

Patagonia Land of Violas and Volcanoes

Alpine Garden Society tour 2013



**A report written by
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For the Merlin Trust and Alpine Garden Society

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It was a pleasure to share the tour with such a friendly and knowledgeable group of people, our common interest in plants made for easy conversations and an enjoyable experience. A special thanks to Tim Lever for giving me much sound advice, particularly with regards to taking photographs, which have provided me with a lasting reminder of the tour

My final thanks are for my family and in particular my father and mother, Clive and Di Groves, who offer endless support as well as their infectious love of *Viola*'s which they have tirelessly championed. I am also indebted to my partner Louisa for all the encouragement and support that made going on a tour such as this a reality.

Introduction

My family have been nurserymen for six generations, so you could say that horticulture is in the blood. However, there has been one particular genus that my Grandad and subsequently my father, have held in great affection, and that is the genus of *Viola*. The family nursery is home to a National Collection of *Viola odorata* and Parma violets. Reading on the subject of Violas often pre-warns of an exception to the rule before the main body of text. That exception is a group of Violas referred to as 'Andean' or 'rosulate' Violas. Rather disappointingly, because they are the exception, no further details are given, often justified by their notorious reputation of being difficult to cultivate. However, from the few photographs that I had seen of them, I was sure that their unusual and unique appearance in their natural habitat would be of curious interest to many a horticulturalist.

As I began reading the details of a forthcoming Alpine Garden Society & Merlin Trust tour named 'Patagonia; Land of Violas and Volcanoes', I could hardly believe such an exciting opportunity to learn more about these curious plants. To later find out that I was a successful Merlin applicant was my equivalent to Charlie winning the golden ticket to Willy Wonker's Chocolate Factory!

My personal objective for the tour was to learn as much as possible about the rosulate, or more correctly named *Andinium* Violas, through observing them and the environment they grow in. Having not been on a botanical trip before and only travelling outside of Europe on one other occasion it was guaranteed to be very different to anything I had previously experienced.

In the following report I have set out to record my observations by means of a daily account, where we visited and what we saw with the emphasis being on Violas. I found it impossible to ignore the inclusion of many other plants, but have tried to limit the vast number of what we recorded to just those I felt were of particular interest. All the photographs taken are my own with the exception of the group photograph on page 4 (courtesy of Tim Lever).

Setting off for distant lands – 30th November

The day of departure had arrived. On my afternoon train journey from Plymouth to Heathrow, my nervous anticipation made me question my decision to bottle my homebrew cider earlier that morning, as the lingering aroma of fermenting apples on my hands was probably not the best impression to give my prospective travel companions, who I was to meet at the airport. Prior arrangements for the rendezvous at the airport was no more than a time period at terminal 5 check-in, which left me with the question, how easy would it be to identify a group of horticulturalists in this very large complex? The answer was very easy, I guess it takes one to know one. After the pleasantries of meeting and greeting it wasn't long before we went through the formalities of air travel and took off for our 14 hour overnight flight. After landing in Buenos Aires we travelled across the city from the international airport to the domestic airport via bus. The morning sun and heat was welcoming to my bodies senses, even if my mind was struggling to comprehend the seasonal switch from a cold, wet and wintery December in the UK, to late spring sunshine in the southern hemisphere. To convince my own mind of this reality I done what many gardeners would do and used to flora to gauge the season. Vibrant blues and yellows of *Agapanthus*, *Acacia* and *Jacaranda* together with fresh and zesty green foliage allowed me to change my mind-set over the course of the journey. At Jorge Newbery airport the group became complete as those that made their way separately until this point met here. A delay due to an engineer strike gave us a good chance to get to know each other, we proved to be a healthy mix of alpine enthusiasts, botanists, gardeners and nurserymen/women. Our two hour internal flight to Neuquén together with a two hour bus journey to Zapala meant that we got to our hotel at 12.30am, suitably weary, which made the fact it had an illuminated casino attached to it all the more surreal.



Above; Members of the tour group, names are from left to right; Christine and Roger Skelmersdale, Robert and Marlene Werra, Martin and Anna Sheader, Fred and Pat Bundy, Eduardo Shule, Pablo, Barbro and Arne Strid, Julio, Peter Mee, Robbie West, Robert Hauer, Ruth and Tony Rymer, Ross Barbour, Rosemary Anderson, Caroline Seymour, Joanne Everson, Charlotte Reynolds, Helen Picton, Tim Lever, Chris Groves

Photograph courtesy of Tim Lever



Image left: Map highlighting Neuquén province in Argentina

Image Bottom: Map showing Neuquén province with the main tour route highlighted in red



Day one; Laguna Blanca National Park

2nd December

After a 7am breakfast we set off at 9am in our two mini buses for a day trip to Laguna Blanca National Park, which was about a 30 minute drive away. Given the darkness with which we arrived in, I had little idea of the landscape we had driven through to get to Zapala. Once out of the town, vast expanses of steppe, which were punctuated with rocky outcrops, extended to the foot of the snow covered peaks along the horizon. From the bus the steppe vegetation appeared to consist of fine grassy tussocks and similarly sized rounded shrubs, the sand suggesting an arid and challenging habitat to survive.

An on route scenic photo stop turned into a botanising session, given it was the first occasion the caged horticulturalists had been released it was not surprising, but an early indication to our leader, Martin Sheader, that he had his work cut out keeping us in check as we all dispersed into the landscape. Being new to the processes of botanising, Tim Lever (of Aberconwy Nursery fame), gave me some pointers on how to read the landscape in order to maximise the potential diversity of plants you are likely to encounter when plotting a route. Sound advice which put me in good stead for the rest of the trip.

Attaching myself (either permanently or periodically,) to knowledgeable people such as Martin and Tim was essential in order to understand what I was looking at as it soon became apparent that so many of the plants I was looking at were completely new to me. The discovery aspect of this was exciting, but the inability to identify was frustrating. For the times I was alone it would require me to draw vague recollections on characteristics of plant families in order to aid me in making notes for later research, coupled with plenty of photographs of course.

With this improvised strategy of botanising, closer examination of the rounded shrubs I could see from the bus were in fact spiny shrubs such as *Mulinum spinosum*, *Pantacantha ameghinoi* and *Ephedra chilensis*. Well adapted for protection from grazers and water loss from the sun and wind.

Back on the mini bus and on the approach to Laguna Blanca the buses were instructed to promptly grind to a halt as masses of white cushions could be seen stretching far into the distance. These were *Junellia caespitosa*, individually beautiful, collectively spectacular, many of the cushions were larger than dinner plates and covered with small white to lilac flowers. The wind was blowing strongly enough to carry sand with it and yet the sweet perfume from the flowers was powerful enough to make itself known. Growing in the shallow gullies and roadside slopes was *Junellia micrantha*, distinctive by the flowers which mostly

grow around the edge of the cushion rather than covering it. It obviously prefers the slightly damper conditions compared to *J. caespitosa*.

Whilst in the area Martin set myself and Charlotte, my fellow Merlin, the task of looking out for *Pterocactus araucanus*. We failed miserably to be the first, but we did find some specimens. For a plant that could be described as having a rather unremarkable appearance, it had a surprisingly delicate flower, bronze coloured petals with slightly frayed edges suggestive of woven silk and a velvety purple stigma complementing the dusty yellow stamen.

We continued the drive and parked southwest of the lake near it's shore at about 1230m. Tim, myself and Charlotte headed north along the lakes side then to the base of a rocky ridge line before going over the ridge at about 1300m and following it back down. The damp slopes supported plants such as *Calceolaria filicaulis* and *Mimulus glabratus*, the vertical rock faces made the appropriate home for *Buddleja araucana*, the windswept and rocky plateau had *Austrocactus sp*, *Junellia patagonica* and *Rhodophiala mendocina* as residents. A red form of *Tetraglochin alatum* particularly caught my eye with its pink winged seed capsules.

As we reconvened near the buses there was word that someone had spotted *Viola tectiflora* nearby. Sure enough just a short distance growing in the sand near a large patch of *Nicotiana acaulis* was the first soft leaved rosulate *Viola* I clamped my eyes on. Much more difficult to spot than I imagined and smaller too. It was not a particularly impressive species or specimen so it didn't have me in awe, but never the less it confirmed to me that they are not a thing of fiction and that this was hopefully this first of many.



Top left: *Junellia caespitosa* at Laguna Blanca

Top left: *Junellia caespitosa* stretching into the distance at Laguna Blanca

Middle left: *Junellia micrantha* preferring the shallow gullies at Laguna Blanca

Middle right: Flowers of *Junellia micrantha* at Laguna Blanca

Bottom Left: *Hypochaeris incana* growing through *J. caespitosa* at Laguna Blanca

Bottom Right: *Pterocactus araucanus* at Laguna Blanca



Top right: *Nassauvia axillaris* growing close to *Junellia caespitosa* at Laguna Blanca **Top left:** *Calceolaria germainii* along a rocky ridge at Laguna Blanca **Middle left:** The red form of *Tetraglochin alatum* overlooking Laguna Blanca **Middle right:** The pink seed capsules of *Tetraglochin alatum* at Laguna Blanca
Bottom Left: *Buddleja araucana* at Laguna Blanca **Bottom Right:** *Viola tectiflora* at Laguna Blanca

Day two; Travelling west to Villa Pehuenia

3rd December

Today was essentially a travel day, leaving our casino hotel and heading west along the Rahue pass to Villa Pehuenia, with botanising stops along the way. Being at the back of the queue to get on the mini bus meant that the only remaining seats were at the front with our driver, Juilo, whose limited vocabulary of English was far superior than my Spanish. This turned out to be a prime position not only for the view but also ability to embark and disembark promptly, subsequently this would remain my position for the rest of the tour.

Our first short stop was at a dried lake, Laguna del Burro, about 30 minutes in. There wasn't much that caught my eye, apart from the inflated seed pods of an unknown *Astragalus* species and a shrubby *Mulguraea ligustrina* with similar flowers to the *Junellia*'s seen yesterday, but these were yellow.

Continuing our journey we were heading over high ground (1580m), when bright orange mounds were spotted at the road side and we stopped for closer inspection. These were the spiny cushions of *Anarthrophyllum strigulipetalum*. Further scouting found two other pleasing plants, *Oxalis nahuelhuapiensis*, of which there were plants with green foliage and others with red, and *Viola maculata*, not in the *Andinium Viola* Group of species, but a rhizomatous species with vivid yellow flowers, it seemed well established in this area.

Our next impromptu stop was to take a closer look at *Grindelia prunelloides*, a yellow composite flower growing in flat circular mats in the fine gravel and sand of steppe habitat.

Our first trees of *Araucaria araucana* were spotted as we came close to the Rahue pass, nestled into a rolling valley. I have longed to see these trees, and even from a distance their unique forms were visible, highlighted as their density petered out into open hillside. We stopped shortly after and in a small area by the road there was a great range of interesting plants growing in fine sand with some organic material. Two members of the orchid family, *Chloraea alpina* with its waxy orange flowers, and *Chloraea magellanica* with deep green veining on white petals, both very alluring to any passing winged insects. *Anemone multifida* was a reassuring sight of a more familiar genus, with subtle creamy yellow flowers and healthy soft foliage. *Oxalis adenophylla* formed neat clumps with good sized flowers that were lilac pink at the edges and faded to a paler centre.

After travelling a short distance we parked at the road side by a dirt track that lead a radio antenna at its highest point (1635m). Walking parallel to the track there was an impressive display of *Oxalis adenophylla*, which we had seen previously and the intriguing *Tristagma nivale*, a bulbous perennial with curly narrow leaves. Growing around the base of the

antenna itself were numerous rosettes of an unknown *Andinium Viola* species. We had narrowly missed seeing them in flower, with some plants having shrivelled petals still visible and others beginning to form seed capsules. Again I was surprised by their small scale, each rosette not being more than 30mm across. I was struck by their compact geometric form and their exposed position in amongst a loose stone scree. My level of excitement had gone up another notch and my desire to see some in flower was building my suspense.

We had about another three hours of driving along the Rahue pass before reaching Villa Pehuenia. The drive was a feast for the eyes through this captivating landscape, from traversing down steep and rocky mountain sides scattered with *Araucaria araucana*, to following the green valley carved by meandering Rio Aluminé and supporting many introduced species such as *Salix*, *Cupressus* and *Rosa*. At 7pm we arrived at the hotel that would be our base for the next three nights. It was a charming hotel with stunning lakeside views of Lago Aluminé, a real treat.



Top right: *Anarthrophyllum strigulipetalum* on roadside of RP46 **Top left:** *Oxalis nahuelhuapiensis* on roadside of RP46 **Middle left:** *Viola maculata* on roadside of RP46 **Middle right:** *Grindelia prunelloides* on roadside of RP46 **Bottom Left:** *Anemone multifida* near the Rahue pass **Bottom middle:** *Chloraea magellanica* near the Rahue pass **Bottom right:** *Tristagma nivale* near the Rahue pass



Top right: *Chloraea alpina* near the Rahue pass **Top left:** Flowers of *Oxalis adenophylla* near the Rahue pass
Middle left: Healthy population of *Oxalis adenophylla* near the Rahue pass **Middle right:** Finished flowers of an unknown *Viola sp* on the hill top of a radio antenna near the Rahue pass **Bottom Left:** Following the river Aluminé **Bottom Right:** The lakeside view from our hotel in Villa Pehuenia

Day three; Primeros Pinos

4th December

Today's main objective was to find rosulate Violas, hopefully in flower. We were to head east along RP13 as far as Primeros Pinos. The weather was fine with plenty of sunshine but the wind brisk, giving a real chill.

On route Martin was conveniently sat behind me so I quizzed him on the classification of rosulate or *Andinium* Violas. He explained how there were two main groups. The first being what he referred to as '*Viola cotyledon* Group Species'. These were essentially hard leaved (or coriaceous meaning leather in Latin) perennial species that possibly live to 15 years or over. These can be mainly found growing on rocky outcrops in amongst large stone through to fine gravel and sand. The other group were '*Viola volcanica* Group Species', essentially soft leaved species that were annuals or short lived perennials and were more often found growing in sand or silty soils of steppe or steppe edge habitats.

After an hour of travelling we stopped at a known location of *Viola coronifera*, one of the Violas I was especially excited about seeing. The location fitted the description of the preferred habitat of the hard leaved Violas and we ascended a rocky outcrop scouring the terrain. I was so keen to find them that my previous interest in all flora had all but evaporated as I took on a blinkered and self-indulgent quest to find these little botanical jewels. The first holler went out as a group member discovered something, I always liken the discovery of a plant and the subsequent holler to a game of alpine bingo as to who makes the first discovery. Closer inspection revealed that it most probably was *Viola coronifera*, but the familiar sight of shrivelled petals were an indication that we had again arrived too late. Further colonies of post flowered plants were found and apprehension set in, what if it was an early season and we were too late to see any Violas in flower? We reached the peak of the hill (1885m) with Martin drawing to the conclusion that we weren't going to get to see this species in flower. The pace of the search slowed and as we ambled along the edge of the peak something orangey caught my eye, I made the alpine bingo call and sure enough it was *Viola coronifera* in flower, Martin had a wry smile on his face and dryly conceded that it was worth bringing me along after all, which I took as the complement I think was intended! The ring of orange flowers are what make these Violas true gems and are the only real clue that they are in fact Violas at all. My moment of awe had arrived. It wasn't long before half a dozen or so plants were found in the vicinity, tucked beside rocks and some with fresher yellow flowers rather than aging orange. The shared excitement among the group about these Violas was energising. Once all the photographs and notes had been taken, the group began the decent and I reluctantly bought up the rear to leave Violas behind. A quick

exploration of the slope below where the minibuses parked revealed flat mats of white flowered *Jabberosa volkmannii* and streamside flowers of *Primula magellanica*, but my mind was still at the rocky peak above.

We continued our drive east and stopped at Primeros Pinos. A steppe habitat with thinly scattered *Araucaria araucana*, one of which we sat under to take shelter from the wind and have our lunch. With our bellies full we scanned the terrain to quickly reveal a Viola from the soft leaved group of *Andinium* Violas, *Viola trochlearis*. It was amazingly well adapted to camouflage with the sand and stony ground where it grew between the grassy tussocks. Some plants were larger than the other *Andinium* Violas we had seen, up to 80mm diameter and typically had a domed rosette. The fine hairs around the edges of the soft leaves presumably help reduce transpiration by slowing down the movement of air around the plant, a very necessary adaptation to this windy environment. The white flowers had beautifully mottled purple centre fading to the petal edges and a yellow throat leading from the lower petal.

Moving on to our next stop was just a short drive and was one Martin hadn't been to before, so we had no idea what we may find. From the track we parked along we were already at 1830m before walking up a gradual incline to just below 2000m. It was quite a featureless stony hillside with receding snow sheets, meaning there were few species there. However, miraculously there were hard leaved Violas there, first off not in flower, then higher up the slope, in flower. Martin's initial thoughts were that it was similar to *Viola copahuensis*, but could differ slightly because of the length of the spur at the rear of the flower as well as the proportions of some of the flower's anatomy. Subsequent research has classified this as *Viola copahuensis* at a new location, but it could be a slight variation or progression of the species due to its geographical location. All together this proved a very *Viola* rich day and I for one was sure of a content night of sleep.



Top right: *Viola coronifera* off RP13 on route to Primeros Pinos **Top left:** *Viola coronifera* off RP13 on route to Primeros Pinos **Middle left:** Habitat of *Viola trochlearis* at Primeros Pinos **Middle right:** Red circles indicate six well camouflaged plants of *Viola trochlearis* at Primeros Pinos **Bottom Left:** *Viola trochlearis* at Primeros Pinos **Bottom Right:** *Viola copahuensis* at a new site off RP13 near Primeros Pinos

Day four; Volcán Batea Mahuida

5th December

In all my excitement of seeing the *Violas* yesterday, and my novice experience of botanising, I had realised that I had neglected some fundamental basics that may be doing the plants a disservice. As a result I made a decisive effort, from today onwards, to take more time to closely examine the plants in detail using my eyes and other senses rather than rushing to capture them through the view of a camera lens. I would have unlimited chances to view the photographs in the future, but this was most probably my only chance to appreciate them in their physical form. With this in mind we were set for another day of *Violas* ahead.

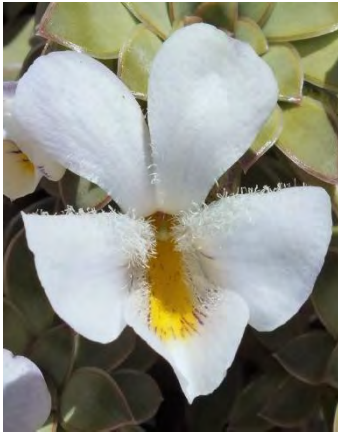
We headed for Volcan Batea Mahuida, an extinct volcano which was visible from the hotel and north of its position. After an approximate 40 minute drive we parked at the shore a lake that filled the crater which continued to rise in a semi-circle around it. We were to spend most of the day here, so we were able to take our time and have a thorough search. There was a worn path that followed the ridge up one side of the crater, myself and Tim decided on an alternative route along the steep inward facing slope below this ridge. On our climb we saw numerous patches of *Quinchamalium chilense*, with its bright orange balls of flowers scrambling outwards from its red foliated centre. *Oreopolus glacialis* was also common and similarly easy to spot with its appropriately sulphur yellow flowers.

It only took us to walk about halfway along the slope before seeing our first *Viola* of the day, *Viola cotyledon*. The whole slope was scattered with large lumps of volcanic rock and a coating of bleached yellow pumice in which this *Viola* seemed to be flourishing in. They have comparatively loose rosettes of foliage for the hard leaved group of *Violas* and would appear to readily offset to create some clumps up to 30cm across. It also became apparent that they were very floriferous too, with large flowers on long stems that rise above the foliage almost concealing the larger clumps entirely. Colour of the flowers ranged from white, lavender and purple, always with a yellow centre and quite often various degrees of hairs or bearding on the lower three petals. In a bid to honour my earlier vow of using all my senses, I gave them a good sniff, there was a light sweet scent, but nothing tangible enough to elaborate and not comparable in any way to the scent of our native *Viola odorata*. Never the less this was definitely a showy violet, doing its best to be noticed.

We continued along the slope coming across many more colonies, I found it irresistible to examine each one closely and as a result Tim gradually shrank into the distance on a mission to see discover the floral diversity beyond *Violas*. I finally made it across to where the *Violas* diffused away and made it to the summit which stood at 1960m. It was an awesome view, from a single position it was possible to see seven volcanoes, many of which

were in Chile. There are few words to share or describe such a view, instead we just took the time needed to absorb it all. I caught up with Tim to see if there had been any discoveries and I was directed to a patch of *Ourisia fragrans* which had nestled itself and spreading along a shady crevice. The red underside of the foliage and pink underside to the white flower buds were just visible. We made our way back down to the lakeside to enjoy a leisurely lunch on the shore.

On our way back to the hotel we took a slight detour via an *Araucaria* forest along a road which lead to the Arco Pass. It was great to take a closer look at these fascinating trees which had such diverse forms and such different habits from those we see growing in the UK. Martin also pointed out how the bark of the trees from Argentina can vary by having a pattern of large irregular plates compared to those from Chile with a finer, more knobbly appearance. There were surprisingly few other species in this habitat and little in the way of an understory. One obvious species was *Chlorea alpina*, which was now becoming a common sight. The forest had a strong ambience, almost prehistoric, it wouldn't have been too much a stretch of the imagination to envisage a dinosaur roaming around.



Top right: View across Volcán Batea Mahuida **Top left:** Floriferous display of *Viola cotyledon* on Volcán Batea Mahuida
Middle left: Colour variation of *Viola cotyledon* on Volcán Batea Mahuida
Middle right: *Ourisia fragrans* near the summit of Volcán Batea Mahuida **Bottom Left:** Myself at the summit of Volcán Batea Mahuida
Bottom Right: *Araucaria araucana* forest near a road leading to the Arco Pass

Day five; Travelling north to Caviahue

6th December

Today we reluctantly left our lakeside hotel at about 8am and headed north to Caviahue, again breaking the journey with botanical stops. It was only half an hour or so until we stopped to search for orchids in an *Araucaria araucana* woodland beside RP23. In addition to *Chloraea alpina* and *C. magellanica* which we had previously seen, we also found *C. speciosa* (similar in appearance to *C. magellanica*) and *C. cylindrostachya*, a tall and fleshy plant with many smaller greenish-white flowers. At this location was the rhizomatous *Viola reichii*, similar to *V. maculata* in appearance but preferring a woodland situation rather than steppe or high mountains.

We travelled for a further 45 minutes before our next stop along RP23 over high ground (1750m) near the Pino Hachado pass which led to Chile. The habitat consisted of boggy ground, suitable for a number of moisture loving plants including the rush *Patosia clandestina*, whose pink flowers were clearly visible on the large cushions that grew over 1.5m across. Surrounding the boggy area were vast thickets of bamboo, *Chusquea coleou*, which we had passed many acres of along this stretch of road. We had to fight our way through it to climb a hill where Martin knew *Viola dasyphylla* had previously been observed. Sure enough at the top of the hill was a small population of the hard leaved *Viola dasyphylla*. The foliage was mid green in colour and the leaves appeared to point quite upwardly. The flowers were white with purple veining most prominent on the lower petal. Another super little *Viola* miraculously surviving on a rocky hilltop.

Continuing our journey we made a few more impromptu stops, one of which was to take a closer look at a roadside colony of *Argylia bustillosii*, which seemed to scramble along the sand with its beautiful creamy yellow trumpet flowers that had a deep maroon centre.

After travelling through an extensive steppe habitat, the landscape feature in the form of a caldera became visible. As I learned, this is caused after a volcano has erupted and the subsequent empty magma chamber can collapse to create a very large crater up to 100km wide. Our destination of Caviahue happened to be inside this particular caldera. We drove through a dramatic steep sided canyon, called Cordon del Cajon Chico, which cut through the rim of the caldera. Part way through we pulled over to botanise. As we stepped off the bus, literally beneath our feet were *Viola volcanica*, Martin certainly had the canny skills of a homing pigeon when it came to locating these obscure plants. Further exploration of the adjacent area of bare volcanic sand and gravel revealed huge numbers of this soft leaved *Viola*. They were distinctively flat or just slightly domed, again impeccably camouflaged, with

tiny flowers that were not yet quite open. The rounded brown leaves were heavily veined and with a finger-like serrated edge.

Exploration of the lower slope on the opposite side of the road revealed a number of interesting species, a couple of which we had seen previously but not in such an impressive display, notably these were the deep orange flowers *Mimulus cupreus* and smaller yellow flowers of *M. glabratus*. The damp conditions which they enjoyed had previously seemed to me to be an unexpected feature of what seemed to be an arid environment, but it demonstrated how the thaw of heavy snowfall over the winter kept a flow of water through small gullies and streams to the rivers below. Close by were a few remaining flowers of *Famatina maulensis*, a bulbous perennial which we had unfortunately missed at its peak, and I'm sure would have been an impressive blaze of brilliant red flowers.

It was a short drive to Cavihue, a town sandwiched between the lake to the east and the slope which rose to Volcán Copahue to the west. Our hotel for the next four nights was at the base of this slope to the west, very much in the presence of the volcano which let out the occasional puff of volcanic vapour to let us know that it was still very much an active volcano.



Top right: *Chlorea cylindrostachya* in *Araucaria* woodland beside RP23 **Top left:** *Viola reichii* in *Araucaria* woodland beside RP23 **Middle left:** *Viola dasyphylla* near the Pino Hachado pass off RP23 **Middle right:** *Argylia bustillosii* at roadside of RP21 **Bottom Left:** *Viola volcanica* at Cordon del Cajon Chico **Bottom Right:** *Minulus cupreus* at Cordon del Cajon Chico

Day six; Volcán Copahue

7th December

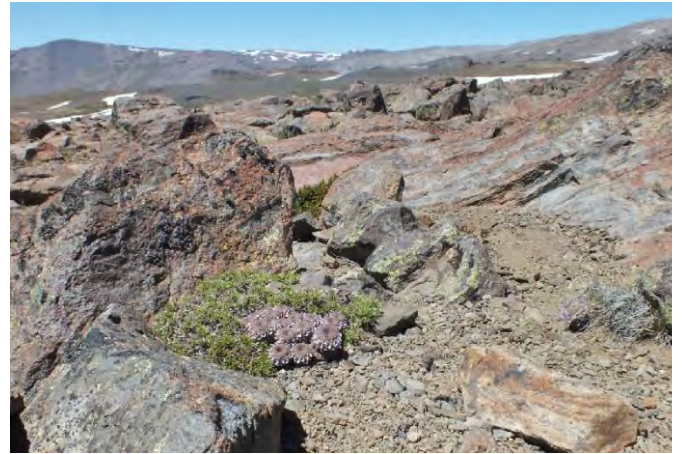
Today we headed a short distance north west from Caviahue to the village of Copahue, known for its thermal spas. On the way there Martin explained how the volcano had an eruption of ash just the previous year and that there was currently a 5km exclusion zone around the crater itself. Our route for the day would take us close to this exclusion zone and just a kilometre or so from the Chilean border. From Copahue we ascended a rocky path to about 2125m, there was still plenty of sheets of thick snow, easily exceeding 3m deep. We were on the lookout for a *Viola* that shared its name with the volcano itself, *Viola copahuensis*. We were now becoming quite honed in identifying the habitat of the hard leaved *Violas*, and as we came to the top of a rocky hill all eyes were down and it wasn't long before a number plants had been found. There were some really good specimens that were of an established girth and height (approx. 60mm wide, 80mm tall) , this itself revealed a little more information about them. The flowers formed under the previous year's growth, and this species displayed easily identifiable bands of growth. When I later found out that this area experiences winter snow depths of over 12m I was amazed at how these little *Violas* survived at all.

We also found plants that differed from *Viola copahuensis*, these were identified as *Viola x blaxlandiae*. This was a hybrid between the two species *V. copahuensis* and *V. cotyledon*. The resulting seedlings displayed characteristics of both parents to extremely variable degrees. This must create an interesting dynamic in the population of both species, one proportion of seed remaining identical to the parent plant because it is being produced by self-pollinating or cleistogamous flowers, whereas the other proportion is being openly pollinated and hugely variable. This brought me on neatly to question Martin on what could be the prospective pollinators? There is no definite answer but it most likely to be a wide range of whatever insects are about at this time of year, winged or otherwise, which could include ants and even the suggestion of fritillary butterflies for the soft leaved *Andinium* *Violas*.

Viola copahuensis also displayed variation in the colour of the foliage, from brown to mid green. Given how well these plants blend into their habitat, it also made me wonder if this variation was a mechanism to survive pressures such as grazing? The lighter green hued foliage being better disguised in amongst other foliage while the darker browns better adapted to blend with the rocks. I had no conclusions to draw, but it was something to ponder over.

Beyond Violas there were other plants to observe. The fiery red flowers of *Ourisia ruelloides* made itself visible despite it precariously clinging to a rock face beside a waterfall. Tim's enthusiasm for *Nassauvia* also rubbing off on me as we found a particularly good example of *Nassauvia revoluta*. We also found our first plants of *Olsynium frigidum*, a member of the Iris family, low growing and with creamy yellow flowers growing in sandy soil.

In the afternoon we explored an area next to two nearby lakes. As we drove our way there something orange at the roadside caught the corner of my eye, wanting to be proactive so we didn't miss anything of interest, I raised my hand to alert Julio our driver who I was sat beside. No sooner had I done this, we both realised my error and burst out laughing. What I had spotted was nothing botanical at all, instead it was a redundant, partially buried mound of orange plastic mesh, presumably left over from some previous road works. Although it wasn't easy to communicate with words, we were comfortable in each other's company and his English vocabulary miraculously extended enough to tease me for the remainder of the tour by saying in his heavy Spanish-Argentine accent, "orange plastic flower, so beautiful!" whenever he thought of it. Alas the flora at this site was largely the same as we had already seen that day.



Top right: View of Cavihue and Volcán Copahue on route to Copahue **Top left:** Habitat and rosettes of *Viola copahuensis* at Copahue **Middle left:** Flowers of *Viola copahuensis* at Copahue **Middle right:** Visible and distinct growth bands of *Viola copahuensis* at Copahue **Bottom Left:** *Viola x blaxlandiae* at Copahue **Bottom Right:** Colour variation of foliage of *Viola copahuensis* at Copahue

Day seven; Salta del Agrio

8th December

The wind was beginning to ease, taking the chill out of the air. Setting off from Caviahue we travelled east to Salta del Agrio. The river Agrio is fed from the volcano and the valley it flows through is wide with a rich steppe habitat. Before we dispersed to explore it there was one, perhaps surprising, view to appreciate, in the form of a rather impressive waterfall. There was little to pre-warn the senses that something of this scale would open out from the valley floor. Once an appropriate amount of time had been spent admiring it the task of botanising began.

This location had an undulating topography with varying degrees of moisture and proportions of sand, gravel and rock for the flora to colonise. As well as the expected species of grass, one of the additional dominant species was *Adesmia boronoides*, which was in flowers and formed some impenetrable thickets. There was also a small group of short *Nothofagus antarctica* trees in a damp spot creating some shade for plants that prefer those conditions. Altogether a diverse habitat with a diverse range of species.

Rhodophiala araucana was one of the first species we hadn't previously seen. These bulbous perennials varied in colour from orange-red to yellow. *Solenomelus segethi* is in the iris family and has quite a delicate mauve flower with a yellow centre on stems that sway in the wind. *Geum magellanicum* was appreciative of slightly damper conditions, and its tangle of buttery yellow flowers stood tall above the surrounding vegetation.

Viola copahuensis and *V. volcanica* were both also present at this site. The flowers of *V. volcanica* were open and remarkably small. When placing a coin beside one particular plant to indicate scale, I noticed how cool the surface of it was when compared to the warm sand beside it. I checked this observation on a number of plants, all of which were significantly cooler than the surrounding ground. It was not just the temperature, but also a noticeable slight dampness on the foliage itself. It was about 11am so it was possible that there was a delay in the warming of plants. These *Violas* have long, thick tap roots and I thought that it may be feasible that they are drawing cool water from the ground beneath and the dampness could be caused either by transpiration drawing the cool water to the surface of the plant, or, by condensation forming on its cool surface. I am unable to conclude if either of these are an appropriate explanation. I know some desert plants employ CAM photosynthesis, closing stomata during the day and opening during the night, in order to reduce water loss. Knowing if this is applicable to *V. volcanica* may favour one of the explanations given above.

Touching *V. volcanica* not only brought my attention to their temperature but also disturbed ants which emerged from below a number of plants. Martin was able to tell me that the soft leaved *Violas* have glands on the underside of the leaves, could these secrete something for the ants in order to attract them for the purpose of pollination or seed dispersal?

As we made our way back to the mini bus we found a really good plant of *Fabiana imbricata*, a shrubby plant smothered in white flowers all along it's stems. We also eventually found *Tropaeolum incisum* in flower after seeing plentiful foliage and closed flower buds.

In the afternoon we headed back to Caviahue to explore scenic waterfalls surrounded by *Araucaria*'s at Cascadas del Agrio, which were a short walk from our hotel.



Top right: Waterfall at Salta del Agrio

Top left: *Solenomelus segethi* at Salta del Agrio

Middle left: *Viola*

volcanica in flower at Salta del Agrio

Middle right: *Fabiana imbricata* at Salta del Agrio

Bottom Left: *Tropaeolum incisum* Salta del Agrio

Bottom Right: Cascadas del Agrio, Caviahue

Day eight; Cordon del Cajon Chico

9th December

For our last day at Caviahue we drove back along the road we came in on to climb the southern side of the canyon, Cordon del Cajon Chico. The wind had continued to fade away so it was a hot day. At the lower part of the slope there was a moist meadow where we found an orchid, *Chloraea chica*, as the name suggests it was fairly small and like many of the orchids we'd seen, had white and green flowers. It was a steep climb up the slope following a shepherds path and as the grass tussocks dispersed to leave exposed rock, gravel and sand, *Viola copahuensis* began to appear again. Damage to some of the *V. copahuensis* plants was visible, possibly as a result of grazing as bite size pieces were noticeably missing. The creamy yellow flowers of bulbous *Rhodophiala elwesii* also caught our eye close by. As we continued up the slope we could see ahead a scattering of yellow mats, the closer we moved towards them the more that seemed to appear. It was an impressive display of *Oreopolus glacialis*, a plant we'd seen on many occasions but not in such high numbers and over such a large area, photographs didn't seem to do it justice.

We again passed many more *Viola copahuensis* and some *Viola x blaxlandiae*, however these hybrids seemed to display greater characteristics of *Viola copahuensis* in all but the colour of the flowers. Growing with these was *Olsynium frigidum* which we had seen growing at Copahue, but it seemed much happier here and like the *Violas* stayed with us at the rocky top of the canyon side. We were now at 1980m and could see views not only across the canyon but the landscape beyond. We followed the ridge along, boulder hopping as we went until we saw an interesting cascade of white just below the 10m ridge. Scrambling our way down for a closer look revealed that it was a remarkable mat, many meters across, of *Discaria nana* in flower. The fine green foliage of this low growing shrub seemed to flow its way down the slope, presumably via its adventitious roots, and in sections the mat appeared to hover as the wind had hollowed out the sand beneath. Continuing to walk just below this ridge we came across the flowers of a plant I'd been itching to see, *Perezia fonkii*. We had seen the ruffled foliage quite commonly and even a few flower buds, so to finally see the attractive blue to white composite flowers was a treat and an indication of how the flora was moving on since we arrived in Patagonia.

The plants continued to put on a really good show, with a healthy, albeit sparse scattering of *Rhodophiala andicola* across the rocky slope. The cerise pink flowers with dark centres were quite striking. It's a shame that these bulbs didn't appear to grow in greater densities, they obviously enjoyed keeping their distance from each other.

We made our way back down the slope to conclude a fruitful day of botanising, we arrived back at the hotel fairly early so we had time to pack our bags for tomorrows day of travel.



Top right: Numerous yellow mats of *Oreopolus glacialis* at Cordon del Cajon Chico **Top left:** *Viola copahuensis* at Cordon del Cajon Chico **Middle left:** *Olsynium frigidum* at Cordon del Cajon Chico
Middle right: Large flowering mat of *Discaria nana* at Cordon del Cajon Chico **Bottom Left:** *Perezia fonkii* at Cordon del Cajon Chico
Bottom Right: *Rhodophiala andicola* at Cordon del Cajon Chico

Day nine; Travelling north east to Chos Malal

10th December

We had an early start, leaving Caviahue at 8.15am to travel north east to Chos Malal. Despite the roads being mostly gravel they were generally kept in good condition without too many pot holes. However, it meant progress was slow and our drivers really were excellent and took great care on what must be quite tiring roads to drive along. Welcomed refreshments for the drivers came in the form of a green tea called maté (pronounced mat-ay). The loose leaf tea fills a vessel, traditionally a dried hollow gourd, and then hot water is poured in with the leaf and it is then drunk through a metal straw or bombilla. Once drunk the tea leaf was kept in the vessel until the next occasion and only putting in fresh leaves the following day, the idea being that it works as a stimulant in the morning and later in the day it becomes weaker and a relaxant. It was quite a strong, smoky drink with a slightly bitter aftertaste. Our driver, Julio, had clocked my curiosity early on in the tour and offered it to me many times. Today however our Argentine guide Eduardo explained that sitting in the front meant I was Julio's honorary co-driver and that it was my responsibility to pour the tea for us to pass and share. I seemed to pass the test with my pouring abilities, so from now on whenever we stopped I had to remain alert in case my new found skills were called upon.

As we left Caviahue we seemed to have caught the morning rush hour as herds of goats and sheep were being shepherded by the distinctively bereted Gauchos. It felt I was experiencing a very Argentine morning. We bid farewell to the last of the *Araucaria*'s as heading north east meant we were heading away from their northern limit.

Our first and main botanical stop for the day was off RP21 at 10.30am in the hills above El Huecu. The last time Martin visited this site he found an unknown hard leaved *Viola* species that had just finished flowering, so we hoped for flowers on this occasion. I decided to head from the road to the hill top in search of it and then botanise on my way back down. I made my way through sandy grass tussocks and then towards a rocky outcrop. At the base of the larger rocks I spotted *Loasa tricolor*, a perennial with hairs on the foliage capable of delivering a sting and yellow downward hanging flowers. I stopped briefly to take some pictures before carrying on to the high ground. The volcanic stone near the top was quite distinctive, a type of red cinder which was fairly uniform. In amongst it was the unknown *Viola* species, it was soon obvious that it was not in flower, further searching revealed more plants but all post flowering. Without any flowers this would remain an unknown species, this was disappointing, but never the less still of interest. The foliage was red, almost an exact match to the rock around it. This made me think back to my earlier thoughts of foliage colour perhaps being selected through grazing, but what if these plants were displaying pigments

that had been taken up through the soil? More to ponder over. As the rest of the group reached the summit I heard that they had found some plants of *Viola tectiflora* in the grassy tussocks below so I headed back down to investigate. We had seen a single plant of *V. tectiflora* on our first day at Laguna Blanca so it was good to see a number of plants in flower. The flowers were not dissimilar to *V. volcanica* but appeared to be on longer stems and the foliage lifted upwards rather than lying flat. I was also keen to give them the temperature test to see if they too were cooler than the surrounding ground as with *V. volcanica*, indeed they were.

After passing through the dramatic Neuquén Valley we made about three other brief stops on route with a few interesting plants, notably *Mulguraea spathulata*, a shrub with a ball of *Junellia*-like flowers on long stems. *Perezia recurvata* ssp. *Beckii* also had attractive yellow flowers from a neat spiny cushion.

After driving round the block a couple times we found our hotel in Chos Malal which would be home for the remaining four nights.



Top right: Myself drinking maté tea **Top left:** Gaucho's herding their flock along RP27
Middle left: *Loasa tricolor* off RP21 above El Huecu **Middle right:** Unknown *Viola* sp in red cinder off RP21 above El Huecu
Bottom Left: *Viola tectiflora* off RP21 above El Huecu **Bottom Right:** *Mulguraea spathulata* roadside of RP21

Day ten; Tromen National Park

11th December

We left Chos Malal for the hour or so drive north to Tromen National Park. On the outskirts of the park we stopped to look for a curious *Viola*, even by Patagonia's standards. It could be found growing in the sand of steppe, popping up out of the sand and among the grasses. It was not a particularly attractive plant, its flowers were on the uppermost part of long red stems and formed a ring below an upper set of narrow radiating leaves that sparsely continued down the stem. *Viola escondidaensis* is not grouped with either of the hard leaved or soft leaved *Violas* and in that respect is in a groups of its own. Gently digging the sand away from the base of the plant revealed an extensive root system of white rhizomes connecting many of the visible emerging stems. A method of spreading and reproduction similar to our native *Viola odorata*. Discussing this unusual species with Martin on route to our next stop I wondered if it could be an evolutionary stepping stone between *Andinium* and non-*Andinium* species of *Viola*. It's a possibility, but another is that it could be an evolution of *Andinium* species. Plenty to speculate.

Our next stop was only a short distance and a *Calandrinia affinis* hotspot. These perennials enjoyed the sandy soil between the grassy tussocks and have good sized flowers that were mostly white, but the pink form was also present.

It was pretty much the only day we experienced cloud and the odd spot of rain, this was localised and caused by the impressive summit of Volcán Tromen which stood at 4114m and very much created its own weather pattern. Although the volcano was some distance away we botanised along the flat ground (2200m) up to the base of lava flows that were probably about 10m high with huge fragmented boulders forming a rugged cliff face. The flow had apparently been formed thousands of years ago, but it looked so recent that I would of easily believed someone if they told me it was only a few years ago.

The habitat consisted of steppe and large areas of flat bedrock that provided plenty of crevices and pockets for a diverse range of plants. *Austrocactus* species seemed to take advantage of the rocky areas as well as the equally spiny *Maihuenia poeppigii*, also in the cactus family, but forming large mats rather than vertical stems. Patagonia is home to a huge number of *Senecio* species and we had seen many on this trip, all seemingly with yellow flowers. Growing in this area was *Senecio gilliesii*, its wide silvery foliage seemed to make it stand out as a plant of interest with or without the flowers. We came across another unknown hard leaved *Viola* species, unfortunately it had finished flowering, so we were again left to only imagine what it may look like.

The wildlife in Patagonia did not appear to be abundant but we did see birds and lizards on a regular basis. The lizards were rather sluggish at times as they warmed themselves on the rocks, but for the most part they were extremely quick. There was a large lake in Tromen National Park and before we made the journey back to Chos Malal we spent some time watching the bird activity on and around the lake. The flamingo's seemed rather antisocial, keeping their distance in a huddled group at the far side of the lake. Looking through the binoculars I had to do a double take as I spotted a duck with a blue bill, quite an unusual sight, later it was appropriately identified as a Blue Billed Ruddy Duck. Many of the birds were far beyond my limited ornithological range of identification but it was nice to relax and watch their social interactions.



Top right: *Viola escondidaensis* among grass at Tromen National Park **Top left:** *Viola escondidaensis* at Tromen National Park
Middle left: Numerous *Calandrinia affinis* at Tromen National Park
Middle right: Larva flow at Tromen National Park **Bottom Left:** *Grindelia prunelloides* at Tromen National Park
Bottom Right: Lizard at Tromen National Park

Day eleven; Cerro Wayle

12th December

Today we returned to Tromen National Park to climb Cerro Wayle, a long extinct volcano with a section of the crater absent. It would be the most physical walk of the tour and also to the highest altitude, from 2225m at the lowest point to 3185m at the summit. I was looking forward to the challenge but also one particular *Viola* that had evaded us so far, *Viola atropurpurea*.

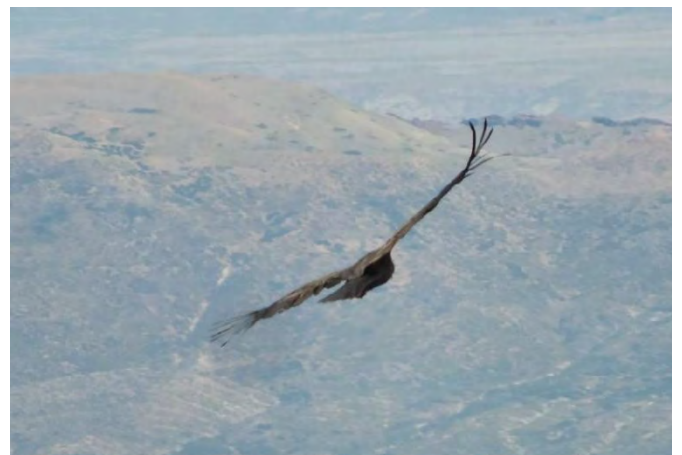
We set off with the plan of ascending the eastern side of the crater where the incline was at its lowest gradient. We scrambled our way through tall and dense *Adesmia pinifolia* with its distinct yellow stems to reach a ridge line which we could then follow upwards. Early botanising was good with many species in plentiful numbers. I was quite taken by *Sisyrinchium laetum* for its decent sized yellow flowers on short stems low to the ground and in tidy clumps. *Sisyrinchium* is generally a genus that will make many gardeners hearts sink as they automatically think of pulling up seedlings that seem to spread everywhere, but this was a species worthy of some appreciation. *Adesmia papposa* is a flat spreading perennial that was also abundant and helped to create a yellow patchy carpet on the slope.

As we increased in altitude *Oxalis erythrorhiza* became very noticeable as it neatly nestled itself between rocks with a healthy peppering of flowers that seem to effortlessly lie on the compact cushion. It was at a similar altitude that we started to find *Viola atropurpurea*, not in flower at first and then with flowers, this rapidly became one of my favourite *Andinium* Violas. The flowers were deep purple, almost black with the familiar yellow throat that seemed more prominent against a darker hue. Like some of the other hard leaved Violas it had hair or bearding on the petals, but rather than on the three lower petals these seemed to be more prominent on the upper petals and the hairs being comparatively thicker too. The odd plants we saw were tucked between or beside rocks, but then a call came from ahead where Ross had found an uncharacteristically flat gravelly scree with a healthy population of *V. atropurpurea*. There were dozens of plants, so many in fact that you had to tread carefully to avoid trampling them. This made for easy comparison between plants, some of which were heavily bearded and others without any at all. They certainly chose to grow in a position with a prime view overlooking Volcán Troman and the lake below, it seemed appropriate to sit on a boulder and to have our lunch with the Violas at 2788m. I felt very content and fortunate of the opportunity to see these largely unknown plants growing in a spectacular landscape.

Fore filled with my *Viola* fix for the day discussion turned to who wanted to carry on with the climb to the summit. There were a number of us keen for the challenge so we set of in earnest while the remainder of the group began their decent. We didn't have to climb much

further before we felt some mild effects of altitude, a new experience for me, the symptoms of which were breathlessness and giddiness when standing after crouching to take a photograph. Opportunities for botanising were becoming less abundant, but there was a lovely rare pink form of *Nassauvia lagascae* that remained tight and compact due to the altitude. Three Condor's seemed curious about our efforts and circled as low as 10m above our heads to investigate. It was perhaps an ominous sign, I think they had eyed me up as being the lightest and between them they were probably large enough to carry me away. With that thought aside it was a pleasure to pause and watch them glide so closely.

The final stretch was a scramble across some large boulders, but at last we made it to the summit. The view was impressive and included the colossal Volcán Domuyo, the highest mountain in Patagonia at 4709m. As much as we all would of liked to of lingered longer, our attention soon had to turn to the decent, obviously easier but still time consuming. We all made it back down safely and were sure of a good night sleep ahead.



Top right: *Sisyrinchium laetum* at Cerro Wayle **Top left:** *Oxalis erythrorhiza* at Cerro Wayle
Middle left: *Viola atropurpurea* without bearding at Cerro Wayle **Middle right:** *Viola atropurpurea* with bearding at Cerro Wayle
Bottom Left: Small plateau with plentiful *Viola atropurpurea* at Cerro Wayle, overlooking Volcán Tromen **Bottom Right:** Condor at Cerro Wayle

Day twelve; Epu Lauquen National Park

13th December

Our final day of botanising would take us north west to Epu Lauquen, about a two hour drive away. On the way there we made a roadside stop to search for *Viola rubromarginata* in overgrazed steppe. Careful searching found just a few plants. As the name suggests it has a red edge to the leaf on a loose rosette. It was very attractive for a soft leaved *Viola*, which had until now hadn't bowled me over like the hard leaved *Violas*.

We progressed on to the entrance of the National Park. Given it's close proximity to the Chilean border we had to endure the procrastination of the border police while they checked our papers. Martin then negotiated with the admissions desk to wangle us entry, but not before having to surrender a 50p fee for the two most youthful members of the group, one of these happen to be me.

Epu Lauquen National Park consists of a series of lakes and a break in the mountains means that it receives approximately 1500mm of rain a year, unusually high for northern Argentine Patagonia. This brings with it a very different range of flora, much of which is more common to the wetter climate of Chile rather than the typically drier climate of Argentina. After a short drive into the park we parked in the shade of *Nothofagus* woodland and followed a footpath that led us to the lakeside. There were many species enjoying damp conditions, one of which I was amused to see. *Gunnera magellanica* was just a few inches high but appeared to be just a scaled down version of the giant rhubarb, *Gunnera manicata*, often seen and photographed in many gardens in the UK because of its huge leaf span.

The damp conditions continued as we entered the *Nothofagus* woodland with unusually orange flowers of *Geum magellanicum*. *Calceolaria undulata* also enjoyed the woodland conditions and it's shrubby form held the flowering stems high so the flowers could be easily seen. I sensed Martins pace had increased so through that something exciting may be in store as he seemed to be a man on a mission. As it happened he was homing in on *Viola sp. aff. congesta* so I joined him in the search. Heading off the main path we scrambled through the woodland and there it was, in a shady sandy spot, the largest *Andinium Viola* we'd seen, it was about 120mm wide. As much as I would of liked, we didn't stop there long as Martin knew of a larger colony nearby. After further scrambling through vegetation and over rocky outcrops we emerged in an open clearing of bare volcanic soil surrounded by low scrub. Sitting on the soil were plentiful plants of *Viola sp. aff. congesta*. It was quite unlike any of the soft leaved *Violas* we'd seen. Most notable was its grey velvety soft leaves, which did not appear to have the thick veining that the other *Viola volcanica* Group Species had. The flowers were a lovely pale purple with a yellow throat. This was a *Viola* so impressive that it

even revitalised those members of the group who were experiencing 'Viola fatigue'. A fine species for the final *Viola* that we'd see on the tour, a sad thought, but we'd seen more species than I ever dared to hope.

As we headed out of the clearing we passed a huge cushion of *Azorella trifurcata*, a plant we'd seen many times, but nothing as large as this which was in excess of 2m wide. As we walked along the lake shore we also found *Schizanthus hookeri* swaying in the wind with its bright pink lobed flowers, apparently this is the only location in Argentina it has been found.

It had been good to botanise in a new habitat, but we had to depart in good time for the long drive to Chos Malal and to pack our bags as we began the long journey home tomorrow. It was hard to believe that I'd be back in the UK on Monday 16th, sat at Paddington train station in the morning rush hour waiting for a train back to Plymouth.



Top right: *Viola rubromarginata* on route to Epu Lauquen

Top left: Lakeside view across Epu Lauquen

Middle left: *Calceolaria undulata* in *Nothofagus* woodland at Epu Lauquen

Middle right: Habitat of *Viola*

sp. aff. congesta at Epu Lauquen

Bottom Left: *Viola sp. aff. congesta* at Epu Lauquen

Bottom Right: Tim Lever and *Azorella trifurcata* at Epu Lauquen

Conclusion

The tour had been an amazing experience and I had to pinch myself to believe I was actually there. Thinking back to my first day of botanising and my initial alarm of how unfamiliar I was with all the plants was almost overwhelming. In contrast it was extremely gratifying to be climbing Cerro Wayle on day 11 and being able to recognise and put names to a number of plants that were now becoming familiar.

We had seen more *Viola* species than I had ever hoped and learnt a great deal seeing them growing in their often spectacular environment. I can only hope my observations in this report help to shed some light on these extraordinary *Viola* species. For me it has filled in a blank page when it came to this particular group in the *Viola* genus and I will endeavour to share the experience with those with a similar curiosity.

The enthusiasm shown by the group for the Andean Violas has really highlighted for me the challenge to create similar excitement about the cultivars *Viola odorata* that my family grow and which have historically been held in great affection before shyly retreating to the background.

This tour has defiantly wet my appetite for further botanical travels and I'd love to return to Patagonia one day to see if there are new *Viola* species waiting to be discovered.

Bibliography

Shedden, Martin. (2013) Flowers of the Patagonian Mountains, Pershore: Alpine Garden Society

Shedden, Martin (2014) Violas and Volcanoes 2013 Species list

Ingwersen, Will (1978) Ingwersen's Manual of Alpine Plants, Eastbourne; Will Ingwersen & Dunnsprint Ltd