Alpine Garden Club of British Columbia

Eriogonum caespitosum in the Sellars Garden

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AGC-BC 2018 Membership Renewals Due
If you have not already renewed your membership for 2018, please bring a cheque for $30 to Membership Secretary, Jane Byra, with your name and contact info.

Or renew online using your credit card through PayPal on our website www.agc-bc.ca/membership-renewal

AGC-BC 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.

2018 AGC-BC Upcoming Events

• Sept 12 - AGC-BC Fall Sale and Meeting
  • 6:30 - 7:30: Fall Sale
  • 7:30 - 9:30 Chris Gardner: The Silk Road
• Oct 10 - AGC-BC Meeting
  • Ron Long: Plants of the High Andes and Other Stories from Argentina and Chile
• Nov 14 - AGC-BC Meeting
  • Laura Caddy: The E.H. Lohbrunner Alpine Garden

For more information, visit http://www.agc-bc.ca/events
From the Editor
Laura Caddy

I find summer can be a tough season to be a rock gardener. Fun tasks of dividing, rearranging and planting out get replaced with seemingly never-ending watering and weeding (sometimes weeding then watering, just for a change). The west facing, rocky slope of the E.H. Lohbrunner Alpine Garden, which is a haven of warmth in spring, turns into a hostile environment during summer heat waves. Although there is always something blooming in the Garden, the blast of spring colour seems like a distant memory. On the bright side, where there were flowers there is usually now fruit, which are incredibly diverse, and beautiful in their own right (sometimes even more showy than the flowers!). This is the perfect time in any garden to not only admire the seed heads that your favourite flowers have ripened into, but also make a note of what seeds you could collect, for, oh, I don’t know, perhaps the Club Seed Exchange?

Collecting seed is a wonderful way to get to know your favourite plants in a different stage of their life cycle, admire the many different types and form of fruits, and potentially pass them on to your fellow members. So much of what we treasure as alpine plant people is the diverse palette of species not often available commercially, and where would any of our gardens be without the sharing of seed from other members? I think most of us are aware of how important the Seed Exchange is, to local and distant members, but in case you are new to the process, or need a refresher, we have a lovely article in this edition outlining all the hard work that goes into our amazing exchange. There is also information on the details of how and to whom your seeds can be sent. I hope you all will take the time to contribute!

Further in this edition, we have the distinct pleasure of travelling to the BC Interior to explore the Summerland Ornamental Garden with Andy Matheson, the first recipient of our Willie Dickenson Scholarship. If that’s not far enough for you, Mike Kintgen reflects on his highlights from the tours at the NARGS Annual Meeting, held this past June in St. John’s, Newfoundland. A little closer to home, Carla and Bill Bischoff report on gentians in their garden, and Jack Akerley reports on the excellent and informative May presentation by Jim Jermyn, which was the first in the Willie Dickenson Speaker Series.
The reoccurring favourite Garden’s Rock is also back, but in a slightly different form. To accommodate David’s great photographs, it has been expanded to two pages. This provided an opportunity for the ‘back’ page of the Bulletin, and I thought I would try something new. As a bit of a plant nerd, I am fond of identification challenges, and thought you may be as well. So, I am including an image of a plant, with no caption, in this section. Feel free to take a stab of what it may be, and check the final page of the edition for more images, a little information, and of course what species it is. The prize for correct identification is bragging rights to whomever is nearest, and if your loved ones, neighbours and/or colleagues complain how insufferable that is, feel free to blame me. Enjoy!

Too easy? Too hard? Let me know at bulletin@agc-bc.ca
It is time to think of seeds again. The Seed Exchange is a major activity for the Club, and it depends completely on people sending in seeds. Therefore, seed donors get special treatment when it comes to ordering seed from the seed exchange: they get the first chance at seeds that are in short supply, and they can order more packets than non-donors. So why not give it a try this year, if you are not already a donor? We all grow interesting plants, and it is actually quite fun to hunt for seeds – in your own garden or in the wild. Please ensure that the seed is as free as possible from chaff and other kinds of contaminants. Also, please make sure the seed is dry, and especially if you send it in plastic baggies. We don’t recommend plastic baggies as we end up throwing away seed every year because it arrives mouldy (sometimes to the extent that it is hard to recognize any seed). Please make the label easily legible – I am sometimes left guessing, and I might guess wrong.

You need a minimum of 5 different kinds of seeds to qualify as a donor. For people in North America, these need to be natives of North or South America. Overseas members get donor credit for seed from any country. That said, we like seed from anywhere, and we do take into account how many kinds of seeds you send, so we certainly hope you’ll go beyond the minimum! It is a great help to us if you can include with the seed an alphabetical list of what you are sending. Also, if you have wild collected seed, please include the location where you collected it, and if you are not sure of the species, some details of height, flower colour (if you know it), possibly growing conditions, etc. Seed is much more likely to be interesting if it is described as: Penstemon sp., 20 cm, compact, small leaves, flowers pink, growing at 8000ft., than if it is described as: Penstemon sp., and no more.
Please mail them in time for them to arrive before **October 26, 2018**. This gives us barely enough time to complete the seed-list by the time the fall bulletin is due.

Last year we had serious problems with Canada Customs. Not because they prohibited seed, but because they had logistics problems, and packages just sat about. Some packages took a month to six weeks to arrive, and we have no way of knowing whether the problems have now been solved. Obviously, it becomes impossible to mail seeds that early, so I am begging you, when you mail your seeds, please, please, PLEASE, also email a list of what you are sending to me by email. For the few of you who don’t have e-mail, please put a list in an envelope and send it separately, as last year letter mail was not delayed. If you find it totally impossible to get your seeds in before the deadline, mail or e-mail me a list of what you are planning to send before the October 26th deadline. And please make sure that you will definitely be sending the seed you include on the list. If you can’t make the deadline for the seed, it is important that you send it as soon as possible. Packaging the seed is another major job and it starts soon after the deadline.

Finally, to end as I started, the donors are the pillars of our exchange – without you there wouldn’t be one – so I’d like to thank in advance everyone who’ll be sending seeds this year.

**AGC-BC Members Fall Plant Sale**

In lieu of a public fall plant sale, we invite members to sell and buy plants at our first meeting on September 12th in the Floral Hall at VanDusen Gardens. Based on feedback from sellers last fall we still want to have a sale for our members, the primary customers in any case, but with less of a time commitment by all parties. We encourage all of you to donate plants to the club table and invite those members selling to set up at 5:30 that day. The sale will start at 6:30 and end at 7:30 giving us time to clean up and prepare for Chris Gardner’s presentation on the flowers of the Silk Road. We need a few volunteers for the set up and ask that you bring snacking food for the break table.
In Memoriam - Glen Alexander Patterson
September 23, 1921- May 15, 2018

Glen Alexander Patterson, 96, died May 15th with family at his side. He is survived by his sister, Jean Edwards of Toronto, son Dennis, (Evelyn) Bruce George, Jessica and Alexander, son Bruce, (Ilse) Kate, Rose, Lena and daughter Sheila, (Brian) Lewis, Isobel, Sally, and 5 great grandchildren. His was a life well lived.

He was born in Calgary to a musical and gardening family. When Glen first laid eyes on Vancouver in 1936 as a boy on a band trip playing at the Haywood bandstand in the West End, it was the beginning of a lasting love affair with this city. He graduated in Commerce from UofA and then served with the Royal Canadian Air Force training pilots in the Commonwealth Air Training Plan. After the war, he and his high school sweetheart Isobel Farr eloped to Vancouver. Glen got a job in the Kananaskis and lodging was scarce. They took over an abandoned prospector's cabin and while Glen cruised timber, Isobel fended off the bears. What bliss! Back to Vancouver, Isobel worked to support Glen when he took a second degree in Forestry (UBC 1947). Jobs were scarce then and they were thrilled when Glen was hired by Canadian Forest Products in the Nimpkish Valley on Vancouver Island as a fire warden, later as a forester. Living in isolation in remote Woss Camp they raised 3 children. Home was an uninsulated wood stove heated bunkhouse, sensibly sited on gravel. Ever the gardener, Glen packed swamp soil on his back to establish a garden that was their pride and joy. His work talents were recognized and he was promoted to management at Grande Prairie, Alberta and in the last years of his career to his beloved Vancouver as VP at Canfor. His retirement was not retiring. He threw himself at exotic travel often in the pursuit of rare plants. He created two outstanding gardens, one at Pilot House Rd in West Vancouver and his piece de resistance in Coal Harbour, a celebrated rooftop garden that defied gardening norms.

Glen had a zeal for life and his enthusiasm was unmeasured. If you asked after Glen, his reply would invariably be "Never better". Among his many passions; nature, travel, rare plants, the mountains, politics, the Internet, photography, fitness, investing, conifers, his I-phone, pussycats, collecting
Indigenous West Coast Art, and his grandchildren. He adored his final home at Tapestry, UBC. He is remembered for his courage and his steadfast commitment to his independence. (How about 5 times /week personal training sessions until right before his death!)

His curiosity and intellect were prodigious and his many opinions were staunchly defended. He was serially social, though his black cloud was the tragic loss of Isobel in 1971.

Our Dad, Brother, Grandpa, Great Grandpa and Friend, Go well to the Great Beyond

Published in Vancouver Sun and/or The Province on June 9, 2018:

Glen at the 2017 AGC-BC Spring Show. Photo: David Sellars
AGC-BC Seed Exchange: A Sincere Thank You to the Volunteers

Chris Byra, with Linda Verbeek

As a relative new comer to the club, I have had little to do with the seed exchange other than donating a few packets and ordering many. This past year has been an eye-opener! Diana Hume has managed the preparation and distribution parts of the exchange for nine years; a huge job only really recognized by the participants, as the exchange has been running smoothly and autonomously in the background. I had no idea of the complexity of the process and tremendous amount of work by the volunteers involved, many of whom have helped for many years. For personal reasons, she has to give up the job and we are very pleased that Pamela Yokome has stepped up to manage and organize the exchange. The activities of the manager happen mostly away from the seed sorting and packaging table, ensuring that everything is ready and organized.

History:
Linda Verbeek kindly prepared a history of our exchange from memory and past bulletins. There seems to have been a Club to Club exchange of seeds since 1962 (when we were still the Canadian Primula and Alpine Garden Society). The first structured seed exchange was running in 1970 and done by Jim McPhail. It only covered western North America and had just 215 taxa, so I imagine Jim and his partner Bob Woodward did most of it themselves. It was apparently a great success, and the next year the scope was broadened to include all of North America.

The report on the first seed exchange mentioned that the membership list had grown considerably in the last months of 1970, especially members from other countries. In 1971 the list had 411 taxa and the exchange was run by Ann Hartman for two years. It was then taken over by Thelma Chapman. At some point, she decided to include seeds from South America. In 1976 the seed exchange was passed on to Betty King.

In 1982 Vera Peck took over, and began including a selection of seeds from the rest of the world. She organized the seed exchange in its current form and made it an efficient operation. Vera ran it for 10 years, and the job increased tremendously in her time - at one point we had nearly 200 donors. When Vera stepped down, Pam Frost took over the whole exchange for 12 years, which is still the record! Following her tenure, Ian and Phyllis
Plenderleith operated the exchange for four years and would happily have continued if Phyllis hadn't been disabled by a major stroke.

Once again Pam Frost stepped into the breach and helped out for a year so the seed exchange didn't come to a crashing halt. After that point the work for the seed exchange was split, with one person receiving the seed and putting the seed-list together (Marilyn Plant then Linda Verbeek). A second person receives the orders and oversees the distribution, including organizing the folks who do the packaging (Diana Hume for the past nine years). Leftover seeds are managed by a third person (Ann Dies then Ruth Anderson), selling them at our meetings and various other venues and contributing some to UBC and a few other societies.

Unmentioned so far are the many seed sorters and packagers; more than a dozen volunteer every year, each spending several days at three locations. The club thanks you for your participation!

The workings of the exchange:
The seed receiver, Linda Verbeek, maintains the donor list, prepares the seed list and details for packaging and organizes the seeds into their taxa and source (for wild collected). Getting the seed list out as early as possible is critical. Please send, as early as possible, a list of seeds that you will be donating to the club.

For the past nine years, boxes of seeds then found their way to Diana Hume’s house where she organized them and ensured that all forms, seed envelopes and other supplies were ready for packaging. Volunteer teams were scheduled at three locations and all seeds and paraphernalia arrived ready to go. Much of her work was behind the scenes – she was the conductor ensuring that everything was ready to go. Packaging began based on previous years’ orders. Then, as orders arrived, further packaging occurred to ensure that there were adequate packages of each taxon. Decisions were made when there was a shortage of seed, but everyone got at least 80% of their first requests; usually it was over 90%. All orders were double checked for accuracy and thank you notes were prepared. As a last step, members received their orders at the January meeting or through the mail.
The story is not over. Ruth Anderson takes over to package the left over seed to sell at ours and other club meetings and sales during the rest of the year. Bill Bischoff has kindly supplied photos of all the taxa on the seed list numbered the same as the list. This will be available on the site next fall.

Please be part of the team:
Our club not only provides an opportunity to socialize with others having a similar interest in alpine plants, the exchange is central to the international membership of the club and is our access to taxa not easily found. The size and reputation of the club would be greatly diminished without the exchange. This differentiates us from other garden clubs that only offer speakers and newsletters. Even if you have limited available time, we could use your help in November and December. Let Pamela know when you could be available at seedrequest@agc-bc.ca.
Summerland Ornamental Garden’s Xeriscape
Andy Matheson

Summerland Ornamental Gardens (SOG) is one of the oldest public gardens still in operation in British Columbia. Founded in 1916 in the Okanagan valley, it was used as an experimental garden to test plants in the Okanagan climate. With a history like that, one could guess that there are some pretty old, unique trees on the property. My two favourite ones are the gnarly and furrowed Gymnocladus dioicus (Kentucky coffee tree) and the stately misfit Picea breweriana (Brewer’s spruce). But, what drew me most to take a seasonal horticulturist internship at the SOG was their large Xeric Demonstration Garden, and their concern for good water management in a dry climate.

As we have seen across British Columbia, weather patterns are changing and summers are having longer periods of dryness, so where better than the Okanagan to look for drought tolerant horticultural inspiration? Summerland’s biogeoclimatic zone¹ is characterized as a Ponderosa Pine ecosystem, meaning Ponderosa, native grasses and Artemisia species define the landscape. A little further south and in the Thompson Nicola valley is the bunchgrass biogeoclimatic zone. These are the hottest and driest ecoregions of BC, characterized by shallow snowpacks in the winter, and arid summers.

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Because of this climate, the Okanagan knows water woes. According to the Okanagan Basin Water Board\(^1\), the average Canadian person uses 329 litres of water per day. In B.C., that number jumps to 490 litres. Comparatively, the Okanagan average is 675 litres, which increases to 1,000 litres per person per day in the summer. Twenty-four percent of the Okanagan’s household water use is for outdoor use—generally for irrigation. With a growing population and a limited yearly amount of water, the Garden knew it had to begin testing the boundaries of water usage.

The xeric garden at Summerland was built in the early 90s on a southwest facing rocky, gritty outcrop—the hottest and driest area of the garden. Much of the area is mulched with large pieces of rock, intensifying the heat. Walking into the Xeric Demonstration Garden one is greeted by a wooly sea of *Stachys* and *Verbascum*, contrasting with the dark leaves of *Cotinus* and fine textures of *Perovskia atriplicifolia*. Under the shade of a burr oak, custard yellow spikes of *Yucca* give way to pink and yellow blooms of native *Opuntia* and *Penstemon* spp. The predominant colours are golds of dry grass, blues of *Artemisia* spp., and various beige colours of rock, blending seamlessly with the Okanagan landscape. This is a garden taking a hint from its environment.

The SOG aims to entice the public with interesting and thoughtful ways to be more water wise, even with lawns, and The Xeric Demonstration Garden is a constant learning experience where new plants, designs, and irrigation methods are tested. One of the biggest questions is how often, and how deeply, to water to mimic the natural environment, and

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\(^1\) [http://www.obwb.ca/wsd/key-findings/water-use](http://www.obwb.ca/wsd/key-findings/water-use)
how can irrigation be reduced to, ideally, nothing. One recent implementation is the use of drip lines, which according to the Regional District of Okanagan-Similkameen\(^1\), conserves 30-50% more water than overhead sprayers, while also reducing water loss due to evaporation and target inaccuracy. Currently, the gardeners (at SOH or just the Xeric?) water once every two weeks—typically only from July through September. Areas are renovated to better reflect the discoveries of various plants’ success. Following an idea from Metro Vancouver’s Grow Green website\(^2\), a small area of turf was replaced with five different *Thymus* spp., all creeping varieties of thyme. This is one plant that, once established, requires no extra water in the Okanagan.

Through the Xeriscape Demonstration Garden, the SOG has learned the importance of choosing the proper plant for the proper place. Some plants require no extra water such as *Berberis* (formerly *Mahonia*) *aquifolium* and *Ribes aureum* (golden or yellow flowering currant). In fact, extra water will cause these plants to grow significantly larger than they would in the wild, potentially choking out other plants. Conversely, other species, like

\(^1\) [http://www.rdos.bc.ca/departments/public-works/water-systems/water-conservation/#c1442](http://www.rdos.bc.ca/departments/public-works/water-systems/water-conservation/#c1442)

\(^2\) [http://www.growgreenguide.ca/lawns/keep-me-dry-lawn](http://www.growgreenguide.ca/lawns/keep-me-dry-lawn)
*Lewisiopsis tweedyi* and *Ericameria nauseosa* (rabbit brush) will rot with too much water. Getting to know the various aspects of a garden by keeping track of water use and measuring the depth of soil infiltration help inform watering practices, plant, and mulch choices over time. A xeric garden like this does not play it safe, but takes risks in order to learn the limits and advantages of various designs and plant choices. These lessons are even being adopted/implemented as money allows into the rest of the SOG with new bed renovations focusing on plants with low water requirements, due to the success in the Xeriscape.

A completely xeric garden in the Okanagan is beautiful, desirable, sensible, and very much possible, and the valley is blooming with ideas. On the coast, however, there is not as much discussion on how low water gardens can be implemented on a large scale. How can the coast, which is facing similar questions about the future of water consumption use what is available to create more sustainable landscapes?

Obviously our plant, mulch, and watering choices will be different given our reasonably dry, cool summers and incredibly wet, warm winters. Knowledge of local soils and climatic conditions is critical to the success of a sustainable garden. The connection between alpine gardening and xeric gardening is the growth strategy of the plants—both gardening types take advantage of stressful environments to grow beautiful plants. My philosophy on horticulture is that gardeners are land stewards: we don’t just garden for ourselves but we...
garden for our community and for ecology. We are literally providing for the birds and the bees (the latter which are dying off at alarming rates), and water shouldn’t have to be a limiting factor in our gardens. How can we use ideas from nature and implement them in the garden? By turning the weaknesses of our gardens into strengths, we can best use what we have to be successful in our gardens, rather than toiling in an attempt to change them.

To find more information about the Summerland Ornamental Garden and it’s, in my opinion, remarkable Xeric Demonstration Garden, visit their website, www.summerlandgardens.org. Of course, it’s always better to see it in-person.

Andy Matheson is a recent graduate from UBC Botanical Garden’s Horticulture program who is currently doing a seasonal internship at Summerland Ornamental Gardens in Summerland, BC. Passionate about ecology, Andy takes his gardening inspiration from nature and aspires to play with the interface of nature and horticulture, improving landscapes disturbed by humans. He has also never met an Artemisia he didn’t like.

Andy is the first recipient of the Willie Dickenson Scholarship.
Newfoundland provided a welcome relief from the heat that many parts of the US and Canada had been experiencing. Todd Boland and the Newfoundland contingent created a wonderful meeting filled with delightful gardens, lectures and field trips.

The first field trip I went on was to the Hawke Hills and Little Soldiers Pond to see an assortment of alpine, boreal, and bog plants. Passing west out of Saint John’s we climbed slightly in elevation through boreal forest of spruce, larch, and *Alnus*. Coming from a dry continental climate I always love the deep green and textural landscapes of eastern North America. Ferns often dominated below the feathery *Larix laricina* (tamarack) and dark green somber spruce. My travel companion and colleague at DBG Michael Guidi and I were taken with the *Larix* and promised to plant a forest in the future to mark this special occasion.

Parking alongside the Trans-Canada highway we climbed a dirt service road to the summit of Hawke Hills. Already the forest was a stunted mixture of *Alnus*, *Betula* and *Larix*, so it didn’t take long to break free of the larger woody plants and emerge into a world of dwarf *Larix laricina*, *Kalmia angustifolia*, *Juniperus communis*, *Empetrum nigrum* (crowberry), *Rhododendron* (*Ledum*) *groenlandicum*, and other assorted woody plants. A mixture of herbaceous forbs, graminoids, lichens, and mosses filled the space between the rocks and islands of stunted tamarack. One side of the road was quite wet and harboured *Sarracenia purpurea* (northern pitcher plant) and *Eriophyllum* (cotton grass).

Stunted *Larix laricina* surrounded by mats and cushions of various species, on a typical misty day.
Continuing up we spotted the first *Kalmia* (Loiseleuria) *procumbens* and *Diapensia lapponica*. Hawke Hills are known for harbouring these two choice species. Both were past bloom but their cushions and mats were a feast for the eyes. Around them was a beautiful matrix of greys, an amazing array of green shades from the brightest and darkest green to shades of olive, and blue greens. The range of textures and muted colours was a beautiful change from Colorado where many of the tundra plants share similar textures and shades of green. The lack of bright flowers allowed the viewer to truly settle in and enjoy the full range of greens and textures without being distracted by reproductive structures. Once the whole group was on top Todd gave a great tour of each species, filled with his encyclopedic knowledge. Todd’s knowledge is truly impressive and probably no one has done more to help educate about the native flora of Newfoundland.

Having our fill of this special alpine environment we returned to the bus for the short trip to Little Soliders Pond to see orchids. The site was beside the Trans-Canada highway and under a powerline – not the most romantic place to appreciate a wide variety of plants. Yet the plant life and views to the north made me feel like I was in the middle of a vast boreal wilderness. Having spent time in Michigan’s Upper Peninsula, bogs are a familiar feature. What made this one stand out to me is how it cascaded down the slope in a series of terraces. Each lower terrace was a bit wetter. Right away people spotted beautiful *Arethusa bulbosa* (dragons-mouth orchid), and outstanding *Sarracenia purpurea* patches. Verdant cinnamon fern (*Osmundastrum cinnamomea*), the largely local *Betula michauxii* and tons of additional bog denizens rounded out the area right along the parking lot. It was a highlight to see *Betula michauxii* in habitat being a lover of all things birch.

A very late flower of *Diapensia lapponica*

One of many *Sarracenia purpurea* patches.
Passing down the slope people found some *Cypripedium acaule* and *Calopogon tuberosus*. It was wonderful to see my first large flowered *Cypripedium* in eastern North America. Additional searches also revealed various colour form of the dragons-mouth orchid orchids.

The next day I was scheduled to go to Cape Spear, Signal Hill and the Memorial University Botanic Garden. I had visited these places my first day in Saint John’s with my travel companions Karen Lehrer and Michael Guidi. These areas provided a rich assortment of plant life near the coast in an amazingly harsh environment. Of the two wild sites we enjoyed Cape Spear’s plants the most. Here I saw *Rhododendron canadense* (above) a plant I had wanted to see since I was a little kid. *Sarracenia purpurea*, luxurious spreads of cinnamon fern, cotton grass, and other interesting plants filled the boggy areas. We liked Cape Spear so much, that we returned one morning to poke around a bit more. I found *Iris versicolor*, *I. hookeri* and one *Rhodiola rosea* in full bloom.

*Rhodiola rosea*, photo by author.
Signal Hill has beautiful plants, a spectacular location and great views of Saint Johns. Its harsh exposed location makes much of the vegetation resemble alpine vegetation in form.

Far left: Beautiful views (though harsh, windy and exposed), of the Atlantic Ocean from Signal Hill.

Left: *Sibbaldiopsis tridentata* and *Vaccinium vitis-idaea* finding shelter in a natural crevice.
What the Memorial University (MUN) Botanical Garden lacks in size it makes up with variety, and quality of display. I had seen the garden in late Oct 2014 so it was fun to return to it in July. The large collection of *Rhododendron* was at peak along with many alpine and rock garden plants that had bloomed months ago in Denver. The Botanic Garden is not to be missed by any plant lover. The rock garden is very nicely done and the other additional beds are beautiful.

*Rhododendron campylogynum* in the crevice garden at MUN Botanical Garden.

Tour participants admiring choice specimens in MUN Botanical Garden Alpine House, near the entrance to the Rock Garden.
Newfoundland was a dream come true in many ways. I was able to revisit the gardens in the height of summer that I had seen in autumnal glory years before, and explore many wild areas that made me swoon with the mixture of rock, water and texturally verdant plants.

Left: The Rock Garden at MUN Botanical Garden.
Right: *Linnaea borealis* (the floral emblem of the Garden), and *Cornus canadensis* blooming along the extensive nature trails at MUN Botanical garden.

Mike Kintgen is Curator of Alpine Plant Collections at Denver Botanic Gardens. He holds a B.S. in horticulture from CSU and a M.S. in Alpine Ecology from Regis University. Mike gardens in both Denver and Steamboat Springs, Colorado.

*Photos, except those noted, by Laura Caddy*
Summer Blues: Gentians in the Bischoff Rock Garden
Carla and Bill Bischoff

We have about 12 different *Gentiana* species and cultivars currently blooming in our flowerbeds, and six more in pots. *Gentiana asclepiadea* (willow gentian), is typically blue, but we also grow cultivars that have pink and white flowers. Gentians and their close relatives can be found natively growing on every continent, save Antarctica, but *G. asclepiadea* is native to eastern Europe and west Asia. This perennial grows about three feet high and as much in width, in full sun, with normal garden care. Flowering started the end of July, and we expect four weeks of blooming from it. It does self-seed, and the seedling will produce flowers after three seasons. The plants can be divided in early spring.

*Gentiana asclepiadea* currently blooming in the garden.
In our rock garden one of the gentians we grow is *Gentiana cachemirica*, which, as the botanical name suggests, is native to western Asia, including Kashmir. This perennial is four years old, and we obtained it from a nursery in Port Kells Nurseries in Surrey. It grows about five inches high, but spreads 18 inches wide, and does best when supported by larger rocks. We have it in full sun, but it will take some shade, especially in the afternoon (we grow related species in part shade). There are two species of bumble bees that seem especially attracted to these flowers, and we expect this to bloom through the month of August.

Left: *Gentiana cachemirica*, in the rock garden. The dry part in the centre of the plant is indeed the root stock, only three inches wide. Right: Looking closer you can see still some unopened buds.

All in all, we have three gentians closely related to *Gentiana cachemirica*, and they share a similar growth habit. All grow and bloom well in full sun, but will adjust to part shade. They can be cultivated in the rock garden, or in wide, shallow pots. The pots can be allowed to almost dry out over winter: a garage would be okay to store them, even with frost. Overall, these gentians are excellent plants for gardeners, even novices.
Jim began his presentation with the statement that the most important component of rock gardening is understanding where the plants grow in nature. To this end, Jim got off to a good start in his career, having undertaken his apprenticeship in the Munich Botanical Garden, including working with alpines in native conditions in the satellite Schachen Alpine Garden at 1850m elevation. Observing plants in their native habitat and monitoring their performance in the garden have therefore honed Jim’s expertise, and his presentation featured many spectacular photos and plant-by-plant growing recommendations, including:

- **Adonis pyrenaica** takes full sun with perfect drainage. It is in the buttercup family, and as Jim noted throughout the presentation, the buttercups need depth – up to two or three feet of root run. Jim’s perfect specimen is among limestone, but in deep soil.

- **Dianthus callizonus** is native to the Carpathians in Romania. This late flowering dianthus loves lime. It is stoloniferous, and so needs to have space to run around.

- **Gentiana acaulis** is native to the Alps. Jim noted some plants are shy to flower. Select plants that have a genetic disposition to be prolific bloomers.

- **Primula marginata** grows in the maritime Alps of Italy, on cliff faces, getting good light but not necessarily full sun.

- Jim showed **Primula allionii** on March 13 in the Maritime Alps in porous limestone. Detritus falls into crevices, allowing the plant to establish. Tufa is a good substitute in the garden. Jim makes a hole, at 45 degrees, and fills with a mixture of sterilized soil and sand. A 2 inch overhang prevents rain falling directly on the Primula rosette. He carefully puts the roots in the mixture, and some on top. He warns not to tamp the mixture hard, but water well.

- **Ranunculus glacialis** is native to the Engadine region of the Swiss Alps. Jim noted this is a plant that will not perform in the garden as it does in habitat. Enjoy it there!

- **Allium insubricum**, however, can do well in cultivation. Tuck it in between limestone boulders as it would be in nature.
To create a natural setting for alpines, Jim recommends limestone. Start with big boulders at the bottom, and back fill with soil as you build up. A southwest orientation is best, but some plants like a cool, shady position. Tuck these plants into northwest facing areas of garden, or out of direct sun behind boulders. Top dress to one inch deep with a material that will retain moisture, and Jim recommends making use of deep rock pockets. Jim mentioned the benefits of crevice gardens, including that of Ann Bartlett in Denver, Colorado. Harold McBride’s practical crevice garden in Northern Ireland comprises not more than 80 sq. ft. A small garden relatively speaking, but containing many happy alpine plants.

Jim imparted additional expertise regarding some excellent alpine plants:

- **Callianthemum anemonoides** is a buttercup from Austria. It needs a deep root run, in limestone.
- **Campanula raineri** is a lime loving plant. Tufa is a good host, planted in dappled shade. Slugs are devastating to *Campanula* in Jim’s experience.
- **Campanula zoysii** grows on limestone cliffs. The species develops a deep root run in fissures in the cliffs. In its habitat, Jim collected detritus and material from a rotting plant, and replicated its habitat in a trough with dolomite limestone.
- **Cyclamen purpurascens** occurs in dappled shade in habitat. Jim grows it in limestone boulders in full sun. Cyclamen repandum is much more of a woodland plant.
- **Cypripedium calceolus** grows amongst Pinus mugo in the Dolomites. It has exacting requirements – specifically it needs mycorrhiza. Rotted pine needles work great. Look for the white mycelium that is deep under the pine needles. That and broken dolomite is the ideal mix for this plant.
- **Daphne arbuscula** occurs in the Muran Mountains of Slovakia and Hungary. It prefers limestone, and don’t allow any other plants to overlap it, or its foliage rots!
- **Daphne blagayana** is native to Montenegro. It is an alpine plant that will take a bit of shade. It is is easily propagated from ripened cuttings end of June.
- **Daphne cneorum ‘Eximia’** is very vigorous Daphne. It needs room; space to move.
- Miniature **Delphinium glaciale** is a buttercup member that occurs in the Himalayas, with roots that reach down 4-5 feet. A one inch tall delphinium!
• **Dianthus pavonius** loves full sun, perfect drainage and acid soil.
• **Gentiana brachyphylla** and a hybrid of **Gentiana verna x G. pumila** Jim grows in a trough. The trough’s drainage must be fantastic. He places broken clay pot above hole, then a layer of good compost to draw the roots down. He uses a top dressing of rock chips. Watered well, a number of small plants will look fantastic in three years.
• **Gentiana farreri** is one of few autumn gentians that grows in alkaline soil and likes it. Jim grows it in a hypertufa container, in sphagnum peat.
• **Gentiana froelichii** grows in Slovenia, in soil from acidic to neutral.
• **Gentiana sino-ornata** grows in high meadows. In the garden setting, it grows well in a trough, with acidic humus. It must never dry out, but must be in full sun.
• **Helleborus niger** grows in Austria, completely open to direct sunlight. Jim grows in six inches of leaf mould. As it is in the buttercup family, he allows it a deep root run (a theme is developing here!). Underneath the leaf mold is broken limestone to facilitate root development.
• **Physoplexis comosa** is a monotypic genus, with roots like a carrot. Root it in tufa with a west facing orientation, not in full sun.
• **Ranunculus parnassifolius ‘Nuria’** grows in moist scree, on a steep slope. In the garden it is lime free, and kept very well watered, tucked in between slate crevices.

Jim’s presentation made it clear that he has viewed an enormous number of alpine plants in habitat. It was also clear that he’s had a lifetime of experience replicating alpine conditions in the garden. Some plants are easier than others and of course it also depends on the conditions your garden presents. With some adjustments as noted above, even plants with exacting requirements can be grown with the right site and site preparation. However, in Jim’s own words, “the true key to growing alpines in true character, is to buy an Alp”.

Jay Akerley is a rock and alpine gardening enthusiast with gardens in both Greater Vancouver and high on the Thompson Plateau in BC’s Interior. His degree in Geography from Simon Fraser University and subsequent training at the Pacific Horticulture College in Victoria nurtured an interest in the plants and landscapes of the world's montane and high steppe biomes. Over the past 10 years, he has been collecting seed in rugged environments across western North America, contributing to seed exchanges and the collections of specialized growers around the world.
North American Plant Portrait

Aquilegia scopulorum
Valerie Melanson

This dwarf columbine is a native from central Utah to central and southern Nevada, found on limestone at high elevations (scopulorum means “of rocks”). Robert Nold\(^1\) describes it as “ravishing” and I heartily concur.

As you can see it has a disproportionately (if you go by human standards) large bloom for the tiny tuft of glabrous leaves. Yet the flowers themselves are very small – blades about 10-12 mm and spurs 25-35 mm. Nold notes that usually they are blue, pale blue, white or white tinged with yellow. However, he mentions that a form from the Charleston Mountains in southern Nevada has red-tinged sepals and blades, so that probably accounts for this specimen.

He further notes that the cultivation requirements are “similar to those of other subalpine and alpine species: a deep scree, full sun or partial shade, plenty of moisture in spring, and nutrients provided in late winter.”

I have my wee beauty in a terracotta pot filled with gritty, rocky mix, sunk in a raised, rocky bed, that seldom gets water in summer, and as much sun as my rock garden can achieve. My big regret is that it really should be on a wall or bank at greater height where it would be much more visible. I started it from seed received from the Alpine Garden Society in 2010, and it was sown on Dec 28, 2010. It flowered for the first time in 2012, blooming again in 2013, 2014 & 2015. Given its native habitat, I give it minimal extra moisture, following the protocol of ‘Treat them mean to keep them keen’. Maybe I have taken that a bit too far, as although the plant itself is very healthy and growing in mass very slowly, it did not put up a bloom in 2016 or 2017. Of course we did have a good drought both years in Qualicum Beach. In 2018 I have treated it a bit nicer and the plant is healthy, but still no sign of a bloom as of August 1\(^{st}\). Maybe in 2019?

Eriogonums are an acquired taste that once developed can be savoured every spring and summer. Winter is a different story when the plants in the garden look scruffy and half-dead but they soon come back to life with the warmth of spring. They are not flashy plants but have delightful soft foliage, form excellent buns and have flowers that last for weeks on end. Many have flowers that open with a red tinge, turn a nice creamy white or yellow and then turn red again as the flower ages.

Eriogonums are high elevation alpine plants that grow on dry rocky ridges or live in semi-desert conditions often alongside sagebrush. Three things are essential to successful cultivation of eriogonums: sun, sun and more sun. And of course excellent drainage which can be best provided with a deep layer of Sechelt Sand.

They are easy to grow from seed and wild seed is often available in the exchanges. Species that have been grown well for us in the rock garden are from high elevations in the Cascade Range including mat forming *Eriogonum caespitosum* and *Eriogonum ovalifolium*, which has wonderful grey foliage. From our local mountains, *Eriogonum umbellatum* var. *majus* makes a splendid rock garden plant. Surprisingly one of the easiest to grow is the dryland *Eriogonum strictum* var. *anserinum*. This needs quite a bit of room as it grows to about half a metre across.

So if you have a sunny sand bed and wondering what might go into that available crevice, why not try an eriogonum? It will reward you with endless flowers and a soft bun that everyone will want to touch. Me too!
Clockwise, starting at top left: *Eriogonum caespitosum*, *E. ovalifolium* var. *nivale*, *E. strictum* var. *anserinum*, and *E. umbellatum* var. *majus*.
Editor’s ID Challenge

Do you know it? If not, perhaps the picture to the right may help. Need a hint? How about some facts about our alpine friend. It is an evergreen, mat-forming shrub, native to New Zealand. It is dioecious, meaning male and female flower are on separate plants.

To the left is a picture of a female plant in full flower, not exactly a show stopper. The ice blue fruit (drupes, botanically speaking) nestled on the leaves are much showier. Below, you can see why visitors to the UBC Alpine Garden mistake this shrub from the coffee family as moss. This planting is well established, accessioned into the Garden’s collections in 1977.

Coprosma petriei is one of my favourite plantings.