NORTH AMERICAN ROCK GARDEN SOCIETY

The Rock Garden QUARTERLY

WINTER 2019/2020

SLAY THIS SIDE OF MALL.

CONTRIBUTORS

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

Carol Eichler is a long-time member of NARGS and the Adirondack Chapter, where she's held just about every officer position. After years of growing rock garden plants in troughs, she finally decided in 2015 that it was time to build a rock garden, with stonework by husband Steve. It has given them such pleasure that they are now in the process of building rock garden number two. Carol chairing the 2020 Annual General Meeting and look forward to hosting our members in Ithaca, New York, this June.

Bill Stark and Mary Stauble's glacier impacted garden will be on the 2020 AGM garden tour. They met as grad students at Cornell and stayed in Ithaca. Mary worked at Cornell's Vet School. Bill joined a computer firm, became its director of engineering and then left to start a hi-tech company. Patent lawyers voted him inventor of the year for his Adaptive Inference AI system. During a business trip to England, Bill visited RHS Wisley and got hooked on rock gardening. Now both retired, Bill & Mary are building a house and garden on Cayuga Lake.

John Gilrein is an outdoor recreation enthusiast for over 50 years, enjoying nature while hiking, canoeing, and skiing. He is currently a pathological gardener on two acres, tending a rock garden, perennials, vegetables, and trees. John is also a dedicated NARGS member who believes the seed exchange is the greatest.

Kayla White enjoys hiking wild places, yoga, swimming, fermenting things, and maple sugaring. She is currently the Summit Steward Coordinator for the Adirondack Mountain Club and has been working there since 2012. She graduated from the University at Buffalo with a BA in Philosophy and Comparative Literature.

Joseph Tychonievich is the author of *Plant Breeding for the Home Gardener, Rock Gardening: Reimagining a Classic Style,* and editor of *The Rock Garden Quarterly.* He lives and gardens with his husband and too many pets in Williamsburg, Virginia.

Bob Nold was dragged kicking and screaming to Denver in April 1961. There was snow on the ground. He took that as a bad sign. It was. His garden is located at the western edge of the Denver metro area, in the rain shadow of Mount Evans. He eventually came to terms with this and now grows mostly bulbs, a few dryland plants, and the odd conifer. He is the author of *Penstemons* (1999), *Columbines* (2003), and *High and Dry* (2007)

Mary Gilliland is an award-winning internationally published poet. On the writing faculty of Cornell University, she also taught writing at Cornell's branch campus in Doha, Qatar, and was a featured poet at the International Al Jazeera Film Festival. In November, 2019 Mary was one of four writers selected for the inaugural Sandy Bend writers' residency on Sanibel Island, Florida.

Front cover: Taughannock Falls. Heather Hughes.

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From the Editor

IF EVERYTHING WENT as planned, this issue of the *Quarterly* looks as it always has, but getting it printed cost us nearly half of what it has cost in the past. We have switched to a new printer. The company we've been using for the past 15 years

has served us well, but by shopping around we've been able to find a printer who can bring us very significant savings. Though this switch does slash our printing costs almost in half, the cost of postage is the same and will continue to increase. But I'm thrilled that we were able to find a way to bring you the same *Quarterly*, still printed four times a year, at a significantly lower cost. This means we can put more of your membership dues and generous donations into keeping NARGS a solvent, vibrant, growing organization for years to come.

Hopefully the issue you are holding in your hand as you read this (unless you are reading online) arrived promptly and looks and feels just like what you are used to. But a big switch to a new printer can, of course, run into unexpected problems. If anything went wrong with your issue, pleased let me know (gsparrowgardens@gmail.com) so we can address it moving forward.

The bulk of the articles in this issue are focused on the NARGS Annual General Meeting coming up in June of 2020. If you are going to be able to attend the meeting, this will be a great preview of the amazing gardens and landscapes that you'll be seeing. Of course, most of us won't be able to attend in person, so I hope this issue can serve as the next best thing, with tons of beautiful images of the gardens and landscapes of the Ithaca, New York, area. You can also save this issue in case future travels take you to the Ithaca area and let it serve as a garden tour guide to this fascinating region. And there is a lot of information, inspiration, and beauty packed into those articles.

Enjoy this issue, and happy new year! Here's hoping that in 2020 all your seeds germinate, all your cuttings root, none of your bulbs get eaten by rodents, and you get exactly the right amount of rain!



Foresight 2020 EXPLORATION AND INSPIRATION

THE ADIRONDACK CHAPTER invites you to attend NARGS' Annual General Meeting whether you are a return attendee or are considering attending for the first time. We promise an action-packed few days that include visiting the Cornell Botanic Gardens and some very special private gardens. We are eager to showcase the beauty of our area that is often described as "gorge-ous" in reference to our many gorges and waterfalls. But we're also proud of 40-mile (64 km) long Cayuga Lake, the second largest of the Finger Lakes, and the rolling, wooded hills and verdant gardens that surround it.

Each afternoon, after returning from field trips, you will be able to indulge your plant lust at our plant sales featuring an exciting list of specialty vendors. Dinner and evening talks will follow. We are thrilled to introduce the NARGS community to Kaj Andersen and the Bangsbo Botanical Gardens of Northern Denmark where he and his wife Minna, working alongside Zdeněk Zvolánek, have been instrumental in the construction and care of the world's largest crevice garden. Our other international speaker is Harry Jans who, believe-it-or-not, is making his AGM debut and needs no introduction to the rock gardening community. Harry, renowned for his extensive travels, will take us on a whirlwind round-the-world tour in 60 minutes highlighting alpines that he considers the best, new, rare, or strange, and looking at their different survival techniques. For his second talk, he will focus on the alpines of Ecuador and Peru, two countries not often visited by plants people. Rounding out the Conference activities are book sales and signings, door prizes, and always the camaraderie of fellow plant enthusiasts.

We believe Ithaca is the place to be this June! You might even want to consider extending your stay to more fully experience the Finger Lakes region.

--Adirondack Chapter Planning Committee

Registration at a Glance

- Cost \$425; must be a NARGS member. You can join or renew at the time of registration.
- Online registration opens around January 6, 2020. From the NARGS.org home page, go to drop down "Events" and to the link for the Annual Meeting. The link will take you to an external webpage where you can complete the registration form and pay. There will be no paper registration.
- Limited to 135 registrants.

Conference central will be Robert Purcell Community Center, 217 George Jessup Rd. on the north campus of Cornell University, Ithaca, where talks, plant sales, book sales and signings, and most meals will take place. Everyone will sign in here; look for the loading zone signs near the building entrance. We plan to have volunteers on hand to direct you upon arrival.

- Accompanying guests who do not choose to register for the conference may stay in the residence halls and can purchase meals at the Robert Purcell Marketplace Eatery with a credit card; advance payment is required for guests to attend the banquet.
- May 15 is the deadline for all below (subject to availability); all can be performed through the online registration site:
 - Registration for Syracuse pre-conference day trip.
 - Submission of after-hours mini-talks proposals (coordinated through Steve Whitesell, elysium214@aol.com).
 - Ordering a Conference t-shirt.
 - Guest banquet reservations.
 - Motel or residence hall reservations at special conference rate.
 - Last date to register without a penalty; after May 15 registration cost is \$450.
 - Last date to cancel your registration, less a \$50 processing fee; registration fee is forfeited for cancellations after May 15.



Saxafraga 'Jan Neruda' in a trough in the Marlene Kobre and Ron Denson Garden.

Program Summary

- Two daytime field trips to gardens and a moderate level gorge walk (with easier options) at a "botanical pace."
- Two talks by Harry Jans, one talk by Kaj Andersen, four talks by Cornell Botanic Gardens naturalists and horticulturists.
- After-hours mini-talks (by advance submission, see below).
- Two scheduled plant sales and book sales and signings.
- Three breakfasts, two lunches, and two dinners at Robert Purcell Marketplace Eatery.
- Friday night catered banquet with a cash bar; option to add a guest at an additional cost; Saturday dinner is on your own.
- NARGS Annual Meeting and Awards.
- Door prizes.

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• Open gardens on your own on Sunday, June 21 (optional).

Conference Schedule (subject to change)

Syntuse area garters)8:00am - 3:00pmPre-registration required and additional fee of \$45 includes lunch (limited to 42)2:00 - 6:00pmOfficial Conference check-in (Early or late registration by prior arrangement)3:00 - 6:00pmAdCom and NARGS Board meetings3:30 - 5:30pmPlant sales, book sales and signings4:30 - 5:30pmInformal "Taste of Ithaca" social hour6:00 - 7:00 pmDinner at Robert Purcell Marketplace Eatery7:15 - 9:30pmTalks by Cornell Botanic Gardens naturalists and horticulturists9:30 - 10:30pmAfter-hours mini-talks (optional)Friday, June 197:00-8:00am7:00-8:00amBreakfast at Robert Purcell Marketplace Eatery8:00am-4:00pmAll day field trips: gorge walk and 3 private gardens; box lunch included4:30-6:00pmPlant sales, book sales and signings5:30-7:30pmCash bar6:15-7:30pmCatered banquet buffet7:45-9:00pmTalk by Harry Jans9:15-10:15pmAfter-hours mini-talks (subject to submissions)Saturday, June 207:00-8:30am7:00-8:30amBreakfast at Robert Purcell Marketplace Eatery9:00-10:00 amTalk by Kaj Andersen10:30am-12:00pmField trip to Cornell Botanic Gardens with docent guides12:00-7:00pmBox lunch and free afternoon with options offered; dinner on your own7:00-8:00pmAnnual Meeting and Awards8:00-9:15pmTalk by Harry Jans and concluding remarksSunday, June 217:00-8:30am7:00-8:30amBreakfast at Robert Purcell Marketp	Thursday, June 18	Pre-Conference Day Trip (optional tour of 3 Syracuse area gardens)
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10:30-3:30pm On-your-own tour to members' private gardens	7:00-8:30am	Breakfast at Robert Purcell Marketplace Eatery
	10:30-3:30pm	On-your-own tour to members' private gardens

Speakers

Please refer to the fall *Quarterly* for brief bios of our international speakers (Harry Jans and Kaj Andersen) and to FAQs on the NARGS conference web page for more details.

Cornell Botanic Gardens featured talks

- Emily Detrick, the Elizabeth Weaver Director of Horticulture: welcome and opening remarks.
- Sarah Fiorello, Interpretation Coordinator: "Cornell Botanic Gardens is Gorges," the Natural Areas Program of management, conservation and research.
- Krissy Boys, Natural Areas Horticulturist: her stream bank restoration project in the Mundy Wildflower Garden.
- Robert Wesley, Botanist: the Chaumont Barrens of Jefferson, County, a rare alvar grassland.

Field Trips

Friday: We've planned a full day's outing, dividing into three groups with three identical itineraries, in round-robin fashion. Box lunch on the go will be at a local park along Cayuga Lake. We will take a guided gorge walk and visit three gardens.

Gorge walk: Buses will take us on a guided gorge walk with a local naturalist expert to enjoy the natural beauty of the area. Note the walk will be at a leisurely "botanical" pace on improved pathways that do involve walking up and down steps and woodland paths. Be advised to wear comfortable clothing and hiking shoes, exercise caution, and know your own limits.

Three garden visits:

- Bill Stark and Mary Stauble Garden: See the article in this issue about this garden (Gardening with Glaciers, page 28).
- Len and Cindy Lion Garden: We anticipate their hundreds of perennials will be in peak bloom for the Conference. From the entrance plantings, you will be drawn to the sound of flowing water emanating from three connected ponds. Stone-terraced beds around the house are filled with yet more choice perennials and dozens of planted pots. The gardens continue down a steep, wooded hill, where borders of shade-loving perennials, ground covers, and shrubs surround a gazebo and folly. Woodland trails lead to a sculpture garden, a cantilevered deck overlooking a deep gorge, and a boardwalk.



Two views from the Len and Cindy Lion Garden.



Rock garden (top) and tender succulent collection (bottom) at the Marlene Kobre and Ron Denson Garden.

• Marlene Kobre and Ron Denson Garden: An unassuming front yard belies the beauty that awaits you as you enter through the garden gate. The gardens soon reveal a passion for Japanese maples and tree peonies, lush perennial borders, patio plantings, troughs, water features, and more. Regular visits to New Mexico have greatly influenced their collection of potted succulents. Continuing to add new beds and new plants, their latest additions have been a second rock garden and a dwarf conifer bed. **Saturday**: After breakfast and a morning talk, we'll be ready for a lovely ramble along Beebe Lake on mostly level ground from our Conference headquarters to the Nevin Welcome Center and the Cornell Botanic Gardens. Docent volunteers will be stationed along the surrounding themed gardens to answer questions throughout the morning. With a free afternoon, you may choose to further explore its 25+ acres of gardens or its F.R. Newman Arboretum (voted the most beautiful among U.S. colleges), best reached by car.

Plant Sale Vendors

The following nurseries are confirmed at this time:

- Secret Garden, Esther Benedict owner, Nappanee, IN. Miniature plants, alpines, mini-hostas, ferns, daphnes, and papercrete troughs. No website but check out this tantalizing review: http://bit.ly/2Db3QAn
- **Coldwater Pond Nursery**, Phelps, NY, http://www.coldwaterpond.com. Ted and Elly Hildebrant, owners. Dedicated to propagating and growing select woody ornamentals of exceptional quality, range, and scope.
- **Topiary Gardens**, Diana Smith, owner, Marcellus, NY. http://www.topiary-gardens.com. Specializing in new and hardto-find conifers, perennials, including choice alpines, shrubs, and trees and her real passion, Japanese Maples with over 500 varieties grafted and grown by the nursery.
- **Cayuga Landscape**, David Fernandez, owner and Pat Wilson, Garden Center Manager, Ithaca, NY. Choice dwarf conifers, unusual deciduous ornamentals, and interesting perennials suitable for rock and woodland gardens, primulas a specialty.
- Wrightman Alpines, Esther Wrightman, owner. St. Andrews, New Brunswick, Canada. http://www.wrightmanalpines.com. Needs no introduction to most NARGS members, offering a choice selection from the more than 600 alpine plants listed in their catalog.

Syracuse Area Pre-Conference Day Trip

A charter bus will leave at 8:00 AM on Thursday morning to take those who have signed-up in advance (via the Conference registration page) to visit three Syracuse area gardens, located north of Ithaca. The ride is just over an hour to the first garden. Cost is \$45, which includes a box lunch and at this price, we expect seats will sell fast. The bus returns you back to the Robert Purcell Community Center at approximately 3 pm. The pictorial article in this issue (Pre-Conference Garden Tour: Preview in Words and Pictures, page 16) offers a preview of what you'll see at these outstanding gardens. Note you must be a Conference registrant or guest of a registrant to go on this trip.

After-hours Mini-talks

We are inviting proposals for informal after-hours presentations to be offered Thursday evening (and Friday if there is sufficient response) following the main speakers' talks. Each one-hour session can feature up to four speakers who will have five to fifteen minutes for their presentation on any topic of interest to rock gardeners. Possibilities are wide open and could include travel adventures, growing tips, experimentations, design and construction ideas and / or implementations, failures and successes, or your own idea – the more original the better. We want to be as inclusive as possible and will accept as many proposals as time allows, considered on a first-come, first-served basis. For our planning purposes, submit your proposal via email to Steve Whitesell, elysium214@aol.com by May 15, after which he'll notify all applicants of the scheduling and other details. Your presentation should be formatted in PowerPoint, please.

We look forward to a broad range of presentations.

Lodging

A block of single and double rooms have been set aside at a Cornell residence hall very close to all conference-based activities at a cost of \$68 and \$93 plus tax per person respectively. All rooms are furnished with twin beds, linens, and towels, and bar soap but no other toiletries. A full bath serves every three-room suite. Rooms can be booked for Wednesday, June 17 for early arrivals. You may book your room on the registration website. Roommate requests will be honored.

Alternatively, a limited number of rooms are being held at special rates at two nearby motels: Best Western University Inn of Ithaca (\$139+ tax for single/double room for two) and Clarion Inn University Airport, Ithaca NY (\$129 + tax for single/double room for two). Ask for the NARGS Conference rate, which can also be applied to two days before and two days after the official Conference dates (from June 16 – 22). Each motel offers free door-to-door shuttle service to the Conference by advance arrangement. The registration webpage will provide links to these motels.

All rooms are subject to availability and will be held until May 15.

Getting to Ithaca

By car: Parking on campus will be available only in a designated lot for a daily parking fee, currently \$7 per day. We will contact attendees arriving by car by email with further instructions.

By Air: Ithaca is served by three airlines: Delta, United, and American. Airports in Rochester and Syracuse offer additional carriers. Shuttle Service: Both motels offer free shuttle service from the airport and to and from the Conference Center. Car rental services are available at the Tompkins Ithaca Regional Airport. Ithaca also offers Uber, Lyft, and taxi service.

Conference T-shirt

We will be selling a full-color Conference t-shirt featuring our Conference logo. It can be ordered through the registration website.

Additional Information/Questions

Visit the FAQs on the NARGS website (Home -> Events -> Annual General Meeting FAQs). We'll also include options for free time activities, whether it be for a few hours or a few days (including dining options). Our FAQs address many of the details of the AGM and Conference, but you may still have unanswered questions. If so, contact our Registration Coordinator: John Gilrein, 2020agm@twcny.rr.com.



The Marlene Kobre and Ron Denson Garden.

Pre-Conference Garden Tour: Preview in Words and Pictures

CAROL EICHLER

I'VE TRIED TO describe the three outstanding gardens featured in our pre-conference day trip. And where words may fail, the photos will serve to illustrate and hopefully pique your interest enough to join us on this bonus excursion on Thursday, June 18th.



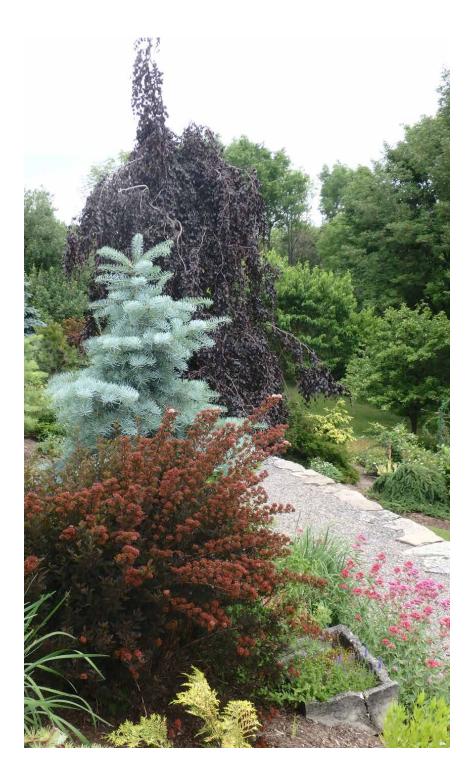
A weeping larch tumbles down over one of the many stone terraces in the Kraft garden. Donna says, "Sometimes it gets pruned to expose the shape, and some years I leave it shaggy to look like a neighboring *Larix decidua* 'Puli'."

Garden with a View: the Gardens of Donna and Jim Kraft

The Kraft home and garden overlooking Crooked Lake has always been about the view. Donna and Jim's first undertaking was to tame their sloped country property with a series of inviting stone terraces. The planting beds this created were soon filled – in Donna's words, too filled – with beautiful flowers and unique specimen trees. So, as avowed plant collectors are wont to do, the Krafts created massive new perennial beds in what Donna calls overflow areas, where the grade is flatter. These beds remain today with wonderful species peonies, woodlanders, and more.



The Kraft garden is graced with views of Crooked Lake.





Opposite: Trees and shrubs bring diverse textures and colors to the Kraft garden. Top: One of many *Arisaema fargesii* that "jump around the garden." Bottom: A clematis in full bloom.



A trough in the Kraft garden with Juniperus horizontalis 'Golden Wiltonii'

Donna's interest in rock garden plants has grown naturally over time. Says Donna, "Initially, it was about the dwarf forms of familiar cultivars. That evolved into exploring the proper growing conditions that allowed them to thrive rather than just survive. It soon became apparent that troughs were a great way to group unique plants with similar needs."

Over time, maintenance on such steep terrain became an issue. When Donna was introduced to dwarf conifers and pendulous plants, not only did she see a solution, she also got hooked on their beauty and diversity. However, she comments, "The love of flowers doesn't subside in the face of adversity," it merely means she has had to become more selective.

Strolling through the garden, one can appreciate the carefully sited collection of conifers. The young miniatures and dwarfs are complemented by mature, often pendulous or gnarled specimens, amidst strategically placed feather rock tumbles and troughs. "I've created more places to pause and observe those small alpine plants which are the perfect companions to young dwarf or miniature conifers," Donna observes, "They play so well together."

Small is Beautiful: the Gardens of Dianne and Dan Bordoni

Dianne Bordoni has a penchant for small plants, which just happens to match perfectly with her collector mentality and her smallish suburban lot outside of Syracuse. The yard was vastly overgrown with out-of-control shrubs when she and her husband moved there in 1985. An old yew, now grown to tree-like proportions, was one of the few plants to escape the chain saw and today has become a focal point. Dwarf and miniature conifers allow her to maximize the variety of plants and satisfy her plant lust. Purchasing them when they are small means they are much more economical and allows Dianne the delight of watching them grow. In her garden, you will find both mature conifers – the advantage of residing here for 35 years – and those recently planted.



The remains of two tree trunks make a seating area in the Bordoni garden.



Top: The lily pond in the Bordoni garden. Bottom: *Larix decidua* 'Pendula' trained to grow along the fence.



Scenes from the Bordoni garden, including a massive yew (top left), peonies (top right), conifers large and small (bottom left) and a rock garden (bottom right.)

What she has created is a harmonious landscape of green. "If you only have a green palette, you start noticing the many shades of green." But what you also notice about her garden is how she is so effective at layering, varying textures, and utilizing spaces big and small. Choice perennials and Japanese maples introduce color. Right plant, right place is her mantra.

Many areas of the garden have deep familial meaning. There are plantings to mark births, deaths, and friendships. The loss of an old tree is marked with a seating area. The pond was sneakily built by her and then-eight-year-old grandson when her disapproving husband was away for the weekend.

Dianne loves to share her garden with fellow plant collectors who love to talk plants and cultivation, who understand the challenges of nature, and who can admire choice specimens.

Pagodahill: the Gardens of Michael Brennan and Robert Moss

When you own an 18-acre rural property and you're Michael Brennan, it's easy to think big when it comes to gardening. He and his partner have lived here for 21 years, so where did they begin?

Spoken like a true professional (he is, in fact, a professional landscape designer), Michael confesses, "I did lay out my gardens on paper and gradually they have evolved. Defining areas early on is important. Being outside inspires me." Adding, "I do like theme gardens. "



A container display at the house entry.



Top: Backyard patio and pond in the woodland garden. Bottom left: Alliums bloom under the arbor. Bottom right: The perennial garden in June. What has evolved includes a 60-foot (18 m) locust pergola for roses and clematis, a formal perennial garden backed by a thirty-foot (9 m) hot garden, a large raised-bed vegetable garden that has an ornamental feel, and a shade and shrub border featuring chartreuse foliage and blue and white flowers. A small pond just outside the patio at the back of the house adds sound, dimension, and a touch of whimsy to a yellowthemed garden. Meandering pathways allow access into the wilder terrain of meadow, woodland, and hillside, to reveal specimen trees in unexpected places.

Clematis is one of Michael's favorite plants, "I find them fun and challenging to grow. I also love plants that self-sow, like verbascum, *Verbena bonariensis*, and feverfew."

Michael is very passionate about the Garden Conservancy, an organization that Frank Cabot founded in 1989. "I worked for a woman who was involved with Garden Conservancy from its beginning. She had a wonderful estate in Bedford, New York and was open in the first year of the Open Days program. I saw what pleasure people got out of having the opportunity to visit private gardens and thought, someday I want to be part of this." Today he serves as a Regional Representative and has opened his garden not just on Open Days with the Conservancy but to many gardening groups, including ours. He has certainly embraced its mission of "sharing outstanding American gardens for the inspiration and education" of others.

And why has he named his place Pagodahill? The property is named for the Pagoda dogwood, *Cornus alternifolia*, an Eastern North American native, that proliferate on this hilltop bit-of-paradise.



Garden outside the back porch and deck.



Top: *Magnolia sieboldii*. Photo by Michael Brennan Bottom left: *Lonicera* x *tellmanniana*. Bottom right: *Salvia sclarea*.



Gardening with Glaciers

BILL STARK

ATTAN MARTIN PARA

MARY AND I garden on the edge of a glacier-cut canyon that's over a thousand feet (300 m) deep. Over the thousands of years since the last glacier retreated from upstate New York, the canyon has filled with sediment and a trillion gallons of water to form Cayuga Lake. Ithaca and Cornell University, at the Southern end of the lake, will be the site of the 2020 NARGS Annual General Meeting and we will be on the garden tour. This article describes our gardens and some of the challenges we've faced creating them. Streams flow the 1,500 foot (457 m) length of the property and a variety of gardens are built on either side of the main stream. I'll describe the gardens in the same order as the water flows.

At the steeply sloped top of our property, streams have eroded 75 foot (23 m) deep ravines in the second-growth forest. There are traces of old logging roads and the remains of barbed wire deeply embedded in the trees. We've recently cut dirt roads and woodland paths through this difficult-to-access area and built an overlook over the north ravine. Downhill is an abandoned red pine plantation which is our best area for growing rhododendrons and mountain laurels. Further downhill, the north creek flows past a bamboo grove that we're trying to get under control and then falls into the upper pond. The waterfall outlet of the pond feeds a series of waterfalls with a total drop of 18 feet (5.5 m).



Previous pages: Waterfalls dropping over carefully exposed rock. Above: Mary cleaning out a crevice created by a glacier.



Bill helping the excavator slide a limestone block with his come-along

Most of the bedrock and stone that you see in the photo on the previous two pages was originally buried under 10 feet (3 m) of clay. The clay has been removed after 20 years of digging and used to build berms and hills that enhance the natural ravine and our hill and pond stroll garden

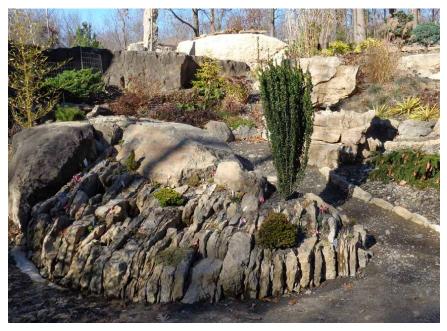
The waterfalls flow over 375-million-year-old, Devonian-era Tully limestone that was torn apart by the glaciers, leaving a nine-foot (2.7 m) high top cliff, a flat mid-level shelf of bedrock where we've built our largest rock gardens and a five-foot (1.5 m) high bottom cliff. Stone ramparts on the top cliff are reminiscent of medieval fortifications and allow visitors to safely walk along the edge of the cliff and look down on the gardens. The ramparts project was the first time we engaged in extensive quarrying. (See DIY Quarrying at the end of this article.)

The hard limestone is divided by horizontal seams of a soft clay/ shale material and by deep vertical fissures that were formed 250 million years ago when Africa collided with the North American tectonic plate and the Appalachian Mountains were formed. As a result of these weak planes, the glaciers easily broke off thousands of blocks of limestone which we've used to build rock gardens, rustic walls, and sculptures. We haven't built classical rock outcroppings in the disordered debris field left by the glaciers. Instead, our stonework looks like it's been disturbed by either nature or man. We highlight unusual water-eroded rocks and look for inspiration in the archeological sites that we've visited. As you walk through the gardens, you may recognize an area styled after a Pictish hill fort in Scotland, a Neolithic tomb built out of 12 foot (3.6 m) slabs, or vertical stones from a stone circle or standing door lentils in the ruins of an ancient village. All the stone in the gardens was found on site with the exception of the tufa, most of which came from Ilion, New York.

The last glacier arranged nine-foot (2.7 m) high limestone blocks on the mid-level bedrock shelf to form a passageway that we call The Canyon. The entrance of the canyon is shown below. We're enhancing and lengthening The Canyon to 160 feet (49 m) by placing about 60



Entrance to The Canyon, which has been enlarged by careful rock placement.



Ilex crenata 'Sky Pencil' planted at the edge of a crevice garden.

tons of limestone (so far). All the stone to the right of the small tufa wall in the photo was placed by us while rocks to the left were placed by the glacier. The soft horizontal seams on the left side have been eroded into wide cracks where we tried to grow plants for years. Frosts and rain would erode the soil and the plants would fall or dry out so we made planting pockets by mortaring one and a half-inch (3.8 cm) high stones to the bottom of the cracks to retain a small amount of soil. Roots can then grow many feet into the horizontal seam material. These high pockets are the one place where campanulas are safe from our woodchucks.

We had originally planned to build stairs to connect the different levels of the Tully limestone, but as we uncovered the mid-level bedrock, we discovered that the glacier had sheared the edge of the lower cliff into the start of a ramp. So we built a zig-zag path with a crevice garden at the lower end and the entry gate at the top. Ramps are better for wheelbarrows and they're a better architectural solution here. They created a dynamic passage where tall accent plants and stonework define foreground, midground, and background planes that are constantly shifting, hiding, and revealing as you twist through the space. That's why we took the unusual step of planting a tall *Ilex crenata* 'Sky Pencil' at the end of a crevice garden filled with small rock garden plants. Three vertical steel pipes are set at ground level between stones in the crevice garden. Posts can be inserted into the pipes to stabilize a gardener working there. On the other side of the path across from the crevice garden is a tall assemblage of two highly eroded limestone blocks that a visitor christened "Dragonstone." We planted a Kabschia saxifrage cutting in a pocket of the bottom stone in rock garden soil. It's been healthy for 3 years now, perhaps because it's in the rain shadow of the top stone. Close by, the hardy banana, *Musa basjoo*, has multiplied to 20 plants, thanks to the moisture from an adjacent spring. Visitors are often surprised to see bananas growing 80 miles (130 m) from the Canadian border, but Cayuga Lake, 48°F (8.8°C) spring water, and our massive bedrock creates a favorable microclimate where winter and summer extremes are muted.

Returning to following the water, the north creek then flows from the Tully limestone onto the Moscow shale. Artesian springs at the base of the limestone flow year-round at 48°F (8.8°C) so the subsequent waterfalls never freeze in the winter. The creek flows past Pride Rock, at 39,000 pounds (17690 kg), one of the largest rocks that we've moved. The tip of Pride Rock is splattered with tar that melted off the roof of a cottage that burned down in the 1950s. We're building our new house over the old foundation. A crack in Pride Rock is planted with *Daphne* x *medfordensis* 'Lawrence Crocker', one of the first of many daphnes planted throughout the garden.



A water-eroded limestone slab.



Plantings on top of Pride Rock, including a blooming Daphne x medfordensis 'Lawrence Crocker'



Moisture-loving plants thrive in the ravine garden.



A seating area under a wisteria-covered arbor.

After cutting through five feet (1.5 m) of the soft shale, the creek enters the kitchen pond where we've planted a *Laburnum* x *watereri* 'Vossii' on its west bank. Golden chain trees are problematical in upstate New York, but we're hoping that our microclimate will protect it. Leaving the kitchen pond, the creek goes over another waterfall and enters the ravine garden.

The ravine garden is a moist shady area where candelabra primroses and *Ligularia japonica* grow like weeds. Gravity powered water pipes from the kitchen pond feed artificial springs and a fountain which then flows into rills and small ponds so that we can grow more moisture-loving plants. We've been experimenting with what will grow in the shale walls of the ravine. Above the water, a stunted *Acer palmatum* var. *dissectum* 'Waterfall' is growing horizontally out of a crack in the eastern vertical shale wall bedrock. On the west side, we cleared off the top of the shale and planted a rock garden which has done surprisingly well in pure bedrock.

The creek then flows into the large lower pond. A rocky peninsula planted with a Japanese maple and a string of small islets suggests a Japanese landscape. A small dock and seating area are at the far end of the pond. The lower pond, ravine garden, and kitchen pond were conceived as a hill and pond stroll garden. Encircling paths provide dramatic views of the ravine waterworks, Cayuga Lake and the plantings. Scattered along the garden paths are lightweight troughs based on the tough synthetic stucco wall technology used in many commercial buildings.



A lightweight, yet very strong, stucco trough,

The stucco trough in the photo above is two feet by three feet (0.6 x 0.9 m) and weighs 19 pounds (8.6 kg) when empty. It's lightweight because the walls are formed with insulation foam. It's strong because the walls are wrapped with fiberglass mesh and then coated with fiberreinforced surface bonding cement. To save further weight, the interior of the trough is filled like a crevice garden with one-inch (2.54 cm) sections of a lightweight soil mix separated with two-inch (5 cm) thick vertical foam panels. Tufa in each of the three levels has been drilled for plants and for drip irrigation lines, with the emitters hidden in the base. We've been building and refining stucco troughs for 15 years and we've never had one break. We think it's time to share this knowledge, so I'll give a five-minute demo on building stucco troughs towards the end of the garden tour. Mary will give a one-minute demo of splitting a limestone boulder with feather wedges. We'll be under the pop-up tent.

Mary and I are looking forward to welcoming our NARGS visitors in June. Our garden has many level changes and stairs, so please wear sensible shoes or boots. The house and garden are still under construction and heavy equipment may be present during your visit. Be careful of the cliffs, uneven ground, loose gravel and deep fissures in the bedrock.



DIY Quarrying

The glacier buried a 20-foot (6 m) long and nine-foot (2.7) high, 125,000-pound (57 metric ton) rock where we had to build our driveway. Our contractor suggested breaking it up with jackhammers. Instead, we moved the top four feet (1.2m) to the entry garden, the middle three feet (0.9 m) was used to build 72 feet (22 m) of ramparts wall, and pieces of the bottom two feet (0.6 m) were used throughout the property. Here's how we did it.

The top: I spent three days on my knees digging out material from a half-inch (1.3 cm) wide seam that was four feet (1.2 m) down from the top, and then slid a three-inch (7.6 cm) flat water hose into the crack. Pressurizing the hose to 90 psi with air generated nearly 100,000 pounds (45 metric tons) of force and lifted the 50,000 pound (22 metric ton) top about one and a half inches (3.8 cm). The hose only burst once! Using wood spacers, I incrementally lifted the top until I could slide hydraulic jacks and then rollers in the seam. Pulling the top with an excavator turned into an expensive nightmare of broken equipment and endless jacking. After a near miss by a snapping chain, Mary started calling the egg-shaped top "Bill's white whale." We finally hauled the top 32 feet (9.75 m) to our entry garden where it's now half of the house's and garden's entry gate.

The middle: Using an SDS Max hammer drill, I drilled one inch (2.5 cm) holes 16 inches (40 cm) deep every 12 inches (30 cm) and filled them with expanding demolition grout (from Amazon). In about 24 hours, the expanding grout cracked the stone 37 inches (94 cm) vertically down to a weak seam. The crack then went sideways, forming 20-inch (51 cm) wide and 37-inch (94 cm) high flat-bottomed blocks that were perfect for building the rampart walls along the top cliff.

The bottom: That left a 20 foot (6 m) long by 20 inch (50 cm) thick pancake of limestone that I cracked vertically with expanding grout and horizontally with feather wedges. Feather wedges are ancient and easy to use devices for cracking rocks. I drilled five-eighths inch (1.6 cm) holes four inches (10 cm) deep every six inches (15 cm) along the intended break line, inserted the feather wedges into the holes and then lightly tapped them with a hammer in sequence until the rock split. The serious limitation of feather wedges is that they can only reliably split a rock that is up to four to six times their length.



Geology of the Finger Lakes

JOHN GILREIN

THE 2020 NARGS Annual General Meeting will take place in Ithaca, which is at the head of Cayuga Lake, the second largest of New York's Finger Lakes. The Finger Lakes are a group of 11 long, narrow lakes created by glaciation, and they are a geologically unique area. This area is also noted for spectacular scenery, and thanks to those climate moderating lakes, it is New York's premier wine-growing region. This article explains, in simplified terms, why there are Finger Lakes and other interesting aspects of our local geology. Understanding how our scenery was created makes my travel through the area more interesting.

Approximately 550 million years ago much of New York State subsided (sank) and was covered by the sea for 325 million years. Through erosion, material including sand and gravel washed down from higher lands to the north and east, the Adirondacks and New England. Conditions throughout this time were not uniform, and thick salt beds accumulated from evaporating seawater in some areas in the region. There is a salt mine here deep below Cayuga Lake. Sand, mud, lime, and salt kept accumulating and the sea bottom likely continued to subside allowing long term accumulation of material. The bottom layers hardened to became limestone (calcium carbonate), shale (from mud or clay), and sandstone (from sand). These sedimentary layers are around 8000 feet (2.4 km) thick in the Finger Lakes region.

Around 200 million years ago there was an uplift, which caused a rise in the elevation of the Finger Lakes. The slope of the rock beds, toward the south, was maintained during the uplift. The sedimentary beds rose to a height thousands of feet above sea level and the streams draining the area became the Susquehanna River and its tributaries. Erosion wore down the land to near sea level for around 100 million years before a second uplift raised the height of the land, including the height of the drainage divide between the north-flowing and southflowing streams. Weak beds of rock, like shale, were very thick in the Finger Lakes area, allowing streams to wear down the land surface to a relatively low level. Still, the undulating highlands around the southern ends of the Finger Lakes are currently at an elevation of up to around 2,200 feet (670 m) above sea level.

Around a million years ago, ice began to accumulate on the Labrador Plateau (high country in Quebec and Labrador), building up to around 10,000 feet (3,000 m) thick. The ice spread laterally over the

A gorge in Treman State Park in Ithaca, New York. Photo by Brad Marzolf.



Cayuga Lake as seen from the air.

Finger Lakes area, eventually reaching Williamsport, Pennsylvania, over 100 miles (160 km) south of Ithaca. The ice in Central New York was over 2,500 feet (762 m) thick. The glacier may have moved only a few feet per day, but it was an unyielding mass of ice moving continuously for many years, generally in a southward direction. The ice gathered rocks which gave it tremendous power to erode the surface of the land. The low land in Central New York was an easier path for the glacier to follow in its continuing southward journey. The erosive power of the ice was greatest in the north-south running valleys, which include the Finger Lakes. As the ice moved southward, it was constricted by narrower valleys, forcing it to flow more quickly in those narrow areas. The eastern Finger Lakes (Otisco, Skaneateles, Owasco, Cayuga, and Seneca) were thus created by those narrow channels.

There was a glacier-free interval after the first glaciation followed by a second glaciation. The major effect of the second glaciation was to leave tons of glacial debris behind; perhaps the most obvious are terminal moraines (deposits of sand and gravel dumped when the ice front remained stable over a 100 to 200 year period), for example at Tully, Onondaga County, New York, just east of the Finger Lakes. Another artifact of glaciation is kettle ponds, which were created by ice blocks left in glacial debris. The ice eventually melted and filled the pits with water. Tully, New York, is the site of several kettle ponds. Donna Kraft's garden (one of the gardens on the pre-meeting garden tour) is on Crooked Lake in Tully, one of those kettle ponds.

Through valleys are yet another glacial artifact in the Finger Lakes area. These are flat, glacial valleys connecting the north-flowing drainage (streams that flow into Lake Ontario and the St. Lawrence) and south-flowing drainage (streams that flow into the Susquehanna River) without passing over any high land. Glacially carved valleys typically have relatively flat bottoms and oversteepened sides due to the ice scouring out the sides of the valley; this valley shape is common in this Lakes area. Though there is no igneous bedrock (e.g., granite or gneiss) anywhere near the Finger Lakes, glacial erratics (igneous rocks, which could be cobbles or large boulders) are common in the area, carried by glaciers from distant points, likely the Adirondack Mountains or Quebec.

The depth of the two largest Finger Lakes, how deeply they were scoured out by ice, illustrates the power of glaciers. Cayuga Lake is approximately 40 miles (64 km) long, 3.5 miles (5.6 km) wide, and 435 feet (132 m) deep (around 50 feet (15 m) below sea level). Seneca Lake is 38 miles (61 km) long, 3 miles (4.8 km) wide, and 618 feet (188 m) deep (that's 174 feet, 53 m below sea level) and is New York's deepest lake.

The glaciers receded from New York State for the last time between 9,000 and 10,000 years ago. Since the ice left, streams tumbling down off the higher elevation uplands to Cayuga Lake carved through thick shale beds, creating the dramatic gorges for which Ithaca is known. Among the gorges are Buttermilk Falls (a state park), Enfield Glen (in Robert H. Treman State Park), Taughannock Falls (a state park), and Cascadilla Gorge (managed by Cornell Botanic Gardens, subject of a talk during the meeting by Sarah Fiorello of Cornell Botanic Garden). Cascadilla Gorge, which has a trail you can hike, drops 400 feet (122 m) through sedimentary rock layers from Cornell to downtown Ithaca. The field trip during the meeting will include a walk in the gorges of either Buttermilk Falls or Enfield Glen. Buttermilk Falls State Park is unusual, in that the rocky gorge environment in the park has neutral to alkaline growing conditions, and some of the upper areas of the park above the gorge have acid growing conditions, with ericaceous plants. Taughannock Falls (pictured on the front cover) is one of the highest waterfalls in the eastern United States, with a vertical drop of 215 feet (65.5 m). The gorges and waterfalls would not have been as impressive if it were not for the glaciers heavily scouring out the Cayuga Lake valley. Though plants are challenged to grow in the crumbly shale bedrock of the gorges, we should see the lovely fern Asplenium trichomanes, maidenhair spleenwort (which is also the fern in the AGM logo) growing in the gorge walls.

Should you wish to extend your stay beyond the meeting activities, there are many more natural wonders to take in around Ithaca.

The source of the information in this article is The Finger Lakes Region, Itxs Origin and Nature, *by O. D. von Engeln, Cornell University Press*, 1961.

Monitoring Alpine Plants in the High Peaks

Kayla White

NEW YORK STATE'S rarest ecosystem coexists with some of the greatest recreational opportunities in the state atop the Adirondack High Peaks. These peaks have been experiencing a dramatic increase in the number of hikers over the past seven years. Adirondack High Peaks summit stewards have been educating hikers about the alpine plants on the summits of these tall mountains for nearly 30 years. Increasing recreational use in the High Peaks has been a frequent news topic, with tales of trail erosion, crowding, trash and poop on the trails. But what about the summits? How do alpine plants fare in light of the increasing traffic? Are summit stewards still effective in their educational messaging? Thanks to a repeat photography study conducted by the Summit Stewardship Program, we can answer those questions.



Alpine azalea (Loiseleuria procumbens) is one of the imperiled native plants of the High Peaks



The same location before (left) and after (right) implementation of the Summit Stewards program.

Background

The 1960s brought an influx of hikers to the High Peaks, looking for mountain solitude but lacking in minimum-impact recreational skills. Professor Ed Ketchledge, a botanist and professor at the State University of New York College of Environmental Science and Forestry, noticed that the alpine summits were getting trampled and initiated a restoration program to promote revegetation.

Early on, Ketchledge realized that there needed to be an educational component to protecting the alpine plants. With a team of concerned individuals and organizations, he created the Adirondack High Peaks Summit Stewardship Program in 1989. This program is a partnership of Adirondack Mountain Club, the state Department of Environmental Conservation, and the Adirondack Chapter of the Nature Conservancy. The program's mission is to protect alpine habitat through education, trail work, and research. Summit stewards hike to the tops of four alpine summits and educate every hiker on the importance of protecting alpine plants by staying on solid bedrock above treeline.

What is photopoint monitoring?

In 1999, Summit Steward Matthew Scott created a monitoring tool to evaluate the recovery of the alpine ecosystem, utilizing repeat photography to examine change over time. The photopoint monitoring project is scattered across nine summits with 59 points. Baseline photographs were taken in the 1960s through 1990s, largely by Ketchledge, to document soil erosion and hiker impact. With Ketchledge's assistance, Scott identified the location of the photographs. At each location, he drilled a small nail into the bedrock so others could retake the shot, and documented tripod height, camera angle, focal length, and GPS location. The methodology had to be simple and easy to replicate due to the project's remote setting and user variability. That being said, finding a grey nail on grey rock is much more difficult than originally imagined!



Lapland rosebay (Rhododendron lapponicum)

Photopoint monitoring is an unobtrusive, low-impact way to track alpine recovery over time. Project objectives are to create a library of images for educational purposes, document alpine recovery, and evaluate the success of the Summit Stewardship Program.

In 2009, the photographs were analyzed, estimating the percentage of rock, soil, and vegetation visible. The analysis revealed that alpine areas were recovering and that peaks with a summit steward presence since the beginning of the program (Mt. Marcy and Algonquin Peak) had recovered significantly compared to mountains without regular summit steward coverage. (Read the peer-reviewed journal article at digitalworks.union.edu/ajes/vol17/iss1/7.) The photopoint monitoring project and the Summit Stewardship Program were deemed a success.

However, this analysis was conducted before the exponential increase in hikers. Since 2009, summit stewards have seen a 73 percent increase in the number of hikers on the tallest alpine summits. In 2015, summit stewards retook photographs, and a new analysis was done to test whether traditional methods of alpine stewardship could preserve the alpine ecosystem in the face of high visitor numbers. The results were startling.

Latest Results

A comparison of the photographs taken in 2009 and 2015 shows no statistically significant change in alpine vegetation. That might sound negative, but since alpine vegetation recovers less as the years go on, this is a hugely positive finding. It was expected that vegetation would be declining due to the increase of hikers, especially since the photographs target areas of impact around trails. This is a limitation of the project, as it does not show how the alpine zone is changing as a whole. This year, with funding assistance from Patagonia (outdoor clothing chian) through The Mountaineer (local outdoor speciality store), summit stewards are working with two botany stewards to monitor how populations are changing across the alpine zone by subsampling the twenty-seven rare, threatened, and endangered alpine species.

What does this mean for the Summit Stewardship Program? Photopoint monitoring continues to show that the program is effective in preserving New York's alpine zones and that the alpine plants are still recovering. But despite the documented success, the program struggles to be fully funded. Grants from the ADKhighpeaks Foundation, the Adirondack 46ers, Patagonia through The Mountaineer, REI, the Waterman Fund, and the #507 Fund for Summit Stewardship along with the generosity of donors like you have made it possible to field a crew this year. You can help ensure the future of the program and the alpine vegetation it protects and restores by making a donation to Adirondack Mountain Club or the program's endowment, the #507 Fund.



Prenanthes boottii is an imperiled species endemic to the alpine zones of the northeastern United States.



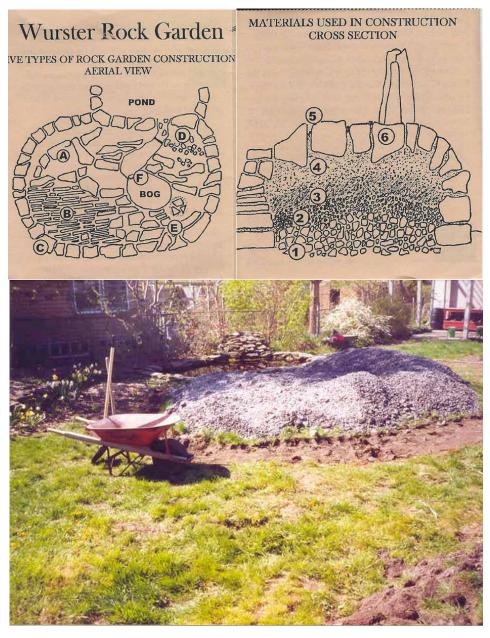
Adirondack Chapter Builds a Public Rock Garden

CAROL EICHLER

AS I LOOK upon our Adirondack Chapter's public rock garden, the Al Wurster Memorial Rock Garden built in 2000 and 2001, I'm still in awe of this monumental project that we undertook 20 years ago. The garden continues to be a showpiece today. Based on our experience, I believe your chapter could accomplish a similar project. And should you decide to tackle such a challenge, let me share some key components that were vital to its creation and on-going upkeep.

Planning

This garden became a reality because of the vision and commitment of a handful of people. Planning a garden by committee requires many meetings, lots of discussion, and a willingness to revise and compromise as the process moves forward. Our ambitious plan for this garden didn't make the process any easier. Our goal was to make the garden educational, so our design included five different types of rock gardens: English, crevice, Czech crevice, sand bed, and wall.



Top: The designs for the garden showing the different types of gardens included, and the different materials used for the construction. Bottom: Designs on paper become reality as construction begins.



Top: a campanula finds rootholds in the crevices of the dry stone wall. Bottom: The meadow portion of the garden in spring bloom.



Pulsatilla vulgaris, a most welcome self-seeder.

The garden also has a bog and a series of graduated waterfalls that cascade into an existing water feature. In 2002, we added a sixth component, a hypertufa trough.

In the end, we are most indebted to two people. One was able to incorporate our ideas into a coherent garden design (as the story goes, sketched onto a cocktail napkin) and one who was a professional stonemason, whom we hired for the build. The latter was a financial splurge that proved to be well worth the cost. The rental of a backhoe also proved to be a great time, and back, saver.

Funding

Building a rock garden takes a lot of sweat equity, but it also takes money. Starting with seed money from the Chapter, we applied for and were successful in receiving a \$1,500 grant from NARGS's Norman Singer Endowment Fund. In addition, we sought numerous in-kind



Chapter members hard at work building the rock garden.



All the hard work pays off with this, the finished garden in 2001.

donations from our local nurseries. The last piece that let us meet our fundraising goal came from an unanticipated source, the Al Wurster Memorial Fund.

Al was a gardeners' gardener with eclectic interests and an unparalleled generosity in sharing plants and knowledge. Additionally, he was engaged in virtually every gardening organization in the area, including the Cooperative Extension Master Gardeners, the Liberty Hyde Bailey Garden Club, and our own Adirondack NARGS Chapter.

Al met an untimely death in 1997. So that his legacy would live on, his family established this Fund, augmented by gifts from many contributors, in his name for the greater good of the gardening community. Our proposal to build a rock garden became a beneficiary. Additionally, Cooperative Extension offered us a space on their property to build the garden. Thus, we finally had the last pieces in place and were ready to bring our plans to fruition.

Building

With the initial excitement that often accompanies a new project, quite a few of our Chapter members stepped up to help with the construction. With more people-power than money, we had to get creative, doing our own picking and hauling of local limestone from a nearby quarry and seeking plant donations from our members. We were moving stones both large and small and ton upon ton of rubble, sand, gravel, and compost. Onlookers found it hard to believe all those piles of raw materials would be transformed into something of beauty. The following spring, with the construction largely finished, we were able to plant. It's amazing what can be accomplished by a small group of determined people.



Top: *Dianthus, Phyteuma cordatum* and *Helianthemum nummularium*. Bottom: *Iberis sempervirens* exhibited a bit too much exuberance and has since been restrained; others pictured include *Iris pumila*, phlox, and *Aurina saxatilis*.

On-going Commitment

Our rock garden was built and continues to thrive today because of our Chapter's commitment. Rock gardens may require less maintenance than a perennial border, but they do need regular attention from our dedicated handful of volunteers. Finding enough volunteers is perhaps our greatest challenge. Many of our Chapter members live far away so it is not realistic to expect their help.

Some years we have struggled to find enough volunteers. In those years, the garden has gone a bit wild with rogues self-sowing at will. They do provide a floriferous show (and the public is none the wiser) but the smaller plants struggle to compete. In the long run, it has made for more work and expense as we cull the rogues that have become unwelcome weeds and replant more desirable plants.



Salix nakamurana var. yezoalpina thriving in the bog area.



Newly planted trough built and added to the garden in 2012.

Ongoing Challenges

If your chapter thinks it might be interested in taking on a project such as this, be aware there are some on-going challenges.

First, we lose many plants due, in large part, to the challenge of maintenance. Planting at less than optimal times of the growing season and lack of an irrigation system are two main challenges, not to mention the aforementioned issue of finding adequate volunteers. Of course, there are nature's challenges too, including plants that give up the ghost, the squirrels who eat our bulbs, and cottonwood seeds from neighboring properties that blow in and germinate. In other words, we are faced with the usual gardeners' dilemmas.

While we continue to get plant donations from members, the garden requires an annual influx of funds (generally ranging from \$100-300) and this has become part of our Chapter's annual budget.

Public gardens also pose special challenges. Visitors love to climb on the rocks, often trampling our treasured plants. We have posted signs – unfortunately not very attractive – with limited success. With no on-site caretaker, we have no one to monitor the behavior of our visitors.

Looking Ahead

However, we can say unequivocally that the rewards of this garden have far outweighed the challenges. The spectacular flush of springtime blooms serves as a testament to this and certainly generates interest. The garden demonstrates the beauty and potential of a rock garden and we have created something enduring. The garden is used as a basis for classes and tours, as an avenue to recruit new members, and as a vehicle for all of us to continue to learn about rock gardening and rock garden plants.

We are now looking ahead to the garden's 20th season and can reflect on the transformations this garden has undergone. At the time we undertook this project, it never occurred to us that it would be a learning experience for us every bit as much as it would be a teaching tool for the public.

The Al Wurster Memorial Rock Garden is located at the offices of Tompkins County Cooperative Extension in the city of Ithaca. Attendees of the 2020 Conference may choose to visit this garden in their free time.



The meadow garden in full bloom.

Rock Gardening in a Sauna

JOSEPH TYCHONIEVICH

TWO AND A half years ago, after a lifetime of gardening in the Great Lakes Region, I moved with my husband down to Williamsburg, Virginia. I went from Zone 5 to Zone 7, almost Zone 8. The average year down here has about three times as many days with highs over 90°F (32°C) as what I was used to in Michigan. My new home town gets an average of 47 inches (120 cm) of precipitation a year compared to the 36 inches (91 cm) I had known. In short, it is hot and wet down here, not exactly the preferred climate of many alpine plants.

I'm not used to the ground being covered with daffodils in February instead of snow, and I'm certainly not used to people using the word "blizzard" to describe a snowfall of four inches (10 cm). My whole gardening life I've made an annual routine of checking over the garden in the spring to see what survived the cold winter. Down here, winter doesn't kill much. Instead, I'm checking to see what managed to avoid rotting during the hot, rainy summer.

My strategy to learn how to rock garden down here has been pretty straight forward. I built a simple crevice garden as a test plot, planted everything I could, and watched to see what died. There have been a lot of surprises, a lot of dead plants, and some successes.



Cheap ceramic tiles form the structure of the crevice garden.

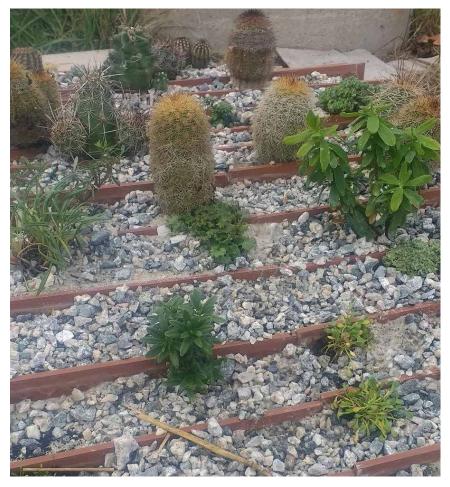


Crevice garden filled with sand and mulched with gravel.

My Crevice Garden

I chose to start with a crevice garden based on the reports, published here in the *Quarterly*, of the giant urbanite (recycled concrete) crevice gardens down at Plant Delights Nursery. Crevice gardens are not just beautiful and trendy, they seem to be one of the best ways to keep a wide range of finicky plants alive. The structure of a crevice gardens can be works of art on their own, but I didn't have a lot of spare time or money, so I just built something basic. I'll apply what I've learned in my crevice garden when I get around to building a big, beautiful version. Instead of stones, I bought a box of the cheapest one foot by one foot (30×30 cm) ceramic tiles I could find. I set the tiles vertically in the soil one to two inches (2.5 to 5 cm) apart. The tiles in the center I sank just a few inches into the soil. The outer tiles I buried deeper to make a mound-shaped crevice garden about ten inches (25 cm) tall in the middle and six inches (15 cm) tall at either end.

To fill, I bought a bag of coarse sand labeled "concrete sand" at the hardware store. I filled all the spaces between the tiles with sand, then topped the whole thing with a layer of gravel mulch. Plants have thrived in the nearly pure sand, quickly putting down deep roots to access additional moisture and fertility in the native soil below.



The crevice garden, planted.

When planting, I bare-rooted everything before tucking it into a crevice. I didn't wash the roots off, but I did break apart any circling roots and shake off the potting soil. I was worried that some plants, particularly the daphnes, would resent that much disturbance to their roots. I was more worried that the peat-based potting soil would hold too much moisture, leading to rot, and that roots would just stay circling in that rich, moist peat, rather than growing deep through the drier sand below.

What's Still Alive

Just over two years in, I'm happy to say that a lot of plants are thriving, including several that I fully expected to die. Here are some of the survivors.



Daphne x hendersonii newly planted (left) and after two years in the ground (right). Unfortunately, the flowering hasn't been as vigorous as the growth.

Daphnes

Alpine daphnes have been at once my biggest successes and disappointmentes. I planted *Daphne* 'Kilmeston', *D*. 'Lawrence Crocker', *D*. 'Rosy Wave' and *D*. x *hendersonii* expecting them to all die. 'Lawrence Crocker' bit the dust during the first summer, but the other three are thriving. That's the good news. The bad news is that they just don't flower like they did back north. In Michigan, *D*. x *hendersonii* was a solid mass of flowers every spring and rebloomed a couple of times during the summer and fall. Here, it is growing just fine, but the flower display is underwhelming. Alpine daphnes were my favorite rock garden plants



Daphne 'Kilmeston' has been the best performing daphne in the garden..



Saponaria 'Pink Surprise' (top) and Dianthus 'Red Penny' (bottom) have both been standout performers.

in Michigan but I don't think I'll be planting them again down here. I'm holding out hope that the flower display will improve with age, but if it doesn't, they may all get ripped out. The best performer, in terms of flowering, has been *D*. 'Kilmeston'. It has never covered itself with blooms, but it does flower fairly heavily for a long stretch of spring and early summer.

Saponaria 'Pink Surprise'

Right after I moved, I was in Minnesota to speak at a gardening event and got to visit with the legendary rock gardener and nursery woman Betty Ann Addison. She kept offering me plants and I kept saying they looked beautiful but I was sure they wouldn't survive in my new, hot garden. Luckily, she didn't listen to me, and I went home with some beauties, like *Saponaria* 'Pink Surprise'. It is so tiny, so perfect and alpine-looking that I just knew it was going to die. I was completely wrong. It may be my favorite plant in the whole crevice garden, forming a perfect mound of tiny foliage and, in classic alpine fashion, completely covering itself with flowers in spring.

Dianthus 'Red Penny'

This is another gift from Betty Ann Addison. Again, I looked at those silver leaves and the dense growth habit and thought there was no chance it would make it through a coastal Virginia summer. Again, I was completely wrong. It has produced masses of intense flowers in spring with sporadic rebloom through the summer. I bet it would rebloom even better if I deadheaded it.



Saponaria 'Pink Surprise' out of bloom.



Echinocereus reichenbachii (top), *E. milleri* (bottom left), and *E. dasyacanthus* (bottom right) blooming in the crevice garden.

Cactus

I've been collecting different species and hybrids of the genus *Echinocereus* for a few years. Many of them were perfectly hardy in my Michigan rock garden, they have beautiful flowers, and they don't have obnoxious glochids like opuntias. Moving to a warmer climate, I happily put the whole collection into my crevice garden, where I'm sorry to say that some have died, and the others have merely survived. *Echinocereus reichenbachii, E. milleri*, and *E. dasyacanthus* have all survived and produce beautiful flowers, but they are basically the same size they were two years ago. I guess I shouldn't be surprised that plants native to high dry places in the West don't exactly love a constant deluge of water. I have seen happy specimens of other species around the Southeast, so maybe I just need to give them even better drainage. Or maybe I'm just being too impatient.



Echinocereus reichenbachii newly planted (left) and after two years in the garden (right). I'm not thrilled with the growth, but maybe I'm too impatient.



Aloe striatula

Aloe striatula (syn. Aloiampelos striatula)

I grew this from seed and plopped about 20 of them in my tiny crevice garden. The seedlings looked so small and innocent. By the end of their first summer, they were all over a foot (30 cm) tall and I was getting worried. I dug some out and gave them to friends but still had 15 going into their first winter. At first, I thought they'd all survive but mercifully a bit of colder weather killed all but three individuals. Those three may still be too large for the garden, but they are

staying for now. They haven't flowered yet, but the foliage is pretty fantastic.

Zinnia grandiflora

I've been a huge fan of this plant ever since seeing it growing in huge sheets in gardens in Denver. My experience is that there is a lot of variability in how well different clones perform in wet climates. My first plant was a named selection, 'Gold on Blue', which sat in my Michigan garden for one summer, never grew, and never flowered. Plants I grew from seed I purchased from Alplains showed huge variations in vigor. Some seedlings wasted away and died while others bloomed all summer long and spread vigorously. A couple of the happily growing seedlings moved down to Virginia with me where they are just as



Zinnia grandiflora

content. They pump out little yellow flowers all summer long, even through the most oppressive heat and humidity. I grow this in mounded

sand next to the crevices because it can spread very aggressively. If you'd like to grow this plant in a rainy climate, I recommend starting with a packet of seed. The seed germinates easily, the seedlings start flowering their first summer, and you'll get some genetic diversity to select from.



Zauchneria garrettii 'Orange Carpet'

Zauschneria (Syn. Epilobium)

This is a genus I've drooled over on visits to Denver, where specimens cover themselves with a glorious excess of brilliant flowers. So I thought I'd try some. I purchased *Z. latifolia* 'Woody's Peach Surprise', *Z. garrettii* 'Orange Carpet', and *Z. canum* var. *arizonica* 'Sky Island Orange'. 'Woody's Peach Surprise' bit the dust nearly immediately. But the other two didn't just thrive, they quickly ran out of the crevice garden, into my heavy native soil, and started making pests of themselves. However, though they have proved to be something close to weeds, their first year I got a total of three miserable little flowers. Frustrated, I ripped all of them out of the crevice garden, but left some of the runners that had spread into the surrounding ground. This year it is a different story. I don't know if it was the richer soil, a hot, dry spell at the end of the summer, or something else, but they bloomed like crazy, covering themselves with brilliant flowers. Hopefully, they'll keep doing it in years to come.

Those are the highlights of my new crevice garden. I've killed a lot of plants and there remains a long list of plants to try in the future, but I'm thrilled with the range of rock garden plants I've been able to cultivate in my cheap little crevice garden in this sauna-like climate.



Why Aren't They Up Yet?

Bob Nold

LET ME JUST say at the outset that whoever started the rumor that I am some incredible super-genius who can work feats of magic never before seen in a garden is obviously mistaking me for someone else. Allow me to illustrate this, with a few pathetic examples.

There was a time when I thought I wanted what they call a "wild garden," which I understood to be, oh, you know, wildflowers, grasses, with bees and stuff. My version would be sort of like that, but a total mess, with grasshoppers clinging to my shirt and spitting tobacco juice everywhere, but it sounded pretty good, nonetheless.

I started with grasses. Native ones, of course. I figured that since the grasses were native, and they increased by seeds, all I had to do was sprinkle seeds on the ground, and eventually, there would be grasses.

It didn't exactly happen like that. One of the grasses I tried was the very beautiful ricegrass, *Achnatherum hymenoides* (which used to be Oryzopsis, rice-y). This is one of the few grasses that is said to require winter chilling, and, since winters here are definitely chilly, I sowed the seed in about November, and waited.

Nothing happened. I normally like that phrase, nothing happened, but not where gardening is concerned. So, a couple of years later, I sowed the seeds in pots and left them outdoors. By January the pots were empty. I mean empty of soil. I wondered about that a little, but just figured it was some climate thing. It usually is. Well, eventually, wondering how it could be that there was such a plant as ricegrass out in the real world, but none in my garden, I looked at the Forest Service website, where it was suggested that the highly nutritious seeds should be planted about a quarter-inch deep. Highly nutritious seeds. Oh.

Maybe if I had glanced at the bird feeders all around the garden I could have figured this out earlier.

I was going to leave this little article at that, but I might as well talk about bulbs, too. I'm supposed to know something about bulbs, but again, that's just a rumor.

Maybe you haven't tried bulbs like what are known as the "steppe corydalis." They're often expensive. When they arrive in the mail, you get this round, or maybe slightly flattened, object. Absolutely no sign which direction is up. Or down; either one would do. Sometimes if you look at the bulbs, or, okay, tubers, with a 30x lens you can see vestiges of roots. Or maybe those aren't the roots.

If you ask someone with some corydalis experience, you might get great advice like "Plant them sideways". If the tubers are round, which way is sideways?

It might be important to note that if the expensive tubers are planted facing the wrong way, nothing will happen. Ask me how I know.

There are bulbs—corms, this time—which they tell you to plant sideways because they grow like that in real life. No, really. *Crocus cappadocicus* and *C. suworowianus*, for instance. They grow sideways. The flowering stem emerges—sideways—and then by a miracle, it turns, and grows upward into the sun. So go ahead and plant them sideways and see what happens.

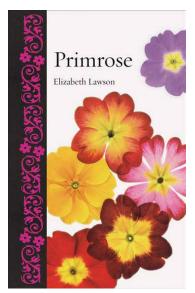
"You planted them on the wrong side." Thanks a lot.

One last example. This one is really embarrassing so, of course, I have to share it. There was this very nice nursery, which sold, among other things, erythroniums. When you got the erythronium bulbs in the mail, you also got a sheet with pictures of the bulbs indicating which direction was up. Or, again, down. It may come as a surprise that knowing only one direction would be sufficient.

So I got a bunch of these erythroniums and planted them, in my usual feverish orgy of planting.

Some time passed, and I began to wonder, "Why aren't they up yet?" Then I remembered the sheet with the pictures. I had tacked it to a wall in the garage. A few heavy sighs later, I went out with the trowel. You know, just to slice through four or five of the bulbs, as penance for not paying any attention to the directions.

And now you know what really goes on here. Some genius.



Primrose by Elizabeth Lawson

A book review by Mary Gilliland

The family home from which I left for college was on Primrose Drive, and the first plant I brought home from a NARGS meeting was Primula 'Wanda'. In the years since, my excitement

about primroses has multiplied as vigorously as the flowers themselves do in my woodlands and its borders throughout the spring, with an occasional second late summer flowering. But imagine that it is a snowy day in winter, and with a cup of tea at the kitchen table, I sit with two books opened: my oldest edition of Brewer's Dictionary of Phrase and Fable at my right hand, and botanical illustrator Barbara Shaw's 1991 Book of Primoses at my left. That sum of pleasures is what I feel as I immerse in Elizabeth Lawson's new hardcover, *Primrose*.

While her book was in development in 2017, Elizabeth gave a slide lecture for the NARGS Adirondack chapter. Her overview ranged from displays of the rare—primulas with the hugest stalk that grows on far northern limestone barrens, cave-dwelling primulas of the Southwest that grow in algal mats—to reminders of the practical: doubles must be divided, for they bloom and bloom and never set seed because all the reproductive parts have become flower. At her talk, intermixed with such lively botanical knowledge were historical summaries of primrose appreciation and uses, as well as cameos of primrose breeders, bloggers, and illustrators. Did you know that the most famous auricula illustration is Georg Dionysius Ehret's 'Fille Amoureuse', the beauteous pale blue primrose with a pale green leaf?

Lawson's book is graced with this picture, and over 100 other splendidly reproduced illustrations: botanical paintings of individual plants, photographs, herbarium sheets, electron micrographs, handwritten letters with line drawings, portraits of primrose breeders and historians, and posters from popular culture incorporating the flower. Around and among these visual delights are striking condensations of history and biography. Did you know that herbals were succeeded by florilegia; do you remember that sketching was followed by painting by engraving by computer imaging? Seventeenthcentury weavers often grew gold-laced polyanthus and other flowers for sale. Eighteenth-century Elizabeth Blackwell spent two years at the Chelsea Physic Garden drawing 500 plants recently arrived from the Americas then engraved, hand-colored, and marketed A Curious Herbal to ransom a feckless husband from debtor's prison. The project turned out well, though the fate of the feckless man did not. In Lawson's book, we also get notes on the primrose from Dorothy Wordsworth's journal (occasionally sourced, I might add, for poetic lines by her brother William). For nature writing, I place poet John Clare near the pinnacle, and my eyes misted over upon finding his "crimped and curdled leaf" of the cowslip embedded in a discussion of their vernation being revolute—and then noticing the words of this literarily botanical paragraph run below a reproduction of Cicely Mary Barker's eponymous flower fairy!

That moving combination is one tiny bit from a chapter devoted to molecular genetics, a chapter that covers 30 years of Charles Darwin's research on pin-and-thrum (a terminology originating with the aforementioned 17th-century florist weavers) on Britain's common primrose, cowslip, and oxlip. But here as elsewhere, Lawson displays no dichotomy between science and letters, nor chronological or spatial separation between people of different centuries and countries who pursue a common interest. All chapters are topically holistic—chapters on explorers and adventurers, on hybridizers from the Wynne sisters through and beyond Barnhaven, on 400 years of auricula (ah! the stunning "farina" photographs), on the Japanese sieboldii and Chinese counterpart sinensis, on the primrose in prose and poetry, in fairy tales and politics, in health and cooking.

Authorial joy permeates our richly illustrated verbal travels from Scotland to Turkey to Tibet to the one South American primrose. This labor of love includes a comprehensive index, a list of associations and websites, an excellent bibliography, 20 pages of references, and a superb timeline which notes that 25 million years ago "Primula solidifies its genetics in the eastern Sino-Himalayas" and then begins with Pliny the Elder (he who became fertile soil beneath Vesuvius's ashes trying to save the life of a dear friend) and continues through the 2016 isolation of the supergene in the thrum flowers of P. vulgaris.

Primrose is the newest addition to the Botanical series from Reaktion Books Ltd. As for the phrase from Hamlet reused by so many "the primrose path" is explored both metaphorically and literally in Elizabeth Lawson's finely written book. I leave you, dear reader, to your own pleasurable adventures with her through its host of colors and meanings.



Bulletin Board

winter 2019/2020

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2019 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 2019 has been a good year financially for NARGS, although we are currently at a deficit for the year (end of October). Tour income for the year from the Scotland and Greece tours, however, is expected to add nearly \$35,000 to our treasury, leaving us net positive income over expense year-to-date. We plan more tours in 2020 and beyond that will financially help support our society, as well as provide great opportunities for members to see plants in their native habitats and in gardens. As noted below, we have changed printers for the *Quarterly* to reduce printing costs.

Special thanks go to our *Rock Garden Quarterly* editor, Joseph Tychonievich, who suggested that NARGS switch printers. He recommended Sutherland Printing (Iowa), which currently prints about 100 titles. Projected savings are some \$13,000 per year in printing and mailing costs. We appreciate the services of Allen Press (Kansas), whom we've used since 2004. We have switched printers with this winter (January) 2020 issue. Because of the projected savings, there are no plans to go to a fully digital-only issue. The *Quarterly* continues to improve and surpass our expectations.

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, 295 of you have made contributions to NARGS to support our various activities. Plus, there were 210 members who joined or rejoined our society during this period. However, we continue to be impacted by a net declining membership.

Thus, we continue to need your financial support at year-end to start 2020 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 online on the NARGS website at www.nargs. org and click on the "Donate" button. You may donate online 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, Box 18604, Raleigh, NC 27619-8604 USA.

The year 2019 was a busy year for NARGS. In May, the Delaware Valley Chapter hosted a successful study weekend in Frazer, Pennsylvania, with an optional pre-conference tour that included the New Jersey Pine Barrens. At the meeting, the Frank Cabot Public Rock Garden Award was given to the Allen Centennial Garden (University of Wisconsin-Madison). The Timmy & Linc Foster Millstream Award was given to Darren Heimbecker's Whistling Gardens (Ontario). The Award of Merit honored Carol Clark (Ontario) and the Geoffrey Charlesworth Writing Prize was awarded to Glenn Shapiro (United Kingdom). Norman Singer Endowment Grants were awarded to Evergreen Arboretum and Gardens (Washington), Laurelwood Arboretum (New Jersey), and Juniper Level Botanic Garden (North Carolina).

In 2019, through the generosity of a donor who wishes to remain anonymous, NARGS has received an endowment of \$7,000 per year for five years to cover travel costs for speakers giving presentations to local NARGS chapters in the U.S. and Canada. Rosemary Monahan (Massachusetts) is serving as coordinator for the Traveling Speakers Program, assisted by regional coordinators. This year's speakers consisted of: Ger van den Beuken (the Netherlands), Liberto Dario (Greece), Geir Moen (Norway), and David Charlton (United Kingdom). Plans for traveling speakers in 2020 are being developed.

Preparation for the 2019-2020 Seed Exchange has been going on for the past few months, 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 in main round is January 31) and the Wisconsin-Illinois Chapter that will process surplus seed orders beginning March 1.

Looking ahead to 2020, the Adirondack Chapter is organizing a NARGS Annual Meeting in Ithaca, New York, at Cornell University, June 18 – 20. Future meetings will be held in Durango, Colorado (2021); Toronto (2022); and Nova Scotia (2023).

The NARGS Tours and Adventures Committee, headed by David White, organized a successful trip to Scotland in May and a trip to Greece in October-November. Three are planned for 2020: tours to the Adirondacks and the Hudson River Valley, before and after the annual meeting in Ithaca, New York, and a tour to both northern and southern Patagonia. For information on space availability, check the NARGS Web site.

We welcome three new board members: Cyndy Cromwell (North Carolina), Brendan Kenney (New York), and Jerry Rifkin (Pennsylvania), and we thank departing board members Dave Brastow (Washington), Julia Caroff (Michigan), and David White (North Carolina) for their service to the society.

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

New and Rejoining Members

Welcome to all those who joined or rejoined between August 1 and October 31, 2019.

Botts, Suzanne, Raleigh, NC Carlton, David, Derby, United Kingdom Cornell Botanic Gardens, Ithaca, NY Crick, Barbara, Bellevue, WA Cutler, Laurence, Ithaca, NY Dimenza, Chella, Woodland Park, CO Donnelly, Kathleen, Cambridge, MA Espinoza, Jennifer, Berthoud, CO Fabian, Daniel, Flourtown, PA Georgopoulus, , Toronto, ON, Canada Grimm-Duchesne, Jennifer, Clearville, PA Haegele, Jason, Oxford, NY Hammond, Seyra, Woodbury, CT Hildebrandt, Theodore, Phelps, NY Knight, Jon, Nobleboro, ME Knudsen, Inger, Rockwood, Canada Lee, Barbara, London, ON, Canada Maher, Denise, Long Beach, CA McArdle, Helga, Hillsdale, NJ McAvoy, Vladislav, Astoria, NY Mulac, Kathleen, Mansfield, OH O'Byrne, Ernest and Marietta, Eugene, OR O'Callahan, Jessica, Bayside, NY Plum, Janice, Reading, PA Purdy, Kathleen, Oxford, NY Read, Joan, Mandalay, Glouc., United Kingdom Rich, Jeanne, Valleio, CA Richo, Jeana, Bethany, CT Shellenberger, Jane, Longmont, CO Snyder, Bill, Bishop, GA Sonnenberg, Kyle, Southern Pines, NC Stevens, Alyssa, Owego, NY Sukenik, Dmitry, Highland Park, IL Wiegand, Charlotte, Eagleville, PA Zona, Scott, Hillsborough, NC

Note: In the interest of privacy, we are no longer publishing the addresses of new members in the Quarterly. You can securely message fellow members on our website: nargs.org/member-lookup



The Tours & Adventures Committee has organized three tours for 2020. They include tours to the Adirondacks and to gardens in the Hudson River Valley that will be held immediately before and after the Annual General Meeting in Ithaca, New York.

The 3-day tour of the Adirondacks on June 15-17 is currently full, but requests to be added to the waitlist are still being accepted. The 3-day tour of gardens in the Hudson River Valley on June 21-23 still has space available. Additional information and registration instructions are available in the "Latest News" section of the NARGS website.

The third tour in 2020 is a tour to the northern and southern Patagonia regions of Argentina. The tour going to Northern Patagonia is currently full as is a second tour in 2021 that was added in response to the large number of NARGS members who were interested in touring this area. However, there is still space available on the tour to southern Patagonia. Additional information on the Patagonia tours is in the "Latest News" section of the NARGS website. You don't need to login to access the pages.

The committee is working on tours in 2021 and beyond. Details will be announced via the NARGS website once details have been finalized.

David White, Chair

Email: dmwhite_nc@yahoo.com

NARGS Donations

Donations to NARGS between August 1 and October 31, 2019. To support the Seed Exchange, *Rock Garden Quarterly*, the general fund, web site improvement, and educational tours.

Anonymous (Pennsylvania) Anonymous (Wyoming) Rare Plants Group (Wisconsin) Adelman, Elizabeth L. (Wisconsin) Beelman, Clare (Montana) Boulby, Christine (United Kingdom) Brown, Alison A. (Maine) Church, Clara (California) Clark. Susan (Massachusetts) Clark, Thomas (Massachusetts) Dodge, Marianne (Maine) Eichler, Carol (New York) Feitler, Mary A. (Indiana) Gray, Gail K. (Colorado) Grushow, Jane (Pennsylvania) Kelley, Sabra (North Carolina) Koltun, Nancy (Illinois) McMaster, Donna (Ontario) Miller, Joyce E. (Oregon)

Moamar, Amal (Massachusetts) Moscetti, Paula J. (New Jersey) Olmsted, Amy (Vermont) Robeson, Gesa (Colorado) Rodich, Richard T. (Minnesota) Ruault, Bob (Alberta) Schellingerhout, Jan H. D. (Netherlands) Schmidt, Loren (Alberta) Shen, Lucia (Pennsylvania) Shepard, Cecile (California) Spriggs, Paul (British Columbia) Straub, Peter S. (California) Toit, Helen du (Massachusetts) Vanspronsen, Arie (Ontario) Whyman, Steven (North Carolina) Wollenberg, L. J. W. "Bert" van den (Netherlands)

YOU CAN HELP KEEP NARGS SOLVENT!

Circle of 100 Challenge

Be among the 100 NARGS members willing to give \$300

DONATE AT NARGS.ORG

Help NARGS and new rock gardeners grow.

Give a gift membership to the North American Rock Garden Society and introduce someone to a world of passionate gardeners. Give access to the seed exchange, *Rock Garden Quarterly*, tours and adventures, meetings and study weekends.

Recipient information:

First Name:
Last Name:
Email:
Phone:
Address:

Membership (Circle one):	US/Canada	International
Household	\$70	\$75
Individual	\$40	\$45
Student	\$15	\$15

Mail with check payable to the North American Rock Garden Society to P.O. Box 18604, Raleigh, NC 27619-8604

Or visit nargs.org/join

Patrons

The following recently became NARGS Patrons: Beelman, Clare (Montana) Cromwell, Cynthia (North Carolina) Lockhart, Bruce (Massachusetts) Lofgren, Aaron (Minnesota) Moysey, Emma (Australia) Phelps, Laurence "Larry" (Wisconsin) Shepperly, Katherine (New Jersey) Wagner, Jeff (Colorado) Willis, John (Maryland)

Book of the Month

Do you like to read about rock gardening and horticultural subjects? Please share your useful insights with other members and get a free review copy of the book for your efforts. Reviewers are always sought for the NARGS website Bookof-the-Month feature. In return for submitting a 300-400-word review of the book of your choice, the book will be sent to you free of charge. Select your own title for review or suggestions can be provided. Please contact Steve Whitesell at elysium214@aol. com for more information.

We have learned of the death of the following NARGS members:

Donna Maroni, Chapel Hill, North Carolina Ted Kipping, San Francisco, California Al Deurbrouck, Pittsburg, Pennsylvania Dave Nelson, Richland, Washington

NARGS Traveling Speakers Program

Recently, through the generosity of an anonymous donor, NARGS has been given an endowment of \$7,000 per year for 5 years to cover travel costs for speakers. This is excellent news and will enable NARGS chapters to benefit from hearing more speakers than ever before.

Spring 2020 Southeast and Mid-Atlantic Tour: Todd Boland

- Saturday, March 21, 2020, Piedmont Chapter (Raleigh)
- Sunday, March 22, 2020, Potomac Chapter (DC area)
- Monday, March 23, 2020, Four Seasons Garden Club
- Saturday, March 28, 2020, Delaware Valley Chapter (Philadelphia area)
- Sunday, March 29, 2020, Allegheny chapter (Pittsburgh area)

Northwest U.S. Chapters Tour: Cliff Booker

May, 2020 Schedule to be announced

Southeast Canada Chapters Tour: Jiri Papousek, Czech Rock Garden Club

Toronto, Ontario	September 13, 2020
Montreal, Quebec	September 20, 2020
Halifax, Nova Scotia	September 21-23, 2020
St. John's, Newfoundland	September 24, 2020

Contact your local NARGS chapter coordinators for times and location of these speakers.

Information about speakers will be posted on the Traveling Speakers Program on the NARGS webpage (https://nargs.org/ speakers-tours) as well as in this Bulletin Board, as plans are finalized.

Rosemary Monahan, Chair Email: rosemonahan@comcast.net

SEED EXCHANGE

One of the best times of the year for gardeners – during an often long and dull, certainly cold winter – is the arrival of plant catalogs and seed lists. They set one part of the mind to dreaming, and the other part (the more realistic portion) to planning. With the arrival of the seeds (which will be soon), hands will be busy, too.

We are grateful to the many members and friends whose efforts have made this seed exchange viable. Our thanks go to our seed Donors, without whom there would be no seeds to exchange. And the many chapter and individual volunteers who divvied up the seeds into small packets, making it possible to share the largesse with as many members as possible.

There is still time to place an order in the Main Distribution of the Seed Exchange, as orders will be accepted until the January 31 deadline, and there are still plenty of seed packets remaining. The orders will be filled again by the exceptional volunteers of the Watnong Chapter.

Then there will be a month's wait until the Surplus Distribution will begin operating, from March 1 until March 21. These orders will be handled by the volunteers of the outstanding Wisconsin-Illinois Chapter. You may order from the Surplus list, even if you have not ordered from the Main Distribution.

Our stalwart Seed Intake Manager does, indeed, manage all the tasks and volunteers (the cats to be herded) throughout the run of the Seed Exchange, from the arrival of the summer's first seed donations, to the conclusion of the Surplus Distribution in late March. And sometimes beyond, for the occasional seed order that might have gone astray in the mails. We are fortunate that Laura Serowicz is so capable, patient... and well organized!

A note to all Chapter Chairs: At the conclusion of the Surplus Distribution, the remaining packets of seed will be shared among those chapters that want to receive them. Be sure to respond to the notice sent to you in late February. If you wish to place an order through our website, be sure that our Executive Secretary, Bobby Ward (nargs@nc.rr.com), has your current email address so that the electronic ordering system will recognize you as a member.

If you prefer to order by mail, contact me – right now! – for a print copy of the Seed List and order form:

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

However, as I write this – in late October – a new regulation is looming that will require a phytosanitary certificate to accompany all seeds entering any country within the European Union. We are petitioning the European Commission to either exempt small lots of seed from that regulation, or allow seeds to be imported with a special import permit for small lots of seed – as the U.S. does now. One uncertainty is whether that change can come about before the regulation goes into effect on December 14, 2019. The rule does make an exception for seeds produced during this past 2019 growing season, but we have not yet received information on how to label those shipments so that they will be able to enter an EU country in 2020.

Another uncertainty, at this point in late October, is whether the U.K. will still be within the Union. By the time you are reading this note, I hope that all will have been clarified and expedited. Be sure to check the SEEDS section of the NARGS website for any breaking news.

However, as we were finalizing this copy word arrived that the European Commission has published a new regulation that requires a phytosanitary certificate to accompany any seeds entering any country in the European Union, to be enforced beginning December 14. This is a financial burden that the NARGS Seed Exchange cannot handle. We will have to ask that anyone residing in a country within the Union territory to pay the \$26USD to cover the cost of their own phytosanitary certificate. That amount will be paid to NARGS as a Donation, and clear instructions will appear on the checkout page.

We will only be able to provide phytos for orders in the Main Distribution.

This same fee and procedure will also be necessary this year for members residing in Japan.

Wishing you all a kind winter, segueing gently into a lovely spring – Joyce

Joyce Fingerut, Director NARGS Seed Exchange

About NARGS Email Sign Up with Mailchimp

NARGS needs ALL its members to sign up in a different email application to receive promotional material from NARGS. This is the Mailchimp "Signup for free news" linked on the bottom right column of our Home page, nargs.org. That way, we may notify you about tours, annual meeting signups, etc. Mailchimp is an online marketing platform and an email marketing service. NARGS does NOT share your email address; any messages you receive from NARGS via Mailchimp will only be about NARGS activities. (Membership renewals will continue to come to you from nargs AT nc.rr. com)

Upcoming NARGS Meetings

Ithaca, New York: Cornell University, June 18 – 20, 2020

Durango, Colorado: 2021

Toronto, Ontario: Humber College (North Campus) June 10 – 12, 2022

Nova Scotia: 2023

Norman Singer Endowment Applications Due March 1, 2020

NARGS expects to award grants in 2020 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 posted on the NARGS website. The deadline for submittal of applications is March 1, 2020. Grant recipients will be announced in June at the NARGS annual meeting in Ithaca, New York.

NARGS 2020 From-the-Floor Nominations Election of Three Board Members

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 no later than January 31, 2020.

The combined list of candidates will be published on the NARGS website by April 1 and in the spring 2020 *Quarterly* (dispatched in March 2020).

Online election will be held April 20 to May 3, 2020. 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 may also be mailed and received no later than January 31, 2020 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 NARGS Director (three-year term).

All nominations and required nominee information must be received by January 31, 2020.

NARGS 2020 Nominations for Online Election for Three Members of the Board of Directors: April 20 – May 3, 2020.

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



Ed Glover

I have been a member of NARGS and the Wisconsin-Illinois Chapter for about 35 years. After my first visit to the Rocky Mountains, I was entranced by the alpine plants I saw there and was thrilled to find a group of gardeners whose focus was growing such plants. I have served as Chapter Chair several times and was on the NARGS Board from 2000-2003. In 2003-2004 I served as vice-president of

NARGS. For the past 16 years I have managed the rock garden in the Allen Centennial Garden at the University of Wisconsin-Madison, and we are proud to have received the Francis Cabot Public Rock Garden Award from NARGS in 2019. I am willing to serve on the NARGS board.

Susan E. Schnare

I live and garden on my family farmstead in rural central New Hampshire, where my interests are generally in plants, animals, and architecture. I have particularly warm spots for primroses, collies, and old houses and gardens. For about 20 years I ran Mountain Brook Primroses, a tiny primrose nursery in my garden and unheated greenhouse. After a lifetime of growing plants, I studied Plant Science at the University of New Hampshire and then at University of Connecticut, where I specialized in landscape history. After working as a gardener, designer, and consultant, I enjoyed a six-year idyll studying at the University of York (U.K.) and visiting gardens throughout Europe. My doctoral dissertation, "Sojourns in Nature: the origins of the British rock garden," resulted in work with English Heritage and the Chelsea Physic Garden. My work and studies in landscape history and on the history and conservation of rock gardens led to numerous presentations and articles, and a continuing



fascination with the early botanists. I am a member of the Fells Chapter of NARGS and would be honored to be a board member.



John Willis

Although I have always been interested in various aspects of horticulture, it was not until I retired from my physicist day job, that I began to explore more esoteric aspects of gardening, including rock gardening. I'm particularly intrigued by the challenge of persuading alpines that my Maryland hillside is an acceptable place to flourish. I've been a

NARGS member for ten years now and a member of the Potomac Valley Chapter. I find the seed exchange, travel programs, speakers, and the *Quarterly* immensely rewarding. I've obtained seeds and bulbs from all over the world and I've shared my experience in growing them with many online postings. I would welcome the opportunity to work on resolving the issues that NARGS faces now and going into the future.

NARGS Awards Nominations Due March 1, 2020

Nominations are due to Panayoti Kelaidis, chair of the Awards Committee, by March 1, 2020. Electronic nominations only, please. Email to: telesonix@outlook.com Awards will be announced in June at the NARGS annual meeting in Ithaca, New York.

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 Ouarterly) 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 Ouarterly) 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).

NARGS SERVICE Awards

Nick Courtens (Rocky Mountain Chapter)

Nick has worked at the Betty Ford Alpine Gardens since 2010 when he took over as head horticulturist. Immediately, Nick began improving and redoing parts of this world-famous high-altitude garden in Vail, Colorado. While at the gardens he helped create and played a pivotal role in building and planting several tufa areas, a stumpery, and a unique silk road garden. Also, Nick and his colleagues created and built a stunning new entrance garden as well as a sunny and comfortable visitor center. Nick's important and creative alpine plantings make him well deserving of our chapter's service award. (Recommended by Marilyn Raff as chair of the RMC Awards Committee)

Glenn Guenterberg and Patrice Van Vleet (Rocky Mountain Chapter)

Glenn Guenterberg and Patrice Van Vleet work together tending their outstanding rock, crevice, and perennial gardens. Here, they welcome passionate gardeners, showing by example how to skillfully create a garden masterpiece. They assist our Rocky Mountain Chapter and national organization helping with travel logistics to purchase tufa for themselves and others in faraway states, as well as arranging local carpooling for garden tours and plant meetings. Patrice was a driver for the Steamboat Springs Symposium in 2016. Glenn served as chair of our chapter in 2017-18, and also took on the task of editor of the Saximontana newsletter during a difficult time in 2018. (Recommended by Marilyn Raff as chair of the RMC Awards Committee)

Gayle Lehman (Rocky Mountain Chapter)

Gayle has been the superintendent of the Yampa River Botanic Park in Steamboat Springs, Colorado, for over 20 years, where she has guided the park from infancy to a world-class, high elevation, many-acre garden. Gayle has promoted and showcased the use of native plants, alpine, and rock garden plants throughout her time at this diverse and well-planted garden. She spearheaded the creation of a large crevice garden in 2013, which has become an eye-catching centerpiece for this mountain garden. In addition, in 2016 she added a tufa planting area to exhibit even more alpines. Local and international visitors certainly appreciate the extensive work Gayle has done to display and combine Rocky Mountain native plants and alpine plants. (Recommended by Marilyn Raff as chair of the RMC Awards Committee)

Carl Wilson (Rocky Mountain Chapter)

Carl served as vice-chair of the Rocky Mountain Chapter for two years. He organized events well and planned noteworthy speakers with a graceful knack. During his tenure, the programming was excellent and well received by the membership. In addition to his duties as vice-chair, Carl played a substantial role in the organization of the 2016 NARGS conference in Steamboat Springs. Without Carl's organizational skills, the conference would not have happened as smoothly and successfully as it did. His hard work for our chapter and NARGS is greatly appreciated. (Recommended by Marilyn Raff as chair of the RMC Awards Committee)

Christine Ebrahimi (Columbia-Willamette Chapter)

The Columbia-Willamette Chapter has been the beneficiary of Christine Ebrahimi's seemingly limitless enthusiasm. Christine joined the chapter in 1996 and served as chairperson for two years and vice-chairperson for six years. (Prior to this, she was a four-year member of the Siskiyou chapter and served as chair for one of those years). Christine obtained her bachelor's degree in systemic botany and worked for a year in taxonomy at Harvard's Herbaria. She then obtained her master's degree in forest ecology and spent ten years surveying rare and endangered plants of northern Idaho for the Forest Service and BLM. Christine's parents were avid hikers and she continues the tradition with her husband and two sons, and with friends, as they explore many of the western mountain ranges. Her talks to the chapter on these areas are both scientific and beautifully illustrated. Christine also continues to share seeds and propagated plants for the chapter's benefit. Her welcoming personality, accompanied by gifts of rare alpines, has drawn a number of new members to the chapter. Christine's garden is a botanical library with perfectly grown and labeled alpines in raised beds, covered sand beds, and troughs. She shares her garden willingly and inspires eternally. (Recommended by Terry Laskiewicz)

Jan Jeddeloh (Columbia-Willamette Chapter)

The Columbia-Willamette Chapter is pleased to give the Chapter Service Award to Jan Jeddeloh. She has served as vice-chair/ program chairperson and as chapter chair. Perhaps most important, for the past several years she has managed the chapter's annual participation in "Hortlandia," the region's largest plant sale, resulting in significantly increased funding for chapter activities. Her garden was the site of our recent annual picnic, and her baked goods are welcome additions to the refreshments table at many meetings. Jan, a native Oregonian, grew up with nature and gardening. For many years her garden was in a heavily wooded area, but she and husband Alan now live in a sunny neighborhood, where Jan has transformed a bare suburban yard into a complex of rock gardens and lavish mixed borders, as well as installing an alpine house. She propagates much of her plant material, including skill at growing ferns from spores and experimenting with tissue culture. She has always been generous in sharing her special plants with other NARGS members. Always willing to participate, and to do so creatively, Jan is one of our most valued members. (Recommended by Terry Laskiewicz)

Michael and Susan Dolbey (Ontario Chapter)

They have been members since 1989 - That's 30 years! I asked them, in 1996, to take over the then ORGS Seed Exchange. They agreed after some hesitation. The seed exchange was transformed. There was good groundwork in place and they spent hours improving and turning it into an online, user-friendly, list of seeds available to members in December. They made sure the donors' plants had the correct scientific names and queried any unusual descriptions. Then they sent the lists to the Journal editors, compiled the numbers of requests for seeds and printed seed package labels. For years, Mike spent his New Year's Eve printing up over 10,000 labels to have them ready for the next day's seed packaging. This list was continually improved, including the labeling process. After ten years, others gradually took over the exchange with Mike printing the labels for the last time in 2017. Both he and Susan are still willing helpers when there is a need for assistance with proofreading the Seedex list. They were co-chairs in 1999 and 2000. Always helping, growing plants for plant sales and selling, at our last NARGS meeting, with Michael working the projector and lights for the room. They are two of ORG&HPS's treasures. (Recommended by Anna Leggatt)

Jacques Mommens and Elisabeth Zander (Berkshire Chapter)

At its October 5, 2019, meeting, the Berkshire Chapter presented Jacques Mommens and Elisabeth Zander with awards for distinguished service and devotion. For many years, Jacques Mommens has diligently kept track of memberships and income from monthly plant sales and auctions, managing to be an oasis of calm during our group's frenzied acquisition of new plants. We are grateful to count him as a long-time member who generously shares his plants (especially primulas) as well as gardening expertise. Elisabeth Zander has held about every office and volunteer position possible within the Berkshire Chapter, but this award recognizes her more recent service as treasurer, one-person program committee and our audio-visual/computer expert. Elisabeth has been invaluable in keeping our meetings interesting and running smoothly. We recruited four members to take over the jobs that she was doing! We are proud that she is now President of NARGS, and know how much talent and experience she brings to the position.



Al (left) discussing plants with Jerry Pottmeyer at the National Aviary.

IN MEMORIUM: AL DEURBROUCK 1932-2019

The Allegheny Chapter and NARGS lost a stalwart member and supporter when Al Deurbrouck passed away on Tuesday, November 26, 2019. Al was an avid rock gardener, and his home near Pittsburgh showed this effort in myriad beds, troughs, and specimen plants. His gardening expertise showed in the numerous awards he won at the Allegheny Chapter's annual show. Many of these plants were grown from seed, and Al certainly followed the adage, "Who plants a seed beneath the sod, and waits to see, believes in God."

Al was definitely an elder statesman in the chapter. He served as chapter chair, chapter awards chair, show chair, and editor of the local newsletter. On the national level, he chaired the advertising committee and was chair of the committee when the chapter hosted two national conferences and two winter study weekends.

Al always taught newcomers the marvelous quote by Elizabeth Lawrence, the first woman landscape architect in America: "All gardeners become rock gardeners because gardening is an art and rock gardening is the purest form of that art!" His personal rock garden and troughs demonstrated this art.

In addition, he bred a wonderful rock garden daylily which was named 'Little Bird'. This daylily is only 6 inches tall and still the only one of this type registered by the American Daylily Society. Al was also active in other garden societies including The West Mifflin Men's Garden Club and the Daffodil and Hosta Society of Western Pennsylvania. One of his favorite iris cultivars was 'Tiger Honey' with a broken pattern or orange and white.

Professionally, Al was a coal prep engineer and received many awards in that profession. He is survived by his wife, Nancy, two daughters, seven grandchildren, and two great-grandchildren.



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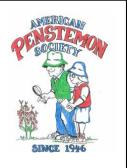
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John Gilrein <basecamp@alum.syracuse.edu> Florene Carney <snowfire@mtaonline.net> David Amrheim <amrheindav@aol.com> Joyce Hemingson <jhem1022@gmail.com> gary, AB)

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NARGS STRUCTURE

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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Vice President	Vice President: Panayoti Kelaidis telesonix@outlook.com 1244 S Quince St., Denver, CO 80231-2513
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Back cover: Saponaria ocymoides in the Al Wurster Memorial Rock Garden, Carol Eichler.

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