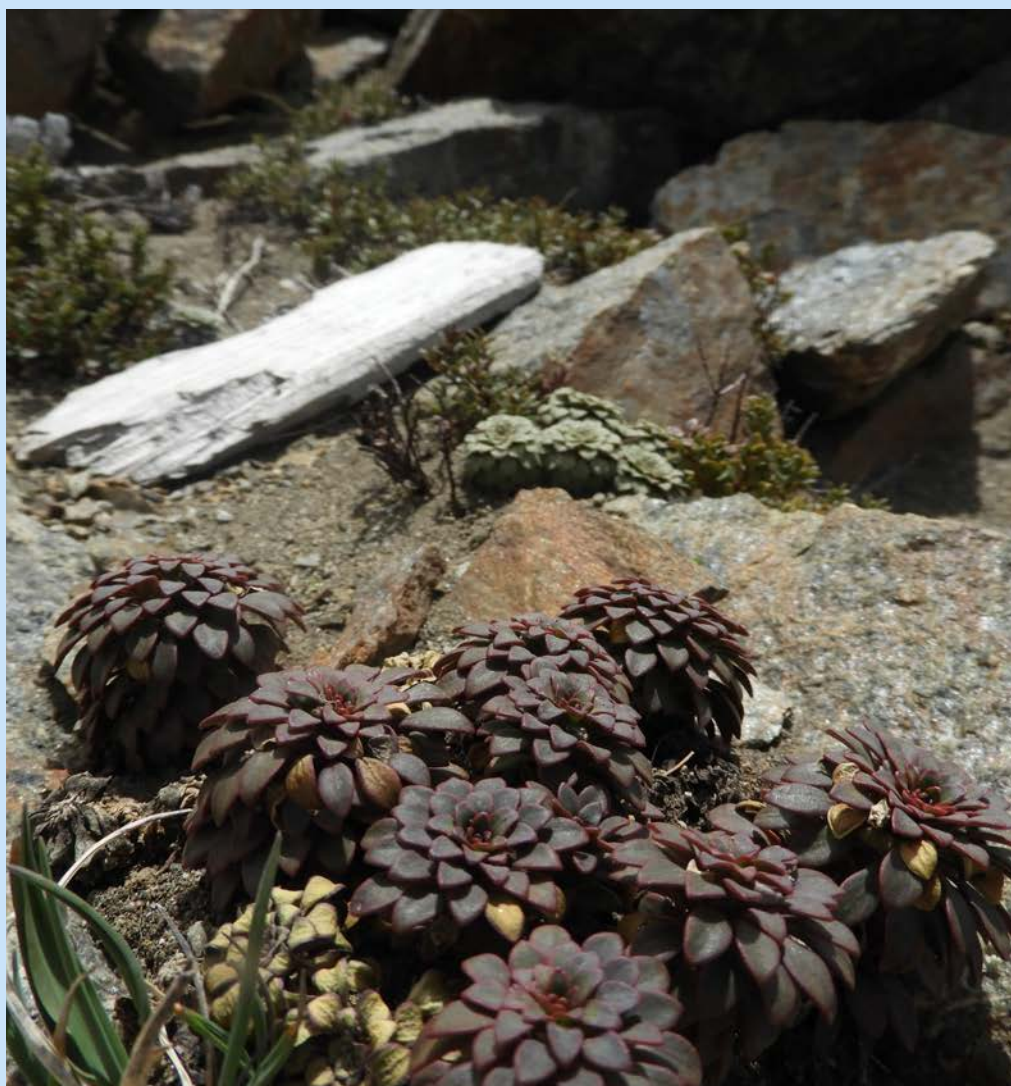


# THE JOURNAL

of the  
Alpine Garden Society Victorian Group

Summer

2020



## Welcome to the AGS of Victoria Journal

In the first article Susan More describes her 2 hectare garden in Dunedin New Zealand. Dunedin is further south than Hobart and with a temperate climate - cold in winter, mild in summer, trilliums, fritillarias, Paris and rhododendrons abound!

Angie's article on the reasons why plant names change is informative, especially now when so many plant names are changing and it is hard to keep up! It's worth reading several times to get a better understanding of the complexities behind plant name changes.

The cycling tour in Chile and Argentina undertaken by Chris Byra and his partner and the fascinating variety of plants they found on their journey is described in article three. Chris is president of the Alpine Garden Club of British Columbia I came across this piece when looking for potential articles for this journal. In exchange for Chris' article I offered him the articles written by Alan Ayton (with Alan's permission) about Tasmanian plants (two parts) that appeared in recent Journals. Who knows, in the future when travel is back to pre covid times, some British Columbians may venture across the Pacific Ocean to visit us!

Emma's article about her and Peter's covid projects is inspiring. They now have two beautiful structures in their Dandenong Ranges garden - a tangible reward after several months in 'iso'.

**Editor:** Helen Batty

**Photos:** Supplied by contributors

**Front cover:** *Viola sacculus* (Chris Byra)

### 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.

The Committee and Editor, retain the right to edit or refuse the publication of any material submitted.

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## IN THIS ISSUE

- Ovingden  
Susan More's beautiful garden in Dunedin, NZ p. 4
- What's in a name - Angela Atkinson explains the reasons for plant name changes p. 11
- Botano-Cycling - Chris Byra  
The Lakes District of Chile and Argentina p. 21
- Garden project - Glass houses et al  
Emma and Peter's life size Meccano set p. 29
- Seed Exchange Time - Helen Batty p. 34





A selection of Trilliums, clockwise from top left:  
*Trillium chloropetalum* hybrid, *trillium* hybrid,  
*trillium grandiflorum* fl. pl., good foliage red  
*trillium*, *trillium grandiflorum* roseum.

# Ovingdean Garden, Dunedin, N.Z.

by Susan More

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I have gardened seriously for almost 50 years. I live on 2.2 hectares and for some years had my garden open to the public, however, I realised that keeping the place up to the required standard was a large effort and that really, my first love was plants. I collect plants as others do fine china or teaspoons! I grow many from seed and cuttings. Apart from trees and shrubs, I grow a collection of perennials, trilliums, fritillarias and other small bulbs.

When we arrived here well over 40 years ago, the original garden had been neglected for some years, so we used to hack our way through the undergrowth every weekend. We sometimes found small treasures - semi formal pond and a stone seat. It had some interesting features, part of a stone house that had been the original home in the 1880's as part of a town supply dairy farm, and a stone archway put in we discovered, on Coronation day in 1953. It has a stream, small or large, depending on the weather. When we first arrived it used to flow all winter and spring; now, with global warming it is often dry.



We live on a reasonably steep slope on the side of a hill that overlooks Dunedin, at around the 300 metre (above sea level) mark. Our climate is coastal, temperate. Summers rarely get above 25° and can fall to below freezing in winter. Weather is changeable as we are on an island and sometimes the cold fronts we receive are influenced by the Antarctic. Rainfall is approximately 73cms (28 inches) a year.

It is not a formal, overly manicured garden. Originally I grew rhododendrons as they could withstand the night time snacking of possums which for reasons best known to themselves thrive in our climate. I enjoy growing mainly species, and because of our temperate climate and living at the altitude we do, I can grow species from the tiny *Rhododendron radicans* to the large leafed forms of *R. sinogrande*, *R. magnificum* and many others. We have snow most years, although that also appears to be reducing as a result of climate change.

We had a number of amateur rhododendron growers in the early days, and some grew from seed. Most of our species came from them and some of the large leafed ones have taken up to 30 years to produce a flower, then, as they were seedling grown, they often turned out to be incorrect. It was always exciting in spring to await the new blooms. They can be variable in the wild, but often not that variable.

As time passed and the children left home, it gave me more time, so I set about making the garden a little larger, by suggesting that we remove a large, both in height and length, macrocarpa hedge that had always kept part of the garden under a sort of permafrost after we had had a particularly heavy fall of snow. Once removed by my long suffering husband, it opened up a whole lot of new possibilities. In conjunction with opening the garden to the public during our Rhododendron Festival, I had a small nursery from which I sold plants propagated from the garden or grown from seed. When I closed the garden to the public I had a number of rhododendrons, in particular, left over, so I was able to plant them in groups all over

the paddock overlooking the house. It already had a number of trees that I had obtained from a specialist grower in the North Island and I had been collecting anything that looked unusual or different and would maybe grow in our climate.

Amongst the trees I grow are *Emmenopterys henryi* a lovely Chinese tree with beautiful spring foliage. I am not sure that I expect to live long enough to see it flower as it took 75 years in Wakefield Place in the UK to perform. *Carrierea calycina* is another, and much to my surprise, two years ago had flowers. The tree is rather leggy and I am rather short and the flowers were quite high so did not get an exceedingly good photo of it. Some time later I saw what I thought was a pod (although I think it needs male and female plants to produce seed) and just as I managed to drag the branch down and grab it, it burst open and spread its bounty on the ground. Maybe next time.

*Neillia thibetica* is a good space filler with lovely pink flowers, which gives good all round interest and can be kept as a shrub just by pruning the dead branches out. A number of my plants are the only ones in the genus and I think that *Parrotiopsis jacquemontiana* from the North Western Himalayas may be one of those. It is a lovely delicate looking small shrub with interesting small white 'flowers' which are actually bracts. Another unusual plant is a *Helwingia* species which has minute flowers growing in the centre of the leaf.

Cornus, Nyssas, Malus, Hawthorns (double) all grow well here. One of my favourite plants is *Crataegomespilus*, a graft cross between *Crataegus* (hawthorn) and *Mespilus* (medlar). The one I have is a semi-weeping form and in late spring, looks lovely. It has a miniature medlar style fruit. There are also a number of Malus (crabapples) which I grow because most prunus here are prone to silverblight and last only a few years before succumbing.

Climbers grow well here. My favourite wisteria suddenly died earlier this year and I discovered it had started to rot at ground level – this is one of the things that one has to be pragmatic about. You think that you have things growing successfully and after years they die,



Left: *Craetaegomespilus*, graft cross between *Crataegus* (Hawthorn) and *Mespilus* (Medlar),  
Right: Hawthorn, double red

sometimes inexplicably. I think that is why most gardeners grow to a good age, always something to look forward to.

Starting with subscriptions to not only our local Alpine Garden Group, but overseas groups such as the AGS, the Scottish Rock Garden Society, and some North American societies I became hooked very quickly on the seed lists which came out annually. This was in the days when we could import anything into New Zealand



and what fun we all had. I still grow from seed but there is not the variety available to us now.

It was all rather trial and error as I had not yet learnt that one should look at where the plant came from and try to grow it in similar circumstances. Such was the case of *Rheum nobile* - I was given a small plant, and desperate not to lose it, I planted it near *Rheum tangutica*, in a shady, damp place! It eventually died. Next month the AGS Bulletin came out and I saw the front cover with *R. nobile* in flower, growing on a very steep scree in the open. No wonder it died! I have since discovered that South African bulbs struggle here too. It is just not hot enough.

Things that do well here are Trilliums, Paris and Arisaemas. A few years ago, I was lucky enough to be left the contents of the garden of the late Stewart Preston who was a well known Dunedin plantsman. It took me almost 3 months, starting in the depths of winter, when nothing is above ground, to dig out all I could find.

Most labels were either missing or had up to three names on them, so it was rather like a treasure hunt without a map, of sometimes rare and choice plants. There was an amazing collection of trilliums, including *T. grandiflorum fl pl*, *T. grandiflorum roseum*, sp, so many species and equally as many hybrids. *T. rivale*, *T. nivale*, *T. hibbersonii*, *T. vaseyi*, *T. sulcatum* and a number more. All quite overwhelming at the time and described by another plantsman as a poisoned chalice. I have been trying to spread them around to keep them in circulation, because once they are gone, they are gone, under



*Rhododendron morii* and *R. davidsonianum*

our current regime. There were woodland bulbs, including Arisaema, Paris, Camassias, Scillas and Alliums, Dodecatheons and Eremurus (which I struggle with). Nearing Christmas, *Cardiocrinum giganteum* and *C. yunnanense* are magnificent in their statuesque beauty, pouring scent all over the garden.

One of the results of this kind bequest, was the chance to continue to grow an expert's lifetime work of collecting.

I grow the odd NZ native, including our lovely *Ranunculus lyallii* and a number of Celmisias and Myosotis.

Writing this has given me a chance to reflect on how lucky I have been to have had the opportunity to dabble in the world of plants. The people I have met and the friends I have made have enriched my life and led to friendships around the world. Latterly, the internet has offered a new perspective on various species and yet again widened connections with both the people and the plants that I have enjoyed and been lucky enough to grow. Having attended several international Alpine Garden conferences has also been a delight, although sitting in the Czech Republic with our Australian friends while the Europeans and others were buying beautiful daphnes and other dainty treasures was very difficult.



*Ranunculus lyallii*

The one downside over recent years has been the strict import restrictions placed on a number of countries, including our own, which means we can no longer import any new species that were not in the country since the 1990's and restricts the importation of others. However, I shall continue to enjoy the beauty and challenges that my garden brings me.



# What's in a Name?

Angela Atkinson

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The scientific names of plants seem to be constantly changing, more so now than ever before. This causes frustration for those of us who use scientific plant names on a regular basis - as soon as you learn a name, it changes - usually to something longer and more unpronounceable it seems!

These constant name changes are the result of taxonomists trying to streamline and make more sense of the evolutionary relationships between plant taxa, and are driven by an increasing understanding of the biology and genetics of plant species.

If we understand the reasons behind the changes it will help to increase our understanding of plant relationships and evolution, and may help us to accept these changes more readily.

There are two main reasons for changes to plant names - changes to nomenclature and taxonomic changes.

## **Taxonomy**

Taxonomy is the science of classifying organisms, and is based on a hierarchical system of categorisation. The plant kingdom is divided into divisions, which are in turn divided into classes, and each class is divided into orders which are in turn divided into families. Each family consists of a number of genera, and each genus is made up of a number of species. In this system, at any level, the organisms within the same group should be more closely related to one another than to those outside the group.

Taxonomy is essential to understanding plant evolution and relatedness. Knowledge of what group a plant belongs to,

particularly at the level of family, can help us to understand the characteristics of an unfamiliar plant. For example, knowing that a plant is a member of the Ericaceae family will tell us that it will likely require an acidic soil. Understanding the relationships between plants is also important in plant breeding and hybridization, and in rootstock selection and grafting.

Kingdom	Plantae
Division	Magnoliophyta
Class	Monocotidae
Order	Liliales
Family	Melanthiaceae
Genus	<i>Trillium</i>
Species	<i>chloropetalum</i>

## Nomenclature (and the rules for naming plants)

Nomenclature is the naming of plants that botanists and taxonomists have identified and categorized. The rules of plant nomenclature, are dictated by the *International Code of Nomenclature* (ICN) for algae, fungi and plants (formerly known as the International Code of Botanical Nomenclature - even the rules get a name change!). The fundamental rules are that a plant can only have one name, and the oldest published name for a plant is the correct name to use.

The scientific name of a plant consists of the genus name and the specific epithet. This is the binomial system developed by Linnaeus in the 1700s. In some cases, a plant's name may also include infraspecific epithets such as subspecies (subsp.), variety (var.) or a cultivar name (cultivated variety). The rules of nomenclature also dictate the way in which the scientific name must be written (genus

with a capital, species epithet in lower case, both in italics or underlined, subspecies in italics as well but abbreviation subsp. not italicised and the same for a variety, with a cultivar name non-italicised with a capital letter and in single quotation marks). Examples of correct nomenclature include *Fritillaria kotschyana* subsp. *grandiflora* (a subspecies of *F. kotschyana*), *Actaea cimicifuga* var. *racemosa* (a variety of *A. cimicifuga*), *Eucalyptus caesia* 'Silver Princess' (a cultivar, or cultivated variety of *E. caesia*). To be really botanically correct, the name should also contain reference to the person who first described the species, and in some cases those who described or revised subspecies or varieties. Nomenclature is the natural home of the pedant! (Who else has issues with not being able to do italics in Instagram posts of your plants?).

## Changes to plant names

- **Nomenclatural changes**

Changes to the name of a plant can be purely due to nomenclature, with no effect on the taxonomy of the plant. For example, name changes resulting from changes to nomenclature can occur, when an earlier record of a name associated with a particular species is discovered. This most commonly happens when more than one botanist has collected and described a plant, as was common in early botanical exploration. The ICN rules state that the earlier name is the correct name (with some rare exceptions). All subsequent names are considered synonyms. An example of a nomenclatural name change is the substitution of *Cladrastis kentukea* for *Cladrastis lutea* (a North American tree in the Fabaceae) because the older (1811) epithet *kentukea* had been overlooked in the literature, and the more recent (1825) epithet *lutea* used incorrectly. The name was therefore changed to earlier epithet.

Although the ICN defines the rules for naming plants, it does not provide guidance for determining if a species is distinct from other published species, and so justifying a new name. The taxonomic validity of a species is determined by the acceptance of the names by the scientific community reviewing academic research and subsequent publication in scholarly works such as Floras. It may take years before a name change is widely accepted and becomes commonly used.

- **Taxonomic changes**

Name changes resulting from taxonomic changes reflect a change in the classification of a plant, such as the splitting of a genus or the consolidation of several genera, the elevation of a subspecies or variety to species status or the demotion of a species to a subspecies or variety. These changes invariably require the name of the plant to change.

Some taxonomic changes do not result in changes to a plant's name. For example, changes to families or orders (the taxa above genus in the taxonomic hierarchy), such as broadening or narrowing the genera included in a family, will not necessarily change the genus name or species epithet of a plant. Sometimes an entire family is made redundant, without changing the name of the individual plants as the reclassification did not change at the level of genus.

## **The 'New' Taxonomy**

While plant names have always changed as new information comes to light, it seems that the reclassification and renaming of plant species has increased exponentially over the last couple of decades. A lot of this can be attributed to advances in the tools used by plant taxonomists.

Early plant taxonomy was based on grouping like with like, on the basis of morphological characteristics such as flower structure, leaf arrangement and characteristics of fruit. In fact, Linnaeus initially grouped flowering plants into 24 classes based on the number and arrangement of stamens in the flower. While Linnaeus' binomial system for naming plants persisted, the characteristics used by taxonomists to group plants expanded as the understanding of plant biology and the methods used to study it developed. Anyone who has used a key to identify a plant will know the detailed morphological characteristics used to differentiate species!

Since Darwin's theory of evolution, taxonomy has progressed from simply grouping like organisms to classification that reflects the evolutionary relationships between taxa. The underlying reasoning was that all organisms evolved from a common ancestor, forming a 'family tree' of life, or phylogeny. In many cases, the original classifications correlated with the relatedness of taxa, but not always. Morphology-based classification can have a downside, in that it can be subjective and by emphasizing the importance of different morphological characters differing results can be obtained by different taxonomists. In addition, similar morphological characteristics can also arise among unrelated organisms that have evolved in similar environments, or under similar selection pressures, which can lead to misinterpretation. It wasn't until the 1950's that a mathematical method was formulated to analyse all the morphological data collected and calculate the most probable connections in the family tree. This method, and subsequent work, became the basis of phylogenetics.

The most significant changes to how taxonomists group and classify plants have come about through the development of techniques to study the DNA of organisms, especially the ability to read the DNA sequence. Classification based on these techniques, rather than morphology, is called molecular phylogenetics, and this has revolutionized plant taxonomy.

Many changes based on molecular phylogenetics have occurred at the family level, or above, and have changed our understanding of the evolutionary relationships of taxa, while leaving the botanical names of the plants unchanged. In some cases, families have merged or split, or a family may be made redundant as DNA evidence shows that plants in that family are more closely related to another family. Examples of this include the Aceraceae (maples) which no longer exists as all maples are now in the Sapindaceae, or the Asclepiadaceae (milkweeds) whose members are now in the Apocynaceae. Plants originally within the family Liliaceae are now found in more than ten families, including the Amaryllidaceae, Alliaceae, Melanthiaceae, Colchicaceae to name a few. The Liliaceae now consists of only 15 or 16 recognised genera (depending on the publication) including *Lillium*, *Fritillaria*, *Erythronium* and *Tulipa* among others (although some taxonomists only recognise these four genera as truly belonging to the Liliaceae).

Molecular studies at the level of genus are resulting in many changes to accepted botanical names. Taxonomy, and the ICN, dictate that only taxa that are derived from a common ancestor, or more specifically monophyletic branches in the phylogeny, or tree, should be named. Comparison of DNA within, and across, genera has led to a more accurate understanding of relatedness between species. In order to comply with the rule that a taxa such as genus must represent an evolutionary lineage, genera have been split apart or merged, some species have transferred from one genus to another or a new genus formed.

An example of DNA analysis leading to the formation of a new genus is the case of *Corymbia*. There are around a hundred species of *Corymbia* which were previously treated as members of the genus *Eucalyptus*. Molecular studies showed that these species were more closely related to the genus *Angophora* than they were to *Eucalyptus*. If the *Corymbia* species remained as *Eucalyptus*, the



genus *Angophora* would have to be renamed as *Eucalyptus*, hence the new genus. A similar scenario is ongoing in the genus *Acacia*.

Several other well-known Australian natives have had major changes to their names as a result of molecular phylogenetics, such as the genus *Dryandra* being subsumed into *Banksia*, and *Callistemon* now becoming *Melaleuca*.

The analysis of DNA of species, resulting in changes to botanical names, has often been found to support earlier discrepancies in classification and nomenclature, and reflect geographical distribution in some cases. An example of this is the renaming of *Dicentra spectabilis* to *Lamprocapnos spectabilis*.

Using DNA to examine the evolutionary relationships between the species within the genus *Dicentra*, it was found that *D. spectabilis* didn't share an immediate common ancestor with the other *Dicentra* species, and so did not belong in the same genus. Morphologically there are differences also, in that *D. spectabilis* has small leaves on the flowering stem, while the other *Dicentra* species have a bare flowering stem. *D. spectabilis* is from East Asia, while the other *Dicentra* species (except 1) are from North America. *D. spectabilis*, therefore, needed a new genus name, but as the rules of the ICN state that pre-existing names get precedence (you can't just make up a new one if an old one exists), *Lamprocapnos* was chosen as that name had been used to describe *D. spectabilis* in an article from the 1800s (clearly the classification of *D. spectabilis* had been in doubt before).

Another group of plants that many of us grow, that has undergone name changes is the genus *Aster*. Analysis of DNA from species within the genus showed that *Aster* was a mix of nearly 600 species from all over the world, many of which were not closely related at all. The genus has been split and many species now belong to other smaller genera. In cultivation, the most common of these is

*Symphotrichum*, which contains around 90 species including most of the North American species, and *Eurybia*. Around 180 species remain in the genus *Aster*, all but one of which are from Eurasia. DNA analysis showed that the Eurasian asters have no close relationships to those from North America. Some Asian asters are still to be split out into new genera.

As mentioned previously, it can take some time for name changes to be widely accepted. The Royal Horticultural Society's Nomenclature and Taxonomy Group (NATG) monitored the adoption of the new classification of *Aster* for a decade before recommending its inclusion in the 2015 RHS Plant Finder!

For those familiar with floral structure and morphology of *Salvia* species, the reclassification of *Rosmarinus* spp. to *Salvia* would come as a surprise. One of the defining morphological features of *Salvia* is the presence of only two fertile stamens, while many other Lamiaceae have four, and the stamen have a hinge that works like a 'lever mechanism' depositing pollen on pollinating insects when they push against them trying to access nectar. Despite this unique feature, genetic analysis of *Salvia* and related genera within the Lamiaceae, has suggested that the genus *Salvia* should be broadened to include *Rosmarinus*, *Perovskia*, *Meriandra*, *Dorystaechas* and *Zhumeria*. In the light of the molecular evidence, looking at these genera morphologically, it has been noted that each only has two fertile stamens as in *Salvia*, and while the 'lever mechanism' of *Salvia* is not present or well-developed, the tissue that forms that feature in the stamen of *Salvia* is swollen or elongated in the stamens of those five genera, compared to other members of the Lamiaceae.

A recent name change that we are having to come to terms with is the move of all species of *Dodecatheon* to *Primula*. Again, this is based on sequencing of DNA, and supported by morphology and cytology (the study of the structure and function of cells). While

superficially the flowers of *Dodecatheon* appears more similar to *Cyclamen* than *Primula*, and are buzz pollinated like *Cyclamen* flowers, they are apparently very similar to species in *Primula* subgenus *Auriculastrum* when the anthers and corolla are removed (yes, subgenus is a thing too). The resulting 28 new *Primula* species correspond to all 17 species, plus varieties, of *Dodecatheon*, and have been placed in the subgenus *Auriculastrum*. Although the genera *Primula* and *Dodecatheon* were both proposed by Linnaeus in 1753, the name *Primula* was retained as it represents a larger and more widespread group. Now I'm waiting for *Cyclamen* to become *Primula* too (although molecular studies have not suggested this will happen).

While most of these examples make sense once the rationale behind the name changes is understood, molecular phylogenetics has thrown up some surprising discoveries in the evolutionary lineage of plant species, particularly in the higher taxa. For example, the order Cucurbitales, which contains the family Cucurbitaceae (cucumbers, pumpkins, squashes) is related to the order Fagales, containing the Fagaceae (beeches, oaks), and at the level of order again, the lotus, *Nelumbo*, is more closely related to plane trees than to water lilies.

It is often quoted that the only certainty in life is change. As with all things, the names of the plants around us will continue to change and by understanding the reasons for these changes, we too can grow and hopefully learn to accept them.

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## **The AGSVG Seedex**

Save your seed as they mature for our own AGSVG 'seedex'. Please clean the seeds of chaff or debris before packing them into leak-proof envelopes/bags and posting in a padded envelope to:-

“The AGS Vic Group Seed Exchange” c/- 12 Georges Rd,  
Sherbrook 3789.

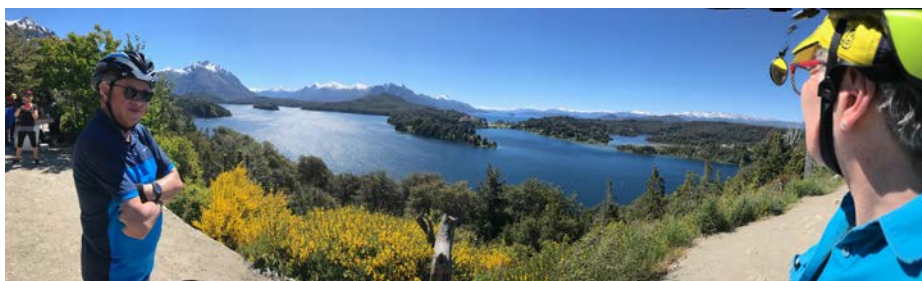
They should arrive by the 10th January 2021 at the latest, but let Fermi know the plant names in advance so they can be added to the seed selection list.

# Botano-Cycling the Lakes District of Chile and Argentina

by Chris Byra

Although the late November trip through the northern extremity of Patagonia was primarily a cycling trek, botanizing from a bike was possible. My gradually worsening worn out knees still allow for relatively pain-free cycling but very limited hiking, hence an organized bike trip.





View of Lago Nahuei Huapi, Argentina, with *Genista monspessulana* in the foreground.

The trip started 1,000 km south of Santiago, in Puerto Varas, Chile, looping through Argentinian Andes heading north and back to the Parque Nacional Conguillío, in Chile. Free days allowed small excursions to the Catedral ski resort in Bariloche, Argentina, the base of the volcano Villarrica, in Pucon, Chile, and the Araucaria forest. On an excursion to the ski area, Valle Nevado, near Santiago, alpine flowers lay hidden on slopes that appeared barren.

The most striking images throughout the trip, besides the beautiful vistas, are the numerous *Embothrium coccineum* (Chilean firebush, below left) and the introduced invasive *Genista monspessulana* (French broom, below right), both in full flower. The species are ubiquitous both in nature and in gardens. We were struck by how well gardens and roadsides were maintained throughout our trip. The climb through the Andes consisted of riding ferries on several lakes





Above: *Viola sacculus* Below: *Tristagma bivalve*





*Calceolaria biflora*



*Gaultheria mucronata*



*Viola philippii* & *Phacelia* sp.

and steep gravel roads as well as lovely paved bike lanes. The forest density rivalled our own with trees right to the water and snow-covered peaks in the distance.

The Patagonia region received an unusually heavy snow pack this past winter consequently had a late spring in the alpine. The snow melt line at the Catedral ski resort, a 30 minute city bus ride from Bariloche, Argentina, yielded several rosulate viola species. Red and green forms *Viola sacculus*, *V. columnaris* not yet in flower, and another rosulate *Viola* sp. displaying a few mauve blooms could be seen at the elevation we explored.

Unfortunately, we did not have time to search lower down the mountain. The flowers could only be seen close up in the scree of the ski slopes. *Tristagma bivalve* and *T. nivale* growing through *Berberis empetrifolia* could be seen flowering sporadically near



the snowline. A Northern Irish cyclist, looking for an outing on a slack day, decided to join me on the hunt for flowers, a first for him. He became quite enthusiastic and had a good eye for spotting new species.

After taking a transfer over a 100 km of busy highway heading north back into the Andes through the Seven Lakes district, we cycled toward San Martin de Chloraea alpina los Andes. We continued to be laggards in the keen cycling group as we looked for flowers. I was pleased to observe an orange *Chloraea alpina* in a meadow because livestock commonly graze in this area. The bright yellow French broom continued to be the most prevalent display of colour in many areas.



Chloraea alpina

The trip back through the Andes was a difficult ride on 54 km rough gravel but we were rewarded with a 20 km downhill ride on a tarmac bike lane to our hotel in Panguipulli, Chile. We passed a large field of cream coloured *Anemone multifida* that had not been grazed.

On our second free day we hiked up the lower forests and lower reaches of the Villarrica volcano that dominates the tourist town of Pucon. The forests hid lovely yellow *Viola magellanica* and white *Codonorchis lessonii* amongst three meter tall ferns. On the open lava slopes are *Sedum* sp., the large pink fruits of *Gaultheria mucronata*, and the ever-present symbol of Patagonia, *Berberis microphylla*.

During the last two days of riding we entered the Conguillio National Park with its massive lava and ash field below the volcano Llaima. While only *Senecio chilensis* grew on the lava field, the flora along the border of the lava flow was interesting. In moist areas were



*Lathyrus nervosus* (left) and *Solanum valdiviense* (right), growing in Conguillio National Park.



*Fuchsia magellanica*

*Oxalis squamata*

*Lathyrus nervosus*, *Fuchsia magellanica*, and *Solanum valdiviense* shrubs, with numerous patches of *Calceolaria biflora* along road cuts.

Cycling to spectacular Araucaria forest (*Araucaria araucana*, Monkey puzzle tree) was the final leg of the trip. It is the national tree of Chile. The usually dioecious species has female trees that are somewhat conical when immature, then develop a distinctive umbrella shape with trunks free of foliage. The female has obvious 15 to 20 cm globose cones. The largest tree, called “Araucaria Madre” is 2.2 m in diameter, 50 m tall and 1800 years old.

Paul Krystof recommended that we visit Andean ski areas just east of Santiago. The Valle Nevado ski area, one and a half hours from

the city by tour bus, up a mountain road with 60 switch back curves was ablaze with California poppies (*Eschscholzia californica*), an introduced species, and numerous patches of *Alstroemeria* sp. At lower elevations the pale yellow flowering large cactus *Echinopsis chiloensis* was prevalent, with occasional plants showing the bright red inflorescence of *Tristerix aphyllus*, a parasitic plant of this cactus. At 3000 meters, the slopes appeared to be barren until one wandered uphill from the village. Beside the tiny flowering *Viola philippii* were scattered *Tristagma bivalve* and large cushions of *Laretia acaulis* and *Anarthrophyllum gayanum*. The latter cushion was flowering where there was protection. The bright pink *Oxalis squamata* was beginning to flower as were two other yellow *Oxalis* species. One was *O. compacta* while the other may have been *O. cinerea*. *Astragalus vesiculosus* in early bloom and pre-bloom *Nassauvia pyramidalis* were also observed.

The scenery in the Lakes District of Chile and Argentina is spectacular whether seen from a bicycle or other vehicle. Perhaps the only regret was the pace of the ride, leaving less time than desired for botanizing. However, with the encouragement and advice of Paul Krystof and Alan Tracey, we found some flowering gems in the alpine and along the road through the Andes.



Volcano Llama & *Senecio chilensis*



*Araucaria araucana*



*Immature female Araucaria*



*Viola sp.*



*Anarthrophyllum gayanum*

Chris and Jane Byra have gardened since getting to know each other but mainly vegetables in the early years. Chris' interest was always in building walls and overall design whereas Jane was the horticulturist. The rhododendron, rock garden and alpine plant attraction started with Don Martyn, Charlie Sale and Margaret Charlton and has grown through membership in the AGC-BC. Our latest and longest project is a garden on Chilliwack Mountain.



# Garden projects – Glass houses *et al!*

by Emma Moysey

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For many years I have yearned for a glass house and had spent many hours looking at photos of glasshouses on line, many of them of stunning old structures in Ye Olde England. I imagined that as well as looking nice in the garden, that a glasshouse, might miraculously turn me into an amazing gardener – we are still awaiting that transformation!

My partner Peter and I saw the glasshouse we finally settled on set up at MIFGS. We then visited the shop front in Officer to look at all the options available, and to make sure we were ready to go ahead. It was a large enough purchase to cause me pause-for-thought, but .....enough procrastination! It is really just a large Meccano set, (with many, many pieces), first the frame, then attaching the poly panels.

I gravitated towards the design called the ‘Orangery’ as this design had the entrance along the long axis, which sat nicely across the slope of our site.

It took us three full weekends to put together, including site preparation, but that was probably because we were inexperienced. You can have these glasshouses professionally installed, and the YouTube videos of this process suggest that it can take only a day or two.

Over the page are photos showing the construction, and some lovely plants, that are growing nicely in their new home, and some faunal inhabitants that are also happy.





**Site preparation** – we built a stable platform, taking care to make sure the area was level and well drained – it is important to have a level site, as the glasshouse panels will not ‘come together’ if they are not completely square. And many hours later, the frame was finally put together.

Our puppy dog Mack was a great site supervisor, and this is now one of his favourite places in the garden, warm and elevated, he can survey his dominion.

*The glasshouse panels have now been installed (above) and the whole structure takes some years to ‘settle in’; right, one year old.*



Following are some plants that have loved the conditions in the glasshouse; *Cyclamen*, *Primula*, *Arisaema*, *Galanthus*, *Ornithogalum*, *Paris*, *Saxifrage*, *Pleione*.







## The Garden Shed

During Covid lockdown, we also put together our Garden shed, which was a lot of fun, and went up in only a few days. Peter was happy to relax after the final 'zhooshing'.



## Storm Damage

And our next project is garden and fence repair after a Mountain Ash from our neighbour decided to let go in the latest storms – puppies are at the ready again to help supervise! An opportunity to put in more plants – we always need a positive outlook after the initial heartache!



# Seed Exchange Time

Helen Batty

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Our first AGSVG seed exchange is about to begin. We have been watching the flowers on our special bulbs and plants as they fade and with fingers crossed look for the development of a seed pod or lots of seed pods. I have been tying the little gauze party bags over the seed pods of galanthus, silene, liriopes and clematis to name a few from my garden. One of the bags had a small family of earwigs inside and no seeds! I had to tie the ribbon tighter around the stem to keep the bugs out! But over the past couple of weeks I have been removing the bags with the seed pods and emptying the seed onto clean white paper to separate the seed from the chaff. Then my cleaned seed goes into the little origami seed packets I have been folding. I am still waiting for my one *Cyclamen rohlfianum* seed pod to open.

In 2010 Lydia Bartlett wrote an article about *Cyclamen rohlfianum*. She was a keen and very good grower of cyclamen in suburban Melbourne where many cyclamen grow well due to the hot, dry summers. She said that *C. rohlfianum* blooms are distinctly different in appearance to the majority of cyclamen flowers as they have the stigma exerting in a similar way to dodecatheons.

They originated in Libya suggesting long dry seasons and heat. They are the slowest to flower from seed, taking at least five years, but they seem to be long lived in the right conditions. When they do really well, by 10 years they have very large corms.

*C. rohlfianum* seed will take 5 to 6 weeks in the dark (refer to notes opposite page), some seeds will pop through, then the pot can be placed in the light and the rest of the seeds will emerge. Cyclamen seed will come up in their own season, for example *C. repandum* will come up in the spring.

Good luck with the seed you receive and if they include cyclamen seed you may find Lydia's notes informative - opposite page. Lydia was an AGSVG member for many years and generously shared her cyclamen seed, plants and knowledge until she passed away.



## Cyclamen Seed Sowing Handout. Prepared by Lydia Bartlett. 24/04/2010

Definition of Imported seed: A.G.S S.R.G etc

Mine is from the Cyclamen Society. You do not receive a large number, so each seed is very special. For seed raising, I use a good potting mix. The method to prepare the seeds and make the potting mix is described below.

To prepare the cyclamen seeds for sowing:

1. Mix 3-6 drops of detergent in 500 MLS of water  
(My containers are the type you receive about 2 tablets in or small bottles, egg cups etc)
2. Mark your container with a number and put the same number on you plant label as its easy to mix them up
3. Soak for at least 24 hours and ensure all seeds sink to the bottom of the mixture

To prepare the potting mix:

1. 2 x 9 litre buckets of soil
2. Approx ¼ bucket of 3 minus gravel
3. 1 level measure of 15 month or 12 month Osmocote  
(my measure is the spoon you get with Laundry powder)
4. ¾ measure of complete fertiliser
5. 1 cup of Buchan Limestone Grits  
(calcium carbonate)  
(you can get Buchan Limestone grits at Mitchells' at Lilydale)
6. Dampen and mix well
7. Use eyebrow tweezers to plant seeds  
(allows for good separation)
8. Firm into soli
9. Cover with gravel
10. Water again
11. Allow to drain
12. Slip pots into sandwich bags
13. Tie tops
14. Pack pots in white boxes
15. Cover with black plastic AND an old mat

The fertilizer is used because the seedlings are left in pots for 2 years. When at one leaf stage there is only one root.

The University of Reading (UK) does a lot of testing for the Cyclamen Society. It has been determined that 3 weeks darkness gives the best results ... and I mean darkness – so NO PEEKING!! To achieve the level of darkness required:

With my own collected seed I use the same mix but with quantity I use much larger pots and not give the dark treatment.

Yours truly, Lydia Bartlett  
24.2010



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