

Alpine Garden Club of British Columbia



Castilleja rupicola with Mt. Baker in the background

Photo by David Sellars

Volume 59, Number 4 Quarterly Bulletin, Fall 2016

AGCBC meetings are held on the second Wednesday of each month except July and August in the Floral Hall, VanDusen Botanical Garden. Doors and Library open at 7:00 p.m. and the meetings start at 7:30 p.m.

Please bring plants for the plant draw; the proceeds of which go toward paying for the hall rental. Don't forget to bring your coffee/tea mug.

2016 and 2017 AGC-BC Upcoming Events

- **November 9 – Jay Akerley on North American Cordillera Plants for the BC Garden and Annual General Meeting**
- **December 14 – Annual Christmas Potluck and Rare Plant Auction**
- **January 11 – Luis Roberto Gonzalez Torres on Orchids of Cuba**
- **February 8 – Ken Marr on Flora of Northern BC Alpine**

For more information, visit <http://www.agc-bc.ca/events>



Aquilegia laramiensis, endemic to the Laramie Mountains in Wyoming. Photo taken April 26, 2016. Grown from Hokonui Alpines of New Zealand seed, sown October 19, 2013, after vinegar water and drop of soap soak, surface sown scatter of seed on granite grit, pea gravel and starter mix in propagator on hot mat under grow light. There were numerous sprouts by early May 2014 and first flowers in 2015. The pot is sunk in Valerie Melanson's rock garden in the shelter of a rhododendron for some shade and protection.

From the Editor

Dear Readers,

All this rain, a wonderful relief from the summer drought, has encouraged/confused some of my alpines into another round of flowering—witness some of the spring primroses! The autumn flowerers have been very happy of the moisture too, though the blooms don't last long, of course. But now the garden is just about into full-time shadow, so I am tucking it up for the winter and thinking of sowing seeds that need outdoor treatment. I will be looking at the seed list enclosed with this issue and getting my order in, pronto. I hope you will too.

There is quite a variety of material in this issue. Giving it some altitude, talented artist and Wasatch Rock Garden Society member Susan Sims, shares impressions of the recent NARGS conference, and some high alpine hikes in Colorado in her 'Four Easy Pieces'. (There are some B.C. connections there too.) David Sellars shares some of his techniques in 'Photographing Alpine Plants: A Landscape Point of View', and gives us more food for thought in his "Gardens Rock" column.

Also in this issue is the first of 'In Member Gardens' photos, and the first in several new series—'Plant Portraits'; 'Blooming Now in the Rock Garden'; 'Using Carnivorous Plants'; and 'Using Hardy and/or Native Orchids'. Thank you to Ger van den Beuken for the first Plant Portrait of *Morisia monanthos*.

As you put your gardens to bed, sort through your photos and update your garden journals, please think of the "Bulletin" and send in your contributions to the new series mentioned above. Thanks to Bill Bischoff's suggestions and contributions, pieces on 'Gentians through the Year' and 'Cyclamen in the Rock Garden' are in the planning stages. If you have info to share on those two genera, or anything else, please send them along to your grateful editor at Melanson.valerie@gmail.com. Don't forget the new Facebook Page either—Kerrie will be happy to hear from you.

Wishing you a Fruitful Fall and Happy Holiday Season,
Valerie Melanson



Primula marginata 'Allen Jones',
in the rain, November 2



AGC-BC Facebook Page

Hello AGC-BC,

At the last meeting, we announced the start-up of our own Facebook page. This page will provide a great opportunity to reach many people, both locally and globally, and tell the story of our club.

My name is Kerrie van Gaalen and I will be the Facebook Page Editor. Here is where I need your help. Whether or not you are member of Facebook, you can be part of improving this page by providing me with information to post on behalf of AGC-BC. I am looking for short and interesting write-ups on:

- Neat alpine plants
- Photos
- Tidbits on alpine ecology
- Seed collecting or plant viewing trips (past or present)
- Wonderful stories relating to alpine plants (e.g. experiences growing plant, troubleshooting, tips and tricks)
- Personal stories on how you got interested in alpine plants, how long you've been a member and why you've enjoyed being part of this group
- Social issues impacting the alpine ecosystems
- Interesting articles of you think are worth sharing with the world

You can send this to me at **kvangaalen@gmail.com** or pass on the information at a monthly meeting. My goal is to release 50+ posts over the next 12 months.

Thank you for your help! If you are a Facebook member, please “Like” our page, <https://www.facebook.com/AlpineGardenClubBC>, comment on posts and review the club online. You can also share you stories by messaging us through the actual Facebook page.

Lastly, here are some examples of the type of posts we are looking for:



Sample Facebook post from UBC Botanical Garden



Sample Facebook post from In the Defense of Plants

Blooming Now in the Rock Garden

Galanthus reginae-olgae

by Valerie Melanson, Qualicum Beach

The flowers of this snowdrop are very similar to *Galanthus nivalis* in appearance but they appear in the autumn before the leaves appear or when they are very short. Grey-Wilson describes the leaves as “a deep green or grey-green above with a prominent grey strip down the centre, much paler and more glaucous beneath.” The AGS website records that it flowers “in October under the plane trees of the Peloponnese in Greece, high in the Taigetos Mountains.” At lower, more sheltered locations they can flower from



winter to spring. They are native to

South and NW Greece, Corfu and Sicily, where they are found in woodland and on woodland edges in deep leaf litter from plane and coniferous trees. The genus was first collected on Mt. Taygetos in 1876 by Greek botanist, T.G. Orphanides, and named for Queen Olga of Greece. The species is reported to be not as cold-tolerant as other snowdrops and it is recommended to plant them in a relatively warm and well-drained site, so they are good under trees and in a rock garden.

In my rock garden the bulbs are partially sheltered by an overhanging trough and on a slight slope with exposure to the early morning sun. During the summer drought they get some moisture from a weekly hand watering of the bed they share with the hypertufa trough, *Cortusa turkestanica* syn. *Primula matthiolii* ssp. *turkestanica* and various Fritillaries.

My original bulb was given me by June Strandberg, who grew it from Archibald seed.

References

Slade, Naomi. (2014.) *The Plant Lover's Guide to Snowdrops*. Portland: Timber Press, pp. 170-171.

Grey-Wilson, Christopher. (2010.) *A Field Guide to the Bulbs of Greece*. Pershore: Alpine Garden Society, pp. 109-110.

Alpine Garden Society website, Plant of the Month and Portraits, about the subspecies *vernalis*: <http://www.alpinegardensociety.net/plants/plant-portraits/Galanthus+reginaeolgae+ssp+vernalis/19/>

Gentiana sino-ornata

by Valerie Melanson, *Qualicum Beach*
With additional photo and notes from Bill Bischoff



The first and probably most important European find of a fall-flowering Asian species, *Gentiana sino-ornata* was discovered by George Forrest in moist places in NW Yunnan in 1904 and in the Lichiang mountain range in 1910. Seeds were sent to Edinburgh and Ness Botanic Gardens and flowered for the first time at RBGE in 1912. In the wild it grows in peaty, alpine meadows, from 2500 to 4800 metres, in the SW Chinese provinces of Yunnan, Sichuan and Gansu.



The AGS website stresses that “only those who garden on an acid soil or employ troughs and containers filled with a rich ericaceous compost sited in good light but with some shade in the south may succeed with this otherwise easy plant, for it detests any trace of lime in soil or water and will show its resentment by speedy departure. Watering must always be adequate and ample in hot weather.”

Maybe it is a bit more flexible than that. My plant is now six years old, seems happy enough in a pot sunk in the rocks and has survived our summer droughts with only weekly watering. It does receive a bit of shade from the midday sun courtesy of a power pole and perhaps some surrounding plants.

In my garden it flowers in October. The trumpet-like blooms are quite tall and vividly striped, coming from the tip of a stem that radiates from a central rosette. The leaves are linear, dark green and stiffish. To 8 inches high, 12-18 inches wide, Zones 5-8.

Grown from AGS seed given me by June Strandberg, sown March 27, 2010 in my mini greenhouse on a hot mat. Each year, until now, there have been more buds. Caveat: It must true that Gentians don't like having their roots messed with. Even though I repotted with care this spring, I have had lots of leaves but few buds this Fall 2016. So the photos are from 2015.

Bill Bischoff reports that he and Carla grow *Gentiana sino-ornata* mostly in flat pots, so they can move them about and display them in fall during their blooming time. He notes that they will grow sideways about 2 feet per year and that they also produce rooted off-sets.



(Bill Bischoff photo)

References

Kohlein, Fritz. (1991.) *Gentians*. Portland: Timber Press, pp. 23, 111-112.

Alpine Garden Society website, Plant of the Month section: <http://www.alpinegardensociety.net/plants/plant-portraits/Gentiana+sinoornata+and+hybrids/54/>

Email from Bill Bischoff, October 30, 2016.

Top Notch Resource for Native Orchids

Report by Valerie Melanson



(Calypso bulbosa, May 16, 2013, at The Notch, Nanoose Bay)

As a prelude to some pieces for future issues of the “Bulletin” on using hardy and native orchids in our gardens, first I want to mention a good information source for native orchids.

I have a few terrestrial orchids in my garden and then became interested in growing non-native orchids as house plants, so I joined the American Orchid Society. One of the first articles I enjoyed in their monthly magazine, “Orchids”, was about The North American Orchid Conservation Center (NAOCC).

(<http://northamericanorchidcenter.org/>)

An extremely useful component of NAOCC’s website is GO ORCHIDS (<http://goorchids.northamericanorchidcenter.org/>). One can search for information on over 200 native and non-native orchids in North America. Search by location, by name or by using a simple search key of criteria like location, habitat, number of leaves, structure of labellum, main colour of labellum, etc.

For Canada, working from paradise eastwards, they have information on the species of British Columbia (36 species), Yukon (17), Alberta (26), NWT (19), Saskatchewan (29), Manitoba (36), Nunavut (13), Ontario (59), Quebec (50), New Brunswick (43), Nova Scotia (40), PEI (33), Newfoundland and Labrador (37).

The 36 for British Columbia are:

Calypso bulbosa
Corallorhiza maculata
Corallorhiza striata
Cypripedium montanum
Cypripedium passerinum
Epipactis gigantea
Galearis rotundifolia
Goodyera repens
Liparis loeselii
Neottia banksiana
Neottia convallarioides
Platanthera aquilonis
Platanthera dilatata
Platanthera elongata
Platanthera huronensis
Platanthera orbiculata
Platanthera transversa
Spiranthes diluvialis

Cephalanthera austini
Corallorhiza mertensiana
Corallorhiza trifida
Cypripedium parviflorum
Dactylorhiza viridis
Epipactis helleborine – non-native
Goodyera oblongifolia
Hammarbya paludosa
Malaxis monophyllos
Neottia borealis
Neottia cordata
Platanthera chorisiana
Platanthera elegans
Platanthera ephemerantha
Platanthera obtusata
Platanthera stricta
Platanthera unalascensis
Spiranthes romanzoffiana



Cypripedium parviflorum,
near Canmore, AB,
photo by David Sellars

L: *Platanthera stricta*, R: *Platanthera dilatata*,
both July 29, 2014, Paradise Meadows,
Strathcona Provincial Park

For each entry there is a collection of photos, and botanical information: synonyms, subspecies, general description, habitats, plant characteristics, whether native or not, and its conservation status and distribution in North America.

More on the North American Orchid Conservation Center

NAOCC is a coalition of organizations dedicated to conserving the diverse orchid heritage of the U.S. and Canada. It is based at the Smithsonian Environmental Research Center (SERC), and includes the National Zoological Park, the National Museum of Natural History, and Smithsonian Gardens. The U.S. Botanic Garden is the other founding partner. They have partnered with other public and private organizations.

Their mission is to “Conserve orchids native to the U.S. and Canada.” Their goals:

1. “Develop a national seed bank that is representative of the genetic diversity of all orchid species in the U.S. and Canada.
2. “Develop a national collection of fungi that is representative of the genetic diversity of mycorrhizal fungi required by native orchids.
3. “Use seed and mycorrhizal fungus banks to develop techniques for conserving, cultivating and restoring orchids in native habitats.
4. “Develop techniques to conserve the genetic diversity of all native orchids by cultivating them in a national network of botanic gardens and arboreta.
5. “Support efforts to conserve orchid populations through habitat conservation and restoration.
6. “Develop web-based materials that provides up-to-date information on the ecology, conservation status, and techniques for the cultivation of native orchids in the U.S. and Canada.”

A Canadian Partner is the University of Alberta and an International Partner with Canadian interests is The Nature Conservancy.

I will share more information on NAOCC’s work in Canada and especially British Columbia, as I find out more. Meantime, if you are an orchidophile, check out GO ORCHIDS and another educational tool, ORCHID-GAMI—a series of origami orchid flowers that are produced on punched cardstock with appropriate species information—designed for schools and displays. Appropriate to Hallowe’en right now the “Ghost Orchid”, *Dendrophylax lindenii*, is available as a download.

Photographing Alpine Plants: A Landscape Point of View

by David Sellars



Olsynium douglasii, Columbia River, Washington

Sparkling cushions, hanging gardens, starry flowers reaching for the sky; this is the appeal of alpine plants to rock gardeners who find magic in the tiny gems dotted among the scree and outcrops in the high alpine areas. Though each solitary species is exquisite, our admiration of alpiners in the mountains extends beyond the beauty of an individual plant. The setting in the mountain environment is an essential component, and an understanding of the habitat assists in finding special plants and learning how to grow them in the rock garden.

Alpine plants are often splendidly situated on rock outcrops with soaring ridges above, green valleys below, and the surrounding stark beauty of the high alpine terrain. Capturing an image of a tiny plant together with the immediate habitat and overall mountain context is challenging. In many alpine plant lectures two photographs are shown, one of the plant and flower, and a second from further away demonstrating the habitat and scenery. I have even seen published images fudged using Photoshop with the plant artificially superimposed on the habitat. But in some special circumstances it is possible to take a single image that includes a close-up of

the alpine plant, and at the same time conveys the character of the plant community and mountain landscape.

Finding a flowering plant with an attractive background that can be included in an image requires continual observation and covering a lot of ground. Only about one in a thousand plants are suitable for a photograph from a landscape point of view. Once you have found a plant with a background that will work, the next step is to set up the camera for the type of image you prefer.

My personal preference for alpine plant photographs is to have all of the image in focus whenever possible. The photograph of *Phacelia sericea* on Slate Peak in the eastern Cascades contrasts with the snowy peaks of the high Cascades in the distance which are as sharp as the flowers in the foreground. A meadow in the Dolomites with spikes of *Gymnadenia conopsea* is a fitting foreground for the jagged peak of Langkofel.

The zone of sharpness in a photograph is called the depth-of-field, and it extends in front of, and behind, the point where the camera is specifically focused. The size of the zone is determined by three key factors—the aperture of the lens, the focal length of the lens, and the focus distance which is normally the distance from the subject. I maximize the depth of field by using the smallest aperture possible, and taking the photo with a wide-angle lens to reduce the focal length. In addition I use a digital compact camera which has a lens with a very short focal length to create a 35 mm equivalent field of view on the small sensor surface. Typically the sensor diagonal on digital compact cameras is four times smaller than the diameter of 35 mm film. Because digital compact camera lenses have very small focal lengths, the depth of field achieved by these cameras is much greater than a digital Single Lens Reflex (SLR) or 35 mm film camera with the same field of view.

Advanced digital compact cameras are available that are more than “point and shoot” cameras as they have an electronic viewfinder, zoom lens, and manual exposure control. In fact, they have all the advantages of a digital SLR and much less weight. However these types of cameras are unsuitable if you prefer to take plant portraits with the background out of focus.

I use a Sony DSC-HX400V digital compact camera, but other advanced compact cameras would provide the same key features. The image sensor is very small, and on maximum wide angle the focal length is only 4.3 mm. For the same field of view the equivalent 35 mm camera wide angle lens has a focal length of 24 mm. I have the camera set on “aperture priority” with the smallest possible camera F stop of F8. With this F stop, the shutter speed is fast enough in most bright light situations that I do not need a tripod. In poor light I compromise on the aperture setting rather than use a tripod.

The current trend in digital photography is towards larger sensors as it is perceived that the image quality is superior, and they are certainly better in low light situations. A shallow depth of field is considered by others to be a positive as it is possible to isolate the subject, and have a blurred background which creates an artistic effect. I have even read that small sensor cameras are limited because it can be difficult to blur



Phacelia sericea on Slate Peak in the eastern Cascades



Gymnadenia conopsea with Langkofel in the background

the background. But if you are interested in landscape photography with sharp images and alpine plants in the foreground, a camera with a small sensor is the way to go.

For composing an image of a small alpine, I typically have the camera close to the ground only a few inches from the plant. The electronic viewfinder is hinged so I do not have to lie flat on the ground to see the image. The plant fills most of the screen and slight adjustments in the position of the camera will have a dramatic effect on the overall composition. My camera has a movable automatic spot focus capability so I move the focus target to the most critical location on the plant. Most of the plant is then also in focus. For a very small alpine the focus distance is small so the background may not be as sharp but is clearly visible. I then take at least five images moving the camera slightly between each shot so that I have a number of different compositions to choose from.

When photographing larger alpines, the camera is further from the plant, the focus distance is greater, and the background scenery is completely in focus. With longer focus distance the depth of field extends to infinity, as can be seen in the image of *Balsamorizha sagittata* in the Teton Mountains, Wyoming. I occasionally take an image with a plan to crop it later, particularly for images that look best in portrait dimensions. I do not do any other digital manipulation, and do not use a flash or light diffuser as I prefer natural light for photographing alpine plants.



Balsamorizha sagittata in the Teton Mountains, Wyoming



Erythronium montanum in the Olympic Mountains, Washington



Delphinium nudicaule above the Rogue River, Oregon

Maximizing the depth of field is also useful when photographing masses of flowers. The key is to position the camera close to some flowers so that they fill the foreground and provide detail as shown in the image of *Erythronium montanum* in the Olympic Mountains. Sometimes an unusual background can be found to illustrate the habitat as shown in the photo of *Delphinium nudicaule* poised above the canyon of the Rogue River in Oregon. Even close-ups of buns benefit from maximizing depth of field as more flowers are in focus.

Bringing a landscape perspective to alpine plant photography is very rewarding as the habitat setting enhances the beauty of these very special plants. Advanced compact cameras are relatively simple, and lightweight, and eliminate the need to carry a tripod. You can hike longer distances and find even more plants to photograph! But here is a warning. Once you try this method it becomes highly addictive.

(A version of this article first appeared in the NARGS Quarterly, Summer 2012.)



David Sellars is an award winning photographer and is the Past President of the Alpine Garden Club of British Columbia. Together with his wife, Wendy, he is developing an extensive alpine and woodland garden in coastal British Columbia. He is an avid mountain hiker and maintains the website: http://www.mountainflora.ca/Site/Mountainflora_Home.html

His particular interests are rock garden design and construction, alpine plant photography and using video to illustrate mountain landscapes and alpine plant habitats. His video page is here: <http://www.youtube.com/user/MountainFlora>

David has written illustrated articles for the NARGS Rock Garden Quarterly, the International Rock Gardener, and the Saxifrage Magazine. A selection of his photographs were published in the recent book *Alpine Plants of British Columbia, Alberta and Northwest North America*. His photos will also be included in a new edition of Arthur Kruckeberg's *Gardening with Native Plants of the Pacific Northwest*.

Four Easy Pieces: Sketches of the 2016 NARGS Annual Meeting

by Susan Sims

Whenever I am traveling, I like to take along a sketchbook. I find that the act of sketching scenery I see immerses me in a new environment more deeply than staring at it passively or taking a quick photograph. It may take up to an hour or two to create a sketch and to add watercolor, so I do sacrifice the chance to see more. But, as I've traveled, I've often discovered that quality is better than quantity; I am more likely to inspect the few, odd sketches I make of a place than the hundreds of photographs I take off-the-cuff.

My trip to the 2016 NARGS annual meeting in Steamboat Springs is no different, and since I was traveling alone, I had the chance to make several sketches. Rather than writing a more traditional report recounting every detail of the conference, I've made a few written "sketches" of some favorite moments as an observer from one new to this world of rock gardening, accompanied by my drawings and some photographs. I hope they inspire you to consider attending one of the annual conferences and maybe try your hand at sketching yourself.

The Apex Garden in Arvada, Colorado

The first thing after I got off the plane in Denver for the North American Rock Garden Society annual meeting was drop my bags off at Hostel Fish (highly recommended) and take an Uber (also highly recommended) immediately out to Arvada. I've wanted to see the Apex Garden for a couple of years now, and it did not disappoint.

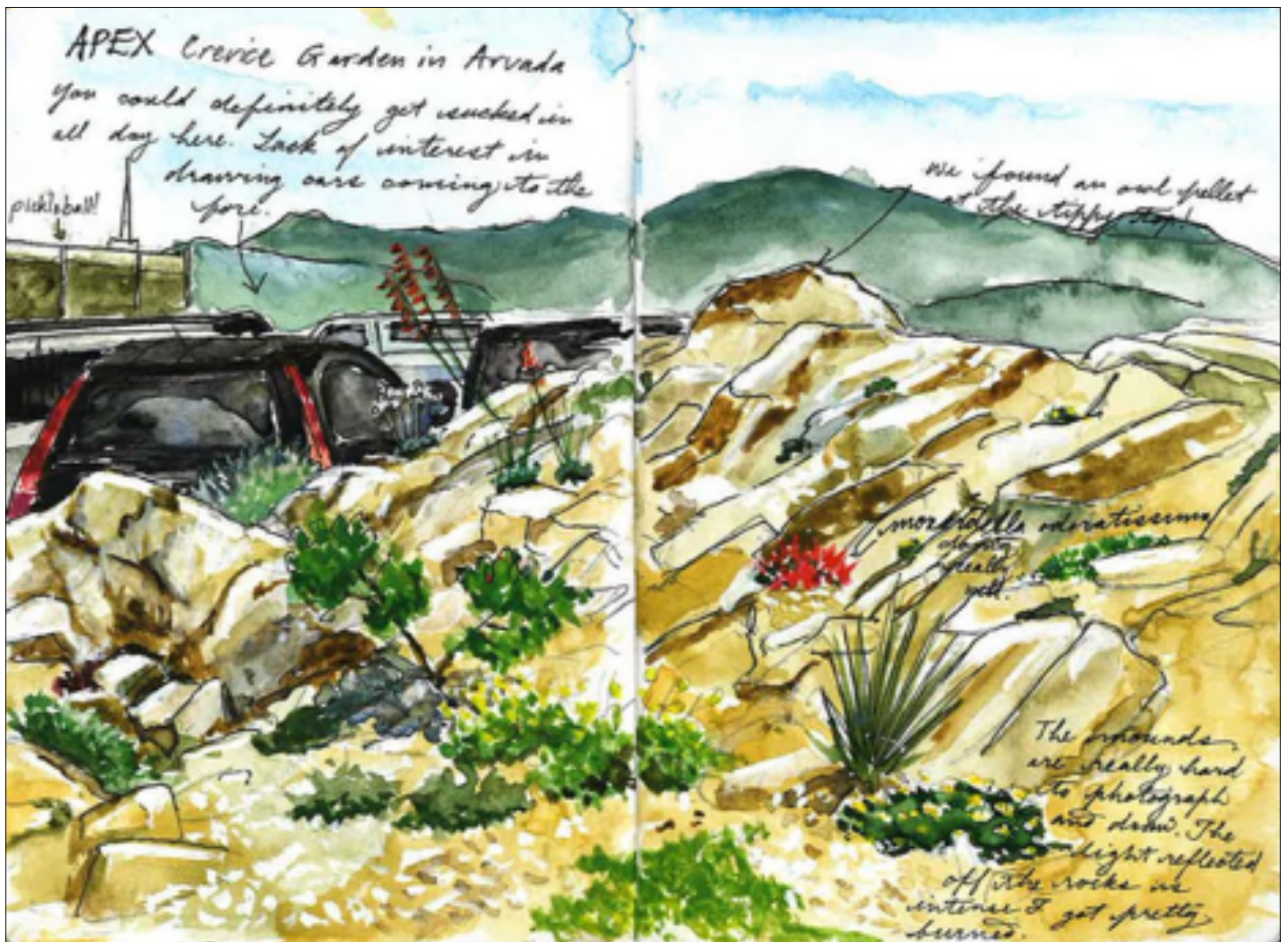
Kenton Seth (who spoke to our chapter and designed this garden) and his crew did an amazing job. Having now seen a few crevice gardens, this one is the most ambitious by far and perhaps the best executed. The parks department had come out and sprayed for weeds, and that made it difficult to get large landscape shots of the mounds, as they did need a landscape shot, they were so immense. The scale of it is approaching the point where you lose a sense of its size, and it begins to feel small, an effect most noticeable

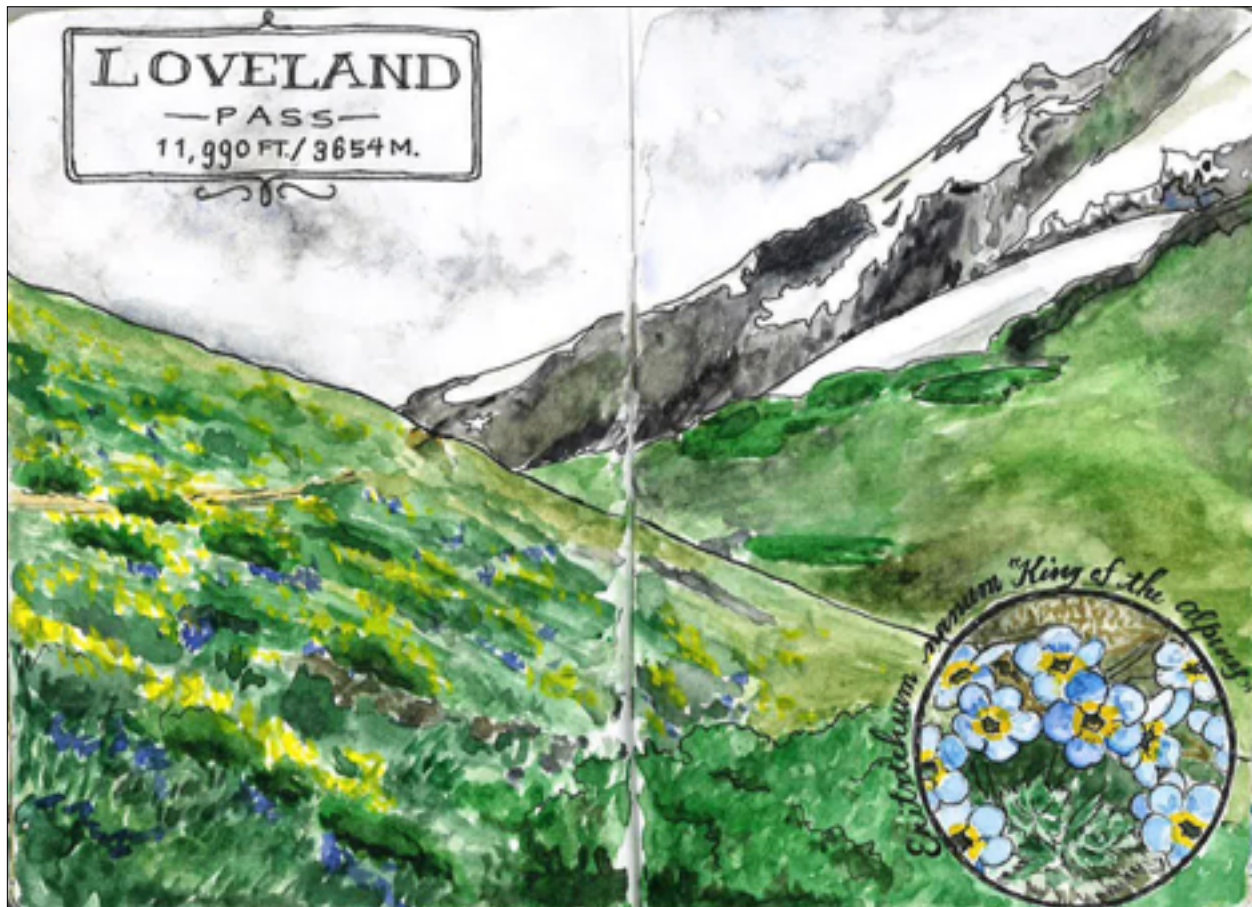


A small species of Heuchera thriving on the cool side of a boulder at the Apex Garden

when you are in the mountains. One can hope the Parks Department would be willing to permit an expansion in the future. Also, to be critical, I'm not fond of the white top dressing rock as I feel it detracts a bit from the naturalistic feel that the design is reaching for. However, as plants fill in, and under intense afternoon sunlight, the effect is less noticeable.

I finally gave in to the place and made some watercolor sketches when serendipity struck and along came Kenton himself along with Victoria, B.C. crevice expert Paul Spriggs, who helped in the garden's construction. Paul apprenticed under Zdeněk Zvolánek of the Czech Republic who is considered the authority on crevice garden construction. Paul himself is a great source of insight and advice on crevice gardening and was the first of many expert rock gardeners and botanists whom I was privileged to meet over the next five days, and I'm proud to say is also now a good friend.





On Loveland Pass, Colorado

On the second day of the trip, Loveland Pass surprised me. It is not often one can fall asleep in a car and awake to suddenly discover you're at 11,990 feet in elevation. I had been battling indigestion since my new Canadian friend Paul and I had circled about Golden, Colorado, looking for a non-chain option for breakfast. Despite attempting the most harmless looking option on the menu of oatmeal and fruit, weaving westwards and upwards along I-70 only seemed to put my stomach into a constant state of pique. Determined not to test Paul's damage waiver on his rental, I went into sensory-deprivation mode. I was so focused on staying there that I completely missed how much altitude we were gaining until we stopped at the highest elevation mark I've ever reached on foot, let alone by car.

Ironically, all feeling of nausea ceased as I breathed in the alpine air, and it was replaced by elation. I found myself transported to alpine tundra with all its assorted gems, a world that was formerly distant and unfamiliar, now all before me within convenient walking distance of the car: *Oreoxis alpina* (Apiaceae), "King of the alpine" *Eritrichium nanum* (Boraginaceae), *Smelowskia calycina* and *Erysimum capitatum*, and several *Draba* species (Brassicaceae), *Paronychia pulvinata*, *Silene acaulis*, and *Minuartia obtusiloba* (Caryophyllaceae); *Rhodiola integrifolia* and *Sedum lanceolatum* (Crassulaceae), *Ranunculus adoneus*, emerging next to the snowbanks (Ranunculaceae);



Besseyia alpina in the cool environs of Loveland Pass



Altitude-loving *Eritrichium nanum* at Loveland Pass



Tiny *Saxifraga bronchialis* approaching flowering



Phlox condensata and *Oreoxis alpina*

Gagea serotina (Liliaceae), *Besseyia alpina* and *Penstemon whippleanus* (Plantaginaceae), *Primula angustifolia* and *Androsace septentrionalis*, flowering in a smaller form at this altitude than I'm accustomed to (Primulaceae); *Trifolium nanum* mounding in fabulous heaps (Fabaceae); *Phlox condensata* and lots of *Polemonium viscosum* (Polemoniaceae). Rosaceae was well represented with large swaths of *Geum rossii*, *Dryas octopetala*, mingling with several *Potentilla* species, and *Saxifraga bronchialis* (Saxifragaceae), not yet in flower. *Carex chalciolepis* (Cyperaceae) was intriguing with its coal-black flower, and in a moment where I saw it but didn't put two-and-two together until later, *Kalmia microphylla* (Ericaceae).

The floral diversity was impressive given the proximity to the road. I went scrambling up several hundred feet higher in search of more perfect specimens to photograph, disregarding both the intense sunlight and menacing clouds which rolled

alternatively over the pass. As a commentary on the human impact on these fragile alpine environments, after scrambling along rocks up to a ridge high above the pass, I was surprised to discover the odd plastic water bottle in a crevice and the confetti of broken glass. There is something to be said for not building roads.

After a couple of hours of scrambling over boulders and glissading over snow patches, we headed down the other side of the pass, where Paul braked for the state wildflower (*Aquilegia caerulea*), as well as several other montane gems down the way.

We had originally aimed to visit the new indoor alpine house tufa crevice garden at the Betty Ford Botanic Garden, but the real alpine scene at Loveland absorbed us so completely we missed our window and so, headed straight on to Steamboat so we could check in on time.

Yampa Breakfast and the Flat Tops



Starting the day off with a great breakfast is a surefire sign that the day is going to be good. The catered breakfast provided for the NARGS 2016 meeting at the Yampa Botanic Gardens was excellent, and the gardens were well curated. I was especially taken with the fin-like crevice garden full of dianthus abutting the rockery, but I'm susceptible.

Conference friendships continued to grow with my introduction to David and

Wendy Sellars of Vancouver, BC. David and Wendy are avid trekkers and, having inspected the list of planned hiking options for the weekend, had decided to ditch the proposed garden tours for that afternoon and head into the Flat Tops Wilderness for a preview, and invited Paul and me to join them.

The Flat Tops were about an hour's worth of Brexit-hangover conversation southwards of Steamboat, near Yampa. Siri gave us excellent navigational instructions, and David in his graciousness, gave me all the credit.

To get up to the alpiners, we crossed the dam for the Stillwater reservoir and picked up a very wet trail skirting wetlands and following vernal streams. Flowers from Ranunculaceae like *Anemone narcissiflora* var. *zephyra*, *Caltha leptosepala*, and *Trollius albiflorus* were reveling in the spring runoff. It was still early enough to clean mud from our boots while crossing a couple of snowfields as we followed mountain lion tracks up over a pass through the cliff bands.

The view from on top of the cliffs at 11,200 feet was tremendous; broad basaltic flows formed the substrate for expansive sweeps of alpine tundra. The views gently rolled down to subalpine lakes fed by a waterfall that spilled 500 feet over sheer cliffs.



*Susan sketching the Polemonium viscosum.
Photo by David Sellars*

Even higher, still snowbound tundra sat atop these cliffs of mancos shale, buttressed by expanding talus cones. This rhythm of vertical cliff and talus recapitulated until it leveled off at the summit of Derby Peak just shy of 12,200 above.

At our feet, we found *Myosotis asiatica*, *Minuartia obtusiloba*, *Polemonium viscosum*, diminutive *Hymenoxys grandiflora* growing in abundance, as well as several of the plants I spied at Loveland Pass. While some of my hiking partners who live at sea level found the altitude trying despite their fitness, the Utahn in me marveled at how much easier it is to access the world of alpine flora in Colorado. To access scenery such as this in Utah, it would take at least a day's worth of hiking in the Uintas or the Tushars.



Still, however easy it is to access the alpine zone, the aggressive and changeable nature of the weather is quick to remind you of where you are, and that it is a harsh environment. The combination of stormy weather to the northeast and katabatic winds spilling down the opposite slopes encouraged us to decide that the best place to eat lunch was hanging off of the basaltic cliff edges among the *Saxifraga bronchialis*. Only the threat of approaching storms would compel us to descend from our aerie.

The drive back took longer as we would break for the odd spires of *Frasera speciosa*, flashes of blue *Iris missouriensis*, or hop ditches to inspect the magenta florescence of *Oxytropis lambertii* growing in a pasture.

The NARGS Conference

As this was my first NARGS conference, I can't compare it to those that have gone before, but among those who attended, many felt that this was the best in recent memory. This sentiment was due in part to the number of "young" and new rock gardeners, myself included. This group of aspiring "youth" ranged from a definite youth at 17 to a young-at-heart at 45. There's been a lot of hand-wringing about NARGS's future, but with over 250 people in attendance with many more on waiting lists, I don't think we need to worry about a waning of enthusiasm. It was a pleasure to meet gardeners and plants folk whom I've met only online, or have only heard mention of. This is not to mention meeting the many international directors of botanic gardens, botanists, owners of alpine houses, and hard core plant nerds. It was a gathering of greats, and between talking to the people, listening to the lectures each night, and hiking and viewing gardens in the day, it was like trying to drink from a firehose.



Susan on the edge, Photo by David Sellars

Two talks that stood out for me in particular were Marcela Ferreya's lecture on Patagonia and its flora, and Johan Nilsson's presentation on the Gotenberg Botanical Garden in Sweden. Due to the former, I ordered seeds of several hardy *Alstroemeria* species I will be sowing soon, and because of the latter, I continue to have visions of potted dionysias in alpine houses heaped up like great scoops of ice cream.

As with any gathering of a group that large, there is some criticism. The first is just a matter of logistics; there were simply too many people. Despite the conference itself being a week in length, which was too long for some, there wasn't enough time to visit with the few I wanted to see, let alone everyone. Secondly, I figured that at a conference in Colorado, I had a shot of actually knowing many of the plants I would see, which I did. But, I discovered that I found the most pleasure in the unfamiliar alpine zones and all of its jewels, and frankly, I felt that I didn't see enough of it.

Most of the hikes took us through the familiarity of the montane forests, and while I always enjoy a walk-in-the-woods, I longed for windswept tundra. If it hadn't been for the willingness of new friends to take me along on their off-schedule side adventures, I would have missed these alpine zones completely, so I was lucky. Some undoubtedly never got to see those alpine wonders.

Looking back, there are some places I would like to revisit. The Flat Top Mountains were the highlight of the trip, and they look like an ideal location for a future backpacking trip. I had never been to Denver Botanic Gardens, and my time there felt cursory. I will watch the online airfare sales for some future day when I can spend a full day at that botanical-Disneyland. Steamboat Springs itself is a really charming ski town, and is not at all overly-commercialized like Park City, Vail, or Aspen is. I wouldn't mind spending a romantic weekend there with my husband, especially as it would let me revisit the wonderful Yampa Botanic Gardens with its rock garden and Ryan Keating's crevice installation. It was a riot of dianthus when I saw it and I wouldn't mind seeing it again under less crowded circumstances, and with a sketchbook.



Susan Sims lives and gardens on the eastern margins of the Great Basin region in Orem, Utah. She is a member of NARGS and its local chapter, the Wasatch Rock Garden Society, as well as the Utah Native Plant Society. If she is not digging out more sod from her garden to put in more places for rocks and plants, you will find her exploring the peaks and cliffs of the Wasatch range just outside her front door.

(This article appeared in the Wasatch Rock Garden Society Newsletter, October 2016, and is reprinted here with permission of the author.)

Plant Portrait: *Morisia monanthos*

by Ger van den Beuken, the Netherlands



A member of the Cruciferae, *Morisia monanthos* is a species endemic in Corsica and Sardinia, where it grows from sea level to as high in the mountains as 1200 metres. This species prefers sandy conditions in the most sunny places. It grows with a stout rootstock and forms a tuft of rosettes made up of pinnate, lanceolate evergreen leaves. The 1.5 to 2 cm wide flowers are four-petalled and a beautiful bright yellow on very short stems. There is a form in cultivation named 'Fred Hemingway' with finer, larger, yellow flowers.

Cultivation

It's an ideal species for trough, crevice, scree or rock gardens in a bright sunny spot. Usually it's a hardy plant, but to avoid any risk give it a nice sheltered place. Sandy conditions are ideal and watering in the summer is only necessary during a long hot dry spell. The first flowers appear in April and sometimes you may expect a second flowering during summer. Unfortunately we do not have a flower show in the Netherlands, but I have seen the most spectacular plants in the UK on the show bench.

Propagation

As far as I know it's possible to propagate the plants from seed, however I have not seen any seeds on my plants in the garden. Another way of propagation is taking some rosettes and treat them as cuttings. This is a good method if you need just a few plants. If you want to propagate many plants for sale, you can make a try from root cuttings—not difficult at all. Take the largest part of the roots and cut them in pieces of about 5 cm length and insert them in a pot with pure sand. Keep the sand slightly moist and you may expect new growth after some weeks. Another way of propagation that I have seen at a wholesale nursery with a huge number of plants was as follows: all the plants were grown in the open field in big pots. They had been growing for one year and during the spring, when the plants were in growth, the pots were taken out of the soil and all the roots left behind in the soil sprouted and produced wonderful new plants during summer.

(This Plant Portrait was originally published in "The Crevice" # 40, Early Spring 2016, and is here reproduced with permission of the author.)

First Attempts Using Carnivorous Plants (CP)

in the Rock Garden

by Valerie Melanson

Thinking back, my CP seduction began on a nature walk with my kids at Golden Ears Park back around 1988, and the naturalist pointing out the coolest wee Sundews (*Drosera rotundifolia*). I think I was more excited than the kids. My next CP encounter was when Will Lemmon, leading an alpine group walk at Paradise Meadows in Strathcona Park, pointed out more of those cute Round-Leaved Sundews and Common Butterwort (*Pinguicula vulgaris*). Photo R: One plant from drifts of them. Their hibernacula do roll around when the surrounding vegetation has gone dormant for the winter.



Starting with ‘Pings’

Having started propagating alpenes, I now had the chance to follow up on my growing interest and try to grow some CPs. I watched the seedlists and found a listing on the 2012 AGC-BC list (#1104) for *Pinguicula grandiflora* (Large-Flowered Butterwort) seeds. European, it is found in hilly and mountainous regions of Ireland, France, Switzerland and Spain. They duly arrived and I sowed them in January 2013 in the greenhouse, under a cover, surface sown on moist seed starter mix (peat and vermiculite) and later moved outdoors. I had beginner’s success of a sort, germinating one (and only one) seed. The brave, lonely seedling achieved less than “quarter” size by October 26, 2013 and spent Winter 2013-14 in a cold greenhouse, dying back to a small resting rosette. It lived and come Spring 2014, it was now ensconced in a clay pot and moved outside to enjoy the summer sun by the rock garden.





By October 22, 2014 it had grown greatly but didn't achieve a flower, though there was a tantalizing bud of sorts in the centre:

Winter 2014-15, it again hung out in a cold greenhouse, dying back to a small resting rosette.

2015 was to be the big year. The pot returned to its retaining wall by the stairs up into the rock garden.

Early spring brought a trip to view the VIRAGS Spring Show and Plant Sale. And there was the "Best in Show" winner, a pan of the very same species.

After seeing this flowering pan, I was keen to see if my plant would perform this year too.

The day after the VIRAGS show, I checked my baby and found what looked to be a bud, confirmed three days later, when the stem started to uncurl:

By May 5 the first flower was open, living up to its name. By May 14, three had bloomed.



Photo by Kirsten Juergensen



And the now, clump, of plants was steadily bulking up, especially after being installed on the edge of a 'damp' bed with a *Sarracenia purpurea*. This damp bed is kept wet by dumping the dirty water from a bird bath at the top of the slope into a pail pond below that is full of a rush, *Typha minima*. The excess overflows into the damp bed where reside the CPs, *Primula vialii*, *Dodecatheon alpina*, *Polemonium boreale*, *Iris forestii* and other damp lovers. The bed is edged with *Dierama atrum*, a dwarf Rhodo and *Pulsatilla vulgaris*, various Hellebores and Scotch and Irish moss, all appreciating more moisture.



June 21, 2015 – L: the 'ping' is earning its keep eating bugs, R: the Sarracenia purpurea



October 22, 2016



Winter 2015-16 the 'pings' died back to the classic hibernacula. They hid out under odd deciduous leaves, on December 7 looking like above.



By March 26, 2016, with the promise of a new growing season, they started to regrow from their hibernacula.



Going strong by April 6



flowering by April 26



and gone to seed by May 19

By October 22, 2016, the older plants were back to resting hibernacula, leaving just a couple of young plants to get as much growth in as long as possible:



Next Experiments

Having some moderate success with the *Pinguicula grandiflora* and *Sarracenia purpurea* in the bird bath damp bed, I decided to create two other CP areas.

For the first bed, I was inspired by footage in a documentary narrated by Sir David Attenborough called “Plants Behaving Badly: the secret life of orchids and carnivorous plants”. It showed a damp meadow in the SE USA full of *Sarracenia* and *Liatris spicata*.

I lifted an existing collection of white and purple *Liatris* (that had struggled in dry conditions) and amended the bed with more peat, then replanted with the *Liatris*, *Sarracenia flava* and *S. ‘Scarlet Belle’* (*S. leucophylla* x *S. psittacina*) (both *S.* from Cultivate in 2015).



Liatrix Sarracenia Bed, above and right, May 19, 2016

For the second bed, I created a peat amended terrace, down slope of a stock trough pond—the idea being that overflow (whether from rain or my top ups) from the pond would keep the bed damp all the time. I planted it up with *Dodecatheon*, Irish Moss (*Sagina subulata*) and various *Sarracenia*—all have been quite happy there. *Sarracenia* ‘Judith Hindle’, *S. rubra*, *S. oreophila*, *S. jonesii* (the later two were purchased at the VIRAGS 2016 Spring Show and Sale).



Summer 2016



Sarracenia Bed by stock trough pond, October 22, 2016

The new ongoing experiment is to start more CP from seed obtained from the International Carnivorous Plant Society Seed Bank, and try them out in the garden. The bank has seed of temperate, sub-tropical and tropical CPs. I am trying various droseras and one pinguicula. Some have sprouted, some have not. Early days. I will do a further report with my results and reports from other members growing carnivorous plants.

Further Information on Pinguicula

Pinguicula are part of the Lentibulariaceae, the Bladderwort Family. The family includes three genera—Genlisea (snare traps), Utricularia (bladder traps) and Pinguicula (adhesive traps). The Pinguicula genus has 86 species, mainly native to the Northern Hemisphere. The name Pinguicula is derived from Latin pinguis meaning 'fat' or 'thick', referring to the thick, fleshy, greasy-looking leaves.

'Pings' are generally perennial, terrestrial and herbaceous rosette plants.

The flowers appear during the development of the spring/summer rosette.

In very cold winter conditions the plants die back to buds (hibernacula) that have no mucilaginous glands and are unable to catch prey. These buds are easily moved by rain and wind to spread the species.

In milder areas, they grow shorter and shorter leaves, ending up with a tight little pale green rose = heterophyllous.

In warmer areas, they keep the same leaves, summer and winter = homophyllous.

They grow in boggy areas with minimal soil nutrition, so have developed sticky mucilage to trap insects and protein rich pollen grains on their leaves where digestive juices can pool to process the food.

References

Barthlott, Wilhelm, Stefan Porembski, Rudiger Seine and Inge Theisen. (2007). *The Curious World of Carnivorous Plants: A Comprehensive Guide to Their Biology and Cultivation*. Portland: Timber Press, pp 122-128.

D'Amato, Peter. (1998). *The Savage Garden: Cultivating Carnivorous Plants*. Berkeley: Ten Speed Press, pp 188-218.

Gentle, Victor. (1996). *Butterworts: Greasy Cups of Death*. Milwaukee: Gareth Stevens Pub.

The Bischoff's Fall Garden—In Photos By Carla Bischoff



By the patio door



Cyclamen purpurascens

A Big Success this Summer

*Carla Bischoff with giant
1-foot wide lilies,
Photo by Bill Bischoff*



Gardens ROCK!

David Sellars

Keeping it all going

One of the challenges of rock gardening is keeping plants alive. Fabulous species such as *Douglasia nivalis* flower beautifully for a year or two and then decide that enough is enough. It is useful to have easy, reliable plants that will form a long-lasting foundation in the rock garden so that complete renovation every year or so is not necessary. Over the years you begin to love those plants that are always there for you. For example, *Iberis sempervirens* forms large clumps in our garden and seeds around in odd places to make lovely splotches of white.



Douglasia nivalis

While those easy foundation plants such as *Phlox*, *Arabis*, *Daphne* and *Veronica* are delightful, they are usually not enough to satisfy the keen rock gardener. You need a steady supply of new plants to maintain interest in the alpine garden. With the decline in availability of retail alpine plants, it means that you have to grow lots of plants from seed, and we are fortunate that our seed exchange is such a good resource. It is also worth taking plenty of cuttings even from your own garden.

My mix for cuttings is half Sechelt Sand, sifted to remove the larger pieces, and half vermiculite. I don't use peat anymore because of moss build up. I cover the tray with a clear plastic dome and don't use bottom heat. Everything works fine except I have been dissatisfied with the quality of the plastic domes generally available. On most propagation domes, the plastic is thin and they fall apart after a few years. Even if you buy expensive heavy-duty domes they still eventually crack up. I recently discovered Mondi seven-inch domes which are very solid, not expensive and provide a very secure base connection if used with the Mondi heavy-duty tray. Surprisingly, despite having a head office in Vancouver, Mondi products are difficult to find in British Columbia. The only source I found was Fraser Valley Greenhouse Supply in Chilliwack. If you are frustrated with your cracked and flimsy propagation domes, give Mondi domes a try.