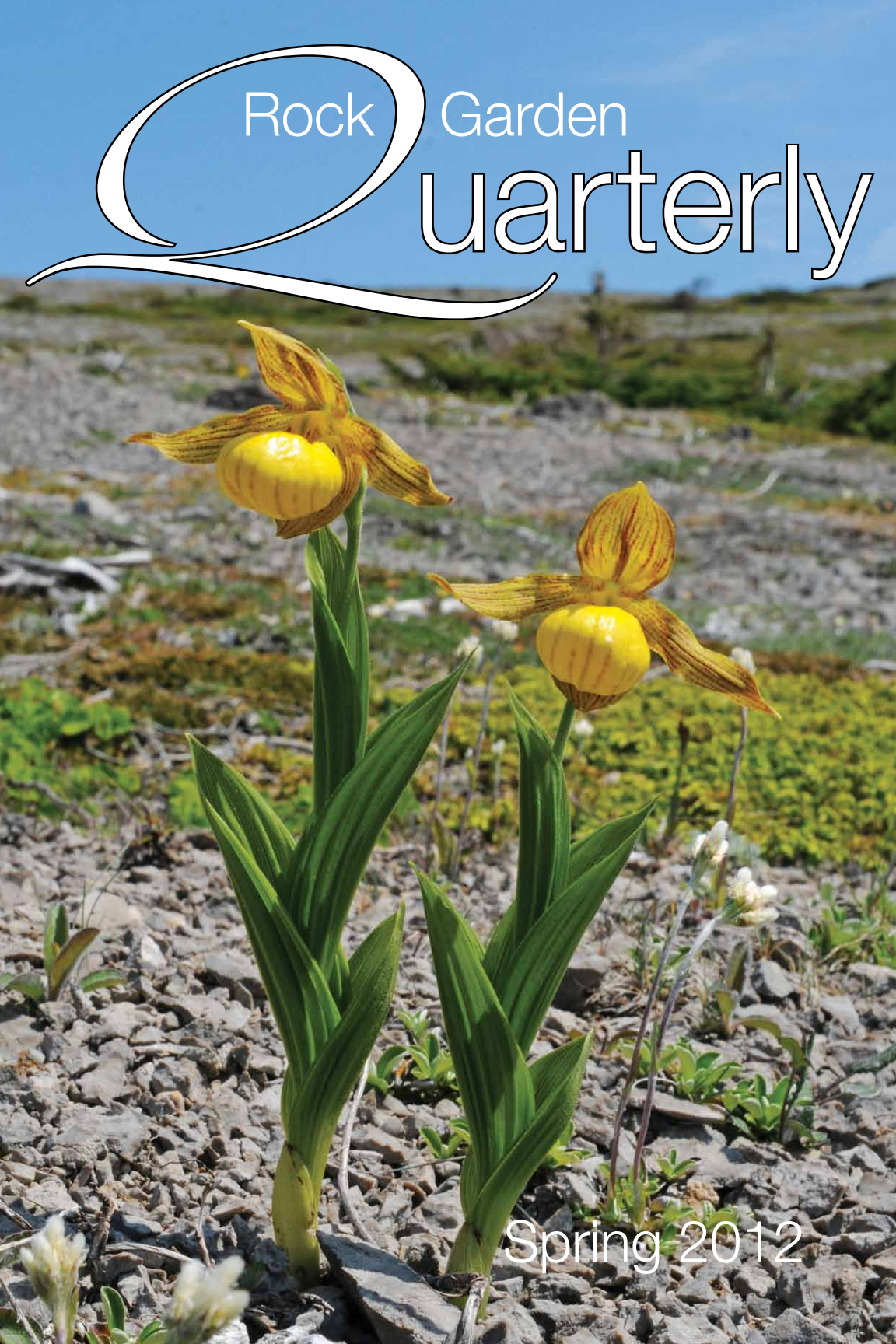
Rock Garden Quarterly



Spring 2012

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

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Mike Bone is Curator of Steppe Collections at Denver Botanic Gardens, and propagator/greenhouse manager. He has worked in the field of propagation for 17 years, focused mainly on collecting and growing plants from steppe climates around the world. Mike lives in Arvada, Colorado on a half-acre plot with rock, xeric, and vegetable gardens, and a 200-square-foot greenhouse to support those.

Panayoti Kelaidis is Senior Curator at Denver Botanic Garden and a lifelong rock gardener particularly interested in plant collecting. Unconventional rock-gardening with an eclectic range of plants combine with a formidable globe-trotting lecture program. Panayoti is a prolific contributor to the *Quarterly* with some 40 articles and 20 book reviews.

Martha and Charles Oliver are the owners of the Primrose Path, a nursery in western Pennsylvania specializing in *Heuchera, Tiarella, Primula* and *Phlox* hybrids from their own breeding program. Martha is a garden designer and specializes in butterfly gardens and wetlands.

Tony Reznicek is an avid gardener, with interests in rock gardening, Chinese and Japanese woodland plants, native plants, hardy succulents, and plants of evolutionary and botanical interest. He is Curator and Assistant Director of the University of Michigan Herbarium. His research centers on the systematics and evolution of sedges (Cyperaceae). He also has a strong interest in the biogeography and flora of northeastern North America, especially the Great Lakes region.

Grahame Ware is a writer/nurseryman based on Vancouver Island. Co-author (with Dan Heims) of *Heucheras and Heucherellas*, Grahame has written for *The Plantsman* on the climbing *Aconitum* (March 2006) and in December 2011, a plant profile on *Mukdenia,* and is a regular contributor to *The International Rock Gardener.* Grahame's nursery is Owl & Stump Rare Plants <*www.owlandstumpraeplants.com*>. Full copies of his articles on *Aconitum* and *Roscoea* (and much more) can be found at his website.

Abbie Zabar is an artist, writer and designer, as well as Program Chair of the Manhattan Chapter of NARGS. Her illustrated stories have appeared in American and British publications. She writes about gardening in New York City as the ongoing urban challenge, and her story, "A Vine in The Sky," <*www.forward.com/articles/131477/*> received the 2011 Garden Writer's Association Media Award for Best Newspaper Writing.

Front cover: *Cypripedium parviflorum*, limestone barrens, Cape St. George, Newfoundland – Todd Boland

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Contents

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PO Box 18604, Raleigh, NC 27619-8604.
<nargs@nc.rr.com>

Membership can also be paid on-line at
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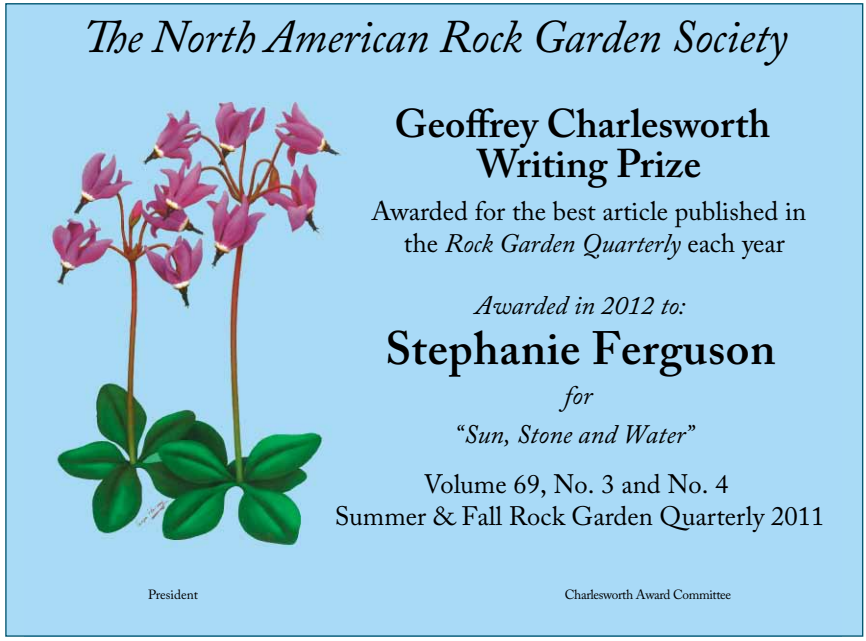
Geoffrey Charlesworth Writing Prize

CONGRATULATIONS TO Stephanie Ferguson for winning the Geoffrey Charlesworth Writing Prize for 2011 with her two-part article "Sun, Stone & Water." This prize is awarded annually to the writer of the best article published in the *Rock Garden Quarterly*. All articles published in the Quarterly are automatically eligible. The prize honors one of North America's rock gardeners whose *The Opinionated Gardener: Random Offshoots from an Alpine Garden* is a book that every rock gardener should have and delight in. The Geoffrey Charlesworth Prize Committee, chaired by Mike Kintgen, has the responsibility to decide which chapter should make the decision on the prize, and this year the decision on the Writing Prize was given to the NARGS members of the Potomac Valley Chapter. Thanks to all those involved.



Previous winners of the prize have been :

2010 Charles Hipkin, *The Summer Flora of the San Juan Mountains*
2009 Panayoti Kelaidis, *In Defense of Nonconventional Rock Gardens*
2008 Andrew Osyany, *Two Gardeners in One Garden*
2007 Kristl Walek, *Seedy Thoughts*

and Stephanie is a very worthy addition to this list of winners.

Winner of Class 2 (Natural scene with plants) David Sellar's joyous picture of *Campanula rhomboidalis* in the French Alps

PhotoContest 2011 Class Winners

The NARGS Annual Photo Contest gives an opportunity for members to see their photographs in print in the *Quarterly* – and for us all to see some fabulous pictures of fabulous plants. As always, the judging panel had the fun of having to reach agreement when there were so many photographs that every judge felt deserved a place as winner. Thanks to them for all their work. In future issues the *Quarterly* will feature some more of the great pictures from among the entries. Congratulations to all those whose photographs illuminated this year's contest.

CLASS 1. PORTRAIT OF A PLANT IN THE WILD

1. David Sellars: *Primula pedemontana*, French Alps
2. Michael Hoppel: *Androsace helvetica*, Dolomites, Italy
3. Tanya Harvey: *Castilleja hispida*, Bull of the Woods, Western Cascades, Oregon

Winner of Class 6 (Plant in container) is Ewelina Wajgert's picture of this exquisite *Hepatica nobilis* var. *japonica* 'Koshire-no-yamabuki'

CLASS 2. NATURAL SCENE WITH PLANTS

1. David Sellars: *Campanula rhomboidalis*, French Alps
2. Cliff Booker: *Lilium bulbiferum*, Val Gardena, Dolomites
3. Yoko Arakawa: *Erythronium grandiflorum*, Crested Butte, Colorado

CLASS 3. PORTRAIT OF A PLANT IN CULTIVATION

1. David Sellars: *Edraianthus serpyllifolius*, Sellars garden
2. David Sellars: *Ramonda myconi*, Sellars garden
3. Cliff Booker: *Oxalis* close up, Ness Botanic Gardens

CLASS 4. ROCK GARDEN SCENE

1. John Zabkar: Rock garden scene
2. John Zabkar Rock wall with *Lewisia cotyledon*
3. David Sellars: Rock garden with pond

CLASS 5. MACRO PHOTOGRAPH

1. David Sellars: *Collomia debilis,* Olympic Mountains, Washington
2. David Cammack: *Astragalus ceramicus*, growing in sand in Wyoming
3. David Sellars: *Fritillaria recurva*, Jacksonville, Oregon

CLASS 6. PLANT IN CONTAINER

1. Ewelina Wajgert: *Hepatica nobilis* v. *japonica* 'Koshiro-no-yamabuki'
2. James Mikkelsen: *Lewisia brachycalyx*
3. Cliff Booker: Trough garden at Harlow Carr, Harrogate, West Yorkshire

Photo Contest ClassWinners 2011

Above: Winner of Class 5 (Macro photograph)
David Sellars - *Collomia debilis* in the Olympic Mountains, Washington.

Opposite top: Winner of Class 1 (Portrait of plant in the wild)
David Sellars - *Primula pedemontana* in the French Alps.

Opposite below: Winner of Class 3 (Portrait of plant in cultivation)
David Sellars - *Edraianthus serpyllifolius* in his garden in Surrey, British Columbia.

Below: Winner of Class 4 (Rock garden scene)
John Zabkar - John Zabkar's Pennsylvania rock garden.

Photo Contest 2012

If you enjoy photographing plants, share your enthusiasm with others – and perhaps win a prize.

The NARGS Annual Photo Contest gives you an opportunity to see your photographs in print in the *Quarterly* – as well as getting a free year's membership for someone of your choice that will arrive just in time for Christmas.

NEW & REVISED CLASSES

Class 1: ROCK GARDEN SCENE
Image of a rock garden (general view or isolated vignette). It is the photograph that is being judged rather than the garden itself and it does NOT have to be your own garden. Please identify the owners of the gardens. Hint: Frame your image carefully to exclude unattractive and unintended objects ... or move them.

Class 2: PORTRAIT OF A PLANT IN CULTIVATION
Image focuses on a single plant, group of flowers, or small group of the same plant in the garden, or in a container (pot, trough or other container).

Class 3: PORTRAIT OF A PLANT IN THE WILD
Image focuses on a **single plant** in its native habitat. Ideally, the entire plant should be visible, not just a flower, which is more appropriate to class 5.

Class 4: NATURAL SCENE WITH PLANTS
Image includes both wild plants and their surrounding habitat and scenery. This need not be high mountain scenery. Please identify the site. Hint: This is not the same as class 3, and should not foreground a single plant specimen; the emphasis should be on the general scene. Depth of field is a strong consideration.

Class 5: CLOSE-UP
Close-up image (macro or otherwise) of **single flowers** or other plant parts.

Class 6: NORTH AMERICAN NATIVE PLANT
Image may be of any North American native plant . This may be in the wild or in cultivation.

In addition to the fame and the gratitude of the editor, you can win a year's NARGS membership as a gift to a new member of your choice. Entries may be submitted as digital images on CD, or as slides or as prints. Slides and prints will be returned after the contest or after publication; digitals will be archived for future publication. All published photos are credited, and copyright remains with the photographer. Entering the contest grants NARGS permission for one-time use of all images submitted.

INSTRUCTIONS for ENTRIES

Digital images may be submitted in JPG or TIF format. Other formats may cause problems. Please examine the file extension on your image files to make sure it says "jpg" or "tif." If you are not sure how to save images in these formats, refer to the instructions that came with your camera. Submit all your images on one CD, with each image file renamed with the subject and your initials (e.g. Phlox hoodii JM.jpg). If you are entering several classes, it is very helpful to make a separate folder for each class.

Include a text document listing your entries by class, with plant names fully spelled out and any other information you feel should appear in a caption when the photo is published. Please submit this list on paper and also put it on the CD as a DOC file.

Slides and prints should be accompanied by a list like that described above. If you need them back quite soon, please let us know in your cover letter. Be sure that each slide or print is clearly labeled with your name and the subject.

You may enter a maximum of ten images in each class.

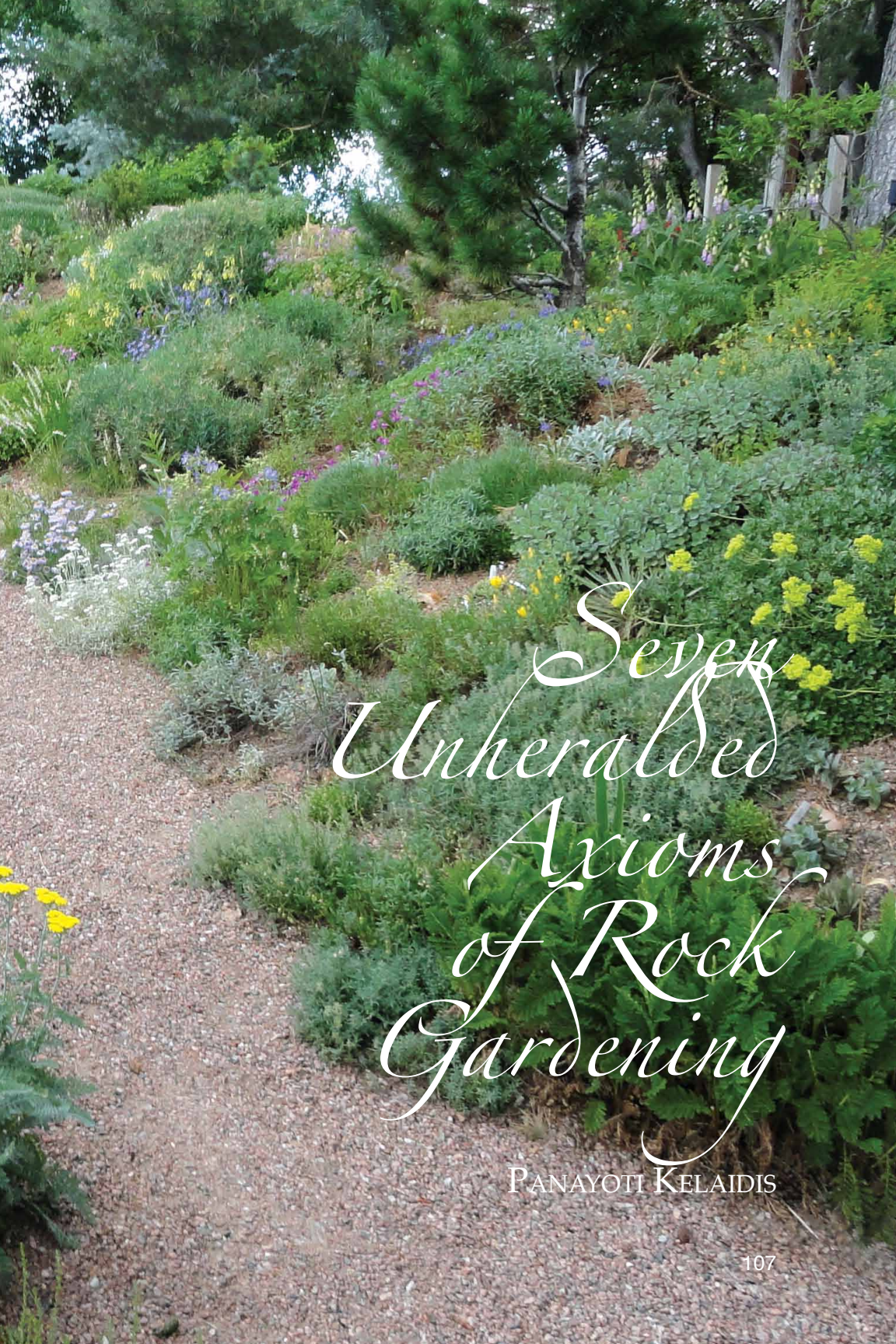
The deadline for entries is October 1st, 2012

PUT THE DATE ON YOUR CALENDAR **NOW**

ENTRIES SHOULD BE SENT TO :

Bobby Ward, NARGS Executive Secretary,
PO Box 18604, Raleigh, NC 27619-8604.

Judging criteria are technical quality, aesthetic appeal, adherence to parameters of the class entered, and suitability for publication. Different judges are recruited each year by the editor and remain anonymous.



Seven Unheralded Axioms of Rock Gardening

Panayoti Kelaidis

THERE ARE THE way things should be and the way things really are. We rock gardeners yearn to grow tiny, challenging gems, like *Eritrichium*, *Dionysia*, rosulate *Viola*, oncocyclus *Iris,* and *Meconopsis punicea* and the *Quarterly* does nothing to deter us. In fact, our rock gardens are more usually full of cresses, mints, geraniums, dwarf conifers and hostas. In Colorado, more often than not they are full of cactus, buckwheats and penstemons. There is a disconnect here!

I own a bookcase pretty much full of nothing but rock garden books, most of which have helpful hints about rock placement, examples of how to create stratified outcrops, and then long lists of classic alpines heavy on *Androsace*, *Dianthus*, *Gentiana*, primrose and saxifrage. The sort of garden these books describe would be dazzlingly beautiful for three weeks in late April and early May in Denver where I live. And, with luck, very green the rest of the year (albeit a few gentians would liven up summer and late fall).

The classic alpine garden is a wonderful thing, mind you. It's just not what almost anyone I know in America has in their garden. Or Europe for that matter (although I have seen such a garden in the town of Wengen, Switzerland, and also in my own state of Colorado, in Breckenridge where they have less than one month frost-free incidentally).

My home garden is a strange, contrary affair full of South African and American succulents, mints of all descriptions (especially thymes and oreganos), veronicas galore, bulbs and more bulbs, and lots of strange plants in oddball families such as Commelinaceae, Oxalidaceae, Plumbaginaceae—families largely absent in the high Alps or the Cascades or even the Himalaya.

I have enough classic alpines that the garden looks quite stunning in early spring. If you squint, it could even pass as a classic rock garden. But as the season progresses, more and more of these lower latitude plants take over and by midsummer what we really have is a sort of macchie, or maquis, with abundant Mediterranean chasmophytes and Western American and South African xerophytes.

I believe most of our rock gardens—at least the successful ones---represent a marvelous conversation, a sort of mediation between the ideal rock garden promulgated by books and our mental pictures of the high Alps or Himalaya, and … something else.

This "else", this other thing, is dictated by your climate, your quiddity, the strange essence of your personal plot of ground combined with other intangibles such as what's available at local plant sales and nurseries, what germinates in your seed frame, your personal interests and genius (or let's just say talent). This is what makes your rock garden "yours"; this is your signature.

Seven Axioms of Rock Gardening
Complex rock gardens, such as Panayoti Kelaidis's, exemplify the principles he espouses

Principles 1 & 2
Plants with similar water needs,
***Onosma echioides* and *Campanula poscharskyana*,**
are planted on this warm slope

The Seven Axioms

Rock gardening books can be great – as I say, I have a bookcase full of them. But there are certain underlying axioms that I believe are largely missed by garden books, and which I haven't seen in magazines either. Any sort of gardening can be done by instinct, but rock gardeners who master, or who at least understand, these principles are apt to produce results that can keep them motivated – you can create the rock garden of your dreams.

They say there are seven deadly sins: those who ignore these seven axioms might as well be wallowing in sinfulness: their rock gardens will soon go down the slippery slope and need major renovation. Or you had better go back to growing annuals, my friend!

1. Match plant selection to site

There is an old rock song that says "if you cannot be with the one you love, love the one you are with." Although I don't think this is a very good philosophy for marriage, it is perfect for gardeners. If you live in Tucson, don't try growing Porophyllum saxifrages. If you live in Maine, develop a taste for heathers and Ericaceae. Learn what does best for you and become enthusiastic about it! Gardens are really just modified ecosystems: determine which ecosystem or ecosystems you are recreating, or mimicking perhaps. And stick to it!

2. Put plants with similar water needs together.

I realize your hardy calla lily would look just stunning rising from a wonderful mat of *Zauschneria californica*, except the calla likes it wet and your *Zauschneria* is a xerophyte! Be sure to group plants that like similar soil, aspect and moisture regimes together. Don't try making "pockets." They don't work.

3. Avoid plants that do not self prune

Avoid plants that do not self prune, which is to say, grow smaller plants whenever possible. Plants with tall stems, and large plants generally, produce biomass which is a nuisance to cut back—not to mention time consuming and a source of way too much herbage! One of the great joys of rock garden plants is that most require very little ongoing maintenance (i.e. they are self pruning). I spend less drudge time in my rock garden than in any other garden I have attempted: I am constantly deadheading and cutting back perennials in my borders, while my alpines look on in amusement. Half the time when I cut back alpines I'm really just collecting seed: they often look charming with their seedheads and would look and do just as well left alone!

4. Don't forget Bulbs & Annuals

Use bulbs and annuals…strategically to be sure. There are those who hate bulbs in rock gardens because their foliage persists and is often turning yellow in May and June when the garden is otherwise in peak form. I say, who cares? Nature's rock gardens are full of crocuses, cyclamen, narcissus, tulips: you name it. I find that unfurling fern fronds in shade, or spreading perennials like *Gentiana septemfida,*

do a great job covering over the dying foliage. Likewise, early alpines like *Adonis amurensis* that die down in early summer provide a perfect spot for some long blooming summer annuals such as *Anagallis monellii* or *Eriogonum pharnaceoides* (a favorite of mine) to bloom during the summer months. That said, avoid weedy bulbs like *Muscari neglectum* like the plague, and remember some "annuals" like California poppies can be extremely perennial and take over the joint.

Principle 4
In this summer rock garden the annual poppies (*Papaver rhoeas*) provide a great high point alongside the *Verbascum* and *Edraianthus*

Principle 5
***Thymus neicefii* and *Asperula pontica* along with many *Iberis* are all examples of easy plants that should never be ignored**

5. Do not disdain easy plants

But if we are to avoid "weedy" plants "like the plague" that's no reason to avoid easy plants. Early in my career I planted *Delphinium grandiflorum* in the Rock Alpine Garden at the Botanic Gardens in Denver, where it was so much at home it self-sowed with abandon, creating a riot of brilliant blue for months on end. I was chagrined that it was so "invasive" and had it all removed. The next year…no blue. I was never able to re-establish it so that it grew that well ever again. I could repeat this story many times over. Some plant that grows well for you may be excruciatingly choice in another's garden…. learn to value it!

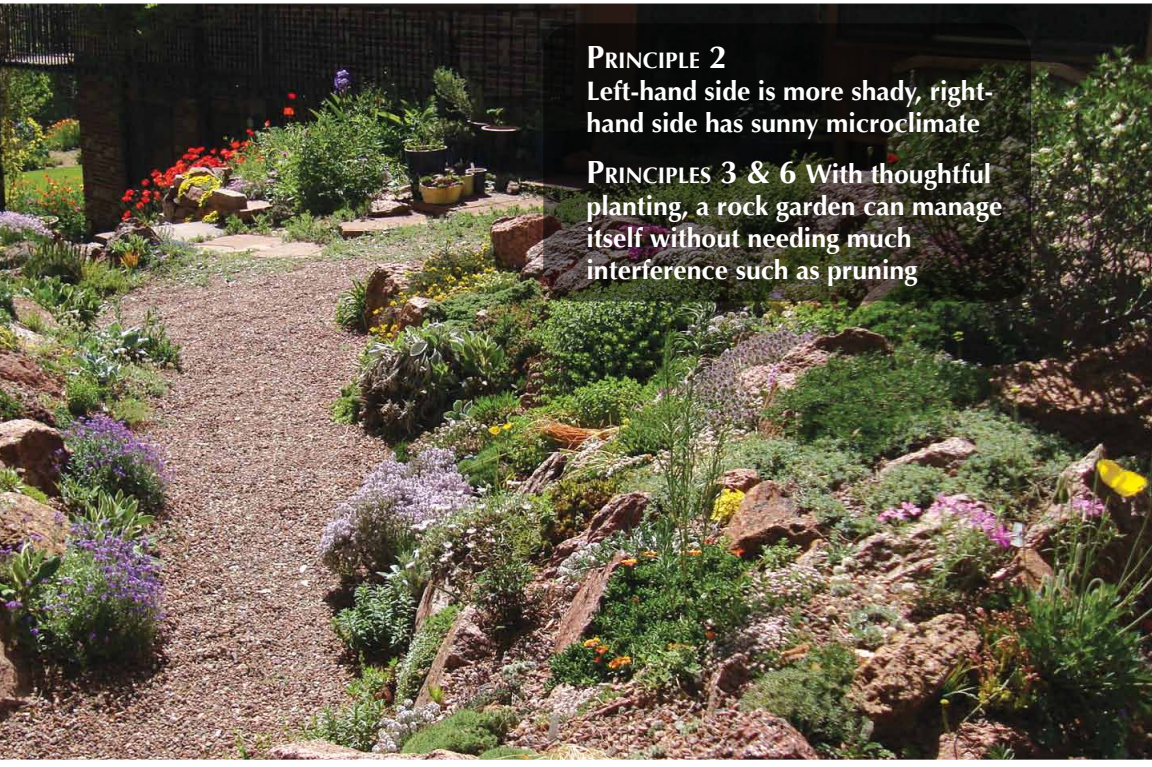
6. Plant plants with similar growth rates

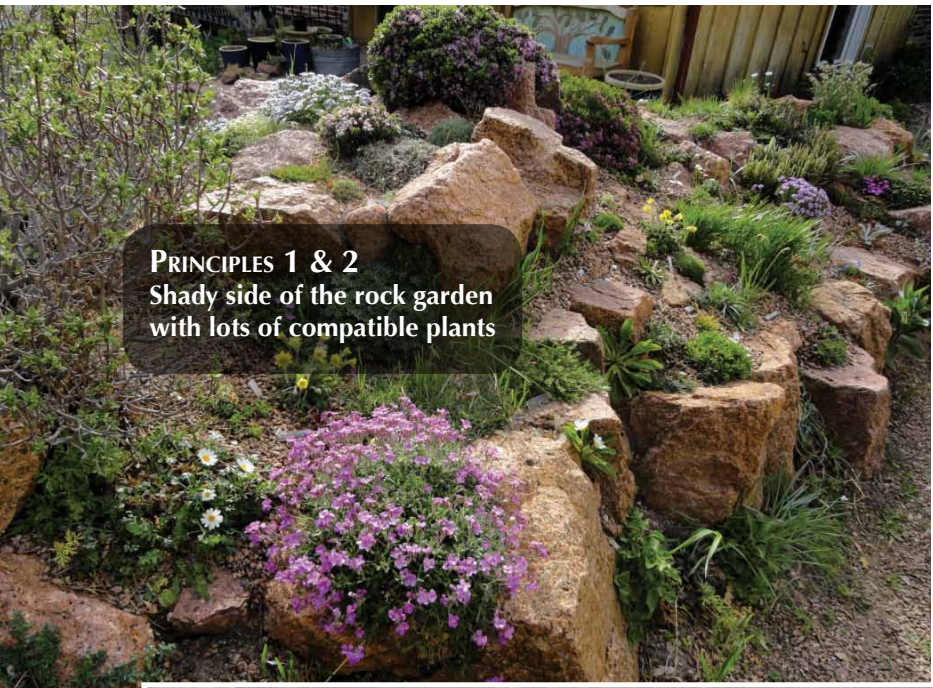
This is the kicker. Nothing destroys a rock garden more quickly than planting widely ramifying

groundcovers where tiny buns and cushions should be left alone. Do some research on any new plant, and preferably put it somewhere you can keep an eye on it. Try to combine vigorous groundcovers, like creeping phloxes, rock and wall cresses and suchlike vigorous creatures together in "rockeries" and try to have all the smaller plants in their own sacred realm. If you notice a plant seeding excessively, try and restrict it to low portions of the garden, or isolate it in a spot where it will not overwhelm. And watch out for any plant that spreads underground. No rock plant lives forever, but many can last many years provided they are not crowded.

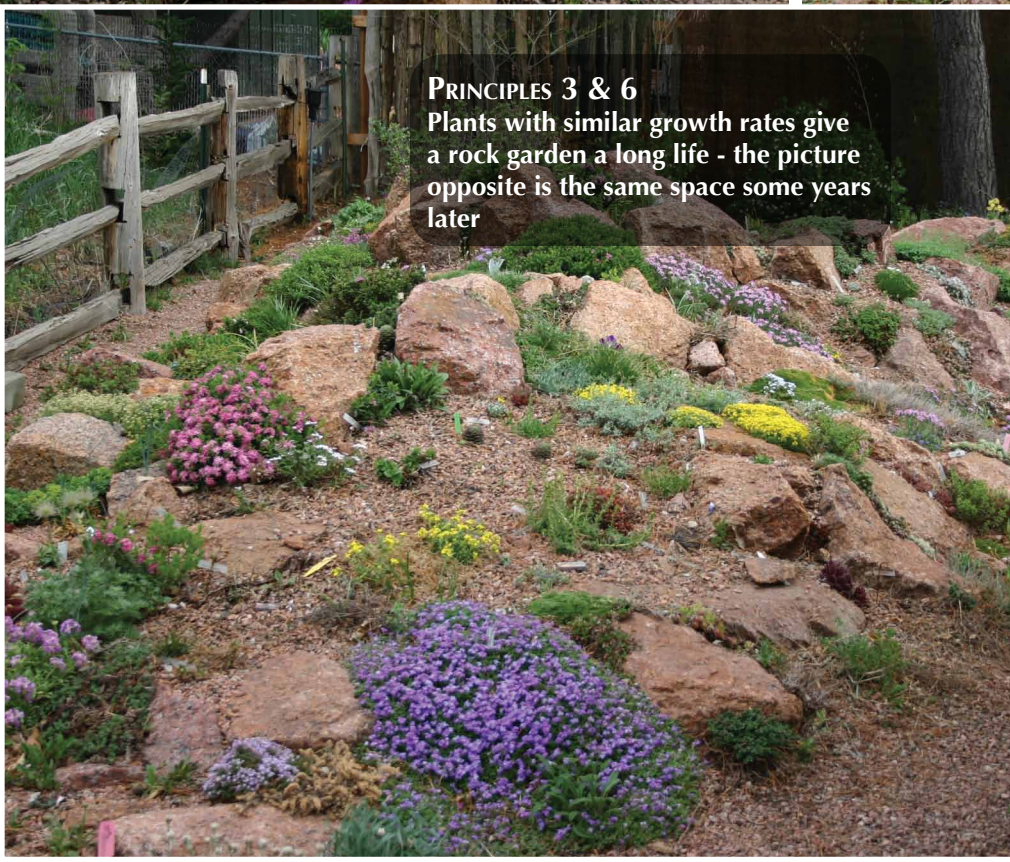
7. Propagate, collect seed, and share

I have often said that you have not really grown a rock garden plant until you have given away divisions or seed. There are many plants in my gardens that have gone through multiple generations. And there are many that I have swapped back and forth many times with my best friends: I grow them a few years and they disappear, and I get them back. Meanwhile they lose them, and come begging pieces back from me. Many of the finest rock garden plants are relatively short lived and

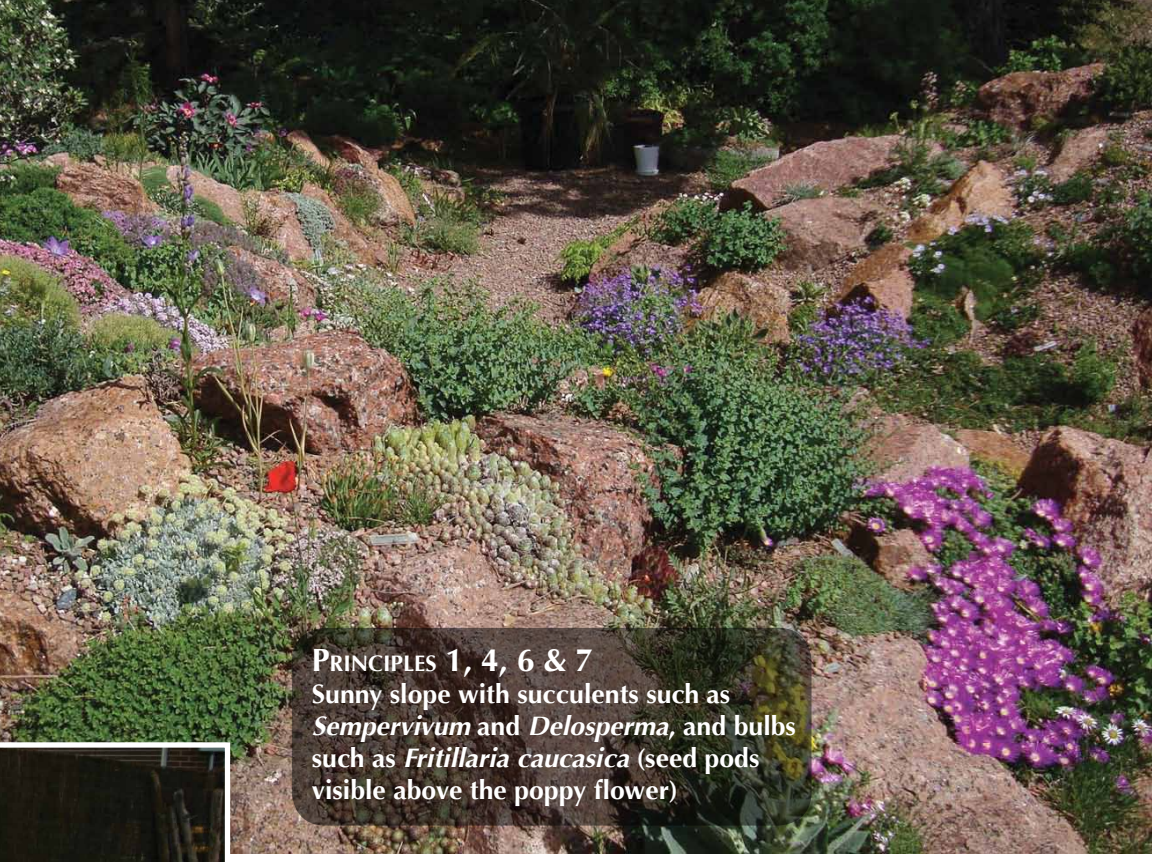




Principles 1 & 2
Shady side of the rock garden with lots of compatible plants



Principles 3 & 6
Plants with similar growth rates give a rock garden a long life - the picture opposite is the same space some years later



Principles 1, 4, 6 & 7
Sunny slope with succulents such as *Sempervivum* and *Delosperma*, and bulbs such as *Fritillaria caucasica* (seed pods visible above the poppy flower)

must be regenerated. That said, be aware that many of the most glamorous and desirable alpines: *Aquilegia*, *Dianthus*, *Linum*, *Thymus*, are very prone to hybridization with at least some of their closer relatives. You must either grow your favorites in isolation, or be aware that your seed is very likely to become muddled in a few years. You may end up with some wonderful hybrid strains, but there is nothing more stunning than the real *Aquilegia scopulorum* or *Dianthus callizonus*. It is worth growing multiples of these in isolation in a trough to keep them as pure as possible.

Another seasoned rock gardener would probably come up with a very different list of axioms. So be it!

Tolstoy began *Anna Karenina* with the sentence "All happy families are alike, but unhappy families are unhappy in their own ways." One could paraphrase this by saying that all perennial borders are essentially the same, but each and every rock garden is utterly unique. I would add that it is the rock garden that gives me far more joy and pleasure. Provided you keep these axioms in mind, that is…

Vegetative Propagation - Understanding Cuttings

Mike Bone

ONE OF THE most frequent topics I am asked about is rooting plants from cuttings, and I'm slightly apprehensive as to where to start. There are so many different stories of abysmal failures, but then there are groundbreaking successes. So, let's start with what actually happens to the plant.

For a cutting to root, what needs to happen is that the cells in the stem of a plant need to stop being stem-tissue cells and start being root-tissue cells. That is the basic premise, and, when you can wrap your head around that, the rest of what you need to do just starts to fall into place. The process goes like this. You (the propagator) cut a portion of stem away from the connecting vascular system of a plant. That system has been moving water and nutrients from the ground, up through the plant to the leaves. But this is not purely a one-way trip. The plant uses that water, full of nutrients, mixes it with sunshine to create energy, and sends it back down to the crown of the plant and into the roots to grow. Simple, right?

Well, yes, but now you have a piece of plant (your cutting) that is no longer connected to this system of transport so you had better hurry up and do something with it.

The environment for cuttings

I often like to think, that if you give the cutting all the opportunity in the world to make the right decision to root, it won't let you down. To continue this thought: while you create the best environment for roots to grow, you also need to discourage vegetative and floral growth. That will usually mean keeping the air cool while keeping the soil warm. Tricky I know, but that is what you need to do.

Think about where the root is - in the soil. This rhizosphere (the soil environment around a root that is directly affected by the root) is a quite complex environment where many exciting and mysterious things take place, but let us now simplify what we expect from our propagation rhizosphere. What is important to a root is darkness, moisture, temperature, oxygen, and the ability to move around and get to the nutrients and water .

Obviously much depends on what you (the propagator) have

available to you and where you intend to root cuttings.

I have been in very elaborate greenhouses, with plants on conveyors continually revolving, while long boom arms with lasers reading barcodes emit mist, fertilizer, sterilants, and, presumably, magical pixie dust ensuring 105% rooting success of tiny little cuttings. I have been fortunate enough to see acres of cuttings stuck by tractors in open fields. I have helped build greenhouses filled with heated floors, as well as greenhouses with feet-deep beds of sand and gravel. I have even been privy to those who have rooted cuttings in glass vessels on windowsills with nothing more complicated than adequate portions of dihydrogen monoxide to initiate cellular dedifferentiation followed by redifferentation into root tissue.

Whatever system, whatever equipment you have, you are putting a portion of stem into a set of conditions that is unlike anything that a stem wants and needs, but is the perfect environment for roots. No light, lots of available moisture, and plenty of oxygen and air space to keep it easy for new roots to grow. For the most part any cutting you stick will have enough energy stored in it to begin to initiate root, so fertility or rhizosphere organism populations are not the concern yet.

Rooting medium and moisture

At the Botanic Gardens in Denver I use a cutting mix that is 3 parts perlite to 1 part bagged germination mix. At home I use this perlite-germination mix in my greenhouse, and have a sand-frame for outside, and I have had fantastic success rooting many perennials and woody plants in just clean sand. My best success comes with having a sand-frame on the north-side of a building.

Your sand-frame needs some type of cover that lets you get at the plants, but still lets some light through to them and shelters them from rain. And make sure you provide for drainage.... if you simply dig a hole, fill it with sand, and cover it with plastic, you'll find that you soon have a hole full of dead plants, water, and sand. Elevating the sand-bed above ground is very effective at letting your sand-bed dry out, as are drain tiles. Too often I see cuttings rot from sitting in water, no matter how much drainage you think is there. Last quarter I discussed perched water tables – make sure you are not leaving the basal end of your cutting in that perched water table.

There is a careful balance that you need to create - water and humidity are very important. But your cuttings don't initially have the means to take up water, and that's your fault for cutting it away from its happy home. So you have to make it comfortable again until it can fend for itself once more.

The goal, in this initial step, is to keep the cutting from getting to the terminal wilting point, but not to keep it soaking wet all the time. Keep just enough humidity and moisture on and around the

plant to keep it turgid. As the plant begins to harden off, or toughen up, reduce the amount of water and frequency of watering to just keep it at that point. A little bit of tough love here, can be just enough catalyst to convince your cutting that it needs to grow some root and start taking care of itself.

What sort of cutting ... and when

Now lets explore the actual cutting itself. For the most part, the time of year and type of plant that you are working with will dictate what you call the cutting and how it is treated.

Cuttings from herbaceous plants are fairly straightforward. For the most part you want to take a cutting when the plant is not flowering, or from a non-flowering shoot, and when the stems have matured enough to have fully formed leaves, but not to the point of being too hardened. This sort of cutting is typically referred to as a herbaceous cutting.

Woody plants on the other hand have lots of terms referring to what

Rooting Hormone ... or not

The role of rooting hormones in the process of rooting cuttings is still a matter of quite a lengthy debate. I tend to look at it this way: science has identified the fact that specific chemicals are produced within the plant when growing roots. Those chemicals have been isolated and marketed for sale with the intent of helping the propagator be more successful. Where the debate stands for me is that if you can create the perfect conditions then the cutting will root. The addition of root-initiating chemicals serves only to jumpstart the plant into producing its own auxins.

There are a couple of things to note about the rooting hormones available. The chemicals, IBA (indole butyric acid) and NAA (napthalene acetic acid), are not soluble in water: they need either to be bonded to another chemical, or dissolved in alcohol. But many plants are sensitive to the alcohol in rooting hormone solutions and will burn or dehydrate and not take up any of the liquid hormone. The usual alternative is to bond the chemicals to a talc particle, and treat the cutting with a dry powder in hopes that by having high levels of the chemicals present the cutting will recognize that presence and start producing its own auxins.

I use some form of root-initiating chemical on every cutting I take and stick. Past experience will dictate which form I use: talc or liquid. If you don't know, you could do half with liquid, half with powder.

There is a slow progress toward making K-IBA available as a rooting hormone. By bonding a K (potassium) atom to an IBA molecule you change the chemistry of IBA making it soluble in water. Some day that product will make it to the open market and this will, in my opinion, replace all other forms of rooting hormone

state of development the stem is at: softwood, semi-softwood, semi-hardwood, and hardwood cutting. That progression of terminology gives you some clues as to how to handle different types of cuttings. Following this progression: with softwood cuttings (and with herbaceous cuttings) you will typically start with greater misting and watering, and lower hormone concentrations; for hardwood cuttings little or no mist or watering, and higher concentrations of rooting hormones. What type of cutting you should take, revolves around the type of plant, and when the plant would be normally growing roots, or at least not flowering.

Inside the cutting what needs to happen is the de-differentiation of meristematic cells into parynchyma cells, then the re-differentiation into root cells. This can happen at different places depending on the plant and the type of cutting.

Many plants have latent (or dormant) buds between the nodes, and these buds can produce the type of meristematic de-differentiation required to change into root cells. But many plants will only root from existing buds, at the nodes, and do not make adventitious shoots. There are also plants that will only root from the basal end of the cuttings along the inner cambium layers (a good reason to make sure you stick your cutting right way up). Unless you know exactly how each plant will root, given the right conditions, you should give yourself as many options as possible for the roots to emerge.

On woody plants I like to make the cutting long enough to have at least two nodes below the soil. I will then strip the leaves from the nodes causing wounds where new roots might emerge. I also like to make the basal cutting on a forty-five degree angle to give more room along the cambium ring, just in case. The best thing to do is to keep a log of what you have done to each taxon you try and propagate so that you can keep track of your successes and failures.

So all you have to do is cut it and stick it ... well, after you build the right system, understand soils, be clear where water will come from and go to when not being used. Then after you wound the stem, and apply either a talc or a liquid hormone, depending on whether the plant is sensitive to alcohol or not, all you have to do is wait. Sometimes only a few days, sometimes up to eight months later, you will have rooted plants ready to transplant into a larger pot and grow on for up to two years before you can plant them. Seriously though, that was all of the worst case scenarios.

Think about the process from start to finish. Control water, pore space in the rooting medium, and oxygen, and you can root most any cutting. When you are working for your home garden and you stick one hundred cuttings and only five of them root you more than likely quintupled the number of plants you started with. But I think that is great - how many did you want anyway?

Newfoundland's Southern Limestone Barrens

Todd Boland

Cape St. George, June 2011

NEWFOUNDLAND IS BLESSED with an area where alpine plants grow at or near sea-level. This region is called the limestone barrens and is restricted to a thin strip of land along the western coast of the Great Northern Peninsula from the community of Belburns to Cape Norman. Due to the number of rare and endemic alpines in this region, there are currently three ecological reserves in this area: Table Point, Watt's Point and Burnt Cape. The Point Riche Peninsula is also protected, as it is encompassed by the Port-aux-Choix National Historic Site. However, there is another tiny stretch of limestone barrens located as an outlier, some 225 kilometers (140 miles) to the south of our main limestone barrens. This "southern" limestone barren is located on the west coast of the Port-au-Port Peninsula. The area encompasses a mere 20 square kilometers (about 8 square miles), yet is home to a wonderful array of alpines.

Hedysarum boreale

The southern limestone barrens form a thin coastal strip 10 km x 2 km between Cape St. George and the community of Mainland. The area is now under review for being designated as a new ecological reserve. The main reason for establishing a reserve here is due to the presence of an alpine plant which has just been listed as threatened in Newfoundland: *Hedysarum boreale* or Mackenzie's sweetvetch.

*Hedysarum boreal*e is a common species throughout the western Rockies but has a very restricted range in eastern North America: one site in Newfoundland and another on Quebec's Anticosti Island. It is theorized that this species once had a distribution across North America but most central population were wiped out by the last period of glaciation, leaving a disjunct population in the east. Newfoundland's population is estimated at about 600 plants. It is primarily at risk from ATV activity in the area.

This past June I was invited, as a guest, to attend the Limestone Barrens Species at Risk Recovery Team meeting held at Cape St. George. I was part of the group responsible for counting *Hedysarum* plants. Thankfully it was a wonderful sunny day as this area is known for strong winds and cool temperatures. Despite being early in the season (from a Newfoundland perspective), I was quite surprised to see a great diversity of alpines in bloom. *Hedysarum boreale* was just commencing their blooming season while its cousin, *H. alpinum*, barely showed flower buds. However another legume that was beginning to flower was *Oxytropis campestris* var. *terrae-novae*, a variety endemic to Newfoundland.

Oxytropis campestris var. *terrae-novae*

Cypripedium parviflorum

Foremost among the flowering alpines were drifts of spectacular yellow lady's-slipper orchid, *Cypripedium parviflorum*. Some clumps had over 25 blossoms. Petals ranged from dark mahogany to chartreuse. Most had twisted petals but many had completely flat petals, marking them as the variety *planipetalum*. What was most amazing was the fact that some appeared to be growing in pure limestone gravel.

Here and there were patches of *Viola labradorica* whose flowers, due to the exposure of the region, were practically stemless. The normally 45–60 cm tall *Maianthemum stellatum* was also present as the stunted 10–15 cm form called *M. stellatum* var. *crassum*.

Potentilla were represented by flowering *Potentilla nivea* and *P. verna* (syn. *P. neumanniana*, *P. crantzii*) which grew in natural limestone screes and crevices. *Potentilla tridentata*, now correctly *Sibbaldiopsis tridentata*, were just starting to bud. *Minuartia rubella* formed tiny mounds packed with flower buds, a testament to their flower-power in the weeks to come. *Thalictrum alpinum* were abundant but their minute flowers were hardly noticeable. On the other hand, *Anemone parviflora* showed lovely white flowers with exceptionally blue reverse and often finely spotted, something that I've never seen on northern populations.

Potentilla nivea

Potentilla verna (syn. *P. neumanniana, P. crantzii*)

Individual specimens of *Cypripedium parviflorum* can vary considerably in appearance and their immediate surroundings also vary from pure limestone chippings to short turf or very slightly taller vegetation

Top: *Primula mistassinica* f. *leucantha* with relatively large white fowers

Below: *Primula laurentiana*

Primula laurentiana were past their prime but in shaded ravines, some pristine plants were still to be found. A white-flowered primrose was also very common. Initially identified as *Primula mistassinica* f. *leucantha,* there is now debate among local botanists as to whether these plants are in fact, a new, as of yet undescribed species, since plants consistently had 2–3 relatively large white flowers (never mauve or pink) and minute rosettes of only slightly dentate, efarinose leaves. *Silene acaulis* were also past their prime but I did manage to find a few plants with late blossoms, including the largest specimen I have ever seen, with a mound over 60 cm across. I even happened upon the rare *alba* form. Also lingering were late mats of *Dryas integrifolia*, whose flowers faithfully follow the sun.

Cape St. George limestone barrens

Physaria arctica

The most common saxifrage was *Saxifraga oppositifolia*, whose flowers were long gone by this time, but I happened upon one clump of *S. paniculata* var. *labradorica* that was just opening its first finely-spotted flowers. Unlike the limestone barrens to the north, *S. aizoides* was actually quite rare in this southern limestone outpost.

By contrast *Physaria arctica* were much more common in this southern barren than I have ever noticed in more northern areas of Newfoundland

Arctic willows were the predominant woody plant but the diversity was much restricted compared to our northern limestone barrens. Here in the south, I only encountered three species of willow: *Salix uva-ursi, S. vestita* and *S. glauca.* White spruces in the area were completely prostrate

There are three species of willow here, fewer than in more northerly barrens:

Salix uva-ursi (above)

Salix vestita (right)

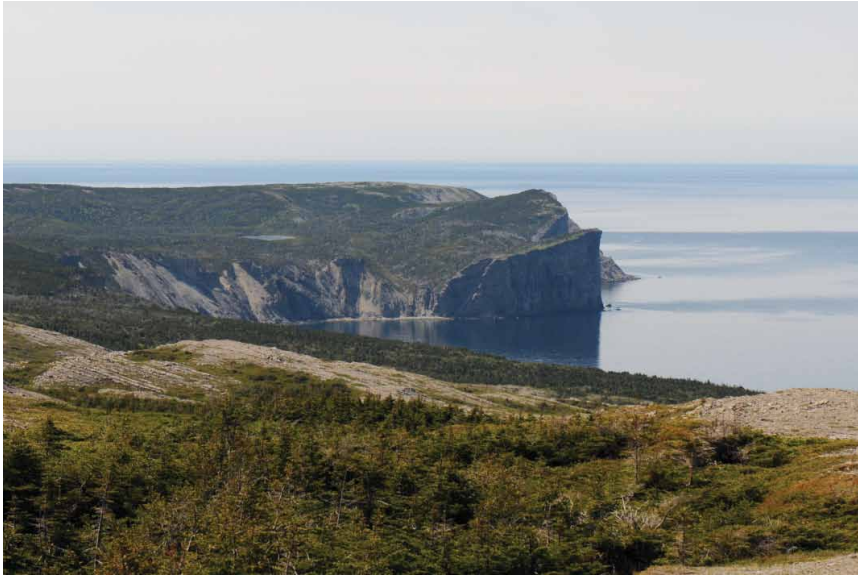
Salix glauca (below)

with absolutely no sign of any vertical trunk. *Juniperus horizontalis*, *J. communis*, *Empetrum nigrum*, *Arctous alpina*, *Arctostaphylos uva-ursi* and prostrate forms of *Betula pumila* and *Shepherdia canadensis* rounded out the list of woody plants.

The aster family had several representatives present. Pussy-toes included three species: *Antennaria pulcherrima* subsp. *eucosma*, *A. rosea* subsp. *pulvinata* and *A. alpina*. The first *Arnica lonchophylla* were just starting to bloom while *Taraxacum latilobum* (yes, a native dandelion!) had progressed to its "dandelion-snow" phase. *Erigeron hyssopifolius* was studded with small white daisies but *Solidago hispida*, *Packera paupercula* and *Artemisia campestris* subsp. *caudata* would not be blooming until well into July.

I was rather surprised at the alpine plants I didn't encounter. On the northern limestone barrens of Newfoundland you will see plenty of *Rhodiola rosea*, *Parnassia* species, *Kalmia* (*Loiseleuria*) *procumbens*, *Rubus arcticus*, *Pyrola asarifolia* and *Tofieldia glutinosa,* yet these were conspicuously missing in our southern counterpart. Nonetheless, the southern limestone barrens do offer a wonderful show of easily-accessible arctic-alpine plants.

With luck, this area will successfully be set aside as a reserve so that future generations will get the chance to enjoy this little piece of alpine paradise.



Cape St. George - peaceful in the early season sun

William J. Dress, 1918-2011

Bill "in his element"

WE KNEW HIM as Bill … Bill was an involved member of the Adirondack Chapter for many years, officially serving terms as Board Chair and Treasurer but unofficially as one of our resident plant experts, occasional program speaker, plant donor, and generous "sharer" of plants, information, and "go to guy" for all questions Latin or taxonomic. We honored him with a Chapter Service Award in 1998.

Even before our Chapter's founding in 1976, Bill was part of an Ithaca-based garden study group. Later, he was instrumental, along with others, in moving the Chapter's meetings from Albany to Ithaca where there was a strong base of engaged members. As his health began to fail, he stopped attending Chapter meetings but continued to share his knowledge of plants.

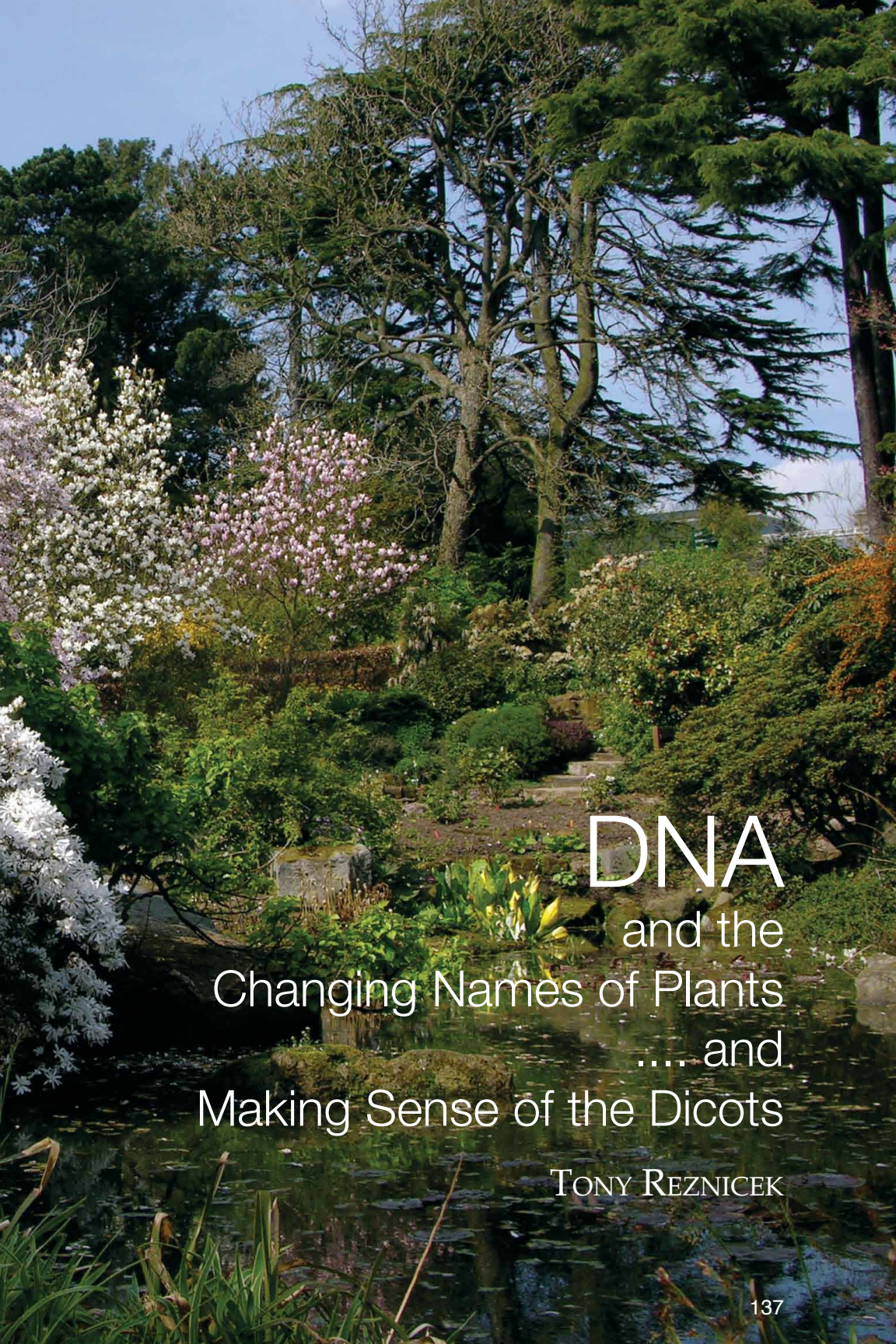
Bill Dress was born in Buffalo, earned an A.B. degree (1931) in classical languages at the University of Buffalo, served in the U.S. Army Air Corps (1942-45), then came to Cornell, earning his Ph.D. degree in botany.

He taught taxonomy of cultivated plants, plant nomenclature and botanical Latin. His chief research interest was the taxonomy of Compositae and cultivated ornamentals in general. He edited two of Cornell Hortorium's journals – *Baileya* and Gentes *Herbarum*. For many years, he also served as the editor of the authoritative reference work *Hortus Third: A Concise Dictionary of Plants Cultivated in the United States and Canada*. He authored numerous articles on orchids, asters, cacti and milkweeds. In addition, a fossil flower named *Dressiantha bicarpellata* and *Hosta* 'Bill Dress's Blue' were named in his honor.

Through Bill's efforts, the town of Ithaca acquired Dress Woods, a 10-acre site of mature forest bordering Culver Road on the town's west side that was long cared for by Dress. Bill died December 15, 2011 at his home at Kendal, Ithaca at the age of 93.

Carol Eichler.

Magnolia stellata **(foreground) and other glorious early-flowering magnolias in the rock garden at England's Birmingham Botanic Garden**



DNA
and the Changing Names of Plants .... and Making Sense of the Dicots

Tony Reznicek

MORE THAN ALMOST any other group of gardeners, rock gardeners use the scientific names of plants, those mystifying binomials in Latin that botanists use. This makes sense, since many mountain plants have no established common names, or if they do, they are in languages far more daunting than Latin. So, to rock gardeners, it can be somewhat disconcerting to see that there has been a flood of recent changes to the scientific names of plants. Some of these are dramatic.

In North America, we used to have a great many species of *Aster* – now we have only one, *Aster alpinus*, and our former asters are now divided among a number of other genera with mostly long and difficult to pronounce names, such as *Canadanthus*, *Doellingeria*, and *Symphyotrichum*. Even our beloved NARGS emblem, the shooting star, is no longer *Dodecatheon*, but just another group of *Primula* (1).

When students are first taught the use of use scientific nomenclature, there is a strong emphasis on the unifying and stable nature of these scientific names. Throughout the world, the same Latin names are used for the plants, so people in North America can look at books or websites about Chinese plants or Iranian plants secure in the knowledge that at least the Latin names will provide a familiar context.

A basic principle of plant science is that any plant can bear only one correct Latin name when circumscribed in a particular way – the oldest name that meets the requirements of the (arcane) rules in the *International Code of Botanical Nomenclature* (2). This is a most important principle in working towards the goal of a stable nomenclature for plants. Unfortunately, this basic principle also contains within it the seeds of change: the phrase "when circumscribed in a particular way." And we presently seem to be undergoing a flourish of re-assignment of species to different genera, and genera to different families, than in older, familiar reference books. So what is behind all these changes?

Plant systematics (the classification of plants) has undergone a revolution in the past couple of decades that revolves around three primary scientific advances. The first is that we now have the technology to access the genomes of plants. Simply, the genome is the complete set of genetic material found in each cell of an organism. So, we can essentially read directly the base

Pretty shooting star, *Primula pauciflora* (*Dodecatheon pulchellum*), Horse Rock Ridge, Oregon

pairs that comprise the DNA molecules of genes. This generates vast amounts of information. The largest genome known up to now is from a plant familiar to rock gardeners, at least in their dreams! This is the legendary *Paris japonica*, which has about 150 billion base pairs! This is 50 times the human genome's paltry 3 billion base pairs. Needless to say, most systematic research uses only tiny portions of the genome, but the numbers are still large.

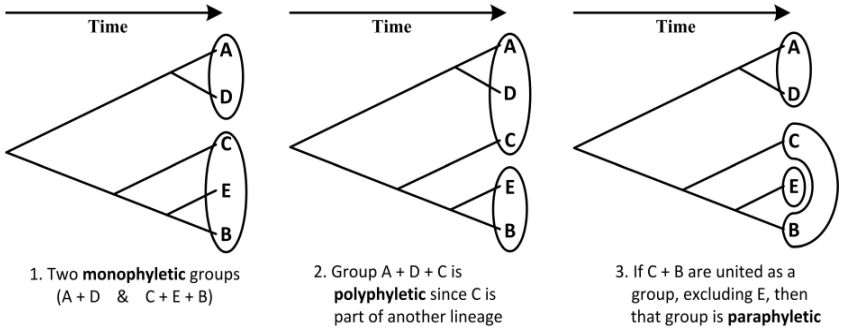
The second advance that has allowed us to use the newly available genetic information is the development of a framework of theory and mathematical techniques. These allow systematists to hypothesize the historical relationships (phylogeny) of the plants from these base pairs and convert that into a classification.

Finally, we now have powerful computers that can quickly perform these analyses. For the first time in the history of plant systematics we can use the genetic code directly to develop explicit hypotheses of relationships that can be used to form classifications; hypotheses that are now testable, since the results from one set of genetic data can be compared with those from another, independent, set of genetic data, or even morphology.

These hypotheses of relationships are usually expressed in the form of dichotomously branching diagrams or "trees," where the branch tips may represent plant families, genera, species, or even individuals.

Now for a botany lesson: To be as useful as possible, classifications must reflect our best hypotheses about the actual genetic relationships of plants. The goal is to have classifications that are as predictive as possible. In most botanists' view, this means that groups, such as genera, must be "monophyletic." And this means that (i) all plants in a group must have an immediate common ancestor and (ii) all plants that share that common origin must be a member of the group. This is just like human families. And, as with human families, if all the members of a plant group share an immediate common ancestry; it is likely that they also will share similar chemistry, and perhaps even gardening requirements. In example 1 (opposite), if the letters A through E represent plant species and we are going to organize the two lineages into monophyletic groups, we can see that the two groups should be A, D, and C, E, B. But in the real world, things are not so simple.

Divergence of species may have occurred many millions of years ago, with much change in outward appearance in some species but little in others, leaving the true relationships obscured. Sadly, this means that in older classifications based on appearance,



not genetic relationships, groups that are not monophyletic are unfortunately rather common. So, we can imagine that, using the same "tree,", botanists might form two groups as in example 2, with one group including A, D, and C and the other just E and B. The problem is that these groups betray the principle of monophyly. The group consisting of A, D, and C includes A and D from one lineage plus C. from another. The term plant systematists employ to describe that is "polyphyletic;" used for a group that includes entities derived from more than one lineage.

Finally, if, as in example 3, a group is formed uniting C and B, but excluding E, such a group is termed "paraphyletic," as it includes some, but not all, of the descendants from the most recent common ancestor of the group.

It is mostly the realigning of species to make monophyletic genera from genera that are polyphyletic or paraphyletic that causes the name changes we are seeing now since the genus name is the first part of the species binomial, and if a species is grouped in one genus rather than another its generic name (*Primula*, *Saxifraga*, *Dodecatheon*, *Aster*, *Rosa*, or whatever) will change.

It might seem however that at least this is a one-off change but it is not quite as simple as that. There is not only one solution that would only have monophyletic groups. For example, putting all of A through E into one group or recognizing each letter as its own group both also meet the criteria of monophyly, so applying these phylogenetic principles does not deal with the differences between plant systematists who are "lumpers" or "splitters."

Though the main, or most obvious, impact on rock gardeners is the changing names of species, especially among familiar plants, there are some remarkable large-scale highlights that are brought to light with our new ability to more accurately understand the underlying genetic relationships of plants.

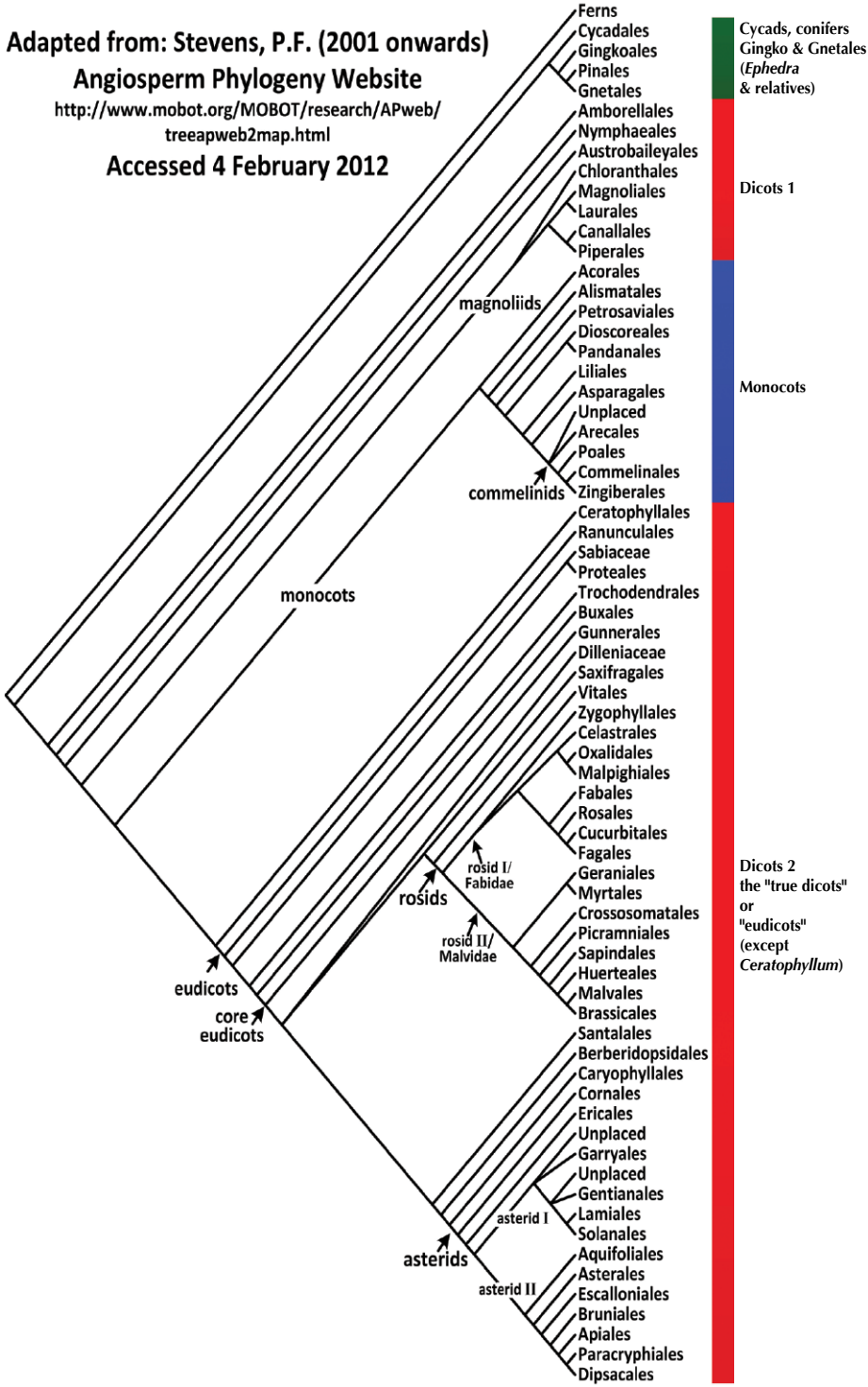
The diagram opposite is a rather complicated phylogenetic tree summarizing our present understanding of the relationships of the orders of seed plants – with the ferns added in. Orders are unfamiliar to many people but bars on the right of the diagram give some interpretation at a broad level familiar to most gardeners – conifers and other gymnosperms (seed plants lacking flowers), and in the flowering plants, monocotyledons and dicotyledons.

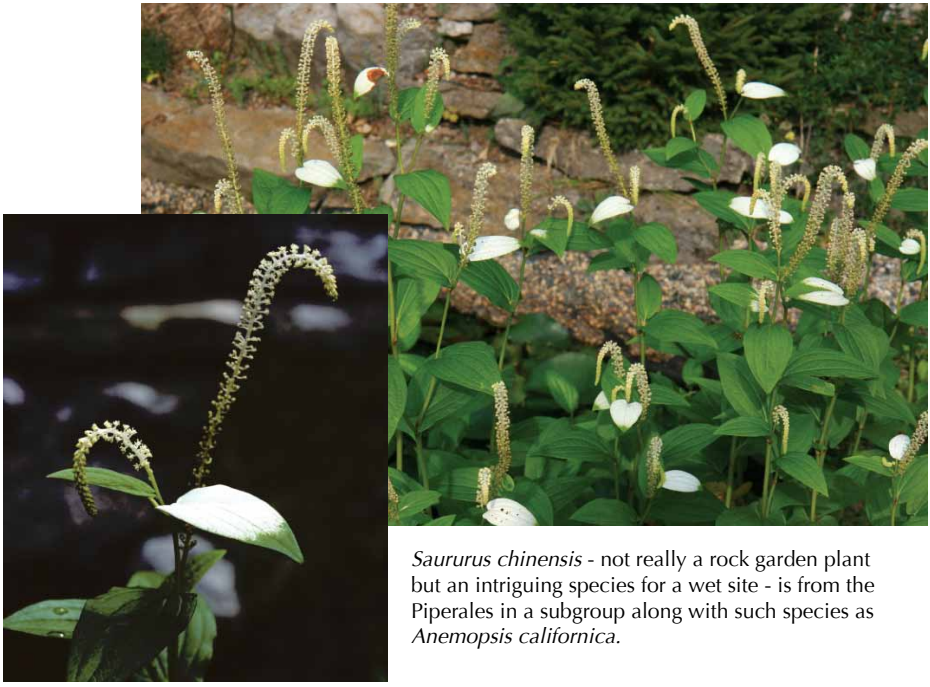
So what does this phylogenetic tree tell us? The most interesting thing is that the plants that most of us are familiar with as dicots – plants with a pair of cotyledons when the seeds germinate, and netted-veined, often broad leaves, plus flower parts in fours or fives – appear in two separate places in the phylogenetic tree. We know already that this is not good. Remembering back to the example of the first diagram, this means that when we separate the monocots as a group (plants with one cotyledon, usually narrow parallel veined leaves and flower parts in threes), the dicots as they have been thought of for centuries, are then paraphyletic.

What is fascinating is that the smaller assemblage of so-called dicots that appears above the monocots in this phylogenetic tree are direct descendants of ancient plants that existed probably more than 100 million years ago, before the main monocot-dicot split. The most basal lineage, the Amborellales, consists of one inconspicuous shrub native to New Caledonia. Most of the other lineages are also tropical, but some have temperate members of great interest to gardeners. Included in this assemblage are many familiar woody plants such as *Magnolia*, tulip tree (*Liriodendron*), and pawpaw (*Asimina*) in the order Magnoliales; laurels (*Sassafras*, and *Lindera* in North America), and some others (such as *Calycanthus*) in the Laurales; along with somewhat less familiar garden plants such the magnolia vines (*Schisandra*) and star anise (*Illicium*) in the order Austrobaileyales. Since botanists have for a long time believed that the most primitive flowering plants were vaguely *Magnolia*-like woody plants, this is comforting.

Schisandra rubriflora - one of the magnolia vines

But this assemblage is full of surprises. Alongside the woody plants among these basal flowering plants are many herbaceous species that have caused botanists to re-evaluate some of what was thought to be common knowledge about primitive flowering plants. These


Adapted from: Stevens, P.F. (2001 onwards)
Angiosperm Phylogeny Website
http://www.mobot.org/MOBOT/research/APweb/
treeapweb2map.html
Accessed 4 February 2012
Ferns
Cycadales
Gingkoales
Pinales
Gnetales
Amborellales
Nymphaeales
Austrobaileyales
Chloranthales
Magnoliales
Laurales
Canallales
Piperales
Acorales
Alismatales
Petrosaviales
Dioscoreales
Pandanales
Liliales
Asparagales
Unplaced
Arecales
Poales
Commelinales
Zingiberales
Ceratophyllales
Ranunculales
Sabiaceae
Proteales
Trochodendrales
Buxales
Gunnerales
Dilleniaceae
Saxifragales
Vitales
Zygophyllales
Celastrales
Oxalidales
Malpighiales
Fabales
Rosales
Cucurbitales
Fagales
Geraniales
Myrtales
Crossosomatales
Picramniales
Sapindales
Huerteales
Malvales
Brassicales
Santalales
Berberidopsidales
Caryophyllales
Cornales
Ericales
Unplaced
Garryales
Unplaced
Gentianales
Lamiales
Solanales
Aquifoliales
Asterales
Escalloniales
Bruniales
Apiales
Paracryphiales
Dipsacales
magnoliids
monocots
commelinids
rosid I/
Fabidae
rosids
rosid II/
Malvidae
eudicots
core
eudicots
asterid I
asterids
asterid II
Cycads, conifers
Gingko & Gnetales
(Ephedra
& relatives)
Dicots 1
Monocots
Dicots 2
the "true dicots"
or
"eudicots"
(except
Ceratophyllum)



Saururus chinensis - not really a rock garden plant but an intriguing species for a wet site - is from the Piperales in a subgroup along with such species as *Anemopsis californica.*

Genetic analysis has greatly clarified the relative positions of different types of waterlily. *Nymphaea* (below top left) is one of the paleoherbs (order Nymphaeales) while *Nelumbo* (the lotus - stalked umbrella-like leaves held clear of the water) is part of the Proteales and one of the eudicots along with, among others, the Ranunculales.

Chloranthus japonicus (above) and *C. sessilifolius* 'Get Shorty' (left) belong to the Chloranthales (another of the orders of paleoherbs close to the Magnoliales) that have species suitable for, but not particularly common in, the garden.

Saruma henryi from the Piperales is in a subgroup that also contains *Asarum* and *Aristolochia*.

herbaceous plants so interested botanists that the term ***paleoherb*** was coined for them – a term to remember for your next garden tour. Included are the Nymphaeales (the very familiar waterlilies) and the Piperales which includes many herbaceous species dear to gardeners, including the genus *Asarum*, with its many small species suited to shady rock gardens, and the striking *Saruma henryi*. Another peculiar plant in this assemblage is the impressive eastern Asian bog and pond plant *Saururus chinensis*, and its larger but less showy American relative *S. cernuus*. Even more exotic looking are the hardy small herbaceous species of *Chloranthus* in the Chloranthales, such as *Chloranthus sessilifolius* or *C. japonicus*, which make superb shade plants.

One interesting fact about these paleoherbs, and also the woody plants in the assemblage, is that many of them have their flower parts in 3s (and 6s) just like monocots, and unlike the true dicots (the larger, lower group of dicots) that typically have flower parts in 4s and 5s. But it is simply fascinating to realize that these plants, the paleoherbs and their close woody relations such as the Magnoliales, are direct descendants of flowering plants that shared our Earth with the dinosaurs.

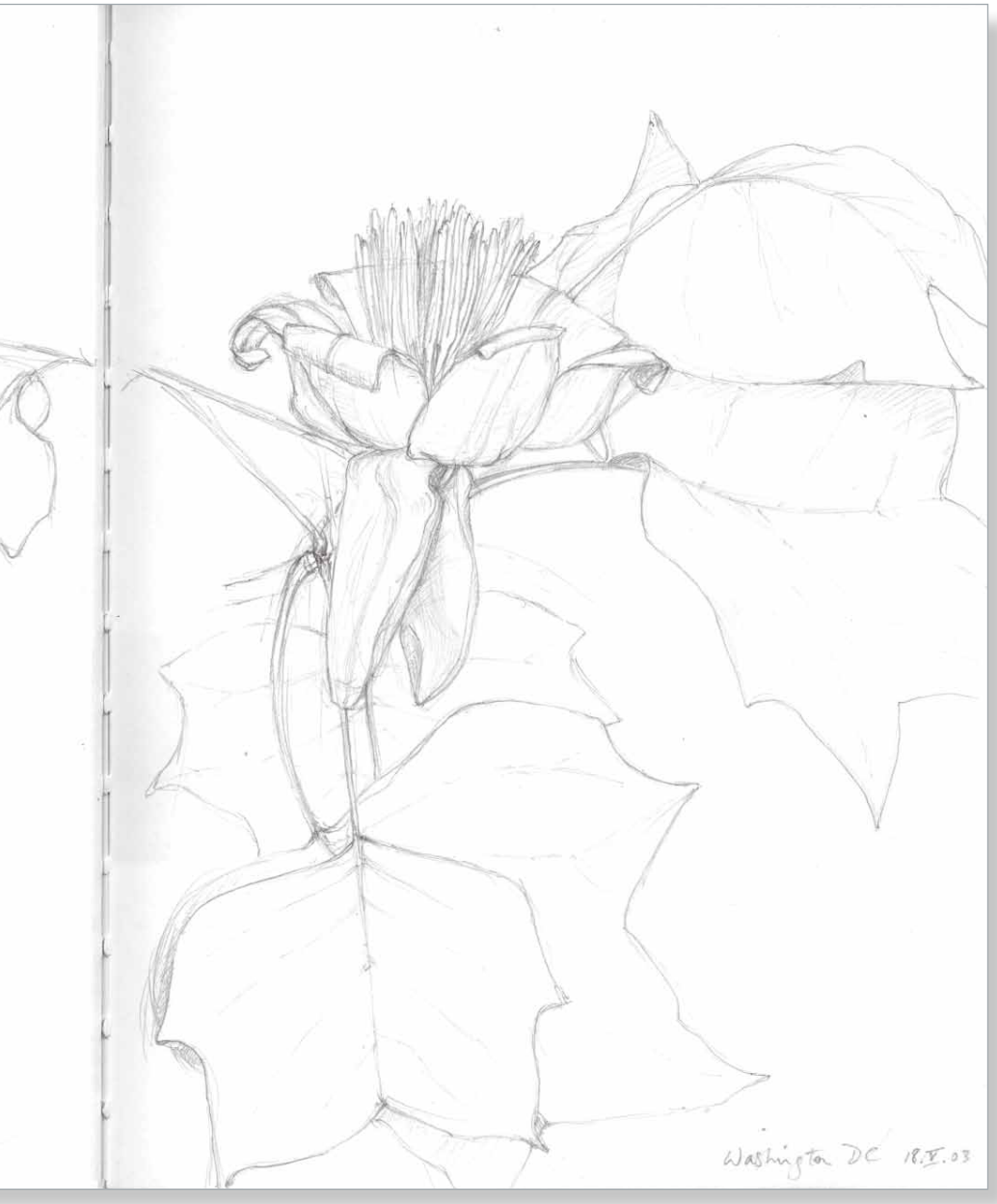
Fortunately, shifting the large-scale affinities of plant orders, does not change the names of plants, as we are dealing with ranks far above the genus. But many examples exist where applying the phylogenetic trees to classifications do result in shifts that change names, based on the principles outlined here. Because these changes are based on directly reading the genome, there is a strong hope that this period of changing names will usher in a time of greater stability, at least for well-studied temperate plants. And take heart; no matter that the plant's name changes, or that it is put into a different family, its cultivation requirements stay the same.

NOTES

1. Once it is recognized that *Dodecatheon* is a branch of the genus *Primula* then it becomes obvious that the genus *Primula* is paraphyletic unless *Dodecatheon* is included and the species in it renamed as *Primula* species. In most cases, although certainly not all, the *Primula* name for previous *Dodecatheon* species is a more-or-less straight change. *The Flora of North America* (the Primulaceae are in vol. 8 and also on-line) discusses this (vol.8 pp.268-269) and gives the *Primula* synonym for each species in the discussion of each species.

2. For those who are interested in just what the arcane rules for botanical nomenclature are the *International Code of Botanical Nomenclature* can be found online. The most recent edition available online is the Vienna Code (search for "ICBN Vienna".) A more recent Code (the "Melbourne Code") has been completed but is not yet available online or in print.

PICTURE CREDITS: *Magnolias*, *Dodecatheon*, water lilies, and drawing of *Liriodendron* - Malcolm McGregor; *Schisandra* - Scott Zona; and *Saururus*, *Chloranthus*, *Saruma*, and diagrams - Tony Reznicek.



Liriodendron (tulip tree) is a member of the Magnoliales, one of the orders of primitive dicots widespread in North America

This general view of the fall prairie taken 6 September, shows diverse composites woven into a tapestry.

Jennings Prairie:
A Remnant Thrives in Pennsylvania

Martha Oliver
Photographs by Charles Oliver

THE HISTORY OF Jennings Prairie goes back thousands of years. Immense glaciers scoured the earth, removing soil and exposing bedrock. Fine sand, silt and clay particles from glacial meltwater settled

Cornus sericea displays brilliant fall color and white berries.

Liatris spicata is the characteristic species for the prairie. Note the tall trees embracing the site.

in prehistoric lakes, forming new soil at the southernmost edge of the glaciers; Jennings is located at this edge, about 45 miles north of Pittsburgh.

Changing climate conditions resulted in a warm, dry period, which allowed prairie plants to colonize the Midwest into Pennsylvania. Gradually the climate became cooler and wetter, more closely resembling the weather today. Eventually, through succession, forests replaced all but a few prairie sites in Pennsylvania.

Otto Jennings discovered the site in 1905 and was able to convince the Western Pennsylvania Conservancy of its merit, preserving a relict 20 acres, the only publicly protected prairie ecosystem in the state. It is now managed by the Department of Conservation and Natural Resources.

The Jennings Prairie remains due to a thick layer of impermeable clay underneath a thin layer of soil that prevents most tree species from becoming established. Plants and animals that do live on the prairie must tolerate shallow soils, fluctuating periods of drought and

saturation, and fire. Even under these harsh conditions, this ecosystem teems with life. It is the home of the endangered massasaugua, a rattlesnake species pretty much at the north-eastern limit of its range, and the prairie is managed with this species in mind (sections are burned every third year on a rotating schedule).

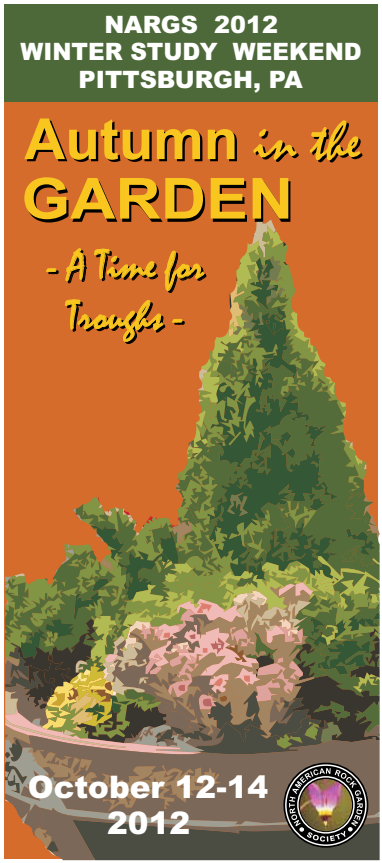
Visitors to the prairie in late July and early August come to see *Liatris*, the blazing star, with tall spikes of purple flowers which are irresistible to butterflies. Asters and sunflowers bloom throughout the fall. The tall *Veronicastrum virginicum* blazes with white candles and the wet places offer *Asclepias incarnata* and *Monarda didyma*. The prairie has become a center for environmental education for local schools and colleges.

Charles and I always took our Native Plant classes there as part of the field trips associated with their Landscape Architecture curriculum. We didn't mention the rattlesnake until they were already on the trail, because by then they were so thrilled with the way the place looked that they weren't particularly concerned. The paths are wide and closely mown, but the experience is walking between two high walls of dense foliage. Big bluestem grasses tower over the shorter forbs. The prairie is surrounded by large trees and crossed by many paths that are well marked.

The plants' roots have woven a dense mat that holds water and keeps them upright, since the roots cannot penetrate the heavy clay. The ability to withstand hot dry periods is a must for these species. Blazing stars form small corms which function as bulbs, retaining moisture and nutrients during drought. Other species have developed thick roots which function as anchors and reservoirs. We think of prairie plants as having long taproots but in this case it isn't so.

Attendees at the NARGS Winter Study Weekend in Pittsburgh in October will have the opportunity to visit Jennings Prairie.

Registration details on page 183



Carl Gehenio with son John

Carl Gehenio, 1922-2011

IT HAS BEEN about thirty years since we met Carl, and we immediately recognized how talented he was and we became very good friends. He had a great influence on us. His plants were always beautifully grown and the stars of the show table. He was very generous providing instruction and insight into the propagation and planting of these alpine plants to anyone who was interested in learning more.

When we first met Carl he was in his *Primula auricula* phase. He grew thousands of auriculas looking for the perfect plant. He grew hemlocks from seed and propagated thousands of heathers. He planted a roadside slope made of mill slag with hundreds of heathers and produced a beautiful garden. He had his own named heathers and hemlocks. Another of his favorites was the *Allium perdulce*, grown from the few bulbs he personally got from Claude Barr. The descendants of these first bulbs are still thriving today. Another lifelong project was propagating *Anchusa caespitosa*. This was an amazing feat because many nurserymen bemoan the fact that they could not keep this plant going. Carl kept them going for over thirty years.

Carl was multitalented, he was an excellent rock garden designer and builder. When he was over eighty years old he built a garden with slabs of rock removed from the stream near his house. That garden was planted with choice plants and thrived.

Carl Gehenio spent his early years living in Tarentum, Pennsylvania, along the Allegheny River in the rolling hills of southwestern Pennsylvania until he entered military service as a member of the Army Air Corps in World War II. He served in Germany and also spent time in Scotland. It was while he was in Scotland that he developed an intense interest in rock gardening. During this time he developed lasting friendships with several like-minded gardeners.

After discharge from the military he returned home and by 1956 he had built a small cottage house alongside a small stream with a thirty foot waterfall trickling into the stream just a few yards from the house. Carl and his wife raised their family here and lived there their entire lives.

For his first rock garden, Carl enlisted the aid of his children to help drag large boulders from across the road to construct a wonderful garden. That garden was planted with numerous different conifers and many alpine gems. The garden and the conifers have matured and it is still an outstanding garden.

Over the years he nurtured hundreds of Japanese primulas, trilliums, hepaticas, tiarellas, *Sanguinaria canadensis*, *Caltha palustris* and other wildflowers to plant the streambed above his waterfall. Today that streambed is a blaze of color in the spring.

There was always a well-tended vegetable garden which produced an abundance of produce for summer use as well as canning and preserving.

Most impressive of all was the greenhouse where Carl worked his magic with his beloved alpine plants and wildflowers. One summer Carl decided that the old greenhouse needed replacing. At about this same time his daughter became ill and Carl dedicated all of his energy into her care while he maintained his greenhouse. After his daughter's death he rebuilt his greenhouse and continued to propagate. There were always hundreds of well grown plants blooming in all sorts of colors and filling the air with wonderful fragrances. There were always many *Dionysia* in February showing that even the most demanding of alpines can be grown with his sort of passion. He built small troughs he called "jewel boxes" and when they were planted up, they were indeed jewels.

The most amazing fact is that Carl was entirely self taught. Over the years as he became a consummate propagator his reputation across the United States and England grew. There are lewisias being marketed as *Lewisia* 'Gehenio strain' and his selection of *Dianthus* 'Minimounds' is still available from several growers.

Carl has been a member of NARGS since 1963. He has been presented with the Award of Merit and in 2009 he received the Linc and Timmy Foster Millstream Garden Award. His main goal was always to teach others about alpine gardening. There are many things that we would like to say about Carl, but the most important is that he was our very good friend and we will miss him dearly. *John and Paulette Zabkar*

Rock Gardening Roots

Abbie Zabar

ALPINE PLANTS DIDN'T mean a thing to me back in 1997 when I first read "The Stone Trough, From Sarcophagi To A Home For Alpines In Our Gardens."

Yet that story from a Pennsylvania Horticulture Society's publication, *Green Scene*, still holds a place of honor in my files. Because of the gorgeous carved stone troughs? To a container gardener – one who will consider a pot before the plant – we were talking.

For Bobby Ward, past-President of the North American Rock Garden Society and current Executive Secretary, what hooked him on rock gardening was attending a NARGS Winter Study Weekend in North Carolina, chatting with members, marveling at slide show images, watching demonstrations, and ultimately returning home with a whole new collection of vegetation. And Bobby says he "still has give-away plants from that meeting: *Chamaecyparis obtusa* 'Nana' and *Cyclamen coum* with deep magenta flowers, which I view from my library window each winter,"proving that alpines for southern gardens is not an oxymoron.

For Harvey Wrightman, who along with his wife Irene started Wrightman Alpines, a nursery in Ontario, Canada, it was "seeing a 'most perfect alpine meadow' – where ten-feet of snow is the norm."

"I started gardening in 1996, completely ignorant of anything other than vegetables," says Peter George, who lives in an 1837 Greek Revival house in the 'Historic District' of Petersham – a town of fifty-three square miles in north central Massachusetts with a population of 1100 people – on a perfectly flat four acres, which he bought because his family had horses. "When the horses died – after long and happy lives – it was time to use the land differently, so the gardening evolved. One of my friends here in Petersham was a rock gardener; he thought I should be as well. Together we dug out a relatively small area on the south side of the house adjacent to my driveway and started a 'rock garden.' With his continued help it grew. Each year I got more interested and as my success increased, I expanded. I was attending Berkshire Chapter meetings, and after a few years hanging around with rock garden luminaries like Lori Chips, Nick Nickou, Geoffrey Charlesworth, Anne Spiegel, Elisabeth Zander I actually began to get 'good' at this gardening stuff. I took on a few jobs at the Berkshire Chapter and sixteen years later, I now have a pretty substantial group of rock gardens." No less an accomplishment, Peter George is the current President of NARGS.

"In my case," says Gelene Scarborough, Curator of the Alpine Area and Wild Garden at Wave Hill, a 28-acre public garden and cultural center

in the Bronx overlooking the Hudson River and Palisades, "I first got interested in alpine and rock gardens as an intern at Wave Hill: I would wander up to that trough garden area whenever I had the chance."

John Rommel, lifetime Member of NARGS, is going with his gut and tells me it was probably a display at a late 1980s Philadelphia Flower Show that caught his attention, "not for any re-creation of a garden or style, but because it was so well realized."

One of my favorite harbingers of spring is the annual NARGS alpine plant sale at Stonecrop Gardens, a public garden in Cold Springs, New York, where Caroline Burgess, the Founding Director since 1988, says "It all started when I was a student at Kew, maybe a little before when I worked with Rosemary (Verey), went to the RHS gardens at Wisley a lot, loved the alpines house and all the troughs and of course the rock garden is so impressive. Loved the RHS shows in London too. Then at Kew I worked in the alpine department for nine months, on the rock garden, in the greenhouses, and taking care of the alpine collection under glass on weekend duties. I was a member of the Alpine Garden Society and used to go to all the shows and visits. As a student we got to help at the RHS shows and one time I was helping on the Alpine and Rock Garden Committee – fantastic seeing all the plants being showcased and awarded AGM's! Also, at this time I was lucky enough to stay with Valerie Finnis and her husband Sir David Scott on weekends, doing propagation, potting up, weeding all the alpines; we gardened from dawn to dusk. I feel very lucky to have had such great opportunities with experienced and knowledgeable people."

Katherine Powis, says she "was originally attracted to the beautiful illustrations in the *Rock Garden Quarterly* at the Horticultural Society of New York," where she was the librarian for twenty-one years. "They were usually plants that were new to me, and soon I began reading it selectively. I was fascinated that the same plants that cling to mountaintops in far off places can thrive in this concrete jungle we call home. I've particularly enjoyed reading passionate debates about what exactly constitutes a rock garden. My research indicated that this question has plagued devotees right from the start."

Lori Chips, Alpine Plant Manager for Oliver's Nursery in Connecticut, remembers that she was "lucky enough to work in the Rock Garden at the New York Botanical Garden under the curator, Bob Bartolomei," and being the sharp student she is Lori was "naturally attracted to the unusual and the exotic." As well as the near impossible, if I know Lori.

The eminent biologist T. Paul Maslin, who died in 1984, taught at the University of Colorado in Boulder and was the founder and first president of NARGS Rocky Mountain Chapter. "He was my near neighbor growing up with the most beautiful garden in Boulder. He became my mentor and best friend," wrote his then young protégé Panayoti Kelaidis, who is now Senior Curator and Director of Outreach at the Denver Botanic Garden, where rocky outcrops are laden with at least 4,000 plant species, and Panayoti knows the provenance and understands the needs of each of his expatriate charges. "I was aware of the Maslin Garden from the time I was a very small child. It was utterly unlike any garden I had ever seen: rather than a conventional lawn, it had a sloping mass of kinnikinick in the front yard surrounded by lush borders of strange shrubs and trees. I could glimpse through the carport an astonishing back yard: steep berms studded with rock gardens, what looked like a pond and a multiplicity of fascinating trees shrubs and flowers, endless flowers. I yearned to find a way into that garden through most of my teen years."

Although Brendan Kenney has been a member of the Manhattan Chapter and NARGS since 1995 his early garden memories are of the Mid-west. "While growing up I was surrounded by various landscapes. The oak-sugar maple woods were behind the house and the planted landscape appropriate to our clay soil to the front and sides, while across a meadow the lush green landscape of the golf course lurked. The woodland and its plants were what I found more appealing. The monoculture of the nearby cornfields held little interest. The mythical landscape of the rock garden was known to me only in my mother's fond memories of the Easter sunrise services at the Moravian Church in Hope, Indiana in the 1930s and '40s, where their attentiveness to horticulture, even in the cemetery, is historical. The first rock garden that I encountered was at the Botanical Garden in Berlin in 1979 (Brendan is – conveniently – fluent in German; as well as French and Italian and with "abilities in Spanish, Polish and Czech," he modestly adds.) I was enchanted walking 'through the various mountain ranges' as the plants are systematically divided and displayed in a natural manner. Many years later, meeting Steve Whitesell – then the new Chairman of the Manhattan Chapter of NARGS – led to the end of my journey. I have never met anyone else who had such similar interests to mine. Steve's enthusiasm persuaded me to attend the 1996 Eastern Winter Study weekend and astounded by the feast of people, plants, knowledge, and experience, I was hooked."

Jody Payne, Curator of the Rock Garden and Native Plant Garden at the New York Botanical Garden, said "I had a rock garden when I was

ten years old. I bought plants from the Farmer's Market in Ann Arbor, Michigan because I like things that are small. I remember especially loving columbine and being disappointed when it grew bigger."

Lola Horwitz, one of the founding members of a new rock garden chapter, recounts, "I was still a professional pianist when I became interested in rock gardening, drawn in by my second cousin, Augustus 'Gus' Kelley who was the publisher of Theophrastus Press offering reprints of rock gardening classics. So at his urging – maybe 1983 – I joined NARGS. Happily, a while later the Horticultural Society of New York offered a bus trip to Linc and Timmy Foster's garden, and I happened to sit next to another NARGS member whom I hadn't known but immediately liked: Larry Thomas. His enthusiasm for rock gardening was such that he gathered a core group together and founded the Manhattan Chapter."

I sat next to Tom Stuart on one of my first rock garden bus trips. I remember him prophetically telling me that I would soon be working on a computer, as well as gardening in troughs. "At the age of eight or so," Tom says, he "had a small garden in the back yard, all annuals. It wasn't until nearly forty years later I moved from city to country and when I first saw the house and yard, it was the last week of March and pretty drab, as befits any very early spring day. Since there was no background to draw on, I began reading. Voraciously. One of my favorites was Louise Beebe Wilder with accounts from her Bronxville home and another garden in Pomona (near Harriman State Park), first published in gardening magazines and then recycled into nine books including *Pleasures and Problems of a Rock Garden.* Arguably our finest garden writer, this book did a lot to set the stage. Omnivorousness in reading apparently leads to omnivorousness in plant acquisitions. One soon runs through the plants at the garden center and the next step is ordained to be mail order. One follow-up was nurseryman Don Hackenberry in Reedsville, Pennsylvania. His one-man, now-defunct, Appalachian Wildflower Nursery produced a single mimeographed sheet each spring and fall. The first arrival stunned me. I did not recognize a single plant on the list. That opened up a whole new world. I had so many questions, I offered a few days work for Don, and went to Reedsville. The nursery was the back yard; the operations center was the house that he shared with his mother on that three-quarter acre lot. The trip had two benefits. One was a visit to the nearby garden of Norman Deno, retired professor and fanatic grower, and a site that showed me what a couple of decades of obsession could produce, such as a fine bed of Lewisia tweedyi of which Norman was very, very proud. Needless to say, I had no idea what it was. It made me feel challenged. The second was Don's insistence I join the American Rock Garden Society."

Matt Mattus is a member of the Berkshire Chapter; he's also a designer, plant collector and author of one of the web's most popular gardening blogs, *<www.growingwithplants.com>*. "I was raised in a home that sat on land where three generations have gardened since 1910. My childhood gardening experience included everything from plots of vegetables to formal beds of perennials. Yet my mother's rock garden was just that – a garden, with rocks. Delightful, but sadly inauthentic I was soon to learn at my first summer job, where I had the laborious task of systematic maintenance and day-to-day care of a renowned collection – silver saxifrages, lewisia species, gentians – all planted in an elaborate tiered tufa rock wall at a private estate. With tweezers in hand I weeded the minutia of tree seedlings and unwanted grasses from within the buns and tufts of plants that I knew little to nothing about. But even at seventeen I could appreciate the skill required to grow these true rock plants. Yet as the Head Gardener informed me, 'Like watercolors, one should not expect success with alpine plants, until one is over fifty.' I joined NARGS at age forty, nearly ten years ago. The way I see it, success is within my reach."

Michael Riley, Chairman of the Manhattan Chapter and an "off-and-on member of NARGS" but finally a Life Member around 2008 says that his attraction to rock gardening was "the concept of perfect little plants growing in the midst of beautiful rocks, which seemed to be a very inhospitable climate. Besides I liked the rocks as much as the plants." But that was only after moving to New York City because, "I had previously only seen plants growing in rich Indiana topsoil, though I was already familiar with gesneriads and knew that such a seemingly delicate plant as *Ramonda* could be hardy outdoors. That challenge inspired me to create my first rock garden – about three rocks – in my back yard on Eighty-second Street."

Francisco Correa's sole gardening experience was watching his mother tending to her few 'common' plants in pots, as well as some fruit trees that his father set in the ground around their rural house in Michoacán, Mexico. "I am not a member of any rock garden society," says Francisco, "but I really like the trips that I have done with my partner, (Michael Riley), to all of those rough weather places where these wonderful plants are living and actually thriving. I love to see them in their own natural environment."

Pamela Harper, the author and photographer, arrived from England in 1968, began gardening on two acres near the tidal creeks of Virginia's Chesapeake Bay, while discovering that rock gardeners – unequivocally and unapologetically –"are the best gardeners."

Steve Whitesell, the Editor of the Manhattan Chapter Newsletter, *The Urban Rock Gardener* has been a life member of NARGS since turning forty, "betting on longevity to make it worth the cost," and flat out agrees with Pamela. "That was also my attraction and I sincerely believe it's true," adds Steve. "Sometimes garden groups are about the lunch, but not with them. It's always about the plants and how to grow them, even the most challenging and near impossible."

Janet Mavec and Wayne Nordberg have a quintessentially gorgeous New Jersey farm. Nevertheless they worked with the renowned Spanish minimalist landscape architect, Fernando Caruncho, to create a master plan for their 100 acres. And because "You cannot fight the rocks in some areas of your property – why not learn how to make them look cool?" was Janet's thinking.

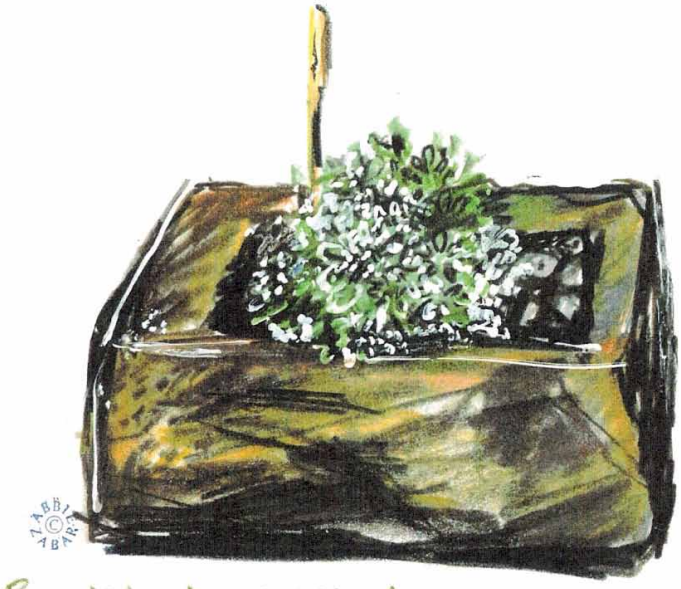
The author, Amy Goldman, a leading advocate in the movement to preserve the agricultural heritage and genetic diversity of heirloom fruits and vegetables, writes "I fell in love with rock gardens whilst hiking the Inca Trail in Peru over thirty years ago. We camped out in the jungle in old ruined stone houses with exquisite orchids growing through those amazingly small, yet perfectly fitted, rocks," before continuing "but really it was you, Abbie, who got me roped into this rock gardening world."

So, in a leap of faith, I'm cultivating an urban garden in containers on the roof of a steel and masonry building. And even if New York City skyscrapers are built on Manhattan bedrock, and even if I'm of the "Alexander Pope School of Landscape Design," which follows the line that a garden must be sympathetic to the context in which it is located, installing rock formations up here would have been a disingenuous stretch. Surely a no-no.

Yet I had the attitude, the altitude, the hard driving winds, and the unforgiving sun. If I wanted to work with the "genius loci" of the site, as the seventeenth-century essayist and designer of gardens advised, I was halfway there already. Collecting old stone troughs or creating new ones from power drilled-out urban cobble stones became an ongoing passion; all I was missing were the plants that thrive in compromising environments and for that I needed more information.

The librarian at the Pennsylvania Horticultural Society suggested an article in the *Rock Garden Quarterly*, "A City Terrace Garden," and to quote the byline, "Lawrence B. Thomas gardens on an eleventh floor terrace in New York City. He is a stalwart of the Manhattan Chapter of NARGS and its Newsletter Editor."

I read the piece and, right away, opened up a Manhattan phone directory – though any kid born and raised in New York City should



Recycled urban cobblestone with tiny rosettes of 'Minutifolia' Saxifrage

know better. We had an okay talk, even if it was the wrong Mr. Thomas. Ultimately the real Lawrence Thomas became a loving friend, a mentor, as well as sponsored me to be a judge at the Philadelphia Flower Show. Time and again he would say the crowning moment that turned him on to rock gardening was "Seeing Marjorie Walsh's vertical tufa wall outside her kitchen back door in Maine, planted with Kabschia saxifrages. In bloom." It's no wonder I went to my first rock garden meeting at Larry's invitation. The speakers were British, they were his houseguests, and as I remember, they were auctioning off a copy of the Sunday Mail's coverage of Charles and Diana's wedding. Nonetheless, still believing this was an organization of serious gardeners and that you could learn something from these people, I joined.

However, at the next few meetings I looked, listened, and never said "boo." It didn't matter that for the last two decades I was pruning fourteen-foot high hornbeams and fastigiated yew into green architecture that mimicked the skyline while limbing up branch-entwined hawthorns that served as windbreaks on my well-documented Manhattan duplex penthouse terraces. And though I was also fascinated by the way some low-growing sedums and rosettes of sempervivum – even the *fraises des bois* – were taking root in nothing

more than the grit covering the roofing membrane, that's as far as it went.
At the same time I was cultivating a weekend herb garden in a seaside meadow on Nantucket Island. There were thyme paths, reined in by lavender edgings, antique roses galore, and billowy clouds of aged boxwoods encircled by germander hedges, plus I don't-know-how-many herbs were loaded and stacked into vans that made the ferry trips over from the mainland. In retrospect, plenty of those plants could be rock garden candidates but I was clueless. Rock gardening was a new world to me in 1997 and here was a group where no self-respecting member called a plant by its common name, and I didn't speak the Latin.

Ultimately I would pick up some of the mother tongue. As well as a collection of the most engaging, irascible, and idiosyncratic plants. I fell for them hard, yet I think Mr. Pope would be proud. With every new addition to my "troughery," I'm getting closer and closer to a Manhattan rock garden *in situ*.

A setting of rock garden plants in English troughs & New York City cobblestones. Each container is planted with a single variety alpine.

Opposite: *Aconitum* 'Red Wine' is one of the intriguing climbing monkshoods

Plants that dazzled me in 2011

Grahame Ware

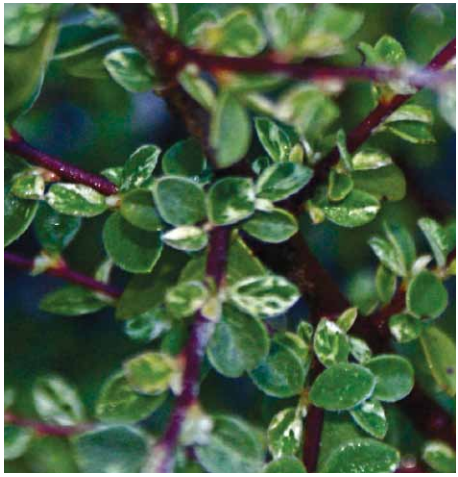
LIFE WOULDN'T BE worth living if it wasn't for the beauty of plants – both foliage and flower. It seemed that 2011 was the best year in quite some time. It had been two years since I established a garden here at Yellow Point (on the east coast of Vancouver Island) and plants will take at least that much time to get into the groove. It has been a struggle adjusting to my sandstone woodlands. Besides just out-and-out bullwork (removing sandstone, wheelbarrow after wheelbarrow), the principal amendments required are composted fir bark (two years) and mineral-rich, coarse sand. On the other hand, I had my first greenhouse to work with and this proved to be quite a boon.

***Cotoneaster* 'Straight Up'**

After 10 years of nurturing this and moving it from the harsh clime of the North Okanagan to Yellow Point and moving it again from its first location here, my patience and intuition of its cultural requirements was rewarded with the first flowers and, naturally, the first berries. I had collected seed of this plant in China in September 2000 at the

Cotoneaster 'Straight Up'

foot of the Me Li glacier in northwest Yunnan and two seedlings germinated in 2001. It shocked and delighted me last year when it developed speckled variegation – just like that. It has proved stable. My abiding interest in this genus has sparked a relationship with the world's leading authority on the genus, Jeanette Fryer. She has sent me seed of many new species and I have placed them in plastic zip lock bags to began the slow process of germination. Even with the aid of her wonderful book (with coauthor Bertil Hylmö), *Cotoneasters: A Comprehensive Guide to Shrubs for Flowers, Fruit and Foliage*, I have been unable to identify what species I have in *C.* 'Straight Up'. She is going to get some seed and grow it to see for herself. As you likely guessed, it is fastigiate and simply an unofficial "working" cultivar name that I gave to it.

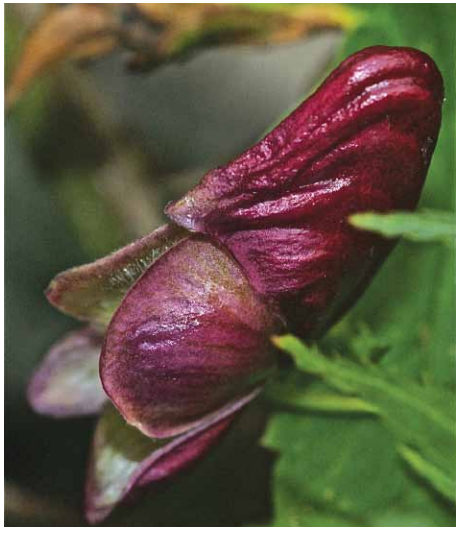


Speckled foliage of *Cotoneaster* 'Straight Up'

***Aconitum* 'Red Wine'**

I received the seed of this cultivar from Jonas Bengtsson, in Sweden, who in turn had received it (via Göteburg Botanic Garden) from Shanghai Botanical Garden. I had come into contact with him as a result of my article in the RHS *The Plantsman* in 2006 about the climbing *Aconitum*, and he was kind enough to send me seed and I was able to start off about 20 seedlings. They never did anything dramatic in the North Okanagan but at least they lived. The rhizomes are slow to build size anyway but finally this year one of the plants flowered and, oh, what a show it was. I was able to collect a little of my own seed. This after 6 years. I would expect to have

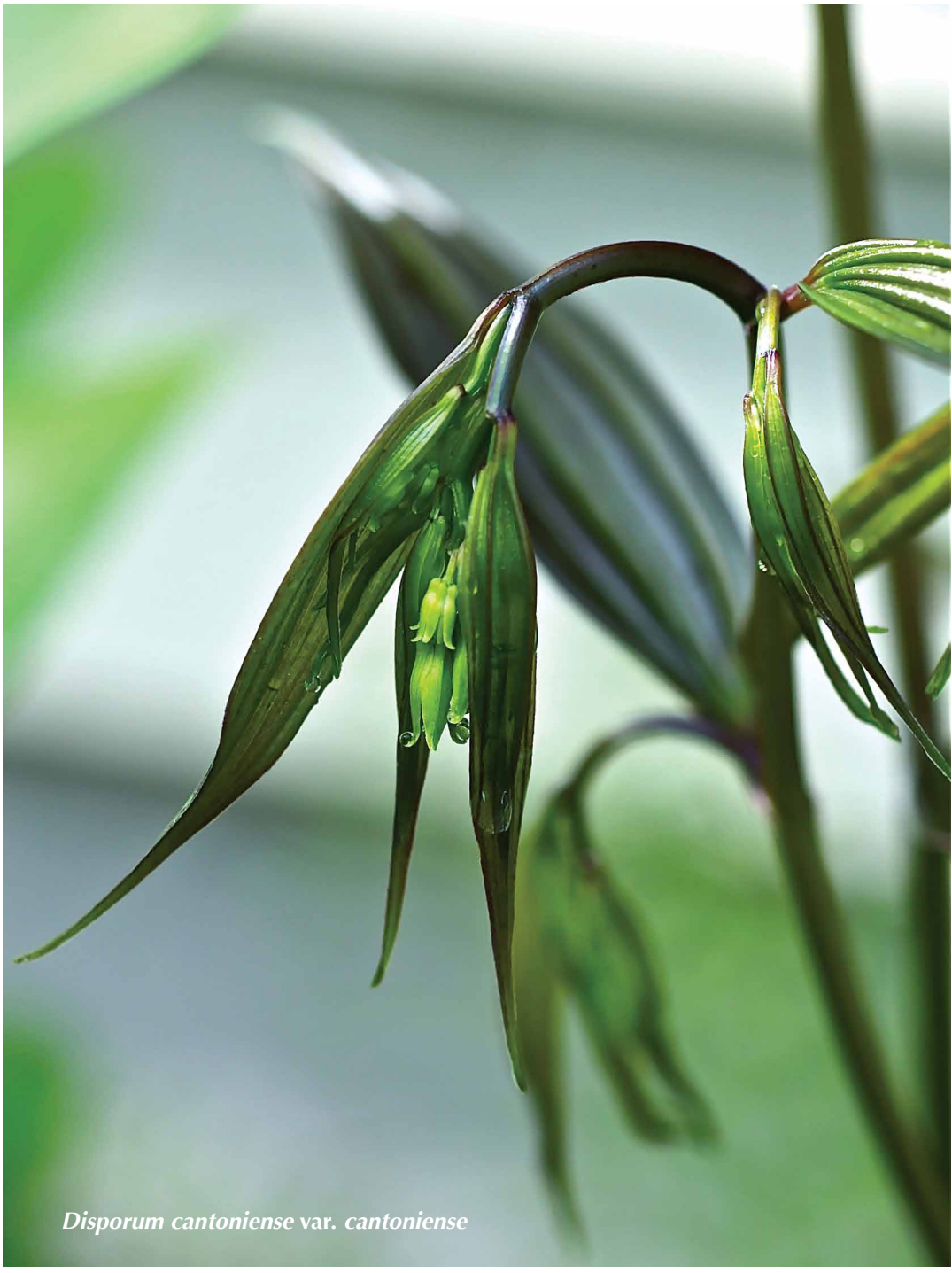
Individual flower of *Aconitum* 'Red Wine'



Asarina procumbens compact form

more of them flower for me in 2012 and I will have a few plants for sale. Jelitto is now selling 'Red Wine' seed for 8 Euros/packet.

Asarina procumbens compact form
I admit that I was rather dubious of the credibility or status of this "compact" form when I ordered seeds from the 2010/2011 SRGC seedex as lot #570. Gratefully my doubts were soon dispelled come June when it flowered. This was not the spawling, sticky beast that I'd previously grown. No, it was the "compact" form that really was compact and a damned fine plant because of that mere fact. It certainly is a far better rock garden plant than the type. The last 150 years has seen writers on alpines like Sutherland, Robinson, Clark and Farrer all mention it as good or useful so it certainly is no stranger to our collective gardening consciousness. The compact form is, however, relatively new to cultivation and try as I might to discover its origins, it has been to no avail. Wonderful plant.



Disporum cantoniense var. *cantoniense*

Disporum cantoniense* var. *cantoniense

I received two different accessions of this plant and they turned out to be the same thing. Over the course of last winter I delved deeply into this genus to discover more and was lucky enough to read the original monograph by David Don (1839) and 150 years later that of Hiroshi Hori. This led me to conclude that this ever-popular genus was underserved by taxonomists. As a result, the horticultural veracity of *Disporum* was a mess. The December 2011 issue of *The Plantsman* has struck a chord for clarity with the in-depth article by Bleddyn Wynn-Jones and Julian Shaw. Together both grower and botanist have sorted things out largely using the template provided by Hori. Well done guys. My only complaint was that it wasn't long enough. But back to my plant. I was able to identify it because of Hori's posthumous monograph published in 1988. *Disporum cantoniense* var. *cantoniense* is a superb plant that should be in every woodland garden because of its substance (about 3 feet tall), grace and colour. It is January as I write this and it still looks as fresh as it did in June with a few blue/black berries persisting.

Achillea holosericea

Seed from Mojmir Pavelka proved viable and I was able to get about 12 seedlings under way. The form and the colour are excellent – a bright, strong yellow on strong stalks. I grew it in the roughest and poorest section of my garden in full sun. It flourished. I was able to collect seed and share it with the Alpine Garden Club of BC as well as the Scottish Rock Garden Club.

Achillea holosericea

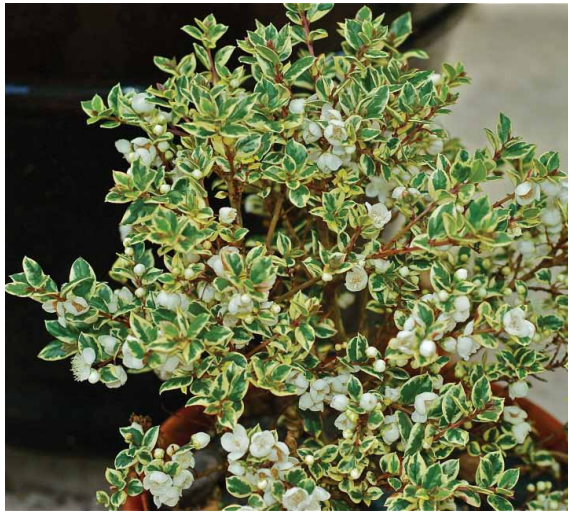
Roscoea humeana

I really like this plant. Other species in this genus want more acid and peaty conditions as well as more shade, but unlike its more commonly available species brethren, *R. humeana* takes lime and likes more sun. This is good news for all of us on the east coast of Vancouver Island where basalt rules geologically especially along the shores of this emerald isle. This hardy member of the Ginger family is a robust rebel and is jauntily thriving in the bed that gets just morning sun (but a whack of it as it builds to the flowering stage in late spring). I have planted more seedlings out into various positions and expect to have more for sale this year. I'm also attempting to get more forms of this species and some of the others as I think they have a lot to offer the woodland/alpine gardener. Many of the typical species that we see in our gardens (especially *R. purpurea*) are not that good, especially seed grown plants. I'd advise looking for selections of good cultivars and ones that flower over a longer period such as 'Kew Beauty' and 'Vincent'.

Roscoea humeana

***Luma apiculata* 'Glanleam Gold'**

I bought this woody beauty from Brentwood Bay Nursery in Saanich (just outside of Victoria, British Columbia.) I was surprised at how floriferous it was in a terracotta pot. The variegation is just exquisite and it has a compact habit. *Hillier's Manual* (1992) says that the Chilean native, one of only two species in the genus of the myrtle family,



Luma apiculata 'Glanleam Gold'

originated as a seedling at Glanleam House on Valentia Island in Co. Kerry, Ireland, about 1970. Thanks go to *horticulteur* Robin Dinning, for bringing this one to Van Isle.

***Gladiolus* 'Passos'**
I could not believe what a beautiful flower this 'novelty' glad had - and it's so floriferous as well. It really is an ace container plant but I have planted some bulbs out in the open ground where I have a lot of drainage. I will be acquiring and using many more of this type. I think they are terrific.

Gladiolus 'Passos'

ADDENDA:

Of course there were more that I could have put on my list but I'll just give honourable mention to the following (not in a ranking order):

1) *Epimedium* 'Yubai'. Loads of strong pink flowers over great foliage.

2) *Aconitum saxatile*. There's nothing like it (except possibly *A. jaluense* of which it *may* be a synonym.)

3) *Aconitum carmichaeli*. Always the best plant in the garden in October. Both this and the preceding are herbaceous, not climbing, species.

4) *Mukdenia rossii* and cultivar 'Crimson Fans'. Soon-to-be-staple woodlanders.

5) *Syneilesis aconitifolia*. Foliage, foliage, foliage and great flowers too!

6) *Saxifraga* 'Clarence Elliott'. An old chestnut that continues to dazzle.

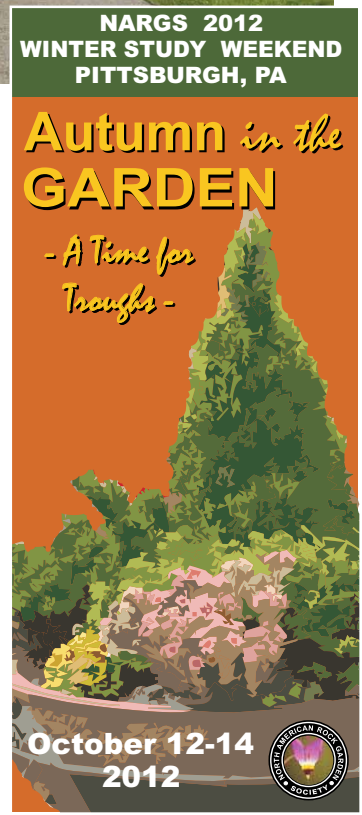
7) *Heuchera* 'Zoot Suit'. My new favourite hybrid and my own!

Hosta 'Blue Mouse Ears'

8) *Hosta* 'August Moon'. Completely dependable and stout hosta.

9) *Hosta* 'First Frost'. Very classy newcomer and the American Hosta Growers Association "Hosta of the Year" in 2010.

10) *Hosta* 'Blue Mouse Ears'. Thick yet small leaves with good flowers – "Hosta of the Year" in 2008.



Phipps Conservatory

THE PHIPPS CONSERVATORY in Pittsburgh is one of the largest glasshouse complexes in the world and there is an opportunity to visit it during the Eastern Study Weekend in October. The original glasshouse was constructed in 1893 and was then stocked with plant material from the World Columbian Exposition which had taken place in Chicago. Many additions and changes have taken place since: from the South Conservatory in 1896 to an "aggressive multi-year expansion plan" from 2003 to the present which has added the Visitor and Welcome Centers, Tropical Forest Conservatory, and extended production glasshouses. The surrounding gardens have also been extensively remodelled. Our visit will coincide with the fall Chrysanthemum Show.

Details of Registration can be found on page 183

Rock and Ink Struck into Flowers - a Response

Brian Bixley

IN HIS ARTICLE, "Rock and Ink Struck into Flowers" in the Fall 2011 issue of the *Quarterly* (vol. 69, #4) Robin Magowan writes, "The Canadian gardener Brian Bixley once asked whether it is possible to create a 'great' garden without substantial wealth. Try as I might, I've found myself unable to grasp the lure of a 'greater perfection'. . . You can make an excellent garden on a small urban lot, or the deck of a suburban home, or the windswept terrace of a Manhattan apartment" (p.346).

I read anything that Robin writes with great pleasure. He writes about gardening with a poet's pen, while his poetry is, happily, uncorrupted by his gardening preoccupations. I think he is making two points, that he is not much interested in the idea of better and worse when it comes to gardens ("unable to grasp the lure of a 'greater perfection'"), and that even if he were, he sees no link between wealth and 'greatness' in gardens ("You can make an excellent garden…"). These two points are in response to a passage in my *Essays on Gardening in a Cold Climate*, reviewed very handsomely in the NARGS *Quarterly* by Robin himself. Let me consider the points in order.

Few of us are indifferent to judgments of value, especially when it comes to the arts. We – and I shall return to that 'we' – accept that Mozart was superior to Salieri, Beethoven to Dittersdorf, Shakespeare to Beaumont and Fletcher, Monet to Cassatt. It might be safer to say that there is a 'set' of painters, composers, playwrights and poets who are judged to be greater, in their fields, than the rest of us, the left-over set. Perhaps Robin would dispute this or, alternatively, that he accepts that such judgments come to be widely accepted but is not personally interested in knowing what those judgments are, about his own garden or anyone else's. This is an admirable withdrawal from the world, but the judgments will go on being made, by the relevant critical community – the 'we' I alluded to above - whether or not he is unable (does he mean unwilling rather than incapable of?) to grasp the lure of such comparisons. The question I raised in my piece concerned less the way in which such judgments were made in the gardening world, but in the strange correlation, as compared with the other arts, between wealth and 'greatness' in the creation of gardens. Here is what I wrote:

"One of the peculiarities of the history of the garden as art form has been its concentration on the gardens of the rich, as though only the rich made gardens, or made gardens sufficiently important to be studied.

Wealth is not a sufficient condition for the making of an important or 'great' garden…but a reading of the garden literature leads to the inescapable impression that a 'great' garden cannot be made without wealth. Wealth is a necessary condition, because the accepted notion of 'greatness' in gardens implies expensive space, expensive care and maintenance.

Even garden writers, as distinct from garden historians, can be pulled into making the same identification. *Country Life*'s Tony Venison is quoted as saying (*Hortus*, No. 30) that 'with contemporary gardens generally much smaller than those of the past…outstanding gardens are becoming harder to find.' Is it not odd that size and, a fortiori, the wealth that owns it, should be an essential condition for the creation of 'outstanding gardens'?

If you remain sceptical of this connection, pick up any of the 'Great Gardens' books, and count the number of Dukes and Duchesses and Comtes (with the occasional fashionable – and wealthy – novelist or parfumeur or dress designer thrown in). Note how many of them have head-gardeners, leaving us to imagine the crowd of underlings…Then count the number of carpenters, building inspectors, schoolteachers, storekeepers, poets, painters and candlestick makers whose gardens are included. Great gardens, it has been said, are mulched with money… Ian Hamilton Finlay has commented sardonically: 'The murmur of innumerable bills was known to most great gardeners."

When I wrote those words, I was writing to protest this identification, not to endorse it, to excoriate the garden historians not to admire them. Robin and I are really on the same side, we want gardens to be admired for their intelligence, their originality, their beauty, their spiritual values and not merely for the wealth they represent. But he should ask himself this question. In all the gardening books he has upon his shelves, books that purport to be about outstanding, even 'great', gardens, how many portray and discuss a small urban lot, the deck of a suburban home or the windswept terrace of a Manhattan apartment?

Brian Bixley
Whitfield, Ontario.
November 11, 2011

NARGS Bulletin Board

News supplement to the Rock Garden Quarterly

WELCOME to our NEW MEMBERS!
Persons who joined NARGS November 1st to January 31st

Aubert, Serge, UJF Station Alpine Joseph Fourier, 2233 Rue de la Piscine, Saint Martin d'Heres, 38400 France
Barkar, Lars-Ole, Biskopsholmen 15, Sundom 65410 Finland
Batt, Lynn 3303 Chaucer Ave., North Vancouver, BC V7K 2C2 Canada
Bittmann, Frank, 12 Stanton St., Pittston Township, PA 18640
Boswell, Bill & Ana, 542 S. Corona St., Denver, CO 80209
Bradley, Heather, 1932 Buchanan St., San Francisco, CA 94115
Bramley, M., 124 Holymoor Rd., Chesterfield, Derbyshire S42 7DU, United Kingdom
Buzzi, Barbara, 1075 Ralph Rd., Brookfield, VT 05036
Callinan, Veronica, 75 Ferris Rd., East York, ON M4B 1G5 Canada
Colburn, Lisa, 26 Mainewood Ave., Orono, ME 04473
Crain, Max, 3145 Cox Rd., Chesapeake Beach, MD 20732
Cuddy, Chris, 52 Rodd St., Canowindra, NSW 2804 Australia
Daher, Camilla, Ljusseveka 8, Varnamo 33134 Sweden
Gehenio, Anthony, 294 Goldscheitter Rd., Sarver, PA 16055
Graper, David, 21663 – 476th Ave., Aurora, SD 57002
Groseil, Yvonne, 1654 Third Ave., Apt. 2, New York, NY 10128
Haggerty, Peter, 634 Watertown St., Newtonville, MA 02460
Hand, Sara, 257 Wallace Hill Rd., Randolph, VT 05060
Hashizume, Kazuhiro, Asumigaoka 1-39-12, Chiba, Modori-ku 267-0066 Japan
Hewlett, Linda, Devonian Botanic Garden, U. of Alberta, Edmonton, T6G 2E1 Canada
Kaines, Dianne, POB 314, Uraidla, SA 5142 Australia
Kneissl, Hilde M., 23 Cider Mill Rd., Sudbury, MA 01776
Kosonen, Kirsi, Niinipolku 15, Haapakallio 58410 Finland
Kronau, Stephanie, 696 Snake Hill Rd., Poestenkill, NY 12140
Kuenstling, Kathleen A., POB 253, Amana, IA 52203
Kuhn, Robert, 6241 Reserve Dr., Boulder, CO 80303
Loos, Michael, 9038 Townsendville Rd., Interlaken, NY 14847
McCormick, William, 529 Prospect Rd., Springfield, PA 19064
Miller, Mike, 332 McKinnon St., Parksville, BC V9P 1H7 Canada
Morino, Ryozo, 3-3-23-201 Shibuyaku, Sendagaya, Tokyo 151-0051 Japan
Muggli, Michael, 12896 – 375th St., Goodhue, MN 55027
Munro, Stephen, 2333 Yale Ave. East, Seattle, WA 98102
Murgel, Meagan, 6963 S. Albion St., Centennial, CO 80122

Pascoe, Michael, Gardens of Fanshawe, Fanshawe College M3010, 1001 Fanshawe College Blvd., London, ON N5Y 5R6 Canada
Pence, Joyce, 378 Lightning Creek Rd., Clark Fork, ID 83811
Picton, Helen, Parkwood, Brockhill Rd., Malvern, Worcs. WR14 4DL, United Kingdom
Poulsen, Knud Bruun, Vaseholmen 55, Maalov DK-2760 Denmark
Rafferty, Sean, 4440 Marion Rd., North Vancouver, BC V7K 2V2 Canada
Robel, Kevin, 1048 Beaver Creek Dr., Bayfield, CO 81122
Rosengren, Hjalmar, Kronangsvagen 9, Hallingsjo SE-43896 Sweden
Smith, Lois, 4545 County Rd. 6, Yarker, ON K0K 3N0 Canada
Smith, Margaret, 1926 SE Holman Ave., Dallas, OR 97338
Smith, Ronald L., 508 Fifth Ave. SE, Le Mars, IA 51031
Smith, Syd, 57 Timson St., Lyme, MA 01902
Stames, Rebecca, 912 Mendon Center Rd., Pittsford, NY 14534
Stephens, Sue, Troedrhiw Cwmhyar, Tregroes, Llandysul, Ceredigion, Wales SA44 4NP United Kingdom
Stiles, Susan, 3716 Rush Rd., Jarrettsville, MD 21084
Thompson, Nichola E., 5106 – 42th Ave., Hyattsville, MD 20781
Vaxvick, Linda L., 215 Hawkview Manor Cr. NW, Calgary, AB T3G 3E5 Canada
Washburn, Gay, 5410 Huntington Parkway, Bethesda, MD 20814
Wilson, Diane, 1219 Cherry St., Denver, CO 80220
Wimhurst, Rob, 6312 W. 147th St., Overland Park, KS 66223
Yew, Allison, 270 W. Washington Ave., Pearl River, NY 10965
Yokome, Pamela, 13073 – 61st Ave., Surrey, BC V3X 2H4 Canada

NARGS Donations Appeal

DONATIONS between November 1st, 2011, and January 31st, 2012

DESIGNATED

Seed Exchange	$85
Speakers Tour	$400
Rock Garden Quarterly	$100
GENERAL FUND or UNDESIGNATED	**$1495**
TOTAL as of January 31, 2012	**$2080**

DONORS

Judy Adams (Quebec)
Helga Andrews (Massachusetts)
Patricia K. Apgar (New Jersey)
Berta J. Atwater (Rhode Island)
Thornton W. Burnet, Jr. (Virginia)
Vivien Bouffard (Massachusetts)
Jeannette Dupey (Washington)
Gary Dunlop (Co. Down, U.K.)
Joanne Foster (New Jersey)
Maryanne Gryboski (Connecticut)
Charles Hardman (California)
Nancy Koltun (Illinois)
Sally Konen (Idaho)
Phyllis Milano (Connecticut)
David R. Morel (New Jersey)
Janet Novak (Pennsylvania)
Siskiyou Chapter of NARGS
Mary Stanley (Wisconsin)
Laura L. Stephenson (Pennsylvania)
Mary Ann Streeter (Massachusetts)
Winnie Thornley (Cumbria, U.K.)
Bobby Ward (North Carolina)
Paula A. Whitlock (New Jersey)

NARGS Seed Exchange

By the time you read this notice, the 2011-2012 Seed Exchange will be completed. We hope that all those who ordered seeds found many treasures among the seeds that they received. We have many people to thank for their efforts this year, as always.

First, an effusive "Thank you!" goes to the members who generously donated seed, for without them, there would be no Seedex. Period.

However, for reasons of weather and other factors, seed donations are down, in terms of donors, taxa, and amounts. If the number of seed donors matched the number of seed requesters, we would be in a position to have the finest seed list available. As it stands now, only about a third of the members who order seeds manage to donate the five packets of different taxa that would raise them to Donor level (receiving ten extra packets, and priority in having their orders filled), and raise the NARGS Seedex to a whole new level, too. We hope that those who have requested seed will seriously consider donating seed this season, so that we can continue providing and improving this important membership benefit.

The seed list for this past and prior years can be found by going to our website, ***www.nargs.org***, and clicking on **Seedex**. As you read the lists, you will find many, many plants that you grow and whose seeds you could contribute this summer and fall.

Sorting, authenticating, entering, collating, and then packaging/shipping those seeds to over 15 centers for re-packaging, then producing a flawless seed list . . . all this falls to our Intake Manager, Laura Serowicz, who handles it perfectly, and with aplomb. This year, Laura had the added burden (and joy) of working with NARGS webmaster Chris Klapwijk, advising him on the very particular needs of the NARGS Seedex, as he carefully crafted our new online ordering system.

Chris' contribution brings NARGS to parity with the other major seedexes worldwide that operate electronically. This system is a great aid to the members who order seeds, as well as the volunteer members who fill those orders. Those who used the electronic ordering had nothing but praise for the ease, fun, and added features of the new system. We thank Chris for all his efforts and great results.

It is still possible, of course, and as simple as ever, to order by print-and-mail.

The work, like the wealth, is spread around NARGS, and we had fifteen chapters, groups, or individuals helping to re-package the seeds. This phase of the Seedex involves dozens and dozens of volunteers throughout the continental US, and their services are rewarded by giving them Donor status when they order seed. This is a small way of thanking them for their large contribution of time and effort.

Joan Haas, Mark Brownlee, and the volunteers of the Delaware Valley Chapter have again handled filling the hundreds of seed orders - this time,

arriving by both post and email. Theirs has been the crucial but unenviable job of working out the kinks in a new system and process - and they have done it outstandingly well and with good cheer.

At the time of this report, we are anticipating that BZ Marranca and her tireless crew from the Adirondack Chapter will once again fill members' requests in the second round of orders. This time, there will be the added stress of trying to fill large orders from radically dwindling supplies, as there were lower amounts donated, as well as fewer taxa. This drop in supplies of seeds was probably due to freak weather conditions - like Hurricane Irene, on the east coast - which we hope will not be repeated during the coming seasons.

We are all grateful to the leaders (like Laura, Joan and Mark, and BZ), as well as the many volunteers, for all their work in making this a successful and enjoyable benefit for hundreds of NARGS members.

At the conclusion of this year's Seedex, we will need two new chapters (or groups of adjacent chapters) to handle the two phases of order fulfillment. By the time you read this, I hope to have convinced two groups to answer NARGS's call for their help, so that we can continue to offer one of its stellar membership benefits.

If not, then your chapter can count on receiving a call from me. The thought of NARGS without a Seed Exchange (which cannot possibly operate without order fulfillment) doesn't bear contemplating.

I extend my wishes and hopes that you all enjoy perfect germination, followed by a most rewarding gardening season!

Joyce Fingerut, Director
NARGS Seed Exchange

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

Kim Blaxland, Radnor, Pennsylvania
John Buck, Santa Ana, California
Elizabeth Crispin, Mount Shasta, California
Elisabeth "Beth" De Fries, Goshen, Indiana
William Dress, Ithaca, New York
Carl Gehenio, Tarentum, Pennsylvania
Sue Handley, Ridgewood, New Jersey
Coleman Leuthy, Seattle, Washington
Wolfgang Oehme, Towson, Maryland
Dee Peck, Philadelphia, Pennsylvania
Rosemary Powis, Canterbury, Kent
Bob Stewart, Fowlerville, Michigan
Otakar Stupka, Cheznovice, Czech Republic

THE FOLLOWING RECENTLY BECAME
NARGS LIFE MEMBERS

Kees Jan van Zwienen (Netherlands)
John E. Gilrein (New York)
Gregory C. Peterson (Washington)

THE FOLLOWING BECAME PATRONS

Gioia T. Browne (Rhode Island)
Richard Dube (Vermont)
Thornton W. Burnet, Jr. (Virginia)
Michael & Hilary Clayton (New Jersey)
Elise Latrobe Felton (Maine)
Gail K. Gray (Colorado)

Potomac Valley Chapter Award
Paul Botting

Paul M. Botting has been a major player in the Potomac Valley Chapter for over 20 years – essentially a life member. He has recently become a trough expert, but for years has been a specialist on daylilies and daffodils.

For the Chapter, he has held the position of President and Vice President. He has chaired the nominating committee twice, the membership committee twice, worked on the Eastern Study Weekend twice, participated substantially at several of the money-making annual plant sales, as well as being an MC for various new plants at information booths.

Paul is a true trough aficionado; he has held, exhibited, and planted troughs specifically for the plant sales, making additional money for the Chapter. He has held workshops for making troughs, planting troughs and preparing various mixes for troughs out of assorted materials. As a result many more of our members are 'into' troughs.

Recently Paul has taken on planning trips for the group and the last successful trip was to the Allegheny Chapter in the summer of 2011. It was wonderful!! His contacts with other chapter members have been invaluable. I believe the timing is right and Paul Botting deserves a Chapter Award.

Submitted by Richard S. Hammerschlag.

NARGS Speakers Tour Program 2012-2013

The Speakers Tour Program is a wonderful service provided by NARGS to its members. It enables chapters, regardless of their size, to secure outstanding speakers at a very nominal cost. We are happy this year to have Fritz Kummert and Nick Turland as our speakers for 2012.

Fritz Kummert, a long time horticultural lecturer who provided extensive photographic assistance for the book, "Rock Garden Plants," arrived in the US at the end of March and is touring eleven, primarily western chapters this April.

Upcoming is **Nick Turland**, from the Missouri Botanical Garden in St. Louis, who is Co-Director of the Flora of China Project and a noted author and researcher; he will tour primarily the eastern chapters in September 2012.

The speaking schedule, contact person and contact information for each chapter is posted on the NARGS STP site. If these speakers aren't visiting your chapter, contact another chapter where they are visiting and arrange to see our speakers there. It will be a great opportunity to see these speakers and to meet and visit with other members of NARGS.

Further ahead, we are pleased to announce the names of the two individuals who will participate in the NARGS Speakers Tour for 2013. James H. Locklear (Nebraska) will present programs to western NARGS chapters in March 2013 and J. Ian Young (Scotland) will present programs to eastern chapters in September 2013. Complete bios of both James and Ian are on the NARGS Web site under "Speakers Tour."

Comments and suggestions regarding the Tour Program are welcome. Please contact the Chairperson, Barbara Wetzel **<aparkplace@aol.com>**.

Delaware Valley Chapter Award

Joan Schmitt and Gene Spurgeon

Joan has supported the Delaware Valley Chapter for a number of years and in many ways. Most notable are her two years as Chapter Chairperson and two years as Program Chairperson. She has worked on the Philadelphia Flower Show as coordinator of volunteers and plants and worked on our Membership Handbook. Joan pitches in to help with plant sales, annual member meetings, and wherever else help is needed.

Gene is a relatively new member of the Delaware Valley Chapter to be receiving the Service Award, but he has donated a significant amount of time, energy and skills by designing and executing two beautiful exhibits for our chapter at the Philadelphia International Flower Show in 2010 and 2011. The exhibit won Best in Show for Plant Societies category one year and got very high marks the other. As evidenced by the excitement and energy instilled in those who worked with Gene, it is clear that the chapter members working with him truly enjoyed their experiences both years. And very importantly, through his careful management of funds, both exhibits were brought in at or under budget and therefore did not cost the chapter any money.

Submitted by Tammy Harkness.

Mid-October is prime time for fall foliage color in Pennsylvania's deciduous forest.

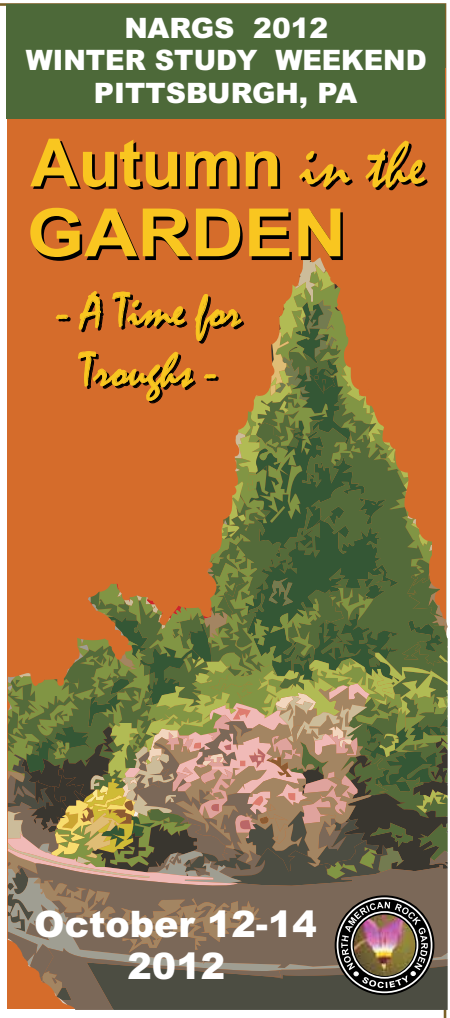
Come to NARGS 2012 Eastern Winter Study Weekend

Enjoy Nature at its finest by taking one of the 3 field trips offered as part of the weekend events. These trips include:

1. McConnell's Mills State Park - a rocky gorge created by Slippery Rock Creek includes a restored mill. Site of 2 endangered species – Laurentian Bladder Fern (Cystopteris laurentiana) and Harbinger of Spring (Erigenia bulbosa). Hiking these trails is considered light to moderate.

2. Jennings Blazing Star Prairie – a relic prairie from when Pennsylvania was all prairies over 10,000 years ago. Site of largest native stand of Blazing star gayfeather (Liatris spicata), large stands of native Asters and other fall blooming composites.

3. Pittsburgh Phipps Conservatory and Botanical Garden and National Aviary Rock Garden – the trip will go through areas of lovely fall forest and the tour of the nationally renown Phipps Conservatory (second or third largest in the world depending on how space is calculated) is spectacular. The fall chrysanthemum show will be in full regalia and the tour will include visiting the newly renovated Allegheny Chapter rock garden at the National Aviary.



Also in the weekend program will be speakers, workshops, vendors, trough show, plant auction, raffle and other events.

Contacts:

Len Lehman (Chair)
362 Vermont Ave.
Clairton, PA 15025
412-233-5902
Lclehman1@verizon.net

Karen Schmidt (Registrar)
111 N. Benbrook Road
Butler, PA 16001
724-679-3818
NARGSWS2012@gmail.com

NARGS 2012 Eastern Study Weekend

hosted by NARGS Allegheny Chapter, October 12-14, 2012

Cranberry/Mars, PA,

REGISTRATION

To register for the Study Weekend, copy and fill in the form below and mail with a check to the Registar at the address below

or

go to the website at **www.nargs.org**, click on Study Weekends and proceed to Eastern Study Weekend site. There will be a link to register online and pay with a credit card through PayPal.

Please make reservations directly with Sheraton Four Points Hotel, Pittsburgh North at 1-888-627-8175, 724-776-6900 and mention ROCK GARDEN SOCIETY to receive special rates. Or visit **www.starwoodhotels.com/fourpoints/**

TO REGISTER BY MAIL

Please print your name as you wish it to appear on your conference badge

Name #1 _____

Name #2 _____

Address _____

City, State/Province _____

Zip/Postal Code _____ Home Telephone _____

Email _____

Registration fee includes field trip or workshop, Saturday lunch and banquet, and coffee breaks.

		Name 1	Name 2
• Received before Sept 1, 2012	$300	☐	☐
• Received after Sept. 1, 2012	$350	☐	☐
• Optional Friday Buffet dinner	$33	☐	☐
• Extra charge for Saturday Salmon dinner	$6	☐	☐
• Guest cost for meals only	$60	☐	☐
Total Enclosed		$ ☐	

A cancellation fee of $50 will be assessed for refunds after September 1, 2012
Please enclose check written to "Allegheny Chapter, NARGS".
Canadian residents: please send checks or money order in US dollars or with credit card at **www.nargs.org**

Mail registration forms and checks to
Karen Schmidt
111 North Benbrook Road
Butler, PA 16001
Email: NARGSWS2012@gmail.com

A. Field trips
Select first and second choices
1. McConnells Mill State Park _____
2. Jennings Blazing Star Prairie_____
3. Phipps Conservatory and Aviary Rock Garden _____

Or

B. Workshops _____
By signing up for workshops, you may participate in all offered.

Do you intend to show trough(s)? _____ **If so, how many** _____

SPEAKERS

Our Eastern Study Weekend featuring AUTUMN IN THE GARDEN has a great selection of noteworthy speakers.

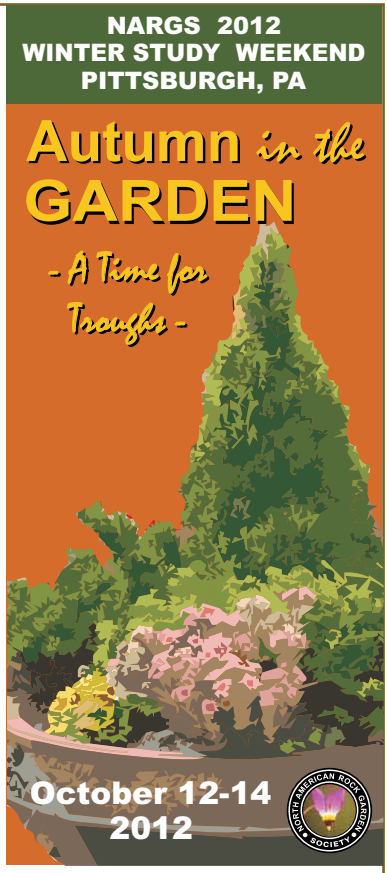
Gwen Moore - The Rock Garden in Autumn - Gwen is well-known to NARGS members as former editor of the Quarterly (for 11 years) and co-owner of Rocky Mountain Rare Plants.

Kathy Rienzi - Fall Blooming Native Plants - Kathy is proprietor of the Yellow Springs Native Plant Nursery

Mike Szesze - Carnivorous Plants in the Rock Garden - a different type of color - Mike is owner/propagator of Carnivorous Plants Nursery in Maryland and a retired educator.

Dr.Tom Lord - Maneageable Ferns for the Rock Garden - Dr. Lord is professor of biology at Indiana University of Pennsylvania and author of the book "Ferns and Fern Allies of Pennsylvania.

Matt Mattus - Fall Blooming Bulbs for Garden & Greenhouse - Matt is a writer and gardener from Massachusetts whose gardening columns are widely published in magazines and journals.



Gary Whittenbaugh - Crevice Gardens in a trough - the role of Dwarf Conifers - Gary is Past President of the Conifer Society

Rex Murfitt - Saxifrages in troughs - Rex is a noted author, lecturer and authority on Saxifrages

Martha Oliver - Heuchera, Heucherellas and Tiarellas - bold leaf and color for the fall garden - Martha and Charles Oliver have introduced several award-winning plants of this group and operate Primrose Path nursery - a wholesale supplier of heuchera, etc.

Workshops

Workshops will include: (1) Digital photography of Rock Garden and Alpine Plants; (2) Construction of Pop Bottle Troughs; (3) Preparing Programs using Digital Photography;
and it is hoped to have further workshops including (4) Growing Orchids in Borders and in Outdoor Containers; and (5) Papercrete Troughs

Autumn in the Garden - A Time for Troughs
NARGS 2012 - Winter Study Weekend - Pittsburgh

Personal Notice

Male 63, MA USA, degrees in biology and medicine; seeking activity partner(s), with some rock gardening knowledge, for garden, outdoors, or nature related activities -- possible friendship. Life-long interest in plants. Single. Have humanist and progressive values. Now much interested in western USA rock garden plants, Clivia, caudiciforms, etc. "externmed" -- NARGS forum. <caswan2@netzero.net>

NARGS CHAPTERS (meeting place/area) & CHAIRPERSONS _____

Adirondack (Ithaca, NY)	Billie Jean Isbell - bji1@cornell.edu
Alaska (Anchorage & Mat-Su Valley)	Carmel Tysver - garden@gci.net
Allegheny (Pittsburgh, PA)	Albert Deurbrouck - adeurbrouck@verizon.net
Berkshire (Stockbridge, MA)	Erica Schumacher - ejnovick@yahoo.com
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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 at an annual meeting.

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.

Officers

President	Peter George, petergeorge@verizon.net PO Box 833, Petersham, MA 01366
Vice President	Harvey Wrightman, wrightman@golden.net RR#3, 1503 Napperton Dr., Kerwood, ON N0M 2B0
Recording Secretary	Ben Burr, bnfburr@verizon.net PO Box 549, Bellport, NY 11713
Treasurer	Bill Adams, 330 Carlile Ave., Pueblo, CO 81004-1054
Director-at-Large	Betty Anne Spar, 206 Wolfe St., Alexandria, VA 22314
Immediate Past President	Grazyna Grauer, Dublin, OH

Directors of the Board

2009–2012	Marguerite Bennett, Seattle, WA Lee Curtis, Lakewood, CO Ray Deutsch, Redwood City, CA
2010–2013	Jane Grushow, Ephrata, PA Philip MacDougall, Surrey, BC Anne Spiegel, Wappinger Falls, NY
2011–2014	Lola Lloyd Horwitz, Brooklyn, NY Janet Novak, Philadelphia, PA Betty Spar, Alexandria, VA

Managers

Executive Secretary	Bobby J. Ward (919) 781-3291 PO Box 18604, Raleigh, NC 27619-8604 nargs@nc.rr.com

Back cover: The order Magnoliales is at the heart of the "primitive" dicots (p. 142): *Magnolia* x *soulangeana* 'Alba Superba", Birmingham Botanic Garden, UK – Malcolm McGregor.

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