

British Cactus & Succulent Society

Southampton & District Branch Newsletter

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Editorial	1
Announcements	1
Last Month's Meeting.....	1
Table Show Results	8
Books and things	8
New books in the library.....	9
Read All About It!	10
Branch Committee Meeting	10
Next Month's Meeting	10
Forthcoming Events.....	10

Editorial

Our clocks changed at the weekend and now it's dark at 5pm! I expect we will get to feel a frost quite soon. I may give the plants one last drink for the year, but that will depend on temperatures over the coming days. A few mesembs and Aloes are in flower at the moment, and I also have a *Clivia caulescens* which flowers at this time of the year.

Announcements

The **Annual Branch Dinner** will be held on Friday 18th November at The Luzborough Inn, which is situated between Romsey and North Baddesley – there is a map on the front table. Please contact David Neville for further details.

The **Zone 11 Quiz** is due to be hosted by Portsmouth branch on 19th November and we hope to form a team to defend the Mealy Bug trophy that we won last year – hopefully a few of you will consider attending the event to support our team! As usual, the hosts will provide free refreshments.

Nomination forms for the **branch committee for 2017** are on the front table – we do have a couple of vacancies at present, so if you like to join the branch committee, please discuss with Dot or David.

The first meeting in January 2017 will be a **members evening** – if you have some slides or plants that you want to talk about for a few minutes, please let David Neville know. David is also putting together the **programme** of meetings for **2017**, so if there are any topics or speakers you would like to see featured, let him know ASAP.

Next month is our AGM followed by a Christmas social – as usual, the branch will supply drinks, but we would appreciate people bringing along a **variety of food** to share with everyone. Please discuss with Glenn Finn. Also note that there will be no bran tub this year.

For **branch committee** members, I will want to publish your **annual reports** in next month's newsletter – so please send me your write ups sometime in November!

Last Month's Meeting

Mesembryanthemums

Terry Smale apologised for not having many mesembs amongst his sale plants - many of them had sold out at the MSG event a few days earlier. He was going to talk about the mesembs as a family, starting with the background to the establishment of the family and then he would show us some representative members. Although many of the pictures were from his collection or his trips to South Africa, some of the pictures were taken by Andy Young, who had visited Steve Hammer several times in California. Some were also from Chris Rodgerson and John Trager. If plants are difficult to grow or photograph in this country, then Andy had probably got him pictures of the plant from Steve's collection.

The mesembs are regarded as a plant family of mainly Southern African plants, along with a few outliers from other parts of the world. They have been put into the Aizoaceae - which has two main sections - the Mesembryanthemums which has nice plants in it and the Aizoaceae which has some horrible weeds in it, so it's really only one half of the family that we are interested in. The name was derived from mesembria which means midday and anthemon which means flower. Quite a few of the plants open their flowers in the middle of the day and then close them in the evening. Some of them last 1-4 weeks. As more plants were discovered, it was found that some species will open their flowers

early in the morning, some open at 4pm and others open the flowers at night and shut them at dawn. The night flowering ones tend to be scented since they need to attract insects when it is dark.

Plant families are grouped together into orders and the Caryophyllales (Carnation family) contains Cacti, Anacampserotaceae, Portulacaceae, and the Madagascan Didiereaceae, as well as the Aizoaceae. So it's interesting that some fairly distinct plants that we grow amongst our cacti and succulents are actually grouped together, in evolutionary terms. The earliest mesembs would have been introduced into the UK when the European countries started colonising South Africa. The Dutch East India Company established an outpost at the Cape to put food and water onto their boats which were travelling from Holland to the Dutch East Indies (Indonesia). So there was plant exploration in South Africa from the mid-1600s onwards and a whole range of mesembs got introduced into Europe. At that time, they were all called Mesembryanthemums - Carl Linnaeus had set up the genus Mesembryanthemum in 1752 and that was the only genus until 1921 when the genera began to be subdivided, and genera such as Lithops and Conophytum and Titanopsis etc. were set up by N E Brown (who was based at Kew) - others who contributed to this work included Louisa Bolus in Cape Town, and Germans such as Gustav Schwantes and Kurt Dinter.

Nearly all the mesembs are leaf succulents, so it's the leaves that have been modified to store water and allow the plants to survive through the dry period. This is different from cacti or most of the Euphorbiaceae, which are modified stems. A couple of mesembs do have thickened stems and a number have quite thick root stocks, almost like caudiciforms. The plants have a vast variety of plant forms. There are some annuals like the livingstone daisy, but most are perennial. There are mesembs several feet tall all the way to tiny plants which are only a few millimetres tall. So there's immense variety. It's worth pointing out that South Africa is a relatively small country and yet the vast majority of mesembs come from there.

Some of the species occur in very small areas of distribution. For some Conophytums, their entire population in habitat fits in an area half the size of our meeting hall! Because of this, some species are in danger - it would be very easy for unscrupulous collectors to remove the species in habitat - and other activities such as mining or agriculture pose a major threat. Right now there's a zinc mine being developed in Bushmanland on a hill called the

Gamsberg and the main colony of *Conophytum ratum* is found on that mountain. So a lot of these are very rare plants and are on the IUCN red list but none are in CITES, which is an indication that CITES is purely political and not related to how rare or endangered some of these plants are. Terry said he was pleased that they're not on CITES because it means they can be propagated in cultivation and can be distributed around the world, something which would be prevented by CITES.

A particular feature of most Mesembs is that they have hygrochastic seed capsules, i.e. they respond to water. There are only a couple of exceptions to this - *Carpobrotus* and *Apatesia*. *Carpobrotus* is seen near the seaside and some have even naturalised in this country in the South, with large cream or bright purple flowers - they have fleshy fruits which are supposedly edible, although he has not tried them. When he was young, he tried eating *Mammillaria* fruits and was sick within 2 hours so has not tried it again. Originally the seed capsule structure was seen as important for classification of the plants and *Tanquana* was separated from *Pleiospilos* for that reason. The most recent DNA work he has seen indicates that the capsule structure is not that important and perhaps *Tanquana* and *Pleiospilos* can be merged. A lot of mesembs are flowering at this time of the year and you can pollinate them and set some seed and form a green capsule and by summer next year it will have turned brown and become hard and dry. When they come in contact with moisture - in habitat this would occur after some rain - the capsule opens up. When the capsules dry up, they close again so if not all the seeds were washed out, the remainder are stored until the next rainstorm. This means the seeds are only released at the correct time, when there's a chance of them germinating due to moisture being present. We saw a *Dinternathus* capsule, the seed is tiny and Terry said he did a rough count and estimated that it contained 5000 seeds - the seed is dust like. For comparison, we also saw the capsule of *Khadia acutipetala* - this had a different number of seed chambers (called locules). Mesembs vary from 4 to 20 locules, and also in the extent of protection for the seeds. On one of the seed capsules he showed, there was a membrane on the locules and also some obstructions to slow down the release of the seeds. Terry mentioned that the speaker at the MSG event this year was Brian McDonough and he had shown time-lapse photography of the seed capsules which was rather interesting to see.

Cornelia Klak is curator of the Bolus Herbarium, at the University of Cape Town. She has analysed 2 pieces of DNA to try and create a family tree of the

mesembs and a Phylogenetic tree display of her results showed that the weedy plants in the Aizoaceae did separate out fairly well. If you come further down, there are two sub families of mesembs. With Mesembryanthemoideae, she did get some separation there, but the Ruschioideae was flat. The diagram showed the rate at which genes mutate is a feature of time and the fewer the mutations that take place, the more recently they diverged. Terry mentioned that the available data pointed to around 5 million years ago when the vast speciation of the mesembs occurred. This seems to coincide with a mediterranean climate establishing in the western part of South Africa. Cornelia is now using 10 different gene sequences, and getting some resolution at the generic level, but still very little at the species level. Her ongoing work is awaited with interest. There are around 1500 species in Ruschioideae and around 100 in the Mesembryanthemoideae, so altogether there are around 1600 known species.

A map of Southern Africa showed South Africa, Southern Namibia and Botswana and Terry said that the vast majority of mesembs grow in this area. Some of the Delospermas grow into East Africa through Somalia and one or two get all the way to the Yemen - *Delosperma harzianum* grows at several thousand feet in the Yemen. There are also a few distinct species in Australia and New Zealand. Some shrubby mesembs have naturalised in wide areas of the world and are now considered a weed in some cases - *Carpobrotus* in the Lizard Peninsula in Cornwall is smothering the native plants. On the map, some lines showed the areas which receive rain in the summer months as thunderstorms, and winters are dry. Nearer the west, there was a mediterranean climate established - think of Spain or Greece - the summers are hot and dry and the winters are mild and rainy - and plants prefer to grow in the winter months. The areas in between can get rain at any time and so plants at the transition tend to have maximum growth rates in the spring and autumn - they shut down in the summer when it's too hot and in winter when it's too cold. So when growing a mesemb, you need to figure out where it comes from and that will give you clues on whether to treat it as summer growing or winter growing plant. Terry mentioned that for each of his plant slides he had placed symbols on it to indicate whether the plant grew in the summer or winter. One rule he uses is that if the plants forms sheaths - like many of the Conophytums - it doesn't need watering in the summer, but if it has fleshy green leaves and these start shrivelling, then he will give it some water to prevent excessive shrivelling. With cacti, they respond to plenty of feeding - but a lot of

the mesembs don't appreciate it - they can grow out of character and even become more susceptible to pests and diseases. So he feeds his mesembs just once or twice during the growing season. With Conophytums he would feed in March since that's when they are building up new heads which will grow on in the following year.

His personal view is that mesembs don't like peat based composts. You can use it for short term cultivation of anything for a few months but that's about all. So he uses loam based composts such as John Innes No.2 or No.3 and adds in the same amount of grit, so his mix is 50% John Innes and 50% grit. He uses John Innes branded "Clover" which he can get from his local allotment society and that seems to work pretty well. In the past he's had some unfortunate issues with some of the big brands. He used to use Westland's John Innes but one bad batch killed the roots of many things he was growing. The grit he uses for the adult plants is a granite grit which is 4mm, so quite coarse. He doesn't repot very often, tending to do this every 3-4 years. When mesembs are in growth, they need good light, especially for the winter growing ones. In South Africa they would receive a lot more light then they will in the UK where the light is going to be especially poor for the winter growers. Some shade in the first months of spring as the sun intensifies is also advisable, to prevent leaf burns.

There's a lot of mesembs which can be propagated by cuttings, and as for any plant, if you take a cutting, try and take it early in the growing season, so in April for summer growers, and September/October for winter growers. Unlike cacti or euphorbias, there is no need to callous the stem - just put it in some moderately dry soil and after a few days water and off you go. There is no need for bottom heat either. He does use a finer grit for seed raising and for cuttings. The grit he likes to use Meadowview potting grit ECO - which is quite fine and very sharp - he gets good root systems when he mixes 50-60% of that grit in with 40-50% of John Innes. In the wild, seed of a winter growing plants will germinate in the autumn with falling temperatures, and high temperatures may inhibit germination - and for the summer growers, higher temps will be an impetus for the seeds to germinate. He mentioned when he sows mesemb seeds in the autumn, he gets a lot of losses, so he favours sowing in January, and uses a windowsill in the house. He now has a propagator which raises the temp by around 5°C, leading to temperatures of about 8°C at night and 15-20°C in the daytime - this seems to work fine for winter growers. For summer growers, you can use higher temperatures and he sows the

seed in April/May. Only keep the propagator vents closed until the seeds start germinating - let free air circulate after the seeds germinate, to prevent damping off - the approach of keeping a sealed container for months just doesn't work well for mesembs. Mesemb seed is very fine so sow just it on the surface of the soil, and keep the soil moist while the germination takes place. He dunks the pots in water once a week. He also mentioned the Mesemb Study Group (MSG) which issues 4 bulletins a year and has a decent seed distribution.

He proceeded to show some of the habitats, with 3 slides, all from the mediterranean areas. The rainfall gets lower as you go north of Cape Town - at Cape Town it's around 1m of rain in the winter. At Clanwilliam, you get 30-40cm in winter, and further north it can be as little as 10cm. The first area had reasonable rainfall and thick green vegetation with some metre high shrubs. The soil was sandy and the purple flowers in the picture were probably *Lampranthus*. The Afrikaans name for mesemb is vygie - so this terrain called the vygieveld. In the hills, the rocky outcrops are sandstone, (table mountain sandstone) and various small succulents grow amongst the rocks, including things like *Conophytums*. At Vanrhynsdorp, which is 160 miles north of Cape Town, this area used to be the mouth of the Orange River, so it is very low lying, and quite silty with a rock pavement of quartz pebbles. We saw the Knersvlakte at Quaggaskop. You can see a bit of green but when you look closely, you will see a lot of plants. The white quartz here reflects the light and helps to lower temperatures, and this helps to form a micro climate between the quartz pebbles. If you move on north to Namaqualand, the vegetation is called the hardeveld which is a very ancient metamorphosed granite 500 million years old - pressure has modified it to rock called gneiss - because it's so old, it has eroded and you get grit pockets and crevices and mesembs can grow in these spots. Winter rainfall here is around 20cm.

Starting with the primitive family the Mesembryanthemoideae - the shrubby mesemb *Aspazoma amplexans* is a monotypic genus which forms white flowers. He has not seen anyone in this country growing it, and not seen seed of it being distributed either. *Mesembryanthemum guerichianum* is a biennial plant - in the first year it forms a leaf rosette and in the second year it flowers. It can get to 2-3 feet tall when flowering. *Phyllobolus resurgens* has a caudex like growth. In the summer it is just a lump, and in the autumn it starts to form the leaves. The Octopus-like tentacles sitting there and then in spring the flowers appear at

the end of the shoots and then the stems die back. It is a good caudiciform plant. *Phyllobolus micans* doesn't have the caudex, but the stems still die back each year. A plant which was in *Phyllobolus* but has its own genus now is *Dactyloopsis digitata* - this means finger-like in 2 languages. The leaves grow in 2 pairs. In the summer the leaves shrivel up completely and you get a few resting buds. It is a common plant on the Knersvlakte but not in cultivation and he has not seen many grown in the UK, the picture was from Steve Hammer's collection. *Prenia sladeniana* is a plant that's perhaps best left in habitat. The leaves would be green and horrible in this country, but the overlapping curved leaves showed the variation of forms in the mesemb family. *Psilocaulon* contains a few stem succulents - this plant had small succulent leaves but the stems are thickened - it forms miserable little flowers on the ends of the stems. It is relatively common in South Africa but is hardly grown in the UK. With *Scelletium joubertii*, when the leaves are plump you can see the veins on the leaves, and when the leaf dries, the vascular bundles are still left on the dried remains - hence the name. A lot of mesembs contain alkaloids which are psychoactive (like *Lophophora*) and *Scelletium* is well known for this, and some of the Bushmen use these plants in the same way that the native Americans used peyote.

After break we moved to the bigger of the two main families in the Aizoaceae - the Ruschioideae. Terry said we would start with the annuals, then the taller shrubby ones and then work down to the miniature stemless mesembs. He recommended *Carpanthea pomeridiana* - sow the seed in the spring and plant them on a raised bed and it will flower for a long period in the summer months, producing yellow flowers with numerous thin petals. *Dorotheanthus bellidiformis* is the Livingstone daisy which is usually planted out in the summer - a lot of colour forms are available and it is also variable in the wild. Quite a few of these annuals have been lumped into an old genus called *Cleretum*.

Now for perennials. *Conicosia elongata* has quite a thick root system. In the summer months when dormant, it partly or wholly dies back to the root. It forms plenty of growth in the winter and then produces multi-petalled flowers in spring. He was given some seeds for the MSG and these were from Tresco Abbey Gardens on the Scilly Isles - they were being grown outdoors there. *Carpobrotus acinaciformis* grows in sandy coastal areas and it has spread around the world - he photographed a plant in North Eastern Greece. The stems can get to 6-8 feet long and it can smother other vegetation. It

is an attractive plant when in flower but is perhaps also a pernicious weed. *Lampranthus* is a big genus of shrubby mesembs – some can be 3 feet tall. *Lampranthus aurantiacus* can survive outside, especially in a cold frame. If given free root run it can grow really large. It smothers itself with flowers in the summer and they do most of their growing in the winter. *Antimima* was separated from *Ruschia* due to seed capsule structure, many are dwarf plants and we saw a small plant with lavender flowers which he found in the wild. At Giftberg, he found a little shrub which was 6 inches tall and which had ¼ inch leaves - he collected the seeds and raised a batch at home, where it went on to form purple flowers in spring. In the summer it stops growing and the leaves sheath over. There is similar behaviour with *Antimima fenestrata* - it doesn't grow more than an inch over ground level and in the summer the leaves sheath over. It grows on limestone. There is very little limestone in the western part of South Africa, but in south west of the Knersvlakte, there are soft limestone reefs which are outcrops sized 10-20ft and specialised plants grow on these. In Namibia, *Ruschianthus falcatus* is monotypic. It has scimitar shaped falcate leaves and yellow flowers. The stem is 6 inches tall, and it is very slow growing and the flowers last 3-4 weeks.

Delosperma is the most widely spread of the mesembs and it grows in the western part in the winter rainfall area, also in the summer rainfall areas and through to East Africa and Yemen. Some grow at high altitude, and plants are found at 2500m to 3000m in Lesotho's Black Mountains. The featured plant was labelled LEG 037 and after a lot of searching, Terry found this was a collection reference assigned by the "Lesotho expedition from Gothenberg". People have been hybridizing *Delosperma* with a view to creating cold tolerant plants. There was one that he has grown outside in the summer and in a cold frame in the winter. *Delosperma esterhuyseniae*, which is also a high altitude plant is grown in his greenhouse - the small plant flowers from March to October and it's a brilliant plant. It is named after Elsie Esterhuysen who was 4ft 10 tall - she spent many years studying the Proteaceae and other plants on the Cape Mountains and she collected a number of mesembs and worked at the Bolus Herbarium. The genus *Esterhuysenia* is named after her. *Delosperma spalmanthoides* was only discovered 25 years ago, growing next to a road at Komsberg pass - it flowers from March onwards. It doesn't do so well for Steve Hammer in California since it's too warm over there. The minimum temperature in habitat is -15°C and it's from a winter rainfall area. He tried growing it outdoors but it died.

Spectacular mounds of *Drosantheum speciosum* in flower were photographed at the Karoo Gardens in Worcester - they were part of their outside bedding scheme. Lots of *Drosantheum*s have glistening papillae on their leaves. *Drosantheum striatum* was one they grew in their garden - they took cuttings in autumn, kept these in the greenhouse over the winter, put them out at Easter and they grew very well in a raised bed. *Trichodiadema densum* has a hairy diadem at the end of the leaves. There are various growth forms and flower colours. *T. bulbosum* forms a nice caudex and can be raised from cuttings, but it takes a long time to form the caudex, and it might be quicker if grown from seed. Another one suitable for garden planting is *Trichodiadema decorum* - it has hardly any spine cluster. He takes cuttings in the autumn and plants them out in the spring. *Astridia herrei* is a slow growing mesemb and is found in the northern part of the winter rainfall area, in the Richtersveld and southern Namibia. It grows to 10-12 inches and produces a very nice show of red flowers. *Schlechteranthus* consists of only 2 species which are similar to each other - *Schlechteranthus maximilianii* was photographed in the Richtersveld. He grew it and it got to 5 inches after a long time, but it never flowered for him.

Now onto a group of mesembs which in each growing season produce 2 pairs of leaves but the pairs are different in the different seasons. *Monilaria obconica* has a resting pair of leaves which are almost globular and sheathed and in the autumn it produces a pair of elongated leaves which take it through the growing season. We saw a *Monilaria* flower which was white, but it also flowers in pink and red colours. This was taken at Steve's collection - it is almost impossible to flower in Europe. *Monilaria moniliformis* forms stems which look like chains of beads. *Mitrophyllum grande* also forms 2 different leaf pairs each year - the picture was taken in autumn and the new leaves were about to develop. It forms 3-4 inch long leaves which are the biggest and fattest leaf of any *Mitrophyllum*. When it flowers, a flowering shoot erupts and grows to 2 feet, this flowers and then dies away. It took 18 years to flower from seed in Steve's collection. Another one with big leaves is *Mitrophyllum mitratum*. When these flower, the flowering stalks stay there for a long time and continue to flower for a number of years, but it forms quite an ugly plant. He doubted whether anyone in the UK has flowered it. One *Mitrophyllum* which he did recommend highly was *M. abbreviatum* - the plant was 6 inches tall and wide - after reaching 5 years in age, it flowers every

spring, remains compact and is a reliable flowerer – it's the one to grow.

Oophytum also forms 2 distinct leaf pairs each year. He has kept a plant of *Oophytum nordenstamii* growing for 20 years but it looks horrible and has never flowered. It looks gorgeous in habitat in the quartz patches in the Knersvlakte where it colours up nicely. *Oophytum oviforme* in his collection is always green. There are just three species, the remaining one is *O. nanum* which is similar but smaller. It is very difficult to get a plant which looks good in this country, but in Steve Hammer's collection they look good. *Dracophilus proximus* and *Juttadinteria deserticola* are two related genera which grow in the Richtersveld and the southern part of Namibia. They form short stems, and are not difficult to grow or to flower. They form quite nice grey leaves but they won't attain the red colouring that you would see in habitat or Southern California. *Ebracteola* is a small genus of very short stemmed plants - they form little clusters 6 inches across. He has never grown *Ebracteola fulleri* - but it is always in flower in the wild when he has seen it, and he wondered whether it would be as floriferous in cultivation. The MSG have never offered seed of it. A plant which we had seen a glimpse of earlier with bright red flowers was now seen in habitat and the plant was more compact and had grey leaves - this was *Malephora crocea*. "Crocea" implies yellow - and the plant is found with both yellow flowered and red flowered variants. *Jensenobotrya lossowiana* is monotypic and only grows in one place - Dolphins Head in Southern Namibia, near Luderitz. It gets hardly any rain in the wild, but the area gets lots of fog coming in from the Atlantic Ocean. Grown in the greenhouse, the leaves get all wrinkled. In the wild, the growth rate is almost imperceptible - Ernst van Jaarsveld published some pictures of the same plant pictured 33 years apart and it had hardly grown in all that time. In cultivation, it flowers in the spring and the flowers last 3-4 weeks. It is a nice plant to grow.

Faucaria is popular but a lot of the material in general cultivation is either hybrid or has been grown to exaggerate certain characteristics. With *F. tuberculata* - the tubercles of plants in cultivation are exaggerated compared to what you would see in the wild. Some of the species are named after animals (likeness to animal teeth), e.g. *F. felina*, *F. lupina*. On the whole they are easy to grow. If given to Steve Hammer, they develop really reddish colouring in his growing conditions. A plant at the National Show was getting towards looking as good as that, Terry thought it might have been Trevor Wray's. He has seen *Faucaria* in habitat, and some

are green and others are more red, but he himself has never achieved colouring as good as that.

Glottiphyllum (some people unfortunately call them grottyphyllums) mostly have bright green leaves, and if you give them a lot of water, they get turgid. The best plant in the genus is *Glottiphyllum oligocarpum* which has grey leaves. Another Eastern Cape plant is *Bergeranthus leightoniae* which forms little tufted plants, which are no problem to grow. Moving on some of the night flowering plants, *Stomatium pyrodorum* has flowers which are pear scented. Many stomatiums are scented, with distinct scents. Titanopsis contains half a dozen species with leaves which are greyish or blueish grey, although *T. hugo-schlechteri* is brown. The patterns of pimples on the leaves varies from species to species. They are fairly easy to grow from seed and grows well for 5-8 years but then you find bits of the plant die off. So it's something you need to renew every 8-10 years. In the wild they only grow on limestone outcrops (calcrete outcrops), so they like a higher pH, but he hasn't done anything special as far as soil goes.

Aloinopsis were thought to be closely related to Titanopsis, but the DNA work by Cornelia Klak suggests otherwise. *Aloinopsis spathulata* has pink flowers and grows near the Astronomical observatory at Sutherland, at an altitude of around 1700m and it gets really cold in the winter. The best plant of it he's seen was grown by Gillian Evison who got it to a foot across - she kept it outside in the summer and put it into a cold greenhouse in the winter. So it does like to be grown quite cool. We saw *Vanheerdea primosii* - the genus is named about a school teacher in Springbok, Pieter van Heerde who did a lot of botanical exploration from Springbok. *Conophytum tantillum* ssp. *heleniae* is named after his wife Helena. It is a genus of 4-5 species most of which have elongated leaves but some do look like Lithops. We saw a picture from Steve Hammer's collection, they are not easy to grow. That statement also applies to *Didymaotus lapidiformis* which is monotypic - the flowers come in twos and grow from each side of the plant. The bodies have a beautiful red colouring in habitat, but they are green when grown in Europe. Nearly all mesemb flowers from the terminus of the shoot and the flower emerges from the centre of the plant. Here, the flowers come from 2 lateral buds (leaf axils). It grows in the Tanqua Karoo, alongside *Pleiospilos prismaticus* and *Lithops comptonii* and all three are rather difficult to grow in cultivation. The Tanqua Karoo is in the rain shadow of a mountain range and it is probably one of the driest

parts of the Western Cape, receiving no more than 10cm of rain per year.

Gibbaeums come from the little Karoo which is east of Cape Town. The little Karoo has lots of white quartz patches and the Gibbaeums grow in these patches. There are about a dozen species, and the easiest to grow and flower is *Gibbaeum petrense* which is a nice plant to grow in the greenhouse. We saw *Gibbaeum cryptopodium* in Steve Hammer's collection - in the wild, all you see is the very tops of the leaves which are slightly windowed - so the plant is buried in the soil and it absorbs a little bit of light from the top. *Gibbaeum neobrownii* (closely related to *G. johnstonii*) is slightly different - you can grow it and flower it - but it is very difficult to grow it without splitting the plant bodies. He grows it in a clay pot to try and avoid the splitting. There was a nice example in the National Show, again grown by Trevor Wray. Growing in the little Karoo (and hybridising with the Gibbaeums) is *Muiria hortenseae*. This is basically the ultimate spherical mesemb, with two leaves which are almost completely fused, with just a tiny fissure through which a flower can push its way. It is not at all easy to grow or flower. He has raised it from seed and got it up to 2 heads, but found it difficult to keep for any length of time. He hasn't flowered it but thinks Eddy Harris has. One successful grower of this from East Anglia said he put a pinch of table salt in the compost!

Vlokia ater is in a genus with just one species. It was discovered on the top of one of the mountains, not far from Cape Town. Discovered by Jan Vlok of Cape Nature Conservation. Ater means black and this is due to the colour of the old leaves. This is one of the few self-fertile mesembs and it will produce seed pods without needing to be pollinated by another plant. Another plant from the Little Karoo is *Cerochlamys pachyphylla* - the name means wax mantle - the leaves are covered with a waxy coating. The typical form has purple flowers - but this distinct colony has white flowers and the leaf shape is also a little different, so it's a good candidate for a subspecies. *Bijlia* has only three species - *Bijlia tugwelliae* forms plants 6 inches across - it flowers a lot of the time and produces a succession of yellow flowers. The other species are *B. cana* and *B. dilatatus*. *Nelia* contains just 2 species and grows in the Richtersveld. Steve Hammer has found it very difficult to pollinate - apparently there is a lot of nectar in the flowers which "gums up the works" and as a result, there is very little seed around. The flowers open and stay open. He had received an article to review for *Bradleya* about this but didn't

understand a word of it - it had been translated from German!

Psammophora consists of half a dozen species, most of which are compact. The name means bearing sand and the glistening thing you see on the leaf surface is actually sticky glue. Particles of sand sticks to the leaves and acts as a sun screen. *Cheiridopsis* is a big genus of winter growing plants and almost all have yellow flowers, although *Cheiridopsis purpurea* has purple flowers. They are easy to grow, but not the easiest to flower. *Cheiridopsis peculiaris* does flower regularly for him, and we saw it growing in the wild - the big flat leaves resemble the Nama shale that it grows in. If you cultivate it, the grey-green leaves can acquire a red tinge in the spring. They have 2 types of leaves, like the *Mitrophyllum* plants. So it forms two leaf pairs each year and they are different. *Cheiridopsis umbrosa* may be impacted in the wild due to road widening. It has two very different leaves, and was discovered in the year 2000. On a trip, he saw clumps of "barnacles" growing on the rocks, and it turned out to be this plant. The plants look quite different in the summer resting phase and the winter growing phase with the longer leaves. The plants grow in crevices in the shade and form long peduncles, they are easy to flower in the UK, perhaps its preference to grow in the shade better adapts it for our winters.

Odontophorus is closely related to *Cheiridopsis*. They have lumpy growths at the ends of the leaves. *O. herrei* is compact, some of the others spread out. *Cephalophyllum fullerii* is a compact plant which he has grown and flowered in his greenhouse - it is suitable for cultivation. *Ihlenfeldtia* was separated from *Cheiridopsis* on the basis of capsule structure but recent DNA analysis suggests it could be put back, and we saw *Ihlenfeldtia van zylii*, which is one of two species in the genus.

Fenestraria rhopalophylla ssp. *aurantiaca* in the wild grows in sandy areas, with just the leaf tips visible. In the north of its range it has white flowers, in the middle yellow flowers and in the south, orange flowers. *Conophytum* are his favourites and he showed a couple of examples - *Conophytum minusculum* is day flowering and *Conophytum obcordellum* "spectabile" is scented and night flowering. Some of the patterned forms fetch hundreds of pounds on Ebay. *Argyroderma delaetii* grows in large numbers in the Knersvlakte covered with these. In one colony he saw plants with either purple or yellow flowers, but also a few red-flowered plants. *Diplosoma retroversum* is impossible to grow in the UK, so the picture was

one of Steve Hammer's plants. In the summer it dries back to a resting bud, in the winter it forms leaves and flowers. The genus only contains two species. Schwantesia is closely related to Lithops but it has more elongated leaves. Lithops is of course well known, and the named cultivars are very popular. The patterned cultivars are difficult to establish, but the coloured cultivars are easily grown from seed. The flowers are either yellow or white, but there are some variations around, including yellow flowers with a white centre and also pink. Some of the plants he showed included *L. dorotheae*, *L. optica*, *L. salicola*, and *Lithops gracilidelineata* "Café au Lait" and *L. bromfieldii*.

Dinteranthus microspermus ssp. *puberlus* mostly grows in Bushmanland and adjoining areas. A plant in cultivation was quite large - they rarely get to that size in the wild. He has only seen yellow flowered ones in the wild, but in cultivation there are some white flowers and also white with pink tips. With *Lapidaria margaretae* the leaf pairs are persistent and they remain on the plant for 3-4 years, so you get stacking of the leaves. *Pleiospilos simulans* is mainly summer growing. *P. nelli* is greyish green with orange flowers but there's a cultivar called "Royal Flush" with purple flowers where the colour also spreads into the leaves. Tanquana consists of just three species - and we saw an exceptional form of *T. hilmari* with purple leaves. *Tanquana archeri* is not so easy to grow, but it is growable in the UK.

Frithia differs from all other species of mesembs in that the leaves emerge one at a time in a spiral rosette, whereas other mesembs produce leaves in pairs and each pair at 90 degrees to the previous set of leaves. If you raise Frithia from seed, it is easier to see the spiral pattern. The genus contains 2 species - the larger one is *Frithia pulchra* with purple flowers and it has been known for a long time. The newer plant is *Frithia humilis*, which has much smaller leaves and has white or white pink flowers. They are found in the mountains near Pretoria and are summer growing plants.

Vinay Shah

Table Show Results

There were 19 entries in the October table show, and 6 entries for "Plants in Flower".

	Cacti – Echinocereus	Succulents – Lithops
Open	(1) B Beckerleg <i>Echinocereus brandegeei</i>	(1) B Beckerleg <i>Lithops dorotheae</i>
	(2) T Smith <i>Echinocereus</i> sp.	(2) T Smith <i>Lithops aucampiae</i>
	(3) -	(3) I Biddlecombe <i>L. bromfieldii mennellii</i>
Intermediate	(1) B Beckerleg <i>Echinocereus rigidissimus</i>	(1) G Penrose <i>Lithops coleorum</i>
	(2) -	(2) B Beckerleg <i>Lithops aucampiae</i>
	(3) -	(3) I Biddlecombe <i>Lithops dorotheae</i>

Cacti/Succulent in Flower
(1) T Radford <i>Ceropegia ampliata</i>
(2) B Beckerleg <i>Glottiphyllum oligocarpum</i>
(3) G Penrose <i>Conophytum herreanthus</i>

Ivor Biddlecombe

Books and things

The Autumn Equinox has come and gone, the clocks have gone back, Halloween is over (thank goodness!), ash tree leaves are piling up on my small lawn, and plants in the garden are looking decidedly past their sell-by date, except for *Cyclamen hederifolium*, *Schizostylis coccinea* 'Fenland Daybreak', which we should now call a *Hesperantha*, and *Erysimum* 'Bowles Mauve', which has been attracting butterflies all summer. In what I grandly call the conservatory, few cacti and succulents are still in flower, apart from some Aloes and my *Cleistocactus colademononis*, which seems to produce a few of its bright red flowers every few weeks without stopping. If it keeps going, perhaps it will be the new Christmas Cactus. (Oops, sorry, I didn't mean to mention Christmas!)

But my Lachenalias, Nerines, Veltheimias and other South African bulbs are bursting into life, and

hopefully will brighten up the place during the winter. I will always be grateful to Margaret Corina for introducing me to these lovely plants, which fill the winter gap while the succulents are not doing very much. Another way to fill the dark winter evenings is to read books of course, which brings me to ...

... the Branch Library, which I haven't written anything about since I inherited (if that's the right word) the role of Librarian from Sue Wilson, who left the branch earlier in the year when she moved to the Isle of Wight. (The Isle of Wight? That's not far, I had to get a job in Cardiff in order to escape from being Secretary!) Be that as it may, many thanks to Sue for her work maintaining the branch library, managing loans and, of course, writing her "Bookworm Corner" column in the Newsletter.

Given the disappearance of effective but dangerous pesticides from our garden centres in the interests of health and safety, I decided not to invite any bookworms back into the newsletter. Also, I won't be able to keep you posted on what any local sparrowhawks are having for breakfast. So, although I don't have a very satisfactory title for this column, it will be about cactus and succulent-related books in general and the branch library in particular, but also anything else which catches my attention and that I want to share. An example of the latter, also connected with elf and safety, comes from a review of a (non-cactus-related) book that I glanced at the other day. The review noted that in the book there are references to "many grand houses, such as Lord Berners' Faringdon, where a tower bore a notice: 'Members of the Public committing suicide from the tower do so at their own risk'."

I claim no special skills, experience or expertise for writing this column, so if you have anything to say about books and related topics, send a note to Vinay to include in the branch newsletter. If you're reticent about doing that, or you have only a sentence or two (or are worried that your sentences might not be grammatically or politically correct), send them to me instead.

New books in the library

We have obtained several new books for the branch library during this year, which are available for you to borrow. These include the recently published volumes:

- "**Small Opuntias**" by John Pilbeam & Michael Partridge (2016), John Pilbeam (publisher), 136pp. ISBN 978 0 902099 41 8. As the title suggests, this covers small species of *Austrocylindropuntia*, *Corynopuntia*, *Cumulopuntia*, *Cylindropuntia*, *Grusonia*,

Maihuenia, *Maihueniopsis*, *Miqueliopuntia*, *Opuntia* (yes, really), *Pterocactus*, *Punotia* (a suspected anagram!), *Tephrocactus* and *Tunilla*. Some of the species included are not all that small, e.g. *O. basilaris* and *O. rufida*, but most of them should be happy in small pots. Lots of colour photos in habitat and cultivation, with distribution maps, cultural hints, etc.

- "**Cacti & succulents of Baja California**" by John Pilbeam (2015), BCSS (publisher), 233pp. ISBN 978 0 902099 98 2. Divided into section for each area of interest, with a brief description of the area followed by lots of excellent photographs.

Busy chap, John Pilbeam, including publishing his own book! And also:

- "**Austrocactus 2015**" by Elisabeth & Norbert Sarnes (2015), published by the authors as Cactus-de-Patagonia.de, 124pp. ISBN 978-3-00-050107-4 This book was donated to the branch library by Martin and Anna-Liisa Sheader. If, like me, you aren't too sure what an *Austrocactus* is, they appear to be related to the taller genera *Eulychnia* and *Corryocactus*. The book has lots of colour photos of plants in habitat, detailed text about each species, useful notes on cultivation and an identification chart at the back, should you happen to have an unidentified *Austrocactus* lurking among your collection of plants or photos.

We have also acquired copies of the following older but still useful books:

- "**The Complete Encyclopedia of Succulents**" by Zdeněk Ježek & Libor Kunte (2005), Rebo Publishers, 303pp. ISBN 90 366 1705 7. Sounds like another beginner's introduction, but in fact it has good coverage of species, with a photo and a paragraph (in quite small print) about each one, from a large number of families containing succulent plants, including some which you might not have come across, except perhaps in the BCSS "Guide to Shows". Anacardiaceae, anyone? The book may lack the expansive feel of the recent Pilbeam books, but there is a lot of information here. Some plants are included whose claim to be succulent is debatable, such as *Haemanthus*, *Cycas* and *Pinguicula*, but you will find their inclusion interesting. There is only token coverage of the Cactaceae, so space is not wasted duplicating stuff found in the plethora of cactus books.
- "**Agaves, Yuccas, and Related Plants: A Gardener's Guide**" by Mary & Gary Irish (2000), Timber Press, 312pp. ISBN 0-88192-442-3. Although there are more than 100 colour photos, the main value of this book is its informative text, both about the plants in general and individual species, with cultural notes on each. Also includes the genera *Hesperaloe*,

Furcraea, Manfreda, Beschorneria, Polianthes, Nolina, Dasylyrion, Beaucarnea and Calibanus.

The ISBN numbers are shown exactly as printed in the books. A wonderful thing is standardisation!

Read All About It!

Our speaker for today's meeting is Alice Vanden Bon, "technical editor" of the BCSS, who had a hand in the two Pilbeam books mentioned above, apparently being responsible with John for their "origination". No, I don't know what that means either – we could always ask her. Anyway, her talk is entitled "South Africa First Class" which, given her range of interests and the huge number and diversity of plant species in South Africa, doesn't give me much of a clue as to which books from our library you might want to read in relation to her talk. But we do have Doreen Court's "**Succulent Flora of Southern Africa**" which, although published in 1985 and now superseded by a newer edition, should cover a lot of what she will talk about. We also have several books on *Aloe*, *Crassula*, *Gasteria*, *Haworthia* and mesembs, including books by Steve Hammer and others on the popular genera *Lithops* and *Conophytum*.

Remember that any branch member can borrow one or more books from the branch library, on a monthly basis. We charge a mere 20p per book per month, at present, so you can improve your knowledge and health by borrowing two books instead of buying a cake. (I'm sure Glenn would prefer that you did both.) Normally I collect the 20p "up front" when you borrow the book. If you forget to return it the following month, you will be asked to pay another 20p per month for every additional month that you keep the book, except for months such as December when there is no library. If you work out that you can save money by not buying an expensive book, and instead "borrowing" it from the library in perpetuity, while investing the cash saved in order to

pay your library dues, I shall get very cross. So far, only the Treasurer has thought of doing this (only joking, Alice!)

Richard White

Branch Committee Meeting

A committee meeting was held at Dot's on 12th October.

The annual accounts are ready to pass on to our auditors. Alice mentioned that we seemed to have made a small profit for the year.

Recent meetings and events were discussed, as were plans for the Branch Dinner, the Zone Quiz and the AGM and the Christmas Social.

David has started thinking about the Branch programme for 2017 and hopes to have this finalised in time for the December meeting.

Vinay Shah

Next Month's Meeting

Our final meeting of the year will be held on December 6th. This will be our **Annual General Meeting** followed by the **Christmas Social**.

After receiving reports from branch officers, it will be time for some food and refreshments! Drinks will be provided by the branch, but please do bring along some items of food for the buffet table.

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.

Forthcoming Events

Sat 12 th Nov	Isle of Wight	Czech Collections (David Neville)
Fri 18 th Nov	Southampton	Branch Dinner - Luzborough Inn SO51 9AA, 7pm for 7:30 start
Sat 19 th Nov	Portsmouth	Zone 11 Annual Quiz – hosted by Portsmouth Branch
Tue 6 th Dec	Southampton	Annual General Meeting, followed by Christmas Social
Sat 10 th Dec	Isle of Wight	Annual General Meeting followed by American Supper
Sat 10 th Dec	Portsmouth	Annual General Meeting & Christmas Social

Branch website: <http://www.southampton.bcsc.org.uk>
 Facebook : <https://www.facebook.com/southamptonbcsc>