Gaultonia

Newsletter of the
Manchester Branch
of the
British Cactus and Succulent Society

Lophophora williamsii

SUMMER 2010

This Issue:

Please continue to send us your news, photos and written pieces, long or short, for publication.

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Lophophora williamsii

Lophophora is the source of mescaline, a mind-altering alkaloid, as well as studied for its long use religiously and medicinally by the native Americans.
The name 'Lophophora' comes from the Greek for 'crest bearer', referring to the tufts of hair that adorn the tubercles of some member of the genus. A number of species have been described, many based mostly on specimens in cultivation. They are now generally included in *Lophophora williamsii*.
The legality of owning these cacti in the USA, or in other parts of the world is questionable because of the local drug laws. This is unfortunate because it is an attractive cactus, and cultivated specimens don't contain enough alkaloid to make them a risk to the society.

Growth Habits: Solitary or clumping flattened cactus, the glaucous green heads are up to 2.5 inches tall (6 cm), 5 inches in diameter (12 cm), with a woolly top; (5 to) 7 to 13 ribs; round spineless areoles, with some bunches of greyish hairs, up to 0.4 inch long (1 cm)
Ref. **http://www.desert-tropicals.com**

Hylocereus undatus

At Christmas we treated ourselves to a 'Dragon fruit' from Asda, believing it to be the fruit of some sort of *Opuntia*. Not so - it's a *hylocereus undatus*. We saved a few seeds, washed and dried them and tried to germinate them. Here is a picture of them at 2 months - over two inches tall and growing fast. Some are available on the seedling swap table, but watch out - one plant will fill your greenhouse.

Heat Tolerance: Avoid frost
Sun Exposure: Full sun to afternoon shade
Origin: Widely cultivated, origin uncertain, probably West Indies and Caribbean basin
Growth Habits: Sprawling 3-winged stems, up to 16 feet long (5 m), 1.6 to 3 inches wide (4-7.5 cm); 1 to 3 conical spines, up to 0.12 inch long (3 mm)
Watering Needs: Regular water
Propagation: Cuttings

Don't Forget that Tomorrow is the Open Day
See Peter if you haven't got a Map.

Photo Corner

(photos courtesy of Muhammad Ullah)

I am pleased to be able to share these photos with you. My interest in cacti stems from my Father who was also a keen grower. In the early stages his interest was experimental and he learnt a lot from other experienced growers. Following my attendance at the Cactus Auction on May 1st this year I acquired a reasonable number of plants. I have been thrilled with their progress in so short a period of time and my interest in growing cacti is now increased greatly.

Photo 1 a form of *Mammillaria spinosissima* showing the delicate and frilly nature of the petals.

Photo 8 shows the orange flowered *Rebutia muscula* with the white background of the dense spination forming a wonderful contrast to the clear orange flower.

Photo 2 and photo 3 are of *Mammillaria pseudoperbella*. Photo 2 is a really close shot showing the beauty of flower, spine and wool.

Photo 4 could be *Mammillaria chionocephala* showing the flowers very clearly.

Photo 5 is another Mammillaria much akin to *pseodoperbella.*

Photo 6 and photo 7 show two more plants in the complex *Mammillaria spinosissima* group.

Photo 9 is completely different in so far as it shows an *Echinocereus* from the *triglochidiatus* group. The stamens can be seen to tightly wrap round the style. They are strongly overshadowed by the wonderful green stigma that is so typical of most species of *Echinocereus*. If you look carefully you will see that the right hand flower has been open for 24 hours longer than the left hand flower. The stamens in this flower are beginning to relax their hold on the style and are preparing themselves to offer pollen to any visiting pollinator. Likewise the stigma lobes are beginning to unfurl to accept any pollen that visiting insects drop on to its sticky surface. The orange petals are intense in coloration and different from the more common scarlet red version. The creamy white throat offers a guide to the nectar the insects are seeking.

Our Auction - Result! (notes from Peter Bint)

Starting with Friday we had the team: yourselves (eds), Chris Leather, Tony Hesketh, myself, Ian McDougal and the two lads from Wythenshawe Park, Christine Humphreys, Jim Farrell, Anne Mortimer and Philip Barker. What I can say is the fact that the help we received from the people at Wythenshawe made life so much easier because, apart from the van and my car, no vehicle was asked to make more than one journey from Joyce's to the church hall. Everybody played an impressive role and all helpers were invaluable because they fitted like a jigsaw, each contributing in a special way.

Christine and Philip had carried out a superb job by the time we returned with the final load as they had sorted out all the plants, as far as possible, into genus groups. Philip had prepared the lot numbers and the bidder numbers. That meant that the three of us plus Tony were able to go round sorting out the plants that were only fit for the sales tables, we had a 50p table and a £1 table. We were also able to place the lot numbers on most plants though we did run out of numbers and I had to make some more that were placed in position on the Saturday. There were eventually in excess of 200 lots.

Saturday dawned clear and bright. I was up there early, aided by Tony, to put the final touches to the operation and the doors opened at 12 noon, as promised. People arrived promptly and many eyes were cast over the plants. Judith and Peter manned the refreshment centre with help from others. Philip prepared the treasurer's stand and money quickly changed hands as the sales plants rapidly disappeared. People had come from far and wide - from Barrow, the west country, Nottinghamshire, Milton Keynes as well as many from the north west.

At 1 pm all were seated and I got proceedings under way with a salutory warning that the number of lots demanded decisive bidding. Every single lot was sold, some at incredible prices. There were a few determined bidders who spent over the £100 mark but most people present went away with a number of plants. By 4 pm all was complete and we were packing away. An incredible £2059 had been amassed from all the comings and goings and Joyce was very grateful. She made a donation to the Branch of £200.

Photos courtesy of Chris Leather.

Editor's note on an unexpected encounter while transporting plants. We were held up by a slow moving white van near Bury, towards which pedestrians were waving or gesturing. When it turned a corner, we saw in big letters on the side "John Prescot's Battlebus" - mystery solved.

Lets look at some Mammillarias
Part 3
by Peter Bint

Those Mammillarias once called Dolichothele

John Pilbeam, in his book 'Mammillaria – a Collector's Guide' published in 1981, treats *Dolichothele* as a subgenus of *Mammillaria*. In 'the New Cactus Lexicon' published by various authors in 2006 (Good Heavens has it been around for that long already?) the genus is mentioned in the index under the section 'Names in Current Usage' but every species has been referred to an equivalent *Mammillaria*. At least the genus is mentioned in both volumes even if the plants have to be considered as *Mammillaria*.

It is a distinctive group of plants that have, in most cases, some noticeable differences to most *Mammillarias*. There are a couple of species that you never see in collections, a few that have more or less always been considered to be *Mammillarias* and hardly ever had the name *Dolichothele* attached to them and five species that were the ones generally considered to actually be this subgenus. In the definitive work 'The *Mammillaria* Handbook', the *Mammillaria* bible, published in 1945 and written by Robert T Craig, only four species are considered to belong in *Dolichothele*. So we can see there has been considerable amount of to and fro amongst the 'experts' over a period of the last 60 years.

Going back to the beginning of the naming of plants that were considered slightly different from *Mammillarias*, Schumann, in 1891, was the first person to use the name *Dolichothele* for one of the sections of his *Mamillariae* (notice the spelling at that time). In that section he placed many plants that, in 1923, would be moved to the *Coryphanthanae* by Britton and Rose, but he still called them all *Mamillaria*. Even in the Second World War Years there was disagreement about whether these plants were *Mammillaria* or *Dolichothele*. While they bear considerable resemblance to Mammillaria there are differing characteristics. The size of the flower was, for a long time, considered a differentiating factor but, as there are many Mammillaria species in the series *Longiflorae* and *Ancistracanthae* that also have large flowers, it was accepted that this factor could not be used to separate the plants from Mammillaria. The size of the tubercles in both length and width is quite a distinguishing factor especially in certain of the species. A strong distinction between the two genera appears to be the fact that the tubercles in *Dolichothele* are not consistently arranged in a regular series of spiral rows that cross in both clockwise and counter clockwise directions as is universally found in *Mammillaria.*

Let's start with the most difficult set of plants and look at a number of plants that are a real challenge to grow in addition to having a chartered career. *Mammillaria beneckei* has not only been included in *Dolichothele* but it has also been called *Oehmea.* It first received its present name in 1844 by Ehrenberg. In 1891, for some strange reason, Kuntze chose to return to the general name *Cactus,* a name that most botanists no longer used for a huge swathe of genera, and called it *Cactus beneckei*. In 1923 Britton and Rose chose the name *Mammillaria nelsonii* only to find that, three years later, Orcutt erected a new genus for it calling it *Chilita nelsonii*.

Mammillaria beneckei

In 1931, Boedeker, using Schumann's spelling, called it *Mamillaria balsasensis* and then in 1933 changed his mind and decided it was Mammillaria (now using the 'correct' spelling) nelsonii. Finally, to pour more confusion over the already uncertain understanding, Craig and his wife discovered a 'new' species, *Mammillaria balsasoides*, near the Rio Balsas in the state of Guerrero an area that is to the south west of Mexico City by around 200km (125 miles). To add to the problem (or nonsense) other names were added to the array. In 1938 Werdermann penned the name *Mammillaria aylostera* for plants found along the lower reaches of the Rio Balsas, probably not far from the site later discovered by Craig. In 1945 Craig himself decided that a plant discovered near Colonia, not far from the Rio Balsas should be called *Mammillaria colonensis*. Sixteen years later, in 1961, as if the confusion was not already great enough Schmoll received plant material from Backeberg which had been collected some distance away from other material already mentioned. This was from the neighbouring state of Sinaloa close to the Rio Elota. He decided it merited a new name and promptly called it *Mammillaria barkeri*. Finally in 1962 Bravo received material from MacDougall, about which there is little literature, which he blessed with the name *Mammillaria guiengolensis*. The problem was a lack of communication between the various people who 'discovered' all these 'species' allowing very similar plants from various localities that were not far away from one another to carry different names. Eventually Craig obtained enough details about seed, flowers, body characteristics and spine count to come to the sensible conclusion, that all plants, except his 'new' *M. balsasoides* and the 1960's discoveries, were *M. beneckei* (using the earliest name according to botanical law).

It is a difficult plant to grow, if you can even get hold of it, as it comes from the warmer cactus regions of Mexico and will not tolerate low temperatures in winter. One of the main distinctive characteristics of these variations of *M. beneckei* is the flower which is large (an inch long and over an inch wide), funnel shaped and varies in colour from yellow through to orange. The outer petals, the sepals, can vary considerably with reference to colour where species have been found that vary from greenish to violet rose. The seed, which is the other main characteristic, is considerably larger and shaped differently from normal Mammillaria seed and was the final piece of the puzzle which tied these various plants into one species. Unfortunately, when he collected his *M. balsasoides*, Craig had no information about the seed or he would have realised he had found M. beneckei. If you can keep it for long enough *M. beneckei* can form a clump about 7 inches across and would be a real 'show stopper'.

In addition to the necessity of keeping a minimum temperature of 8 degrees Celsius the plant needs a freely draining compost and care with watering. Unfortunately, probably due to the lack of strong ultra violet light in Britain, *M. beneckei* is very reluctant to flower in this country. In good sunlight the body will turn brown, tinged with purple. Individual heads are globular to short cylindrical, clustering haphazardly at all levels.

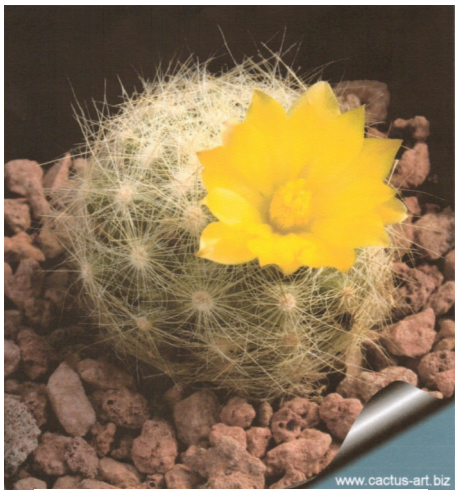
Mammillaria carretii

Mammillaria heidiae

Moving to the next group that have, at some time in their lives, been referred to *Dolichothele* we meet *M. carretii*, *M. heidiae* and *M. zephyranthoides*. *M. carretii* is a very shallow rooted species that is slow growing in cultivation. Its hooked spines mean that the plant will be easily pulled from the pot if the spines catch on to human clothing or passing animals – obviously a useful ploy in the wild for spreading the species. Flowers are white with a rose coloured midstripe, an inch long, and possessing a green stigma. In time it could grow large enough to fill a 7" pan. *M. heidiae* also has hooked spines and again has the ability to form a low growing cluster of heads. It has flowers that are a greenish yellow in colour, just over an inch long and an inch wide. Again the stigma has prominent green lobes. In the Cactus Lexicon this species has lost its status and become merely a variety of *M. zephyranthoides*. *M. zephyranthoides* has never sat well in the *Dolichothele* subgroup and has been moved to the *Ancistracanthae* series. Like all plants in that series it presents challenges to the grower to keep it alive and growing well. It needs well drained compost, careful watering and if it loses its roots it is slow to reroot. Unlike v. heidiae, it remains solitary reaching a diameter of 4 inches and a height of 3 inches. Flowers are white with a red midstripe and achieve a diameter if an inch and a half. I have always found it difficult to understand why they have been included in *Dolichothele* as they have few visual characteristics in common with the others.

Finally we move to the third group of plants that were for years considered as THE *Dolichothele* group; namely *baumii, longimamma, melaleuca, sphaerica* and *surculosa*. These all have the large yellow flower, once considered a defining characteristic, in common. They grow further north than all the previously mentioned species and are consequently somewhat easier to grow.

M. baumii is a densely white spined species that will form large clumps in time. The size of clumps is easily controlled by removing offsets you don't want to keep the plant manageable. The flowers are a clear yellow, 1 inch long and wide, which bear a greenish yellow stigma. There appear to be two clones in cultivation. The first is the large headed clone with heads 2 inches across. This is much slower to cluster. The second clone has heads half the size but even here large clusters are hard to come by. They are sensitive to long dry spells when heads may dry up. They hide under bushes in habitat to gain protection from strong sunlight. Thus we get a hint as to propagation: give a little shade and maybe just a hint of water on suitable days through autumn and even winter.



Mammillaria baumii

M. baumii - unusual white flowered form

M. longimamma (right) is the 'giant' of the subgroup. It has large, flabby tubercles and is weakly spined. With age it can become tatty. Single heads can be up to 5 inches in diameter before they start to clump. The flowers, lemon yellow in colour, are over 2 inches long and wide. You may come across the name *Mammillaria* or *Dolichothele uberiformis* which is a slightly different form of *M. longimamma* and has long been considered synonymous.

M. melaleuca (left), for some reason, is not often seen in collections, which is even stranger when you consider it is the most attractive species of the whole subgroup. It has a globose stem which is more reluctant to cluster than all the others. The tubercles are stout, a centimetre long and 7 millimetres wide which is quite small really. The flowers, also, are somewhat smaller than average for the group but keep up the bright yellow theme.

M. sphaerica (right) is a small headed, readily clustering species that will reward the grower by filling a washing up bowl 20 or more inches across. The yellow flowers can reach a diameter of 3 inches, which is large considering the heads are usually 2 inches across. This is the most northerly growing of the whole subgroup as it is recorded from Texas in addition to Mexico.

M. surculosa (left) forms clumps consisting of hundred's of heads each bearing a stout tuberous root. It has the capability to fill a washing up bowl after a few years of good growing conditions. However if it is grown a little harder the heads will cluster tightly when they are even more generous with flower production. Flowers are yellow and about an inch across.

The Cactus Mart

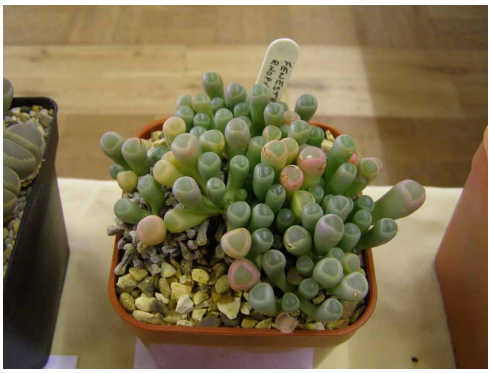
Photos courtesy of Chris Leather

Our Succulent Show



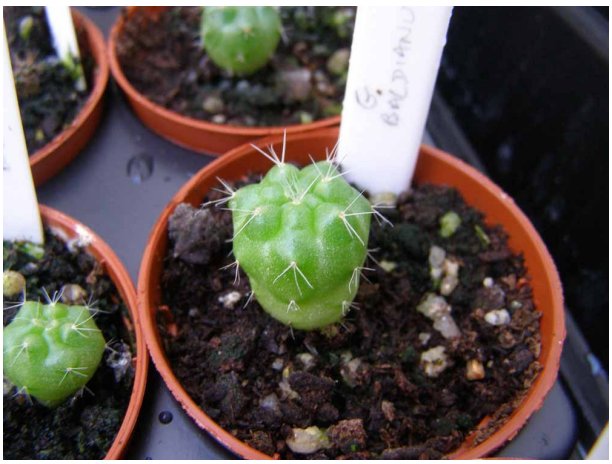






Note - a larger range of plants can be seen at Chris Leathers website - Cactus Corner

Some of you may remember from a previous Galtonia that I showed a Mammillaria that had flowered in just under two years. Well, the above Mammillaria wildtii did so after only 14 months!! (but I forgot to take a photo!!)



Have you noticed that if you germinate half a dozen seedlings in a pot, one always grows twice as fast as the others? I repotted this *Gymnocalycium baldianum* (sown in March) because it was twice as big as the others, one of which can be seen on the left.