



The Trillium

Mayapples: Woodlanders with Fabulous Foliage

Todd Boland, Chair, Newfoundland Chapter NARGS

Certain garden ornamentals are primarily grown for their foliage, especially those suited to shade. One of the most spectacular and choice woodlanders are the mayapples. While the native North American species is not without its merit, the Asian species are the real stars.

The mayapples, botanically known as *Podophyllum*, comprise seven to thirteen species (depending on the reference), primarily from China, with a single species found in North America (*P. peltatum*). In recent years taxonomists have been at odds over this genus. Some authorities still call them all *Podophyllum* while others reserve that genus solely for the American species. Taxonomically *Podophyllum hexandrum*, native from Afghanistan, Bhutan, northern India, Kashmir, Nepal, Pakistan, and western China, is now known as *Sinopodophyllum hexandrum*. The remaining species, all from China, are known by some taxonomists as *Dysosma*. It's all so complicated that for simplicity, I'll refer to them all as *Podophyllum*. In the wild, they grow as forest-floor wildflowers in damp, humous-rich areas under deciduous trees. In the garden, they are best used as ground-covers in shaded areas (*P. peltatum*) or as choice woodland flowers for shade gardens. While the Asian species demand a reasonably moist soil, the American species is slightly more tolerant to dry conditions.

As a garden ornamental, they are best appreciated for their foliage. The flowers are actually quite attractive, but are often hidden by the foliage. These develop into a relatively large tear-drop shaped berries which may be yellow (*P. peltatum*) or red (Asian species). Leaves are either solitary (non-flowering) or paired (flowering). They produce a lovely umbrella-like effect and among the Asian species, are often intricately patterned in maroon. Hardiness varies but that will be covered under the individual plant descriptions. As a warning, this plant is toxic but recent studies have shown them to contain anti-cancer properties.

Most eastern North Americans are probably familiar with our native mayapple, *P. peltatum*. Of all the *Podophyllum*, this one is the most, shall we say, robust (a kind way to say it's a bully!). It can spread rapidly via strong underground rhizomes, hence may be used as a ground-cover. The leaves, which arise 30 to 40 cm, are umbrella-like, 20 to 30 cm in diameter with 5 to 9 deep lobes. Mass displays of these growing in the dappled shade of deciduous trees is a common sight throughout the hardwood forests of eastern and central North America. While not native in my area, Newfoundland, I do grow it but must admit, I am constantly removing wayward shoots that threaten to engulf other choice woodlanders in my shade garden. The solitary, cream-white flowers are nodding and located at the axis point of the paired leaves. It is the hardiest species, rated for zone 4. Native Americans did use this plant as an herbal medicine to treat a variety of mostly female complaints.



From the other side of the world comes the Himalayan mayapple, *P. hexandrum* (syn. *P. emodi*), a species admired primarily for its lovely mottled foliage. While some forms can be plain green, the best have striking brown to purplish mottling, especially in early spring. The solitary flowers in this species are also located at the apex of the paired leaves but



Podophyllum hexandrum—May

are held erect, rather than nodding, hence, are more noticeable. They may be white or commonly, soft pink, adding to their attraction. Later in the season, a nodding, egg-sized, bright red berry develops. This species does not run and will remain well behaved in the garden. It is rated hardy to zone 5.

The remaining species all hail from China. These species also have lovely

mottled foliage whose leaves are often shaped like a starfish! Their nodding dark red flowers are commonly produced in clusters of 3 to 8 and develop into smaller red berries than those of *P. hexandrum*. They are also much tenderer, rated for zone 7, possibly zone 6 with heavy winter mulching. All are slow growers with minimal running. Not so easy to propagate, they fetch high prices in those specialty nurseries that offer them.



Podophyllum hexandrum—June



Podophyllum delavayi - July

Podophyllum delavayi (syn. *P. veitchii*) produces a solitary or cluster of flowers from the crotch of the paired, deeply lobed leaves. The remaining species have flowers that are produced just below one of the paired leaves, rather than from the crotch. *Podophyllum difforme*, very rare and slow, has unusual angled leaves which vary from star-like, polygonal, rectangular to nearly square! Some, like 'Kaleidoscope', 'Starfish', 'Sugar Daddy' and 'Spotty Dotty', have spectacular mottled leaves. Slow to grow via traditional methods, commercially they are grown mostly from tissue culture. Similar to *P. difforme*, with star-like to nasturtium-shaped leaves is *P. pleianthum*. Hybrids also occur between the previous three species.



Podophyllum delavayi - May

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Dysosma 'Spotty Dottie—Nov

Podophyllum aurantiocaulae, perhaps the rarest species in cultivation, is distinguished by its creamy-yellow flowers. The other species are more-or-less unknown and/or extremely rare in North American gardens. These include *P. glaucescens*, *P. guangxiensis*, *P. hemsleyi*, *P. mairei*, *P. majonense* and *P. trilobus*.

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If you have a shade garden and desire 'high end' plants, then the Chinese *Podophyllum* are your kind of plant! If your wallet is not so overflowing, then the less expensive *P. peltatum* or *P. hexandrum* can provide more economical substitutes. ☞



Podophyllum pleianthum x veitchii—July

All photos are by the author.



New Members: Scott Zona

I recently moved from Miami, Florida, to Hillsborough, North Carolina. I've always wanted to have a rock garden, so I joined NARGS. I was thrilled to learn that there is an active chapter of the NARGS in the area. I joined as soon as I could.

Do you have a favorite plant? I don't have a favorite... yet. I love lots of kinds of plants, especially salvias, peonies, flowering bulbs, maples (especially Japanese maples), birches, *Osmanthus*, hollies and dwarf conifers. I want to grow them all!

I am a botanist by training, receiving my PhD in palm taxonomy, and I've spent most of my career studying palms in Asia and the Americas. I've published over 100 articles on palms, *Salvia* and other tropical plants, but I've also worked with mosses and liverworts. My professional interest sometimes intersects my gardening passion, and I like to grow plants for their botanical interest or for my research projects, rather than for their worthiness as ornamental plants. I've published scientific articles that began with observations I made in my garden.

My garden is a pretty much a blank slate. There is a rock-covered berm in the back garden that I want to convert into a rock garden filled with interesting and beautiful plants. So far, the weeds have the upper hand. I need to learn pretty much everything I can about rock gardening. I've admired rock gardens during my travels, so I'm excited to have the opportunity to create my own rock garden. How to propagate plants and grow them in my conditions are two topics that interest me most.

I am completely new to the challenges of growing plants in the temperate zone. Frost and hardiness issues, heavy clay soil, and 4-legged herbivores (moles, deer) are new for me. I've built a compost bin and raked piles of leaves, so I'm making a good start on generating organic matter to improve my soil. Next up: I want to build an unheated greenhouse with all the old windows leftover from remodeling my home. 🐾



Shirley Livengood

I joined your group to take advantage of the speakers and to enjoy time with other gardeners. I know lots of you already so it will just add to the circle of friends.



As to my favorite flower - it depends on what day you ask that question as I have so many favorites. Daffodils, camellias, peonies, hellebores and dahlias to name a few. And I forgot the old-fashioned larkspur, which was a favorite of my grandmother. My love of gardening started with her as we walked through the woods and she would identify the small blossoms. And growing up on a farm I loved to till the soil and watch things grow. My mother was more of a vegetable gardener but she did have roses. Of course I still love roses but they are so difficult in my garden because of the deer.

I have no labeling in my garden and don't always remember everything that is there. It's for my pleasure and to share with others. It is a delight to furnish flowers to friends and to help out the church when blossoms are needed.

Fortunately or unfortunately my garden is spread out over several acres. The house was built in the early 60s in an open field so every tree and plant has been installed, other than those planted by the birds. There are lots of stories about various trees and plants and where they came from. It has truly been a joy to become friends with all these plants. They are wonderful!!! 🐾



NARGS Award for Service to Amelia and Richard Lane

It is my great honor and pleasure to present the North American Rock Garden Society Award for Service to Amelia and Richard Lane. Amelia is our immediate past chair, having served for three years. Richard served for four years at the national level as NARGS treasurer, steering our parent organization through a period of financial uncertainty and establishing us on firmer footing. He recently agreed to come back on board due to the current treasurer's inability to finish his term.

We are lucky to have Amelia and Richard as part of our chapter. They have seemingly boundless energy and enthusiasm. Richard is a jet-setting financial consultant, and Amelia has run her own business, Lasting Impressions, with partner Beth Jimenez for fourteen years. Fresh back from a trip to Ecuador and the Galapagos with the JC Raulston Arboretum, it is rare for these two to miss an opportunity for adventure.

Richard and Amelia take an active role supporting the JC Raulston Arboretum, as well as our Piedmont Chapter and national NARGS. We are so grateful. I'm thrilled to present this Award for Service to Amelia and Richard Lane.  Presented by Cyndy Cromwell



Saturday, March 28, 2020

**Hypertufa Trough Workshop; 9 am-12 noon
Small Concrete Mushrooms Workshop, 1-3 pm**

Lasting Impressions' partners, Amelia Lane and Beth Jimenez, are offering two creative workshops.

Trough Workshop: Create your own stone like planting container with your reusable form, mix the ingredients, and build a hypertufa planting trough. Hypertufa is a lightweight concrete product that makes an excellent medium for plants. It has great drainage to highlight your special plants. You will make and take your trough home from the workshop. All materials are supplied. Cost is \$85.00 and pre-registration is required.

Mushroom Workshop: Create 5 different mushroom shapes for your garden or planter. You will learn how to mix the ingredients, create funky mushroom shaped molds, and make 5 mushrooms to inhabit your garden. All materials are supplied. Cost is \$100 and pre-registration is required

To register, please send a check made to:
**Lasting Impressions to: Lasting Impressions,
4904 Hermitage Dr., Raleigh, NC 27612**

Questions? Please email Amelia at amelia.lane@gmail.com

SAVE THE DATE, SATURDAY, APRIL 18

**LASTING IMPRESSIONS' 14TH ANNUAL
OPEN GARDEN & ART SHOW
9AM-4PM**

4904 HERMITAGE DR, RALEIGH, NC 27612

Come and enjoy a day in the spring garden with native wildflowers and shrubs, spring ephemerals, bulbs, Japanese maples, dwarf conifers & more!

Enjoy returning and new artists, and new plants. There will be pottery, jewelry, birdhouses, metal garden art, hypertufa troughs, concrete leaves, watercolors, turned wood, baskets, & mosaics!! Also available, locally grown plants for your garden.

Come and bring your friends to celebrate Spring!
Amelia Lane & Beth Jimenez, partners
Lasting Impressions:

www.lastingimpressionsleaves.com



Introduction to Our NARGS Greece Trip

By David White

The first rains of fall bring a “second spring” to Greece, when bulbs that have been baking in the hot summer sun come to life. This past fall, the NARGS Tours and Adventures Committee sponsored a trip to Greece to find as many *Crocus*, *Cyclamen*, *Colchicum* and other fall-blooming species as possible! Of the 21 participants on the tour, 9 were connected to the Piedmont Chapter.



During our 12-day tour, we traveled through northern Greece to see oak forests carpeted with cyclamen and fields of *Crocus sativus* where some of the world’s best saffron is produced; enjoyed botanical highlights around Athens (including the personal gardens of our guide, Lefteris Dariotis); and explored the rugged coastlines, limestone mountains, and ancient olive groves of the Peloponnese where multiple crocus species line the roads. Following the botanical tour, most of the group stayed over for an additional 4 days to visit historic sites and museums in Athens, in the northern Peloponnese, and in and near Delphi. The map of Greece above shows in red some of the places we visited. And when we weren’t botanizing or being culturally enriched, we enjoyed some of the best food that Greece has to offer! ❧



Lefteris's Private Gardens

By Cyndy Cromwell

On the NARGS Fall Bulbs of Greece tour with Lefteris Dariotis, we spent most days in wild locations, scouting out beautiful fall-blooming plants, especially bulbs. We began in northern Greece, moving south to Athens and environs, and finally all the way down to the Peloponnesus. A few cultivated gardens were on the tour, and the best of these were Lefteris two personal gardens: the garden he has made at his parents' home near Athens, as well as the famous Goat Garden nearby.



Uncle Sam, Lefteris and the Billy Goat

On a perfect, dry and sunny Saturday morning, our group met at The Goat Garden, which is named after the Billy Goat Tavern in Chicago, owned by Lefteris Uncle Sam Sianis.

Uncle Sam's family is in residence here for one month a year, in August, leaving the grounds as a horticultural field lab for Lefteris the rest of the year. Here, he trials wild collected seeds, bulbs and the many unusual plants he receives as gifts from all over the world.

The Goat Garden peaks in spring, with most flowering plants going dormant in time for the owners to park their

cars in the bulb beds out front. Even in the fall though, there are plenty of things to see in the Goat Garden, a living catalog of Lefteris famous

seed list. I ordered quite a few, and can't wait to find out if *Cerinthe minor* and *Teucrium fruticans* 'Ouarzazate', among others, can survive here in the sticky Southeast.



Cerinthe minor, Goat Garden



Teucrium fruticans 'Ouarzazate', Goat Garden



Seseli gummiferum, Goat Garden



Epilobium californicum, Goat Garden



We then proceeded to Lefteris home garden, which his parents have kindly turned over to him as a nurse-

ry, display garden and seed storage. Working in a modestly sized, urban back garden, he has utilized very square inch: there is a beautiful display garden, sand beds, cold frames, seed beds and nursery stock, all meticulously maintained. This is not the typical hodgepodge you might see “backstage” at some growers, rather a truly awe-inspiring arrangement of everything a serious



Lefteris welcomes our group to his backyard home garden



Adorable, fuzzy bloom on *Salvia oxyphora*



Salvias are the backbone of Lefteris home garden, including here *S. microphylla* 'Hot Lips' and *S. madrensis*

horticulturist might desire.

I asked Lefteris how the garden came about, and it is pretty much all his creation. He started as a

youngster with just a part of the property, where he attempted growing plants like roses, which suffered in the dry heat of Athens. It is only relatively recently in his evolution as a horticulturist that he has come to appreciate and grow the native plants that do so well in his Mediterranean climate. This garden is a stunning show case of what can be achieved by working with plants well adapted to the conditions. ☞

Editor’s Note: Lefteris Dariotis is known on Facebook by his Americanized name of Liberto Dario.



Lefteris with one of the cold frames holding Oxalis trials



Saffron Harvest in Greece: NARGS Adventures Fall 2019

By Nancy Doubrava

Greece is an incredible place, especially in autumn. The tourists are gone, and fall-flowering bulbs awaken, including the saffron crocus (*Crocus sativus* L.). Today, it is time to travel with our NARGS tour leader, Lefteris

Dariotis, to the home of the most expensive spice in the world — saffron. Cultivated for more than 3500 years, it's highly valued for its exquisite flavor, color, and healing properties. After a hearty breakfast, we eagerly board our vans and travel to the small village of Krokos, three



Crocus sativus

miles south of Kozani, in the Western Macedonia region. It is here, where some of the highest quality saffron is produced in the world.

Our first stop is the Cooperative de Safran, formed in 1971 to unite small farmers and set high quality production standards. It serves 2,000 members from 40 small villages of the Kozani Prefecture, where Greek saffron has been cultivated for more than 300 years. Methods of drying and harvesting are passed down from generation to generation, and today they take special pride in certified organic production. We visit their new drying,



Cooperative de Safran in Krokos, Greece

packaging, and labeling facilities. Proudly, the Cooperative de Safran holds the legal rights for the collection, distribution, and packaging Greek red saffron or 'Krokos Kozanis'.

The production of saffron spice is laborious. To make 1 kilogram of saffron, it takes about 150,000 flowers from the saffron crocus. Inside each healthy flower are the three precious, bright red stigmas, the saffron spice itself. These are removed by hand and dried to become red threads. From behind glass windows, we watched the dried red stigmas being meticulously separated and then weighed by hand, before being packaged and shipped around the world.



Basket of recently harvested saffron flowers



Weighing the dried saffron filaments at the Cooperative de Safran



Saffron field flowering in Krokas

We leave the production facilities and travel along a quiet road that is soon bordered on either side by fields turning lavender. The saffron crocus, *Crocus sativus*, is ready for harvest. It is a pleasant, dry morning, mid-70 degrees F, and refreshingly there is no large agricultural equipment in sight. Harvesting is a family affair, and the horizon is dotted with silhouettes of both young and old. Buckets of hand-picked crocus flowers are being carried to central locations. We park along the roadside and are greeted with a huge smile from Nikkos, our guide, who we follow into the fields.

We walk carefully among the crocus flowers beneath our feet. The soil is rich, calcareous, and very well-drained. A clump of crocus is dug up for our closer inspection of its growth below ground. Crocus plants arise from underground structures called corms. Each corm lives for only one season, but can produce up to 10 cormlets. Each field is cultivated for a maximum of six years, then allowed to rest for 20 years to help control soil pathogens. Now another day is ending too quickly, and we linger in the fields before leaving. We travel onward to our next adventure, a very special meal featuring saffron dishes.

Before concluding there are few botanical notes worth mentioning. First, *Crocus sativus* is a triploid hybrid species, sterile, and unknown in the wild. No viable seeds are produced for breeding, so all plants cultivated worldwide originate only vegetatively. In 2019 researchers at TU Dresden using molecular and cytogenetic methods, reported that saffron crocus is descended from a single wild species, *Crocus cartwrightianus* found in Greece. Finally, I would like to report that Greece is an incredible place to visit, especially when exploring with Lefteris Dariotis. ☞



Lefteris Dariotis holding a recently dug clump of saffron crocus in Krokas

All photos by Nancy Doubrava.



May 31 Picnic at Belvedere Garden

102 Sturbridge Lane, Chapel Hill NC 27516

By Gail Norwood

Being from Williamsburg , VA, I naturally found our colonial style neighborhood in Chapel Hill appealing. Garden elements were chosen in keeping with the colonial theme and flavor of the house and neighborhood. There is an herb kitchen garden by the back deck near a bricked patio with seating. Nearby beds filled with hydrangeas and roses put on an early summer show.

One of the main features in the garden is the Gazebo, seated deep in the wooded area. It is an exact replica of the Benjamin Waller Gazebo in Williamsburg, built for me by a local carpenter. I have named the garden Belvedere, which is French for gazebo. It is the heart of the garden!



The garden has been a place for family, friends and neighbors to gather and provided some rich memories of special events. It has been an honor and pleasure to be on several garden tours, and to be featured in six magazines, which has been most rewarding. In 2015 it got the cover shot in Country Gardens Magazine. As is true of most of us, I love to share my garden with other gardeners! ❧



Plant Sale at Raulston Bloom, April 4

Jim Hollister, Plant Sale Chair, hollijm@gmail.com

The NARGS Piedmont Chapter plant sale at Raulston Blooms is fast approaching - April 4th. It is a great opportunity to get more involved in our chapter. The time is between 10 am and 4 pm.

This plant sale provides over half of our total income for the year. Proceeds go towards acquiring our great speakers among other things and allows us to make significant contributions to the JC Raulston Arboretum which has been so supportive of our club for years.

Not too late however to get something together if you have been procrastinating. Remember, each individual pot needs a label (a section of venetian blind can work well) with scientific name, and optional info such as common name, size, sun/shade, wet/dry, bloom color, aggressiveness. A picture will be very helpful in selling a flowerless plant.

One picture per type of plant you are bringing. Something about 3" by 4" with the name of the plant and somehow weatherproofed (laminated/baggie) would work great. If you want to send me a photo, I have a laminator, and could print and laminate. Maybe we could get a collection of pictures together for next year.

Regarding a few questions about my comment on the website about "invasives." If you are trying to rid your garden of a plant that seems aggressive, it might not be the plant to pot up to donate! It is also helpful to include comments on the tag as appropriate: Seeds around, or Spreads rapidly.

I will have a signup sheet for volunteers at the March meeting, but if you are anxious and would like to make sure you get a chance to serve, email me.



Lastly, small boxes and shopping bags will be needed. These can be brought to the next meeting, or if you plan to be at Raulston Blooms early in the day, can be brought then.



Thank you for your generosity and service over the years, and please email me with any questions. 🍷

GREAT WAY TO LABEL YOUR PLANTS FOR THE RAULSTON BLOOMS SALE
Just photograph your plant and type its name to identify it, then print both and mount on a plastic fork.
If you want to include a few helpful words regarding plant needs, as sun or shade, mature size, etc., that would benefit new gardeners.



NARGS Piedmont Chapter Meeting

JC Raulston Arboretum

9:30 Gathering Time – 10 am Program Begins

March 21, 2020

Todd Boland

St. John's, Newfoundland
NARGS Traveling Speaker

“Spring Alpines of the Spanish Pyrenees”

April 18, 2020

Cyndy Cromwell, Nancy Doubrava, David White
“NARGS Fall-Bulbs-of Greece Tour”

Message from the Chair

Cyndy Cromwell

As I write this, it's a chilly 24 degrees on a sunny morning, following the first measurable snowfall in 400 days for our region. And yet, by the time of our next meeting on March 21, our busy spring will be in full swing, and some of you might be complaining about the heat!

Todd Boland, our March speaker, will certainly not be among the complainers, as he lives and gardens in Newfoundland, which has been experiencing an exceptionally snowy winter. His presentation, *Spring Alpines of the Aragonian Pyrenees*, promises a taste of the lovely flowers and bright sunshine of Spain.

Plants plants plants – that's what spring is all about! As you venture out to tidy, dig and divide, consider potting up some of your garden extras for the annual Plant Sale, on April 4 at JCRA's Raulston Blooms event. Check out the website's plant sale page for updated information about participating in our main fundraiser, or contact Chair Jim Hollister, holljim@gmail.com

On April 18, Nancy Doubrava, David White and myself will attempt to convey some of the wonder and beauty of our NARGS trip, *Fall Bulbs of Greece*, last fall. David White, our Treasurer, also administers the enormously successful NARGS travel program. These trips routinely sell out quite early, so plan ahead to come along on a future botanical adventure!

Appalachian Spring Fling, our botanizing trip to western North Carolina, May 15-17, has filled, but you may add your name to the wait list. Particularly after Will Hembree's February talk on hiking the Appalachian trail, I can't wait to explore this area!

Finally, on May 31, the lovely garden of chapter member Gail Norwood will be the site of the annual Spring Picnic. Details will be coming soon. 🌸

Goodies to Share

If your last name begins with a letter below, we encourage you to consider bringing a goodie to share with others.



Sept A-C	Feb M-P
Oct D-F	March R-S
Nov G-H	April T-Y
Jan J-L	May Picnic

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Photos by Bobby Ward