

British Cactus & Succulent Society

Southampton & District Branch Newsletter

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Editorial

We've put the clocks forward and Spring does seem to have arrived, even if this past weekend was a bit on the chilly side. The daffodils have been out everywhere and there are some impressive cherry trees in flower. I bought a number of small Acer trees last year and it looks like they have all survived the winter and are now beginning to open their leaves. Acer palmatum 'Orange Dream' is perhaps the most impressive at present, with the new leaves being a striking mixture of orange, yellow and green.

I've watered the plants in my conservatory on a couple of the warmer days and will increase the frequency as the weather warms up. There's relatively little in flower at present but flower buds have formed on some of the Echeverias.

Announcements

At the last branch meeting, Peter Down explained that **Margaret Corina** was not at the meeting because she was poorly. A few days afterwards she was admitted into the Southampton General hospital, and after performing various scans and tests, they diagnosed that she has cancer. Fortunately they have caught it early and are hopeful it can be treated. Margaret underwent chemotherapy around 10 days ago and will have further courses over the coming weeks. She is back home now but has to remain careful to avoid any infections because of her weakened immune system. I am sure our thoughts are all with her.

As mentioned at the meeting last month, the **Spring Garden Show at Broadlands** has been cancelled. However, there is now a chance that we may make

an appearance at Whiteley, where the organisers have changed the date of their "Garden Day" to 29/30th May (a week after the second May Bank Holiday). If we have enough volunteers, we may be able to put on a display there.

Next month's meeting will consist of a **Mini Show** – so please bring in some plants! The last page of this newsletter lists the show classes.

Last Month's Meeting

Last month's talk was given by Martin and Anna-Liisa Sheader.

Cacti and other Xerophytes of the Patagonia Steppe

Martin mentioned he and Anna-Liisa had been to Patagonia several times. He was interested in alpinism and also in steppe plants and cacti. Patagonia is in South America and very remote, with the nearest neighbour being the Antarctic peninsula. The extent of the region varies depending on which books you read - but usually it covers the area from Neuquen in the north to Tierra del Fuego in the south. Martin showed us a map of the region, with the locations of Buenos Aires and Santiago also marked. Patagonia consists of land in both Chile (to the West of the Andes) and Argentina (on the Eastern side). Martin mentioned most of their trips were on the Argentinean side, but they did cross over to Chile occasionally.

The weather in this region is governed by cold currents from the Antarctic and strong westerly winds (The "Roaring Forties"). They went in December last year and it was unusually warm with temperatures in the 25°C-30°C range, and it also wasn't that windy. Martin mentioned they usually make their trips between November and January, which are the summer months in the Southern hemisphere. The weather varies - with water from the oceans, some parts in Chile receive metres of rain in a year, but parts of the steppe can be down to a few tens of centimetres, so there's quite a gradient. It tends to be drier east of the Andes.

The main road RN40 goes from South to North and it is very good for botanical exploration. Martin showed an old map prepared by Swedish botanist Carl Skottsberg in the 1900s. This marked out the areas of dry steppe, mountains, and general vegetation. He mentioned that there were no trees in low rainfall areas. They would tour through three main provinces in southern Argentina - Santa Cruz, Chubut and Neuquen, and also pass through Rio Negro, whilst also making detours to visit the coast and parts of Chile.

Two factors also influence the plants and vegetation - glaciers and volcanoes. There are glaciers and permanent icefields in some areas and the glaciers grind the rocks down, leaving glacial remains everywhere. There are something like 2000 volcanoes between Argentina and Chile, of which 26 are active at present. The region experiences cold winters and cool summers, and there can be some snowfall, even in the summer. Plants are grazed by guanacos (a relative of the llama) and also sheep, and these can devastate areas. There are also rodents such as the Tucu-tuco which gnaw plants both from the top and underground. We also saw a large flightless grasshopper. Martin explained it was not easy to fly in high wind, so the insects had adapted. On one of their visits there was a mass emergence of cicadas. The nymphs remain underground for a long period and they can eat plant roots during this time.

Martin mentioned that in "Flora of Patagonia", there is a section by Roberto Kiesling which lists keys and has pictures of species of the cacti found in Patagonia species. He lists 3 species of *Austrocactus*, a *Gymnocalycium* found near the coast, and *Neoporteria* (Eriosyce), and also *Maihueunia*, *Maihueuniopsis* and *Pterocactus*.

Starting in the South, the first cactus they encountered was *Pterocactus australis* - this is the southernmost cactus and it gets down to the Magellan straits. The stems were 1-2cm across and the plant had orange flowers. Martin explain there was a lot more to the plant below the ground and in the next picture we saw the huge tuberous root. The tops of the plants can get knocked off or die or be eaten by animals, but new growth can still emerge thanks to the large underground root. In this harsh region the cacti are well spread and the colonies are not large. The steppes contain other spiny plants and we saw *Anarthrophyllum desideratum* which is a long lived scarlet gorse. It was very prickly but is a striking plant with its red flowers. There were also many types of verbena and we saw *Acantholippia seriphioides* dotted across the steppe. It puts on a fantastic show in November and December with

pinks white and blue flowers, some of which are scented to attract insects. This particular species also has scented foliage and grows to a couple of feet across.

Most of the Patagonian verbenas have been transferred to *Junellia* and we saw *J. patagonica*. It has tiny hairy leaves to minimise water loss and it is a tough plant which forms mounds. It produces a ring of flowers at the outer edge of the clump, and is slow growing - a 1 foot clump is probably a couple of hundred years old. The flowers are normally white or pink, but you sometimes get yellow. There were also lots of *Calceolarias* and they found the yellow-orange flowered *C. uniflora*. This tends to occur towards the western edge of the steppe. It is pollinated by birds and the plant offers a sweet "nougat bar" to entice birds into the flower. *Petunia patagonica* can form mounds 2-3 feet across which are also hundreds of years old. These are spectacular when in flower.

As you head north you pass areas of colour due to the flowering plants. Darwin called this region boring and desolate, but he made his trip in March which would have been the autumn and there wouldn't have been much in flower. They again came across *Pterocactus australis*. When not in flower, the spines look just like dead grass. The stems were again 1-2cm across, and the flowers have a pale stigma. Another find was *Austrocactus patagonicus* - these stems were 4cm x 2-3cm and this is the smallest of the *Austrocactus*. It has pink flowers although sometimes white flowered forms can be found. The buds are hairy and the flowers have a purple stigma and a solid ring of anthers around the style and a second outer ring of anthers nearer the petals. The spination was not that strong. It was growing through a member of the Solanaceae - *Fabiana nana* which is another long lived plant which minimises water loss by having no leaves and just stems. Nearby were a compositae (*Chuiraga*) and a *Junellia*.

The third member of the 3 southernmost cacti is *Pterocactus hickenii* - this has a darker stigma than *P. australis*. We saw the orange flowers. Martin mentioned there were various forms of this with different spine lengths. Some plants were tiny - but you can also get clumps a foot across and one wonders how big their tap root would be.

Martin outlined their next movements - towards the Chilean border where there was an area of salt lakes, then out to the steppe, before visiting tourist sites of rock paintings and fossilised trees in the middle of the steppe, and then on to the coast. Still in the Santa

Cruz area, at a height of 150-200m, all the land around was higher - the Andes to the west, land at 800m to the east, and higher ground at the north too. Water tends to drain down from these heights and then as it evaporates you get salt lakes. Here they found big clumps of *Pterocactus hickenii* - but they all looked quite sickly. The plants had just finished flowering. There's a lot of salt in the groundwater and that may explain their condition. This is the most widespread cactus in Patagonia. There are little barbs on the spines which helps distribution of the stems and they can also regenerate from the base.

At a large lake in this area they came across flamingos and also rheas. The latter had just started to hatch their chicks - and these are looked after the males. They tend to poach chicks from other each and they saw one in charge of around 50 chicks. They found a much more decent looking cactus - *Austrocactus bertinii*. There were only a couple of stems here, but they found bigger examples elsewhere. Moving east to a height of about 1000m, the soil was sandy volcanic sand and they found *Junellia thymifolia* growing to a couple of feet across with white flowers, *Junellia minutifolia* forming mats about 3 feet across and also *Junellia ulicina*, the flowers of which change colour from white to blue as the flowers are fertilised. A cactus relative is *Calandrinia caespitosa* which belongs to the Portulacaceae. These have flowers which are yellow, white or orange. They can be spectacular, although if the plant is doing very well, the flowers can become cleistogamous and fertilise themselves without opening. They also found *Alstroemeria patagonica*. This forms leaves during the winter and has tubers underground - the leaves then die down and the flowers emerge. It can be grown in a raised bed.

They also found various compositae. *Perezia recurvata* ssp. *patagonica* has brilliant blue flowers, and white and yellow flowered forms also exist. The pictured plant was 4-5 inches across. Another steppe shrub which gets to a couple of feet high and which has tiny stellate hairs on leaves to reduce water loss is *Abutilon bicolor* - a beautiful plant which ought to be in cultivation. They found *Austrocactus patagonicus* with pink flowers, growing under a shrub. This is the northern limit for this species. They went to a small series of ridges at 1200m and came across a huge colony of *Pterocactus hickenii*. These were large plants a foot across and they must have had massive turnip roots underneath. The plants were doing well and had masses of flowers. There was also the odd solitary plant here.

Moving out to on a dirt track they headed to a cave painting site. Along the way we saw the local equivalent of a motorway service station - a small building which sold almost everything. They proceeded to the Cueva de las Manos which is a famous world heritage site in Santa Cruz. A cave at the foot of a cliff, it has overhanging wall paintings built up from handprints and is believed to date from several thousand years ago. The drawings included guanaco, deer, frogs and lizards and stretched for hundreds of metres. He went off to examine the surrounding area and found a hill covered in *Maihueiopsis darwini* ssp *hickenii*. Some of these were a foot and half across, and had beautiful orange brown flowers. His exploration of the area was limited since sandals / bare feet wasn't really suitable attire to explore the difficult terrain.

They then headed eastwards in the direction of the coast. They found the composite *Perezia pilifera* which forms a tight dome with a fantastic display of flowers. There were also the last vestiges of *Austrocactus patagonicus*. These plants had stronger spines and were always found growing under other shrubs. There were many other spiny shrubs - a lot of them were Umbelliferae - members of the carrot family. The yellow flowered *Mulinum spinosum* forms huge cushions and can get to 2-3m across. Another common plant family found is Nassauvia - these are primitive composites with relatively few florets which can grow either as a carpet or a shrub. They are adapted to reduction of water loss, and in *Nassauvia glomerulosa* the stems are reduced to abbreviated glomerules. As they moved eastwards they came across "nodding donkeys" being used for oil production. They saw more and more of these as they headed to the coast.

The next area visited was also supposed to be a tourist attraction but there was no one else there, even in the summer. The rainfall here is low - around 15-20 cm a year. They were visiting "Bosques Petrificados", which means fossilised trees. Geological activity traps wood and the organic material is then replaced by minerals which preserve the original structure. There were some fantastic colourful landscapes here and it was a very interesting area in what was otherwise bleak terrain. We saw pieces of fossil wood hanging out of the side of a cliff. The fossilised wood looks just like real wood. They took a picture of *Maihueiopsis patagonica*, after giving it a top dressing of fossil wood chips.

They found an unusual form of *Junellia patagonica* which had strange growth extensions. Another primitive plant is *Nassauvia abbreviata* which forms

white flowers. Another large group of plants found here are Adesmiads, members of the leguminaceae. There are over a hundred species in this area. They are difficult to distinguish - some are spiny shrubs a couple of metres high while others form tightly coupled mats. They have little pea-like flowers which are usually yellow or sometimes white or blue. They also found a long spined form of *Pterocactus hickenii*. There were lots of Armadillos in this area and they managed to get one to stay put while they photographed it.

They also found a single specimen of another cactus species - a very spiny *Austrocactus hickenii*. A common shrub in these dry conditions was a legume (Proposis). Each one had 200 flower heads without petals, and the seed pods gave it away. This would be a good plant to grow in dry conditions. They found *Pterocactus australis* again but it seemed to be missing its long central spines. which must emerge then dry up and fall off, leaving just the radial spines on the relatively small heads.

They finally reached the coast - firstly Comodoro Rivadavia in Chubut and further south at Caleta Olivia in Santa Cruz province. This region receives more rain thanks to the Atlantic coastline. For some reason, all the spiny shrubs seem to be yellow-flowered. We saw some seals sunbathing, followed by some yellow compositae. The steppe here was more luxuriant. The soil and contains a lot of fossil oyster shells, so the calcium content must lead to a higher pH. They found *Brachyclados* which tends to occur in dry areas. They also found *Maihueniopsis darwinii* v. *darwinii* with quite beautiful flowers dotted along the hillside. There were also shrubs with red edible berries (lyceum) although he wasn't keen to try them. Another coastal plant was *Frankenia chilensis*, with bushes a foot high.

Chiquiraga aurea had formed very prickly dense growths along the clifftops. *Mutisia retrosa* is one of a group of climbing daisies and has yellow flowers. They also found a single specimen of *Gymnocalycium gibbosum* - the only gymno to be found in this area. *Grindelia chiloensis* would make a good garden plant - it has odd flower buds which are covered in gooey spit and the petals emerge from this. This might be protection of some sort. There were some beautiful grasses growing here and we saw *Stipa neaei*. There were also some big plants - 8 inches high - of *Austrocactus bertinii*. *Hoffmanzegia trifolulata* is related to senna and is a long lived plant. Further inland they found *Maihueniopsis darwinii* v. *hickenii* full of fruit and they collected some seed from it. Right on the coast, sea water was spraying over vegetation and they

came across some minute *Pterocactus* with a pale stigma. This was *P. australis* with tiny stems the size of a pea and mainly radial spines.

Moving on to Chile, they were in a place called Meseta Buenos Aries and heading for Chile Chico - the place where the southernmost cactus in Chile is said to found, although they had already found some further south. There is an odd little town called Los Antiguos on the Argentinean side of the border and Chile Chico is the other half which is in Chile. If you buy cherries at Christmas they may well come from round here. The steppe area is declining because the cherry plantations are expanding, and water from the nearby lakes is used for irrigation.

Recently a Chilean botanist described *Austrocactus patagonicus* as occurring here - but the article was written up badly with incorrect descriptions - and they also published the wrong picture! They got a couple of rangers to show them the site. What they found was *Pterocactus hickenii* looking a bit sad and more robust plants, 6-8" high, of *Austrocactus bertinii* growing in clumps with strong spines. The stems were described as club shaped and the plants have hairy buds. The plants have to withstand burial by ash from volcanoes and windblown sand. They also found *Austrocactus dusenii* - this has long thin stems which extend to 8 to 10 inches and the spines are thin and hooked. The flowers are also smaller. Last year, Stirling Baker had brought along a plant of this and he had suggested it was adapted for hanging down cliffs, but Martin said it's really adapted to growing in bare sandy areas and roots as it grows along the ground. It has a reddy maroon stigma. The stems are 2-3 cm across and 20 cm long. kicked out of the soil - rooted as it goes along. They again found *Maihueniopsis darwinii*. It doesn't flower every year here, being at the limit of its range. They found more examples of *Pterocactus australis*, again with the papery spines, and some poor specimens of *Maihuenia patagonica*, which also rarely flower here.

As we stopped for the mid-meeting break, Martin mentioned that he had brought along examples of some of the plants he had mentioned. These included *Maihuenia darwinii*, *Austrocactus dusenii*, *Pterocactus australis*, *Pterocactus araucanas* and *Pterocactus hickenii*.

After the break, we were now in Chubut province, going up the east side of the Andes using the main route 40, although it's still a dirt track in some areas. They were trying to find some rosulate violas and would go on to the town of Esquel. Starting on route 40 we saw a view of hilly steppe and the van they

used last October. This is a slightly wetter steppe and the plants were growing closer together. They found a lot of really good cacti and also *Junellia thmyifolia* - and *Adesmia* - at a height of 650m. The violas were at 800m so they continued upwards. We saw *Junellia minutifolia* and *Junellia ligustrina* - the latter would make a good garden plant which can have yellow, white, coffee or pink flowers like a privet. They found a big mound of *Maihuenia patagonica* with large pink flowers. Originally 11 species of *Maihuenia* were described but in the lexicon this has been pushed down to 2 species, both of which are very variable. They also found examples with white flowers as well as more pink flowered examples, and some of the clumps were 2-3 feet across. He has grown some seedlings of this but it doesn't flower in the UK. This is the same species as at Chile Chico but here it's flowering. They also found the tightly spined *Austrocactus bertinii* with some plants in bud. The buds are hairy and have bristles. Some of the plants had very dense criss-crossed spination and you wondered how they even photosynthesized. Some of the plants were in flower and these had red-maroon stigmas with yellow to orange brown flowers which were many times the size of *A. patagonicus*. The plants were growing either with or through other shrubs, and they also found an example with pure yellow flowers. A plant which looked different was possibly *Austrocactus philippii* - it had a rosy coloured style and a white stigma. They found both brown spined and yellow spined examples. There were carpets of *Adesmia ameghinoi* and *Nassauvia*. There were other cacti too - *Pterocactus araucana* - named because it grows adjacent to the areas where you find *Araucaria araucana* (the monkey puzzle tree).

We saw *Calceolaria polyrhiza* with its yellow flowers and at the roadside cobbles the ever-present *Pterocactus hickenii*. They also came across more verbena relatives. *Glandularia macrospermum* is variable with pink, white or yellow flowers which are very scented, and these take over from the junellias in this area. North of Chubut they got to Esquel which was a town established by Welsh emigrants in the 19th century. They were now amongst trees in the mountains but the steppe was only a few miles away. They found *Nassauvia axillaris*, and *Ephedra* which is related to conifers and often found in these dry semi-desert areas. *Maihueniopsis platyacantha* which has big flat spines. In cultivation it is fairly easy to grow but does tend to drop off in the winter. They found clumps 6-8 inches across. The only place they saw it was near Esquel. They also found more examples of *Pterocactus hickenii*. Another austrocactus had a

pale stigma and long spines and may well be *A. philippii*. A picture of the stems of *Pterocactus australis* when regenerating from the underground stems showed they would be hard to recognise as a cactus. They also came across 6 feet clumps of the white-flowered form of *Maihuenia patagonica*.

Continuing north, they bypassed Rio Negro and entered Neuquen province. Here they explored around two volcanoes, Copahue and Tromen. The first is active and went up earlier this decade - the latter has been inactive for 2000 years. The former was steaming all the time and there were pools of water at 55°C and with a pH of 0.5 - rather like battery acid! Even at the bottom, the water had a pH of 2.5. They found *Euphorbia collina* and a rosulate viola - a semi succulent only found here and not named yet - which was related to *Viola columnaris*. The rosettes were one inch across and it had strange flowers, and the plant was adapted to burial by sand and stone.

Next we saw a clump of *viola cotyledon* with lilac flowers and silver edged leaves which was one foot across. Martin said these violas were all very difficult to grow in cultivation. This plant is not very good for showing since the flowers fold up and only open after 11am. In response to a question from the audience, Martin said the plants were difficult because the summer heat here is too high for them, although some growers in Scotland have had success. At 1800m on the side of the volcano, they found *Maihuenia poeppigii*. Despite it being the equivalent of July, they experienced a blizzard of snow. This plant has smaller curved spines and larger "leaves" in relation to the stems. It has white through yellow flowers and is generally found at altitudes of 1500m to 2500m.

They also found the white flowered *Calandrinia affinis* - it flowers in November and December but then the leaves die down and there is no sign of the plant in January. *C. colchaguensis* has magenta flowers and also dies down as the summer progresses. Martin said he had grown these in his greenhouse. They were near the river Rio Neuquen, and on the open steppe they found a spiny form of *Maihuenia patagonica*. They also found *Neoporteria straussiana* which had black spines which curved upwards. The plants were 25cm tall. It is supposed to have yellow flowers, but these plants were not in flower. It was growing alongside a Chuquiraga. The conditions are dry but there is extra moisture in the air from the river. A common plant in Chile and Argentina is a parasite *Quinchamalium chilense* which usually has bright orange and yellow flowers.

Back on the steppe before they reached the next volcano they found a few small examples of the rosulate *Viola tectiflora*, an annual which was 1.5 inches across. These plants have glands on their leaves to attract ants for pollination. *Viola volcanica* was very difficult to spot. It is a perennial which lives for a few years and can be flowered in cultivation. It also has glands on the underside of the leaves to attract ants. In response to a question from Derek Prior, Martin said it was not easy to get seed of these plants. *Viola coronifera* had waxy yellow flowers and *Viola congesta* was more soft leaved. There were also some bulb species of Rhodophiala which are amaryllids – *R. elwesii* had stems 8 inches high and the bulbs are a foot or foot and half down. If grown from seed it takes 6-7 years to flower.

Volcan Tromen is 4000m high and was last active 2000 years ago. At 2500m, they found *Alstromeria presliana* which was 8-9 inches high and had pale blue flowers. The highest *Maihuea poeppigii* they found was at 2500m and was very spiny. Growing amongst these were what the locals called “tortillas” – flat clumps of *Azorella* which are members of the umbeliferens (carrot) family. They found *Calandrinia dianthoides* and *Calandrinia picta* with swollen seed pods. One more rosulate viola they came across was *Viola atropurpurea*. They found around half a dozen plants with deep blue purple petals and a yellow edge around the flowers. This is an atypical form, and some of the flowers had “hairy” fringes to the petals.

Martin finished by providing a summary of all the cacti they found during his various trips. The only species he did not come across were *Pterocactus valentini* and *Pterocactus kuntzei*.

As a summary, Martin’s talk showed us some interesting landscapes. The diversity of plants was impressive given the harsh conditions, and the pictures of the rosulate violas were certainly one of the highlights.

Vinay Shah

[Ed – if you want to study some of the cacti of the Patagonia region, the following site may be useful <http://home.arcor.de/jsaul/cacti/patagonia.html>]

Next Month’s Meeting

The next meeting will be held on May 5th and it will be a practical session on judging. Cathy Darbon from Oxford Branch will be running a Mini Judge’s course. **Please bring along some plants for entry into the following classes :**

1. Mammillaria Group
2 plants, max. pot size 5½"
2. Strombocactus or Pediocactus Group
1 plant, max. pot size 5½"
3. Any Cactus
2 plants, Max. pot size 5½"
Different genera
4. Crassula Group Adromischus sub-group
2 plants, max pot size 5"
5. Haworthia
3 plants, max pot size 3½"
6. Any Succulents (other than cacti)
2 plants, max pot size 5½"
Different genera

Forthcoming Events

Sat 11 th	Apr-	Southampton	Display / Plant Sales @ Spring Garden Show, Broadlands, Romsey - cancelled
Mon 13 th	Apr		
Fri 20 th	Apr	Isle of Wight	(title to be confirmed) - Cliff Thompson
Sat 18 th	Apr	Portsmouth	Bring and Buy Sale
Tue 5 th	May	Southampton	Mini Judges Course - Cathy Darbon
Sat 9 th	May-	Ampfield	Display / Plant Sales @ Hilliers Arboretum, Ampfield
Sun 10 th	May		
Fri 15 th	May	Isle of Wight	Cacti of Ecuador (John Hughes)
Sat 16 th	May	Portsmouth	Succulents around Vanrhynsdorp (Derek Tribble)
Tue 2 nd	Jun	Southampton	Plants from our Collection (Kathy & Keith Flanagan)

Branch website: <http://www.southampton.bcsc.org.uk>