

British Cactus & Succulent Society

Southampton & District Branch Newsletter

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Editorial

October has been in the news for having been unusually warm. I did turn on the heating when we had some cold evenings in the early part of the month, but I soon had to turn this off once the weather warmed up again. Outside, I think the grass is still growing and will need another cut - probably in late November!

In terms of flowers, my *Borzicactus samaipatanus* has continued to flower throughout October. The mesembs (*Glottiphyllum* and *Conophytums*) have also been in flower.

Announcements

The **Zone 11 Quiz** was held at Portsmouth on 17th October. A few of our committee members went along to the event, and I am glad to report that our team, consisting of Bruce Beckerleg, Geoff Card and David Neville were able to finish ahead of the competing teams from Portsmouth and the Isle of Wight. I'll provide a write up of the quiz in next month's newsletter.

Next month is our **Annual General Meeting**, which will be followed by an American supper. As is usual, there will be no table show, library or plant sales at the AGM. However, please do bring along some food or nibbles for the American supper. There will also be a lucky dip "bran tub" where members can exchange gifts. Further details of this are given on the back page.

Nomination forms for the 2010 Committee are available on the front table. With both Margaret Corina and Peter Down leaving the committee this year, the existing committee is somewhat depleted and overloaded, so do please consider joining. If the

thought of being on a committee is overwhelming, it needn't be – there are a variety of tasks which people can help with, and some of these tasks really don't take more than a hour or two of effort.

Last Month's Meeting

Before the talk started, Anthony Mitchell mentioned that he had brought along reprints of an article on *Pachypodium Namaquanum* by J A Retief which appeared in *Aloe* 1988. Anthony said that this article explained exactly how to grow these difficult plants and it was possible to get them to flower at 18 inches.

Our October meeting was a special event, with the visit of two botanists from Chile – **Juan Acosta** and **Florencia Senoret**. Juan mentioned that this was his first time in Europe and he was enjoying his trip a lot. He mentioned that he wanted to show us what was happening in habitat. This was a digital presentation and we started with a 5 minute video (and accompanying music) which showed scenes of Juan and Florencia exploring plants in habitat. Juan gave two talks – one on *Eriosyce* (which is described below) and a second one on *Copiapoa* which will be featured in next month's newsletter.

Eriosyce

Juan explained that the name *Eriosyce* was set up in 1872 by Rodolfo Philippi, a German botanist who lived in Chile. He used it for large globular plants with woolly spined fruits. In 1966, Donald and Rowley merged species such as *Horridocactus* and *Pyrrhocactus* into *Neoporteria*. In 1994, Kattermann merged in *Eriosyce*. This name was older than *Neoporteria* so it took precedence. *Eriosyce* now contains members of *Horridocactus*, *Islaya*, *Neochilenia*, *Neoporteria*, *Pyrrhocactus*, and *Thelocephala*

Juan said he started exploring for plants with Florencia in 2004, looking for species of *Eriosyce* listed in Chilean botanist Adriana Hoffman's book. She had listed only the Chilean species, although there are also species which grow in Peru and Argentina. There aren't any in Bolivia, probably due

to due to the desert and mountainous border acting as a barrier. In Peru, the plants are *Islayas*, and they grow near the coast. The remainder are in Chile and Argentina.

Juan said some of his trips to various localities were in the company of Paul Klaassen and Cliff Thompson. In Arica, at the far north of Chile, the plants of *Islaya islayensis* are dying out because they are too dry. This was also supposed to be the type locality of *Eriosyce laui*, but they did not find any specimens there. He explained that the mining industry is sadly responsible for a lot of damage and destruction to the environment.

Showing a cross section of the terrain, he explained how the position of the Andes meant that there was a steep slope on the Chilean side, and somewhat more gentle slopes on the Argentinean side. In addition, the presence of coastal mountains mean there were a number of valleys. The presence of the Pacific Ocean mean that there were coastal fogs which occur between the coast and the Andes – and this is an important source of moisture for many of the plants.

We saw a picture of a spot near where he lived, in Santiago, close to the Southern extreme of the Andes. It was relatively easy to go out and visit some populations to the north of Santiago – but in the town itself the plants are extinct, due to collection. We saw *Eriosyce aurata* and *Eriosyce umadeave* growing at 4000m. This might be a reason why seeds of some species do not germinate easily – it needs a period of weathering in a cold season. In the winter there's snow on the peaks but in the winters, snow can cover the valleys. *Eriosyce* prefer to grow in the valleys, where water is available. They can also grow near the ocean (especially *Neoporteria*s) and some also grow on islands.

Camanchaca is the local name for the coastal fog which brings moisture and also protects plants during the hottest part of the day. Cacti prefer to grow on northwest side of the hills. Some can store water in their bodies, others such as the *Thelocephala* e.g. *T. napina* and *T. heinrichiana* have small bodies but they store water in tap roots which can extend a foot into the ground. We also saw an example where a plant stem had been damaged and the tap root had decided to throw up a new offset.

Eriosyce are mainly globular, but some *Neoporteria*s such as *subgibbosa* can grow to a height of 1 metre. However, they are not columnar and tend to grow in a procumbent manner. *E. paucicostata* can grow to a height of 40cm. Plants in the *Eriosyce* have different

types of flowers and colours. *Eriosyce eriosyzoides* is one of the *Pyrrhocactus* and it has attractive flowers which resemble flames, in shades of yellow or red. They are pollinated by many different insects, but he thought that beetles were very important, along with flies which picked up pollen on hairy bodies.

Most *Eriosyce* have funnel shaped flowers - but in some types, the flowers tend to remain closed up. In particular with the subgenus *Neoporteria*, the flowers are completely closed and do not expose the internal structure of the flower. Most *Eriosyce* have bristles on the flowers and the fruits. We saw *Eriosyce napina* ssp. *tenebrica* with some very spiny fruits – wind can help scatter these over considerable distances. The seeds are loose within the capsule and if the wind blows this structure, then the seeds will scatter over a distance. In some cases, insects like ants and beetles will distribute the seeds, and further up the food chain caterpillars and lizards will also help distribute the seeds.

In Chile there is a lot of horticultural development and grapes are now being grown in many areas. The local brew is known as Pisco. This development means only the tops of the mountains are left for the cacti. The hills are also cleared to make space to dry the harvested fruit. The views of this looked nice but in reality the land is being cleared and then you get erosion and barren areas. From the central area to the south of Chile, they are now growing pines and conifers to produce paper. Apart from clearing local vegetation, the pines drop their leaves and needles and this prevents native plants from germinating. The various factories are dumping toxic products into the sea, and the mining industry creates a lot of waste products. Another danger is collectors – if a plant in their garden dies, they'll just go out and dig one up from the wild. We also saw some examples of plants which had been dug up and were then being offered for sale.

With Florencia he normally visited National Parks, but after seeing Hoffmann's book on Chilean cacti they decided to search for every one listed in the book. This meant non-stop driving and searching. His weapon is his camera and his idea is to get pictures and evidence of the environmental conditions. Florencia likes to make botanical drawings and we saw some examples of her illustrations.

At Coquimbo, 400km north of Santiago is the Elqui valley. It is quite dry here, and although crops of grapes are grown, some of the valleys are smaller, and not habituated by humans – these are full of

plants and cacti. We saw a picture of a colourful local parrot but Juan mentioned that in some areas these birds were killed by the farmers.

We started with plants from the sub genus *Eriosyce*. These have spines at the top of the flower and some have wool on the fruit. We saw a plant of *Eriosyce aurata* some 60cm in diameter. Juan mentioned that you could find a number of different plants according to locality, but really these were just the same species with some small environmental variation which changed some characteristic. For example the spines are golden on plants at an altitude of 2000m, but at lower altitude the spines are stronger but grey in colour. To illustrate this, he showed the photographs of two different human hands and how the skin tone and appearance varied.

We saw pictures of spines on the apex of the plants, and also photos of the same plant taken in different years (2006 and 2009), to illustrate how the number of flowers varied according to the amount of rain received. In another place they found beautiful *Eriosyce* growing on the slopes, but many of the columnar plants had been cleared, with the carcasses used as fencing. In some places, goats are let loose and they eat everything. The lack of plants prevents sheltered spots for regeneration to take place. We saw *Trichocereus chiloensis* with variations in form according to altitude and environment. The red flowers on the plant were not those of the cacti but actually a parasite which grows on the plants. Another big columnar plant is *Eulychnia acida*. This had fleshy naked fruits. *Miqueliopuntia miquelii* had a pink flower and we also saw *Cumulopuntia sphaerica*.

Eriosyce grow slowly, depending on the amount of rainy years they experience. In our collections we can grow them more quickly thanks to regular watering. We saw the bay at Cifuncho, and in the nearby mountains was *Eriosyce rodentiophila*. There were also variations, with more wool on the areoles – others plants had less wool and were more fleshy. Lots of animals are attracted to these plants. Growing alongside was *Copiapoa columna-alba* and the northern form of *Copiapoa longistaminea*.

They eventually crossed into Argentina (at an altitude of 6000m) with Paul and Cliff. This was his first visit to Argentina. The terrain was not as steep and there were lots of valleys. Sunny days can end with stormy weather and plants get to receive some of this rain. In Argentina, the *Eriosyce* subgenus is called *Phyllocactus* whereas in Chile similar plants are called *Horridocactus*. *Phyllocactus* have a lateral opening in the seed pod, and *Horridocactus* have a

hole at the base. Sometimes the ants will make a hole anyway. They also came across plants of *Denmoza rhodacantha* which were 1 metre tall.

In Argentina they enjoyed the wine and found some beautiful places while driving around the valleys, which were somewhat different from the Chilean side. At Posta Del Sol in Jujuy, they found *Eriosyce umadeave* growing with long spines for protection. They found plants with different flower colours and also found beetles in the flowers – these are important pollinators. *Eriosyce* germinate under the protection of the shrubs and Juan felt it was important to protect all the native trees and shrubs to allow this to happen. Another locality for *E. umadeave* is Puerta de Tastil at an altitude of 4000m. Some grow very large and eventually collapse on themselves. They grow with other cacti in this region and we saw globular and flat forms of *Gymnocalycium spegazzinii*. They also came across *Echinopsis ferox* (*Lobivia ferox*) with large and beautiful golden spines. There were rivers in some of the valleys. At many places, *Trichocereus pasacana* (*Echinopsis atacamensis* ssp. *pasacana*) was growing on hill tops, and they also found *Echinopsis tarijensis*. He had always wondered why the globular *Lobivias* are grouped with the columnar ones, but if one looks at the flower structure, they are very similar.

At Purmamarca in Jujuy, the hills consisted of red rock. Here, growing in a crack in the rocks, they found a very special cactus – the tiny *Blossfeldia liliputana*. There were different formations of mountain ranges and some beautiful colours to enjoy. They spent Christmas in this area, and we saw Paul Klaassen standing next to a “Christmas tree” which was actually a *Trichocereus pasacana* decorated with some festive lights.

At San Juan, the scenery was different, and they found *Eriosyce iquiquensis*. The bodies were coloured grey, but the fiery flowers stood out. They found wax on the plant body and even tiny plants (1cm across) have this. The soft layer of wax acts as protection from the sun. If something happens to the apex, the plant forms lots of offsets. Other plants found here included *Tephrocactus* and *Pterocactus meglioli*. The plants were quite hard to spot if not in flower, but they also found some fruits. We saw a close up of a grasshopper waiting for a drink of nectar from a flower. We also saw *Echinopsis leucantha* with some beautiful flowers.

They crossed the border back to Chile. The genus *Horridocactus* was set up by Backeburg and the plants are similar to the *Phyllocactus* on the

Argentinean side. However, the floral tube is more naked and sometimes there are no bristles on the flowers. In the same locality they found plants with different flowers and different amounts of wool and this was just natural variation within a species. Some plants of *Eriosyce chilensis* had white flowers, others had pink flowers. All of the seed pods have a hole at the base. They sometimes grow in front of the ocean, along with *Eulychnias* and *Trichocereus*. We saw *Eriosyce garaventae* growing in a crevice under some rocks and their GPS meter indicated an altitude of 1890m.

In the interior valleys the plants get moisture and find it easier to survive – others have a large taproot to store water. We saw a plant whose roots had been exposed and which showed just how big the tap root could grow. We saw plants growing under the protection of a *Eulychnia* and a photo of Paul lying low on the ground, taking a picture of a tiny *Eriosyce heinrichiana*. The flowers of this species were mainly yellow but there were also plants with reddish and other attractive intermediate shades too. There were also often insects in the flowers. In the central area of Chile, at Valparaiso they visited the Parque Nacional la Campana – this contains some important plants including orchids – but only at the top is there a tiny population of *Eriosyce*. We saw a native passion flower and then the golden spined *Eriosyce garaventae*. There are other mountains in this region at similar altitudes but they have not yet had a chance to explore these.

Eriosyce also grow on the coast of Chile - on the cliffs, the wind can be a problem and the plants grow very flat and protected by grass. They found *Eriosyce aspillagae* which previously had only been known from one other locality which had been destroyed due to the planting of conifers. This new find, on some private property, was therefore important. Heading back towards Santiago, in a river valley we saw a collection of bromeliads including *Puya berteroniana* with its amazing blue flowers. In between the grass was *Eriosyce curvispina* with strong spines. It gets exposed to very low temperatures, including even snow. It has a yellow to reddish flower. We also saw a tiny *Trichocereus chiloensis* – this can eventually grow to 3-4 metres tall.

Another group which grows near the coast and some interior valleys in the north is the *Thelocephala* group, which was set up by the Japanese botanist Ito. These plants have taproots and tubercles, and sometimes the flowers have bristles. The tap root often grows in pure clay. The soil in this area is hard so moisture remains on the surface and the plants

have fascicular roots from the neck near the surface. The plants are small and flat so it's hard to see the body. The flower colour can vary and they open during sunny days. In very dry conditions, the plant contracts and almost grows underground, so it's only possible to spot them because of the yellow/red flowers. We saw *Thelocephala napina* in flower – these always seem to attract insects because there aren't many other shrubs or plants here. Lizards and other animals are also attracted because of the chance of finding a snack. They sometimes eat the flowers. There are also some tiny snakes around but they are not poisonous. The fruits when dry can roll around, and also they are naked without bristles which means the animals can eat them. We saw *Thelocephala duripulpa* growing under a *Copiapoa*, and *Thelocephala esmeraldana* growing under a *Copiapoa columna-alba*. We also saw a *Euphorbia* (there are several native to Chile) and a beautiful sunset in front of the Pacific ocean.

The last group of plants to consider was the *Neoporteria*s. They have a different type of flower, with a naked tube and the flowers are not so woolly and also do not normally have bristles. The plants often grow under the protection of other plants or rocks. The flowers are vivid pink or yellow colours and the internal petals remain closed. The flower always form on the apex of the plant and seem to be adapted for pollination by hummingbirds. Although he had not seen any birds pollinate the flowers, he had seen beetles jumping from flower to flower. Some of the beetles have hairs on their bodies which collect the pollen and we saw a close up of one of these insects with its body covered in pollen.

The plants sometimes grow near the coast and can survive salty seaspray. We saw *E. subgibbosa*, and also plants of *E. nigrihorrida* and *E. clavata*, both of which can grow tall but these are not columnar plants, preferring to lie procumbent. You can sometimes see them hanging off rocks near the ocean. We also saw some lichens, puyas and a lizard. Viewing the garden of a local property, Juan explained how people preferred to grow foreign plants like Agaves or Aloes instead of local plants. In some areas there are very few examples of natural beauty left, thanks to man's intervention. In a forest of conifers, the cacti plants did not look healthy and there were no seedlings – it was probably too acidic for them.

In other valleys at Huasco, they found *Eriosyce villosa* growing under an *Eulychnia*. The flowers remain closed so one cannot see the interior of the flower. The glowing pink flowers may attract hummingbirds but he's only seen beetles pollinating

them. Juan mentioned how apart from taking pictures – he and Florencia also collect seed to share with enthusiasts. These have been distributed around the world and recognised by his JA designation. He was pleased to see of these “little kids” (A neopteris, JA13) in flower. Florencia handles the distribution of seeds and in fact she was selling some seeds at our meeting, and Juan suggested that people visit their website and see what was available. He ended his talk by inviting people to visit Chile to come and see some of the places he had described.

Vinay Shah

[Ed – there is much more information and many pictures of plants in habitat at Juan and Florencia’s website : <http://www.eriosyce.info/>]

Next Month’s Meeting

Our final meeting of 2009 will be held on December 1st. This will be our **Annual General Meeting** followed by the **Christmas Social**. After receiving some reports from this year’s Committee and choosing the Committee for next year, we’ll get on with the real business of enjoying some food and drink and chatting with fellow branch members.

Drinks will be provided by the branch, but please do bring along some items of food for the buffet table.

There will also be a “bran tub” lucky-dip. Simply bring along a wrapped present (suggested value is £2 or thereabouts) and place it in the tub at the start of the meeting. Later in the evening you’ll get a chance to take a present out of the tub.

In order to give the Committee members a chance to participate in the festivities, there will be no plant sales, sundries sales, table show or library at the December meeting. (Although Dot will be willing to accept back any library books which you wish to return).

Finally, for Committee members, a reminder that our next Committee meeting will be hosted by Mark and Rebecca Jakins on the 16th of November. I’ll provide a map of how to get to their house on our website a couple of days ahead of that date.

Please bring along your annual reports so that these can be included in the December newsletter. Any format (handwritten, typewritten, or as a file on a floppy disk) is acceptable. Alternatively, reports can be emailed to my email address, as shown on the front of the newsletter.

Forthcoming Events

Mon	16 th	Nov	Southampton	Committee Meeting (hosted by @ Mark and Rebecca Jakins)
Fri	20 th	Nov	Isle of Wight	Propagation - vegetative methods (Bill Morris)
Sat	21 st	Nov	Portsmouth	Annual General Meeting
Tue	1 st	Dec	Southampton	AGM, followed by Christmas Social/American Supper
Sat	5 th	Dec	Portsmouth	Christmas Social/American Supper
Fri	18 th	Dec	Isle of Wight	Annual General Meeting and Christmas Social/American Supper

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