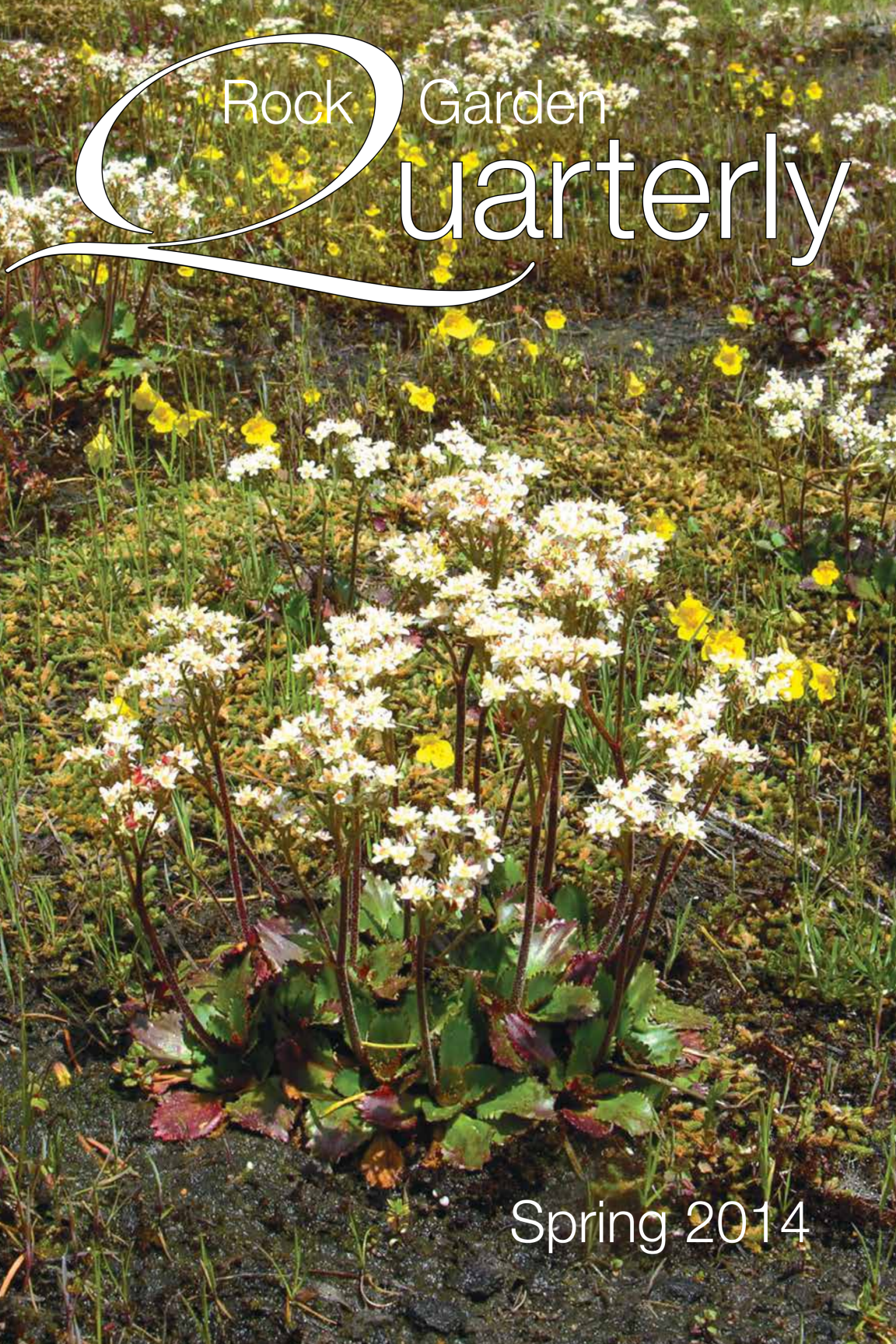
Rock Garden Quarterly



Spring 2014

NARGS



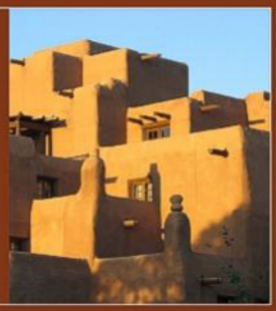
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Don LaFond lives and gardens in Pinckney, Michigan, near Ann Arbor. He is a furniture builder and remodeling carpenter and, most importantly, a Mister Mom for two kids. Rock gardening has occupied and competed for his time for 20 years, with daphnes, irises, and dwarf conifers being among his many plant addictions.

Anna Leggatt was introduced to wild flowers at an early age as her grandfather led 5-mile tramps through the English countryside. Anna lives in Toronto, writes for non-profit newsletters, and lectures on horticulture. She teaches part-time at the Kortright Centre for Conservation. Her garden gets neglected while she travels the world, taking photographs of wildflowers and their native habitats.

Gwen Moore has been rock gardening since the late 1970s, first in Wisconsin and for the last 29 years in the vicinity of Denver, Colorado. She was editor of this publication (when its title was *The Bulletin of the American Rock Garden Society*) for eleven years and served in various positions with her local rock garden chapters. In the last ten years she has tended other people's rock gardens and explored life with roses and a few troughs.

Rebecca Stubbs is a PhD student, originally from Des Moines, Iowa, at the University of Florida. One of the main reasons she is a botanist is her love of being in the field especially montane areas. Her particular enthusiasm for North American saxifrages is exemplified in her research project on the evolution and biogeography of *Micranthes*.

Abbie Zabar is the Speaker/Program Chair for the Manhattan Chapter of NARGS. Her plant sale 'treasures' grow on a New York City penthouse terrace. Among other museums, her drawings are part of the permanent collection of the Hunt Institute for Botanical Documentation, one of the foremost resources of botanical art in the world.

Front cover: *Micranthes rufidula* among *Mimulus guttatus* – Malcolm McGregor

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Printed by Allen Press, 800 E. 10th St., Lawrence, Kansas 66044

digital Quarterly

Digital edition of the *Rock Garden Quarterly*
Bulletin of the North American Rock Garden Society

Volume 72 Number 2 Spring 2014

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ROCK GARDEN QUARTERLY

(ISSN 1081-0765; USPS no. 0072-960)

is published quarterly in January, April, July, and October by the
North American Rock Garden Society, c/o Bobby Ward, Exec. Sec.,
930 Wimbleton Dr., Raleigh, NC 27609-4356
a tax-exempt, non-profit organization incorporated
under the laws of the State of New Jersey.
Periodicals postage is paid in Raleigh, North Carolina, and additional offices.

POSTMASTER: Send address changes to
Rock Garden Quarterly, Executive Secretary NARGS, PO Box 18604,
Raleigh, NC 27619-8604

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Submission deadlines are
February 1st for SPRING issue
May 1st for SUMMER issue
August 1st for FALL issue
November 1st for WINTER issue

Membership includes a subscription to *Rock Garden Quarterly* and participation in the seed exchange, as well as other benefits.

Annual dues: US $30 for members in USA and Canada, US $35 for all other countries. Payment by check on a US bank, International Money Order in US funds, or credit card (Visa, Mastercard). Life membership: US $600, $540 for members over 60 years old.

Membership can also be paid online at
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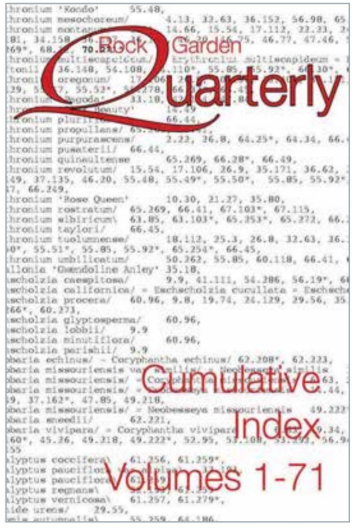
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From the Editor

WE HAVE NOT suffered with the floods which others in England have had such a bad time with. But it has been a very mild winter and now spring is clearly under way outside our window: winter aconites, snowdrops, *Cyclamen coum*, early crocuses, such as *Crocus tommasinianus*, hellebores and witch-hazel are all in flower. Early irises such as *Iris lazica* which has flowered on and off since November has now been joined by some *I. reticulata,* and *I.* 'Katherine Hodgkin' has just started into flower. As those who know me would anticipate there are some *Porophyllum* saxifrages already into flower, with *Saxifraga* 'Maria Louisa' being the best of the early flowering cutivars this year.

But then while we are having such a wonderful early spring in mid-February rather than early March, it will all be past by the time this lands in your mailbox, while you will still have that moment to come when you feel spring has arrived. And of course we could still have six weeks of cold weather yet.

WITH THE COMPLETE archive of the *Quarterly* online on the NARGS website there was obviously a need for some form of index to be equally available. There is a project under way to create a fully searchable interactive index but it will take some time before this is complete since it involves checking every reference as the new index is created. It therefore seemed valuable to post the traditional *Cumulative Index* online.



The three parts of the *Cumulative Index* represent the accumulated work of the 12 editors of the *Rock Garden Quarterly* and its various precursor publications. Inevitably this means that different criteria may have been applied as to what warrants indexing. This presents relatively few problems in the Author Index, relatively few in the Plant Index, but major problems in the Subject Index where the criteria that might be applied are almost wholly a matter of subjective judgement. I am sure there are errors in this index, accumulated over the years, but the value of making it available online alongside the complete archive of issues seems clear. The 385-page 1.5Mb *Cumulative Index* can be downloaded for free from the *Rock Garden Quarterly* page on the website.

NARGS 2014 Elections

Timetable for elections of President, Vice-President, and Directors

The Call for Nominations (details were in the last issue) is Stage 1 of the election process outlined below and is now completed. The agreed slate of candidates is being published on the NARGS website on March 31, and there is an opportunity for "From the floor" nominations for any of the posts from April 1-30.

STAGE 1: Timetable & call for nominations are published in Winter Quarterly. Nominations deadline to Nominating Committee February 14, 2014.

STAGE 2: Nominating Committee agree on slate to be published on website on March 31.

STAGE 3: From the floor nominations April 1-30.

STAGE 4: Combined list of candidates to be published in the summer *Quarterly* (deadline May 1 for dispatch June 20)

STAGE 5: Election online July 15-30 prior to late August AGM.

STAGE 6: Announcement of election results at Annual Meeting in late August 2014.

"From the floor" nominations for any post should be sent by post or emailed to:

Lola Horwitz, 446 6th St., Brooklyn, NY 11215 USA.
<llhorwitz@gmail.com>

Nominations should include:

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

They must be received by April 30. The bio and picture will be published in the summer issue of the *Quarterly*.

The Death of a Gardener

Don LaFond

DOES THE DEATH of a gardener mean the death of the garden? In our group, as with others, we have witnessed what happens when a gardener dies. The family struggles with what to do with the garden. Do they keep it? And if they do, does it need to be kept the same? We have lost four people from our group in recent time. They were all my friends, and all loved and respected charter members of the Great Lakes Chapter. All four of these people were gardeners to their core until the very last. Each garden was a unique garden in every way except one: the gardener.

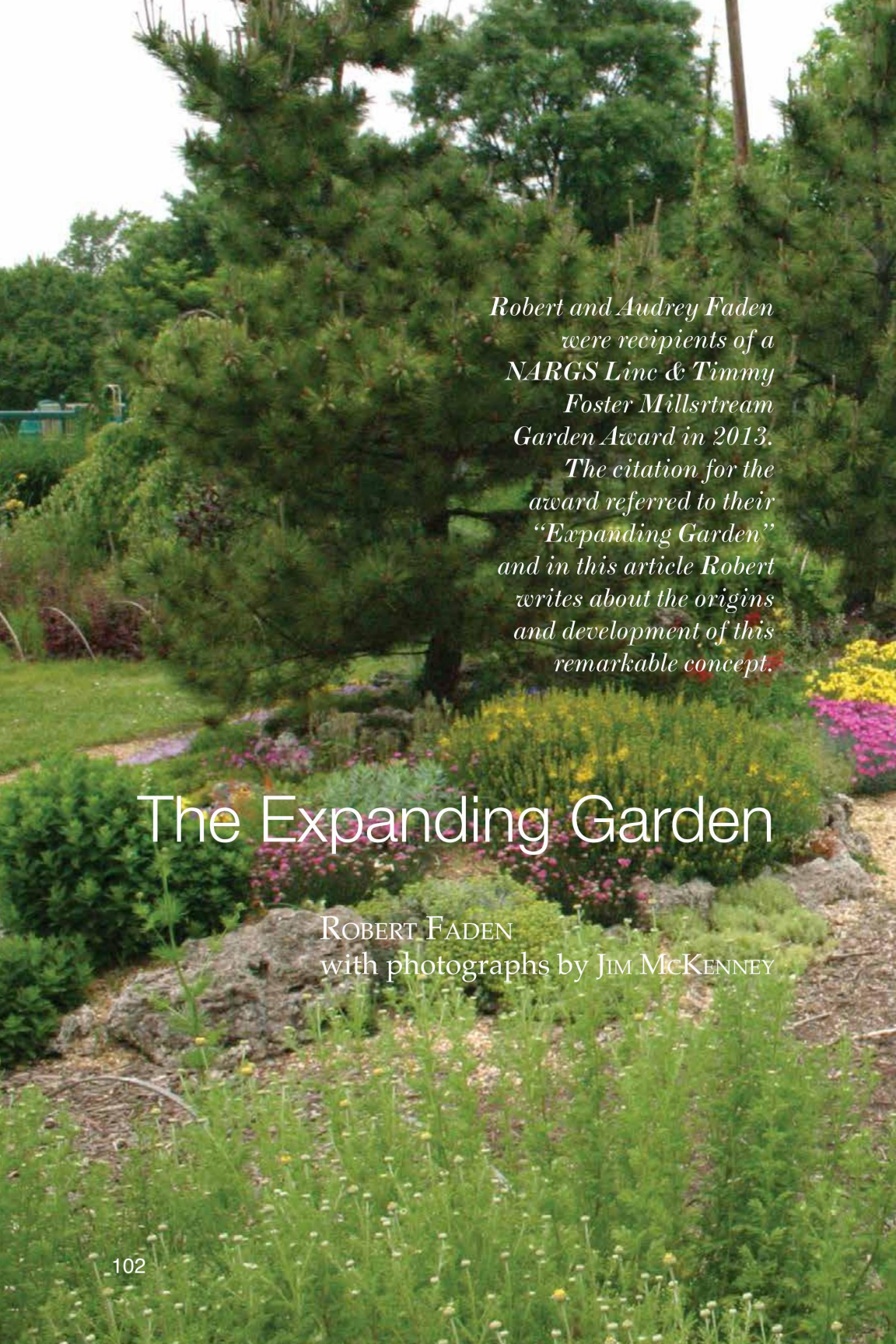
The gardeners were not the same because they were all rock gardeners, or charter members, or all respected; they were the same because of something intangible – a philosophy. They didn't garden because they needed attention or to make their home exceptional, although it did; they gardened because they couldn't not garden. Their lives revolved around gardening. That's not to say they shirked their responsibilities to work and family, if anything they were enhanced.

When something grabs a hold of your imagination with the force of a tornado, time becomes a precious thing. That realization becomes all important. The realization is that she has to keep her divided heart held together. The one side of the heart held ever present in their love and devotion to their families, and the other side to the constant pull or maybe yank of wanting to be in the garden. The gardener becomes aware that he is his own timekeeper and must allocate his time carefully, so as not to offend either side of the heart.

When the gardener dies, does the garden die? The garden is mostly in the gardener's mind. Of course the plants and the rocks and the troughs are there physically in the garden. But like words they can be arranged in an infinite order according to how the gardener or the writer wants it to be, and the land or the story dictates.

As gardeners we know that a garden is never finished. It continues on and on because a gardener's curiosity never stops until the synapses stop jumping. But the gardener can consciously or unconsciously convey their ideas successfully to someone else: to a son, a daughter, or perhaps another person who watches and learns from them. Does giving plants or giving knowledge to a fellow gardener constitute the continuation of their garden elsewhere? When the gardener dies, does the garden live on?

Thank you Dick. Thank you Leila. Thank you Fred. Thank you Betty.



Robert and Audrey Faden were recipients of a NARGS Linc & Timmy Foster Millsrtream Garden Award in 2013. The citation for the award referred to their "Expanding Garden" and in this article Robert writes about the origins and development of this remarkable concept.

The Expanding Garden

Robert Faden
with photographs by Jim McKenney



MANY YEARS AGO, I wrote a piece about showing one's garden in which I stressed how the gardener whose garden was on display was always apologizing for all manner of things, from the timing of the visit – too early or too late – the condition of the plants, the inadequacy of the weeding and pruning, and even the weather, as if he or she could have controlled the elements.

I have written about our gardens for some years now. The concept of the Expanding Garden, which I adopted as the name for my column in the Potomac Valley Chapter newsletter, where much of this article first appeared, comes from the small amount of land that came with our duplex, which we bought almost 29 years ago, and our increasing interest in growing more plants.



Sand bed with *Yucca pallida* (center right, with *Digitalis grandiflora* behind), other yucca species and *Sedum pulchellum* (front middle). Fire engine on YMCA parking lot in the back.

When plant ambitions and desires start to outstrip the available land one can do several things: alter one's ambitions/desires, move to a larger plot, or grow plants on land that one doesn't actually own, such as that of one's neighbors or in public spaces. Our ambitions didn't change and we didn't move, but we have greatly expanded our gardening area onto the land of the Alexandria YMCA, our immediate neighbor to the east, and into Simpson Park, a small Alexandria city park on the far side of the Y.





Large tufa garden: *Genista* sp. at the back, *Penstemon pinifolius* (front right) and Dianthus sp. (left)

The following is a brief history of the gardens. When we purchased our house in 1985 we recognized that by the time we would be able to occupy it, the season would be too far along for us to safely transplant the plants that we were growing around our rented townhouse. So, with permission of the Y, we put in a holding bed in the back of its building and moved our plants there before we moved into our house. That bed was later to be expanded as our vegetable garden.

In 1987 Audrey (my wife) took the Master Gardeners course in the District of Columbia and for her project decided to work on developing flowerbeds in front of the YMCA building. Bulbs of *Tulipa bakeri* 'Lilac Wonder' planted then have continued to expand and bloom every year.

In our first few years we also began to grow some plants just outside our fence on the Y land, most notably two katsura trees (*Cercidiphyllum japonicum*) that I had collected as seedlings from a sidewalk crack behind the National Museum of Natural History where I worked. In the same area we later added a bougainvillea goldenraintree (*Koelreuteria bipinnata*), which had been given to us, as a one-year old potted seedling, by the late Fred Meyer of the U.S. National Arboretum. Those three trees now tower over our house.

In 1991, thanks to my colleague John Wurdack, we joined the Potomac Valley Chapter of the American Rock Garden Society (now NARGS) and our eyes were opened to a wide range of plants that we knew nothing about, as well as to a very nice group of people. As we worked on developing our backyard, we included growing areas that would be suitable for rock garden plants. One tree that we purchased about that time as a 6-inch rooted cutting was a Japanese umbrella-pine (*Sciadopitys verticillata*), which is now the centerpiece of the back yard and is about 20 ft tall.

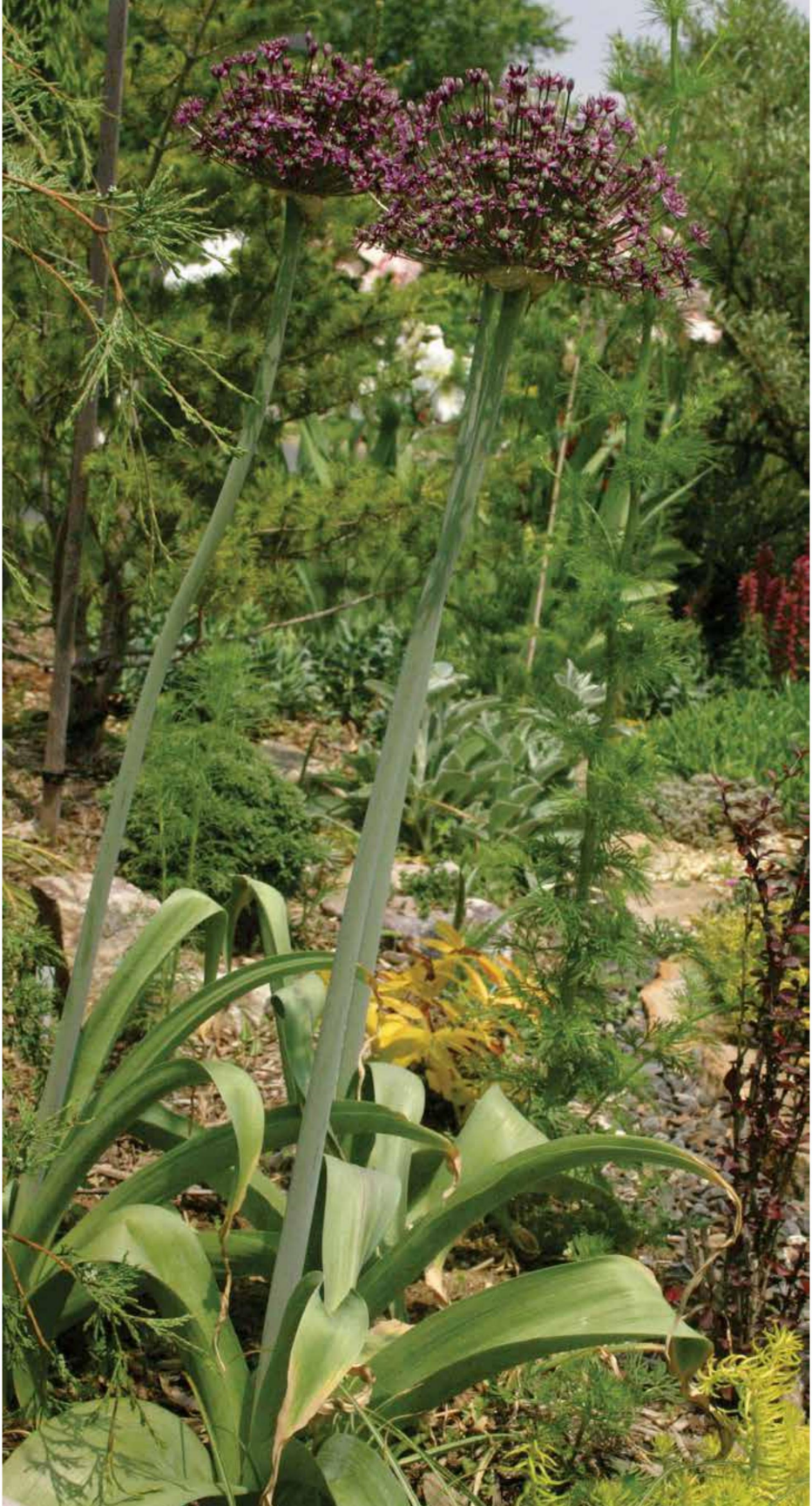


Phemeranthus (*Talinum*) *calycinus* (pink flowers) surrounded by *Sedum album* (white flowers) and *S. sexangulare* (yellow flowers).



Top: Large tufa garden with *Brimeura amethystina* (white-flowered form) (center left) and *Aquilegia barnebyi* (middle and right).

Bottom: *Delosperma* sp. (pink flowers) and *Sedum* species.





Delosperma sp. (pink flowers) with *Nigella damascena* (blue flowers).

Echium russicum

In 1993 the Master Gardeners of Northern Virginia was seeking ideas for a project in Alexandria. Audrey suggested Simpson Park for a demonstration water-wise garden. The plan was approved by Master Gardeners and the City of Alexandria, and the first garden in Simpson Park was installed later that year.



Opposite: *Allium* 'Globus' with tall bearded irises and *Echium russicum* (back right).



Small tufa garden, looking south; *Campanula portenschlagiana* (center left), *Erinus alpinus* (center right), with fringe of *Thymus serpyllum* 'Minus". Part of YMCA building back right.

The most pivotal event that led to the expansion of our gardening activities and area was the YMCA's construction of a new building with a much larger footprint to replace the old building. Because we were the neighbor that would be most impacted by the new building and its construction, the Y had to work with us. For example, the Y agreed to protect our plantings just outside our fence, including the katsura trees. They also followed our suggestions (for the most part) about the trees and shrubs to be planted on their land between the new building and our property. During the razing of the old building and construction of





Tradescantia hybrids (blue flowers) and *Heuchera* species

Sand bed with *Digitalis grandiflora* (front), with *Echium russicum* (behind) and *Yucca gloriosa* 'Variegata' (center left)





Dianthus species



Allium cristophii



the new one in 1995, I often entertained thoughts of places to which we could move. We never did overcome inertia, however, and eventually the building was completed. It opened in January 1996.

A consequence of the larger YMCA building and the need for more parking space, as mandated by the City of Alexandria, was the construction of a large parking lot in what had been a grassy field behind the building. In the end, although the arguments went back and forth about how wide the grassy borders around the parking lot should be, a substantial amount of undeveloped green space was created. A compromise about parking was that the north end of the one-block stretch of Leslie Avenue that had been used exclusively for parking, both for the Y and the baseball fields in Simpson Park, was turned into park area, with a children's playground in the northern part of this area, and an area just south of it set aside for gardens. Audrey submitted a formal plan for the gardens to the Alexandria Department of Parks and Recreation. Part of the arrangement was that the Master Gardeners of Northern Virginia committed to maintain the gardens. An agreement must have been signed at the time, but no one seems to be able to locate it.

Allium schubertii





In the next phase the Master Gardeners began to install the new gardens in the park, which became the demonstration fragrance, tufa and butterfly gardens. A gift of tufa rock by the U.S. Botanic Garden to the City of Alexandria allowed the construction of a unique type of rock garden in Alexandria. Recent construction of walls at the south ends



Small tufa garden, looking north, with species of *Sedum*, *Erinus alpinus*, *Aethionema caespitosum*?, and dwarf *Aquilegia chrysantha*.

of the fragrance and butterfly gardens was enabled by grants from the City of Alexandria and Del Ray Citizens Association, respectively. Local citizens provided some of the labor for this construction. Most recently a gravel garden was added.



Dwarf *Aquilegia chrysantha* in small tufa garden.

Tufa provides an excellent habitat for many species so the gift was highly valued. Campanulas, dianthus, sedums, and aquilegias are complemented by sempervivums, penstemons, fairy foxgloves (*Erinus*), phlox, and many other plants. Once established in tufa plants can survive for many years with relatively little maintenance.

Teucrium polium in small tufa garden.





Digitalis thapsi with *Scabiosa* sp. in front.

Asphodeline taurica in large tufa garden where it is monocarpic.





Phlox subulata 'Laura' (front) and *Armeria juniperifolia* in large tufa garden.

Narcissus assoanus ? (grown from Royal Horticultural Society seed received as "*Crocus* sp."): early flowering, dwarf and very vigorous, in small tufa garden.





Yucca rostrata in sand bed near our house.



Gelsemium sempervirens

We plant for diversity, especially of trees and shrubs. At last count we had about 200 genera of woody plants in our garden areas. Rock garden plants are grown in the center of our back yard, in two sand beds on the Y, and in the tufa and gravel gardens and south end of the water-wise garden in Simpson Park. That's another important aspect of any such project – the plantings have to manage themselves rather more than they would in the backyard.

The last phase of our gardening expansion, which is still ongoing, was onto the grassy verges surrounding the parking lot behind the new YMCA building. We began with the east side, adjacent to the new gardens in Simpson Park, trying to create a visual barrier from the parking lot and also to thematically match the gardens in the park, just a few feet away. For example, we planted lilacs and fragrant viburnums in the Y bed opposite the fragrance garden in the park, and plants with special winter interest across from the winter-flowering Japanese apricot (*Prunus mume*), since deceased.

We always hope people enjoy visiting our gardens. Exactly when you come will determine what you see. When our local chapter of NARGS last visited our gardens (in 2011) they were just a bit early for two especially notable species in one of the sand beds: *Anemone palmata*, a small species from southern Europe with inch-wide, buttercup-yellow flowers; and the Himalayan bulb *Notholirion thomsonianum*, with a dozen or more 2-inch pinkish-purple flowers attached to a central stalk. The anemone had flowered before but the notholirion, which had quietly vegetated for five years, bloomed for the first time.

Maintenance has been a challenge in much of our newer garden area. Although Audrey gets very good help from Master Gardeners in the Simpson Park gardens, keeping up the YMCA gardens has been a constant headache. We advertise spring and fall work parties for these gardens through the local citizens association newsletter and various other outlets, but turnout is typically disappointing. The rest of the year Audrey and I try to maintain the beds while either the Y or their contractor cuts the grass and sometimes weed-whacks the trees and shrubs at no extra charge. Each year we concentrate on cleaning up a few beds in which our efforts can really make a difference. The other beds are not so lucky.

So do come and, if you are not careful, we may put you to work!



Notholirion thomsonianum in the sand bed during its first and only flowering



Gardening with Elk: Theories and Tactics

Gwen Moore

EACH GARDEN PRESENTS a unique set of challenges and opportunities for the rock gardener. Imagine my delight when I was given the opportunity in the summer of 2007 to take on the challenge of a garden at 7800 feet, atop a wind-swept peak in the Colorado foothills, with a resident population of both deer and elk! The rock garden had been constructed ten years earlier, using much of the native, gravelly, open soil and dark boulders of granite and basalt, and encompassing a near-circular area about 60 feet in diameter.

Additional conditions of the challenge included: the garden should present rivers of color in season, remain unfenced, include some grasses (since they lend a naturalistic quality to the garden), and no mulch should be used.

The elk clearly walked with heavy hooves all across the garden in winter and early spring, but they mostly repaired to the high country above 10,000 feet for the warmer summer months. Rose bushes and hollies had been heavily browsed, indicating that the elk were hungry enough to suffer some discomfort in dining.

Tactic A: Plants need to grow well

My first thought was to promote rapid and healthy growth of the plants by watering and fertilizing. Obviously I didn't want the plants to grow out of proportion, so an organic, alfalfa-based fertilizer was used. Watering was twice a week during June, July and August, unless we got heavy rains. My calculation was that if half the plant was destroyed through trampling or eating, at least the remaining part would be in active growth and could replace itself.

Some plants had survived from previous plantings of the rock garden. These included *Erigeron scopulinus*, *E. compositus*, *Thymus* 'Elfin', *Penstemon* 'Claude Barr', *Cotula*, *Verbena*, a few flax (*Linum*), onions, *Artemisia frigida*, *Achillea millefolium*, *Origanum* 'Kent Beauty', *Monardella odoratissima* and *Telesonix jamesii*. I made a few deductions from these survivors:

Hypothesis One: Elk Don't eat Mats

Perhaps elk can't reach down low enough to munch off flat mat plants. Thus I would choose plants that could fly under elk radar. I planted *Androsace sarmentosa*, *Aubrieta deltoidea*, *Penstemon teucrioides*, *Anacyclus depressus*, *Antennaria* 'McClintock', *Dianthus alpinus*, and a selection of low



pink *Dianthus* 'Blue Boy'. Most low thymes and mat-forming veronicas are good candidates, too.

Hypothesis Two: Elk don't eat Everything

Tactic B: Be Repulsive

Certain plants don't please the taste buds of elk, at least elk that have tasted them before. These include many composites, the aromatic sages and erigerons, and perhaps most penstemons (which aren't smelly to us, but when dried in an herbarium have a distinct reek). Seeking out the odoriferous, I planted *Geranium* x *cantabrigiense* 'Biokovo', *Polemonium* (a genus known for skunky scents in foliage), Dahlberg daisy, *Achillea serbica*, all with a goodly foliar scent. *Origanum* of several species, *Monarda* 'Petite Delight', and shrubby thymes, such as *Thymus* 'Peter Davis', all have strongly minty scents in the foliage, so I added them. I figured the milky sap of *Asclepias tuberosa* and *Euphorbia polychroma* couldn't taste very good, so in they went. *Iberis sempervirens* appears on lists of plants less favored by deer. Ferns do not seem to be tasty to deer either. Dodocatheons and primulas don't seem to appeal to the average ungulate, although the flowers may be more palatable than the leaves. Iris, and by extension sisyrinchiums, are unappetizing. However, the leaves of irises and flax seem to present themselves as grasses, attracting enough attention from naïve (inexperienced in garden-plant tasting) elk to be pulled up and tossed away. This, of course, kills the plant even when it isn't eaten outright.

As soon as I began planting I noticed that plants soft from the greenhouse were immediately eaten. As the plants became more "hardened" the elk seemed to become less interested. Included here were columbines, notably *Aquilegia flabellata*, sought after at first, but later ignored. The native and thinner-leaved *A. saximontana* never drew as much attention. *Aquilegia coerulea* was ignored, also, until it flowered.

Tactic C: Use Spines and Fuzz

Apparently roses and hollies are tasty enough that the elk will overlook their texture and eat them anyway. But will elk eat *Vella spinosa*, *Satureja subspicata*, *Teucrium spinosum*, and acantholimons? So far, it seems they won't choose excessively prickly or fuzzy plants. Some of these plants have the double deterrent of minty smell and spines. Many of these have evolved with the goats of the Mediterranean—perhaps they have additional repulsive secrets we have not yet detected. It is also possible that Mediterranean plants may not do well at high elevations or in climates with lots of rain and little sunshine. But it is certainly worth trying them. Fuzzy mulleins (*Verbascum*), *Marrubium rotundifolium*, and lamb's ears (*Stachys lanata*) seem protected also.

Bulbs that are not tasty to elk include hyacinths, most iris, and narcissus. Plant plenty for early spring color. Remember that early spring may continue into early June at high elevations.

Tactic D: Overplant
Elk couldn't eat all the plants at once so, if I planted many, perhaps there would be some that survived to the following season. So I deliberately over-planted. Also, I chose plants in the locally common 2.5" containers, less expensive than larger quart or gallon-size pots, so that there would be greater numbers of individuals, on the theory that at least some might survive this way. Thus, my first summer's research was not so costly: I could find out which plants survived a year without paying too high a price.

Tactic E: Use Nurse Plants and Nurse Rocks
I noted that certain plants, such as *Artemisia frigida*, a native, were not eaten. This fringed sage has a habit of spreading its arching stems out over the nearby ground, so I used these clumps as "nurse plants." I planted such things as *Arabis* and *Aubrieta* right up next to the rootball of the sage and under its branches. My theory is that the sage will shade and shelter the other plants and protect them from trampling and from the notice of ungulate predators. This worked well at least through September. Also, plants in tight crevices between rocks had survived, so I used nurse rocks also, planting up close to rocks wherever possible, and sometimes placing a second rock so that elk had no room to comfortably step on the crown of the plant.

Tactic F: Micro-Fence
I was not to set up any fencing, because the garden owners like the elk to have free reign over this property where their kin have lived for thousands of years. But I knew that elk often pulled up plants by yanking their heads up as they chewed, and then often discarded the plants if they were not palatable. I wanted to keep the plants in the ground until they could form strong root systems to withstand such grazing behavior. I remembered a technique I have used for keeping sempervivums in crevices of rock walls. The "elbow" of a wire coat hanger can be clipped off and used like an old-fashioned hairpin: squeeze the open ends together as you poke the hanger over the sempervivum and between the rocks of the wall. When you release the coat hanger the natural spring of the wire will hold the hanger and the plant in place. I determined to use such wire pins to hold each plant in the ground.

In practice, cutting wire hangers soon lost its appeal, and I bought sod staples, bent wires about six inches long. I pushed these all the way into the soil, holding the root ball in the ground with a good deal of increased resistance to the pull of elk on the top parts of the plants. I soon began to add a second staple at 90 degrees to the first, leaving it an inch or two above the ground, discouraging the ungulates from stepping directly on the center of the plant. In fact the deer seemed to step between the plants, and I soon added staples, sticking up, to areas between plants. Such micro-barriers make walking awkward, tripping up both gardener and ungulate. The

staples are not apparent from any distance and so don't detract from the garden scene. Over time the surface of the staples weathers, also.

I may have gotten carried away with this micro-fence approach: by mid-September I had placed three thousand staples in the rock garden, worried by the return of the elk from higher elevations. To be most effective, these staples should be inspected and righted as necessary at least once a week. A macro-fence for winter would be more effective, if less attractive. Another option is to cover the rock garden with evergreen boughs in winter. Prickly branches would likely be most effective, with blue spruce my favorite pick. After Christmas, spruce branches would be cheaply available, or even whole Christmas trees could be used. Pine branches are certainly worth a try and have a softer look.

Tactic G: Eliminate grasses for grazing—except at edge

Those grasses presented a problem for the gardener, too. There were at least four kinds in the garden. *Poa annua*, a tiny, even dainty grass, goes to seed in six weeks or less. This grass had to be removed, in so far as is possible, as quickly as possible. I cultivated between plants with a circle hoe or hand cultivator, once a week upsetting the root systems of newly germinated seedlings. This species will happily germinate in the mats of thyme or erigeron, and here the seedlings must be pulled up by hand, a time-consuming business. Hopefully in a few years the vast soil store of seed will be diminished. A gravel mulch would help to reduce germination, but here this was not possible.

A second grass was bluegrass, which also needs to be removed because of its aggressive habit of spreading into other plants by rhizome. Any aggressive rhizomotous grass should be removed.

A third grass was a species of clump-forming *Festuca*, native to the area. I dug the clumps out of the higher reaches of the garden, reasoning that the elk might climb up just to graze them. These grasses were retained where the elk can graze on them without entering the garden. I also added *Festuca glauca* 'Elijah Blue' and 'Golden Mops', reasoning that they would withstand the pull of elk grazing, and knowing that these are sterile and will not self-sow.

Tactic H: Use Local Natives

It eventually occurred to me that there must be plenty of native plants that have survived the grazing of ungulates. Why had they survived? After hours of kneeling and weeding it came to me that perhaps they have survived because the ungulates don't care for them. So I planted castillejas and native oxytropis, penstemon, little bluestem, and zauschnerias. So far they have survived well.

There follows a list of plants planted in my "elk" garden. These did well throughout the summer, although the returning elk munched quite a few in September and October. Comments refer to success/death after 5 years.

LIST of PLANTS

✔✔	Success	✘	Not successful
✔	Limited success	✘✘	Complete failure
✔✘	Some success but some problems		

✘	Acantholimon hohenackeri	alive but unhappy
✘✘	Achillea serbica	gone after first year
✔✔	Achillea millefolium	thrives
✘	Alchemilla alpina	content, as always
✔✘	Allium sp. (garlic type)	sometimes eaten in flower, self sows
✔✘	Allium thunbergii 'Ozawa'	flowers eaten off
✔✔	Agastache hybrids	very successful. Deer/elk hate this and won't even walk through it. Use as fence? I leave stalks up until spring
✔✔	Anacyclus depressus	self-sows; unmolested
✔	Androsace sarmentosa 'Chumbyi'	slowly spreading in rock gully
✔	Androsace sarmentosa 'Sherriffii'	also happy and spreading slowly
✔✔	Antennaria 'McClintock'	very happy
✘✘	Anthemis carpatica 'Karpatenschnee'	died, of drought?
✘	Anthemis marschalliana	puny
✔✔	Aquilegia flabellata	now quite happily established
✔✔	Aquilegia saximontana	self-sows
✔✔	Arabis blepharophylla 'Spring Charm'	very happy, limited self-sowing
✔✔	Artemisia frigida	native; removed as desired
✔	Asclepias tuberosa	took a couple years to establish
✔✔	Aubrieta 'Leichtlinii'	happy
✔	Bergenia cordifolia	some damage, protect with rocks
✔✘	Bergenia cordifolia 'Rosi Klose'	suffers some from consumption (by elk)
✘	Campanula cochleariifolia 'Bavaria Blue'	eaten down to staples
✔✘	Cotula (that dark one)	way too happy, needs restraining
✘✘	Cyclamen hederifolium	disappeared
✔✘	Dahlberg daisies	self sows in limited fashion
✘	Dalea purpurea 'Stephanie'	eaten
✔✔	Daphne 'Carol Mackie'	healthy and unmolested
✘✘	Daphne cneorum	dead
✔	Delphinium grandiflorum 'Summer Blues'	self sows
✘✘	Dianthus 'Little Boy Blue'	gone
✔✔	Dianthus 'First Love'	two years old and spreading

✘✘	Dianthus alpinus	gone
✔	Dianthus subacaulis	okay in protected places
✘✘	Digitalis obscura	gone; too cold?
✔	Dodecatheon alpinum	persistent, blooms every year
✔	Erigeron compositus, pink form	self sows in limited way
✔	Erigeron scopulinus	good, but grass invades the mats
✔	Eriogonum flavum var. xanthum	persists, but resents treading
✔	Eriogonum umbellatum	okay but not vigorous
✔✔	Euphorbia polychroma	unmolested,
✔✔	Euphorbia 'Bonfire'	good too
✘✘	Festuca 'Golden Toupee'	gone
✔✔	Festuca glauca 'Elijah Blue'	good
✔✘	Gentiana acaulis	needs periodic replacement
✔	Gentiana septemfida var. lagodechiana	self sows
✔✔	Geranium x cantabrigiense 'Biokovo'	thrives
✘✘	Gilia longiflora	gone
✔✘	Helianthemum nummularium	some winter deaths
✔✔	Heterotheca jonesii	excellent, hybridizes with native species
✘✘	Heuchera 'Canyon Belle'	no
✔	Heuchera rubescens	persistent in crevice
✔	Hymenoxys grandiflora	temporary glory
✔✘	Iberis 'Autumn Beauty'	hangs on, not bushy, few flowers
✔✔	Lavandula angustifolia 'Nana'	good, no browsing
✔	Lewisia cotyledon	needs sturdy protection, rock protection, but worth it. Flowers sporadically throughout spring and fall
✘	Linum perenne 'Saphir'	elk eat it (looks like grass?)
✔✔	Lithospermum	unmolested; self sows
✔✘	Monarda 'Petite Delight'	flowers eaten in some seasons
✔	Origanum 'Kent Beauty'	persistent but not glorious
?	Origanum libanoticum	not sure, think it died
✔✔	Origanum 'Pilgrim'	a great plant here, with long flowering
✔	Oxalis adenophylla	Dried out, otherwise persistent
✘✘	Paeonia 'Anemoniflora'	dead
✘✘	Paeonia 'Mollis'	dead
✔✔	Papaver kluanense	very nice, happy (try P. alpinum)
✔✔	Papaver triniifolium	self sows, vigorous
✔✔	Penstemon caespitosus 'Claude Barr'*	good
✔✔	Penstemon hallii	excellent plant, some self sowing
✔✔	Penstemon hirsutus 'Pygmaeus'	dependable

✔✔ Penstemon linarioides	yes
✔✔ Penstemon mensarum	very persistent
✘✘ Penstemon pseudospectabilis	dead
✔✘ Penstemon teucrioides	some success
✔✔ Penstemon virens	native, very good
✔✘ Phlox 'Laura'	persists
✔✘ Phlox 'McDaniels Cushion'	persists
✔✘ Phlox subulata 'White Out'	persists
✘ Polemonium sp.	Should be good, but not so much
✔✔ Potentilla sp.	Very successful, also incl. P. nivea
✔✔ Primula allionii hybrid 'Lismore Jewel'	blooms very well, very early, large clumps even in full northern exposure sun
✔✔ Ptilotrichum spinosum	self sows, never touched by animals
✔✔ Pulsatilla grandis	persistent, I'd like to plant a lot more
✔ Saponaria hybrid 'Max Frei'	surprisingly attractive to elk, tucked them under skirts of spruce
✘✘ Saponaria x oliviana	doesn't survive
✘✘ Scabiosa 'Blue Buttons'	no
✘ Sedum dasyphyllum 'Himalayan Skies'	not much
✔✘ Sedum ewersii v. homophyllum	sort of just gets by
✔✔ Sedum kamtschaticum 'Variegata'	fine, they won't eat it until they are really hungry
✔ Sedum rupestre 'Angelina'	breaks easily, but persists
✔✔ Silene acaulis	makes very large and fine mats
✔✔ Telesonix jamesii	has been living and blooming for ten years (something likes to eat it though - elk or rabbit or ground squirrels)
✘✘ Thymus 'Minus'	died
✘✘ Thymus praecox 'Highland Cream'	dead
✔ Thymus richardii 'Peter Davis'	does well for a few years, then seems to suffer from winter weather
✔✔ Thymus richardii subsp. nitidus	yes
✔ Townsendia spathulata	has lived several years and bloomed
✔✔ Veronica liwanensis	does well
✔✔ Veronica pectinata 'Rosea'	does fine
✔ Viola 'Clarkson'	yes, but no bloom
✘✘ Vitaliana primuliflora subsp. cinerea	dead

LATER ADDITIONS

✔	Androsace sempervivoides	persists
✘✘	Antirrhinum hispanicum	deceased, probably cold winter
✔	Aruncus aethusifolius	nice
✔	Aster x frikartii 'Flora's Delight'	good
✔	Astilbe chinensis 'Pumila'	grow with moderation; blooms are late and brief because of early frost; elk don't seem to like it
✔	Bolax	moderately vigorous
✔	Erigeron glaucus 'Sea Breeze'	good, leggy late in season
✔	Erigeron leiomerus	fine
✔	Hosta 'Heartbreaker'	good in shade, unmunched
✘	Liatris aspera	not vigorous
✔✔	Micranthes (Saxifraga) rhomboidea	persistent; not showy.
✘✘	Penstemon 'Pikes Purple'	died; Mexicali hybrid
✔✔	Penstemon nitidus	self sows; excellent, needs some protection in bloom
✔✔	Penstemon procerus var. tolmei	excellent ground mat
✔✔	Primula auricula	excellent
✔✔	Primula denticulata	very good; sometimes flowers are eaten
✘✘	Primula vulgaris	does not overwinter
✔✔	Saxifraga x anglica 'Cranbourne'	good in shade
✔	Saxifraga hostii ssp. hostii	all silver saxifrages do well, but should be protected by rocks; some creature pulls them out - probably a ground squirrel
✔	Scleranthus uniflorus	sometimes overwinters
✔	Sedum 'Bertrand Anderson'	good but often eaten in late summer
✘✘	Sedum 'Coral Reef'	does not survive
✔	Sedum ewersii 'Rosenteppich'	okay
✘✘	Teucrium cossonii	most succumb in winter
✘✘	Teucrium orientale	dead
✘✘	Tiarella cordifolia 'Spring Symphony'	gone
✔✔	Verbena 'Annie'	good, but not as vigorous as at lower elevations

Original photograph of elk is by Mike Stout.

TRY ALSO

Spiny or prickly

Acantholimon species
Alkanna
Dianthus erinaceus
Lithospermum incisum (Ha! If you can find it)
Myosotis
Onosma
Phlox borealis
Poppies—alpine, oriental, myabianum, california
Satureja subspicata
Vella spinosa

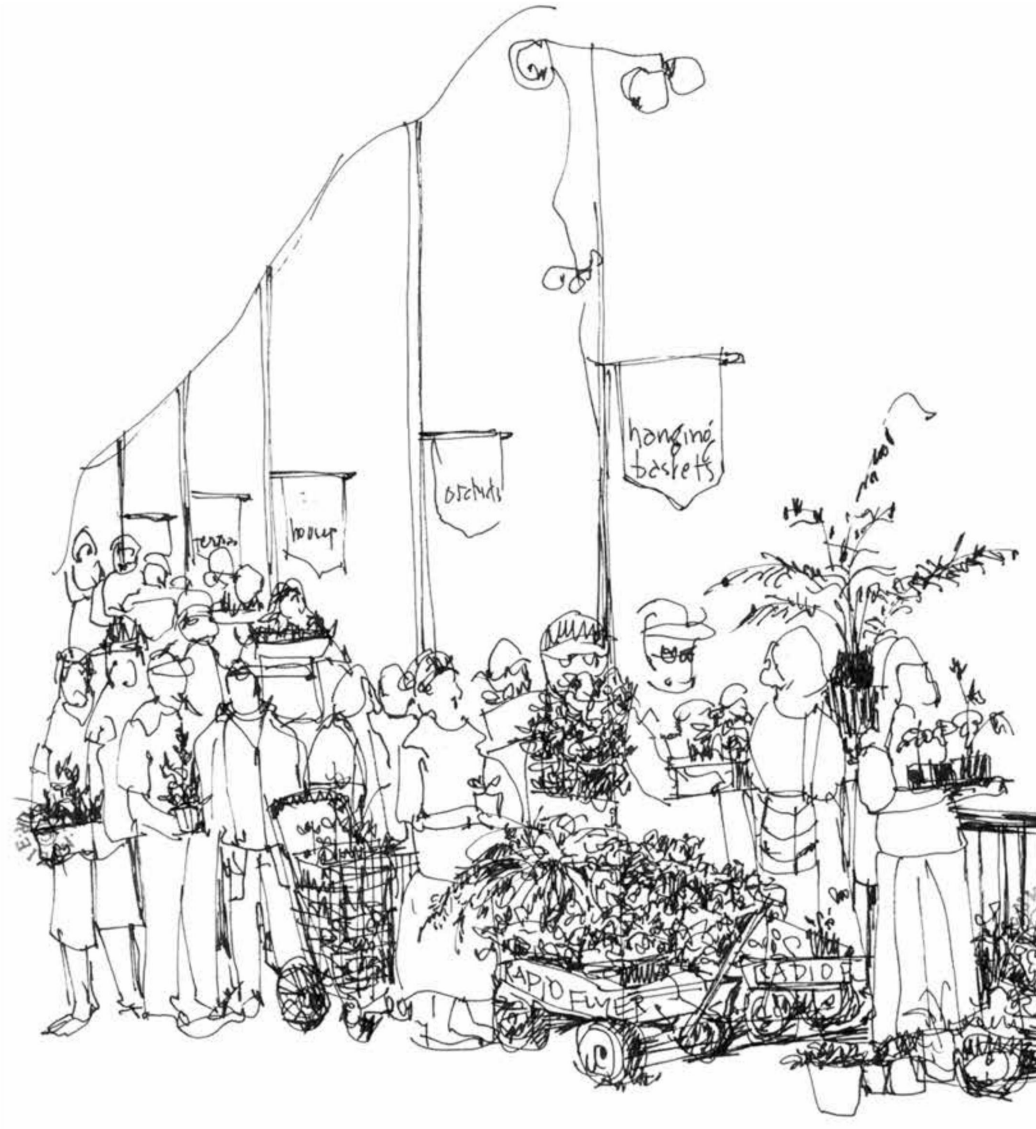
Bad taste or minty

Allium coeruleum
Allium with big balls
Anemone japonica
Castilleja
Chrysanthemum 'Pink Bomb'
Daphnes
Heterotheca, Hymenoxys, Lamium, Haplopappus acaulis, Hieracium lanatum
Origanum species and varieties
Oxytropis lambertii, etc.
Penstemons nitidus, etc.
Phacelia sericea, P. campanularia, and any others you like and can obtain
Polemonium
Salvias
Saponaria, Lychnis, Silene
Stachys
Teucrium orientale

Flat mats

Drabas
Any prostrate thyme or veronica
Douglasia when available
Phloxes, any alpine
Prostrate composites—Gazania, Gerbera,
Saxifraga oppositifolia - OK, but do ground squirrels eat them?

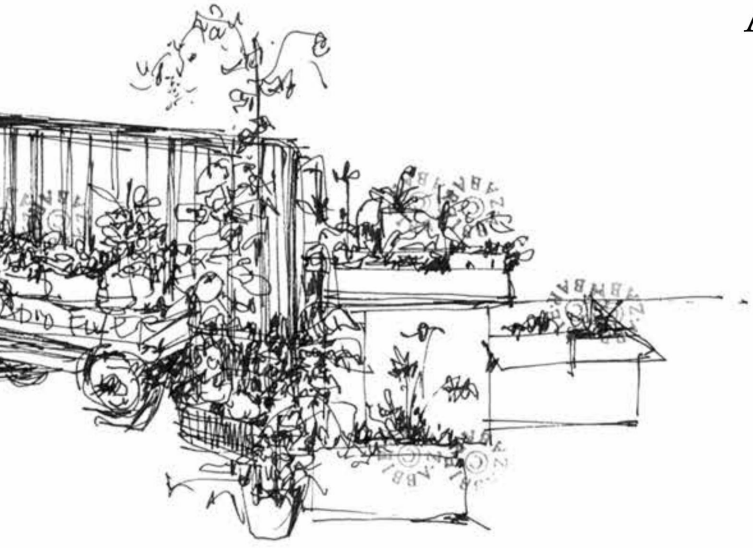


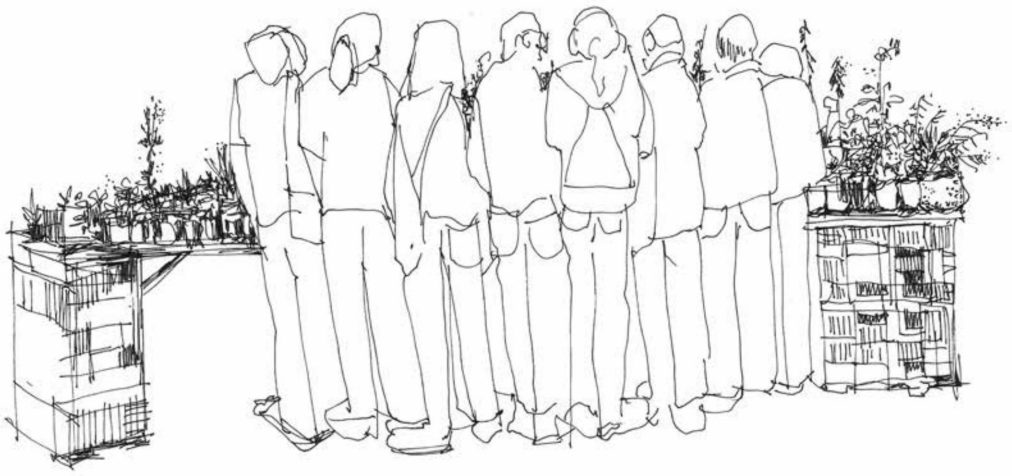


Tuesday, May 4. 2010, 4:30 PM >
Members Only opening night plant sale
@ Brooklyn Botanic Garden

Images *of* Plant Sales

Abbie Zabar





Sunday, October 16, 2011, 9AM > Tri-State Meeting of NARGS,
Carriage Barn, Lyndhurst, Tarrytown, NY.



NARGS Eastern Winter Study Weekend, March 28-30, 2008, in Farmington, CT.



Saturday, Sept. 4, 2010, 10:30 AM "The Big PLANT SALE!"

Berkshire Botanical Garden Exhibit Hall, Massachusetts (BNARGS)



The 18th Annual New York Botanical Garden's Antique Garden Furniture Show & Collectors Plant Sale, 5.6.10



Stonecrop Alpine Plant Sale, Cold Spring, NY., Saturday, April 24, 2010



The genus *Micranthes* is the "largest and potentially most confusing group of saxifrages in North America." The extreme locations of many species, the complicated genetics of the group, DNA degradation of preserved specimens, and a complicated nomenclatural history, all contribute to the current state of confusion.

I am enchanted by these uncertainties and the genus' impressive distribution and thus I have begun researching *Micranthes* for my PhD at the University of Florida. I am in the process of planning my fieldwork for the next few summers although I know I am unlikely to be able to collect every species in the genus. However, help from knowledgeable wildflower experts and the assistance of rock gardeners would help me maximize my chances of success. So, I am writing this article to ask for your help.

A project to research Micranthes species in North America

Rebecca Stubbs

Photographs by Malcolm McGregor

Yellowstone saxifrage - *Micranthes subapetala*



Micranthes nudicaulis, Bering Straits coast, Alaska



THE SPECIES IN genus *Micranthes* vary a great deal. They differ in habit, leaves, flowers, and habitat. They are generally found at high elevations or high latitudes, and a specific taxon's morphology is reflective of its habitat (McGregor 2008). The species are perennial, sometimes low-growing, and herbaceous, rather than woody. The predominantly basal leaves may be fleshy, although most are not, while the flowers are terminal and the petals are generally white or greenish. Chromosome numbers range from 10 to 120.

There are somewhere between 68–93 species found mostly in Arctic and alpine areas around the world, but more than half of the species are found in North America. Indeed, in North America, there are more species in genus *Micranthes* than any of the other genera in the Saxifrage family.

The species of *Micranthes* have not attracted much attention from gardeners in the past, but many of the taxa show interesting variation that would make a nice addition to a wild or naturalistic rock garden (McGregor 2008). The main reason that gardeners have overlooked *Micranthes* is that this genus has spent a few centuries subsumed in the genus *Saxifraga* as section *Micranthes*. This dates back to the 19th Century: the taxonomic intricacies of *Micranthes* began in 1812 when Haworth first recognized the genus as distinct from *Saxifraga* based on morphology and habit. He also recognized 15 other genera distinct from *Saxifraga*, but this mass splitting was not widely accepted by other botanists.

Only ten years later, David Don (1822) put *Micranthes* back into *Saxifraga* as a section, and this was later corroborated by both Engler's, and later Gornall's, monumental work with the genus (Engler 1872; Engler and Irmscher 1916; Gornall 1987; Webb and Gornall 1989). Though there were a few attempts over the next few centuries to keep *Micranthes* as a distinct genus, it generally remained in *Saxifraga* as a discrete section.

In the 1990s there was renewed interest in the Saxifragaceae with the phylogenetic research of Doug Soltis (Distinguished Professor, University of Florida) and colleagues. Their analyses combined with morphometric studies clearly showed that *Saxifraga* was polyphyletic (so not having all its species exclusively sharing a single genetic ancestor) and that *Micranthes* deserved elevation to generic status (Mort and Soltis 1999; Soltis et al. 1996; Soltis et al. 2001; Soltis et al. 1993) and this was finally proposed formally by Brouillet and Gornall (2007). At present, *Micranthes* is unequivocally accepted by botanists as a genus, however, countless questions remain.

The attributes that make *Micranthes* intriguing for detailed





Micranthes oregana in meadow with *Camassia* in Oregon



Micranthes rufidula, Horse Rock Ridge, Oregon



study are numerous: diverse habitats, highly variable phenology, ecological diversification, occurrence in isolated locations, and phylogenetic controversy – all of which contributed to a long history of nomenclatural confusion. Linked to many of the previously mentioned characteristics, the distribution and evolution of the taxa are some of the most interesting uncertainties.

With half of the species found in North America and most of the others occurring in Asia, with just a few in Europe, there are many questions to be answered. For example: what is the historical biogeography of the North American species? In other words, how have the species we know today come to exist in the places that they are now found? Are they the product of a single radiation event or multiple introductions via different routes? How can we explain the different species and disjunct distribution of the Eastern and Western North American species? In order to address these questions the objectives of my research are to provide greater taxonomic sampling, produce a robust and dated phylogeny, and to explain the processes that led to the radiation of *Micranthes*.

Using cutting-edge, next-generation DNA-sequencing as well as modern computational analyses on material that I can assemble from NARGS members as well as extensive fieldwork throughout North America, it will be possible to provide the first in-depth evolutionary study of this poorly known group.

As I wrote at the head of this article, my fieldwork for the next few summers is one of my current concerns. I hope to be collecting in and around the Appalachians, Rockies, Sierra Nevada, Cascades, and the Alaska Range, and would value help from anyone who feels that they can contribute either with suggested locations or even with guiding me to appropriate locations. I am very excited for my upcoming field seasons, but I know I will not be able to collect every species of *Micranthes*. For this reason, I am writing to ask for your help.

I would like to sample as much of the genus as possible, so if anyone has *Micranthes* in their gardens or greenhouse and is willing to share plants, leaf samples, or seeds, please e-mail me at <StubbsRL@ufl.edu>. I would be happy to cover any associated expenses, and contributors will be acknowledged in subsequent publications for providing sample material. Additionally, if anyone would like to join me on my adventures collecting *Micranthes* this summer I always appreciate the insights of local botanists.

I look forward to being involved with the North American Rock Garden Society, and please do not hesitate to contact me with any questions.





Micranthes rhomboidea (snowball saxifrage), Colorado

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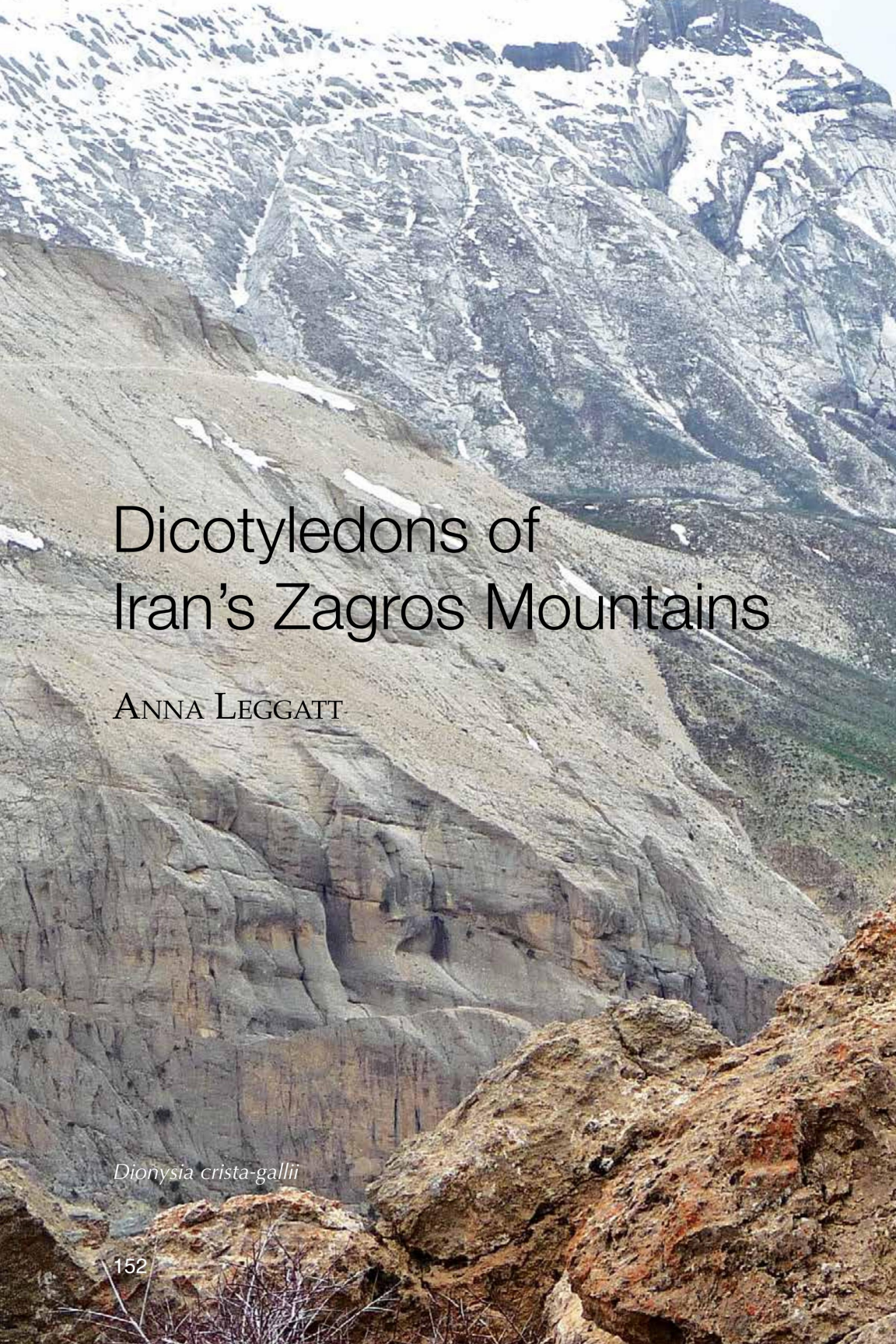
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Editor's note. It is worth noting that the cultivation of Micranthes species is not necessarily difficult, except that there is an extreme paucity of available material. Few nurseries stock any of the species and remarkably little seed is collected by members for the Seed Exchange. Most of the species can be grown from seed so please collect seed this year!



Micranthes virginiensis, New Jersey


Dicotyledons of
Iran's Zagros Mountains
Anna Leggatt
Dionysia crista-gallii
152



This article is a twin to that about the bulbs and other monocotyledonous plants of the Zagros mountains published here in the Fall 2013 issue.

AS I WROTE last time, people were taken aback by my enthusiasm with the prospect of visiting Iran, but many years ago I had the privilege of hearing Jim Archibald give an inspiring talk on *Dionysia*. I marveled at his pictures of these beautiful tight cushion plants growing on impossibly inacessible cliffs in Iran and Afghanistan. I would never get there. Then Worldwide Quest advertized a botanical tour in April, 2010, featuring *Dionysia* in Iran. I booked, expecting most plants would be inaccessible or finished blooming, but the opportunity was one that was a dream.

The Zagros Mountains are in western Iran, running northwest to southeast for nearly 1000 miles. It is also notable that these are not a narrow mountain range but a very broad one, and take up around one third of the whole of Iran – this is a major mountain range. Iran has a large flora, around 6,500 species, of which a large proportion are found in the Zagros Mountains. Most of our botanizing was variously to the west of Isfahan and also more on the route from there to Shiraz.

An old bus took us up to the high pass, northwest of Isfahan on the Aligudarz to Shulabad road. The snow had melted early but there was still the question as to whether we could reach the top. We had GPS co-ordinates for 3 species. Bright yellow patches were sighted near the top on the edge of a 1000 m precipice. These were perfect cushions of *Dionysia crista-gallii*, a species newly described in 2007, with bright white crests to the tips of the leaves. It was growing in the open, plastered onto jagged vertical rocks. One of the guides, Mehran, climbed down with some of our cameras. However, I found a patch that I could safely reach.

Further down the cliff, some specimens of *Dionysia lururom* (yellow flowered) and the purplish-flowered *Dionysia zschummelii* (another species only described in 2007) were found growing together.

It was very special to find *Dionysia archibaldii* its lax cushions with violet-pink flowers dripping from overhanging cliffs beside the Koohrang River. It grew profusely on the edges of an overhang where nomads had made a temporary camp.

Dionysia iranshahrii also grew on cliffs under overhangs. The habitat, near Semiron between Shiraz and Isfahan, appeared to be drier than that of the previous species. The tight silver-grey cushions with pale purple flowers blended into the limestone. *Dionysia bryoides* also was found near Semiron, growing on rocks with plenty of light, some almost horizontal. One small outcrop had plants in a wonderful colour range: pinky-purple, lilac, almost white, and two-toned.

We stopped to explore an almost invisible narrow gorge with steep

twisted limestone cliffs (and a muddy bottom). Someone called out that there were "Prize winners along here!" - wonderful large buns of *Dionysia lamingtonii* gleaming gold on the cliffs!

Dionysia zetterlundii, another species with yellow flowers grew on cliffs high up on the Bazoft Pass. There was almost a traffic jam when we stopped – nomads with herds of sheep and goats. They managed to keep the flocks separated with the help of their dogs.

Other species we saw in good flower included yellow-flowered *Dionysia caespitosa* (and *D. bolivari*, sunk by Magnus Liden into *D. caespitosa*), *Dionysia diapensiifolia*, *Dionysia haussknechtii*, and *Dionysia revoluta*, and purple-flowered *Dionysia mozaffarianii*.

Dionysia archibaldii





Dionysia bryoides (above) and in its habitat near Semiron (opposite)

Another, unidentified, *Dionysia* sp. near Semiron





Dionysia bryoides near Semiron

Primula gaubeana

The one *Primula* we found was endemic: *Primula gaubeana*, a lax plant, very like some of the loose leafy dionysias such as *D. mira* and *D. bornmuelleri*. It grew with *Adiantum capillus-veneris*, maidenhair fern, on damp cliffs above a river, south of Semiron.



Dionysia iranshahrii nestling under an overhang

Dionysia lamingtonii





Although the Primulaceae provides so many outstanding highlights, it is obviously by no means the only family to do so. There are many fascinating members of the Fabaceae (pea family) in Iran. I have a preference for *Astragalus*. There are about 3000 species across the northern hemisphere, over 800 in Iran. Many have attractive, inflated seedpods. *Astragalus horridus* is a small spiny shrub living up to its name. However, it is covered with eye-catching pink pods during flowering. Small fuchsia-colored pea flowers peer out of the tips. It was growing in clearings in oak woods. *Astragalus glaucacanthos* grew nearby and was equally spiny. The pods were pale pink and more elongated, with small white corollas.

Astragalus anthylloides had large, pink-striped inflated pods. It grew above the Sarvestan/Kherameh Pass, as did *A. ebenoides*. The latter was small enough to grow in a pot. It was prostrate, spreading over rocks, with vivid pink-magenta flowers emerging from pink pods covered with white hairs. *Astragalus ovinus* formed large rosettes with its bronze emerging foliage which then turned green. The large yellow flowers had a green tinge. This grew in well-drained areas on lower mountain slopes in the Shiraz area. In lower dry areas we noticed *Ebenus stellata*, an attractive spiny hairy bush with red and yellow flowers.

Astragalus horridus





Leontice leontopetalum

The Berberidaceae always surprises me. I find it difficult to relate plants like *Jeffersonia* to spiny *Berberis*. But this is by no means the end of the contrasts. *Bongardia chrysogonum* and *Leontice leontopetalum* were both common, usually flowering in fallow fields, with the former in apparently damper areas. They looked like a brassica at first glance although the 5 petals obviously contradicted this diagnosis.

The flowers in both species were similar, loose inflorescences of starry flowers. Both had pinnate leaves. *Bongardia* has entire leaflets, appearing above ground spreading well away from the root. *Leontice* was more floriferous with compound leaflets.

Anemone biflora looks possible to grow in our rock gardens, given very well drained soil. We found a variety of forms, growing in dry agricultural fields, in gravel, at high altitude and in rock cracks. The brilliant red forms were mostly closed under cloudy skies. Beautiful bronzed backed petals on large flowers were found high in the Golestan-Kuh valley. Fine yellow specimens grew near the car park above Analujeh, following the base of rocks as well as in open gravelly soil. Some unusual pink forms grew nearby. While we were exploring, locals appeared, as they often did, to stare at the strange people. This group included a teenager who was baby-sitting. He put his brother on his motorbike and drove up from the village. The toddler was secured by his legs, which were under his brother's. Whole families could fit on these low powered motorbikes.

A little annual *Adonis* (possibly *A. annua*) was common in open ground.

I usually ignore *Ranunculus*. We saw several species. *Ranunculus aucheri* was widespread, a pretty, short stemmed buttercup that would fit on my hand.

Thalictrum isopyroides was widespread in the mountains. This is a good rock garden plant, growing to 20 cm tall in the open.

Teenage babysitter









Anemone biflora comes in two distinct color forms. Most of the ones we found were yellow with red backs to the petals while a minority had pink petals.





Zagros village near Aligoudarz

Convolvulus acanthocladus, *C. assyricus* and *C. leiocalycinus* were attractive spiny bushes, all with typical white convolvulus flowers. These differed somewhat in form, with the latter covered with soft hairs. They grew in dry areas near Shiraz and Kherameh.

Convolvulus assyricus





Acantholimon sp.



The Papaveraceae was well represented: *Papaver* and *Roemeria* were common, especially near Shiraz. Here a red sheet of mixed species was punctuated with blue from *Centaurea depressa* and various *Muscari* and *Bellevallia*.

Glaucium grandiflorum was the star with clumps of large scarlet poppies. *Glaucium elegans* was taller reaching 60 cm. The yellow flowers were scattered over the much-branched inflorescences. Large rosettes of crinkly blue-green pinnate leaves were the main attraction.

Corydalis verticillaris was common throughout, usually growing near the snowmelt. One plant was found with offshoots in a circle from the presumably large underground tuber. Fine specimens were found below Gorlestan-Kuh, with larger, pinker flowers than the pink/white near Chelgard.

Corydalis rupestris grew on the cliffs of the Kouhrang Gorge with *Dionysia archibaldii* growing nearby. It had beautiful glaucous foliage and superb bright yellow flowers.

Corydalis verticillaris





Glaucium grandiflorum

The Lamiaceae is very well represented in Iran. There are spiny examples, and plenty of aromatic ones. *Ajuga chamaecistus* subsp. *tomentella* looked nothing like our shade garden *Ajuga*! It was an attractive little spiny shrub with bright pink flowers growing in full sun, locally common near Shiraz. It is used for treatment of joint pains and the like.

Eremostachys laciniata was seen frequently and would make a good border plant. It had tall spikes of white or cream flowers. *Eremostachys molucelloides* grew near Hanna with the wonderful *Iris lycotis*. The ruff of green bracts surrounding the yellow green flower attracted us all.

Eremostachys molucelloides





Stachys lavandulifolia

I always expect to find salvias in hot dry areas. There were several near Hanna, some spectacular *Salvia* aff. *cryptantha* (now *S. absconditiflora*), or possibly *Salvia hydrangea*. It had vivid pink bracts with pink-white corollas and I wanted to grow it. Plants that resembled *S. sclarea* grew nearby.

Stachys lavandulifolia was another "I must try that" plant. The soft white hairs on the inflorescences glistened in the sun and were especially attractive when sprinkled with dew.

The dry land with low hills south of Kherameh was very floriferous with several note-worthy Lamiaceae: *Teucrium orientale* had beautiful blue wands of flowers; a yellow *Phlomis* with yellow-haired leaves grew among spiny *Astragalus* and *Convolvulus*. The best was a low clump of *Stachys* with spikes of luminous pink above blue green foliage.



Viola pachyrrhiza

I thought *Viola pachyrrhiza* was one of the most attractive plants we found. It formed mats, plastering cliffs between Aligoudarz and Shulabad. Yellow cushions of *Dionysia haussknechtii* provided a great contrast.

It might seem unexpected to find a gentian in Iran but *Gentiana olivieri* grew on rocky slopes in the Shiraz area. It was up to 30 cm tall with attractive blue and white, upward facing trumpets.

The Rosaceae has plenty of examples in the Iranian flora. *Rosa foetida*, the yellow flowered Persian rose, was growing in a garden near Naghsht-e Rostam. This was important in the breeding of modern roses. An *Amygdalus sp.* growing high in the mountains was shorter with bright pink flowers, and was a plant that would be worth trying in the garden. More peculiar was *A. arabica* that looked like an *Ephedra*. This shrub had thin green branches, pale pink flowers and almond-like fruit. It was common near Shiraz. *Cerasus brachypetala*, a small cherry, plastered the rocks in many places, with bright pink flowers and just emerging leaves. This would be excellent in the rock garden.

I hope governments in Iran will be able to co-operate with other countries and relax some of the strict rules and regulations. Then we will be able, once again, to experience firsthand the friendly people, the spectacular scenery, and the endemic flora. The rich heritage stretches back thousands of years with the National Museum in Tehran having



Gentiana olivieri

exhibits with artifacts going back over 5000 years. We marveled at the sophistication of stone, glass and metal work.

I have cooked Persian food for over 40 years so much of what we ate was familiar. However, I quickly discovered dried *Berberis* and mulberry fruits. The former contributed to a delicious rice and chicken *khoreshe* (stewy sauce). Luckily I can buy these nearby in Toronto. It is a small taste of Iran to enjoy at home.

This article is dedicated to the memory of Jim Archibald, who inspired me to look at plants in far places, with thanks to Worldwide Quest leade Elizabeth Knowles and Ian Green, our biologist, for detailed plant identification.

NARGS Bulletin Board 1

From the President

I had knee replacement surgery in mid-December, which has distracted me from just about everything else for the past couple of months. Preparing for the surgery, followed by recovery and great deal of arduous physical therapy, has filled most of my time until recently, when I've finally begun to feel like a normal human being again. It's a relief and a pleasure to return to work, family activities, and attending to NARGS. I apologize for not writing a President's Message for the fall issue, but I simply didn't have the time. Now I do, so you're going to get a full measure of news and bit of personal commentary.

First of all, plans for the 2014 Annual General Meeting are underway. We'll be meeting at the Eldorado Hotel in Santa Fe, New Mexico, from August 28th through the 30th. We're working out the final details with the hotel, so registration details will have been announced by the time you read this. Check the NARGS website for updates and how to register.

Next, we're sponsoring an 8-day botanical trip this summer to explore the alpine flora of California in the Sierra Nevada, July 5–12. The maximum number of attendees is 24, and we're currently at 12, so check the NARGS website for details, and please get your reservations into the travel company ASAP! This will be a spectacular trip at a time when our lowland gardens are not doing much in the way of flowering.

One of the greatest benefits of belonging to NARGS is the opportunity to meet fellow rock gardeners and develop strong personal relationships with them. I've met hundreds of people during my almost 20 years of membership, and many of them will remain part of my life and definitely part of my garden. One such person, John Bieber, passed away recently. See the fine tribute paid to John by Fred and Joann Knapp in this issue of the RGQ. John has left us strong memories, not only of a generous, kind, and utterly accessible man, but also of a gardener devoted to daphnes who made sure that we all had a few of his cuttings or introductions, and that we knew exactly how to grow them well. John was a special person to me, and over the years I added over 20 of his wonderful plants to my garden. Every time I go out and look at the various beds, I think of him and thank him for all he did for me and for us while he was with us.

The 2014 Annual General Meeting marks the end of my tenure as President of NARGS. It has been an interesting and challenging experience, and I've gained a much greater appreciation of exactly what it takes to serve in a leadership position in a volunteer-driven organization. Thank you to all who came before me, and to those with whom I've served who have given so much to NARGS. We all need to consider what it means to us to have NARGS standing behind us, not just providing a measure of service to rock gardeners worldwide, but giving our hobby context and color and life, without which we'd be gardening alone and wouldn't have anywhere near the plant material we take for granted.

When I started my first term as President, I drew up a list of challenges that I wanted to address. I've recently taken a look at that list, and I'd like to report to you where we are with several of those challenges.

Under Ben Burr's leadership, we've redone the NARGS website. It has been costly, and at times extremely frustrating, but we've made a lot of progress. I'm optimistic that we're close to achieving our goal of a modern, user-friendly, powerful website and forum for our members. Right now we're focusing on improving content – please keep checking the site to see how we're doing! Ben has also overseen the ARGS/NARGS *Quarterly* project, which has successfully created a complete online database of every word published by us over our long history. It's another huge step in making available to all rock gardeners the important and unique body of knowledge we've created, making it so much easier to grow our plants successfully. It's available to all on the NARGS site, too!

As interest rates have fallen precipitously over the past few years, our income from investments has shrunk to almost nothing. We've also had a modest falloff in membership and an increase in costs for our various programs and the Quarterly. As a result, we're currently operating at a small but significant loss. If we are to remain viable, we need to increase revenue, which is always a big challenge for nonprofit organizations. We welcome donations, and we've been getting an increasing amount of gifts both from individual members and from bequests, which are hugely important to our future. So please go to the NARGS website and consider making a contribution.

In addition – and this is terribly important – we need our members (and non-members, too!) to help our finances by using the NARGS Amazon Affiliate program when they buy anything through Amazon. Rather than going direct to Amazon, simply go to the NARGS website, click on the Amazon link on the NARGS website, and anything you buy on that visit will generate a 6% royalty for NARGS. It's that simple. Anyone can do it! We've been receiving less than $150/month from this program, which is

a pittance, and I know we can do a lot better. It costs us nothing but a few seconds, and we could literally make up our entire deficit if we all took that tiny bit of time to link to Amazon.com through the NARGS website. Please make the effort, and tell your friends as well!

As always, I welcome comments from our members. Feel free to email me and I'll try to respond promptly. I'm hopeful that winter will soon begin to ease its grip on the northeast United States, as I'm increasingly anxious to get back into the garden. Start your seeds, and hopefully I'll be seeing some of you on the trek and/or the Annual General Meeting!

Peter George
President, NARGS
Email: <petergeorge@verizon.net>



Speakers will be Dr. James Reveal (L. H. Bailey Hortorium, Cornell University), David Salman (Founder & Chief Horticulturist at High Country Gardens) and Dan Johnson (Curator of Native Plant Collections, Denver Botanic Gardens).

Seed Exchange

A huge thank you is in order for all who donated seeds to this year's NARGS Seed Exchange. Thank you so much to all of you who volunteered seeds, time, and effort to this year's Seed Exchange. We all depend on your cheerful generosity in making this NARGS benefit happen. I can't emphasize enough how much your support means.

Support comes in many forms, from donors to repackagers, to distributors and website gurus — so many people have helped. Yet again, Laura Serowicz has done an amazing job as Intake Manager creating seed lists and handling all aspects of the seed exchange. Eighteen U.S. chapters and /or individual U.S. members participated in repackaging seeds.

The Potomac Valley Chapter's Dick and Freddi Hammerschlag and Betty Anne Spar were in charge of the main round distribution. The chapter did yeoman work getting everyone's seeds packed and shipped in a very timely manner.

The surplus seed distribution was again handled by the Siskiyou chapter, led by Leigh Blake, Jean Buck, and Baldassare Mineo. We thank all of you for your excellent work.

Daniel Dillon and Ben Burr helped many people navigate our new ordering system.

Now that you have your seeds all sown, please keep in mind next year's seed exchange. I'm sure you all have fabulous plants you love to share with the rest of us. We'll be awaiting your contributions for the next seed exchange.

Happy growing!

BZ Marranca
Director, NARGS Seed Exchange
9056 County Road 142, Interlaken, NY 14847
Email: <mmm10@cornell.edu>

Marcia Meigs Adirondack Chapter Service Award

While it's true that gardeners are passionate about their gardens, I know no one more passionate about her garden than Marcia Meigs of Ithaca, New York. Her rural garden is a mix of woods and open meadow where she's focused on the plants she loves most – tree peonies, hellebores, and spring ephemerals – all of which flourish under her care.

Her woodland garden is generally at peak during our annual spring plant sale each May and the funds we generate from this event, the largest source of revenue for our Chapter, is due in no small part to her generous donations to the sale. She always works long hours at our sale, sharing her knowledge of plants and their cultivation requirements. The quality cultivars that she offers have without a doubt improved the quality of many area gardens – and that's a wonderful legacy.

Because she realizes a garden is meant to be enjoyed, Marcia readily invites others to visit and rarely does anyone leave without being given a choice plant.

Marcia joined NARGS in 1975. She has served on our Board and was involved with the Winter Study Weekend held here in 2000. Some national NARGS members may know her since she's an active Forum participant (and probably other garden chat sites as well).

For all these reasons the Adirondack Chapter of the North American Rock Garden Society wishes to recognize Marcia Meigs with a Chapter Service Award.

Submitted by: Carol Eichler, Chapter Chair

Sierra Nevada Wildflowers

An exploration of the Alpine Flora of California
July 5-12, 2014

Trip Leaders:

Stew Winchester - horticulturalist, professional botanist and natural landscape interpreter

John Baston - former National Park Ranger and guide for Mountain Travel Sobek



ITINERARY

We have planned this trip to coincide with the normal yearly peak bloom of this region. But as we all know one year can be very different from another in terms of temperature, rainfall, and profusion of the bloom, With this in mind we have considered options to the proposed itinerary and will remain flexible as to the exact location of our field trips. To our advantage, the eastern slope of the Sierra Nevada is fairly steep and a full range of habitats can be accessed in a relatively short distance. Species lists for the areas we visit as well as a suggested reading list will be provided.

We will provide various options on each day that should suit everyone's desired level of exertion. There will be options to move slowly and closely examine the flora as well as to hike longer distances in the mountains and cover more terrain.

Saturday July 5 Arrive in Reno, Nevada

Not so long ago it took several months with a wagon train to get to Reno. Now we can get there in one day! There are shuttles every half hour from the Reno airport that will bring you to Peppermill. You should try to arrive in Reno by 5pm. Here we will begin our trip, meet other trip participants and NARGS staff and gather for a welcome dinner.

Peppermill Resort Hotel (Dinner)

Sunday July 6 Tahoe Rim

We will travel up the eastern escarpment of the Sierra Nevada towards Lake Tahoe. This route traverses several thousand feet of elevation change. Depending on the bloom we have various locations planned for stops along the way. We will try to stop at Mount Rose (10,778 ft) along the way to Squaw Valley.

Village at Squaw Valley (Breakfast, Lunch, Dinner)



Monday July 7 Top of the mountain at Squaw Valley

We ride the lift to the top of Squaw Mountain (8200 ft). From there we can explore subalpine rock gardens. There are ample opportunities to stroll around casually in this beautiful place or to take on a more ambitious hike.

Village at Squaw Valley (Breakfast, Lunch .....)

Tuesday July 8 Carson Pass

We will drive south and up towards Carson Pass (8574 ft) to explore the flora near Lake Winnemucca and up towards Round Top Peak. We can have a visit to Grover Hot Spring in the afternoon and soak in hot mineral waters. Tonight we stay in a rustic mountain inn,

Woodfords Inn (Breakfast, Lunch, Dinner)

Wednesday July 9 Virginia Lakes

Our exploration continues southward to Virginia Lakes (9770 ft). There is a restaurant in the beautiful high setting where we can have lunch. Hiking can be as ambitious as individuals like. We continue past Mono Lake on the way to Mammoth Lake (7880 ft) where we will stay for three nights.

The Village at Mammoth (Breakfast, Lunch, Dinner)

Thursday July 10 Yosemite National Park

We will drive to the top of Tioga Pass, at the eastern entrance to Yosemite National Park. The mountains rise precipitously to the west and we can drive up to the 9943 ft pass and explore this famous area known as Tuolumne Meadows.

The Village at Mammoth (Breakfast, Lunch .....)



Friday July 11 Little Lakes Valley

From Mammoth Lakes we will take a day trip to Little Lakes Valley. The road ends at 10,300 ft and from there we explore the rock gardens of this beautiful place.

The Village at Mammoth (Breakfast, Lunch, Dinner)

Saturday July 12 Return to Reno on HWY 395

HWY 395 is certainly one of the most scenic roads in the United States. The rising eastern light on the Sierra Nevada has been the subject of photographers ever since the camera came to California. We return on this scenic drive directly to Reno. We should arrive in Reno about 2 pm.

You can depart on afternoon flights (please book after 3pm).

(Breakfast, Lunch)

ITINERARY INCLUDES

One night **Peppermill Resort** in Reno, Nevada

Two nights **The Village at Squaw Valley** near Lake Tahoe, California

One night **Woodfords Inn** near Carson Pass

Three nights **Juniper Springs Resort** in Mammoth Lakes, California

All **transportation** in two 15-passenger vans (with luggage trailers)

Two **professional driver/guides and a Mountain Travel Sobek guide**

A **professional regional botanist/naturalist, Stew Winchester**

Use of **Conference Rooms** for slide shows and presentations

Meals as noted in the itinerary

YOU WILL ARRANGE

Air to and from Reno, Nevada

Arrival in Reno, Nevada by July 5 (ideally by 5pm)

Leave Reno, Nevada on July 12 (after 3pm). If this is too late for you to fly you should consider staying the night in Reno. We will provide a list of suggested lodgings. As it is in Nevada there are many casinos and entertainment and can be a fun place.

The cost for this trip is **$3800** per person (16-22 trip participants)

BOOKING

To reserve a place on the trip please call Laura Parent at Mountain Travel Sobek 510-594-6041. You can also reach other booking agents at 510-594-6000.

For questions about the trip you can contact John Baston at Mountain Travel Sobek 510-594-6035.

There is a $400 non-refundable deposit. A complete payment schedule and other trip details will be sent to you upon booking.

NORTH AMERICAN ROCK GARDEN SOCIETY

NARGS

NARGS Bulletin Board 2

NARGS Speakers Tours 2015

SPRING 2015

Dieter Zschummel will be our speaker for Spring 2015, tentatively scheduled for the second half of April. From Wallendorf, Germany, Dieter and his wife Rosi have been exploring mountain habitats since 1967 throughout Europe, China, and North America. In the garden, Dieter grows all kinds of alpines, bulbs and woodland plants. He favors cushion plants, especially *Androsace* and *Dionysia*. Dieter has a special interest in propagation allowing him to keep these plants in cultivation in an unfavorable climate.

FALL 2015

Gerald "Jerry" Kral is well versed in conifers, utilization of rock and rock construction in the garden, garden design and esthetic utilization of plant materials. His presentations are enjoyable and informative, generally based on experience. For an example of Jerry's passion visit the American Conifer Society Home Page.

Scheduling for the 2015 tours will begin in August 2014, so please try to get your request in by the end of July 2014. Chapters that have not had a speaker in recent years will enjoy priority in scheduling. Please see the Speakers overview on the NARGS homepage. Be sure to download and read through the PDF file at the bottom of the page entitled "Hosting Guidelines" for an overview of the Speakers Tour and delineation of chapter responsibilities. Please feel free to contact me for any questions or concerns you may have regarding the tour.

The 2014 Speakers Tours with Martin Walsh and Mike Kintgen, earlier announced, are fully booked. See the NARGS Web site for the chapters that will be hosting them and the opportunity to hear them speak locally.

Harold Peachey

NARGS Speakers Tour Coordinator

Email: <hlpeachey@gmail.com>

John Bieber's Obituary

Long-term NARGS member John Bieber died on January 18, 2014.

John joined NARGS 44 years ago and propagated and grew rock garden plants for over 43 years. From about 1986, he specialized in daphnes and became totally involved with them. John was the founder and president of the Daphne Society, past chairman of the Long Island Chapter of NARGS, and a dedicated volunteer at Planting Fields Arboretum in Oyster Bay, New York. He lectured extensively in the Northeast to horticultural organizations and garden clubs and taught at local arboreta. He gardened intensively in Bethpage on Long Island and enjoyed propagating unusual plants. John earned the NARGS Award of Merit in 2007.

John ran the Daphne Society for 7 years. He did this with a plant not widely known and respected in the U.S., a plant mostly found among European mountain areas and cultivated mainly by European plant specialists. The group grew rapidly in the U.S., Canada, and the U.K., and added members from other countries. The society and John achieved international credibility by its fifth year.

If you knew John well, then you can remember what these few comments represent for the NARGS horticultural and human relations world, but a bit more is in order for a proper leave-taking. During 2006--07, John's family began a series of long-term health problems, which gradually reduced his participation in both NARGS and the Daphne Society. After some years as a dedicated caregiver, he too began to have serious issues.

Virtually from the moment he joined the Long Island Chapter of NARGS, he was a perennial fellow of the five to ten persons who normally run such a group, until his health intervened. It follows, on a personal basis, that you would not find a better person to have at your side, whatever you were up to.

Fred and Joann Knapp
Pompton Plains, New Jersey

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

Virginia G. Ballantine, Tucson, Arizona
Joan Walker Keefe, Earlville, New York
Carla Reiter, San Francisco, California
Patrick, Tucker, Guelph, Ontario

Patrons

The following recently became NARGS patrons:

Gioia T. Browne (Rhode Island)

Hilary Clayton (New Jersey)

Boyd Hutchison (Massachusetts)

Katherine Mauney (North Carolina) two years

Betsy Mitchell (Maine)

Henriette Suhr (New York)

New Members

Welcome to all those who joined between November 1, 2013 and January 31, 2014.

Bob Anderson, 111 9th Ave., San Francisco, CA 94122
Terri Bates, 21418 236th Ave. SE, Maple Valley, WA 98038
Lael Berner & Andy Sorg, 1128 Harvard Ave., Billings, MT 59102
Catherine Bird, 57 Marie St., Lindenhurst, NY 11757
Mary Buchen, 223 E. 2nd St., New York, NY 10009
Ernest Cavallo, 1045 Park Ave., New York, NY 10028
Louise Clarke, 108 Winter St., Media, PA 19063
Julie Dandoy, 431 N. McKean St., Butler, PA 16001
Sandy Evertowski, 876 Scotch Pine Trail, Foristell, MO 63348
Maureen Fallon, 300 Alder Lane, Christiansburg, VA 24073
Pauline Fareger, 11321 Jacqueline, Sterling Heights, MI 48313
John Fitzpatrick, Blue & Green LLC, POB 13002, Baltimore, MD 21203
Susan B. Gillies, 910 Scotch Pine Trail, Foristell, MO 63348
Gary Haas, 111 Fox Ridge Dr., Havre de Grace, MD 21078
Andrew Hodgson, 1 Crookstile Cottages, Farley Hill, Matlock, Derbyshire DE4 ELL, New Kingdom
James Hughes, 6909 Pineway, University Park, MD 20782
Jim Hunt, 3065 West Park Plaza Dr., Snowflake, AZ 85937
Cindy Hoffman, POB 28100, Santa Fe, NM 87592
Benita Kapteina, 14 Tompkins Court, Sussex, NJ 07461
Bonnie Kiang, 2955 Arizona Ave., Los Alamos, NM 87544
Josef Kitz, Lind 18, Grafenstein 9131, Austria
Koko Koreeda, 1635 Cherokee Rd., Ann Arbor, MI 48104
Aaron & Ruth Lofgren, 1309 Fraser Dr., Grand Rapids, MN 55744
David Nelson, 78 Upper Rd., Greenisland, Carrickfergus BT38 8RL, United Kingdom
Edward MacDonell, 729 Renfrew Rd, Enfield, NS B2T 1H9, Canada
Peter Newbury, 482 Meadow Rd., Grand Junction, CO 81504
Madeline Norris, Ledrews Rd., Conception Bay South, Newfoundland and Labrador A1X 3B9, Canada

David Norton, 129 Rocky Hill Rd., Hadley, MA 01035
Bonnie Olliver, 260 Hillendale Dr., Doylestown, PA 18901
Jim Lanier, 140 Edgewater Lane, Wilmington, NC 28403
John Rembetski, 11515 Morocco Rd. NE, Albuquerque, NM 87111
Vivian Rioux, 226 Sussex Ave., Newton, NJ 07860
David Salman, Waterwise Gardening LLC, 111 Calle Paisano, Santa Fe, NM 87505
Mark Sanford, 1349 Buth Dr. NE, Comstock Park, MI 49321
Karen Schmidt, 111 N. Benbrook Rd., Butler, PA 16001
Robert S. Scudder, 1199 Stanyan St., San Francisco, CA 94117
Rebecca Simrose, 2001 22nd Ave. SW, Calgary, AB T2T 0S4, Canada
Carroll Smith-Rosenberg, 420 E. 51st 14 E, New York, NY 10022
Mark Soukup, 621 Rowan Rd., Gap Mills, WV 24941
Holly Shimizu, 6101 Bryn Mawr Ave., Glen Echo, MD 20812
Paul Sparrow, 16 Donnington Grove, Southampton SO17 1RW, New Kingdom
Joseph Tychonievich, 1268 N. Gregory Rd., Fowlerville, MI 48836
Margaret Willits, POB 5082, Sonora, CA 95370
Will Winslow, 4408 NE 60th, Seattle, WA 98115
Christine Zimmerman, Ginger's Greenhouse, 888 Gaddis Ridge Rd.,
Elk Horn, KY 42733

NARGS AWARDS STILL OPEN

Nominations still open until May 1, 2014 (not February 1 as incorrectly reported before - Editor's apologies). There is still time to nominate candidates for the following awards. Full details can be found on the website.

Award of Merit

Marcel Le Piniec Award

Edgar T. Wherry Award

Carleton R. Worth Award

Marvin E. Black Award

Linc & Timmy Foster Millstream Garden Award

A listing of previous recipients of the awards are on the NARGS website. Any additional questions or concerns, *please contact me directly:*

Betty Spar, NARGS Awards Committee Chair
<bettyannespar@gmail.com>
206 Wolfe Street, Alexandria VA 22314
Telephone: (703) 549-0214.

NARGS Donations

Donations between November 1, 2013 and January 30, 2014 - $12,560

Applied to the NARGS general operating fund, Rock Garden Quarterly, Seed Exchange, and Speakers Tour.

Some donations were given in memory of Larry Thomas and John Bieber

Joan F. Bolt (Michigan)
William (Bill) Brown (New York)
Hilary Clayton (New Jersey)
Eric Darling (Massachusetts)
Jonathan Dean (Florida)
Jeannette C. Dupley (Washington)
Leslie Flanigan (Colorado)
Peter George (Massachusetts)
Gail Gray (Colorado)
Mary Anne Gryboski (Connecticut)
Patricia Highberg (Vermont)
Jane & Stacy Jones (California)
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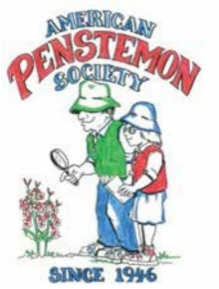
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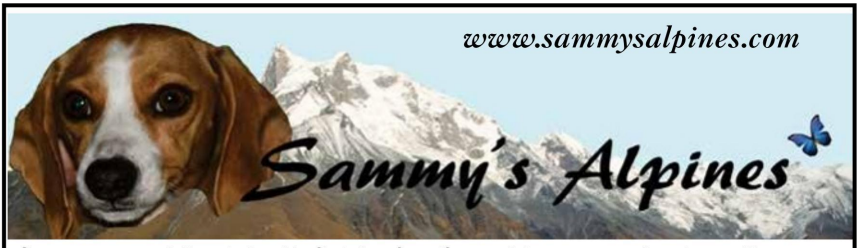


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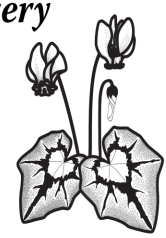
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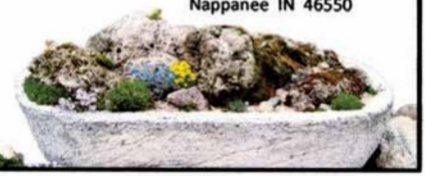
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The officers of the North American Rock Garden Society consist of a president, a vice-president, a recording secretary, and a treasurer. The officers are elected by the membership.

The Board of Directors of NARGS consists of the four above-named officers, the immediate past president of NARGS, nine elected directors, and the chair of each NARGS chapter. Chapter chairs are required to be NARGS members by NARGS by-laws.

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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ISSN 1081-0765
USPS no. 0072-960