Essex Succulent Review

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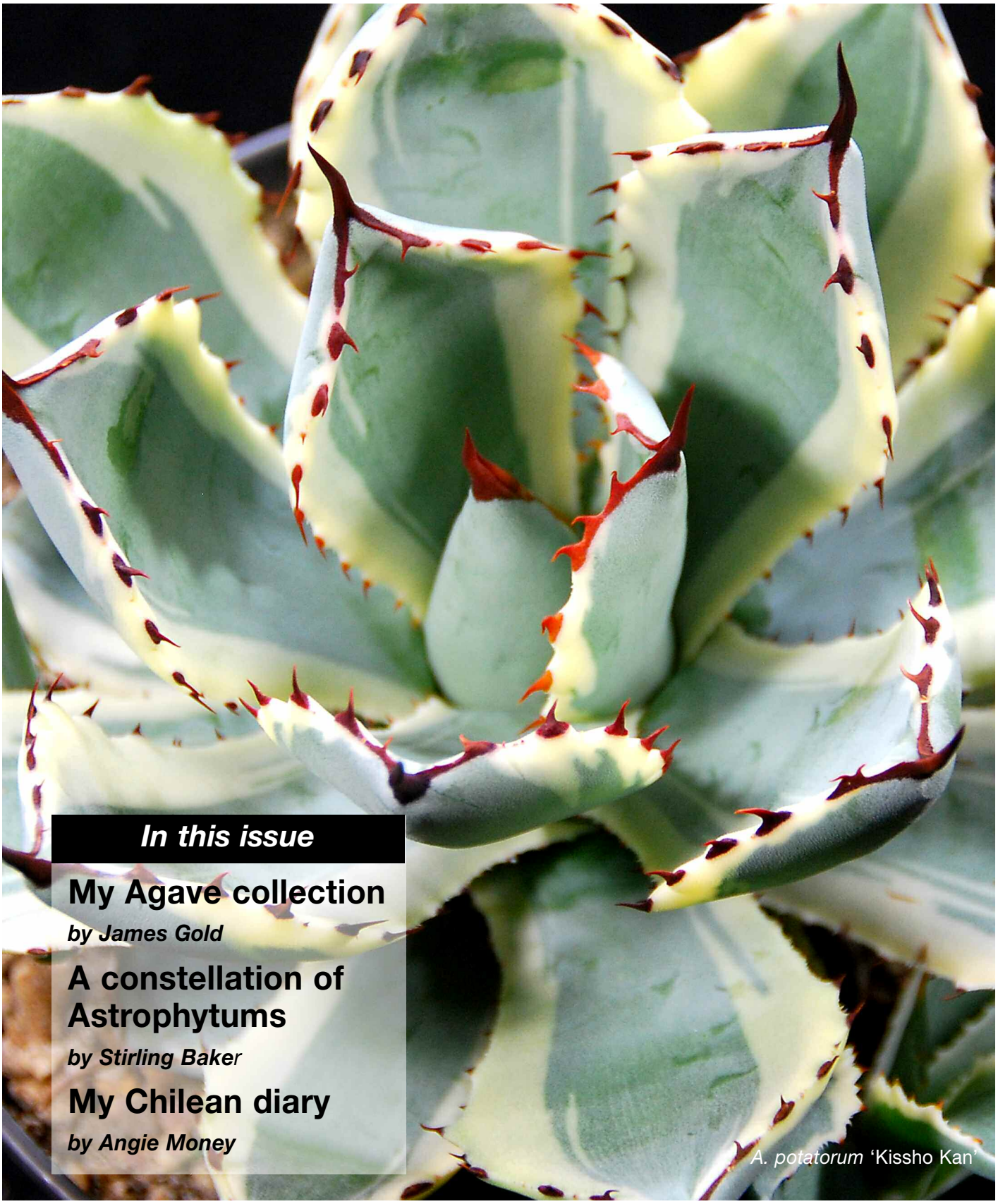

In this issue

A. potatorum 'Kissho Kan'

Editorial

Welcome to the Essex Succulent Review.

I now have a new website for the Essex Succulent Review at www.essexsucculentreview.org.uk where all back issues will be archived. In addition the current issue will still be available on the Zone 15 website. Please note this issue is a little longer than usual and, due also to the number of pictures, I will have to downsize it for emailing. If you prefer a higher resolution file this can be downloaded from the website.

If you do not already do so, and would like to receive the Essex Succulent Review as a pdf as soon as it is ready, please send me an email to the address below and I will add you to the notification list. This is completely free and you can unsubscribe at any time simply by telling me you wish to do so.

And finally, a rather belated welcome back to the UK to the Essex Succulent Review's founder, Len Newton who has now returned to his 'type locality' in east London. I am very pleased to be able to include a short article by Len on page 7 of this issue.

Sheila Cude

Essex
SucculentReview

The Essex Succulent Review is published quarterly in March, June, September and December.

It is available on-line free of charge. Just send an email to sheila@essexsucculentreview.org.uk to receive notification of each issue when it is available.

Past issues are archived at www.essexsucculentreview.org.uk

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The Continental Cactus Crawl

The Reunion Tour 17–20 March 2016

by James Gold

Welcome aboard the SS Rotterdam. Yes, you read correctly. For 2016 we are exploring the nurseries of Holland and Germany from the comfort of the SS Rotterdam, a former cruise ship, permanently moored in Rotterdam harbour. It features two restaurants with open kitchens and authentic ships' cabins. The air-conditioned rooms have been decorated in 50s-style and benefit from tea and coffee making facilities, free wi-fi, minibar and flat-screen TV.

The Club Room restaurant features elegant décor and gastronomic cuisine while the modern Lido Restaurant has a spacious terrace and offers a range of light meals, some of which showcase local ingredients. Cocktails are served in the Ocean Bar. A free shuttle takes visitors to the Rijnhaven metro stop, from where the centre of Rotterdam is easy to reach.

While this is all very tempting, during the day at least, the highlight will be visiting favourite nurseries and exploring new ones.

One of the favourite must-see nurseries is Exotica run by Ernst and Marita Speck. It is a succulent lover's paradise. If it exists then they have it, along with lots that you did not know existed. All perfectly priced, labelled and organised. For many cactus collectors, Piltz is the favourite. It is hard to know what to do first, look at the sales plants, his private collection or have some chocolate biscuits and coffee. Or maybe it is the large Dutch nurseries, that are so huge, the employees move around by bike. Or maybe it is the generous and eclectic Cok Grootsholten with his large and magnificent private collection from which he is prone to give you a cutting or two.

Why not make up your own mind? At the time of writing there are a few places left on the coach. Prices per person are £422 single and £307 double.

If you are interested please contact James Gold
Email: james@gold0070.freeserve.co.uk
Phone: 07765 131883

Zone 15 Mini-Convention

Sunday 13 March 2015 – 1.00pm

Paul Hoxey – Chile from the coast to the high Andes

Len Newton – East African discoveries, past present and possibly future

Plant sales – Plantlife Book sales – Keith Larkin

Venue: Capel Manor College, Bullsmoor Lane, Enfield, EN1 4RQ

Tickets £14, to include a buffet lunch and afternoon tea from Eddy Harris, 49 Chestnut Glen, Hornchurch, Essex, RM12 4HL
Phone 01708 447778 email secretary@bcss.org.uk

Plus free admission to Capel Manor's extensive grounds from 10.00am

Fig.1 A. ellemeetiana

My Agave collection

by James Gold

The family and I are driving clockwise around the perimeter of Gran Canaria in a hire car. It is very hot, so we pull in to buy some water. I stretch my legs and find that next door, under some makeshift shading, a lady is selling some bizarre looking plants. I buy a couple and jump back into the car.

To protect the plants I wrap them up and push them into a two-litre soft drinks bottle. To ensure their safety, I decide to put the bottle in my 'man-bag' while going through customs. I am stopped and my bag is searched. A stern-looking guard barks to his colleagues to come across. I hear someone say "Dope?". I am now separated from my family and surrounded by customs officials. They tip out the contents of my bag and look at the plants. They look up at each other, it becomes very silent and then they burst out laughing with someone shouting, "Succulenta".

The beginning …

So began my collection of succulent plants and agaves in particular.

The offending plants were *Agave americana* and *A. victoriae-reginae*. I do not have these particular plants now as the former was lost in a very cold winter and the latter flowered and, being monocarpic, died some time later.

The great attraction

My attraction to agaves, as to most things in life, was purely aesthetic. I later began to value their drought tolerance, as I was often away from home while travelling. At that point I did not have a greenhouse and the few plants that I had were on the kitchen windowsill. The *A. americana* started to grow at an alarming rate and was turning out to be a monster of a plant and had to be put outside. I then

Fig. 2 A. attenuata

Fig. 3 A. nizandensis

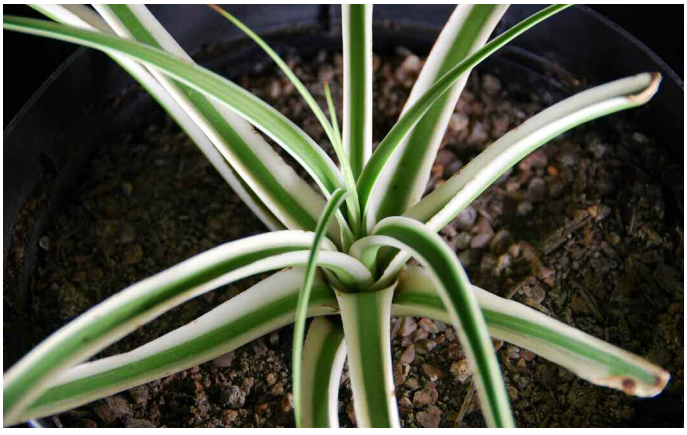

Fig. 4 A. bracteosa 'Monterrey Frost'

Fig. 5 A. victoriae-reginae f. nickelsiae

Fig. 6 A. victoriae-reginae f. viridis

began to find out how cold hardy it was, so long as it was dry. I liked its exoticness and the fact that it seemed to be indestructible. It had got to a point where I could only move it with a sack trolley, so I left it outside all year, only wrapping it up to keep it dry during the winter months.

I started buying other agaves and most of them grew large, quickly, as well. While I could move them, I experimented with storing them in the garage overwinter. To my delight they sat there in the dry, cold and dark garage all winter and then burst into life when put outside in late spring.

It was the perfect plant, aesthetically very appealing and it had all the characteristics to suit my life style.

As my collection grew (in number as well as size) I began to appreciate that, while they are always readily recognisable as agaves, actually there is quite a bit of variation across the species, particularly when I strayed off the species road and started buying hybrids, cultivars and variegated plants.

The knowledge

My desire to find out more about these plants was initially met by the 'bible' for *Agave* enthusiasts (and arguably still is), Howard Scott Gentry's monolith, *'Agaves of Continental North America'*. Not willing to mortgage forward my future children, I bought a second printing edition from 1998. It is an impressive lifetime's work and quite indispensable. Full of a

Fig. 7 A. victoriae-reginae with broad, flatter leaves

Fig. 8 A. victoriae-reginae 'Himesa Moyuki'

Fig. 9 A. victoriae-reginae 'Kazu Ban'

Fig. 10 A. victoriae-reginae 'Royal Spine'

Fig. 11 A. nigra

Fig. 12 A. macroacantha

tremendous amount of detail and filled with lots of sketches and black and white photographs. Another equally indispensable book is John Pilbeam's *'A Gallery of Agaves'* (including variegates). This is an alphabetically arranged visual delight, in colour. Together, they are all you need, until you become obsessed and buy everything that you can.

I have picked out some of my favourite plants along with a variety of others to illustrate the irresistible allure of the *Agave*.

Soft

While most agaves are quite ferocious and spiny there are some exceptions. The very tropical looking *A. ellemeetiana* (Fig. 1) has short, wide, fleshy green leaves. *A. attenuata* (Fig. 2) is one of the few agaves with a very prominent trunk and soft leaves while *A. nizandensis* (Fig. 3) is most perplexing by having soft, thin leaves and is quite small. Very similar is *A. bracteosa*, particularly in the variegated version 'Monterrey Frost' (Fig. 4).

Queen + king + relatives

I must include *A. victoriae-reginae*. It was one of my 'founding' plants and is much prized by growers who enter plants in competitions. There are quite a wide variety of forms and cultivars as you can see from the photographs. In addition to the typical form, there is *A. victoriae-reginae* f. *nickelsiae* (Fig. 5) with its much bolder white markings and fewer, stubbier leaves and f. *viridis*, (Fig. 6) (possibly a natural hybrid between *A. victoriae-reginae* f. *fernandi regis* x *lechuguilla*). I have another plant with a fewer number of broad flat leaves with faint white markings (Fig. 7) and attractive cultivars include 'Himesa Moyuki' (Fig. 8), 'Kazu Ban' (Fig. 9) and the hybrid 'Royal Spine' (Fig. 10).

Black and spiny

Black spines are an attractive quality and in this category I value plants such as *A. nigra* (Fig. 11), *A. macroacantha* (Fig. 12) along with the aforementioned 'Royal Spine' (Fig. 10).

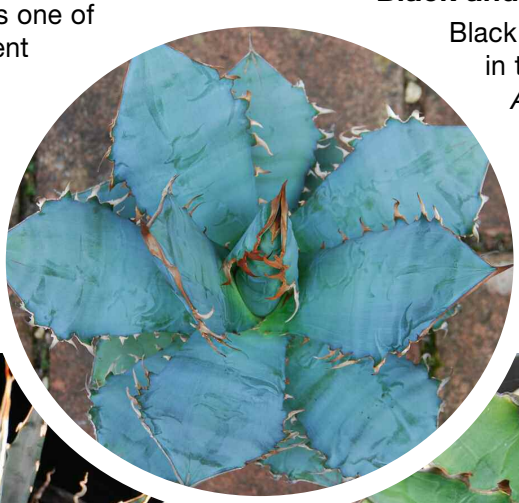

Fig. 14 (left) A. titanota (blue form)
There is also an attractive green form (not illustrated)

Fig. 13 A. utahensis var. eborispina

Fig. 15 A. xylonacantha

Fig. 16 A. isthmensis 'Ohi Raijin Shiro Nakufa

Fig. 17 A. filifera 'Shira Ito No Ohi'

Fig. 18 A. meridensis 'Joe Hoak'

Fig. 19 A. attenuata var. marginata alba

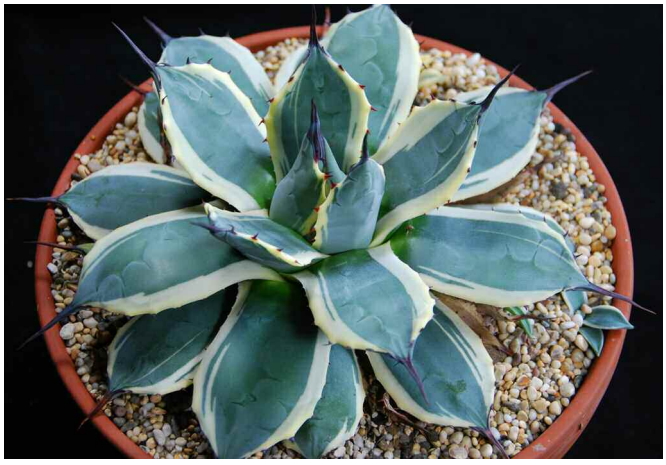

Fig. 20 A. parryi 'Merico Nishiki'

Fig. 21 A. marginata

Long and unusual

Long and unusual spines are also of interest and the top three in this category are *A. utahensis* var. *eborispina* (Fig. 13), *A. titanota* (Fig. 14) and *A. zylonacantha* (Fig. 15).

The white stripes

More recently, a large number of variegates have become available and have added an additional dimension to these already interesting plants. These include *A. isthmensis* 'Ohi Raijin Shiro Nakufa (Fig. 16), *A. filifera* 'Shira Ito No Ohi' (Fig. 17), *A. meridensis* 'Joe Hoak' (Fig. 18), *A. attenuata* var. *marginata alba* (Fig. 19), *A. parryi* 'Merico Nishiki' (Fig. 20), *A. potatorum* 'Kissho Kan' (see front cover) and an extreme form of *A. marginata* (Fig 21), amongst many others.

Bonkers

A. pumila defies description. It grows incredibly slowly. I can count all the leaves on one hand (Fig. 22) and (Fig. 23) a much, much older one. The mature and juvenile plants look quite different. It is, however, one of my favourites. I do not think it is bonkers, it just drives me bonkers.

Fig. 22 A young A.pumila

The kinky ones

Another time perhaps... meanwhile I hope this has aroused your interest. ■

Fig. 22 A pumila (mature plant) ***Photos: James Gold***

The succulent Yucca

by Len Newton

Following Paul Spracklin's mention of *Yucca* species in the last issue, it is worth pointing out the most succulent member of the genus. This is *Yucca endlichiana*, a native of Mexico. It was first described from Coahuila in 1907, and it is also seen in the Chihuahuan Desert.

The succulent leaves arise from a very short stem, so the plant is usually described as acaulescent, or stemless. It has few upright and succulent leaves, up to 50cm long. As the leaf matures the margin becomes frayed, and a number of stiff curly fibres result, adding to its attractive appearance.

In my (rather weedy) Nairobi garden it grew slowly. I acquired it in 2006 but it had not flowered by the time I left the country in 2015. However, it is stated in the description that the inflorescence is much shorter than the leaves, and so one must be careful not to miss it! A flowering specimen is illustrated in the *'Monocotyledons'* volume of the *'Illustrated Handbook of Succulent Plants'* (2001). The species was named for Rudolf Endlich (died 1915), who collected plants in Brazil, Mexico and Paraguay.

Yucca endlichiana

The genus *Yucca* is also of interest for its pollination mechanism. Usually pollen gets onto a pollinating animal accidentally as it moves around on the flower (mostly drinking nectar), and it is accidentally deposited on the stigma of another flower in the same way. *Yucca* is one of only two genera (the other is *Ficus*) in which there is deliberate pollination by the pollinator. *Yucca* flowers are pollinated by a female moth, which actively collects some pollen and then flies to a flower on a different plant. There she pierces the flower ovary wall with her ovipositor, lays an egg, and then deliberately rubs pollen onto the stigma. When the egg hatches, the larva feeds on some of the developing seeds. By the time the fruit ripens the larva has pupated and a new adult moth emerges when the fruit splits open to release the remaining seeds. Thus the plant and the moth depend on each other, as neither can complete its life cycle without the other. ■

Senecio velatus

An interesting succulent

by Philip Greswell

At least to me it is an interesting plant. Particularly when it decided to flower, forming a corymbose cluster, in May this year. It comes into leaf in the summer and, by Christmas, has shed all its leaves. So, I was surprised to see flowers coming from the bare shoot tips which, as you can see, are the typical yellow compositae daisy-like *Senecio* flower.

I obtained it at a Manchester BCSS meeting in June 2010, presumably as a small plant, and it disappeared into my collection. It remained there unnoticed until it came to my attention, perhaps a year ago, as it began to become much bigger and taller.

In *'Succulent Compositae'* by Gordon Rowley,1994, I found what looked to be the same thing under the name *Senecio praecox*, which grows to some 4m tall in the wild and, apparently, was the only succulent *Senecio* to come from the New World worth including in the book.

Mine is an ISI plant named *Senecio velatus* 2005.37. It is much more attractive than that shown in Gordon Rowley's book and, as I have just found out, a different species.

The following is quoted from *'International Succulent Introductions of the Huntington Botanical Gardens':* 'A couple of Mexican senecios have thick succulent stems and bear thin, palmately-veined leaves in loose rosettes at their apices. *S. velatus* is one of these, forming a shrub or small tree 1.5 to 5m tall, like the related *S. praecox*. Both have showy, yellow, daisy-like flower heads, but *S. velatus* is distinctive in its dense white arachnoid tomentum on the stem tips. HBG 91544, from seed collected Apr 2004, by JP Simcox (JP 4671), NE of Chilpancingo, Guerrero, Mexico.'

So there we are, in our hobby we are never far away from unexpected surprises, all adding to our knowledge and giving much pleasure. ■

Photos: Philip Greswell

Below left:

S. velatus in full flower May 2015

Below right:

S. velatus foliage, autumn 2015

A constellation of Astrophytum

Cultivars and hybrids

by Stirling Baker

Astrophytum in general come from Mexico (with some locations for *A. asterias* in south-east Texas). In my opinion there are four species (excluding *A. caput-medusae*) together with *A. coahuilense*, which many people consider to be a separate species, but I think is probably the same as *A. myriostigma*, although there are differences in the flowers and fruits.

They are extremely easy plants to cross-pollinate to produce viable seed, which has led to some fantastic cultivars and hybrids many of them originating in Japan.

Below left: A myriostigma

Below right: a fine specimen of A myriostigma 'Onzuka'

Above: A. asterias 'Super Kabuto'

Right: A. asterias 'Sergeant Stripes'

Above: A. asterias nudum 'Hakuun'

The 'Onzuka' form of *A. myriostigma* was created in Japan around 1974-1977 by Tsutomu Onzuka. It was the product of repeated back crossings – but seems to have been more or less accidental in its final result.

A. asterias 'Super Kabuto' is another cultivar arising from a natural mutation. I have actually got a picture in a book of *A. asterias* 'Super Kabuto' growing in habitat. The origins of those in cultivation today seem to be a little mysterious but they may arise from a plant or plant(s) imported to Japan by Masaomi Takeo in 1980 and sold to Tony Sato who propagated them. However there are plants available today under the name 'Super Kabuto' which are probably hybrids. They look like a 'Super Kabuto' but are not the true plant.

Below:

A. ornatum hybrid

This plant was on a graft which rotted, and the rot spread into the plant. I have rerooted it, and it now seems to be growing well.

A. asterias in my opinion, is quite a difficult plant to grow, possibly more difficult than some of the *Ariocarpus*. I think that people tend to underestimate it sometimes.

A. asterias can sink, and once they start sinking they never seem to expand again. I am not sure what causes it; possibly a change of regime, eg if someone has grown one from seed, in a compost that contains loam, and then it is transferred into a compost that does not contain loam, it may have a detrimental effect. I am not sure that is the reason though; I just do not know.

I grow my plants in a pumice-based substrate with 10% clay in it. I understand that in habitat they grow in or near

A. ornatum 'Fukuryu'

The cultivar name 'Fukuryu' means extra ribs or sometimes refers to warts on the ribs' surface

An interesting hybrid
A. asterias x coahuilense x 'Super Kabuto'

A capricorne var. niveum ***A variety with long straight spines which was discovered as recently as 1930.***

limestone areas. I do not use limestone, I really do not like it and I am sure that there are different types of limestone. So, if somebody reads an article, saying *Astrophytum* grow on limestone, goes out and gets some limestone chippings or whatever, which have nothing to do with the limestone where the plants come from, then puts them on their plants they may – possibly – end up killing them.

My plants are all watered with water that has a ph of 7.0 or below, preferably 6.0 or 6.5, which means it is slightly acid. I find that most plants respond to that, even plants which grow on limestone in habitat prefer slightly acid water. It also stops the plants from marking with that white deposit on the top of the soil which is just lime that leaches out. I feed at each watering until the end of August using either Chempak, Phostrogen (two scoops per three gallons) or Tomorite (half strength). The greenhouse is heated to 10°C in winter but there is always plenty of ventilation.

If an *A. asterias* of any size is seen on the show bench it should be regarded highly. As should *A. capricorne*, which is another difficult plant to grow unmarked. A large, good-looking *A. capricorne* should always be judged highly.

The Japanese are also good at producing interesting hybrids. If it has got spines on it then *A. ornatum*, or *A. capricorne* will be in there somewhere. There are some fantastic plants out there, but I sometimes think people cross one plant with another willy-nilly, and end up with a load of seed that does not make any sense. It is important to keep good records when hybridising plants and make sure you know what you have produced.

The Japanese have also produced some fantastic books. I have the '*Astrophytum Handbook*', by Tony Sato which is a set of four books one each on *A. asterias*, *A. myriostigma*, *A. capricorne* and *A. ornatum*. These are just pictures basically, nothing to do with cultivation.

Another excellent book, released last year, is '*Japanese Hybrid Astrophytum*' written by Pavlica and Saeki. Again mainly pictures of the many different forms that have been produced, but a must for anyone who is interested in *Astrophytum*. ■

Below: A myriostigma 'Kikko nudum' ('Kikko' is derived from the Japanese word for turtle shell.

This is a grafted plant which needs warmer conditions, for the benefit of the stock, not the graft.

The old Saguaro cactus – stolen or faked

by David Swinden

Over a number of years my wife and I have spent time in Arizona, USA, and Carnegiea gigantea (Saguaro) has become of particular interest to us.

Stolen

The cacti only grow naturally in a portion of the Sonoran Desert, including parts of southern Arizona, a corner of south-eastern California and a narrow strip of northern Mexico. Their distinctive size and shape make them recognisable all over the world and the plants are prized as landscape features.

The theft of cacti has been a major problem for decades. As far back as 1980 there were news reports of an estimated 250,000 desert plants being illegally dug up and sold. The thefts are not only from federal land but also from private properties.

The Saguaro has not escaped major thefts in spite of being protected by state and federal law. One recent court case involved not only stealing the cacti but then exporting them to Austria. Thieves typically target plants that are about 40 years old and five to seven feet in height.

A fake Saguaro – soon to be completed

What has been done to try and reduce the numbers of stolen Saguaro?

The real thing

Simple identification tags, called passive integrative transponders, or PIT tags, are placed in the Saguaros' flesh. The PIT tags use the same technology that people use for their dogs and cats. They are preprogramed microchips encapsulated in glass or silicone, about the size and shape of a large grain of rice. Each tag has a unique code, but no battery or other way to store energy. Instead, if a special wand is waved over it, the wand sends enough power to the chip to turn it on and retrieve its code. This system is being used in the Saguaro National Park in Tucson, Arizona. However, with over 1.3 million Saguaros in the park they have only tagged those plants near the access roads that could be used by the thieves. This scheme also allows the authorities to check plant nurseries and private properties for stolen plants.

Fake cacti

For a number of years now you could have seen fake trees and Saguaro cacti along the roadsides in USA. Mainly they were put there as cell phone masts and disguised to make them more environmentally friendly.

Now the authorities have moved on a further step and are putting cameras into these fake cacti to check on vehicles against a database of stolen cars and of persons of police interest. One problem that has occurred with cameras like this is that they do suffer damage by persons firing bullets during the night.

Conclusion

In conclusion I would say that any new system introduced that protects the cacti from being destroyed and used for illegal profit is a necessary thing. Future generations should be able to enjoy these, and other, magnificent cacti in their natural habitats. ■

Photos: David Swinden

My Chilean diary 2015

by Angie Money

Paul (Klaassen) and I had an uneventful flight with Iberia to Santiago de Chile and arrived there after about 15 hours. Eventually we cleared immigration, customs and the control which stops you bringing any food and drink items into the country and made our way straight to Exit 4, where Andres and our hire car were waiting. Soon after we were off to Olmue to pick up Pablo Weisser who used to collect seeds with Hans Lembke for Friedrich Ritter. Paul met Pablo last year at the Australian Convention when the plan was hatched that he would join our three weeks in Chile this year.

Day 1 – 25 October

The first morning Pablo wanted to show us the house where Friedrich Ritter had lived and written the book *'Kakteen in Süd Amerika'* in 1973. He bought the land to build his house from Pablo's father. It was only a short drive, in the next *quebrada*, Cajon Grande. We had to park on the other side of a little stream and walked along until we thought we could cross safely. Pablo was sure he would be able to find the house, even though the trees were much higher than they were when he last saw the place. He very quickly crossed the stream and encouraged us to do the same. I was the unlucky second to try and ended up ankle deep in the water. Paul and I decided that we were going to wait at the car. After about an hour Pablo came back in a bright blue jeep, which turned out to belong to a neighbour of the current owner of Ritter's house, who had invited us all to come over for coffee and a piece of cake.

From left to right Pablo, Isabel, Angie and Paul outside Friedrich Ritter's house

The current owner, Isabel, and her son were very nice. She had kept some parts of the house as they had been when they bought it and showed us the photos she had taken before they moved in and extended the building. She also showed us the cacti Ritter had planted while he lived there and let us roam around the garden and take as many photos as we liked. It was an amazing afternoon!

Day 2 – 26 October

Today was a driving day, we hoped to get as far as Guanaqueros for the night. After booking into our *cabana* at Club Bahia, we had a rest. Later in the evening, we went to our favourite Restaurant 'El Pequeno'. We all had fish *lenguado* (flatfish), *palta* (avocado), *tomate* and *papas mayo* (potatoes and mayonnaise). The meals which turned up could have fed a big family.

Day 3 – 27 October

Mostly a driving day again, but also several cactus stops were made. Our aim was to reach Choros Bajos and stay there for three days, so that we could check

out the extent of the infestation of a non-endemic plant, *Cylindropuntia tunicata* (which comes from Mexico), and causes injuries to animals and people in the area. This was Pablo's project, which was sponsored by the BCSS.

Cylindropuntia tunicata and an endemic Alstroemeria

We managed to find a reasonably priced *cabana* and, while Pablo was chatting about what we wanted to do, the owner mentioned two goat herders who were having a lot of trouble with *Cylindropuntia tunicata*. She phoned them and they came and joined us for dinner that evening and a lively discussion ensued. Bory and Arnoloo then invited us to see their goats the next day; one of them would come with his car so that we could follow him to the farm.

Day 4 – 28 October

Punctually at 6.00am we were picked up and it was a bit of an adventure to follow two rear lights in total blackness. But we got there OK.

They provided lunch (goat's cheese and bread rolls which they warmed up over an open fire and tea or coffee) and then one of them showed us where the worst infestation of *Cylindropuntia tunicata* was. Of course there were lots of other cacti on the farm and the surrounding areas. The desert was really in flower in many places.

On the way back to Choros Bajos we encountered guanacos, a very noisy ground owl, wild donkeys and a fox which ran in front of our car, but we managed to miss him.

Day 5 – 29 October

Today was just a driving day to get us to Vallenar. We had lunch just outside the town, when Pablo (who also used to be a tour guide) got chatting to the man on the next table who was the owner of a hotel in town. Pablo managed to get us a good deal and it turned out to be very nice.

The desert in flower, mainly Calandrinias

Copiapoa dealbata (and me)

Day 6 – 30 October

The next morning we carried on to Taltal, through the Parque National Llanos de Challe to the coast road to Caldera. There were lots of bulbs, but nothing as spectacular as in 2010. We stopped when we reached the big *Copiapoa dealbata* clumps. I took loads of photos here. I recognised the spot and raced off to the biggest clump in the area, Paul and Pablo went a different way. So I took the first one of many selfies with me and the big clump.

When we reached Chanaral we decided to take the scenic route through the Parque National Pan de Azucar (sugar loaf hill). We managed to get as far as Caleta Pan de Azucar and then the road was closed. The first rain in 80 years in March and May and earthquakes had changed the scenery so much you would not have known that there ever was a road.

We drove back to Chanaral and took the fast option on Ruta 5 to Taltal, where we were planning to stay at least seven days. There is always lots to do and a good variety of cacti to see. We stayed in Hotel Plaza; they do an excellent breakfast and they have wi-fi.

Day 7 – 31 October

Today we went to Cifuncho, to see if 'Benji's Plant', a *Copiapoa* 'sp. Cifuncho', which looks very much like a *Copiapoa longistaminea*, had survived. When we arrived at the area behind Cifuncho village, Paul asked me to find the plant, as I had been able to find it more quickly than everybody else in the past. I looked around and thought that the plant had gone, as here the rains and earthquakes had also changed the landscape beyond recognition. I had nearly reached the ocean when I turned round and spotted it. We were all glad that it had survived.

After everyone had taken its photo, we drove to the other side of the bay, to see *Thelocephala weisseri*, a plant which had been named after Pablo. Unfortunately we could not find any. But there were *Copiapoa rupestris* in all sizes.

The last place to visit today was was Ritter's type locality of *Copiapoa columna-alba*. It was getting dark, so we just took a few photos and then returned to the hotel.

Copiapoa sp 'Cifuncho'
(This is very similar to C. longistaminea see page 18)

Copiapoa rupestris (C. taltalensis taltalensis)

Copiapoa columna-alba (C. cinerea columna-alba)

Copiapoa haseltoniana (C. cinerea haseltoniana)

Day 8 – 1 November

Pablo was having a rest day, so we decided that we would have a look at the area between Taltal and Paposo and further north from there. The weather was sunny which made a nice change, the *camanchaca* (sea fog) did not appear this morning. Our first stop was halfway between Taltal and Paposo where we saw *Copiapoa haseltoniana* growing very close to the sea.

It was quite difficult at times to take a decent photo, as the rain earlier in the year allowed so many more plants to grow and flower.

Our next stop was the shrine of the Madonna above Paposo. The view is fantastic up there. The only problem is the toilet paper which people leave behind the monument. After that you find *Copiapoa haseltoniana, Eulychnia saint-pieana, Copiapoa humilis* and *Eriosyce paucicostata*. It is not an easy terrain to walk in, especially as on either side it goes down hill. We found a few cacti in bud, but none in flower yet.

We carried on driving along the coast road to see if it might be possible to get to Caleta Botija in two days time or if parts of the road had been destroyed. We found very little damage and turned round after 50km. I was driving back as Paul wanted a rest. I had spotted on the way there some interesting rocks which stood out in the landscape because of their colour. This time I stopped there and had a look and found *Copiapoa haseltoniana* here again. It seems that this *Copiapoa* has very variable spine colours.

The *camanchaca* was coming in and I realised that there was a track and I could have driven all the way up to the rocks.

Eriosyce paucicostata

Copiapoa humilis

Copiapoa haseltoniana found on the group of rocks

The camanchaca approaches

Day 9 – 2 November

Today we had a very full programme; first on the list was Caleta Guanillos (the road signs had been changed to Huanilos, very confusing). At the seaside there is a grave where Alan Craig's ashes are buried. There is also a little fishing village nearby and the people there look after the grave. They were never asked to do this, they just started by themselves.

Alan Craig's grave

Paul pointed out that there was a seal on a big rock, so I left Pablo and Paul looking for *Thelocephala weisseri*, which we have never seen in flower here, or found more than one plant. I had never seen a seal in the wild, so both cameras at the ready, I went as close to the water as I dared. The waves were enormous, another thing I like to take photos of. The seal seemed to be watching me and promptly turned round and showed me its back. I moved too, and eventually I got a few photos.

Photographing Thelocephala weisseri

When I returned, Paul and Pablo were sitting next to Alan's grave chatting. I asked them, if they had found any thelocephalas? The answer was no. I looked at my feet and there was one in bud. They shook their heads, "how does she do it?" I took my photos and left them to take theirs.

Paul said, "Can you find one in flower please?" I walked around for a few minutes with my eyes down and there it was, one in flower.

Next was another part of Caleta Guanillos, to see *Copiapoa grandiflora* and *Copiapoa longistaminea*. Sometimes they even grow together.

On the way back, Paul asked me to put my photographic memory to use again to find *Copiapoa laui*. But I had great difficulties, as the rain had hit the valley quite badly and the scenery had changed dramatically. I was just going to admit defeat, after

Copiapoa laui (C. hypogaea laui)

about an hour, when I found the right spot, and there were more than I had ever seen before in this location.

Day 10 – 3 November

Today we drove to El Cobre and Caleta Botija. It was a pretty boring drive along the desert which leads to Ruta 5, but we turned off before then and went towards the coast. We stopped to take photos of the *camanchaca* coming up the valley. It seemed to be a new road, but unfortunately it changed back to rough track, where cars would have difficulties passing each other. By now we were in the *camanchaca* and could just see the road. Looking down in the valley was just grey fog.

Eventually we left the *camanchaca* behind us and got to the area where most of the *Copiapoa solaris* are dead or barely alive. There seemed to have been water damage in the area and some *Copiapoa solaris* showed signs of life. And a few wild flowers brightened up the scenery. We were glad when we saw the ocean, we knew we would soon be on the coast road then.

Wrong, we ended up in a dead end, a coastal settlement. Pablo went to have chat; the people were very friendly and offered us a cool drink. It turned out this was El Cobre. The mine had finished and was in the process of being dismantled, and this was now El Cobre village. They gave us instructions on how to get back on the coast road.

On the coast road we realised that many places had had a lot of water or earthquake damage, but the road had been repaired so that it was passable. Many places we did not recognise as, during repairs, the road had been moved closer to the hills. Because it had changed so much, we found another place where

Copiapoa solaris var *luteus* was growing. We had heard about it, but had never seen it, so we made a brief stop. Most plants did not look too happy but I thought I had found a really nice one. However, as I got up after taking a photo, I noticed that the plant did not have a live centre.

Copiapoa ahremephiana

We carried on towards Caleta Botija. Paul's Satnav said it was another 12km away and we knew then that there would not be time to walk in the *caleta*. As we arrived at the sign which said Caleta Botija, there was stunned silence. Botija is well known for its white beach and all we could see was black rocks and grey sand. Then Pablo spotted a *Copiapoa ahremephiana* and we knew this really was Botija. We spent 15 minutes taking photos and recording what we had seen, then we left to get back to Taltal before darkness.

We got caught in the dark on the coast road in 2010 with two cars. Luckily we had Florencia with us and she drove our car back to Taltal at breakneck speed, the second car had trouble keeping up. None of us wanted to try that again and we got back in good time.

Day 11 – 4 November

After yet another nice breakfast at Hotel Plaza, we left Taltal on the coast road. Pablo wanted to take some more photos of *Copiapoa cinerea*. A lone vulture was watching us, as we were taking our photos, so I took one of him too.

Our next stop was *Copiapoa desertorum*. Unfortunately a big digger was in the process of digging a deep hole along the length of the road, possibly for something the nearby mine needed. The gap was too wide for us to jump it, so I took some photos with my newer camera, which has a longer zoom, just for the record. We found some smaller clumps of *Copiapoa desertorum* on the other side and some nice *Copiapoa columna-alba*. It seemed that it had to be grasshopper breeding season, you could not move without seeing them jump out of our way in pairs. More photos were taken.

But Caleta Tigrillo was waiting and I was really looking forward to going there again, as I had been there only once before in 2003. I was hoping to find a *Copiapoa longistaminea (tigrillensis)* which I had taken a picture of then, and get an up-to-date photo of it. I was very surprised when we arrived at the end of the *caleta*, that it looked almost the same as it had in 2003. I was the first one out of the car and a few minutes later I had found the plant. Then I tried to get as many pictures as I could of the *Copiapoa longistaminea* in the area, in my opinion they are best looking *Copiapoa*. It is not easy to climb the rocks here, it is very crumbly granite and it's easy to slip. But it makes a nice background to the plants.

Next on our list for today was Las Maderas to see thousands of *Copiapoa columna-alba* from tiny seedlings to big plants, and we were in luck, some were in flower too. In between were some battered looking *Eulychnia saint-pieana*. At first we got out of the car, took a few pictures, back in the car, stop again and again, until we just left the car and spent about an hour taking lots of photos. It was almost too much. We could have stayed there all day.

Copiapoa longistaminea

Our last stop was just a quick one for *Thelocephala weisseri*. Unfortunately none had open flowers, just seedpods or closed up for the night.

We were totally exhausted when we arrived back at the hotel. ■

To be continued in the March issue

Photos:
Angie Money