



"THE CREVICE"

In memory of Eswyn

Journal of the
Alpine Gardeners of Central Vancouver Island

<http://alpinegardenersofcvi.wordpress.com/>

Issue # 39

Part 2

Winter 2015-2016

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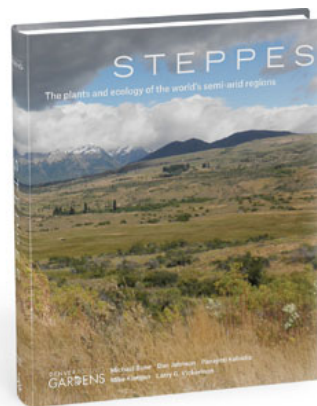
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**WANTING TO READ UP ON PATAGONIAN ALPINE PLANTS &
ECOSYSTEMS? MONTANE & OTHER STEPPE HABITATS?**



Another recent publication, from Timber Press, 2015, is:

Written by 5 botanists/horticulturists from Denver Botanic Gardens - Michael Bone, Dan Johnson, Panayoti Kelaidis, Mike Kintgen and Larry G. Vickerman
Check it out in the AGCVI Library or order thru a bookstore near you.
This volume is definitely worth a study.

A HIGHER STATE



Steppe to Alpine

Steamboat Springs
June 22nd-27th 2016

NARGS
Rocky Mountain Chapter

Come explore North-western Colorado in prime wildflower season with hikes and trips to see steppe, montane and alpine plant communities along with tours of private gardens as well as both Denver Botanic Gardens and Yampa River Botanic Park. Lectures and book sales and signings by local and international experts discussing the importance of the world's steppes and continental mountain ranges in both the garden and wild in the evenings.

For full details please email
kintgenm@botanicgardens.org
or visit www.nargs.org/2016-annual-general-meeting-steamboat-springs-colorado
or join us at www.facebook.com/2016NARGSmeeing

WHAT MAKES NORTHWEST COLORADO SO SPECIAL?

By Mike Kintgen

Some people would say it's the Champagne powder that falls on the ski slopes in the winter. Others would say it's the curse the Utes supposedly placed on the Yampa valley. Wildflower lovers would say it's the sheer magnitude of displays and the variety. Whatever the reason, Northwest Colorado has been drawing humans for millennia to partake in its natural beauty and restorative settings.



Late June Wildflowers - *Senecio* and *Bistorta*

Northwest Colorado is special since it lies at the meeting point of several biomes: flora from the South Rockies form the backbone of the flora, with a broad stroke of Great Basin flora brushing through the lower valleys and steppes, while the Great Plains flora sweeps in from the Northeast and rubs up against the Park Range. At higher elevations, flora from the Pacific Northwest and Northern Rockies can be found hundreds of miles south of their normal range. *Trillium ovatum*, *Rhododendron albiflorum*, *Mimulus lewisii* are a few of the flagship plants from the NW biome. Mixed into the rest of the landscape is a cast of classic western flowers from bright blue Penstemon, to Scarlet Paintbrush (*Castilleja*) and Scarlet Gillia (*Ipomopsis*) and yellow composites of infinite variety.

Steamboat Springs and Denver will be the locations of the 2016 NARGS Annual meeting. The conference opens the afternoon of the 22nd in Denver with lectures by Kenton Seth and Mike Kintgen, two of NARGS's youngest members. On Thursday participants have the option of driving on their own or taking a van trip to Steamboat Springs. The conference resumes in the evening with plant and book sales, and 2 lectures by internationally known Johan Nilsson and Nick Courtens. National superstars Kelly Norris and Jim Lochlear will be speaking Friday night, followed by Saturday and Sunday hikes. Sunday night's lecture will be the very special and heart warming

Marcela Ferreyra from Patagonia. This will be her first lecture to an audience from outside of Colorado in the United States.

Garden tours and visits of Denver Botanic Garden's renowned alpine collection, along with the fabulous Yampa River Botanic Park and several wonderful private gardens in the Steamboat area will round out the conference.



Close up of Crevice Garden at Yampa River Botanic Park

For details and information visit the NARGS website <https://www.nargs.org/2016-annual-general-meeting-steamboat-springs-colorado>, or the conference Facebook page www.facebook.com/2016NARGSmeeeting. Direct questions to kintgem@botanicgardens.org.

We hope to see you in Colorado in June 2016—it promises to be a wonderful and memorable conference.

FOR MORE ON DRYLAND ALPINES & PLANTING
REPORTS FROM "CREVICE" CORRESPONDENTS

THE GUTS OF A NEW CREVICE GARDEN IN THE DRY WESTERN USA

by Kenton J. Seth of Grand Junction, Colorado



Denver, Colorado, USA, is not exactly in the mountains - it's at the edge of the *Great Plains*; the skyline only gets tucked into those snow-capped peaks with the magic of a telephoto lens. Its precipitation is 430mm (17 inches) compared to Vancouver's 1117mm (44 inches). That makes it semi-arid, and the reason that progressive horticulture here begs everyone to go dryer with their gardens, and why we in Colorado can grow the desert wildflowers so easily. The dry continental climate doesn't make a *Crevice Garden* any less attractive, in fact, our mountains are a sturdy inspiration for them and the style is gaining great traction here. (I can think of five Colorado Botanical Gardens offhand which have them, and another slated for May.)

The largest yet, and the only free standing *Crevice Garden* in the state, I had the great fortune to design and oversee. I was not alone, and summoned the legacy of great rock garden innovators: I had incredible aide from friends and colleagues, including Vancouver Island's own Paul Spriggs, and the support of my local Rocky Mountain Chapter of NARGS to execute it through concept, construction, and maintenance.

Arvada, a northeast suburb of Denver, is building a new community sports complex, the centre of which is a world-class Pickleball set of courts. The showpiece garden between it and the main building and parking lot, taking up 280 sq. metres (3000 sq. feet) of footprint,

about 93 (1000) of that in pure stone. It's the APEX (Arvada Parks and Rec) Crevice Garden at Community Heroes Park. The Park Overseer wanted a destination garden, something totally unique, and sent the Landscape Architect to find such a thing. What he in turn found, was Colorado's growing fascination with the Czech art form of vertical crevice gardens, and no one else nearby was free, willing, and nuts enough to dive in to making one happen. Crevice gardens are so popular down here that about half of my yearly work now is making them. It's a real dream come true.

My goal was to service both the layperson and the plantsman, push the envelope, to find a void which had not been bulged into, or an idea yet manifested. Colorado has great xeric (dry) demonstration gardens, and a few great crevice gardens. But not a xeric, crevice garden.

All new things are still made of the blood of their progenitors. Zdeněk Zvolánek, of course, and his style of the Czech crevice, is the basic format of the stones, as described completely in his book. The footprint and lines and shape of the overall design are borrowed from those seen on an individual stone. The crevices are vertical. (These days, I am seeking the opportunity to experiment with diagonal construction, which looks more like many of Colorado's natural crevices in nature, but is more difficult to build and provides more limits for shape and contour. But in the case of the APEX garden, we needed great control over shape of each bed. The soil approach is the internal layer-cake concept pioneered by Stephanie Ferguson of Calgary, Alberta.

I had to find an overall aesthetic to match the site, a mostly flat area with a semi-south western building nearby and the Rocky Mountains dominating the horizon. I recalled the way that the individual mountain ranges in Arizona stand up like islands out of a "sea" of flat desert. This was the natural aesthetic I'd miniaturise to imbed giant heaps of rock between flat paths which go to ball courts. The angles and repetition of gentle peaks on the mounds echo the real horizon, which is seen plainly from the site. Another consideration I made about the real view of the place was an overabundance of strong verticals nearby - many light posts, fence-posts, flag-poles and even a church steeple. These were the hard constraints.

Now to the nitty-gritty details ... We used 55 tonnes (60 tons) of Dakota formation sandstone from Southern Colorado. I forget how many dump trucks of loam, compost, sand, and gravel we used. Lots. There are five separate mounds, two surrounded entirely by paths - the tallest stands 1.8m (6 feet) tall, three of the others being enclosed by path, concrete, gravel, or wall. The shape of the mounds was derived from creating paths to invite sports players to "cut across" the garden, so that it was easier to walk through it than around it. I

still need to bug the landscape architect, who accidentally cut off one of those inviting routes... Anyhow, the resulting shapes left in-between were bulged or shrunk to avoid equality in size and nudge them off-centre from the rectangular area the whole garden occupies - both design concepts I learned in art school. ("Never, ever, paint a portrait with identical eyes," my professor said. "That's not how they are and not how we see them.")



L: First mound (#5) under construction, R: LtoR Kenton and Paul

Having been unable to find a spectrum of gravels to match the stone, and finding that crushing the stone yields more sand than gravel chips, I had an entire dump truck of pea gravel come 400km (250 miles) over the mountains from my hometown of Grand Junction.

The Arizona-inspired look begs to have many of the "cliffs," as they "return" to the ground (as ZZ says) in a dramatic way. That is, the edges are sharp. Lots of steep cliffs. Elsewhere have flat and gentle returns, too, so as to compliment, but the Northwest side of most of the mounds is a collection of steep, dramatic cliffs - all of them echoing one another is another design trick my composition professor called "matrix composition."

Maintenance was a huge (enormous, huge, giant) consideration and limitation I impose on the garden. Allan Taylor, a Colorado rock-garden contemporary of Josef Halda, once said "a garden is one tenth construction and nine tenths care afterword." I absolutely didn't want care for the garden to ever be a chore. I wanted it to be fun, so I've attacked any possibility of use of aggressive plants nearby, and designed the beds to resist weed invasion. Conceptually, I tried to reign in the loose horse of overwatering which has become popular in the field of xeriscapes, where wildflowers wind up getting overwatered, so I settled upon an easily understand "once every two weeks" water regime which would be easily understandable as well as a compromise between going un-irrigated and watering some to widen the plant pallet to include montane, mediterranean and african plants.

Five mounds gave us a chance for five different soil schemes. Two mounds have compost in them, the rest are devoid of added organics. One is solid sand. The largest has the two fattest layers: A sand and expanded-shale mix over a layer of old loam which came from a demolished historic prairie-hill garden at Denver Botanic Gardens. You can visit the website for more details on our mounds, but know that when using the layer method, it is imperative that heavier textures are below lighter, otherwise drainage will be absolutely sabotaged!



Paul on Mound # 4



Sidewalls

We built the beds starting on one side to keep heavy equipment access open - a front-end loader is better than dozens of wheelbarrow loads! We started each bed with its perimeter/border/footer/foundation stones, however you want to think of the lowest, outermost, ring, followed by large keystones within the beds. Then we worked from the bottom/edges up to the peaks. (They are compass-oriented in the ZZ school. 300 degrees Northwest was chosen to offer maximum dramatic cliffs facing the parking lot and first sight of average passers by.) We placed stones on top of soil mix and then shovelled the crevices full by hand, then to top dress with different sizes of gravel to resemble a gradient of natural decaying stone, since the samey-ness of pea-gravel almost never happens in nature.

There are deep, shallow, steep, and level crevices. The variety of aspect and position is a microclimate gallery. As a result, an offhanded measurement shows 5.5 degrees C (20F) surface temperature difference from the average North and South faces!

We had a changing crew of 3-6 people each day, borrowed heavy equipment, and occasional volunteers, all in just over two weeks. This was too fast. I think it would have simply been more enjoyable to do it broken into a couple phases - perhaps I would have been able to fine-tune rock microclimates more. I flew Paul Spriggs down from Canada, and I didn't regret

it. His fresh eye kept me from staying in a formulaic rut. We chased every workday with Indian food and chased every curry with a microbrew, and chased his week of help with a hike to the highest peak in Colorado - Mt. Elbert, and despite being from sea-level, he beat me up there! Maybe just then I regretted asking him to come down to Colorado!



Paul with *Silene acaulis* on Mt. Elbert

Halfway through, I realised I grossly miscalculated tonnes of stone needed. My math, which worked for small-scale, car-sized home gardens, was based on square footage, and failed, for lack of cubic footage, to compensate for the added footage of the added dimensionality of a mound. 38 specified tonnes (42 US tons) had to become 54, (60) to the consternation of the park director, and a few more dump trucks of stones came in. Paul was the one that asked what the largest crevice garden was, and our inquiries then found Montreal, at a matching 54 tonnes (60), but only recently did I read, if we are going to measure by weight of stones used, that Denmark's Bangsbo garden used 200 tonnes (220)! By my eyeball estimate, we used a variety including smaller stones than Bangsbo, which were consistently large, and that overall area/volume/mass looks like they would "feel" much the same, but I'd like to know by actual comparison.

I brought one employee of mine from home to work the job, and many people from the Rocky Mountain Chapter of NARGS came to help for a few hours or give emotional support. Gwen Moore (formerly Kelaidis, NARGS editor for over a decade) generously put me up in Denver for the duration.

"How about those actual plants?" you may wonder. The plant selection, I felt, must be

limited to an army of buns and cushions, to forcibly introduce onlookers to the glorious aesthetic appreciated more internally by rock gardeners.

For scale, a few smallish trees or tall elements were needed to soften the hardness of so much stone, in addition to make a little shade for people in the summer sun, with just a few but incredibly necessary intermediates between small trees and buns: shrubs. This was an opportunity to showcase and accommodate the charismatic and fussy Manzanitas, as well as a traditional, yet local and xeric showing of dwarf native conifers. The shade tree would be one Curl-leaf Mountain Mahogany, and the vertical tie would be four 'Woodward' Junipers, looking intuitively like Italian cypress but not casting shade on the crevice plants, and lastly, to drive home the Desert element- several *Yucca faxoniana* - a bold tree species of Yucca, and a Joshua Tree, all of which come from the desert and cast little to no shade to imperil the crevice garden. After all, our natural desert/mountain crevice gardens have some, if sparse, tree presence.



I had the idea of a set of early-stage, "temporary plants," if you will, for instant colourful impact, like *Penstemon eatonii*, but a club colleague talked me out of it with the sound opinion that this would outshine and create the wrong expectation of the garden's long-term plants: tiny, slow-growing buns. A few of the big plants went in that fall of 2014, (as *Arctostaphylos* seem to prefer), but the real planting happened the following March and April 2015, happening almost entirely with the hands of RMC-NARGS volunteers. My labour budget was exhausted by plant material by then, so they saved my hide!



L: Plants filling in, R: Charlotte R. viewing the plants, visiting from RHS.

Rock garden plant selection is perhaps the most fun to determine. We have a mound of mostly mesembs, a mound heavy in cactus, and one is heavy in mediterraneans. I avoid any which will be too rhizomatous, too thirsty, or too herbaceous, to keep cutting-back to a minimum. We want cushions and buns here. Half the plants are a zoo, a wide-ranging menagerie, but the other half are repeats of reliable, crowd-pleasing stalwarts which will bring colour to the garden all year, like reblooming *Ruschia*, *Delosperma*, and *Heterotheca jonesii*.



L: *Delosperma sean-hogani*, R: *Heterotheca jonesii*

There are a few grasses for physical motion as well as contrast to rocks, but these are carefully selected to avoid reseeding species. I think I deeply underused Penstemons and Astragali, who love a new garden, but I didn't go light on Eriogonums.



Eriogonum kennedyi

We've got a couple Onco Iris and just started, by the input of Mike Bone (of Denver Botanic Gardens), to plant small species bulbs.

The cacti are mostly barrel-types, like *Echinocereus*, because *Opuntia*s would both swallow up the garden, relishing its warmth, and make volunteers or the public itch with their glochids. *Echinocereus* are almost always growing in crevices in nature, too. We had to place them very, very thoughtfully to avoid accidental human injury or plant destruction with these glorious, slow-growing mounders. I confess- I planted some seed-mad plants, but these are deliberate.

And tiny. *Eriogonum compositum* and *Townsendia* 'Jeane's Purple,' for example, as so small, they play well with others and will not subsume a cushion. *Eriogonum compositum* is creating wonderful puddles at the bottom of the cliffs in the paths already, usurping weeds for that water-rich position!

We have recorded every last plant, its source, date planted, its mound, and aspect, in a simple spreadsheet, which is available online. My dear friend Marla of Roots Medicine Gardens bravely entered all of those latin names for those 1200 plants, 200 taxa.

So far, the *Arctostaphylos patula* and *A. pungens* are doing great (and I've experimentally added soil from wild plants to give them mycorrhizae), the choice *Eriogonum kennedyi* has grown phenomenally, *Delosperma basuticum* blooms wildly, *Wyethia scabra* grew ten-fold, and even the gambit of my heart- *Castilleja integra*- has established to bloom a bit.



Castilleja in bloom (centre of photo)

Weirdly enough, the few *Sedum* we planted are looking depressed and unpromising, and our path-edge use of *Paronychia kapela* ssp. *serpiphyllum* resulted in most of them drowning from unusual heavy summer rain. A strange by-product of being low-maintenance has been that individuals of us who look out for the garden can completely forget to look at it for weeks or months at a time with no real consequences. We will probably come up with a regular, organised schedule of "maintenance" in future. When we do go visit, the event is really more social than laborious.

Of less known plants, *Neohenricia sibbethii* has yielded its fussiness a bit to find a few happy spots, *Asperula boisseri* and *A. gussonii* are spreading, *Muhlenbergia torryi* enjoys life, and my newest heartthrob,



Junellia succulentifolia, has exploded in one year to look like an ancient geometric scabby bush and even bloom its musky blooms. We also enjoy the

fresh growth of *Acantholimon caesarium*, are experimenting with *Aloe aristata*, and a new introduction from dry Asia: *Dendrolobium triangulare*. Shocking us to bloom its first year was *Moltkia caerulea*, a choice Czech favourite new to us in Colorado, *Stomatium* spp feel quite at home, and we're tickled to have found the sweet spot for *Lepidium nanum*.

Weeding has been minimal, and done in between our fits of social laughter and exclamations of "oh, look at this!" and "See how well that has done?" when we visit the garden. The passing pickleballers on their way to their matches are always vocally complimentary, and now that we are seeing a year's worth of growth on the plants, we are excited to see what else we can try in this ever-open new crevice garden. I look forward, probably many years from now, to stepping back from my interim role as garden overseer and let another person take the helm and lend a fresher vision to the evolving course of this Noah's Ark of plants, but more so, I am excited to see what this mound of stone, a new breed, with all its own inertia and momentum, will mature into on its own devices.

Official Website: www.communityheroesgarden.com

Construction documented: http://kentonjseth.blogspot.com/2014_08_01_archive.html and see the "September 2015" archives.

WINTER WORK

By Zdeněk Zvolánek, photos by Zdena Kosourová

That year 2015 was unusual. We had a thunderbolt at the pine and stone ridge of the Beauty Slope with two very close strikes. A piece of the natural volcanic rock cliff (up to one ton of stones) landed in my rock garden. I was able to erect a small Matterhorn at the place, so, happily, in the end I put it in the class of a gift and not a disaster.

For a proper celebration of the Celtic December 21st (Sun is coming back again), I bought a new sturdy wheelbarrow to collect a heap of stones near the ridge where possibly was the thunderbolt strike. I had to clean a 400 meters long steep and narrow path to be able to transport the stones. One stone I split into three smaller ones. The two biggest stones are still waiting for some lucky splitting and brave transporting.



Now we have got snow and, after a severe asthma attack, the planned reconstruction of a part of my rock garden will be done in early spring. _With this kind of volcanic stones I am

not able to construct tidy crevice garden some of the English style of Alan Furness (made in

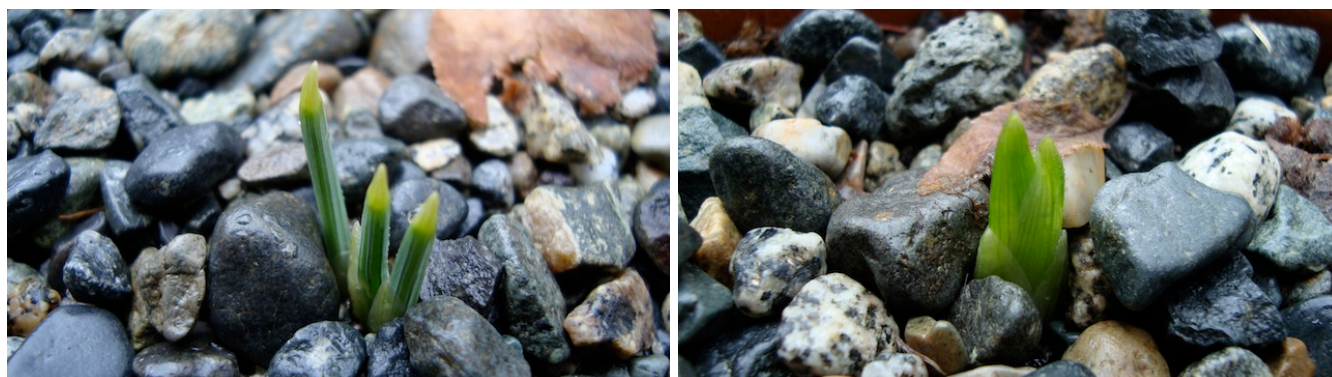


2006).

I promise to send a picture from the reconstruction some day in spring.

NEW IRISES SUITABLE FOR THE ROCK GARDEN

Flowering soon in the editor's garden are two new selections of *Iris reticulata*, bred by Alan McMurtrie of Reticulatas.com. I was fortunate to obtain some bulbs from Botanus.com in fall 2015. Here's how they look now:



L: 'Spot On', R: 'Eye Catcher'

Here's how they will look (from reticulatas.com):



L: *Iris reticulata* 'Spot On'



R: *Iris reticulata* 'Eye Catcher'

Alan has been busy working on many more crosses and getting his new introductions grown on, marketed and publicized. There will be articles about his work in RHS's **The Garden** (Feb 2016) and **The Plantsman** (March 2016), the latter a major article.

Alan writes: "As well as the Feb 16-17 RHS London show, I'll be speaking in Dunblane, Scotland (SRGC) on Feb 20, and at the Harlow AGS show on Feb 27. My understanding is Spot On and Eye Catcher are being added to Van Noort's catalog, and they should be "test marketing" another two varieties."

"I now have a "Stock Photos" webpage:

<http://www.reticulatas.com/HTML%20Pages/Stock%20Photos.html>

6,000 Spot On were sold in Canada in 2015, along with 3,500 Eye Catcher. They were sold at GardenWorks and Botanus.com. "

A number of Alan's varieties will be available in 2016, including:

White Caucasus - 2010 Introduction
Spot On - 2014 Introduction
Scent•sational - 2014 Introduction
Eye Catcher - 2015 Introduction
Sunshine - 2015 Introduction
Sea Breeze - 2016 Introduction
North Star - 2016 Introduction
& 2 more 2016 introductions. One must wait to see which will be chosen for Canadian distribution.

TRAVEL OPPORTUNITY TO NEW ZEALAND

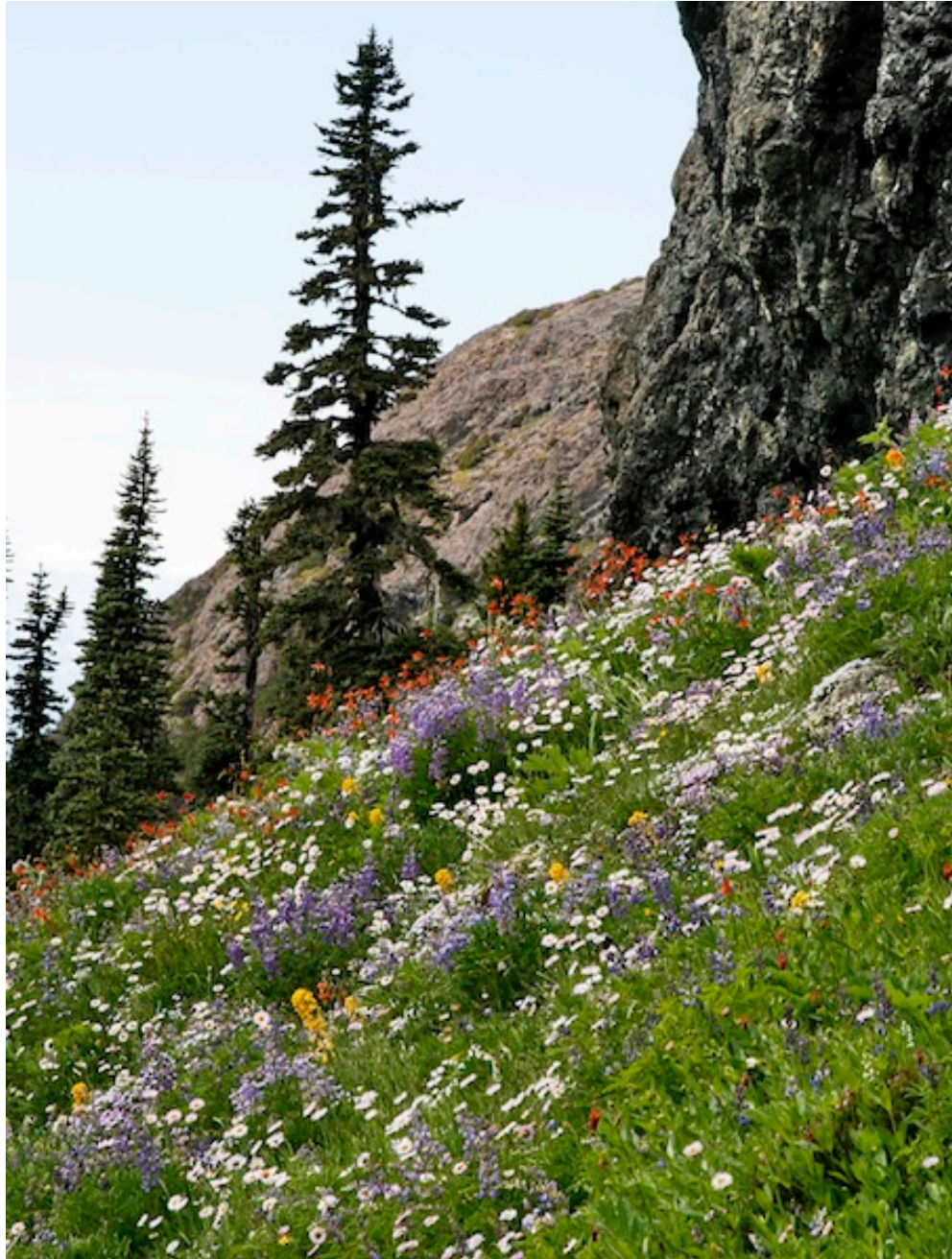
The Cowichan Rhododendron Society and Bill Dumont in conjunction with Duncan Hill Travel Ltd. are planning a New Zealand Garden & Country Tour Fall 2016. The 22 day tour runs from October 23 to November 13th. For further information and itinerary you can contact the travel agent - 250-748-0391 or Bill Dumont at wedumont@shaw.ca. Or the editor can forward you a pdf of the brochure.

ALPINE FLORA OF MOUNT ARROWSMITH by David Sellars

A new hike, **Mount Arrowsmith**, has been added to the alpine flower website, www.mountainflora.ca.

Hans Roemer and Rick Avis, keen botanists from Vancouver Island, have shared their knowledge of the great floral diversity in the alpine habitat below the summit rock walls of Mount Arrowsmith. The featured plant is *Lewisia columbiana* var. *rupicola*, which is the showiest variety of *Lewisia columbiana* and is restricted in range to the outer coastal mountains from northwestern Oregon to Vancouver Island. Hans and Rick have kindly provided details on trail access, over 40 beautiful photos and an excellent plant list to make alpine plant identification easier for hikers. To visit the web page, go to:

http://www.mountainflora.ca/Flora_of_the_Coast_Ranges/Mount_Arrowsmith.html



Base of the rock walls: Photo by Rick Avis

Mountainflora.ca is a website dedicated to the appreciation of alpine flowers in their natural habitat. From our eight contributors we now feature over 50 alpine flower day-hikes around the world ranging from the Andes to the Dolomites and as far north as Yukon.



Lewisia columbiana var *rupicola*: Photo by Hans Roemer

AGCVI ACTIVITIES REPORTS

HANS ROEMER VISIT - OCTOBER 26, 2015

Photos by Kirsten Juergensen

Members and guests enjoyed a very interesting talk by Hans Roemer. It really broadened our understanding of the alpine plant life in the southern Rockies. Thank you so much, Hans. If you missed receiving a copy of the slide list showing plant names, get in touch with the editor please.



AGCVI CHRISTMAS LUNCH, NOVEMBER 30, 2015

Photos by Kirsten Juergensen

On November 30th, the members enjoyed a delicious lunch at The Qualicum Beach Inn.

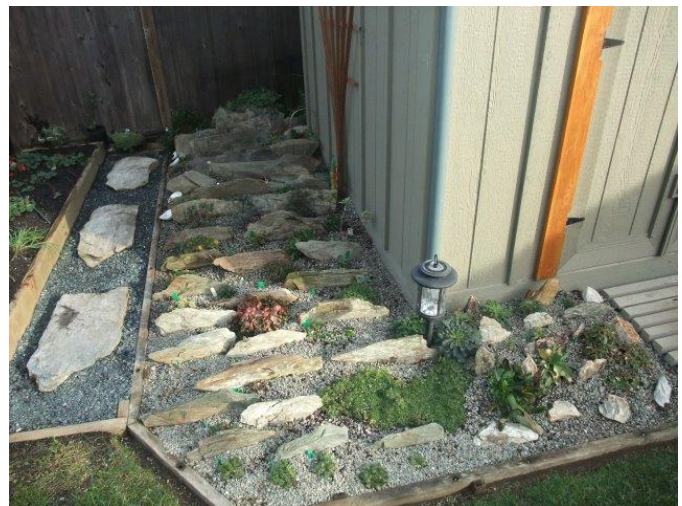


June Strandberg, our founding & now retiring President, was thanked for all her hard work with some special gifts. Mike Miller is our new President and happy at the prospect:



WHAT'S NEW IN MY GARDEN - Lori Pross

November 5th, 2015:



Lori writes:

"New set up! WAY more space (*little* plants tend to GROW!!) No stepping stones - I can walk on the pea gravel! Hope they are survive the winter - I'm not planning on covering this year!!"

A FAVOURITE FLOWER FROM PARADISE MEADOWS

Margaret Castenmiller writes: "My favorite flower was Bunchberry, I discovered this year during the alpine walk, up on mount Washington, the beauty and the flowers where amazing! Thank you for making me aware of this!

