

THE JOURNAL

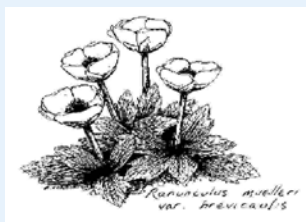
of the
Alpine Garden Society of Victoria

Winter

2020

COVID 19 ISSUE

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Welcome to the Covid 19 bumper issue AGSVG Journal

Several members have taken time out to write an article for this issue. Thank you everyone.

Susan has shared her memories of our founding members - The Gordons. It includes a delightful sketch she has made of how she remembers their garden layout.

Several of our expert growers have shared their seed gathering and raising experiences. I am sure those tips will be very useful and if you wish to go one step further you could note the comments from John Flens about using some donated pollen to try your hand at hybridising.

A most appropriate article while we are currently not able to travel more than 10 kms from home, much less overseas, has been provided by Di, our intrepid traveller. She has written about her tour around part of Kyrgyzstan several years ago with Harry Jans. Such a treat to see plants in their natural environments!

A lovely poem provided by Ruth Hosken completes this Journal

Editor: Helen Batty

Photos: All images provided by the authors of the articles

Editorial Policy

The opinions expressed in the Journal are those of the authors and do not necessarily reflect the opinions of either the Committee or the AGSVG membership.

Both AGSVG members and non-members are encouraged to submit material for publication. However, the Committee and Editor, retain the right to edit or refuse the publication of any material submitted.

Articles can be submitted by post to: Helen Batty, 1a Sefton Court, Mount Waverley, Vic. 3149 or e-mail: hrbatty@iinet.net.au

Don't forget to view the AGSVG blog that is managed by Viv Condon
<http://agsvicgroup.blogspot.com.au>

The Gordons

Founders of the AGS Victorian Group

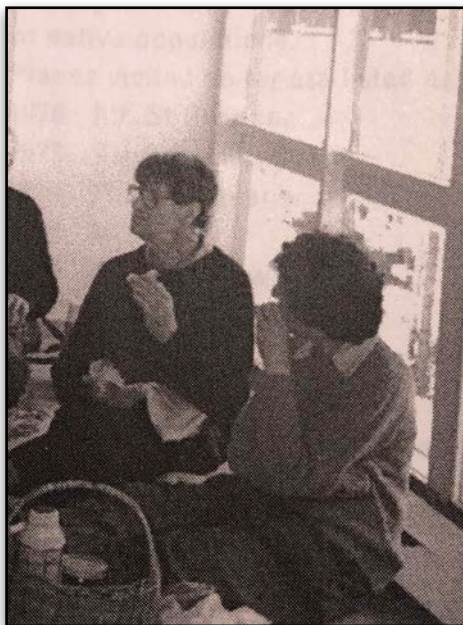
Susan George

Barbara and Philip were fiercely passionate about educating themselves and others about the ecology, botany and the cultivation of alpinists, small stature woodland and rock garden plants. They established the Alpine Garden Society Victorian Group in 1973 because they wanted to surround themselves with like minded gardeners who had a passion for learning. They were always curious to acquire more knowledge and pushed themselves to achieve horticultural success.

Both siblings were born in the 1920s; Philip in 1922 and Barbara in 1926. They grew up in the eastern suburbs of Melbourne, and during their formative years experienced both The Great Depression and World War II. Barbara had trained as a nurse and Philip, who saw military service during the war, was a banker. They were 'no nonsense' old school. I remember them both as tall and straight backed. I think it would be fair to say they both exuded a 'presence'. While there were individual differences, like many people who spend considerable time together and who are close, they had many similar attitudes and attributes.

When I first met them some time during the 1990s, I was in awe and a little fearful. They could be blunt, and they certainly didn't suffer fools gladly. Even sitting in the back row at meetings they commanded the room. Barbara was very capable of calling out 'rubbish' when she heard something that she didn't agree with. Having observed them closely over several years I came to understand they were calling people to account for their utterances in order to encourage people to be thoughtful, do their homework and not just spout any old drivel!

They were happy to debate a point, and while they were often right, if you had a well thought out point of view they would certainly listen. They weren't trying to silence debate they were trying to cultivate it. There were running jokes amongst some of the Group's early stalwarts about differing, but firmly held, opinions on plants and growing methods. The debate about clay versus plastic pots was a classic. Of course, there is no 'right' answer to that question – it often depends on the plant and the circumstances – so the debate raged on for many years!



Philip and Barbara Gordon with sandwiches at an early AGSVG meeting. Barbara did not like her photo being taken so she would turn away from the camera.

If someone showed an eagerness to learn about growing alpines, dwarf woodlanders and rock garden plants they were more than willing to share their knowledge and offer words of encouragement. More than that, they willingly shared their plants. The Gordons invented the annual December 'Bunfight' for that purpose. Philip wrote in the international AGS Bulletin in September 1990:

'December is the month for our Bunfight. It was calculated that by then members' seedlings would have had some six months or so to have grown and any wanted plants picked out. That, in theory, would have meant members having surplus plants (still in their seed containers) that they did not know what to do with.

What better devious means could have been devised in order for others to get their hands on some choice subjects. The bait was taken and so far the plan appeared to be

working. Members brought along lots of “goodies” and their own special soil mixes ready for the potting up exercises. Water was provided free! Seedling pots were emptied of their contents and laid out on benches and at an appointed time the battle began. It was a fight – a fight for possession of a poor defenceless plant without too much regard for its wellbeing. It was an interesting exercise but one that was not repeated in that form as it was doubtful whether many of the plants survived the rough treatment.

We still have our “Bun Fight” but now it is up to members to pot up surplus material during the year and to bring along established plants, properly labelled. They are placed on the benches for all to see and at a given signal the race is on. In this way we now distribute, thanks to the generosity of our members, some 1,200 plants within the Group – free.

We now consider we have a very satisfactory solution for giving our plants good homes and our members lots of enjoyment.’

When I joined the Group in the 1990s, the Bunfight was a well established fixture on the annual “Syllabus” (another Gordon coined term – which reflected their educational bent). Trestle tables were set up each year on the large lawn to one side of the Gordon’s house. The rules were much the same as today, and once everyone had collected their new treasures, we ate a picnic lunch on their lawn, followed by a tour of their garden.

To my mind the garden tour was an equal highlight of the day. I always came away knowing a little bit more and feeling that much more inspired. I could let myself imagine that one day I too might have huge drifts of *Cyclamen hederifolium* that were so prolific I could afford to mow over them as Philip did, in order to keep them in check... one day... Needless to say, I’m still working on that.

More than twenty years on, my memory of their garden is imperfect. I’ve had a go at sketching what I remember. I recall the general layout (I think... although others might well remember it



A delightful sketch by the author Susan showing the layout of the Gordon's garden as she remembers it.

otherwise) and snatches about the plants they grew.

I think quite close to the 'Bunfight lawn' a *Mutisia* (possibly *M. illicifolia*), known commonly as a Chilean climbing daisy, scrambled up a silver birch. I did ask Barbara what it was, as I'd never seen anything like it. She was as pleased as punch to have someone notice it. She had struggled to get it up from seed and this was the first spot in the garden where it seemed to be happy.

Joy Norton wrote (in the booklet celebrating the 30 Years of the AGSVG 1973-2003) about *Meconopsis*, *Hepaticas*, *Arisaema*, *Galanthus*, *Corydalis*, *Dionysia* and all kinds of other treasures that grew in their garden. I do remember that they would bring fantastical items to every meeting for the bench display and I do recall that they had a special love for growing difficult alpine 'buns' in their glasshouse. But the details escape me. John Flenns also recalled their special gift for growing exuberant pots of *Tecophilaea cyanocrocus*, which I had forgotten about until reminded. Similarly, Viv Condon reminded me that the Gordons had a unique way of folding seed packets that they handed out.

They grew both natives and plants from around the world. In his September 1990 AGS article, Philip said, "*Possibly at least 80% of our plants would be exotic. That is not to say that our native flora is not the equal of, or better than the imports. Indeed there are many, many hundreds of native plants suitable for the rock garden.*" I can remember large leafed *Celmisias* growing in their rock garden and I think it was in their garden that I first saw both *Epacris impressa* (the Victorian floral emblem) growing in a garden, rather than the wild, and the NSW *Epacris longiflora*. I'm fairly sure that I can also recall *Wahlenbergia* and *Blandfordia sp.*

Like many 'showcase' Dandenong Ranges gardens they had their fair share of rare rhododendrons. I recall Barbara pointing some out along the second 'secret' drive to their castle folly. But they had pretty much finished flowering by December and given I was unlikely to try them in my own low altitude suburban garden I will admit I didn't take in their names.

I was more interested in the homemade defences Philip had constructed along the driveway to try to deter late night visitors. Sadly, the castle folly, which had been built, possibly blown up, and certainly abandoned by a previous owner(s), was a late-night magnet for carloads of teenagers. Some possibly drug affected. There are fleeting references to it on the net with tags such as 'abandoned castle' and even a brief Victorian Heritage Database entry:

'In summary, the Castle is a unique bluestone building positioned on a significant four hectare site in Olinda. Its first owner was wealthy Miss Lydia Reid but the builder had many difficulties with its construction and the Castle was not lived in for a long period. Successive caretakers lived in a timber cottage on the grounds. Apart from the buildings, the site contains magnificent gardens. The Gordons, brother and sister, became the owners around 1970. The property has since changed hands.'

Electoral records show the Gordons living at Olinda as early as 1968. I was never sure whether they had initially entertained rebuilding the folly and living in it, but both John Flenns and Viv Condon recollect that the Gordons had a good go at restoring it. Viv can remember that they spent a considerable sum repairing a large lead light window, and both John and Viv recall that they had put in new flooring and reroofed it. The Gordons were about to move in when vandals broke in and set fire to it, returned it to a ruin. They never went back to the task of restoring it.

Like the garden, I remember the structure itself imperfectly – castellation, roofless, empty frameless window spaces, some of the walls partially collapsed, a terrace with a retaining wall at the front. I can't find any pictures of it, but perhaps they exist.

I can well imagine that bored teenagers found it exciting to explore a 'spooky abandoned' bluestone castle in the middle of the forest. For Barbara and Philip, it was a constant source of anxiety. Nobody would choose to have strangers roaming around one's garden in the middle of the night. Viv recalls that Philip attended one AGSVG

meeting a few months prior to his death with bruises across his face. A stranger had attacked him with a piece of wood in his own garden.

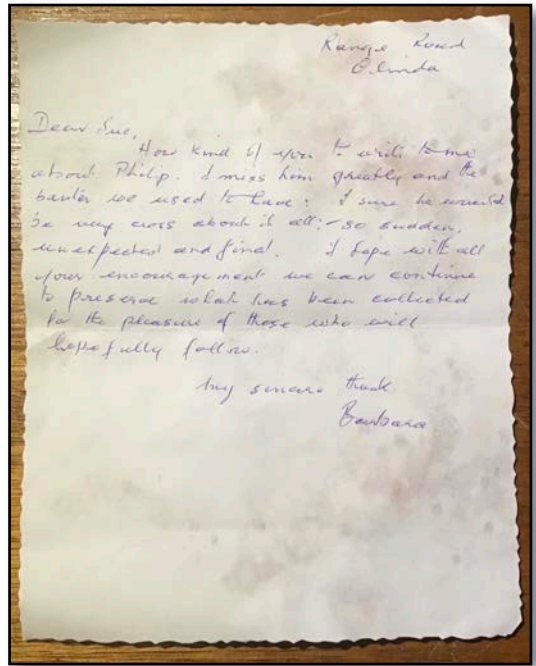
In fact, the castle and the draw it held on young people ripe for adventure was ultimately a contributing factor in Philip's death. After confronting a group of intruders one evening, he fell ill and died. Afterwards Barbara wrote to me saying, *'I miss him greatly and the banter we used to have: I'm sure he would be very cross about it all: - so sudden, unexpected and final.'*

While they had made a beautiful garden in and around the stone walls and pavement of the castle folly, with *Ramonda*, *Haberlea* and *Briggsia* among many rare treasures, they were always deeply worried about the stability of the building. During one garden tour, a hapless member ignored warnings and ventured into the structure to closely inspect some of the botanical riches. Unfortunately for them they were spotted by the Gordons. It was not something that I think they would ever have done again!

Along with a serious turn of mind, the Gordons also had good senses of humour – both ironic and dry. Their naming of the 'bunfight' is an example, as well as their references to plants as 'cabbages' (meaning exuberant leaf growth) and 'David's Carrot', which grew at the base of a large rock in their rock garden. I believe it was raised from seed collected in Turkey by David Glenn. This was at a time when Australian Quarantine published a 'not permitted' list and anything not on the list could be imported, including unnamed species. The plant clearly belonged to the Apiaceae (Umbelliferae) family, but as to which genus or species, nobody was quite certain.

The only other plants that I clearly remember, but which I must have seen during a garden visit in Spring rather than in December, were the many dwarf narcissus that also grew in their rock garden. While they had many species and cultivars that are commercially available, they had also raised their own crosses, many with *N. cyclamineus* as a parent.

One of the most telling things about the Gordons were their hopes for the future. Barbara wrote to me saying, *"I hope... we can continue to preserve what has been collected for the pleasure of those who will hopefully follow."* I think it was this hope that had led them in the 1980s to originally establish a trust to foster and preserve greater knowledge of the growing alpine, small stature woodland and rock garden plants.



I know from their observations and discussions at meetings that they were intensely interested in natural environments. They appreciated natural beauty but were also interested to learn from nature in order to better understand how to cultivate plants in gardens.

They lamented the loss of natural environments. They told me about a large patch of *Patersonia* that they recalled from their childhood. When they were young, every year they would holiday with their family on the Mornington Peninsula. The *Patersonia* was a key landmark that signalled they were nearly there! Important travel information for any child. Needless to say, that patch is long gone. Probably swallowed up by development, but it lived powerfully in their memories. They understood that while preserving natural environments is important, gardens can act as arks for plants under threat in the wild.

Philip died in October 1996 and Barbara in February 1998. Their garden was sold and can only now exist in memory, but I think my fondest memory of the Gordons was their gift of two cardboard

boxes of AGS Bulletins dating from the 70s and 80s. They had been holding them in trust to share with someone who they thought might read and learn from them. I turned out to be that someone. In my mind it was akin to receiving a scholarship of sorts. Spurred on by the confidence they had shown in me, I did read and learn from those little books. And that in a nutshell is their legacy: the ability to encourage and inspire.



Fermi's Seed Collecting Tips

- 1) Always have envelopes/paper bags with you
- 2) And a pencil or pen (you will not remember the name when you eventually find the seeds again!)
- 3) Write the name and date of collection on the outside of the envelope
- 4) Make sure you have a big enough envelope or bag for the quantity of seeds some plants produce
- 5) Try to remember to empty your pockets of seed packets at the end of the day!
- 6) As some seeds ripen over a prolonged period you could have a collecting packet you carry with you which you empty into a separate container each day.
- 7) If not in your own garden make sure you have permission to collect the seeds!

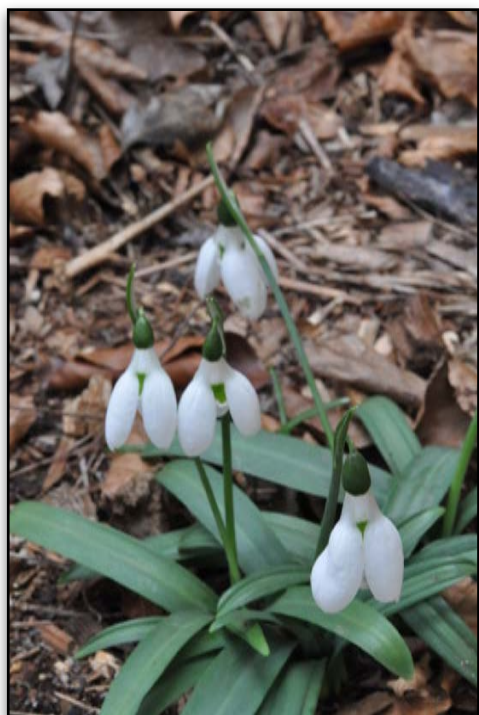


Raising Galanthus from Seed

Viv Condon

Raising Galanthus from seed is a must in order to build your collection and to extend your species numbers.

I grow all of my hybrid Galanthus seed in pots in shade all year with very little sun. The pots are watered in summer even when they are dormant as they do not like to be dried out. I keep the Galanthus seedlings in pots for three years. The small bulbs are of a size where you can handle them at this stage. I usually plant them in the green in the garden once the small leaves are just showing above the fine gravel in the pots. They usually flower at 4 to 5 years. My potting mix contains $\frac{1}{2}$ leaf mulch, grit (course sand) mixed through



Galanthus ikariae



Galanthus Trim from Otto



Galanthus seed coming up

and a small amount of potting mix. Hybrid Galanthus will usually not be the same as their parent plants, so you will get some with different yellow, green or no green marking and different shaped poculiform* flowers and varying leaves. With a limited market now in Australia selling Galanthus bulbs, you never know what you will get from raising hybrid Galanthus from seed and that's a very exciting prospect. After all, that is what the Galanthus breeders in Europe are doing. Once your Galanthus seedlings flower, you can separate them out if they are different from each other as Galanthus do not mind being lifted in the green. But you must water them in after they have been moved and also water in very hot weather and through Summer.

I grow species Galanthus seed differently. I usually disturb the soil beside the parent Galanthus bulbs in the garden and sow the seed directly beside them. This especially applies to *Galanthus ikariae* as mostly they will be the same as the parent plants. I store some of the seed in the refrigerator for overseas seed exchanges. However it looks like that won't happen this year, so it will be for our local seed exchange, that we hope to run.

*The term Pocoliform refers to snowdrops where all six petals - 3 inner and 3 outer have become equal segments and have become uniformly large. Usually snowdrops have the 3 longer outer and 3 shorter inner petals.

The inverse pocoliforms are like *Galanthus Trym*, green on the outside and outer petals reflexing out rather than in.



The Harvest & Sowing of Trillium Seed

Tim Orpin

Trilliums are adapted to the cool and moist woodlands of the northern hemisphere. As such, desiccation of the seed can have a significant impact on germination success. If possible, do not let the seeds dry out.

HARVEST

Seeds are best harvested when the fruit or capsule is fully ripe. The capsule will be slightly softened, spongy to the touch and may be starting to split. When ripe, the capsule will also be easy to pull from the plant. Trillium seeds (10 - 60+ per capsule) have a fleshy elaiosome attached to the side of the seed. The elaiosome is high in protein and fat and is an adaptation to encourage ants to forage for the seeds and relocate them to their nest, in-so-doing, helping to disperse the seed. The elaiosome is also very attractive to European wasps. If these are a problem in your garden, you may want to



pop an organza or light mesh bag over the ripening fruit to stop wasps stealing all of your seed before you get to it.

FRESH SEED

Split open the capsule and remove all seed. Wash the seed in cold water and remove the bulk of the elaiosomes. It isn't critical to remove all of this but I find that it reduces potential issues with fungal infection later on. Spread seed on a few layers of damp paper towel. Cover with more damp paper towel and place in a plastic resealable bag and pop into the vegetable section of your



fridge until ready to plant or send in the mail. Note that the paper needs to be damp but not dripping wet or the seed may rot. Fresh seed is always best. If the seed is a little dehydrated when it gets to you, just follow the same advise with damp paper and leave in the fridge for a week before sowing to rehydrate. Never put the seed in the freezer.

TO SOW

Sow onto a good free-draining potting mix (I add extra fine gravel for drainage) at roughly 20mm spacing. Cover with 1cm of potting mix and another 1cm of fine gravel. Place in a shaded cool area, keep moist, and be patient. I prefer to plant in polystyrene



boxes as they provide a cooler root zone. If using plastic pots, I prefer deeper pots and do not leave them in the sun to heat up. Trilliums undergo skotomorphogenic (dark) germination. In the first spring all of the action takes place underground (invisible) as the seed will produce a root but no leaf. Do not poke around at all or you will kill the germinating seedlings. In the second spring a leaf will appear and you are on your way. Sometimes it can take a few years for all of the seed to germinate. Trilliums take 5-10 years to reach flowering size but they are true gems of the woodland and definitely worth the effort. Good luck.



Paris polyphylla from seed

John Flens

I've been asked to write a quick word on the pollination, harvesting and germination of *Paris polyphylla* from seed. To date I've managed the first two, the last is still a work in progress, so please indulge me with a little tolerance.

Paris appears to be one of those genera where seed needs to be not only super fresh but also the plants are self-infertile... to date that has been a problem, as we (to the best of my knowledge) only had the one readily available clone here in Australia... that one coming originally from the Genats in the Dandenongs.

Fortunately, one of our AGSVG members in recent years imported a different clone into the country and generously gifted some pollen to yours truly... (Thanks Ange).

Pollination is achieved by applying viable pollen onto the tips off the small curved horns at the apex of the ovary at the flower's centre. As usual success is only realised once the ovary begins to swell. Small organza drawstring bags are placed over the maturing seed

Pods at this time, to help identify which pods have been pollinated and to help keep the pods a little safer from nature's opportunists.

Eight to 12 weeks later the top of the seed pod will begin to split, revealing roundish, bright orangey red seeds, which can be removed from the casing quite easily... (a bit like shelling peas).

Being a Woodlander the addition of leaf mould seems to be critical in achieving germination with this genus... so make sure to add some to your favourite seed raising mix.

After this, it's a waiting game... some information sources say germination occurs within a year, others say two winters are needed. As 2019 – 20 is the first year I've had access to fresh seed, I can as yet neither confirm or refute either of these opinions... all I can do is promise to keep any interested readers informed as to when germination occurs with me.



My Seed Raising Techniques

Alan Ayton

This is my very unscientific way of raising plants from seed.

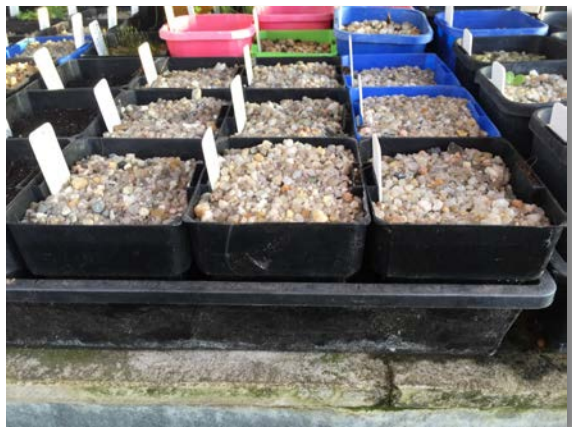
I use Debco's Propagation Mix firmed nicely into selected pots, leaving 1-2cm at the top. I have tried a few different mixes, but seem to find this one pretty good.

I then sow seed differently depending on seed size and other factors if known, i.e. - seed needs light, stratification, and scarification. Larger seed like Paeonia, I push into the mix then cover with maybe 1cm of seed raising mix and then top dress with grit (size about 3 - 5mm, see photo), usually 5 -10mm thick. I don't measure this though, just an uneducated guess.



Most seed like Draba, Aethionema, Penstemon, Salvia and many others I just sprinkle on top of firmed propagation mix and then top dress with grit, again roughly 5 -10mm thick.

The majority of Campanula or Primula seed or any seed that is very fine, I normally just spread thinly on top of firmed propagation mix. Occasionally I will top dress with just a very fine amount of propagation mix sprinkled on by hand.



Once sown and in trays, I use a fine mist to damp down and then place in

I prefer to use these pots (above photo) just because they fit 12 nicely into a seedling tray and they don't move, but I use a lot of tubes as well.

the hot house, I usually check daily and water with a gentle spray of the hose. The hot house can be closed up overnight or during the day to keep humidity and temperature up but I normally only do this during the colder months.

It is highly important to label with as much information as possible. I include the scientific name, where I got it from, what year purchased or collected and the sowing date. I also input all this information into a seed sowing/germination Excel spreadsheet so I know what I have sown each year.

When each pot of seeds germinates I note the date and input this into the spreadsheet as well. With a little magical Excel formula this then gives me how many days it has taken for that seed species to germinate. The longest time of germination so far has been *Penstemon crandallii* at 792 days!



The hot house/green house

Growing some South African bulbs from Seed

Fermi de Sousa

There is a huge range of South African bulbs that are easily grown from seed. Basically there are three types to consider.

The first are what are termed “recalcitrant seeds” and despite this name they are actually very quick to germinate. They include Nerines, Amaryllis, Crinums and Crossyne. Typically these have large fleshy seeds which develop radicles (roots) without being in contact with the soil. The recommendation is to sow them on the surface of the potting mix without covering them. As each seed develops a radicle it will find its way down into the medium and will soon send up a leaf and start forming a bulb between the leaf and the root. The young seedlings may not be frost hardy and are best kept under some sort of protection (shade cloth is usually enough in our climate).

The second group are the winter growing bulbs/corms including many gladiolus, hesperantha, freesia and geissorhiza. These should be sown in late summer/autumn so that they can germinate in winter. Thin flat seeds such as Watsonia or gladiolus should be sown on the surface of the potting mix and covered with a layer of coarse sand or fine gravel. Small round seeds can be sown shallowly and then covered with gravel. I usually use 3”(7.5cm) tubes for seed-pots unless there’s a large number (say, more than 30) when a wider container or even a foam-box is more appropriate. If the pots fit into a tray this can be dunked in a larger tray so that the pots can slowly absorb water and then be allowed to drain. The whole tray can then be left exposed to the elements as the cycle of warmth and cold can be an aid to germination. Occasionally I’ve found that though the frost can trigger germination, subsequent frost can kill the seedlings! So it may be judicious to move the pots with seedlings under cover. Don’t be too quick to discard ungerminated seed-pots because it may take more

than a year to see anything. Sometimes you may only get one or two seedlings the first year and more the next or even later.

The summer growers are the third type and are best sown in spring when the danger of frost is over following the same directions as for winter growers.

Once germinated the seedlings should be kept in active growth by making sure that they never dry out. No problem when the weather is wet but later in spring a close eye has to be kept especially with the small pots which can dehydrate easily. Every week or so a weak liquid fertiliser can be applied to move them along gently. As summer approaches the winter growers will start to yellow and head into dormancy. As each potful fades it is relocated to a tray out of the weather; not all go dormant at the same time, so it always involves a lot of re-organising, especially if using pots of different sizes. When summer is past the trays are brought out to be watered. The process is reversed for the summer growers such as eucomis.



Germinating amaryllis

Nowadays I write a label for each pot with the full name of the seed, its source, the number and the date sown. I also record these details in an exercise book – very old school, I know!

In the second year of growth it may become obvious that the seed-pot is going to be too small but rather than splitting up the seedlings it's best to simply slide the pot off the potting mix, hoping that there is enough root growth to hold it all together. Then the entire root-mass can be re-interred into a larger pot with some slow-release fertiliser underneath. This is less disturbing for the young seedlings and the two-year old bulblets may be ready for division the following summer.

Some of the smaller growers such as *Lapeirousia oreogena* or *L. montana* or *Hesperantha humilis* may actually flower while still in the seed-pots and may be best kept in pots or troughs because of their size.

Eventually when you've been growing and flowering these bulbs (and corms, etc.) you'll want to collect seeds to increase your stock of plants or to share with others and the Seed Exchanges. This can be as simple as seeing when the seed is ripe and picking it or having to bag the pod when it is still green to prevent predation (I blame possums for the theft of some pods!) or the loss of the seed if the pod shatters before you notice.

The little gauze bags sold for lollies or "party favours" are ideal for this. The bags are also handy for holding a label – bread tags are great as you can attach them to the stem – so you know what the seed is when you get around to cleaning and packing it. Avoid using plastic bags as they can retain moisture which could cause mould. Store the seeds by emptying into a paper envelope with the tag or write the name and collection date on the exterior. Keep in a cool, dry space indoors if you aren't going to sow it straight away.



Hesperantha humilis grown from AGS seedex



Seed heads bagged for seed collection with bread-tags for identification

Searching for Tulips and other plants in Kyrgyzstan

Di Barrie

As I sit here at my desk and review this trip, I wonder if and when we will be able to explore other places and parts of the world again! In the meantime, I have many memories of places such as Kyrgyzstan and I hope you enjoy this review in search of Tulips and other plants.

In April / May 2012, I was fortunate enough to join a Botanical tour lead by Harry Jans for a trip through Kyrgyzstan in search of tulips and other plants. Prior to this trip I had spent some three weeks following the Silk Road through Uzbekistan. This provided me an opportunity to see a neighbouring country and to begin to understand more of the life and history in this part of Central Asia. This was my first experience of a botanical tour and had no real idea of what to expect but it was considered an adventure by me.

Kyrgyzstan is located in the heart of Central Asia, surrounded by China, Uzbekistan, Tajikistan and Kazakhstan. This small country of approximately 5 million people is still developing as a democracy in a post-Soviet environment. The country achieved “independence in 1990” and continues to strive hard to build its economy. As with many post-Soviet outposts, the economy was built for Soviet purposes and so it is struggling to develop viable industries and reduce its dependence on Russia. The country is not extensively rich in mineral wealth or good agricultural lands. Currently they have gold mines in the west, which were due to close in 2010, and the most fertile land – the Fergana Valley, which is in dispute with Uzbekistan. Kyrgyzstan is a country that is struggling to lift its economy from its role as a satellite of Moscow. One area that has seen a growth is in education to stem the tide of the “brain drain” as a result of independence and the exodus of Russian elites back to Moscow.

In 2012, there was a push for tourism and the growth of marketing Central Asia as the key to the Silk Road. This has seen a huge increase in tourism but mainly in Uzbekistan, with its history of Timur and magnificent architecture. For Kyrgyzstan, Russians remain the main visitors to the Country, and specifically to Lake Issyk Kul (north shore), with its health resorts around the largest lakes in Central Asia.

The capital of Kyrgyzstan is Bishkek a city of 900,000 people. It is a modern Soviet style city, with remnants of the past in the outskirts. The main buzz of course is found in the markets where you see all of Kyrgyzstan on show.

The landscape dominates life – the location of towns and villages, industry, the modes of transport and agriculture. However, no matter which part of the country you are in the Tien Shan mountains dominate the landscape. Despite the glaciers and the permanent snow cover of the mountain ranges, in late April/ early May, the snow melt was well underway. And it is the geography that influences or forms the environment and the habitat of the flora and fauna.

Whilst the country is predominantly covered by the mountains and high plateaus of the Tien Shan and Pamirs, what was noticeable travelling around is how the land is now suffering from over grazing



Soviet influence: big hats and precision marching



Images of Bishkek

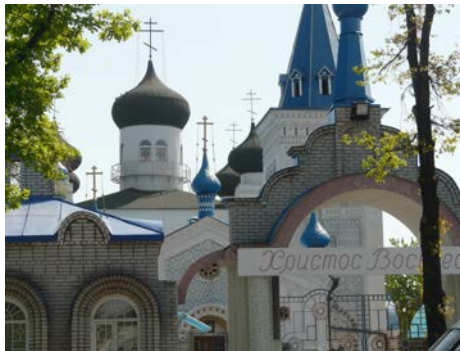
Top left: The Soviet style modern buildings

Top right: Outside Osh Market,

Middle Left: Buying fuel on the streets in Bishkek

Middle Right: Bishkek is known for its green space and many Parks

Lower left: Mosque

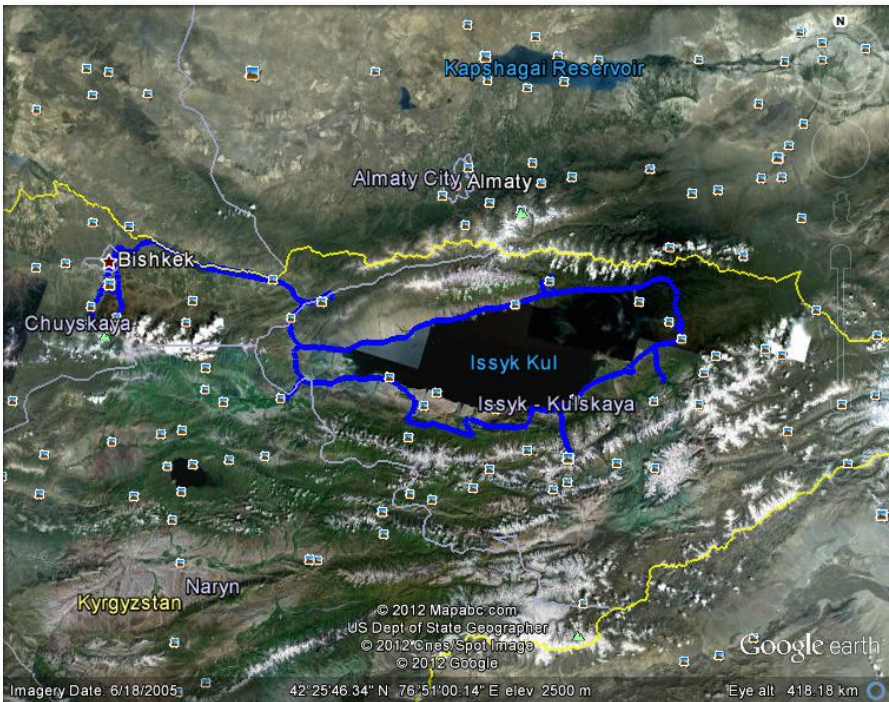


by livestock, in particular sheep. This is due to the importance of sheep to the villagers who have returned to semi-nomadic life of grazing sheep and a few cows up the mountains during the summer. This has led to soil erosion and loss of biodiversity. It has been noted that the country has lost 50% of the forest cover in the last 50 years. Gold mining practices have also resulted in major environmental disasters with arsenic in the water, plus extensive

land degradation, all impacting on a country struggling to cope with post -Soviet management.

So, the tour in Kyrgyzstan was to be my first botanical trip and my first with Harry Jans. For those of you not aware, Harry is an intrepid plant hunter from Holland. Although he is a road engineer by profession, he is a botanist as well, and an amazing plantsman, growing wonderful alpine plants in his garden in Holland – at sea level!

The trip to Kyrgyzstan was to basically navigate around Lake Issyk Kul into surrounding mountains and gorges searching for tulips and other plants. As is always the case when in Central Asia, the debate of where tulips originate from persists. There are those that say Turkey, others say further east in the Stans and even into China. As I am no botanist, this is one discussion I will avoid but I



Above: an image of Kyrgyzstan, that illustrates the dominance of the mountains and Lake Issyk Kul, and the yellow line is the border. To the south are the Tien Shan and Pamirs. It shows how close road travel is to Kazakhstan, to the north, which had barbed wire and military posts the length of the border.

will say we saw some wonderful tulips, plants and landscapes. However, reading Richard Wilford's *Tulips – Species and Hybrids for the Gardener*, he states “that tulips grow in the wild from the Iberian Peninsula across Italy, Greece, Turkey into central Asia.” However, it is probably the tulips from Turkey that are most well known in Europe as they were the first cultivated for gardens and spread via Tulipomania, so well described by Anna Pavord in her book on Tulips.

In the wild, tulips frequently grow on grassy or stony slopes, in an open situation, where they are not crowded out or shaded by trees and large shrubs.”

In the Tien Shan, the range of tulips is huge and are mostly found in the middle zones of mountains below the alpine zone but near the tree zone but can grow high up at around 3000 metres or above depending on slope aspect, vegetation coverage etc. As we were travelling in April, it was too early in some parts for tulips but we still saw several and also other plants.

Our first area to explore was the Ala Archa National Park, 45 kms from Bishkek. It was here we saw the mountains and wonderful landscape and the first plants of the trip.

The area was a wonderful introduction to the landscape of steep slopes and gorges. As can be seen, snow was still on the higher slopes above the tree line. The area is a popular national park, with many families visiting the lower paths and enjoying picnics. We moved up the mountain slope until we reached a small plateau to view what was to come over the following weeks. Our first plants were rather pathetic crocus, gagea sp., some well-trodden pulsatilla etc. nothing spectacular but gave that first sense of excitement. Unfortunately, it all came to an abrupt halt, with one of the members, still suffering jet lag, falling and breaking an ankle!! The most impressive aspect of this adventure was that up in the

mountains they were able to ring Bishkek for an ambulance that duly arrived a couple of hours later and the paramedics walked up the mountain with no effort and with all the appropriate medical equipment!! Once all help was given to our poor companion, including consular support, we headed south east to stay in a family run guest house in Ashu.

Here we explored the nearby Chong Kemin Valley, heading mainly to the Grigoriev Gorge. Unfortunately, there had been a landslide so we were unable to go as far as hoped. However, that gave more



Typical house in Kyrgyzstan



The yurts that were being set up for the summer months up high in the mountains for the



Above: The beginning of the track on the left at Ala Archa.

Right: On the track up

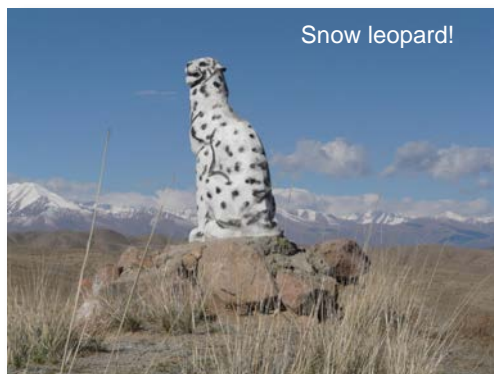


time to observe the towns and villages and note that life is hard for the people. Power was dependent on home generators, even in the guest house.

The landscape of Kyrgyzstan is very dramatic but not an easy life for the people. The town of Karakool, in the east was lovely as we spend a number of days based there, travelling to various locations surrounding this town and the nearby valleys. Accommodation varied, as in the east due to the preponderance of not for profit groups, there was a good standard of accommodation but in the west, where there is no tourism or NFP organisations, we stayed in a range of guest houses/homes, which gave a great insight to how the people lived. It was a real privilege

Harry was very keen to see the very rare and elusive Snow Leopard, but needless to say we never saw anything close to one, until we came across this Soviet version by side the road (right).

So now, let's turn to some of the Tulips that we saw. Almost all were on sunny slopes, below the high alpine line with no trees or shrubs, where they would be baked in summer. In winter they would be under snow or protected by shrubs (right). Understanding the habitats makes it often easier to know if the plant can be grown in other environments. And all sites had very good drainage.



***Tulipa zenaidae*:**

We first saw this tulip in Chui province, early in the trip. It was found at altitude of 1600m, on an open south facing slope. Wilford describes this tulip as belonging to *Kolpakowskianae*, and this species is close to *T. lehmaniana*. This tulip which was named in 1935 by Aleksei Vvedensky after Ainaida Botschantzeva. It grows in the Tien Shan and flowers in April and May and rarely seen in cultivation. We were fortunate to see it in many locations.

***Tulipa dasystemon*:**

This is a small yellowed-flowered species close to *Tulipa tarda*. This species mainly has fewer leaves, solitary flower and lack of any white on the tepals. This tulip is found in Tien Shan and Pamir Alai, and into north western China. This ensured that we saw this in most areas we travelled in Kyrgyzstan and found in higher altitudes from about 1800m to 3000m, where it flowers during May and June, but occasionally even in April.

Richard Wilford notes that bulbs of this plant sold as *Tulipa dasystemon* were actually that of *Tulipa tarda*, which was identified and named in 1933.

***Tulipa kolpakowskiana*:**

This is another small tulip, with wide range of colour from yellow to orange and brownish and red. This was first described in 1877 by Eduard Regel from plants he found in the Tien Shan. Again, has a fairly wide distribution to China and Kazakhstan in the Altai mounts and even reported to be found in Afghanistan. This species is found on sunny, stony slopes up to around 2600m. We first saw in this plant in Chong Kemin valley at around 1330m

Tulipa tetraphylla (Semenovskoye N.P. Kyrchyn gorge, 2160m) is another tulip named by Eduard Regel in 1875. The name means “four-leaved”. But according to Richard Wilford, this tulip can have up to seven glaucous leaves, crowded together at the base of the glabrous flower stem.



Tulipa zenaidae



Tulipa kolpakowskiana



Tulipa kaufmanniana



Tulipa tetraphylla



Tulipa dasystemon and habitat



This tulip is found on stony slopes and gravelly areas in the Tien Shan and into western China, flowering in April and May.

Tulipa kaufmanniana (right)

This tulip is found in the western Tien Shan and although we were in Kyrgyzstan at the right time of year we did not see one. However, I did see it in Uzbekistan in April. Unfortunately, that trip was not a botanical trip so had trouble asking for the driver to stop so I could photograph the various plants we saw en-route. This tulip was named by Eduard Regel in 1877, from plants collected by his son near Tashkent.

Other special plants:

Androsace pavlovskyi (right)

Androsace is a genus of flowering plants in the family Primulaceae second only to Primula in the number of species.

It is predominantly Arctic- Alpine with many species in the Himalayas (where the genus originated), the mountains of central Asia, the Caucasus, and the southern and central European mountain systems, particularly the Alps and the Pyrenees. In Kyrgyzstan it is found on sunny, stony open areas, with beautiful small cushions at altitudes of around 2000m



***Hegemone lilacina* (Trollius),**

Tamga Kumtor pass 2835m(right)

They can grow in semishade, but apparently are very sensitive to soil moisture, and grows on only moist, but well-drained soil.

They are found in Siberia (Altay), Central Asia (Pamiro Alay, Tien Shan, Dzungaro-Tarbagatay) and northwestern. China. In alpine zone, along streams, in lichen or moss tundra to 2,200-3,500m.



These were a wonderful surprise to come across in the snow melt, in the sun. And yes, it was very wet, as we walked through deep mud in parts, snow melt and the usual animal dung! But a delight on a very overcast day to see them glow in the landscape.

Fritillaria walujewii Karakol, Jeti-Oguz, 2145m

It is a native of NW China and E Kyrgyzstan where it climbs through scrub by means of its tendril-like upper leaves (right). The colour is a greyish-white on the outside which is so heavily tessellated inside with red as appear red. (Fritillaria Soc. UK). We found the plant on the top of an open plateau scrabbling through the scrub, mainly very spiky shrubs, which obviously gave it protection from grazing animals.



Iris loczyi

Grigorievskaya gorge 2310m (right)
We found this beardless iris in a number of locations on our journey, generally reasonably high altitude and often protected areas, such as in a gorge or near shrubs.



Pulsitilla campanella

Chong Kemin valley, 2135m (right)
This plant was seen again at a number of locations, generally on grassy slopes in the sun. It is tubular in form and sepals blue-violet to lilac, erect and elliptical to ovate. It is found around 1800 – 3000m across Central Asia, into Siberia and Pakistan.



Primula algida Chong Kemin valley 2100m

Probably the best examples of this *Primula* were seen on open very moist grassy slopes in Joashyl Kol. (right)



Primula kaufmanniana

Kalmak-Ashu valley 1675m (lower right)

Again I refer to the AGS for information on this beautiful *Primula*! And as with all *primulas* I have seen in their own habitats, the soil is very moist!

Flowers funnel-shaped, violet to purple, with a long narrow tube, occasionally white, borne in rather one-sided umbels. Mountains of central Asia, bushes near streams and lakes etc. Pamir, Ala-Tau, Tass Alau and Altai to the eastern Tien Shan, 1000-3700 m. Not in cultivation.



There were many other plants we saw but time or space has meant I have not included but wonderful plants and habitats!!

I refer you to Harry Jans' website for some fabulous photos of here and many other places that he has travelled over the past 15 + years!! <https://harryjans.smugmug.com/Travel>

I also referred to Richard Wilford - *Tulips: Species and Hybrids for the Gardener*, Timber Press 2006



Harry Jans and eagle

The Garden

from Ruth Hosken - our New Zealand member

Come to the garden alone, while the dew is still on the roses. For the garden of your daily living, plant three rows of peas:

1. Peace of mind
2. Peace of heart
3. Peace of soul

Plant four rows of squash

1. Squash gossip
2. Squash indifference
3. Squash grumbling
4. Squash selfishness

Plant four rows of lettuce

1. Lettuce be faithful
2. Lettuce be kind
3. Lettuce be patient
4. Lettuce really love one another

To conclude our garden we must have thyme:

1. Thyme for each other
2. Thyme for family
3. Thyme for friends

Water freely with patience and cultivate with love. There is much fruit in your garden because you reap what you sow.

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