



**MANCHESTER  
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NEWSLETTER**

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## Growing Cacti and Succulents from seed by Christopher Leather

I've always grown cacti from seed. Some periods have been more successful than others, but there are always new plants being grown. Back in 2010 I decided to grow more seed to try and sell the seedlings (and raise a bit of money for charity in the process). I did quite well with those, most being from eBay or Joel Lode and only genera named. A few Cactus World Forum seed pool seedlings made it, plus a few from the BCSS seed list and from the Succeed website.



*Two very early shots of my seeding plants.*



*Both from the late 1990's*

My method has more or less been the same for quite some time. John Innes compost in 6cm pots, stood in boiling water, then when cooled seeds sown and then the pots put in either a propagator or a plastic bag. Those then being placed on the upstairs window sills. My bedroom window sill would have four propagators on it, with larger seedlings in trays on top. The spare bedroom window sill fits two propagators and two trays.

With the new greenhouse due I decided to not to grow any seeds for a while to try and clear the seedling backlog a little bit and then have a fresh start, in the greenhouse, in early 2015. There had been some concern in my mind that it wasn't perhaps the best thing to have wet soil in bedrooms either, especially if in unsealed propagators.

Having a made a decision to have a completely fresh start I looked at what the seeds were sown in. By far my best mixture has been compost mixed with the gravel out of the bottom of either our or my Grandfather's fish tanks. I don't know why, but seeds came up really well in that mix. Other mixes included just John Innes compost, which was OK, but tended to remain very soggy, or a 50% mix of John Innes and grit which tended to dry out. I did try a couple of pots of 100% cat litter and that was either soaking wet or bone dry.

So over Christmas 2014 I cleared my bedroom windowsill of all the seedlings still on the go. Some went on the back bedroom window sill, other bigger ones went to the greenhouse. That then presented a problem because the seed trays and propagators had created a little screen to the outside world and it felt as though people outside could see in to my room. To combat that feeling I got a metal wardrobe pole and put a small black curtain on it that is about 18 inches high. That stopped the feeling of being observed, plus it's not visible so much from outside.

The plan was then to sow seeds in 2¾" pots, in bags, in the greenhouse when the weather warmed up. But you know I've always had seeds growing on my window sill..... So early February saw me sowing a few of my own remaining seeds so that I could have a few pots on my bedroom window sill – they were behind the little curtain, so they weren't noticeable.

Early March the weather seemed to be improving so I started thinking about sowing. The mix would be a 33% combination of seed compost, perlite and cat litter. I mixed up loads and loads and put it in bags in the greenhouse ready for use as and when. The left hand side of the bottom tier was going to be used (10 foot long), but of course I realised it would take a while to fill that with pots of seed/seedlings, so the plan was to fill it slowly.

I'd got some seeds from Succeed and the BCSS seed list, from some plants I'd bought from Uhligs (Fraileas) and my own remaining seed stocks. The first seed to be sown was my own seed, followed by the Uhlig seed (i.e. the free stuff first), followed by the Succeed. The BCSS seed was held back at first. They all went in the Greenhouse in bags. Great – everything sown by mid March – lots of seedlings coming up early April – lots of seedlings to pot on later in the year.....

Or so I thought. What happened to make it go wrong I do not know. They might have been too hot or too cold, too wet or too dry, or a combination of all four. The germination rate was a disaster! After over a month practically nothing had come up. Checking the bags some seemed very dry, so I opened them all to check, re-soaked them and then put them in propagators. That did seem to help germination, but not much.

In the end I took the decision to pull out all those pots with seedlings in, re-bag them and keep them on my bedroom window sill. That seemed to help and I probably rescued half the pots. The other pots seemed to have become infested with moss and algae, from being too wet. I think there were at least three different varieties of moss. I am thinking of joining the British Bryological Society and attempt to grow some *on purpose*. It is sure to be a disaster, and will help the cacti seeds no end.....

*A couple of pictures of the seedlings growing on the window sill at present*



The BCSS seed was sown and put in bags on the back bedroom window sill, which also germinated poorly. They were also sown in a slightly different mix, being 50% mix of compost and cat litter. I think this is a much better mix than my first 33% mix which included too much perlite (which I've never really liked anyway). Over the summer I've sown some more *Frailea* seed in the 50% mix and put them in the other front bedroom window sill in a propagator. Those seem to be quite happy at the moment. My bedroom window sill has about 40 pots on it and there a quite a lot of nice looking seedlings in them.

Hopefully I will get some nice plants out of them. One thing I have done this year is label all the pots with the Brother 1230-PC labeller. The old system was to label them with a number which is matched to a list. Sometimes the label faded or got mixed up. Eventually I want to be able to carry the seed label right through to the sales trays. It's good to know when you are buying plants when they were sown, and where the seed has come from.

So what's the plan for 2016. Well, I'm not sowing seeds in the greenhouse. There won't be room because some of the 2015 seedlings will need potting up into quarter trays. I'm not going to put them straight into separate pots as I think they will benefit a further spell in a community pot. Those trays will go where the seeds went last time.

Once those pots have moved I'm going to sow the 2016 seeds. I'm going to put those in 2" pots, rather than 2 3/4", as I want to get as many pots on my bedroom windowsill as possible. I've not decided if I'm going to use bags or propagators yet. Bags are probably better as there is no wasted space. What I'll order I don't know yet. Probably mostly cacti, but no doubt there will be a few succulents in there too.

Funny isn't it. The system that always worked in the past (my bedroom window sill) turned out to be the best place after all. I think they like the east facing window, plus the little curtain behind them is probably helping with controlling the temperature a bit.

## Events of note this year

By Peter Bint

Our July meeting will be different from normal in so far as the evening will have two short talks rather than a single talk. Our speaker, Rob Stevenson, has proved popular and his talks are enjoyable. He will almost certainly have plants for sale. The previous Saturday, July 2nd, will see a few of us venturing on a trip with a difference. Following last year's successful trip to see Rob's collection, which includes the National Collection of Turbinicarpus, an Alpine Nursery and Williams Cactus it was suggested we try something similar this year. After seeing Mike Stansbie's personal collection in the journal article 'In My Greenhouse' it was decided to ask if we might visit. Mike agreed and another society member, Tina Wardhaugh from Milton Keynes, also agreed to allow us to visit. Thus far only 9 people have accepted the chance but anybody thinking they might enjoy such a visit can join the party provided I know by Sunday June 19th.

August will also be a two event month with Brendan Burke, our ex Manchester member returning to give us the talk first planned for two year's ago 'Snow, Rain and Penguins' but which was hijacked by the Northern Area Weekend. The following weekend sees the once every 4 years National Show. If you want to see some spectacular plants then this is a show not to be missed. The only sad thing about this show is the fact it is a one day show only but it has been proved that competitors are not willing to bring their plants to a show ranged over two or more days because of the travelling required. Set, as it is, in the vicinity of Huntingdon it is not one of the easiest places to reach as it is not close to any motorway. However there are very few affordable venues capable of hosting such an event in the country. As I have been announcing for a few months we will arrange a coach if enough members are interested in going. In addition to the show the venue also houses the sales area. There will be sellers attending you will only see on such an occasion, people from abroad, from the south of England who do not come to our mart as well as all the well known names.

September is special. Len Newton is well known as a name to many members but he has been unavailable to talk to branches until this year as he worked at Nairobi University for many years. He has travelled through many of the African nations and is second to none for his knowledge and expertise. This is not a meeting to miss so make sure you are able to come.

Finally we come to October and the Mesemb Show. Not only is this a memorable event for plants on display but we have the renowned traveller who visits South Africa whenever he can, Derek Tribble, who will be giving the talk on that day. This is another show that deserves wider interest from members because you won't see the array of mesembs at the National Show that will be on display at our show. Our show is the only mesemb show in the whole country that is an annual event and there are some superb plants for people to see in addition to the many plants on sale. The show is open from 10.30am but if you only want to see the talk 'South Africa 2014—the Northern Cape' then that begins at 2pm.

*Two examples of plants at the 2015 show*



### Are you short of space?

#### Plants to grow if you want to have many in a small space.

Greenhouse space is a constant source of discussion if you don't have much space. Actually it doesn't matter how small or big your greenhouse is because plants grow, need repotting and cause space to decrease. It is a problem dealing with such a conundrum simply because the pride achieved in growing plants to maturity is a worthy cause. Many years ago there was a member of Manchester Branch, Bill Rowlett, who would never grow his plants any bigger than a 4 inch pot. If they needed to be in a bigger pot he would sell the plant and grow a new one. Luckily he both enjoyed growing from seed and was extremely successful. So there is method one of keeping your plants small. I grow from seed annually, can't stop myself, but there are the spare seedlings to deal with. That is why I like to put a few small plants together as a raffle prize; it helps reduce the excess seedlings.

Method two, the main reason for this article, is to list plants that are naturally small in nature. It has to be remembered that when we grow even small plants in our greenhouses they will exceed the size they reach in habitat because we provide unnatural surroundings where they are protected from natural conditions. Apart from the occasional nuisance in the form of snails, slugs and mice plants are protected from other animal predators who enjoy a nibble of truly succulent plants. There are other natural conditions which control size in habitat as well, mainly connected with weather and temperature, sun strength and wind.

**REBUTIA.** Here we need to consider those plants that fall into the group once known as *Digitorebutia* because their bodies are finger-like. In habitat they will not grow any bigger than your thumb, offsetting only very sparsely. In the greenhouse they will eventually achieve a four inch pot in size but only after many years. There used to be a proliferation of names, they still exist on labels, but there are now just a few highly variable species. *R. pygmaea*, *ritteri*, *einsteinii*, *albipectinata* and *steinannii* are the main names but you will find them listed as *R. atrovirens*, *brachyantha*, *brunescens*, *brunneoradicata*, *carmeniana*, *christinae*, *cincinnata*, *colorea*, *crassa*, *diersiana*, *eos*, *euanthema*, *eucaliptana*, *friedrichiana*, *froehlichiana*, *gavazzii*, *gonjiani*, *gracilispina*, *haagei*, *huasiensis*, *iridescens*, *iscayachensis*, *knizei*, *lanosiflora*, *leucanthema*, *mixta*, *mixticolor*, *mudanensis*, *nigricans*, *odontopetala*, *orurensis*, *pallida*, *pauciarerolata*, *paucicosta*, *polymorpha*, *potosina*, *raulii*, *rauschii*, *rosalbiflora*, *rutiliflora*, *salpingantha*, *schatzliana*, *supthutiana*, *torquata*, *tropaeoliptica*, *violascens*, *yuquinensis* and *zecheri*. I have grown a great many of these forms I have just listed and the only difference is in flower colour for the majority of them. They do provide a huge range which is impressive when they are in full flower, often completely hiding the body of the plant. I would also include anything with the name *R. heliosa* attached to it as worth growing as a small plant as they too are slow growing attaining a girth of 4 inches after many, many years.



*Two examples of plants from this group*

**FRAILEA.** These are not seen on the sales tables often enough. They are incredibly slow growing and you will do well to grow them bigger than a 2.75 inch square pot so tiny are they. They fall into two groups, those that are globular and those that are short cylindrical.

Globular: *F. castanea*, *cataphracta*, *chiquitana*, *phaeodisca*, *pumila*, *schilinzkyana*.

Columnar: *F. buenekeri*, *gracillima*, *mammifera*, *pygmaea*.

There are other names to be found in literature but they are related to those named above. When we say cylindrical do not expect plants in excess of 3 inches in height. Some of the plants will form small

clumps with age but will still fit in that 2.75 inch pot. The only problem I have experienced is getting them to open their flowers. They set buds easily but the right conditions to get them to open are not fully understood. It may well have something to do with humidity and sunlight. They do not open before noon and when they do open they are greater in diameter than the actual plant and a pale yellow in colour. Whether they open or not they will still produce seed in a process known as cleistogamy.



*Two species of Frailea; on the left F. castanea and on the right F. phaeodisca*

**ECHINOCEREUS.** There are only four species in this genus that remain small. They come from section 5 of the genus, the section actually called Echinocereus. They are *E. viridiflorus*, *knippelianus*, *mapimiensis* and *russanthus*. The first two are the easiest to find and flower. In *E. viridiflorus* the flowers, as the name suggests, have a green tinge to them and in *E. knippelianus* they are pink. There are two forms of this species, one which flowers from the crown and the other from lower down the ribs.

*On the left E. knippelianus showing flowering from the crown and green flowered E viridiflorus on the right*



**GEOHINTONIA.** This is one of the more recent discoveries from Mexico and it currently has only one species in the genus, namely *Geohintonia mexicana*. As with all newly discovered species it takes some time for them to become available to the ordinary collector and when they do appear they are usually grafted to help them to grow more quickly and became more available. It is a very slow growing plant and on its own roots it will take years to attain its full size. By growing this plant you will have an easily manageable plant taking little space for a long time. The flowers are small, about 3cm across, but deep pink. The body is bluish and the spines soon disappear from the older areoles.

**GYMNOCALYCIUM.** This is a large genus with plants that are very small through to some that are large. It is the small ones I will concentrate on. Nearly all the plants in the genus are easy to grow and will withstand cold when dry. Suitable plants for small pots are as follows: *G. andreae*, *bodenbenderianum*, *denudatum*, *kroenleinii*, *neuhuberi*, *ragonesii*, *schroederianum*, *stellatum* and *taningaense* are all very small growing in habitat

and, though they may grow a little bigger in the greenhouse, they are still miniature. *G. andreae* will offset quite readily but even then it does not make a large specimen with age. If you want to keep it very small remove some offsets when it gets bigger than you want. All the plants mentioned are slow growing and there are no rapid growers, even among those that do attain a greater size. I have a specimen of *G. valniceckianum* which I have grown from seed around 1985 or so which is now in a 10 inch pot and is not likely to grow any wider though it will grow a bit taller.



*Two pictures of a ten year old grafted Geohintonia mexicana. Ungrafted it would take 15+ years to reach this size*



*Gymnocalycium ragonessii*



*Gymnocalycium andreae*

**LOPHOPHORA.** There are currently three recognised forms of *Lophophora*, *diffusa*, *fricii* and *williamsii*. Normally the bodies remain single but in cultivation it is not unknown for plants to offset. There is one form, originally known as *L. caespitosa*, which would produce multitudinous small heads, which is rarely seen today. The three named above are all small growing as well as being very slow to attain any reasonable size but they flower from a very young age with either pink or white flowers according to species. Grown in good light on a high shelf they will become very woolly in the crown and make splendid plants. In small pots and growing in an open compost they enjoy plenty of water in sunny spells in summer.

*Images of various Lophophora species*



**MILA.** This has always been a small genus from Peru but in recent times it has been reduced to a single species *M. caespitosa* with a second subspecies *M. caespitosa* ssp *pugionifera*. It is incredibly slow growing and though its name alludes to the fact it offsets I have never grown one bigger than a four inch pot. You will still see plants with the previously known names *M. colorea* and *nealeana* but they are much of a muchness. They have bright yellow flowers when they see fit to flower and enjoy being in the open air in summer when they are more likely to flower. Being from Andean habitat they withstand cold in winter when dry.



*Pictures showing the flowers and how strong the spines can get*

**PYGMAEOCEREUS.** The name says everything. Even though they belong to the *Cereus* group they are the pygmies remaining tiny throughout their lives. They do need a little heat in winter because they grow naturally low in the Andes in Peru not too far from the coast. Two species are currently recognised *P. bieblii* and *bylesianus* though you may come across *P. rowleyanus*. The plants consist of a number of very short columnar stems reaching no more than 6 inches in height. I have had a couple of specimens for many years and they are in no bigger than 3.5 inch pots. They will flower at a small size with whitish, quite large flowers for the size of plant.



*The upper two pictures are *P. bylesianus* while the lower one is *P. bieblii**

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