Alpine Garden Club of British Columbia



Dionysia crista-galli in the Zagros Mountains



AGC-BC 2021

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Please Note: Personal contact information such as phone numbers will no longer be published in the Bulletin, but will be available to members on on the website www.agc-bc.ca

Membership Renewals Due

If you have not already renewed your membership for 2021, please send a cheque for \$30 to Membership Secretary, Jane Byra, with your name and contact info. Cheques should be made out to the Alpine Garden Club of BC. Please contact Jane at membership@agc-bc.ca for the mailing address.

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

Membership status can be checked on the website, after you sign in.

AGC-BC meetings are typically 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 check Upcoming Events or website for information during the pandemic. To accommodate members and presenters from different time zones, meeting day and times may vary.

2021 AGC-BC Upcoming Events

- Sept 8, 7:00 pm 9:00 pm AGC-BC General Meeting
 - Dave Toole: Alpine Plants of the South Island New Zealand
 - Zoom Meeting
- Sept 19, 11:00 am 3:00 pm Fall Sale
 - Dart's Hill Garden Park
- Oct 13, 7:00 pm 8:30 pm AGC-BC General Meeting
 - Favourite Plants from the Seed Exchange
 - Zoom Meeting

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

From the Editor

Laura Caddy

I hope you and your gardens are happy and safe this summer. The drought and forest fires in British Columbia have been a challenge, at best. I think the horticultural highlight of my summer was the 22 mm of rain that literally just stopped falling as I write this – we have gone far too long without rain. Although the Alpine Garden at UBC has an irrigation system, it's never the same as a good rainfall.

We had a heat wave last week, and are forecast for another this week, but neither (fingers crossed) compare to the temperatures we experienced during the "heat dome" at the end of June. The Cactus and Succulent House reached 42 Celsius by 2 pm, and likely went higher. The weather station in our Asian Garden (which is a mature, shady arboretum) reached 35. I have lost plants in the Garden as a result, many of which were already struggling due to other issues. In honesty though, so far I've lost less than I expected – so far.

Something else that I suspect is a result of the "heat dome" is the re-blooming of many alpine plants in the Garden. Plants that usually (and did) bloom in April and May bloomed again in July. This is of course visually delightful, but also some that didn't form seeds in spring did so in summer, perhaps because of the difference in pollinator activity between the two seasons.

Which leads me to the annual reminder that it is seed collecting time! This is one of the best perks of being a member of our club, and it can't happen unless we all pitch in and share our seeds. Please see the Club News section for more information on this, as well as our Fall Sale that is happening at Dart's Hill Garden Park.

Further in this issue, we are treated to an article from the Willie Dickenson Scholarship recipient, Sam MacTavish, as well as a photo tour by Diana Barrie of the Zagros Mountains, focusing mainly on *Dionysia*. This was generously provided by the Alpine Garden Society - Victorian Group (Australia) in another

article exchange between our two clubs. I've also included a writeup on my successes and failures growing and propagating *Euphorbia clavarioides*. The Bulletin is capped off with another great Gardens Rock by David Sellars.

Finally, a note to let you all know we are looking for a new editor of the Bulletin. The end of 2021 will mark my fourth year as editor, and I think it's time for a new voice and ideas. Please get in touch with myself or Chris Byra if you're interested. I'll be happy to answer any questions you may have and help with the transition in anyway possible.

Club News Fall Sale

Chris Byra

I assume I am not alone in spending more time watering and maintaining my irrigation system than usual this summer. Lots of sunburned plants anyway though. Well, we are now providing you with an opportunity to donate all those extra plants that have waited in pots for the plant sale!

We will be holding our Alpine Garden Club of BC Fall Plant Sale at Darts Hill Garden Park in South Surrey in conjunction with the Darts Hill Garden Conservancy Trust Society on Sunday, Sept. 19th. The sale will be open to the public visiting the park and Darts Hill will be featuring a demonstration of building a crevice garden in a trough by Paul Spriggs, several times a featured speaker to our group. The Darts Hill Garden Park is located at the corner of 16th Ave and 170th St (entrance through the upper gate), Surrey.

The pre-sale will begin at 10:30 to 11 AM for volunteers and plant donators and from 11 AM to 2 PM for everyone else. Plant purchases from Darts Hill will also be possible. **Only cash or cheque** will be accepted.

The sale will be held outdoors at the Park and we will need some volunteers (by 9:00) for set up and take down, plant counting, running the till, putting out signs, etc. We also need **plants for the club table**, tables (fold up type if possible), and boxes.

Club News Donating to the Seed Exchange

Linda Verbeek

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, 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 moldy (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 5 different kinds of seeds to qualify as a donor, and 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 less likely to be interesting to others if described as Penstemon sp., than if it is described as: Penstemon sp., 20 cm, compact, small leaves, flowers pink, growing at 8000ft.

The seed should be mailed in a package labeled: **flower seeds of no commercial value** and mailed to arrive before **27 October 2021**. This gives us barely enough time to complete the seed list by the time the fall bulletin is due. Vol. 64, No. 3

Please address your package to:

Linda Verbeek, 5170 Sperling Ave, Burnaby, BC. V5E 2T4, Canada

Some mail is still coming in very slowly, presumably because of Covid-19. So please also e-mail a list of your seed donations to me (beekbos@shaw.ca) when you mail your seeds. Or, if you feel you cannot make the deadline because seed is ripening late or whatever, please, before 27 October, e-mail a list of what you will be sending. And also, please make sure that you actually send what you say you'll send.

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.

Related Events

Treasure Bulb Sale, UBC Botanical Garden

Date: Sunday, Sept 19, 11:00 am - 3:00 pm

Come discover garden favourites, rare wonders and specialty bulbs for all seasons. Our sale focuses on less common, dormant bulbs, corms, tubers and rhizomes—donated by the Garden, volunteer propagation groups, and the Friends of the Garden.

American Rhododendron Society Virtual Fall Conference

Date: 9am, Oct 23 to 1pm, Oct 24, 2021

Hosted by the Mount Arrowsmith Rhododendron Society and the Nanaimo Rhododendron Society in partnership with the Vancouver Island Master Gardeners Association. To make it as accessible as possible, and because our costs are greatly reduced (no venue, travel costs or food), we are making attendance at this conference **FREE**. Everyone will have access to all talks.

However, we are asking that individuals register.

More information here:

https://www.rhododendron.org/Fall_2021_Conference.pdf

My Explorations of Alpine Flora Willie Dickenson Scholarship Recipient

Sam MacTavish

As a new member of the Alpine Garden Club of BC, I would like to introduce myself. My name is Samuel MacTavish. I am a 23 year old graduate of the UBC Horticulture Training Program (2021) and am currently working this summer at Stanley Park with the Vancouver Parks Board. I first got interested in horticulture and plants in 2014 when I began volunteering with the Environmental Youth Alliance. During this time, I also developed an interest in alpine plants. For this bulletin, I invite you to follow along with me as I recount some of my experiences exploring subalpine ecosystems in Washington and British Columbia.



My first exposure to alpine plant communities was in 2015, on a family vacation to the Olympic Peninsula. After exploring the areas astounding old growth forests, we headed up to Hurricane Ridge. Having heard that there was a good chance of seeing mountain goats if you started on a hike 3 miles from the peak of the mountain, I thought it was worth it to give it a go. We didn't see any mountain goats, but we sure saw lots of wonderful plants. Growing out of the sandy brown soil on the mountain's hillside were colourful paintbrush, lupine, and many other plants that I couldn't identify at the time. A love for these beautiful, yet harsh and unforgivable, landscapes and their ecology was born on that day.

Revisiting the same hike in 2017, now aware of what to look for, I saw even more plants. On the ridge, overlooking the Strait of San Juan, *Campanula* grew in a large mass, creating quite a stunning view. As we got higher, partridge foot, mountain heather, and lupine became more prominent.

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As the years went by, my interest continued to grow. Two years later, I would go on my next and most recent visit to an alpine meadow in the summer of 2019. On a mid-July day, we crammed in a day trip to Manning Park. The reason for the visit was to see the sub alpine meadows that are usually blooming in mid-July, and I can gladly report, they were.

In sub alpine plant communities the plants are known as 'survivors'. Many plants grew low like a mat to avoid the hazards of their hostile environments. It was interesting to observe the diversity of these ecosystems. Growing up on the coast, I'm used to hikes through the forest with an understory of 4 shrubs at max due to the competitive nature of these plants growing in ideal conditions. But, as 'survivors', it is harder to gain an advantage, and thus, the plant community is densely populated with many different species. In a square meter, I counted six plants growing, something that you wouldn't find in



Vancouver. On our short hike the meadows and rocky ridges were populated primarily of: tufted saxifrage, western pasque flowers with their Dr. Seuss like seed heads, alpine pussytoe, alpine aster, alpine arnica, arctic lupine, slender cinquefoil, partridge foot, common red paintbrush (image above), and spreading phlox. That's a lot of plants for a few kilometres!

There were also stunning views of surrounding peaks. On the drive up to the sub alpine, I was amazed to find plants, that somehow, were able to survive on steep rocky slopes. These plants included shrubby penstemon and sulphur buckwheat on steep rocks. Alongside the road, growing prolifically amongst the rocks and crevices were Columbia lilies, yarrow, scarlet gilia, Davidson's penstemon, and lupine.



I also spotted a couple of Clark's nutcrackers (image above), who have an interesting connection to the alpine environment. I'm also an avid birder, so seeing this bird brought together both of my interests. These birds, related to jays and crows, live in high elevations where they feed on the seeds of whitebark pine. These species have an amazing symbiotic relationship. Nutcrackers will cache (store for the winter) tens of thousands of white bark pine seeds each year. These birds can remember thousands of cache sites, many under the snow, up to 10,000. The seeds they can't find, will germinate in the hole that they were stored in. Unfortunately for both of these wonderful species, pine beetle infestation is putting this relationship at risk. As white bark pine populations decline, there is fear of decline for their main ally.

When I began the Horticultural Training Program at the UBC Botanical Garden, I was instantly drawn to the alpine garden. The unique collection of plants and the sheer number of species had me coming back to discover something new every time I explored. Within the garden, there is a lovely arrangement of troughs. Creating a trough is definitely something I want to learn how to do in the near future.

In my garden, I don't have many alpine plants yet, but I do have a fun story about a *Lewisia* plant (image below). This plant, its origins uncertain, was purchased by my grandparents long before my interest in plants developed. For the longest time, it had been growing in a basket, smack up against a north facing fence in full shade. Once I started to learn about plants, I wondered, why does that plant never flower? Then I put two and two together and realized that the plant was likely lacking the exposure to changing daylight to trigger flowering. Sure enough, as I brought it out into the sun for the first year, I was rewarded with its intense pink flowers. It has now flowered for 3 straight years and shows no signs of slowing down. Now that I am also aware of the importance of drainage for such plants, I realized that it most likely has only thrived due to the fact that the soil it was initially in is coarse and sandy and the plant is mounded with the soil sloping down on both sides. I think it's safe to say this plant, by sheer luck, is now fairing very well in our garden.



I look forward to learning more about rock gardening with you all and adding to my collection of alpine plants. I am honoured to have received this scholarship and hope to meet you all soon.



Above: Hiking with Campanula, overlooking the Strait of San Juan.

Below: Penstemon fruticosa.



Iran and Dionysia - A Photo Journal

Diana Barrie

Originally published in *Journal of the Alpine Garden Society Victorian Group*

In April 2017 I was fortunate enough to join Harry Jans on his Botanical Tour of Iran, mainly in search of *Dionysia*. Needless to say it was also a tour of many other plants and historical sites of interest for those people not necessarily Dionysian aficionado's.



Dionysia revoluta

We arrived in Tehran on a dark, wet evening and not very warm with a hair-raising taxi ride from the airport to the hotel. So we were in need of a walk to settle our nerves and explored the nearby area before meeting the rest of the party in the late afternoon. It was wonderful to see Harry and his wife Hannie, as it had been couple of years since I had seen them. The rest of the party was a mixture of Dutch, German, English, Scot and Canadian, plus 4 Australians.

The next morning was an early start and first day of a 20 day botanical tour of Iran. So it was off south to Qom, a city known for its magnificent mosque and one of the holiest mosques in Iran (below left). For the women in the tour, it was our first time to wear a chador and can I say they are not the most comfortable things to wear – especially the ones for tourists which appear to be polyester table cloths!! (not flattering at all as per the photo!)





However it was not long before we were about serious botanizing in the Zagros Mountains! It seemed to be an ever changing landscape with snow capped mountains, from desert to fertile agricultural lands on the high plains. And as always the plants you are interested in are at the top of either a scree slope or just a plain steep slope



along sheep and goat tracks. Never just a stroll but that is what botanizing is about and of course gymnastics to get the best photo (above right).



A sea of blue, *Muscari neglectum*, in the fields of Markazi province. *Muscari* seem to have colonized cultivated fields, with their fertile moist soils in full sun. They are considered weeds as they were often to be found in cultivated fields.



A highlight for me was to sit amongst Fritillaria imperialis as far as the eye could see.

Even though the primary focus of the trip was the search for *Dionysia*, several Fritillaria, Galanthus, Tulipa and Corydalis were found, plus many other plants. Iran is known for its diverse range of plants, but here I will focus on Dionysia, which I knew very little previously and certainly came to appreciate these little plants.



Left: Both red and yellow Fritillaria *imperialis* found on sun baked hillside, dry in summer but above the snow line in winter. Very rocky, little nutrients, free draining soils.

Right: The rare yellow F. imperialis in the wild

Dionysia

The genus *Dionysia* is mainly endemic to Iran and Afghanistan. In Iran its centre of diversity is in the dry mountains. Currently the number of identified species in the genus reaches to 46, of which 30 occur in Iran. The genus *Dionysia* in Iran is restricted to the mountainous areas of northern, western, central and southern part of the country.

The AGS describes *Dionysia* as: a species of tufted and cushion-forming perennials from Central Southern Asia, particularly Iran and Afghanistan. Many are of very localized distribution and it seems inconceivable that there aren't many more that remain to be discovered in remote valleys. They are chasmophytes, growing predominantly on north facing limestone cliffs and cave entrances.



Dionysia crista-galli found in full morning sun high up on cliffs.

The genus is closely related to *Primula*. Although no single character or difference can be applied, a combination of characteristics serve to distinguish *Dionysia*; woody stems, revolute leaf-venation, 5-valved fruit-capsule, few-seeded capsules, the presence (often) of woolly as well as powdery farina, and various details of both pollen and chromosomes (cytology). Flowers can be borne in an inflorescence with several whorls of flowers, in a simple umbel, or, in the majority of those cultivated, they are solitary, being borne directly on the leaf-rosette. As in *Primula* the flowers are either pin or thrum-eyed, being borne on separate plants.

Many species possess a pungent aromatic smell, especially from the fresh or dried leaves; this is reminiscent of that of some *Primula* species.

So below will be a photo tour of some of the *Dionysia* we found on our travels through the Zagros Mountains. As always it is not possible to put all the photos in but this is merely a sample. Of the 30 species in Iran we saw only a small number of about a dozen. In some cases we were not able to access the sites even though small yellow cushions could be observed through binoculars. Either rivers or gorges had to be crossed, which was not always possible.





Above: Dionysia crista-

galli

Left: Queuing up to

take photos of

Dionysia.



Above: *Dionysia* country!

Below: *Dionysia revoluta* subsp. *revoluta*





Above: Dionysia haussknechtii

Below: *Dionysia archibaldii*





Above: *Dionysia mozaffrianii*

Below: Dionysia lamingtonii





Above and below: Dionysia bryoides



My Experience with Euphorbia clavarioides

Laura Caddy

When I first arrived at UBC in the summer of 2016 to start my new position as curator of the E.H. Lohbrunner Alpine Garden there was a lot to take in. The first few months were a bit of a blur and there were A LOT of new plants to learn. I have joked that of the approximate 2000 taxa held in the collections of the Alpine Garden at both UBC and University of Alberta (my previous position), there is an overlap of about 12. One of these days I should actually count, as I bet it's closer to 30, but I digress. The point I'm trying to make is that with so many new-to-me species, one would have to be above the rest to really stand out as I was getting my bearings. *Euphorbia clavarioides* was definitely one of them. It was totally unknown to me - a large, gorgeous cushion of strange, succulent barrel like stems that was such a specimen that a picture of it (below) from that era is still the first image that comes up when you Google *Euphorbia clavarioides*.



Image Credit: Daderot, CCO, via Wikimedia Commons. Image taken 21 June 2015.

If you'll indulge me, I have another story from that first year. A colleague asked me in October (four months into the job) "Do you wish for a severe winter that just kills everything so you could start the Alpine Garden from scratch?" My response was "Bite your tongue - that's my nightmare". Well, sure enough we had multiple snow falls (six, as I recall) that winter and cold temperatures - that spring I was sure we had lost half the Alpine. Luckily, that was not the case, though there were causalities and, you guessed it, the prized *Euphorbia clavarioides* was one of them.

Unlike many other plants I lost, the Euphorbia was a slow decline. It first started to turn black on the top of the cushion. Snow was not the issue, as it lived in the bulb frame and was covered all winter. I suspected it was the cold temperatures that cause the discolouration. I'm not sure how cold it got that year, but it was low enough to kill a couple *Eucalyptus* to the ground, turn all the evergreens in the African beds brown and kill 25% of the Cactus and Succulent House.



Image taken April 20, 2017. Damage starting to be evident.



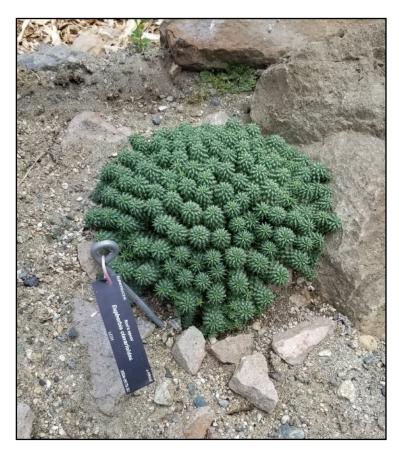
Image taken August 14, 2017. About 40% has been removed and stems still dying.

By summer it became apparent that the damage was severe enough to cause rot, and I desperately began trying to cut out affected stems. By the end of summer, a fraction of the plant remained and the form descended from sublime to hideous. In hindsight I regret not having taken more pictures of the damage and decline, but at the time I had no interest in documenting this failure. Please forgive the images I've included during this phase, as they are of neighbouring plants that include the *Euphorbia* in the frame.

In an effort to save the accession, I put in a propagation request to our nursery manager, and he took cuttings. I also took two as well in the spur of the moment as a Hail Mary. During the summer, when cutting out large chunks that had fallen over due to the rotten base, I noticed that the tips had yet to discolour, and that a good portion of the stem was still firm. I cut out the rotten portion and stuck the remainder right in the bulb frame beside the parent plant.



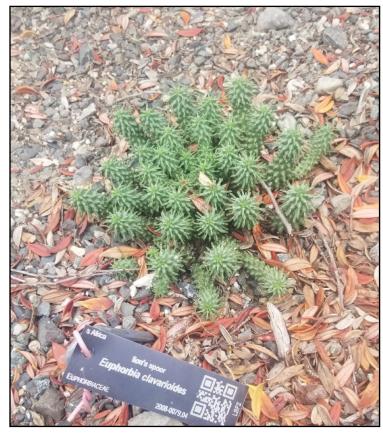
Image taken March 4, 2018. Top circle of cutting that didn't take. Bottom left successful and moved to Cactus House following spring. What survived of the original plant in centre of image.



Cutting taken summer of 2017 and was moved to the Cactus House May 2018. This image was taken June 2020.

I attempted this with two pieces, and to my surprise, one actually worked. I treated this cutting just as I did most everything in the bulb frame. No irrigation through the summer, allowing a few soaking rains in fall before covering the frame in October for winter. Then removing the covers in March when temperatures start to warm and rains let up. This plant quickly started to take on the cushion form this species is known for and the following spring I transplanted it to the Cactus and Succulent House, where it currently resides.

We also had some success with the cuttings that were taken and grown on in our nursery. Of the 16 cuttings taken in September of 2017, eight struck, but we lost four over the following year. As the parent plant (miraculously) didn't die, I decided to try the propagules in a couple new locations. One in a bed outside the Cactus House that has a favourable microclimate where many Aizoaceae thrive. This plant is still doing well two years later, though is not as tight a cushion as the others (image to right). Another I tried in a large piece of tufa, which died within a year. Other propagules were donated to the AGCBC Holiday Plant Auction, and as I recall, inspired a bit of a bidding war.



As my trial of taking a rather large cutting seemed to do so well, I decided last year to try and replicate it. I took two cutting from the parent plant. This is easier said than done on a cushion of this magnitude and I wouldn't have attempted it on the original specimen. Getting in to cut the stem would be nearly impossible. But our original plant hasn't yet returned to its former glory and I was able to cut a couple stems with a knife. Both were larger than what was used as propagules at our nursery, but smaller than my ad hoc cuttings I previously stuck in the bulb frame. One I left to callous, one I planted right away. Once again, I stuck them right in the bulb frame near the parent plant. I wish I could tell you exactly what that soil substrate is there, but in truth - I don't know. It was existing when I started and seems to be a mix of soil and sand. I'm happy to report they both took and have grown well. If any of you have this plant at home, I hope you may try to propagate it as well - I'm sure it would be a welcome addition to a club plant sale.



Top image: Two cutting taken and stuck near original plant June 5, 2020. Original plant (largest one, top centre) finally starting to recover and regain cushion form. Image taken October 2020.

Right image: I dug up one of the cuttings taken in June on July 7th, 2020. Roots starting to form (lower left).





Narcissus 'lan Gillam'

David Sellars

I was privileged to know Ian Gillam, a long-time member of the Alpine Garden Club of BC. He contributed to the Executive as Secretary, Membership Secretary and most of all loved being Show Secretary. Ian's shows were precisely organized and always a huge success. You can read about Ian in the Summer 2014 issue of the Bulletin:

https://www.agc-bc.ca/uploads/images/file_view/AGCBC_BulletinSummer2014web.pdf

Ian had a diverse interest in plants and grew many fine bulbs from seed. He gave me a few of his bulb pots and one was labelled *Narcissus bulbocodium* x *N. cantabricus*. The bulbs produce masses of flowers in February and the colour is a delightful lemon yellow. The flowers are hoop shaped indicating the *Narcissus bulbocodium* in the parentage. The plant does so well I think it is deserving of a name so *Narcissus* 'lan Gillam' it is!

For bulb seed planting I use the advice from Ian Young's Bulb Log: an equal mix of sand, leaf mould and coarse grit. The seed pots are left out over winter and when the grass-like leaves emerge I apply dilute tomato fertilizer. I use the same mix for potting and apply potash after flowering. I collected lots of seed later in the spring so look out for *Narcissus* 'Ian Gillam' in the seed exchange in the fall.



