

A photograph of a winter garden scene. The foreground is dominated by large, light-colored rocks covered in a thick layer of snow. To the left, there are several small, rounded shrubs, also covered in snow, with some reddish-brown berries visible. In the background, there are tall, dark evergreen trees and some bare deciduous trees. The sky is bright blue with a large, bright sun in the upper left corner, creating a lens flare effect. The overall atmosphere is bright and crisp.

NORTH AMERICAN ROCK GARDEN SOCIETY

The Rock Garden
QUARTERLY

WINTER 2018/2019

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All illustrations are by the authors of articles unless otherwise stated.

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From the Editor

THE PAGES OF the *Quarterly* have long been full of useful information on how to cultivate wonderful plants from all around the world. But many of us don't just cultivate plants. We also want to cultivate rock gardeners. We want to share a beautiful way of growing that we love so much, and we want this society, and its local chapters to thrive. We all know this is important, as we value the community this society builds, the essential service in preserving rare plants that the seed exchange provides. We all know that the world will be a less beautiful, less joyful place to live if we don't pass on the art of rock gardening to another generation.

Because of all that, I'm thrilled that this issue, along with the usual articles on cultivating plants, includes two articles on cultivating our local chapters of NARGS. One is from the talented Margaret Bowditch on running local chapter flower shows. Shows are something we don't do nearly enough here in North America. I think they are a terrific way to share (and yes, show off!) our gardening prowess, and they can be an excellent way to demonstrate to non-rock gardeners what they style of growing is all about.

I also wrote an article myself for this issue which tries to summarize what I've seen successful plant organizations around North America do to find and retain new members. I hope to make articles like these a regular feature in the *Quarterly*. So please, if your local chapter (or other plant organization) is doing something that is working, let me know! Just as our gardens all do better when we share seeds and information, so will our local chapters thrive when we share ideas and successful events.

I'm also very excited about the new NARGS website. If you haven't been to www.nargs.org lately, check it out, and see the new way to read the *Quarterly* online. Instead of just downloading a PDF, you can now also click through to individual articles like you would on your favorite news website. This will make for a more pleasant digital reading experience, make it easy for you to share articles you like with friends on social media, and will help the site pop up a lot more in search results. I think it will be an important part of raising the NARGS profile and reaching potential new members.

This issue isn't, of course, just about growing the NARGS organization. Lee Recca wrote a piece on rooftop rock gardens which is beautiful and inspiring. You can rock garden anywhere, even if you don't have a garden!

I'm thrilled to be publishing Anne Spiegel's terrific article on some of her favorite rock garden plants. While editing it, I certainly had to add quite a few of them to my list of things to try and get for the garden next year. Even better, I've talked Anne into writing a sequel to that article in the next issue, so stand by for that!

Loree Bohl shares with us her fascinating technique of converting her shady summer seating area into a small greenhouse every winter. If you have a small garden, think you don't have room for a greenhouse, but want a place to overwinter wet-sensitive or not-quite-hardy plants, be sure to check out this article.

Diana Silva writes a beautiful piece, meditating on her life as a gardener and what it brings to her. This isn't a how-to article, but something to curl up with on a cold winter's night when you need a little reminder of the joys of the gardening season.

And to round out the issue, we've got articles from Mike Slater and Betty Mackey, with some teasers about some of the fantastic places, natural and cultivated, you'll be able to see if you attend the Spring Study Weekend next May. I'm, sadly, not going to be able to make it up for the study weekend, but I'm filing these articles away so I can recreate the experience on my own next time I can get up to the Philadelphia area.

I hope you enjoy this issue. I had a lot of fun putting it together, and am incredibly grateful to all the authors who take the time out of their busy lives to write articles. As always, if you want to write something, or know someone who would be a great author for the *Quarterly*, please do let me know! And in case you didn't know, I do take requests! I've had a couple of people recently ask for articles on specific topics, and I think I've tracked down authors who can write about both of them for future issues! Please don't hesitate to shoot me an e-mail (gsparrowgardens@gmail.com) and let me know what you would like to see in the *Quarterly*.

Happy gardening, and may winter treat your plants kindly!



What Got Left on the Cutting-Room Floor

ANNE SPIEGEL

ANYONE WHO HAS ever had to prepare a talk knows the angst of editing pictures. All of the plants in my garden are my favorites. The ones that turn out not to be my favorites go to plant sales or to a neighbor who puts them in heavily watered, super-rich soil and then assumes they were annuals when they don't reappear the following spring. The plant pictures on the cutting-room floor are all loved for various reasons and it's really hard to leave any of them behind when you feel they are equally deserving. In this article for the *Rock Garden Quarterly*, it seemed the perfect time to talk about some of the plants that didn't make the cut through no fault of their own.

There is never time to talk about the garden that is being made at the bottom of our property next to the road. What had originally been a small stream was turned into a pond by the former owner. It was basically a 14-foot-deep (4.26 m) hole that covered one-third of an acre (1300 m²), and home to very large turtles, water snakes, and muskrats. The land across from us was sold to build McMansions and the developer needed our permission for drainage. The quid pro quo was filling the pond and turning it back into a stream. For the first time, I had an area that was wet year-round with a small stream and springs



Primula japonica in the moist pond-turned-garden.



Ranunculus aconitifolius (left) and double-flowered *Caltha palustris* (right).

and with room for all sizes of plants. It is also the one place where there is no rock. A sloped, shaded area was filled with rogersias, *Ranunculus aconitifolius*, *Darmera peltata*, *Aesculus parviflora*, hellebores, cimicifugas, astilbes, and primulas. On either side of the stream are *Primula japonica*, camassias, *Iris ensata*, *Iris sibirica*, *Trollius europaeus*, daylilies, and a double-flowered *Caltha palustris*. It was a surprise to learn that many “shade” plants are perfectly happy in full sun when their feet are constantly moist. Ligularias were unfortunately too successful and were dug up and moved in front of the 8-foot (2.4 m) fence that was added after several years of planting and having the “antlered rats” eat everything. Now I have both moisture and no deer damage, any Northeastern gardener’s dream.



A wide swath of *Eranthis hyemalis*.

Above the front cliff, *Eranthis hyemalis* starts the season in early March. It blooms as the last of the snow is melting. I learned to dig up a patch in bloom and move it to increase the size of the planting. Now it cuts a wide swath in the light shade of an old lilac tree and will be followed by galanthus, epimediums and American ginger (*Asarum canadense*) that have just been allowed to spread. It’s a no-upkeep planting that increases in size.

Early in April, the incredibly dissected, fleshy foliage of *Lomatium grayi* appears. From seed, the foliage exhibits variation, always very dissected but some are a really fine filigree. A member of the Apiaceae, it is known as "biscuit root" and "Gray's



Lomatium grayi

desert parsley." The bright yellow flowers are held in flat umbels above leafless stems and the large flat seeds turn chocolate brown when ripe, which is another decorative element. It goes dormant in summer. The plant makes many seedlings right around the mother plant which immediately develop a thick, strong taproot, making moving even small seedlings difficult. The young stems and roots were a staple for the Paiute Indians of the American West. The older root is also edible but not very tasty and was called starvation root. This is a western plant of open, dry rocky places with an average annual rainfall of 10 to 20 inches (25-50 cm). Despite this, it has done very well in my garden.



Paeonia tenuifolia

Another April-blooming plant is *Paeonia tenuifolia*, the fern-leaf peony. If it never flowered you would still love it for the delicate-looking, very finely divided foliage, but the flowers make this a must-have plant. Mine has single, deep-red flowers which will last a week unless there is a hard rain. You plant it where you want it and then just let it grow. Here it doesn't seem to mind strong sun, drought, and wind. The plant is



Paeonia peregrina

late-summer dormant. It can be divided, but I've never had the nerve to do it. Sometime after it has finished blooming the flowers of *Paeonia peregrina* will start. These are also red, and the petals surrounding the boss of gold stamens are so shiny they almost look plastic. The foliage is deep green and more typical for a peony. Supposedly it must be protected from wind, sun, and drought, but that is its typical diet here and it grows and flowers very well anyway. Both of these peonies are very desirable in the garden and bloom before the usual border peonies.

Glaucidium palmatum 'Album' is a gorgeous shade plant which was a gift originally from Harold Epstein's beautiful woodland garden in Larchmont, New York. The large leaves are a fresh green and the stunning white flowers are huge. It seems to be able to go dormant towards late summer if the drought is very bad and come back again in the spring. In this garden that's a huge plus. Harold was incredibly generous, always bringing gorgeous woodland plants to my sunny, windy garden on his visits. These included *Trillium grandiflorum* and *Sanguinaria*



Glaucidium palmatum 'Album'

canadensis (both with double flowers), and *Iris gracilipes*. Harold and his wife Esta and I would walk around the garden and he would choose a spot to try his latest gift. Many of the original plants he brought are still going strong. I lived in dread that he would notice if I had killed one of his plants, but if he did, he never said anything.



Ranunculus ficaria 'Flore Pleno'

When you are the owner of a very dry garden, you can entertain certain plants which might come under the classification of “garden thugs.” Several of them are planted and enjoyed here without the usual ill effects, but my favorite is probably *Ranunculus ficaria* and its many hybrids. One of the most decorative is *Ranunculus ficaria* 'Flore Pleno', an early spring bloomer. This one has made a lovely mound a few inches high of dark green leaves with double yellow flowers. It is an excellent form that stays tight and is very well behaved. Another of the so-called thugs is *Asarina procumbens* 'Nana' The foliage is soft and gray-green, the flowers are large and pale yellow – if it didn't have such “taking” ways, it would be high on any gardener's list of desirables. It is not truly hardy here but maintains itself with self-sowing. Often, I will twitch out a tiny seedling and literally paste it into a hairline crevice on the cliff. Enough will take to make a nice display on what appears to be a solid wall of rock. It seems to be able to grow anywhere, happy here in shade and also in sun.

My garden is not a place where you will find the Kabschia saxifrages with their gorgeous flowers or the many blues and purples of mounds and cascades of campanulas. Two enemies of these beautiful plants are always here in abundance: summer heat and drought. To that add humidity for during the worst of the summer we have the



Asarina procumbens 'Nana'

really dreadful combination of heat and humidity accompanied with long periods of drought. The silver saxifrages will do reasonably well here and are well loved, but theirs are not the brilliantly colored flowers that rock the garden. The mossy saxifrages are also a failure here with one exception – *Saxifraga cebennensis*. This was a plant given to me many years ago by Ellie Spingarn, a wonderful rock gardener and plantswoman who gardened in Redding, Connecticut. Like anyone who has gardened for a long time,

my rock garden is also a friendship garden. The daily working tours are accompanied by remembrances of the people who gave me plants to try and who encouraged all my garden building projects. Although *Saxifraga cebennensis* (one of the “mossies”) is not supposed to tolerate drought or much sun and is recommended for alpine house culture, it has flourished here for many years. It is planted in a trough next to a piece of tufa, which seemed a reasonable thing to do since it inhabits limestone areas of the Cévennes Mountains of France. The trough was placed north of the house, receiving shade by mid-afternoon from a large tree. It did very well despite long periods of summer drought, because a few hanging plants were in the area and those did get watered sometimes. Any fallout spray would reach the trough and keep its occupants happy. *Saxifraga cebennensis* forms a low mound with large, brilliant white flowers that make a lovely display. Years later, the tree was wiped out by a tornado and we replaced it with a lath shelter because the dog pen was now in strong sun. I still have the original plant which waxes and wanes according to weather conditions, but to be on the safe side I’m trying to grow it from seed, the preferred method of propagation.

A perfect understory plant for hellebores and epimediums is *Thalictrum kiusianum*, a dwarf meadow rue from Japan and Korea. The foliage emerges here in late spring after most of the hellebores have finished blooming. It takes a while to settle in but then starts to spread slowly. The soft, delicate foliage is followed by airy clouds of tiny, lavender, dainty starry flowers. No more than 6 inches (15 cm) high, it has seeded itself here but not enough, because you can’t have too much of this charming plant. It seems indifferent to pH, and accepts quite a bit of sun although it has spread more in the shadier areas. It can be divided when the new growth appears in spring.

Many years ago, I was lucky enough to see *Aquilegia scopulorum* in Red Canyon in southern Utah, where it grew on a very steep, sliding scree. The population was not concentrated but appeared here and there as far up as I could see. The plants were quite variable both in size and flower color. They ranged from a scant few inches (7 cm) to a foot (30 cm) high with pale to dark blues, soft lavenders to purples, and lovely bi-colors, many of which would have taken pride of place in any rock garden. No matter the size of the plant, the flowers were large and immediately identifiable by their ridiculously long spurs. It was a very dry area, but they will grow and stay here for a number of years, probably best planted in a trough and far away from any other aquilegias, because the genus as a whole has some of the garden's most promiscuous plants.



Astragalus loanus

Astragalus loanus is a rare endemic of Sevier County, Utah, which seems to be the home of a number of really great plants. This treasure is quite small with a number of silky-haired paired leaves surrounding the caudex. The large flowers sit straight up around the plant and are white with purple tipped keels. It's found on slopes of volcanic gravel and needs sun and excellent drainage in the garden. The seed pods are large with silver hairs. It actually made several pods in the garden, but some critter ate them before they were ripe enough for harvesting. Even in the wild, collecting astragalus seed pods can be very frustrating because when you open them up to harvest the seed you often find that tiny bugs have gotten there before you and have damaged a lot of the seed.

Penstemon debilis grows in western Colorado with only a few known locations in Garfield County. It's also called the parachute penstemon due to its proximity to Parachute, Colorado. It grows on very steep, south facing, unstable oil shale slopes, at elevations from 5,500 to 9,100 feet (1600 - 2700 m). It is a xeric plant with succulent,

glabrous leaves that are a pale, almost blue, green. The flowers in the one I grow are large, funnel-shaped, and the palest of pinks. *Penstemon debilis* is soboliferous, which means as the unstable slope on which it grows moves inexorably downward and the leaves start to get buried, the stems are able to elongate and the plant is able to unbury itself. A mature specimen could have the roots anchored quite some distance above the plant. The plant was discovered in 1986 and is currently listed as threatened. I grew this years ago from Alan Bradshaw's Alplains seed company (collected when it was okay to do so), and from the resulting seedlings only one survives, but it has been in the garden for quite a few years. Each spring there's a celebration when the plant reappears because there may never be a chance to grow this one again and it is really lovely and very different. Alan described the habitat from which he collected the seed and it sounded like a "near-death" experience. It was growing in a steep, shifting scree below cliffs, with the scree sliding towards a sheer drop. He described the plants as rambling through the scree. In my garden conditions (very lean scree), it has grown as a low mound. It makes you appreciate seed collectors and understand why some seeds are expensive. The only caveat here had been that the foliage, which is so beautiful, can be disfigured by too much rain. The same could be said for lewisias, but it certainly hasn't stopped me from growing them. In all the years this plant has been in my garden I've never been successful at harvesting seeds nor has it self-sown.

Erigeron scopulinus is the smallest erigeron of my acquaintance, but definitely one of my favorites. It makes a closely-knit mat of small linear leaves of a bright dark green, a wonderful foil for the brilliant white daisies that are almost stemless. A dainty looking plant from Arizona and New Mexico where it grows on ledges and cliff



Erigeron scopulinus

crevices, it's actually very hardy and seems to be as tough as nails. It is drought tolerant but not xeric, although it managed to survive last summer's horrific drought. If you want to plant it in a trough make sure it's a big one because it will spread, especially when it is well watered. I've always been tempted to try under planting it with small bulbs.



Edraianthus pumilio

Edraianthus is a genus in the campanulaceae, and many of the species are excellent in the rock garden. Probably high on any gardener's list would be *Edraianthus pumilio*, a gorgeous plant for tufa and scree. It forms a very tight cushion of narrow silvery leaves and the flowers completely cover the plant with closely packed upturned bells. The flower color is variable and I've grown one that was a soft lavender blue and others that were a rich dark purple. It comes from limestone cliffs and crevices in the Balkans and is grown here in a tufa crevice bed. It gets full sun and wind all day and has been an easy keeper without problems. This was a bit surprising to me since its relatives, the campanulas, really don't like my garden. I read somewhere that Zone 6 is the low limit of its hardiness but the plant has grown here for over 20 years in a Zone 5a/4b garden. I guess you can't believe everything you read.

Sedum cauticola 'Lidakense' blooms at the end of the summer and into the fall when there is not much color in the rock garden. This variety has dark red-pink flowers, contrasting beautifully with the silver-blue fleshy leaves. This is not a sedum you will regret planting because it seeds itself sparingly, just enough for you to dig out the occasional seedling and plant it in another part of the garden that needs some fall color. I grow it here on top of a wall and it managed somehow to seed itself in the wall itself. It's very easy to grow, but considering the "taking ways" that too many sedums have, it might be good idea to grow it lean.



Sedum cauticola 'Lidakense'

Hypericum cerastioides, a plant from Turkey, has been growing in my garden since 1981, a testament to its longevity. It's also a plant of wonderful attributes – large yellow flowers, wonderful blue-green foliage, and it seeds itself just enough that you never have to worry about losing it. It grows here in a lean scree with full sun and is watered only by Nature. It blooms in late spring and will sometimes rebloom during the summer when it likes the conditions.



Hypericum cerastioides

In the Dolomites in Italy, *Globularia cordifolia* is found above tree line growing in limestone rubble. *Globularia cordifolia* subsp. *nana* is one of the mainstays in my garden. It is a smaller plant but still distinct from *Globularia repens* which is even smaller. It makes an ever increasing adpressed mat which has the ability to flow over obstacles (such as rock) that might be in its path. It gets woody with age but is still covered with the small dark green leaves and continues to flower well. The flowers range from the pale blue of this form to the dark blue of *Globularia trichosantha*, which is a larger plant in all respects.



Lilium bulbiferum var. *croceum*

Lilium bulbiferum var. *croceum* is one of the glories of the Dolomites when in bloom. A brilliant orange showstopper in its habitat of mountain meadows and hillsides, at its full height of 3 to 4 feet (about 1 m) it stands above most of its neighbors and telegraphs its presence from some distance. The large, wide open, unscented up-facing flowers have an interior flare of paler yellow-orange dotted with dark chocolate spots. The Latin for “bearing bulbs” is “bulbiferum,” and the plant has tiny aerial bulbs along the stems. It prefers sun and alkaline soils but will grow well in lightly acidic soils. It also wants consistent moisture, which it doesn't get here, but that simply means the growth is slower and the plants a bit lower at 2 feet (0.6 m). It is generally considered to be a fast grower.



Saponaria x olivana

Saponaria x olivana has been in my garden since 1980. I think of it as the “tonsured monk” of the garden because it starts blooming on the outside ring of the tightly leaved low mound and stays that way for some time before the flowers begin opening towards the center and it becomes a solid mass of color. The flowers are really luscious, a soft pink and very large (*Saponaria x olivana* ‘Bressingham’ is a darker pink and lovely in bloom, but the flowers are tiny in comparison). In all the years I’ve grown this plant it has never produced a seedling. It grows from a strong central taproot and unfortunately no part of my plant has ever layered itself (called the lazy man’s propagation trick, which works very well with some penstemons).

If the pretty little annual blue bachelor’s buttons are the only thing that comes to your mind when centaurea is mentioned, you are missing a wealth of lovely and interesting plants for the rock garden. *Centaurea pindicola* from Mt. Olympus in Greece is one of the stars of this large genus. Known also as the Pindus star thistle, the plant has rosettes of large, deeply lobed grey-green leaves that have long silver hairs. The white thistle flower is huge with very narrow petals divided in three at the end and sits right on the rosette. Towards the center of the flower there are some scattered black petals, which I’ve heard described as looking like long eyelashes. This may be a bit fanciful, but the contrast is quite wonderful. This has been growing peacefully in a sunny scree for some years and just recently I learned that it was fairly rare and not found in many gardens. My original plant came from Maria Galletti, the owner of the former Alpines Mont Echo Nursery in

Canada. Another very nice one for a limestone scree is *Centaurea chrysantha*. It has golden thistle flowers sitting on a rosette of leaves so felted with silver hairs that the rosette appears to be white. When the flowers finish you see the long chocolate spines on the calyx which are very decorative (and very sharp). Although they have not been registered as lethal weapons, wise gardeners will approach only with very tough gloves.



Centaurea chrysantha

All of the rock garden convolvulus are really beautiful, floriferous plants, usually flowering in brilliant whites starting in June. *Convolvulus suendermannii*, which is supposed to be hardy to Zone 2, has large, clear pink flowers and it flowers on and off all season. After flowering it seems to take a brief rest and then buds start to form again. This summer this happened also with *Convolvulus compactus* for the first time. The leaves are also very beautiful – long and narrow, with distinct veins, and a lovely silvery-gray thanks to the densely covering silver hairs. It is a wonderful plant for full sun and a deep, lean scree to accommodate the taproot. In nature this convolvulus species, so cherished by rock gardeners, becomes very woody with age, the tap root extending and looking almost like a small trunk.



Convolvulus suendermannii

All of the plants discussed have one thing in common—their value in the garden. The value varies: it could be beauty, color, size, ease of culture, longevity, dependability, or length of bloom time. That they all were on the cutting room floor is due to time constraints and nothing else. There are still many plants left not mentioned but I'll have the pleasure of praising a few more of them in the next issue.



Rocks on the Roof: Gardens Grow Skyward in Denver and Paris

LEE RECCA

IN 2017, COLORADO'S capital city, Denver, joined a growing list of cities, including San Francisco, New York, Paris, and London, requiring green roofs on all new construction of more than 25,000 square feet (2300 m²). Green roof gardens already exist and have proven themselves. But rock gardens on roofs? Where there is a will, the materials, and the methods, there is a way. These two rooftop rock gardens in opposite hemispheres are proving that rocks, plants, and roofs can be compatible companions.

Rocky Mountain Higher Gardens

Denver Botanic Gardens has long been known for pushing the envelope of horticulture at altitude, so it's not surprising that it is at the forefront of rooftop gardening. The Mordecai Children's Garden, approximately half of which fits on the roof of DBG's parking garage, was developed in 2010 and is, by far, the largest roof garden in Colorado.

Walking with the garden's curator, Michael Guidi, on an August day reveals an amazing diversity of plants, microclimates, and structures. There are features seen in typical rock gardens, including stone troughs, cobble beds, sandy dunes, and crevice structures



Opposite: Rooftop garden at Denver Botanic Gardens. Photo by Michael Guidi
Above: Curator Michael Guidi with a crevice garden on the rooftop.



Rocky outcroppings and trees create microclimates that allow a wide range of plants to thrive on the rooftop.

composed of rhyolite. The garden's designers specified the pounds-per-square-foot ratings for each planting area, which allow for a variety of structures, while a Styrofoam-like substructure supports from 2 to 18 inches (5 to 45 cm) below the growing media.

"A 2- to 3-inch (5 – 7.6 cm) layer of media can only support succulent plants and the like," said Guidi. "As the layer of soil deepens to 6 inches (15 cm) or so, herbaceous plants can survive. Then, when we are able to get to a 12-inch (30 cm) soil depth, we can start planting woody material and a much wider array of herbaceous plants." The growing media is typically composed of 80 percent expanded shale, 15 to 18 percent compost, and a small amount of zeolite.

Guidi relies on the creation of microclimates to diversify the garden's plant vistas. Even a small tree, shrub or rocky outcropping can create a shelter in which more delicate plants can thrive. There have been some surprises in the development of the Mordecai roof garden and of a smaller, more experimental one atop DBG's café. "Some of our

penstemons have been growing for 8 or 9 years!" he said, "While some of the erigerons have only given us 2 to 3 years." Pointing to a stand of scarlet gilia (*Ipomopsis aggregata*), he added, "reseeding has sometimes been a bit too successful."

Plants in the Mordecai roof garden receive no fertilizer. Why? Because, among its many purposes, the garden serves as a giant water filter. DBG and Denver's water department monitor the runoff from the garden and are seeing impressive results. A retention pond downslope from the roof area collects the filtered water and has been incorporated into the garden, with water-loving plants and habitat for animals and insects.

Children of all ages visit and delight in the Mordecai Children's Garden. It's a delight, too, for the horticulturalists who work and study there. A living laboratory, the garden points the way skyward to a boom in living rooftops.



The Denver Botanic Gardens rooftop garden in full bloom.



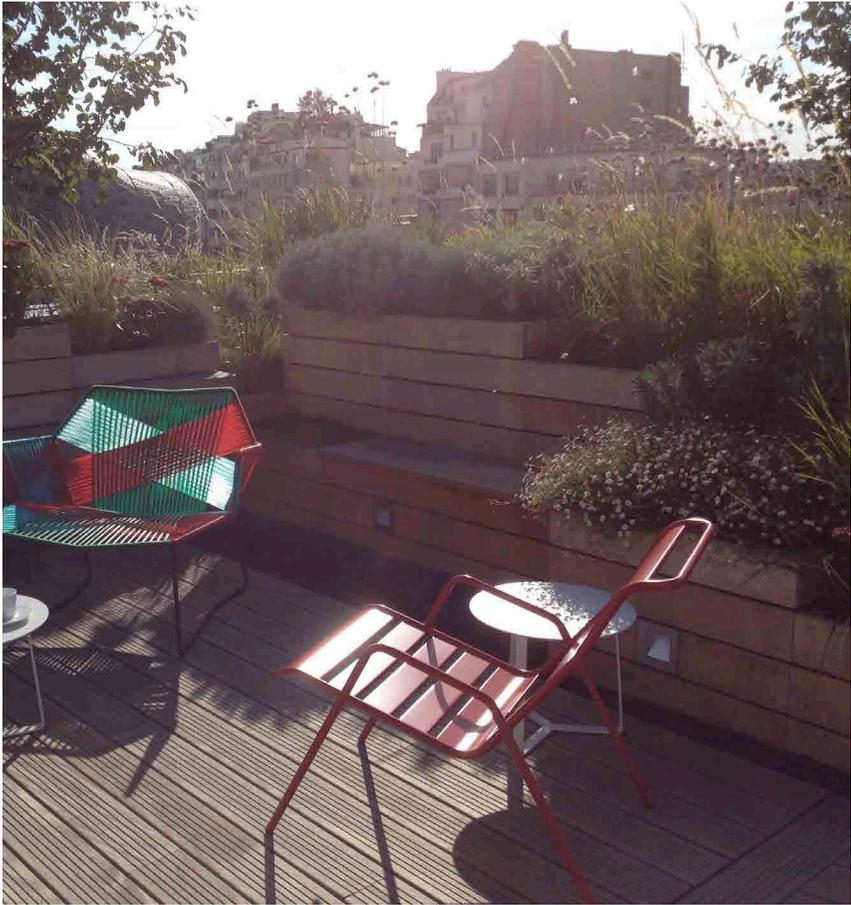
A tapestry of low-growing plants on the Molitor Hotel rooftop.

Paris Rocks the Roof Garden

A rooftop herb garden, outdoor kitchen, restaurant, patios, and plantings crown the reconstructed Molitor Hotel in the chic 16th arrondissement of Paris, not far from the Eiffel Tower. Its historic 1930s pool was popular with celebrities such as Johnny Weissmuller and was the birthplace of the bikini. Now, a reconstructed hotel surrounds the pool, with two stories added and additional framework to support a roof garden including rocks and trees.



A planted wall of herbs on the Molitor Hotel rooftop.



Lush plantings surround the seating areas on the Molitor Hotel rooftop.

Tufa is extensively used as a growing medium, hosting a bricolage of plantings ranging from tiny sedums to towering grasses and flowering trees. Seating areas are reached by a patchwork of tidy gravel pathways. The aromatic herbs and plants and the warm rocks add fragrance to the air as waving grasses hush traffic noise with their susurrations. The garden holds its own, diverting guests' attention from the stunning views of the City of Light.

Paris was one of the first cities to propose a green roofs law in 2015. These mandates are now under attack and other options are being proposed, such as solar or white-painted roofs. However, green roofs such as the Denver Botanic Gardens and the Molitor Hotel predate the legislation and prove that garden rooftops, even rock garden rooftops, are not only possible but practical and make a valuable impact on urban environments.



The Shade Pavilion Becomes a Greenhouse

LOREE BOHL

SUMMERS IN PORTLAND, Oregon, are the stunning reward for our long, wet, grey, cool, winters. Summer days are sunny and the weather is warm (some would say hot, and after the temperature records set this last summer I would agree). While many think of the Pacific Northwest as rainy all the time that's simply not true. Our modified Mediterranean climate means the rains typically end sometime in May or June and don't return until October or November.

Our sunny patio is where I like to spend summer days, surrounded by my (now substantial) collection of potted plants: agaves, aloes, yuccas, mangaves, assorted cacti, and more. My husband, Andrew, is not a sun lover, however, and knowing it would be years before our *Magnolia macrophylla* grew tall enough to cast shade, he designed a structure to provide it. Originally dubbed the "shade shack" — because it's so much fun to say — the name was upgraded to "shade pavilion" once complete, as it was just too well designed to call it a shack.

The first winter with the shade pavilion (2009) I decided to move some of my dry-loving container plants under it, rather than into the dark garage. The tall, angled, roofline wasn't meant to keep things below dry, but unless a strong wind came through there was a small patch of ground significantly drier than the surrounding area. We dedicated gardeners take advantage of every opportunity to keep our treasured plants healthy.

Seeing the containers huddled under cover got my husband's creative, problem-solving, mind working. He developed a modular design that would turn the shade pavilion into an enclosed greenhouse of sorts. Our main goal was to keep temperature hardy succulents dry (cold is fine, cold and wet is the kiss of death), but I soon realized a small heater might help keep the temperature from plummeting as well, slightly increasing the range of plants I could successfully overwinter.

Those of you living in colder parts of the country might think someone in USDA Zone 8 shouldn't complain about winter cold, but I also have an extreme case of zonal denial; I'm always pushing the boundaries of what I can grow. Plus, when you're growing plants in containers, 14°F (-10°C) nighttime lows and extended daytime highs below freezing — which does happen here — can allow roots to freeze and otherwise zone-hardy plants may perish.

Opposite: Shade pavilion in the summer (top) and greenhouse for tender plants in winter (bottom)



Shade Pavilion Greenhouse Version 1.0

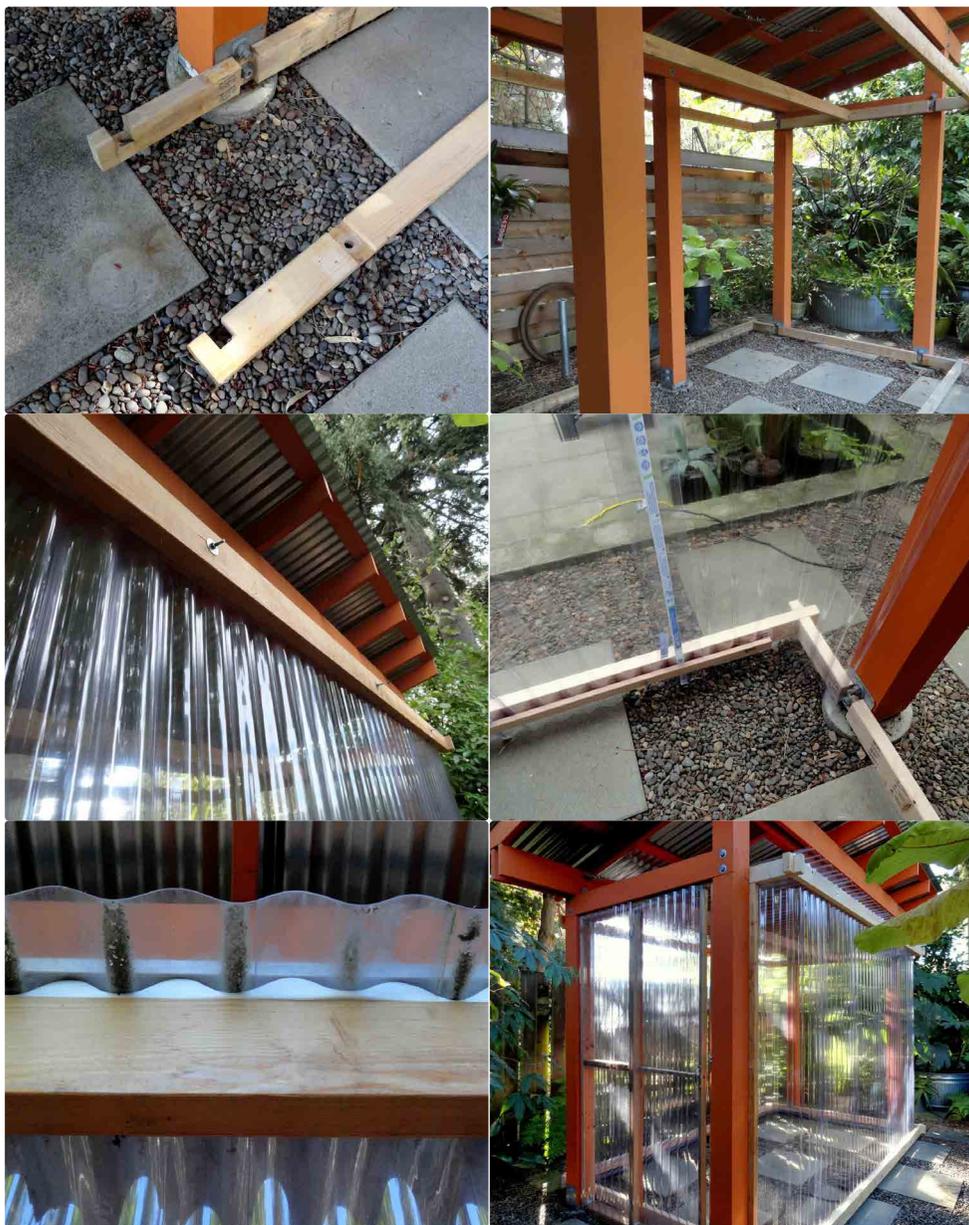
The first iteration of the shade pavilion greenhouse (SPG) — which went up in October of 2010 — involved ends made of rigid corrugated plastic panels, with sides and a top of heavyweight plastic sheeting, draped over PVC pipe. The edges of the plastic sheeting were snapped into metal channels designed for just such a thing. Since the greenhouse roof was under the existing metal roof, we didn't have to worry about snow or ice load. It wasn't pretty, but it did the job.

That first design went up each fall, and down each spring, for three years — until Andrew decided he'd had enough of the plastic sheeting and needed to improve upon it.

Version 2.0, which debuted in the fall of 2013, is made entirely of corrugated plastic panels sandwiched, top and bottom, between two pieces of wood, which screw together to hold the panels in place. The entire greenhouse structure is built off of eight 2x4s which slip into place over the shade pavilion's existing bolts, no screws or nails that mar the existing structure. Nothing that — once the walls are down — indicates this is anything but a summer-use structure. That's the genius of the design, in my opinion.

The design does have a few less-than-ideal elements, however, all easily solvable, but ones that make the SPG look a little unpolished. For one, as the plastic panels overlap each other they do gap a bit, so we tape them — front and back — with no-residue duct tape. There are also small gaps at the top corners that we fill with bits of insulation to keep heat in. The bottom of the rigid plastic panels need something to seal them against the gravel and paver floor, so we slip them into long pieces of pipe insulation.

The cement block and wood shelving is another down-market solution, but it persists mainly because it's easy to break down and store, it's customizable, and it can overcome the uneven floor surface of gravel and concrete pavers in a way that something solid wouldn't be able to. The design snob in me isn't bothered by any of these elements because the SPG happens to be situated behind our garage, hidden from



Assembling the Shade Pavilion Greenhouse Version 2.0:

Top left: Support beams fit over existing bolts and interlock.

Top right: Support beams in place.

Middle left: Plastic walls sandwiched between two pieces of wood.

Middle right: Seams are taped to improve insulation.

Bottom left: Gaps are plugged with insulation

Bottom right: The completed greenhouse.



Cement blocks and wooden boards make an affordable and flexible shelving system.

the house and only seen if one walks completely into the garden and down to the patio, something I don't often do in the winter, unless I'm checking on the plants.

The plants...that's what it's all about, right? So far, the only losses I've suffered in the SPG are things I let get too dry, like a several-year-old *Grevillea* 'Peaches and Cream'. As noted, the original idea was a structure which would house xeric plants that need to be kept out of the winter rain, and only get a single intentional watering, or two, over the winter. Plants like *Agave victoriae-reginae*, *A. franzosinii* and *A. 'Mateo'* come to mind, as well as *Aloe saponaria* and *A. striatula*. However, being a plant lover — some might even say collector — plants that use the space as an actual greenhouse, appreciating the slightly warmer and protected conditions, have infiltrated the mix. These need some winter water, something I tend to forget. By grouping the thirstier things right by the door I've gotten better at keeping them hydrated. A weekly check-up is all they ask, with water distributed as needed.

I'm thrilled to have kept an *Adenanthos sericeus* (coastal woollybush) alive over five winters now; this will be its sixth (knocking on wood as I type). My *Sonchus canariensis*, the Canary Island "tree dandelion," actually goes dormant in our summertime heat, so it often looks its best while it's in the SPG.

One of the rarest plants (at least in my part of the world) currently winter housed in the SPG is a *Strobilanthes gossypina*, aka pewter bush. Like plants in Proteaceae, the strobilanthes does not react well to overwintering indoors (yes, there's another entire garden in our basement over the winter months), so it stays in the SPG and is whisked into the basement only when arctic air arrives and then returned outdoors as soon as possible. This year I'll also be keeping a pair of containerized *Bukiniczia cabulica* under its cover. I've planted out a trio in the garden, but knowing they like it dry, and bloom in their second summer, I'm treating the SPG plants as insurance.

I'm thrilled to report that as I wrote this story, Andrew had started designing, and building, SPG 3.0. The summer storage of version 2.0 had always been an issue. He hated that it didn't break down even further. Plus, there was room for improvement on the insulating capabilities of the single wall corrugated plastic. The new design features double-wall polycarbonate panels with air pockets between the two walls. The panels are also easier to work with (not as floppy or brittle) and connect to each other with metal channels; no more duct tape! The upgraded design also includes doors on both ends, which improves air-flow and accessibility — important when you've packed the space full of plants. Unfortunately, the new design was not far enough along to include photos here, but a thorough reveal will have been posted on my blog, thedangergarden.com, by the time you're reading this. Perhaps you'll be inspired to design your own shade pavilion greenhouse.



The Shade Pavilion Greenhouse all loaded up for winter.



The Highs and Occasional Lows of Chapter Flower Shows

MARGARET BOWDITCH

EACH APRIL THE Delaware Valley Chapter of NARGS kicks off its spring schedule with a flower show. This venerable tradition allows our horticultural wizards to show off their treasures and offers future wizards a chance to dip their toes in the water. Members see familiar plants beautifully grown or new plants they might like to grow. The show is fairly low key and works well. In part, this is because instead of the usual chair rotation our show chair, Rad MacFarlane, has done the job for ten years. He and his vice-chairs, Michelle Hall and Gwynne Ormsby, have a seasoned committee who look forward to working at the show. Another bonus is that many of our members have worked at the Philadelphia Flower Show as committee members or exhibitors. That show is held at the beginning of March, and most years we fight snow and ice as well as sharp-elbowed competitors. In contrast, our chapter shows are usually blessed with benign weather and friendly competition. Many of the entries are plants that have been passed along from member to member as gifts or purchased at our seasonal sales, so members see old friends, both people and plants.

Top: *Cyclamen coum* (left) and *Daphne* 'Lawrence Crocker' (right) ready for the bulb and shrub classes of a chapter flower show.

How to organize a chapter show:

Find a location that offers plenty of space and large folding tables and chairs for the meeting. This may mean a single large room or adjacent rooms. There should be adequate parking space as well. A central location is necessary as we, like many chapters, have members from four different states. Some places are free while others are not.

Posting the date, show location, rules, and classes a few months before the show in the chapter newsletter gives members adequate time to plan to enter the show. The show chair may modify, and or delete classes from year to year, so it is important to publish the information each year.

On the day of the show, the committee must arrive early to set up well before the posted entry time. Up to twelve tables are needed. For large classes, a whole table is used while smaller classes can share a table with a ribbon separating the classes. Two tables are set up for entry preparation and grooming (of entries, not entrants), and two tables are set up for entry registration. Tablecloths cover all tables. The tables for entry will be clearly marked with classes to be entered by each of the clerks: classes 1-4, 5-8, and 9 – 12. Over on the show tables, signs are posted showing in bold the class name and number. Two containers, one for ballot paper and one for voting, as well as multiple pencils, should be placed at each table.

Rad gathers a committee of knowledgeable helpers: three clerks who check each entry for correct identification, nomenclature, adherence to schedule and rules. Then the entry is passed (accepted) and recorded on the entry sheet and given an entry number and a “P” indicating its readiness to go.



Vice Chairs Michelle Hall (left) and Gwynne Ormsby (right) serving as entry clerks.



Left: Stager Bill McCormick carrying plants to the appropriate class.
Right: Chair Rad MacFarlane tallying votes.

A stager then takes the entry to the appropriate class. After the entry time has closed and Rad has double checked that all is well, Rad invites members to view the show. Then members vote, picking a favorite for each class plus a vote for best of show. About half an hour is allowed for voting, and then members go off to the meeting. Rad and a helper go to work, tallying the votes for each class, marking down first and second place winners (and ties) for each class. At the close of the meeting, all winners are announced including both plant and owners' names. First and second place winners receive prizes, usually choice plants from our chapter's exhibit in the Philadelphia Flower Show. Another source of prizes comes from donations from nurseries our members support. Lastly, results are published in a future chapter newsletter. After members have had time to view the show, members remove their entries and pick up ribbons; it's time to clean up and leave the show location as we found it. The equipment is packed up for another year.

What can go wrong? A few possibilities are etched in my memory. The room for the show can be locked, and it can take precious time to find someone who can open it. When that happens Rad and his team go into fast forward to set up. Sometimes experienced exhibitors think they remember the show location, but go to the wrong place. One person carried his treasures into a yoga class. Sometimes people don't

The DVC show rules:

- Entries must have been in exhibitor's possession for a minimum of three months prior to the show.
- There is a maximum of three plants per class by an exhibitor.
- Winners are decided by popular vote in each class plus best of show.
- Plants should be potted in clean pots, well groomed, mulched, and tagged with botanical names.
- Plants must be entered between 9 and 9:30 am

The schedule of classes:

1. **Bloom:** rock garden plant in bloom
2. **Foliage:** rock garden plant shown for foliage.
3. **Succulent:** sempervivum, sedum, jovicarba, rosularia, or like
4. **Bulb:** rock garden bulb in bloom
5. **Primrose:** any member of the primrose family in bloom
6. **Container:** troughs or containers planted with one or more plants
7. **Seed:** Plant: any rock garden plant grown from seed by exhibitor
8. **Shrub:** rock garden shrub, evergreen or deciduous
9. **Woodland:** any appropriate woodland plant including ferns, grasses, shrubs
10. **Native:** a plant native to within 50 miles of Philadelphia
11. **Branch:** a branch of any one shrub displayed in a bottle
12. **Novice:** any plants in classes 1,4,8 or 9 grown by a member who has entered but never won a ribbon in a DVC chapter show.

read the class descriptions and turn up with entries that don't conform to the schedule or rules. Or many arrive as entry time is closing, laden with plants, and expect clerks to fill out entry cards, identify plants, and suggest classes. Rad, always Mr. Nice Guy, signals to us to keep accepting entries after closing time as he aims for a full show. I try to be helpful to novices, but my geniality diminishes with age and the hours since that day's breakfast. I expect experienced exhibitors to be able to fill out entry cards, know their plants and the schedule and arrive in a timely fashion. I do let latecomers in but tell them that as voting is underway, they may not get prizes. If they are competing with me I feign sympathy. Could this be schadenfreude? But some very nice plants from late-comers add to the look of the show, always a bonus. Kinder, more patient, clerks scramble to help with late entries.

Often the trough class houses the best in show. Again, it is Rad who has led many trough workshops, so members are well equipped. At its

best, a trough shows the artistry and horticultural skill of the exhibitor. We used to have a talented member named John Ray who brought the most impressively beautiful troughs to both the Philadelphia show and ours. After retiring as an architect, he went into rock gardening with total dedication. Nothing was too much trouble as he amassed a collection of interesting plants from seed, cutting or purchase. He would think nothing of driving great distances to get the perfect tufa, etc. He has a range of greenhouses and cold frames. He and Betsy live on the Eastern Shore of Maryland, not the easiest climate for rock gardening,



Timing is everything. These species tulips bloomed out too late for the show.

but he rises to the challenge. His troughs are works of art. His practice is to plant a show trough about a week before the show, choosing his best plants (mostly in bloom) and creating a little world that looks as if it had been there for a long time. His artistry includes a drawing for the plant identification, and both the trough and drawing are works of art. No little pins with numbers for my pal John's troughs. Sadly, an illness in the family has kept him from our meetings for several years. He is remembered for his entries and his generosity. Once he brought enough *Primula allionii* to share with every member. At the Philadelphia Flower Show, volunteers drive the distance to bring some of his entries to that show as Ray entries raise show quality.

After fifty years of exhibiting I've learned a few things helpful to exhibitors. Planning ahead is of paramount importance, but being open to last-minute opportunities is helpful. I plan to enter the bulb

class by ordering and forcing rock garden bulbs. Although April is always chapter show time, the weather brings forth different possible entries. My fellow members are often able to dig what's in bloom from their gardens just before the show. Last minute digging damages my plants and my self-esteem so I dig early and park possible entries in my little cold frame a month or so before the show. Some members have greenhouses which bring forth lovely entries. Despite all my planning, I may need to speed up or slow some entries down. To push laggards ahead, I put them in all the sun I can get or under plant lights and water with warm water. To slow down the precocious, I take them out of sunlight, water with icy water, and put them in the refrigerator for most of the hours of each day. My husband is acclimated to seeing plants in the frig though he does remark that his favorite foods, but not mine, are banished to make space for the plants. I feign surprise.

It's great to work as part of the team at a chapter flower show. You can be helpful to exhibitors, and you get to look at the entries up close. Rad is always appreciative of helpers so it's a delight to work for him. So be a worker, an exhibitor, or simply one who enjoys seeing the entries at any show.

At the Delaware Valley Chapter study weekend in May 2019, we hope you will come laden with show entries or admiration for those plants that have made the trip. Look for the show schedule and rules to be sent when you register for the weekend.

Thanks to Dr. Rad MacFarlane for providing me with all the information on the nuts and bolts needed to put on a chapter show.



Sometimes plants have to take priority over food in the refrigerator.

Reaching New Members

JOSEPH TYCHONIEVICH

NEARLY EVERY GARDENING organization is facing the same problems: an aging membership and difficulty recruiting new members. That is true for us in NARGS, just as it is for garden clubs and plant societies of all types. For one of my day jobs, I travel around North America and give presentations for a wide range of gardening organizations. Despite the general pattern of decline, many groups I talk to are thriving and bringing in new members. I've made a habit of taking notes on what seems to be working for these organizations and asking the leaders what they've done that has been successful. What works for one group may not work for everyone, but here are some ideas that might help each local chapter of NARGS boost membership and keep thriving for years to come.

Your Website

I'm a millennial. And for people of my generation, if it isn't online, it doesn't exist. Websites don't need to be fancy, but they do need to be up-to-date. If I search for your chapter and get a site that says "Next meeting date: July 10th, 2015" I'm going to assume the group no longer exists. Make sure your listing on the NARGS website and your local chapter website list upcoming meetings and contact info for current leaders.

Social Media

Social media can be an effective and free way to reach potential new members. Facebook is the biggest network, but Instagram is more popular with younger users and is becoming the most plant-centric of the social media sites.

On Facebook, it is critical to remember that the more people who like, comment, or share a post, the more other people will see it, and the effect is exponential. On the NARGS Facebook page, a post that other people shared three times was seen by about 500 people. A post that was shared 15 times reached 4,000 people. Add just ten more shares, to 25, and a post reached a staggering 37,000 people. That means if all of us, from the national organization to local chapters to individual members, like, comment on, and share each other's posts we can together reach an enormous audience. Each of you can have a huge impact here, as each additional share multiplies the number of people

reached. If you are active on Facebook, take the time each day to check out the national and local NARGS pages, make a comment, and click those “like” and “share” buttons. And if you see a friend posting a great picture of a new trough or the seeds they just got from the Seed Exchange, share that too!

On Instagram, the most important feature is the hashtag. Hashtags can be used on Facebook as well, but they are not as important or popular there. When you post, if you type “#” and then any word, like rockgardening, it will become a link called a hashtag. If I post a picture of my garden and write #rockgardening in my description, anyone looking at that post can click on the hashtag and be shown all the other posts using that same hashtag. So, if we all start using #rockgardening on our posts, anyone interested in what we’re posting can click on that hashtag to discover the rest of the rock gardening community and start learning what NARGS is. Instagram also recommends popular hashtags to people to check out, so the more of us that start using the same hashtags, the more new people we’ll reach. I’d recommend that we all start using #rockgardening, #nargs, and that local chapters each decide on their own hashtag for their members to use. There is no limit on the number of hashtags you can use, so do use other hashtags to help connect to the larger community of gardeners on Instagram.

Whatever the social media platform, be sure to post not just pictures of pretty plants, but also images that show the benefits of being a part of NARGS. Share pictures of your local chapter meeting, seeds from the seed exchange, or your favorite article in the *Quarterly*. That way, new people will not only learn what rock gardening is but why they should join NARGS and their local chapter.

In Real Life

Don’t just rely on the web. If you are having an event, let the local newspaper know and see if they’ll give you some coverage. Coffee shops and public libraries often have spaces where you can post announcements for upcoming events. The more places you put announcements, the more people you have a chance to reach.

Plant sales

Everyone loves a good plant sale. You get cool plants, it raises money for the organization, and it is a great way to bring in prospective members. Make sure to hold the sale in as public a space as possible so that non-members will be able to stop by. Local botanic gardens are a great option if you can get permission. Always give a discount on plants to members so that big spenders will decide to join just for the discount. Once people join, they’ll fall in love and be hooked for life.



This beautiful trough recruited 15 new members in just two days.
Photo by Betty Ann Addison.

Fairs and Flower Shows

If you have a state fair or a flower show in your area, plant up a beautiful trough and show it off. This can be incredibly effective because people can see what amazing gardens you create. If a picture is worth 1,000 words, a beautiful trough is easily worth 10,000. Betty Ann Addison, from the Minnesota chapter, told me, "I made a trough for the State Fair that was 4 feet (1.2 m) long and lightweight, like 15 pounds (7 kg). Our chapter was there only two days, but we collected 15 people who would like to join us. Isn't that great?" To get the most out of your display, make sure to hand out fliers with information about joining, or, even better, an upcoming class or workshop where they can learn to make something like the display they are seeing in front of them.

Teach classes

One of the most successful ways to reach new members is to have workshops and classes. Joining a plant society can feel like a big commitment of time to people, and it may not be clear to them what they will get out of it. But a class is simple and straightforward, and chances are they'll have so much fun that they'll want to join your chapter. In my experience, the most popular classes are on making hypertufa troughs and planting them. Be sure to use plain English in advertising the classes. "Plant an alpine trough" doesn't mean much to the average non-gardener. "Plant a container garden for your patio" will reach a lot more people. The best advertising is an actual planted trough with a big sign that says "Learn how to make one of these!" To reach the most potential members, hold the classes in a public space like a botanic

garden, library, or popular nursery rather than at a member's home. Don't be afraid to charge people a fee for plants and materials, plus a little profit for the chapter. In my experience, hands-on workshops where people get to take home a planted trough at the end sell out quickly even if they are a bit expensive.

Make meetings fun

If you want people to join your local chapter and keep coming back, make sure they enjoy the meetings. I honestly think the best part of any meeting is the informal socialization and plant talk. The whole point of joining a society is to connect with other plant-loving people, so make sure nothing gets in the way of that. Provide some food and maybe even a couple of bottles of wine. Keep the presentations short and fun. Perhaps most importantly, remember that no one wants to sit through a treasurer's report or have to second a motion to accept the minutes from the last meeting. Yes, you have to do those things, but do them at a different time and place from your regular meetings. I've given many presentations where afterward everyone was talking and having a good time only to be interrupted by the onset of the business meeting, putting half the room to sleep and sending the other half home. Keep announcements and business at your regular meetings short and sweet and do the tedious, boring stuff at another time.

Finally, I hope each of the local chapters can use the *Quarterly* to keep learning from each other. If you have done something that works well for your local chapter, please send me an e-mail (gsparrowgardens@gmail.com) with some details and maybe a couple of pictures so I can pass it on to the other chapters in future issues of the *Quarterly*.

NARGS has so much to offer gardeners of all ages and experience levels. If we can take some small steps to get the word out and better communicate what we are all about we'll be able to boost our membership and keep this organization we all love so much thriving for many years to come.



Joseph Tychonievich teaching a workshop on planting troughs.



The Lady in the Woods

DIANA SILVA

IT IS THE twilight of the season. Outside, apricot-brown oak leaves glow in the morning sunlight, while pale yellow discs of cottonwood fall in great swirls, a round of carpet on the frosted lawn. This is my garden, one which germinated within me, naturally, as a wee child; fascinated by the beauty of plants. How many of us remember Grandma's kitchen window ledges, and the wonders there? My grandma grew African violets, and even before I could speak I would stand, mesmerized, and stare at them.

I was born to grow. Once asked why I grew plants, my answer was that I could not NOT grow them; my soul is green, and a kaleidoscope of bloom color. It has been a long and satisfying journey, the wonder of the plant world being such that there remain hundreds of thousands of new species and varieties to discover.

In the garden, labor is transformed. Sometimes it seems I can wield a shovel for an entire day without tiring. Like the pond presently under construction in the lowest corner of the west lawn, now transformed into a vegetable garden and temporary holding area for all sorts: little red maple seedlings chosen out of hundreds in the woods for their precocious scalding fall colors; liliium awaiting permanent placement in the spring; great gobs of antique rose hips, crushed, buried and hopefully hidden from the birds; and scattered spring bulbs. Why not take advantage of the vegetable garden? The bulbs will go dormant before the squash or pumpkins lurch wildly in every direction.

Time to dig a bit more and make that corner pond that will house Mr. Koi and my dear other fishes. They are part of my horticultural circle now. I drain 6 gallons (23 L) of fishy rich aquarium water 1-2 times a week to water the exploding collection of primulina, petrocosmea and other gesneriad gems that will keep me in color and joy this winter. Fresh water goes in the tank, and my fish have doubled in size in a few short months. Indeed, they are eating me out of house and home. Glad to know they enjoy the tough, beaten outer leaves of romaine lettuce that I used to compost.

The unfinished pond testifies to the challenges faced here in northeastern Michigan. The glaciers carved our state and our magnificent lakes, scraping the limestone bedrock, leaving it exposed in places. It left pure sand for me. In the past ten thousand or so years, the low swampy areas accumulated up to a foot of pure organic matter. Most years it remains submerged all season, as the water table is that

Opposite: The northern woods of Michigan



An abandoned quarry is full of rock gardening inspiration.

high. Water, yes, we are blessed here, there is hardly a spot that one can't dig down three feet (1 m) and have water pour in through the coarse sand. We have slight ridges in the forest, and there the humus is only perhaps 1-2 inches (2.5 – 5 cm) deep, on that fossil beach of pure sand. Acidic conditions predominate. Acres and acres of wintergreen (*Gaultheria procumbens*), blueberries, kalmia. Trailing arbutus (*Epigaea repens*) runs rampant under the trees, creeps across the primitive roads cut decades ago through the forest, where tiny-leafed seedlings offer themselves for transplant. This diverse environment was my first, childhood, horticultural schooling.

My rock garden will come in time, but most definitely be a shaded and moist permutation. Our native woodland plants often crawl epiphyte-like up thickly mossed tree trunks. The forest offers an unlimited supply of limestone that I began collecting this summer. I've been collecting stunning fossil coral for years and years – the hundred acre Devonian limestone quarry, now abandoned along Lake Huron, offers inspiration with every rock gathering, fossil hunting expedition. This is an otherworldly place, where plants find tiny places to thrive, sometimes stunted, hundreds of bonsai-like white cedar and black spruce. *Cypripedium calceolus* in the full scalding sun, roots content in pure limestone gravel. Fringed gentian and *Aquilegia canadensis*, spiranthes and arctostaphylos.



A tapestry of beloved primroses.

Presently, I am looking at companion plants for my beloved primula. My love of these garden gems began in 1975, with a packet of grocery store polyanthus. It continues as I've collected and bred these delights rather seriously for the past 20 years. Species, acaulis, mutant forms, all the glorious Barnhaven strains. For me, there is no greater spring impact than their saturated colors. Colors that sing wordlessly, glow with such vibrancy that the external world disappears and I feel only joy.

This season, I noted the tiny white star flowers of *Coptis trifolia*, the aptly named goldthread – for its fine rhizome – blooming during primula season. I've always adored this little plant. Evergreen leaves shiny as plastic parsley, this is what I need between the primrose clumps. Delicate yet tough, it will never negatively impact even the tiniest juliana. This idea led me to the imagination of evergreen woodland lawn patches. The rabbits and deer will munch the fully expanded hosta, leaving spikes of what Mother and I laughingly call "celery," but never touch the primroses. The only pest troubling them is an ever pesky eighty-five year old man on a riding lawnmower. Forgive me, but it seems testosterone and gasoline are more dangerous to the environment than wildfire. So, yes, the evergreen lawn substitute will begin slowly under the massive old white pine in the front yard: gaultheria, coptis, *Epigaea repens*, carefully sited *Goodyera pubescens*, semi-evergreen woodland ferns of yet undetermined identification, and mosses which glow radiant and shimmering velvet against the brown-grey-white winter now just days away. Here, where this drab landscape



Special forms of native woodland wildflowers: hepatica (left) and a very unusual mutant *Trillium grandiflorum* (right)

extends a full 5 months, this green will tantalize when the snow cover is thin, and greet us in spring with first melt and the perky brightness of crocus, *eranthis*, and *Primula vulgaris* subsp. *sibthorpii*.

Primula vulgaris subsp. *sibthorpii* took me a good 10 years to track down, when finally I found the seed staring me in the face on the Jelitto website. In white and all shades of pink, even to rich streetwalker shades, these flowers delight with the first blooms of spring, well in advance of foliage. Indeed, the flowers are often there under the snow, on single stalks initially only a centimeter tall, extending to inches as the blooms age. I shall nurture carpets of them. *P. sibthorpii* would



The extremely early blooming *Primula vulgaris* subsp. *sibthorpii*



One of the author's primrose hybrids.

wear out its rock garden welcome with the mature summer foliage. The kitten cute of bloom roars into king-of-the-jungle, awkward leaves up to 10 inches (25 cm) long. One could easily disguise this, tucking it under a choice deciduous shrublet, or carefully surrounding it with well behaved herbaceous favorites. Too, for best appreciation of the flowers, it requires the autumn or very early spring removal of the old leaves.

I will be using *P. sibthorpii* in my continued primula breeding; the problem being it blooms so early that only *P. acaulis* is available for crossing, and it appears here only barely in time. This is my future challenge. One of many.

The garden is my sanctuary. Here, there is patience, hope, and peace. There is no past, there is no future other than the comforting expectation of next year's bloom, there is only the present beauty.



The author examining wildflowers in the abandoned quarry.



Serpentine Barrens in Southeastern Pennsylvania and Northern Maryland

MIKE SLATER

IF YOU ARE interested in unusual natural habitats and are traveling to eastern Pennsylvania in the Mid-Atlantic region of the United States, you should be aware of our small cluster of serpentine barrens. This globally rare soil type results in unusual plant communities. Serpentine is a metamorphosed ultramafic type of rock that is formed when sea-floor rocks high in magnesium and iron are metamorphosed by heat and contact with seawater as continents collide. The name mafic is derived from the chemical symbol Ma for magnesium + Fe for iron. Adding the prefix ultra, of course, means they contain a very high percentage of these metals compared to most rocks. There are many outcrops of ultramafic rocks around the world, but they only make up a small percentage of the land surface of the continents. (Brooks, 1987)

In eastern North America, serpentine areas are widely scattered from Newfoundland to Georgia. These rocks were created and



Above: A weathered piece of serpentine rock from Goat Hill serpentine barrens.
Opposite: A serpentine savanna at New Texas Serpentine Barrens in Lancaster County, Pennsylvania with eastern red cedar (*Juniperus virginiana*) and little bluestem grass (*Schizachyrium scoparium*).

emplaced beginning about 480 million years ago when various small continents collided with North America and culminated about 230 million years ago when Africa arrived and finished the assembling of the supercontinent Pangaea and raising the Appalachian Mountains to heights which may have equaled the Himalaya Mountains today. Since then, erosion has nearly leveled these mountains and exposed their core rock, which includes some areas of serpentine as well as lots of other metamorphic rocks like schists, phyllites, and gneisses which are common surface rocks in the Philadelphia-Baltimore region.

There are serpentine rocks exposed at the Earth's surface around the world. Two notable areas in the temperate zone that feature these rocks are in the Mediterranean region, especially Greece and Italy, and in Pacific-Northwestern part of North America including northern Californian and southern Oregon. In temperate climates, serpentine rocks form poorly developed soils with many rock fragments, low nutrients (especially low calcium) and poor retention capability for soluble nutrients like nitrogen (i.e., a low cation exchange capacity). Additionally, serpentine soils usually have an abundance of metals like chromium and nickel at levels that are toxic to many plants. Altogether this gives rise to a "serpentine syndrome" of particular types of plants with adaptations to survive in this harsh soil system. In places like Greece and California, where the climate has been relatively stable for hundreds of thousands of years, many endemic species of plants have evolved that are adapted to serpentine conditions. But in areas where glaciation has recently occurred, there hasn't been enough time for such speciation to have happened yet. (Kruckberg, 2002; Latham, 1993)

In the Mid-Atlantic region serpentine barrens are found in the Baltimore area (Soldiers Delight Barrens in Baltimore County, which is the largest one at about 1340 acres, 540 hectares); along the Pennsylvania-Maryland border (southern Lancaster and Chester County, about 2100 acres, 850 hectares), collectively called the State-line Barrens, as the border literally runs through some of them; and some more small areas in central Chester and Delaware counties of southeastern Pennsylvania in the Philadelphia suburbs. Additionally, there are a few small outcrops on Staten Island, New York. The native vegetation in the Staten island sites is now lost to development and the sites in the Philadelphia suburbs are under severe development pressure and many already have had buildings built on in them recent decades. (Latham, 1993)

Opposite: Three different serpentine locations in Pennsylvania, USA
Top: Nottingham County Park, Chester County
Middle: Goat Hill serpentine barrens near Nottingham Park
Bottom: New Texas serpentine barrens in Lancaster County



Pennsylvania means “Penn’s Woods” and the name is appropriate because the climax vegetation of the state is forest. Even though the state was thoroughly logged over the centuries since European settlement, if left alone the land returns to either deciduous or coniferous forest. However, there are a few little patches of land that, because of soil conditions or disturbance (especially fire), haven’t been completely reforested and were often labeled as “barrens” because the poor soils couldn’t grow crops.

Dr. Roger Latham, an ecologist who specializes in grassland and “barrens” habitats of the state, has estimated from historical evidence that at the beginning of European settlement about 0.5% of the state was dominated by grasses, forbs (non-grassy flowering perennial plants), and shrubs. Most of these habitats were maintained by fires set by Native Americans (lightning rarely causes wildfires here in the humid eastern United States), probably to encourage the growth and fruiting of berry-producing shrubs like blueberries (*Vaccinium* sp.), elderberries (*Sambucus canadensis*), blackberries and raspberries (*Rubus* sp.) and also to improve hunting conditions by providing more tender plants for deer and other game to eat during the breeding season. These grasslands were likely a continuation of clearings made by Pleistocene megafauna like the American mastodons and giant ground sloths that lived in the area at the end of the Ice Age. They were big enough to knock down trees to get at their leaves, just as African elephants do today. In addition to serpentine, the rock underlying these grasslands includes shale, diabase and even, in a few rare cases on steep, south-facing hillsides, limestone. (Latham, 1993, 2018)

The continental glaciers stopped their southward movement about 100 miles (160 km) away in northeastern Pennsylvania, but the effect of the colder climate was felt throughout the area and the evidence indicates that southeastern Pennsylvania was a cold grassy tundra at the time of the glacial maximum. After the continental glacier began to retreat about 18,000 years ago, trees and other vegetation began to move northward from their southern refuges, eventually colonizing the area as the climate warmed. Between 7,500 and 2,500 years before the present, the area was warmer and drier than it is now. This is called the “Great Warmth” or Hypsithermal period. During this warm and dry time many species of plants migrated from the midwestern prairies to the east coast. Now, as the climate has gotten cooler and wetter, trees have rebounded leaving serpentine barrens one of the few refuges for relict populations of many of mid-western species. (Pielou, 1991; Delcourt, 2002; Latham, 1993)

The serpentine barrens aren’t a single kind of habitat. There are forests of pitch pine (*Pinus rigida*) and Virginia pine (*P. virginiana*) usually with a thick understory of catbriar and greenbriar (*Smilax*

rotundifolia and *S. glauca*), grassy savannahs with little bluestem (*Schizachyrium scoparium*), prairie dropseed grass (*Sporobolus heterolepis*), and in a few locations side-oats grama grass (*Bouteloua curtipendula*) and a few scattered pines or cedars still exist. A few uncommon-to-rare plants found in the grassy habitats are Appalachian groundsel (*Packera anonyma*; syn. *Senecio anonymus*) and the eponymous serpentine aster (*Symphyotrichum depauperatum*) which was thought to be endemic to this region's serpentine barrens but has also been found in a few diabase barrens in North Carolina. This native aster is rather small and few-flowered, as its scientific name implies, but it makes a pleasant sight when it blooms in the autumn. It is a close relative of the midwestern *Symphyotrichum parviceps* and is thought to be a relict population of that species. (Hart, 1990)



Wildflowers of the barrens:

Top: *Phlox subulata*

Bottom left: Serpentine aster (*Symphyotrichum depauperatum*)

Bottom right: Fameflower (*Phemeranthus teretifolius*)

There are many rocky outcrops and patches of bare rocky soil (glades) which tend to be very hot and dry in the summer and many plants exhibit water conserving adaptations such as succulent or hairy leaves. This is where some prototypical rock garden plants live, such as creeping phlox (*Phlox subulata*), fameflower (*Phemeranthus teretifolius*, syn *Talinum teretifolium*), rock sandwort (*Minuartia michauxii*), whorled milkweed (*Asclepia verticillata*), hairy chickweed (*Cerastium velutinum*), and its very hairy variety the Octoraro Creek chickweed (*Cerastium velutinum* var. *villosissimum*) which grows in just a few barrens, including rocky cliffs along the creek for which it's named.

Other notable habitats in the serpentine barrens include oak shrublands with scrub oak (*Quercus ilicifolia*) and blackjack oak (*Quercus stellata*) which are host plants for buckmoth caterpillars (*Hemileuca maia*) which are very spiny, stinging caterpillars that mature in the fall as large black-and-white, day-flying moths. New Jersey Tea (*Ceanothus americanus*) with its airy white flowers is sometimes abundant here, too. There are also many seeps and wet areas which have interesting plants, although none of them are exclusive to serpentine soils, even locally.

The serpentine barrens face many problems common to all types of wildlands, including development in this very densely populated region and invasion by weedy non-native invasive plant species; but additionally, they have a less common problem of a lack of wildfires hot enough to burn organic matter out of the soil. Our current desire to stop all wildfires, although perfectly



Ceanothus americanus

understandable to people with nearby homes and businesses, is a big problem. Leaves and other organic matter from adjacent forests blow into barrens and over time build up until the soil's organic layer is thick enough that it insulates invading tree seedlings from the impoverishing effect of the underlying serpentine. Normal forest succession occurs, leaving the real barrens habitat as a shrinking donut hole as the sun-loving, serpentine habitat dependent plants die and a typical eastern forest eventually covers the area. If controlled burns aren't possible the only real alternative is scraping away soil with a bulldozer and trucking it away.

On a map or from the air the State-Line serpentine barrens look like a string of small islands, and just like small oceanic islands they suffer from biodiversity loss due to the “island effect.” If the barrens were a large, continuous habitat and a species died out in one spot due to natural habitat succession it could likely recolonize that spot after a fire or other disturbance reset the area back to bare ground. Since the barrens are separated by several miles of forests, farmland, and housing developments the movement of seeds between barrens is now very unlikely and so each species lost from one individual barrens is irrecoverable without human help.

You can visit several public parks and preserves with serpentine habitat in the area. Nottingham County Park near Oxford, Pennsylvania, has some nice well-maintained trails, but check with the park office about trails, because there has been recent logging activity to remove dead pitch pines (*Pinus rigida*) that were killed by a recent outbreak of southern pine-bark beetles due to recent warm winters weather failing to keep the beetles in check. Goat Hill serpentine barrens is partly on public land. It is a few miles west of Nottingham Park, Pennsylvania and is owned by the Pennsylvania Bureau of Forestry. However, the trails are very confusing and the greenbrier and catbrier (*Smilax* sp.) can be very thick. A GPS will help if you visit here! Sugartown Barrens at Willisbrook Preserve near Malvern, Pennsylvania, in central Chester County is owned by the Natural Land Trust (www.natlands.org). Last, but not least, Soldiers Delight near Baltimore, Maryland, is a public park and it is the largest and most diverse serpentine barrens in the region.

References:

- Brooks, R. R. (1987). *Serpentine and Its Vegetation, a Multidisciplinary Approach*. Portland, Oregon: Dioscorides Press.
- Delcourt, H. R. (2002). *Forests in Peril: Tracking Deciduous Trees from Ice-Age Refuges into the Greenhouse World*. Blacksburg, Virginia: The McDonald & Woodward Publishing Company.
- Hart, R. (1990). *Aster depauperatus, A Midwestern Migrant on Eastern Serpentine Barrens?* *Bartonia*, 23-28.
- Kruckberg, A. R. (2002). *Geology and Plant Life*. Seattle, WA: University of Washington Press.
- Latham, R. E. (1993). *The Serpentine Barrens of Temperate Eastern North America: Critical Issues in the Management of Rare Species and Communities*. *Bartonia*, The Journal of the Philadelphia Botanic Club, 61-74.
- Latham, 2018 - Presentation to the Northeast Section of the Botanical Society of America at Millersville University
- Pielou, E. (1991). *After the Ice Age: The Return of Life to Glaciated North America*. Chicago: The University of Chicago Press.



A Heritage of Horticulture: Botanic Gardens and Arboreta in the Delaware Valley

BETTY MACKAY

IN THE DELAWARE Valley of Pennsylvania, USA (encompassing Philadelphia, Bucks County, the Brandywine Valley, and nearby areas), history and horticulture are natural partners. Many of the botanic gardens and arboreta here display the Quaker heritage of loving and studying the natural world. If you are coming to this area – say, in May for the NARGS Spring Study Weekend – plan to add a little extra time for visiting these wonderful places. Here is a brief alphabetical guide to some of them, mentioning what is open, when, and listing some of the special-interest features. Some places charge a fee, some have restricted hours, and some have photo restrictions for professionals, so it is wise to check online ahead of time. There are over thirty unique and wonderful botanical gardens and arboreta within thirty miles (48 km) of Philadelphia.

Awbury Arboretum

Francis Cope House
One Awbury Road
Philadelphia, PA 19138
215-849-2855 www.awbury.com

Awbury Arboretum is a 19th-century Quaker estate with several homes on 55 acres (22 hectares) which have been designed in the English landscape tradition. Over 200 species of mature trees and lovely gardens, ponds, and woodland trails are features. Open daily dawn to dusk. Admission is free.

The Barnes Foundation Arboretum

300 North Latches Lane
Merion, PA 19066
610-667-0290 www.barnesfoundation.org

Before the Barnes Foundation art museum was relocated to the Parkway downtown, it was located on the Main Line at the Albert C. Barnes residence and 12-acre (5-hectare) arboretum. The arboretum,

Opposite: One of the gardens at Chanticleer.

founded by Laura Barnes before 1928, boasts over 2,500 varieties of woody plants and perennials. The peony and lilac collections date back to the early 1900s, and the herbarium, established in 1968, contains more than 10,000 specimens. There's also a garden of medicinal plants, a collection of magnolias, grand stonework, and a huge stone trough. The arboretum is open for public visits on Saturdays and Sundays, from 11 a.m. to 4 p.m., through early September. Admission fees are charged.

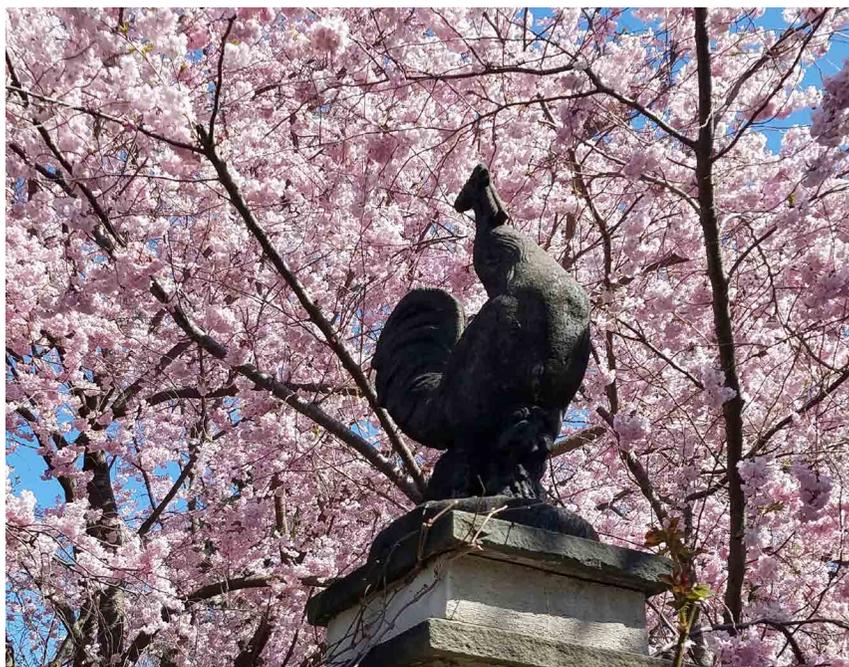
Bartram's Garden

5400 Lindbergh Boulevard
(54th Street and Lindbergh Boulevard)
Philadelphia, PA 19143
215-729-5281 www.bartramsgarden.org

In Philadelphia along the Schuylkill River, is the colonial stone home of the Bartram family, part of a 45-acre (18-hectare) National Historic Landmark. There is also a stone grinding wheel from back in the day, orderly plantings of a botanist's collection, plus a wildflower meadow, river trail, wetland, and farm buildings. Billed as "America's oldest living botanical garden," it was started in 1728 by Quaker farmer and self-taught botanist John Bartram (1699-1777), who collected and shared the then unknown and exotic North American wild plants. He tried to document the New World's native flora. He traded cuttings, seeds, and information with fellow farmers Thomas Jefferson and George Washington, among others, and eventually was named Royal Botanist to King George III. His son William Bartram (1739-1823) became a well-known botanist and author as well. The grounds are open to the public every day and are free to visit. Fees are charged for house tours and special events.



Lush plantings at Chanticleer.



Cherry blossoms at Chanticleer.

Chanticleer

786 Church Road

Wayne, PA 19087

610-687-4163 www.chanticleergardens.org

On the Main Line in Wayne, Pennsylvania, Chanticleer is the former residence of Adolph Rosengarten, Jr., who was famous as a code breaker in WWII. He set up the estate to become a trust and open space. After engaging British horticulturist Chris Woods to design and maintain it, their mission was to make it a pleasure garden. After Woods left, R. William (Bill) Thomas took over Chanticleer's management and design, bringing out ideas from a talented staff and also working with them on the award-winning book, *The Art of Gardening: Design, Inspiration, and Innovative Planting Techniques from Chanticleer*.

Romantic Chanticleer features marvelously flowing plantings and extensive gardens of flowering trees, native plants, hardy perennials and unusual annuals, tropical plants, planters and window boxes, a cut flower garden, a fenced vegetable garden, and more. A woodland garden walk leads to a water garden surrounded by grasses and herbs. The Ruin Garden with its sculptures and flat stone table fountain abuts a gravel garden of special interest to rock gardeners. Though garden plants seem to be unlabeled, plant lists are available in artisan-created boxes. Talking to the gardeners responsible for the various locations is part of the fun of visiting. The garden is open to the public from early April to early November, Wednesday through Sunday. Fees are charged.

The Henry Foundation for Botanical Research

801 Stony Lane

Gladwyne, PA 19035

610-525-2037 www.henrybotanicalgarden.org

The Henry Foundation is the former home of plant explorer Mary Gibson Henry (1884-1967). Its design is naturalistic, with appropriate settings for wild plants from many diverse regions. Encompassing hills and woodlands, the serene location is a tribute to this inspiring botanist and gardener. Mary Henry's rock garden is being restored. The home serves as a meeting place for many horticultural lectures and special events, and also serves as a library. To visit, call the garden or sign up on the website.

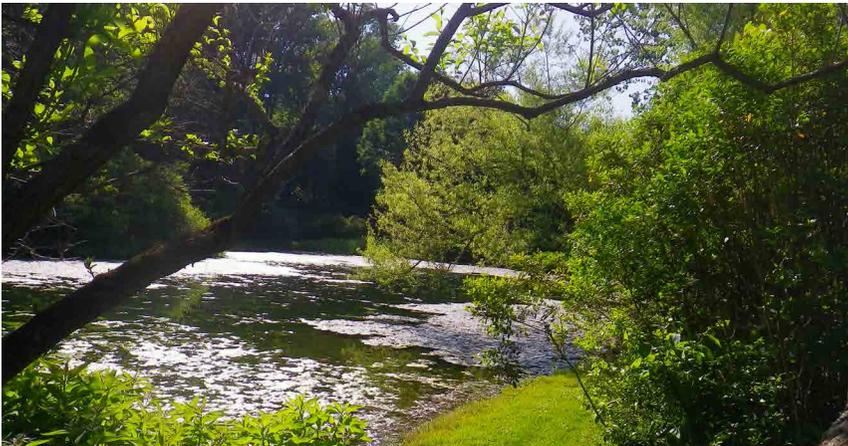
Jenkins Arboretum

631 Berwyn Baptist Road

Devon, PA 19333

610-647-8870 www.jenkinsarboretum.org

Jenkins Arboretum is known for its magnificent collection of native and hybrid azaleas and rhododendrons, native plant collection, and, more recently, its environmentally significant headquarters. With many levels and angles and lots of glass, the John J. Willamon Education Center aims to bring the outdoors inside. It gives a bit of the appearance of a tree house, though it is much larger. It is a gold level LEED (Leadership in Energy and Environmental Design) certified building. Jenkins hosts horticultural talks and meetings, contains an art gallery, and sponsors horticultural events, while the wooded grounds contain miles of trails, a stream and pond, and rare shrubs and trees. Admission is free, and the arboretum is open from dawn to dusk daily.



Above: A pond at Jenkins Arboretum.

Opposite: Some of the collection of rhododendrons and azaleas at Jenkins Arboretum





Inside the conservatory at Longwood Gardens.

Longwood Gardens

1001 Longwood Road
Kennett Square, PA 19348
610-388-1000 www.longwoodgardens.org

One of the world's leading horticultural gardens, Longwood Gardens is situated on 1,050 acres (425 hectares) and offers sights and services that should not be missed by any visitor to this region. It was created by industrialist Pierre S. Dupont (1870-1954) who bought a farm and then over many years turned it into the astonishing garden and center of horticulture that we can see today. Longwood features wild areas and a massive conservatory, naturalistic regions of native plants and garden plants from all parts of the world. There are water features, ponds, 20 different outdoor gardens, woodland gardens, and meadows. Longwood is committed to professional and amateur horticultural education with special facilities for both. Special collections of plants are of interest to rock gardeners. Longwood also has spectacular fountains and offers concerts, organ and carillon recitals, musical theater, and fireworks displays. Longwood is open every day of the year and attracts more than 900,000 annual visitors from around the world. Fees are charged.



Plantings at Longwood Gardens.

Morris Arboretum

100 Northwestern Avenue

Philadelphia, PA 19118

215-247-5777 www.morrisarboretum.org

Morris Arboretum, the arboretum of the University of Pennsylvania, is also an educational center supporting plant exploration, classes, and lectures. The 92-acre (37-hectare) arboretum includes many of Philadelphia's largest and rarest trees. Garden areas include a rose garden, the Pennock flower walk, a glassed-in fernery built in 1899, the Oak Allee, the Azalea Walk, the Swan Pond, the Japanese Hill and Water Garden, the English Park, the Sculpture Garden, the Magnolia Slope, an extensive wetland, and the Ha-Ha Wall with sides planted in wonderful rock garden specimens. For young people, there is a wonderful treehouse playground and a garden railway. Fees are charged.



The fernery at the Morris Arboretum.



Woodland plantings of native plants at Mt. Cuba Center.

Mt. Cuba Center

3120 Barley Mill Road

Hockessin, DE 19707

302-239-4244 www.mtcubacenter.org

Mt. Cuba's emphasis is gardening with Appalachian native plants and inspiring others to do likewise, and to protect the habitats that sustain them. In this rural complex set on many acres are many areas of interest. There is an extensive rock garden on the entrance lane. The Main House, formerly the home of the Copeland family, looks out on a magnificent view of the fields and forests of the area. It has a formal garden with paths that lead on to a trial garden for evaluating native plants. This leads to a path through woodlands enhanced with native plants, leading down to a lovely pond and garden with primroses and a bog garden. Then walking upward one goes through the Dogwood Path and Meadow. But do not miss the wonderful trillium garden and the Woods Path with its columns of tree trunks making a special effect.

Scott Arboretum of Swarthmore College

500 College Avenue, Swarthmore, PA 19081

619-328-8025 www.scottarboretum.org

The grounds of Swarthmore College, a Quaker institution, are also the location of historic Scott Arboretum. Featuring over 4,000 kinds of ornamental plants, it displays some of the best ones for use in the Delaware Valley region. The arboretum has a center in and around its unique building, with attractive plantings of trees, perennials, and containers, but its special plantings are spread throughout the campus. In spring the huge collection of rare bulbs, native plants, and flowering cherry trees is world class, but in fall the massive ornamental planters come into their own. Special horticultural lectures, programs, and plant sales are held frequently. This campus arboretum is open daily and is free to visit.



Diverse plantings at Scott Arboretum.

The Tyler Arboretum

515 Painter Road

Media, PA 19063

610-566-9134 www.tylerarboretum.org

The Tyler Arboretum is another site which stems from Quaker origins. It is one of the oldest and largest arboretums in the Northeast, encompassing 650 tranquil acres (263 hectares) of horticultural collections, rare specimens, ancient trees, a herb garden, historic buildings, and extensive hiking trails. Highlights include an 85-acre (34-hectare) pinetum, the Stopford Family meadow maze filled with daffodils, Pink Hill, and 20 miles (32 km) of trails through wild areas.

In late spring, be sure to check out the blooming azaleas, hydrangeas, rhododendrons, and bottlebrush buckeye. Future plans include using 50 acres (20 hectares) for heritage seed growing and saving by William Woyt Weaver. It is open daily at 9 am, and fees are charged.



Azaleas at Winterthur.

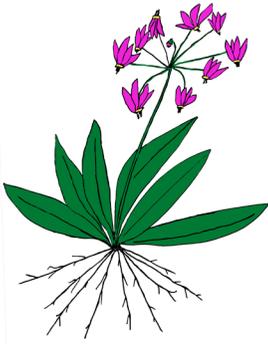
Winterthur

5105 Kennett Pike

Winterthur, DE 19735

302-888-4600 www.winterthur.org

Winterthur Museum, Garden, and Library, founded by Henry Francis du Pont, is an important cultural site. Esthetics were of primary significance to him. The museum's collection of American decorative arts is known for scholarship and historical interest. The grounds were designed to include thousands of colorful bulbs and masses of gorgeous plants yet look naturalistic and harmonious, with one large spread feeding seamlessly into the next. When visiting, you can take a tram ride or have a self-guided walk to see it all. It is an unforgettable experience to walk through eight acres (3 hectares) of mature and rare azaleas and rhododendrons, all in bloom. Visitors also enjoy the Sundial Garden, a reflecting pool and ponds, and a three-acre (1.2-hectare) children's garden called the Enchanted Woods, complete with a thatched stone cottage just the right size for small people to enjoy. The garden is open from 9 am to dusk daily and noon to dusk on Sundays. A fee is charged.



Rooted in Diversity NARGS 2018

The Delaware Valley Chapter
NARGS Spring Study Weekend
May 3-5, 2019

Next May brings the wonderful NARGS Spring Study Weekend, Rooted in Diversity. The main event is taking place on May 3rd, 4th, and 5th. There is a two-day pre-trip that will take place May 2nd and 3rd. Pre-trip participants will go to Shenk's Ferry and environs on Thursday and to the Pine Barrens of New Jersey on Friday. The cost for the pre-trip is \$190 and for the conference is \$425 per person, not including hotel. The sign-up form is on page 71, plus online at <http://www.dvcnargs.org/studyweekend.html>. Please register online if possible.

Our location is the Sheraton Great Valley Hotel in Frazer, PA at 707 East Lancaster Avenue (Route 30). Participants can get the conference rate of \$119 per night plus tax. You may call the hotel at 1-800-325-3535 and ask for the DVC-NARGS rate, which applies to the event and two days before and two days afterward.

Our official events begin on Friday with registration, plant show check in and judging, the plant sale with many great vendors, the book sale, dinner, and lectures. On Saturday there is breakfast and a bus trip to private gardens plus Mt. Cuba Center, with lunch at Mt. Cuba. Later in the day we have the plant show, plant sale, happy hour, dinner, and lectures. Then on Sunday we begin with a breakfast buffet and have the final plant sale, lectures, and announcements. There will also be local private gardens open on Friday morning and early afternoon as well as on Sunday afternoon after the meeting closes.

Speakers

Keynote: Sarah Carlton

Alpine and Woodland Supervisor at St. Andrews Botanic Garden

As the Alpine and Woodland Supervisor at St Andrews Botanic Garden, Scotland, Sarah has responsibility for managing the Rock Garden, Woodland and Pinetum, and the Alpine Display House. She is passionate about all things Alpine (and sub-alpine!), and has worked and travelled in the Swiss Alps, China's Yunnan mountain ranges, the Russian Altai, and Kyrgyzstan. She will be presenting two lectures: the first on the alpine collection at St. Andrews with a focus on some of its notable plants and the evolution of the collection, and the second on her global travels exploring plants that grow in extreme climates.

Mini-Keynote: Dr. Peter Zale

**Associate Director, Conservation, Plant Breeding and Collections
at Longwood Gardens**

Peter Zale, Ph. D, earned his doctoral degree from The Ohio State University where he studied plant germplasm collection, development, breeding, and genetics. He has participated in over 20 international plant collection expeditions in which he has traveled to Japan, Vietnam, Myanmar, Azerbaijan, and several other countries. Dr. Zale is expert in a wide range of woody and herbaceous flora and will be sharing his passion for plants from Central Asia, discussing why we are searching in this region for new and exciting genera and species.

Mini-Keynote: Michael Bone

Curator Steppe Collection at Denver Botanic Gardens

For over 16 years Michael Bone has worked for Denver Botanic Gardens. He is one of the authors of *Steppes: The Plants and Ecology of the World's Semi-arid Regions*, the seminal work on plants of the Steppe ecoregion written in collaboration with his world-renowned peers at DBG. He will be presenting on plants of the steppes and provide tips and techniques for integrating these plants into your garden.

Gregg Tepper

Director of Horticulture of Delaware Botanic Gardens

Having worked for Mt. Cuba Center in Hockessin, Delaware, and now leading the Horticulture Team as the Director of Horticulture at the newly established Delaware Botanic Gardens, Gregg Tepper is known as one of the East Coast's leading experts on native plants. Gregg has also run his own design-build and estate gardening company. He will be presenting on the diverse and ecologically rich plant communities within the Delmarva Peninsula.

Janet Novak

President of DVC-NARGS

Janet Novak is the current president of DVC-NARGS and an avid gardener and local plant expert. She has traveled extensively and is a leading expert on rock garden and alpine plants. She will be presenting on the rare and unusual plants found within one of the nation's most intriguing plant communities, the pine barrens of New Jersey.

Mike Slater

Columnist, *Reading Eagle*

As a local expert on the flora of the Northeast, Mike is well known among alpine and rock garden enthusiast as a writer, an active member with the DVC NARGS, and a staple at the Philadelphia Flower Show. In addition to being an expert on plants, Mike is also skilled and respected in the field of entomology and is an ornithologist. He will be presenting on the unique flora of the Serpentine Barrens.

Please go online or see the Fall *Quarterly* for full information.

Program

(Subject to minor changes)

Time	Friday, May 3, 2019
12 Noon to 5 PM	Registration: Check in and obtain packets.
3 PM	Hotel room check in
3 PM to 5 PM	Sales areas open
5 PM to 5:45 PM	Happy hour
5:45 PM to 7 PM	Buffet dinner
7 PM to 7:15 PM	Welcome and Announcements
7:15 PM to 8:05 PM	Local Roots
8:05 PM to 8:55 PM	Keynote
8:55 PM to 9 PM	Closing announcements
9 PM to 10 PM	Sales areas open
Time	Saturday, May 4, 2019
6:30 AM to 8 AM	Buffet breakfast
8 AM to 8:30 AM	Load busses and leave by 8:30
8:30 AM to 3 PM	Field trip with box lunches
4 PM to 5 PM	Sales area Open
5 PM to 5:45 PM	Happy hour
5:45 PM to 7 PM	Banquet
7 PM to 7:15 PM	Announcements
7:15 PM to 8:05 PM	Mini-Keynote
8:05 PM to 8:55 PM	Keynote
8:55 PM to 9:00 PM	Closing announcements
9 PM to 10 PM	Sales area Open
Time	Sunday, May 5, 2019
6:30 AM to 8 AM	Buffet breakfast
8 AM to 9 AM	Sales area open – final
9 AM to 9:15 AM	NARGS 2019 Annual Awards
9:15 AM to 10:15 AM	Mini-Keynote
10:15 AM to 10:20 AM	Closing
11:00 AM	NARGS Board meeting

Registration Form

NARGS 2019

Rooted in Diversity

The Delaware Valley Chapter of the North American Rock Garden Society
Spring Study Weekend - May 3-5, 2019

We greatly prefer that you register through the Delaware Valley Chapter Website (<http://www.dvcnargs.org/studyweekend.html>) but if you do not have computer access, please fill out this form and send with a check payable to "DVC-NARGS."

The deadline is March 1, 2019 for the main event as well as for the pre-conference trip.

Mail to: Liane Schleifer, 3612 Prestwick Dr, Tucker, GA 30084-2421, USA

If more than one member of a household is registering for the meeting, please complete a registration form for each person.

Name: _____

Mailing Address: _____

City: _____ Prov./State: _____ Postal/Zip code: _____

Country: _____ Email: _____

Phone: (_____) _____ NARGS Chapter _____

Friday Buffet: Chicken ___ Salmon ___ Vegetarian ___

Saturday Box Lunch: Hoagie Wrap ___ Turkey Club Wrap ___ Vegetarian ___

Saturday Banquet: Chicken ___ Cod ___ Vegetarian ___

Other special dietary requirements: _____

Meeting Registration: \$ _____ \$425.00

Meals ONLY for those not registered for the meeting: \$ _____ \$187.00

Two-Day Pre-Tour: \$ _____ \$190.00

(Limited to 39. You must register for the meeting to be eligible for the Two-Day Pre-Tour)

(DVC Chapter Members will be waitlisted for the Pre-Tour. \$190 will be billed if you clear the wait list)

Total: \$ _____

NOTE: No refunds after March 1, 2019. Cancellations subject to \$25 processing fee before March 1, 2019.



Bulletin Board

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2018 /2019

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President's Letter

January is a great time of year. We're past the holiday season and look to the turning of the calendar pages to a new year—2019—and a new beginning, while scanning plant and seed catalogs and the promise they bring to the garden. I am happy to announce to our members that NARGS is doing better than last year and is thriving due to member support, through our chapters. It is the chapter that supports us and we will soon be in a position to support our chapters more.

Our NARGS website (www.nargs.org) is undergoing a face lift, thanks to the leadership of our webmaster Elisabeth Zander and the financial support you gave. Check it out, if you have not been to the site recently.

Before I get back to my garden and its weeds, I am so grateful for this opportunity to serve you all for the past two years. I have another half-year to push forth more ideas. We need to remain dynamic. For \$40, you can get it all--opportunities to buy seed, travel, read a first class *Quarterly*, and visit friends in other chapter locations.

More importantly, I am singularly impressed with our NARGS Tours and Adventures Committee, which continues to sell out trips before the ink is dry. David White, Mariel Tribby, and Michael Guidi are working together to offer the best for short and long trips. I trust you filled out the questionnaire that they developed. None of this would have been possible without the dedication of Malcolm McGregor, Jody Payne and Lola Horwitz, who early on spearheaded the tours program and enabled us to stay afloat for two years. Both the Scotland and Greece tours are filled. We are eager to repeat the famous China trip; so, stay tuned.

The NARGS Seed Exchange is underway and it's better than ever, thanks to Laura Serowicz, Joyce Fingerut, and the many chapter elves.

We hope to have at least one, possibly two, issues of the *Quarterly* digitalized in the coming year. That means you will need to read those issues on line. However, in addition you will receive two or three print copies mailed to you. Even with contributions, we can no longer afford four printed issues. We want to give a special thanks to our editor, Joseph Tychonievich. The *Quarterly* continues to improve and surpass our expectations.

Now if we could enhance our member base by 1,000 new folks, we could offer more. Where will these potential members come from? From the chapters, of course. They all have an untapped pool of non-NARGS members. Also, invite the master gardeners in your area who are ready for the passionate stage of gardening. I am hoping the chapters come up with a feasible method incorporating them into our fold. They certainly like to participate in NARGS events. More on this initiative later.

A special thank you to Marianne Kuchel's nominating committee for bringing us exceptional candidates for the spring 2019 election. And there is the opportunity for from-the-floor nominations until January 31, 2019. We truly have been awed by the past boards who were willing to establish new ideas and be creative. Don't forget to vote: April 9 – 22, 2019.

And soon, NARGS will have an ad in *Horticulture Magazine*. We are leaving no stone unturned.

Again, if you don't like the direction that NARGS is embracing, I'm all ears. Please contact me.

Thank you,

Betty Anne Spar

Email: bettyannespar@gmail.com

North American Rock Garden Society 2018 Year-End Report

The NARGS Board continues to appreciate your support in numerous ways, both through service to the society and financial support. We value your interest in our on-going goal to encourage and promote the cultivation and conservation of rock garden plants and to expand the knowledge of their value, habits, and geographical distribution.

The year 2018 has been a fantastic year financially for NARGS. Our dues increase in 2017 has resulted in higher dues revenue year-to-date; however, that increase has been offset by a greater decrease in donations year-to-date. Tour income for the year, however, added nearly \$35,000 to our treasury, leaving us net positive income over expense year-to-date. We plan more tours in 2019 and beyond that will financially support our society, as well as provide great opportunities for members to see plants in their native habitats and in gardens.

However, we continue to need your financial support at year-end to start 2019 with a cash reserve. We hope you will again consider a donation to NARGS for our Annual Fund. In the U.S., NARGS is a 501(c)(3) tax-exempt organization and your donation may be tax deductible to the extent permitted by law.

You may make a donation on-line on the NARGS website at www.nargs.org and click on the "donate" button. You may donate on-line using your credit card or your PayPal account. Or you may donate by check in U.S. funds (payable to NARGS) or by mailing credit card information to: NARGS, POB 18604, Raleigh, NC 27619-8604 USA.

The year 2018 was a busy year for NARGS. In July, the Newfoundland Chapter hosted a successful Annual Meeting, and Todd Boland, co-organizer of the meeting, led a post-conference tour to Newfoundland's Limestone Barrens. For the first time, NARGS gave a new award, the Frank Cabot Award for an outstanding public garden. The 2018 award went to Memorial University of Newfoundland Botanical Garden; the award honors longtime NARGS member Frank Cabot, former treasurer and public garden advocate.

The NARGS Tours and Adventures Committee organized a successful trip to China last June, led by Panayoti Kelaidis. And the committee has sold-out trips to Scotland and Greece in 2019. Two tours are being planned for 2020, one in North America and one overseas. The committee consists of chair David White (North Carolina), Michael Guidi (Colorado), and Mariel Tribby (Missouri). None of these tours would have been possible without the dedication of Malcolm McGregor (England), Jody Payne (Maine), and Lola Horwitz (New York), who early on spearheaded the travel program. Our NARGS Web site (www.nargs.org) is undergoing a facelift, thanks to the leadership of our webmaster Elisabeth Zander (Connecticut) and the financial support you gave. Check it out, if you have not been to the site recently.

Elisabeth Zander (Connecticut), Panayoti Kelaidis (Colorado), Jim Dronenburg (Maryland) and others organized successful Traveling Speakers Tours during the year with Kit Strange (United Kingdom), Vojtěch Holubec

(Czech Republic), and Marcia Tatroe (Colorado). The committee has scheduled a continental tour for 2019 with Ger van den Beuken (the Netherlands).

Printing and postage fees have forced our hand. We hope to have at least one, possibly two, issues of the *Quarterly* digitalized in the coming year. That means you will need to read those issues on line. However, in addition you will receive two or three print copies mailed to you. Even with contributions, we can no longer afford four printed issues. We want to give a special thanks to our editor, Joseph Tychonievich. The *Quarterly* continues to improve and surpass our expectations. And soon, NARGS will have ads in national horticulture magazines. We are leaving no stone unturned to enroll new members to NARGS.

Preparation for the 2018-2019 Seed Exchange has been going on for the past few weeks, led by Laura Serowicz (Michigan), Joyce Fingerut (Connecticut), and the many chapter members who volunteer to sort, pack, and mail the seeds that you order. We thank the Watnong Chapter that is handling the main seed distribution (deadline to order seeds is January 31) and the Wisconsin-Illinois Chapter that will process surplus seed orders beginning March 1.

Looking ahead to 2019, the Delaware Valley Chapter is organizing a NARGS Study Weekend May 3 – 5 in Frazer, Pennsylvania, about 25 miles west of Philadelphia. Registration is now underway. We welcome three new board members: Michael Guidi (Rocky Mountain Chapter), Mariel Tribby (Gateway Chapter), and Judy Zatsick (Potomac Valley Chapter), and we thank departing board members Anna Leggatt (Ontario Chapter), Mike Kintgen (Rocky Mountain Chapter), and Jody Payne (Maine).

It is sad to learn of the passing of any of our members. Of particular note in the past twelve months were the deaths of Sally Boyson (Colorado), Cliff Desch, Jr. (Massachusetts), Glen Patterson (British Columbia), Otto Rombouts (Washington), Lyn Sauter (Washington), and Evelyn Stevens (Scotland). They made significant impacts on NARGS and their local chapters. We also mourn the senseless deaths of Rod and Rachel Saunders of Silver Hills Seeds, Cape Town, South Africa; they were NARGS traveling speakers to our chapters in 2000.

Your continuing individual membership helps support the seed exchange, annual meetings and study weekends, traveling speakers, and our publication, *The Rock Garden Quarterly*. However, your membership dues don't fully cover these activities that you value. As a result, we depend on your additional financial support to continue our member services. In the past twelve months, 423 of you have made contributions to NARGS, many contributing to our request to support the website upgrade. Plus 164 new members have joined our society during this period. However, we continue to be impacted by a net declining membership.

Please join us in making a year-end gift to NARGS. Thank you for helping NARGS remain a champion of the North American rock gardening community.

Respectfully, NARGS Officers and Board of Directors

NARGS Donations

Donations to NARGS between August 1 and October 31, 2018:
\$5,045.

To support the website, Seed Exchange, *Rock Garden Quarterly*, the Traveling Speakers Program, the general fund, and in memory of J. C. Raulston.

Anonymous 1 (Utah)	McCarty, Sarah (New Mexico)
Anonymous 2 (Wyoming)	McDonald, Rosaleen (Canada)
Adelman, Elizabeth L. (Wisconsin)	Milano, Phyllis (Connecticut)
Adler, Lee Howard (New York)	Moamar, Amal (Massachusetts)
Bennett, Teri L. (Virginia)	Moore, James (Washington)
Goldman, Doris (Pennsylvania)	Moscetti, Paula J. (New Jersey)
Groppenberger, Jane A. (Washington)	Rembetski, John (New Mexico)
Hayes, Peter Paul (United Kingdom)	Schellingerhout, Jan H. D. (Netherlands)
Houdek, Robert (Ohio)	Tallman, Marna C. (Oregon)
Howard, Margaret (Australia)	Turner, Larry (Colorado)
Jakob, Marie-Louise (Germany)	Vaxvick, Linda L. (Canada)
LaVallee, Steven (Wisconsin)	
Lockhart, Bruce (Massachusetts)	
MacNeil, Kay E. (Illinois)	
Magowan, Robin (New Mexico)	

Patrons

The following recently became NARGS Patrons:

Beelman, Clare (Montana)
Cromwell, Cynthia (North Carolina)
Gerace, Alex C. (Colorado)
Knapp, Joann and Fred (New Jersey)
Leifson, Christopher (Michigan)
Lofgren, Aaron (Minnesota)



Tours & Adventures Committee

David White, Michael Guidi, and Mariel Tribby

The committee organized two tours for 2019: Scotland during the late spring and Greece in the fall. Both tours were designed to give NARGS members the opportunity to see and learn about rock gardens and rock garden plants. The tours filled to capacity within three weeks after they were announced. Two tours are being planned for 2020, one in North America and one overseas.

As discussed with the NARGS Board of Directors at the AGM in Newfoundland, the committee developed a survey seeking input from NARGS members to assist with the design of future tours. The initial responses indicated that destination and itinerary are very important, and that seeing plants in their native habitat is a top priority, followed by visits to public and private gardens. The top-rated destinations in North America (in order of preference) include the Mountain West, Alaska and the West Coast of Canada, the U.S. West Coast and U.S. Southwest, and the U.S. Northeast. Top-rated destinations elsewhere in the world include South America, Central Europe, the Mediterranean, and the British Isles.

Most respondents would like a tour length of 5-10 days with the option of adding additional time to see local highlights. Lodging should be well maintained but does not need to have lots of amenities. Several respondents suggested that meals not be included so that personal dietary needs and preferences can be accommodated. If you did not respond to the survey, you may still do so until January 31, 2019 via this link: <https://bit.ly/2KaT6EZ>.

NARGS Awards Nominations Due March 1, 2019

Nominations are due to Panayoti Kelaidis, chair of the Awards Committee, by March 1 2019. Electronic nominations only, please.
Email to: telesonix@outlook.com

Award of Merit: Established in 1965, this award is given to persons who have made outstanding contributions to rock and alpine gardening and to the North American Rock Garden Society. In addition, the recipients will be people of demonstrated plantsmanship. *The recipient must be an active member of the Society.*

Marcel Le Piniec Award: Established in 1969, this award is given to a nursery person, propagator, hybridizer, or plant explorer who is currently actively engaged in extending and enriching the plant material available to rock gardeners. This may be a joint award if two people have worked closely together. *The recipient need not be a member of NARGS.*

Edgar T. Wherry Award: Established in 1973, this award is given from time to time to a person who has made an outstanding contribution in the dissemination of botanical and/or horticultural information about native North American plants. The works must be scientifically sound, but may be written for popular readership and do not have to be specifically about rock garden plants. Generally, the award recognizes a body of work or a lifetime of literary effort rather than a single work (see the Carleton R. Worth Award). *The recipient does not have to be a member of the Society.*

Carleton R. Worth Award: Established in 1985, this award is given to an author of distinguished writings about rock gardening and rock garden plants in a book or in magazine articles. The Award may also be based on an Editor's body of work for a Chapter Newsletter. *The recipient does not have to be a member of the Society.*

Marvin E. Black Award: Established in 1990, this award is given to a member of the Society who excels at promoting membership in NARGS; organizing study weekends, national, and international meetings. They should also be involved in such activities as planning trips to study plants and to meet other plant people. The emphasis shall be placed on a member who has helped other people to reach their potential in the plant world. *The recipient must be a member of the Society.*

Linc & Timmy Foster Millstream Garden Award: Established in 2006, this award is for an outstanding contribution to the North American Rock Garden Society for creating a superior garden. This is not meant to be a competition, but to recognize members' great gardens across the various styles and regions of the United States and Canada. Since there is such a wide range of possibilities in style and climate regions, it has been decided there needs to be four categories of gardens. They are: the Container Garden, the Alpine Rock Garden, the Woodland Garden and the Special Garden. Any of these gardens must be a private garden to eliminate unfair institutional advantages. This award is meant to reward the creation of gardens, which meet a wide standard set by the North American Rock Garden Society, and reflects well on that society. The Millstream award should be submitted with a short one-page essay (300-500 words--that can be published in the *Rock Garden Quarterly*) with 3-7 images (preferably sent at 1 MB, but with higher resolution backup available if the garden is to be featured in the *Quarterly*). *The recipient must be a member of the Society.*

Frank Cabot Public Garden Award: Established in 2018 this award is given to a public garden that excels in furthering the purpose of the North American Rock Garden Society in promoting the construction and design of rock gardens; the cultivation, conservation, and knowledge of rock garden plants and their geographical distribution; and the public outreach through plant exploration and introduction of new garden-worthy species. The award is limited to great public gardens in the United States and Canada that meet high standards in the creation of public rock gardens. Since there is such a wide range of possibilities in climate and geographic regions, there are four categories of public gardens that may be considered for the award. They are: the Container Garden, the Alpine Rock Garden, the Woodland Garden, and the Special Garden. The Frank Cabot Public Garden Award should be submitted with a short one-page essay (300-500 words--that can be published in the *Rock Garden Quarterly*) with 3-7 images (preferably sent at 1 MB, but with higher resolution backup available if the garden is to be featured in the *Quarterly*).

The deadline for submittal of applications is March 1, 2019. Awards will be announced in May at the NARGS Study Weekend in Pennsylvania.

SEED EXCHANGE

As this issue of the *Quarterly* reaches you, through the mails or on the web, the Main Distribution for the Seed Exchange will be underway. We are grateful that the members of the Watnong Chapter, in northern New Jersey, are willing to handle this big responsibility. They will accept and fulfill your orders until January 31st, so be sure to mail your requests promptly or order on our website right now. Our electronic ordering system is also a great way to learn more about more plants by simply clicking on a plant name in the seed list, which will take you to the Google search page with all the many links to information and images.

If you need a print copy of the Seed List and Order Form, contact me right this minute:

Joyce Fingerut
537 Taugwonk Road
Stonington, Connecticut 06378-1805
U.S.A.
alpinegarden@comcast.net

If you do plan to order from our website, login with your username or email address and password; this is how the Seedex will recognize you as a member and allow you access to the page where you can place your seed order. Be sure that our Executive Secretary, Bobby Ward, has your most current email address. If you need help logging in, use the FAQ link at the top of the webpage for directions or send us a message using the contact link. Please read all ordering instructions carefully before beginning to request seeds.

Beginning March 1, members will be able to purchase even more seeds. We greatly appreciate the volunteers of the Wisconsin-Illinois Chapter who will fill requests during the three weeks of the Surplus Seed Distribution.

The current prices are \$17 for the Main Distribution (for 25 packets, or a Donor's 35 packets), and \$10 per 20 packets in the Surplus Round.

In order to reach this stage of offering myriad wonderful choices, we have relied on many helpful hands (and willing hearts). First there are the numerous donors, who take the time and trouble to collect, clean, collate, and convey all the wonderful seeds on our list. They are the reason that there can even be a Seed Exchange.

Then several chapters, as well as single individuals, play a part in dividing and repackaging the seeds, so that they may be shared among as many members as possible. Since we have many regulars that we have counted on year after year, I think they deserve public recognition.

Our warm thanks to the volunteers in these chapters: Adirondack, Allegheny, Hudson Valley, Manhattan, Minnesota, New England, Northwestern, Piedmont, and Sierra.... and, this year: Berkshire, Great Lakes, and Potomac Valley. A number of individuals repackage as many seeds as a whole chapter: Maryann Gryboski, Tasha King, Steve Marak, Jacques Mommens, and Jan Slater. We value their commitment and their support.

The hardest worker – and coordinator of all the many phases of the Seedex – is Laura Serowicz, Seed Intake Manager. There isn't a stage or a job of the Seed Exchange that she doesn't handle, help, or improve (including these notices).

Please complete the circle by adding your names to the list of Donors for the 2019-2020 Seed Exchange.

I wish you an easy winter, and a glorious spring.

Joyce Fingerut, Director
NARGS Seed Exchange

Dr. Clifford E. Desch, Jr.

NARGS member Clifford E. Desch, Jr., of Conway, Massachusetts, died on September 20, 2018. He was a member of the Berkshire Chapter of NARGS and twice its chapter chair.

Cliff was a member of the North American Rock Garden Society since 1974. He was also a member of the Cactus & Succulent Society of America, the Succulent Society of South Africa, the Magnolia Society International, the Rhododendron Species Foundation and a life member of the American Rhododendron Society.

Cliff was a professor in the Department of Ecology & Evolutionary Biology at the University of Connecticut (Hartford campus) and conducted research on morphology and taxonomy of parasitic hair follicle mites of mammals in the Department of Plant, Soil and Insect Sciences of the University of Massachusetts in Amherst.

SALLY BOYSON

February 24, 1952 - October 2, 2018

Sally Jean Boyson, M.D. passed away on October 2, 2018. Sally was educated at MIT and the University of Pennsylvania. She was an assistant professor of neurology and pharmacology at the University of Pennsylvania and later at the University of Colorado, and volunteered teaching at the VA Hospital for many years. Sally was a Colorado Master Gardener and volunteered at the Denver Botanic Gardens. She was editor of the newsletter of the Rocky Mountain Chapter of the North American Rock Garden Society for 16 years. Her beautiful garden, which was her pride and joy, was featured in both the Denver newspapers. Sally is survived by her sister, Elizabeth Norman; a brother, John Boyson; and numerous nieces and nephews.

NARGS 2019 From-the-Floor Nominations

Election of President, Vice-President, Recording Secretary, Treasurer,
and Three Directors

The names of those proposed by the Nominating Committee can be viewed on the NARGS website (www.nargs.org) and in this issue of the *Quarterly*. There is now opportunity for members to nominate FROM THE FLOOR until January 31, 2019.

The combined list of candidates will be published on the NARGS website by April 1 and in the spring 2019 *Quarterly* (dispatched around March 20).

Online election will be held April 9-22, 2019. All active members will be mailed a link shortly before the election opens. Your email address will admit you. If you are a member and have never verified your email address, please do so as soon as possible. You may contact Bobby Ward (nargs@nc.rr.com) for help. The www.nargs.org website will have a notice when voting begins, as well as a copy of the voting-site link on the News page.

A from-the-floor nomination for any post may be emailed to Marianne Kuchel, Nominating Committee Chair: mariannekuchel@yahoo.com

It can also be mailed to:
Marianne Kuchel
1815 Blood Brook Rd
Fairlee, VT 05045-9817

The Nomination must include:

1. Name, chapter (if applicable), email address, and position for which each person is nominated. (The nominee must be a member of NARGS).
2. Bio of the nominee (100 words or less, written by nominee)
3. Picture of nominee (shoulder length).
4. Note of acceptance from (new) nominee indicating willingness to be one of the above officers of NARGS (two-year term) or a NARGS Director (three-year term).

All nominations and required nominee information must be received by January 31, 2019.

NARGS 2019 Nominations for Online Election for Officers and Board of Directors: April 9 – 22, 2019

Assembled by the NARGS Nominating Committee, consisting of Marianne Kuchel, chair; Mike Bone, Judith Brown, Thelma Hewitt, Brendan Kenney, Jane McGary, Sarah Strickler, and Bobby Ward

Nominated for President: Elisabeth Zander (Connecticut):



“Back in the mid-80s, Michael Dodge invited me to a plant sale of the Connecticut Chapter of ARGs if I would help set up tables. Of course, I did... and so joined ARGs. With the likes of Linc Foster, Dick Redfield, Norman Singer and Geoffrey Charlesworth pointing out my "must-have" plants, who could resist. Since then, I have served as Editor for the Berkshire Chapter Newsletter, NARGS

Seed Exchange Director, several offices of the Berkshire Chapter, past Secretary for NARGS, and currently, the nargs.org webmaster. Along with my husband Rod, I build crevice gardens and fill them with plants grown from various seed exchanges.” [Elisabeth is currently co-coordinating the Traveling Speakers Program for NARGS, and she and Rod received the Linc and Timmy Foster Millstream Garden Award in 2018 “for creating a superior garden.”]

Nominated for Vice President: Panayoti Kelaidis (Colorado):



"My love of rock gardening goes back to my childhood in the 1950s, growing up in Boulder under the shadow of the Rockies, inspired by Paul Maslin's rock garden masterpiece garden a few blocks away, and helping my brother-in-law build my first garden at my parent's house when I was barely 10 years old. Fast forward more than a half century--I have not only helped create the Rock Alpine Garden at

Denver Botanic Gardens, but have spoken at most NARGS chapters repeatedly, and visited dozens of rock gardens around the globe expanding my understanding of the art. "My vision for NARGS is for us to pave the way for the Millennial generation to

come aboard and eventually take the helm and move our society onto a much wider scope and really pave the way for rock gardens and rock plants in every home and garden." [Panayoti is currently serving on the NARGS board as Director-at-Large, is chair of the Awards Committee, and is co-coordinator of the NARGS Traveling Speakers Program.]

Nominated for Treasurer: Jeffrey Hurtig (Ontario):



Jeff is a retired anesthesiologist and intensive care physician with dual U.S./Canada citizenship. Jeff has an MBA and was an executive in licensing, mergers, and acquisitions; he hopes to bring these skills in accounting and financing to NARGS to look for growth opportunities. He is keen to attract new, young members to NARGS using social media platforms and informal communications as leverage.

His horticultural passion is growing alpine plants in troughs on his condominium balcony and wants to promote using troughs to retirees and young people. [Jeff previously lived in Connecticut, where he was treasurer of the Berkshire Chapter of NARGS; he is currently co-chair of the Ottawa Valley Chapter and has served on NARGS's By-Laws Committee.]

Nominated for Recording Secretary: Joyce Hemingson



(Connecticut): "The Berkshire Chapter introduced me to rock gardening, when Norman Singer and Geoffrey Charlesworth hosted legendary plant sales at their home as chapter fundraisers. In 1989, I joined the American Rock Garden Society, now NARGS, and have enjoyed meeting other members at study weekends and annual events since then. I worked as a computer programmer and systems analyst and

left to get an additional degree in pollination botany. I've served as recording secretary of NARGS since 2017, taking minutes at the Raleigh and Newfoundland AGM meetings, organizing the annual online voting for officers or directors, and recording online meetings." [Joyce is the chair of the Berkshire Chapter and is currently completing a two-year term as NARGS recording secretary; she is eligible to be elected for another two-year term.]

Nominated for Director: Cyndy Cromwell (North Carolina):



“Horticulture has always been an important part of my life. Seven years ago, I went from caring for extensive mixed borders in Connecticut, to learning how to garden in the sometimes-challenging conditions of the U.S. Southeast. Crevice rock gardening is now my main interest in the home garden. The Piedmont Chapter has been a wonderful resource, allowing me the opportunity to learn from wonderful speakers from all over the world, as well as knowledgeable fellow members.

The NARGS travel program has allowed me to botanize in amazing locations with some of the world's best plant people. NARGS is truly an outstanding horticultural organization, and I would be honored to serve as a Board member.” [Cyndy served on the planning committee for the NARGS Annual Meeting hosted by the Piedmont Chapter in November 2018 and is currently a member of the Piedmont Chapter board.]

Nominated for Director: Brendan Kenney (New York):



Brendan joined NARGS in 1995 at the age of 37 after meeting enthusiastic NARGS member Steve Whitesell online the previous year. He understands the importance of embracing new technology in moving forward in a changing world as he founded a non-profit in a community garden in the East Village in Manhattan in the 1990's which became an NYC Park. A brownstone rock garden with the generous donation of many plants from Bob Bartolomei, rock garden curator at NYBG, was constructed there as well as a hardy cactus garden. He has been the Manhattan Chapter Chair for three years and has worked with other NARGS

Chapters in coordinating the annual Tri-State meeting. Brendan deeply appreciates the knowledge and experience of NARGS members (present and past) and the value of chapters working together.

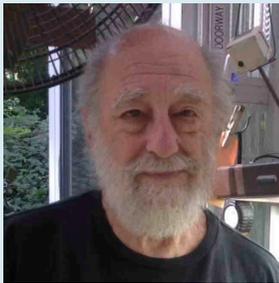
Nominated for Director: Rosemary Monahan (Massachusetts):



She recently retired after 31 years of working for the U.S. Environmental Protection Agency. Rosemary now has more time to work in her one-acre garden (which includes a 'sort of' rock garden) and also to help local conservation organizations with plant surveys. A long-time member of the New England chapter, she has served as chapter chair and secretary, and chair of the hard-working team that put together the 2010 Winter

Study Weekend in Devens, Massachusetts. Rosemary wants to help NARGS continue to be the pre-eminent horticultural organization in the country and to grow its membership.

Nominated for Director: Gerald "Jerry" Rifkin (Pennsylvania):



Jerry is a retired orthodontist with a lifelong interest in horticulture, especially in propagating plants from cuttings and growing them from seeds. His plant interests include dionysias, saxifrages, primulas, and daphnes. He was attracted to rock gardening and NARGS at the Philadelphia Flower Show (PFS) in 2008 and he is now the Delaware Valley Chapter's (DVC) coordinator for award-

winning exhibits at the PFS. He is DVC's chapter treasurer and co-chair of the "Rooted in Diversity" study weekend in May 2019. He was the recipient of the NARGS Award for Service in 2018. Jerry is thorough, organized, and thoughtful with good ideas that he follows up on.

Norman Singer Endowment Applications

Due March 1, 2019

NARGS expects to award grants in 2019 to one or more projects that advance the art and science of rock gardening. Guidelines for submittal of applications and selection of projects, as well as the application form, are on the website: nargs.org/norman-singer-endowment-fund

New Members

*Welcome to all those who joined between
July 28 and October 31, 2018*

Adams, Bryding, 4317 Overlook Rd, Birmingham, AL 35222-3743
Aitken, Steve, Fine Gardening Magazine, 63 S Main St, Newtown, CT 06470-2355
Bendall, Matt, 80 Den Rd, Mole Creek, Tas, 7304, Australia
Boles, Chris, 3259 Hillard Dr, Birmingham, AL 35243-4929
Charnes, Rick, 26 Fuller Ter, Apt 2, West Newton, MA 02465-1211
Chisu, Razvan, 6 Hungerford Pl, Barthomley, Chester, CW2 5PF, United Kingdom
Crawford, Shalee, 2201 Whited St, Pittsburgh, PA 15226-1614
Cummings, Julia, 503 Long Story Dr, Durango, CO 81301-6242
Davis, Janet, 244 Sheldrake Blvd, Toronto, ON M4P 2B6, Canada
Dragonetti, Rebecca, 27 Tioronda Ave, Beacon, NY 12508-3343
Elliott, Karen, 2215 N York St, Denver, CO 80205-5711
Fleischman, Martha, 1150 Park Ave., #18A, New York, NY 10128-1244
Foster, Ken, Kennan Corp, 1216 Rosario St, Davis, CA 95618-5041
Foster, Starr, 6550 Alden Dr, West Bloomfield, MI 48324-2007
Jahnke, Gloria & Jim, 8405 Union Grove Church Rd, Chapel Hill, NC 27516-5411
Johns, Jason, 4426 La Paloma Ave., Santa Barbara, CA 93105-9718
Kreckek, Petr, Valkova 550, Pelhrimov 393 01, Czech Republic
Lawrence, James R, S5 C19 RR1, Kaslo, BC V0G 1M0, Canada
Minnis, Deborah, 2909 Allenby Dr, Raleigh, NC 27604-5824
Morgan, Tim, 1830 S Newport St, Denver, CO 80224-2250
Obrie, Kylie, 165 Kristin Dr, Irrigon, OR 97844-7003
Pounds, David, 9084 25th Sideroad Adjala, Alliston, ON L9R 1V1, Canada
Punnett, Hope, 6635 Wissahickon Ave, Philadelphia, PA 19119-3725
Rathje, Lora, 4 Prairie Meadows Dr, Long Grove, IA 52756-9648
Ross, Matthew, 402 E Street Rd, Apt 2, Kennett Square, PA 19384-1860
Shaffer, Holly, 4960 Knox Ct, Denver, CO 80221-1134
Shivrattan, Ray, Aquaphyte Remediation, 4153 Concession Rd 5, Orono, ON L0B 1M0, Canada
Skarapol, Brenda, Green Spring Gardens, 3814 Oliver St, Hyattsville, MD 20782-3029
Sliman, Lee, POB 331, Pacific City, OR 97135-0331
Vogt, Charles, 2549 Selwyn Ave, Charlotte, NC 28209-1605
Wilkes-Patterson, Marvina, 26 Mallon Rd, Dorchester, MA 02121-3814
Williamson, Chris, 1986 Mount Hope Church Rd, McLeansville, NC 27301-9628

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Speakers Tour 2019

The NARGS traveling speaker for spring 2019 is Ger van den Beuken, from Horst, the Netherlands. He will be speaking at the following chapters: Berkshire (March 30), Great Lakes (April 6), Ontario (April 7), Northwestern (April 11), Columbia-Willamette (April 16), and Siskiyou (April 18). Ger will also be speaking at the Vancouver Island Rock and Alpine Garden Society (Victoria) (April 10) and the Alpine Garden Club of British Columbia (Vancouver) (April 11). The schedule will be posted on the NARGS Web site.

Show off your Garden

A new regular feature on the NARGS Facebook page will be a weekend photo from a NARGS member, showing a plant or vignette from their garden.

If you would like to have a photo featured, please send a photo to Todd Boland at nfld.todd.boland@gmail.com

NARGS Awards for Service

NARGS Awards for Service to the Delaware Valley, Potomac Valley, and Rocky Mountain chapters have recently been presented to the following NARGS members

Joan Haas

Joan Haas is a member who always quietly and efficiently takes on those chapter activities that help to make our chapter a success. Most recently she has been the editor of the Dodecatheon, our chapter newsletter. She has been editor since 2013, always putting together an interesting and professional product. When our newsletter was published online, it was started by Joan. For two years Joan was responsible for seed packing for the NARGS seed exchange. She efficiently organized the activity and ran it from her home. Joan is also an excellent propagator, growing from seed and cuttings some of the most unusual plants that show up at our two annual plant sales. Next year she has volunteered to run our chapter's plant sales. We are happy to recommend for the NARGS Award for Service for Joan Haas for her devoted service to our chapter and for the amazing variety of plants that she has shared with us.

---submitted by Jan Slater and members of Delaware Valley Chapter

Kevin McIntosh

Kevin McIntosh is one of our long-term members, joining the Potomac Valley Chapter in 1979. Since retiring as an immunologist, he has become active in our chapter, serving as Vice-President and as President. Kevin's leadership has kept our chapter vibrant; he introduced the now-annual winter visit to a local quarry to collect unusual stone, revived our regular trough-making workshops, and represents the chapter as a speaker to garden groups. We benefit from his connection to other horticulture organizations as he never hesitates to publicize our activities.

Kevin freely shares his knowledge and enthusiasm for rare plants, writes about them extensively in our newsletter – from selaginellas to gesneriads—and helps bring speakers to our chapter, such as Sue Milliken and Kelly Dodson from Far Reaches Farm in Port Townsend, WA. And he shares choice plants at our exchanges and plants sales. As a board chair, he rallies us to regular meetings and keeps our free-wheeling tendencies in check. We should all aspire to his spirit, humor, and volunteerism. Whether it is regularly bringing food and drink to our meetings, or doing legwork for a workshop, Kevin repeatedly gives his time and energy to make our chapter interesting and active. Without him it is possible our chapter would be extinct. We are grateful, Kevin, for your loyal service and unflinching dedication to our chapter.

---submitted by Sarah Strickler on behalf of Potomac Valley Chapter

Monica Pope

Monica Pope has volunteered in the Rock Alpine Garden at Denver Botanic Gardens for 14 years. Her positive attitude and “can-do” demeanor has been a bright spot in the group since she started in 2004. Monica is the social glue for this group of volunteers, with her friendly welcoming attitude and unparalleled conversation skills. Monica has a knack for detail jobs from cleaning difficult seed or untangling unruly plants in the garden. Monica’s hard work and dedication has allowed DBG’s rock alpine garden to continue to be one of the premier rock gardens in North America. This public garden over its 37 years has been a magnet for attracting people to NARGS and to rock gardening in general. In addition to volunteering in the Rock Alpine Garden every Wednesday year round, Monica has been a die-hard volunteer at RMC-NARGS spring plant sales. She can be counted on to do whatever detailed job needs doing. No job is too little or too large. Monica’s dedication and hard work at the plant sales mean we have all the plants priced and ready to sell by the time the doors open, year after year, despite tight room turn arounds and poor weather. Since starting at DBG as a volunteer, Monica has also helped out in the Rock Garden division of DBG’s May plant sale, ensuring its success through hours of time in the sun, rain, snow or wind to make sure plants are ready for customers.

--submitted by Mike Kintgen

Jerry Rifkin

We’re not sure when Jerry got interested in alpine plants. He joined the Delaware Valley Chapter of NARGS in 2008. He has volunteered in a number of different areas. First off, it was maintaining the name tags. The logical progression was to track down members to “babysit” at the Flower Show Exhibit. He was growing lots of plants. He participated in many of our chapter’s plant shows and was awarded the Dick Van Duser Award a number of times for Best in Show. Unexpectedly, he was asked to become the treasurer on rather short notice. He jumped in and is still doing that to this day. He has given many well-grown plants to the chapter plant sales. He has been our chapter’s lead coordinator for the last five years for the Philadelphia Flower Show. He has also volunteered at the Morris Arboretum Plant Sale and other activities. He is now adding co-chair of the NARGS Spring Study Weekend that the chapter is running in May 2019 to his list of activities. Jerry is always up for a road trip to nurseries (e.g., Stonecrop’s annual sale/open garden), especially if it involves daphnes and encrusted saxifrages.

---submitted by Jan Slater and members of Delaware Valley Chapter

NARGS Awards for Service (continued)

Holly Shaffer

Since joining the Rock Garden Volunteer group around 2012 Holly has been a great addition to the Wednesday group in the Rock Alpine Garden at Denver Botanic Gardens. A kind, caring and let's-get-this-done attitude made her an essential part of the group from her first day. Magnificent

baking, culinary and bar-tending skills (at evening gatherings for the volunteers) further help with group cohesion. She has become a treasured part of the group and helps make DBG's rock garden a national showcase for the art of rock gardening. As if volunteering and feeding the troops is not enough. Holly is a key player in the RMC-NARGS spring plant sale, making sure plants get priced and on tables. RMC-NARGS is so lucky to have such dedicated volunteers like Holly to ensure our spring plant sale runs smoothly. Holly is also a dedicated member of the rock garden division at DBG's May plant sale and ensures once again that plants are organized, priced and on the tables for customers. In 2016 Holly was a giant part of the success of the NARGS conference in Steamboat Springs. Once again, no job was too large or too small. Holly helped with hikes, drove speakers to and from the airport, and made sure many other details were in order.

Her hard work and dedication made individual people feel valued in a conference of 250 people.

--submitted by Mike Kintgen

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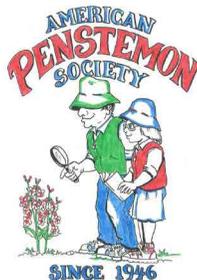
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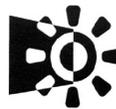
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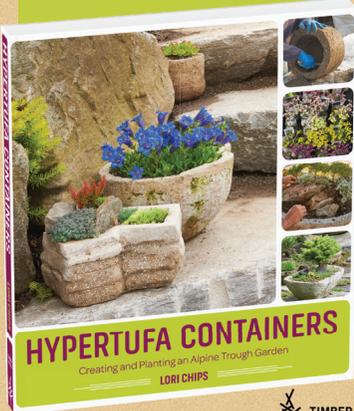
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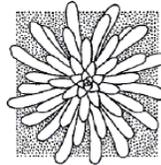
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Alaska (Anchorage & Mat-Su Valley)	Carmel Tysver <garden@gci.net>
Allegheny (Pittsburgh, PA)	David Amrhein <amrheindav@aol.com>
Berkshire (Stockbridge, MA)	Joyce Hemingson <jhem1022@gmail.com>
Calgary Rock & Alpine Garden Society (Calgary, AB)	Margaret Fong <mjfhello@yahoo.ca>
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The officers of the North American Rock Garden Society consist of a president, a vice-president, a recording secretary, and a treasurer. The officers are elected by the membership.

The Board of Directors of NARGS consists of the four above-named officers, the immediate past president of NARGS, and nine elected directors.

The affairs of NARGS are administered by an Administrative Committee (called AdCom) consisting of the president, vice-president, recording secretary, treasurer, and one director-at-large, selected annually by the NARGS officers from among the nine elected directors.

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