humid-summer regions. You also can grow many species of the Iridaceae and Amaryllidaceae that won't flower for me, and many of those are very easy from seed. Identify what you have naturally, and start with plants adapted to similar parts of the world. Once you're hooked, you may find yourself starting seed pots of Central Asian tulips or Californian lilies.

Need more information? The Pacific Bulb Society (www.pacificbulbsociety.org) is an international group of bulb enthusiasts which maintains a discussion forum and a year-round bulb and seed exchange. Almost any question you have about growing bulbs can find an answer from the 400 serious growers who participate in the email forum, which is free to join. The exchange and a printed newsletter are available to members at \$20 per year. Check out the website and its famous wiki, with photos and information about almost every geophytic species. ↪

Alpine Soils and Alpine Gardens

by Michael J. Papay

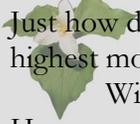
Scientists have studied alpine soils for at least six decades now (Retzer, 1956). Soil scientists have therefore learned a great deal. However, the terminology of their profession (Histols, Entisols, Inceptisols *et cetera*) has hindered the transmission of soil science knowledge to laymen (like me). We are about to overcome this obstacle.

Thanks to the decades of scientific investigation and reporting by soil scientists, it is possible to characterize the general composition of alpine soils and, just as importantly, to explain why they are thusly composed. Two primary factors are lots of cold and lots of wind.

Alpine climates are frozen for much of the year, and have a very short growing season. A common joke is that alpine habitats have just two seasons – the end of winter and the beginning of winter. The truth is not far from that. Just as with plants growing in warmer habitats, alpine plants produce organic matter in the form of shed leaves, spent flowers, and plant corpses. The almost endless cold of the alpine climate impedes the decomposition of the dead plant material, and so it accumulates as organic matter. For this reason, alpine soils often have a high organic component, as much as 5-20% of the soil composition (Retzer, 1956).

Alpine habitats are windy places, what from being on mountains or exposed to wind for lack of trees. As it turns out, the wind plays a significant role in what goes into alpine soils. What wind can blow around depends on the wind speed and the weight of the objects exposed to the wind. It would be an uncommon thing indeed for wind to blow boulders or rocks around, but wind often does blow soil around. The lighter the soil particle the easier it is for the wind to shift it. The mineral particles of soil are, from largest to smallest: sand; silt; and clay. In alpine areas, wind-blown silt accumulates between, amongst, and under rocks (Korner, 2003). There is more silt than clay available to be blown around in alpine habitats because alpine rocks have not been exposed the eons required to crumble them all the way down to the miniscule size of clay particles. Alpine habitats are, ecologically speaking, young.

Given the cold and the wind of alpine environs, we can comprehend why alpine soils often have appreciable contents of organic material and silt. That is, they do where there is any soil to be found. Of course virtually no soil is found on the exposed rock faces of alpine habitats. If the wind hasn't carried the soil away, the melting snow and driven rain have. So where does alpine soil go? It ends up in cracks and crevices amongst rocks, and amongst the scree and tallus. In these places the soil accumulates from the bottom up. So what at the surface appears to be a gravelly, gritty soil is in fact at depth more of a silt loam with plenty of organic matter. Too, being under and between rocks, the alpine soil is protected from evaporation and so remains moist during the brief growing season (Korner, 2003).



Just how deep is alpine soil? According to Jeffrey Monroe (2008) who studied alpine soils on Mount Mansfield – the highest mountain in Vermont – soil depth averaged 18cm [7.2 inches].

With the information now laid out before you, it is *almost* possible to reconstruct an alpine habitat where you live. However, it is unlikely that you actually live in an alpine climate (few people do). So you must translate the reconstruction, or *plant choice*, to compensate for your non-alpine climate. The closer your climate is to an alpine climate the less translation will be needed. Correspondingly, the greater your climate differs from the alpine the greater the translation will be needed. Conditions you should consider are: length of the growing season; warmth and cold of the seasons; usual precipitation; humidity; and seasonal sun exposure.

The warmer the climate the more rapid is the loss of soil moisture through evaporation, and through transpiration by plants (from which the term “evapotranspiration” was coined). In warmer climates the “alpine” gardener must compensate for the *increased loss of soil moisture*. Moisture can be replenished by irrigation (the diversity and complexity of which the gardener must choose. I prefer a watering can or garden hose, but more complex systems are of course available). Too, the greater the soil volume (depth and/or breadth) the greater the volume of moisture it stores.

At some point a non-alpine climate will differ so greatly from that of a true alpine climate that a gardener is forced to select non-alpine plants for their “alpine” garden. The myriads of gardeners faced with this situation should revel in the opportunities thusly presented to create *their* version of “alpine” gardens - no truly alpine plant required.

Whereas you may be surprised to learn that alpine soils are organic silt loams, you may be further surprised to learn that some cacti prefer much the same. Wolfgang Papsch (2017) reported that individuals of *Gymnocalycium platense subspecies platense* “grow in black soil (accumulated humic soil) between rocks.... Analysis of soil samples from...Sierra Bayas and Cerro de la China yielded results which were to be expected of eutrophic pampas soil...” As a matter of fact, I had already discovered by experimentation that many species of *Notocactus* and *Gymnocalycium* grew at their best in an organic sandy loam. By “grew at their best” I mean not too fast, not too slow, and most healthily (least troubled by heat or cold, rain or drought). So what a delight it was to learn that in the wild some of these cacti grow in similar soil.

This is not to say that organically rich loamy soil is always the best choice for all garden plants. It is an indicator, however, that such a soil is not a bad place to start when installing a new alpine garden – or when amending the soil of an existing one.

A garden is a place of dreams, and so dear reader, I wish you pleasant dreams.

Literature Cited

- Korner, Christian, 2003, Alpine Plant Life, Functional Plant Ecology of High Mountain Ecosystems
- Monroe, Jeffrey S., 2008, Alpine Soils on Mount Mansfield, Vermont, USA: Pedology, History, and Intraregional Comparison. Soil Science Society of America Journal Abstract 72 (2): 524-533.
- Papsch, Wolfgang, 2017, On the Distribution of *Gymnocalycium platense*. Schutziana 8 (2): 11-23.
- Retzer, J.L., 1956, Alpine Soils of the Rocky Mountains ❧

Piedmont Chapter Up-Coming 2019 Spring Activities

March 23, 8-3, Saturday Member’s Open Garden Date

5304 Deep Valley Run, Raleigh 27606

Rain date, Saturday, March 30, 8-3.

April 27 Program

“Bulbs in Their Habitat”

Jane McGary

Past Editor NARGS *Rock Garden Quarterly*

May 18 Annual Picnic

With Garden Tours

Graham Ray’s Greensboro Garden,
Ciener Botanical Garden in Kernersville

Additional interesting tour possibilities

for spur-of-the-moment local tours.

Information about these will come by
email



Election of Piedmont Chapter Board Members

Charlie Kidder

We will be electing officers and directors of the chapter board at our meeting on April 27, 2019.

The nominees are as follows:
nominations will also be accepted from the floor:

Chapter Chair—Cyndy Cromwell

Chapter Vice-Chair/Program Chair—Bobby Ward

Treasurer—David White

Director—Tim Alderton

Director—Jim Hollister

An additional reminder regarding the election will follow closer to the meeting date.

Please be sure to attend the April meeting in order that may vote for your board members.☞

More Member Tips to Share

Amelia Lane

Another way to make garden labels!!

I use double faced aluminum tags, #79260, 7/8" X 3", sold by Forestry Suppliers. They come in a box of 50, plus wires for attaching directly to plants, for \$7.00.

I also make label holders using 16 gauge all purpose wire cut into 10" lengths and shaped with pliers into a shepherd's hook.

I "emboss" the labels using a balled point pen. And I reuse the label on the back side, should a plant die (Oh My!).

I attach the label on the hook and close the small loop with pliers. The writing on these labels is always readable no matter how old and dirty they may get. ☞



Piedmont Chapter Plant Sale at Raulston Blooms, April 6, 2019

Charlie Kidder

A reminder that our chapter will, once again, have a plant sale and information tent at Raulston Blooms, Saturday April 6 from 9:00am to 4:00pm.

All members are encouraged to participate in any way they can, boiling down to ***The Three Ps***:

- ✓ Plants—perhaps the most obvious requirement, so take advantage of a mild day to dig up and divide some of your excess garden offspring. Donated plants should look their best, with clean foliage and no weeds. Flowers would be nice, but certainly not necessary. Deciduous plants will sell if they are at least in bud and accompanied by pictures of flowers and/or foliage. Pictures of any donated plant would be helpful, preferably tucked into a Ziploc bag. Plants should be in pots at least one quart/3.5" in size, although cell packs of smaller plants can be sold as a single item. Plants should be labeled with at least the scientific names. We will have labeling materials available for anyone that needs them. Please do not put prices on labels.
- ✓ Packaging—plastic bags from groceries, etc. are ideal for our customers to carry away a small number of plants, and are easy for us to store between now and April. Small cardboard boxes or the trays provided by garden centers are also good for bigger plants or larger quantities.
- ✓ People—will be required to man our tent. The greatest need will be during early morning setup and sales, and also for teardown at the end of the day. I will be sending out a request for specific shifts later on, but anyone wishing to sign up now should contact me at chas36kid@gmail.com

Thanks to all of you that have made this sale a great success for the past two years by donating hundreds of plants and volunteering your time. It provides a substantial portion of our chapter's income. And thanks in advance to all those who will be helping out this year! ☞



NARGS Piedmont Chapter Meeting

JC Raulston Arboretum

9:30 Gathering Time/10 am Program Begins

March 16

“Trillium Hunting in the Southeast”

Jeremy Schmidt

JLBG Research & Grounds Supervisor
Raleigh, NC

April 27

“Bulbs in Their Habitat”

Jane McGary

Past Editor, NARGS *Rock Garden Quarterly*
Milwaukie, OR

Message from the Chair

Amelia Lane

What a great start to 2019 our chapter has had! In January we had a wonderful program about Elizabeth Lawrence, her garden and garden writing. Then just recently, we traveled to Yunnan, China, with a trip program by two of our own members! How fortunate we are to have access to a vast array of knowledgeable gardeners who are willing to share their garden experiences.

We all have experiences and knowledge that other chapter members are interested in. You can share a Garden Tip in *The Trillium*, tell us about your new favorite plant in a Plant Profile, share a picture from your garden, make a garden related announcement at a chapter meeting, ask a question! The participation of many members is the “spice” in the stew making us all better gardeners. Any of these ways of sharing can be sent to me and I will pass them along to the appropriate person.

I hope you will find your special area of interest in our chapter

Enjoy the garden surprises each day as more plants awaken and do such amazing things!! ☘



Goodies to Share

March R—T April W—Z

BOARD OF DIRECTORS

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- Bobby Wilder, Distribution Manager
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- Bobby Ward, Quality Review Editor

OTHER SIGNIFICANT POSITIONS:

- Plant Sale Manager: Charlie Kidder
- Refreshments: Maurice Farrier

2019 Hypertufa Trough Workshop and Concrete Mushroom Workshop

Saturday, March 30

9am-12 noon, **Hypertufa Trough workshop:** Create your own stone like planting trough that is lightweight, has excellent drainage, and is the perfect size to plant a miniature landscape scene. All supplies are included in the cost of \$85. You will take your trough home with you and it will be ready to plant in April.

1pm-3pm, **Concrete Mushroom workshop:** Design, shape, and build a "forest" of 5 mushrooms to add a natural scene in your garden. They are weather proof, and sturdy, while also whimsical! All supplies are included in the cost of \$100.

Classes are held in the basement studio in Raleigh.

Please email if you have questions.

Amelia_Lane@gmail.com

These workshops are fun, creative, and informative.

Registration required.

Mail payment to Lasting Impressions,
4904 Hermitage Dr., Raleigh, NC 27612.