MANCHESTER BRANCH NEWSLETTER JULY 1998

So we are now past the halfway stage of this year. Where has the time gone? The weather has not been the best for our plants but mine seem to be coping with the vagaries of the season, the occasional loss and the plant flowering for the first time. It's rather like the swings and roundabouts of daily life. I hope the new features went down well with you and you will feel able to contribute a little something of your own. Please do not feel shy about putting pen to paper or finger to keyboard. Every person in this branch has something to say which is of value. Ivor has again felt the urge to offer some more thoughts and Harry Mak is telling us what growing in Hong Kong was like.

BOOK REVIEW

by Ivor Crook.

The Cactus File Handbook 3--Adromischus
by John Pilbeam, Chris Rodgerson and Derek Tribble.
Cirio Publishing Services Ltd., Southampton.
May 1998.

John Pilbeam has again excelled with the production of the third Cactus File Handbook on a genus that is fast becoming popular and fashionable to grow. He is ably joined by Chris Rodgerson and Derek Tribble who have travelled widely across the natural habitat of the genus and introduced many fine plants to cultivation. Originally planned at the same time as Helmut Tolken's revision of the genus in 1975 the book follows the same classification system as Tolken but old favourites such as antidorcatum and herrei are retained within inverted commas at a sub-species level. Where the book goes beyond Tolken's work is with the addition of numerous, very clear, colour photographs for each species. The variety of leaf shape, colour and markings within each species is admirably displayed within these photographs. Many habitat photographs showing the plants in their natural state are also included. The distribution maps, also absent from Tolken's earlier work, are published for the first time in this book. As well as the geography, the preamble includes cultural information and a key. Appendices list all past and current names for the genus to help the enthusiast to make sense of some of his older labels and a list of Chris and Derek's field collection numbers. At £25 for 104 pages, it may not be cheap but with the quality of the photography it is certainly value for money and a must for anyone who wants to know more about this fascinating group of plants from South Africa.

NOTE: Volume 4 - Copiapoa by Graham Charles is now in press and due to be published in August.

Following last months innovation of Desert Island plants Ivor has produced another idea for your delectation as figures hereunder.

DESERT ISLAND BOOKS

Following on from the theme of Desert Island Plants I have chosen my six favourite books as my desert island companions. I have included three monographs and three general texts.

1. The Gibbaeum Handbook by Professor Gert Nel 1953.

A family heirloom, this was the first book about plants I ever read, probably when I was about 11 years old. Recently rediscovered it kindled my interest in the hobby. Although not completed in Nel's lifetime it was published from his notes shortly after his death and remains a useful work and the most complete one on the genus 45 years later. Concise and full of detail with each plant illustrated it contains graphic details of the fruits and lots of habitat photographs. It remains my favourite genus and one, I feel, that deserves to be more widely known.

2. **Cactus Culture - Based on Biology by Franz Buxbaum 1958.**

The second book I ever read and again a family treasure. The sections on collecting and culture are now quite dated with the advent of plastic containers and ready made plant foods but it provides a great insight into how cacti were grown forty years ago. (*I remember quite well from experience as a child hobbyist. Ed.*). The photographs of the plants, most in colour, look as wonderful now as I remember them from 30

years ago. Buxbaum is probably best remembered for his work on cactus evolution which is detailed at the end of the book and remains as valid today as when it was first published.

3. **The Genus Conophytum by Steven Hammer 1993.**

The first book on succulents I bought. We all know Steve's wonderfully clear and concise style and his book brought clarity to a large and previously confusing genus of succulent plants. Detailed maps and superb photography complement an absorbing text that begs to be read over and over again. This book is never far from my current reading pile.

4. **The Cactus Primer by Arthur Gibson and Park Nobel 1986.**

The second book on succulents I bought and still in print. This little known book on cacti should be compulsory reading for every hobbyist. The biology of the structure, function and growth of cacti is covered in great detail in a style which, though difficult to follow in places, remains understandable throughout. The chapter on evolution complements Buxbaum. The whole volume is though provoking and approaches cacti from a completely different angle to any other cactus book I have ever read.

5. **Lithops - Flowering Stones by Desmond Cole 1988.**

A book that probably needs no introduction. Surely no-one knows more about this genus than Des Cole having spent so long studying these plants in the greenhouse and in habitat. Does anyone own to not having at least one Lithops in their collection? All the preceding literature on the genus is summarised in great detail and each species is described by a man not afraid to tell us his ideas and opinions.

6. **Flowering Stones and Mid-day Flowers by Professor G. Schwantes.**

The result of the authors life-long study of mesembs. A huge but readable tome crammed with minute detail from a great observer of nature and a classification system for mesembs that everyone can follow and understand. Never, before or since, have the complexities of the structure of fruit and flower been so closely examined in such a large and diverse group.

"If ever I am stranded on a desert island with these fine books please, please don't rescue me!!" says Ivor.

Once again grateful thanks to Ivor for his articles. Now please the rest of you members join him in putting a few thoughts on paper. I am not asking for great essays of profound depth, but rather a few sentences penned with your own thoughts. Everyone has something valuable to contribute.

NORMAN BERRY R.I.P.

Sadly it has come to my attention that Norman has suddenly passed from this earth a few days ago. Norman was mainly interested in the Other Succulents and had shown much proficiency in both propagating from seed and also in grafting the harder to grow plants, especially the Euphorbias.

He had been unwell for some time but when I saw him, in April, he said he was much better. He had not been to meetings for some time but he used to be a regular attendee when he was in good health.

A card of condolence has been sent on behalf of all the Manchester Branch members.

PERSONALITY PORTRAIT

SUCCULENT GROWING IN HONG KONG

This article has been written by Harry Mak who joined us only a short while ago having departed Hong Kong before the Chinese regained possession of the colony in 1997.

Succulent growing is one of my life-long interests which dates back to my childhood. Two incidents flash into my mind immediately. The first one, at the age of ten, is the images of Graptopetalum paraguayensis and Echinopsis multiplex. These two species were commonly grown by local people in my village. Together with streams, hills, grassland, cows and so forth they form a picture of my early childhood. The second incident is the greening of a bare

Echinopsis species which was disposed of on the balcony in my neighbouring room in Ricci Hall in the University of Hong Kong in 1981. Its living vigour fascinated me. My interest in succulents started there and grows non-stop.

In 1995 I emigrated and settled in the United Kingdom to experience growing succulents in another completely different climate. It is very fortunate for me in this respect. I remember an experienced succulent plant grower once told me that plant growing in Hong Kong is much more difficult than anywhere in the world. Though there is no way to prove it, I have to say it REALLY is very difficult, especially after growing succulents there for 15 years and 3 years here in England. But to me growing in any place poses different problems. The question is the extent we can tackle them. In other words, it depends on the ease of solving the problems.

To have an understanding of the actual situation in Hong Kong I need to say a few words about its climate. Hong Kong is situated in the sub-tropical coastal region with;

- Small daily temperature difference (normally less than 8 degrees Celsius)
- Hot (average around 32 degrees Celsius) and humid (average around 92% relative humidity) summer
- Mainly Spring and Summer heavy rains
- Dry and windy winter with temperature seldom below 5 degrees Celsius
- Strong Summer sunlight
- Frequent typhoon visits during the summer season
- Small difference in the daylight period between Summer and Winter

The climate is somewhat the reverse of that in Britain. Though I grew virtually any plants in Hong Kong I had to grow less winter growers and more summer growers. In many cases I had to treat the summer growers as spring/autumn growers. As there was so little daily temperature difference flower production was often hindered. In 1996 I was amazed to see how easy it was for the succulents to flower in Britain. Even though their growth rate is much slower here they seem to be more healthy. Cacti, Euphorbias, Pachypodiums and Asclepiads grow at a tremendous rate in Hong Kong in Summer. Another bonus is the ease of propagation. Cuttings root quite easily without any soil heating.

Fungal and bacterial attacks are a headache in the warm humid summer weather, especially on rainy days and in poorly ventilated surroundings. A glasshouse is seldom necessary as the temperature rarely goes below 5 degrees. A shelter with a transparent roof, however , is a must otherwise most of the plants would be killed during the pouring rains of Spring/Summer. The high humidity and temperature are sometimes fatal to plants, especially after prolonged cloudy weather followed by strong sunlight. I had a painful experience of losing two Pseudolithos - they were cooked by the intense heat of the sun. A similar situation in Britain does not normally kill the plants. They are just severely dehydrated and partly burned.

The dry conditions of Winter are an advantage. In Britain, plant deaths in Winter were numerous, particularly during my first cold season over here. In Hong Kong, though I watered less, I continued to water in Winter. Here, for some species, I have to stop watering altogether, particularly the cacti, otherwise rotting is inevitable.

Finally, the minute variation in day length throughout the Hong Kong year may be harmful to some plants either by discouraging flower production or failing to trigger rest.

I still remember two painful incidents in Hong Kong during heavy rains. A newly erected "greenhouse" collapsed. Water had collected on the roof like a swimming pool. The framework could not withstand the weight of the collected water. Of course, poor design was to be blamed. In the second incident, the pouring rain washed many pots along the ground for a distance of 100 yards. Plant bodies were scattered here and there and labels were all mixed up.

In conclusion, apart from warmer climatic conditions, all the other growing conditions seem not so desirable.

- Flower initiation is greatly hindered.

- Plants are not likely to be very healthy - no significant rest period.

- Sometimes I had to withhold water to force them to rest.

Nevertheless, I have experienced the art of growing - to grow the plants to their best within the constraints of growing conditions. I have also learned the principle of personal selection - to grow less "difficult" or "challenging" plants. As a result I grew Mainly cacti, Euphorbias, Asclepiads and Pachypodiums in Hong Kong. Here I grow more winter growers like Mesembs and Crassulas etc. and avoid Euphorbias, Melocacti and Discocacti. Combining the experiences of Hong Kong and Britain I have had the privilege of growing nearly the whole spectrum of succulents.

- Ed's comment.

An interesting article from Harry which gives us an insight to problems of which we never even dreamed. I would also add that Harry has not mentioned the superb collection of Haworthias that is fast increasing in his greenhouses.

A CASTAWAY'S PLANTS

In the absence of any ideas from members I will offer a second batch for perusal. The common theme to all of these is their showy flowers no matter how short lived. It is amazing what beauty can burst from our plants when we least expect it.

1. **Rebutia tarvitensis**.

A beautiful plant from the popular genus which displays such glory when in full bloom. A dark green body easily visible through the slender, translucent spination is covered with huge orange-red blooms during May and June. These blossoms increase in size each day they are open. A paler stripe is visible down the middle of each petal. Easy to grow it forms a large mound in cultivation after about 20 years.

2. **Mammillaria blossfeldiana**

A beautiful, small, mound forming Mammillaria which, at flowering time, is covered with a great many delightful, large flowers. These can vary from a pure shiny white with a central deep carmine stripe to a completely carmine petal with a slightly darker midstripe. Plants with almost black spines look splendid with this array of flowers scattered over the clump. It takes many years for the clump to reach a 5 inch pan size.

3. **Lobivia jajoiana**

This is a plant that usually stays as a solitary stem that is oval to short cylindrical. The central spines can achieve a considerable length in comparison to the body size. One per areole can be hooked. The flowers of this gem are extremely variable but extremely colourful. They range from yellow through orange to a wine coloured to tomato red. The aspect which makes these colours so special is the black throat against which the pale anthers are displayed. The flowers can be scented and are amongst the most beautiful of all cactus blooms.

4. **Echinocereus pectinatus**

The flowers of this plant are truly splendid if very short lived. They range from a lavender pink to deep magenta, all having a pale throat (white to cream). The green stigma lobes are in stark contrast to the pale pollen bearing anthers. They are anything from 2 to3.5 inches across. There are several varieties of the species, all worth growing and all a little challenging to grow well.

5. **Sulcorebutia canigueralii**

A small bodied clumping species that never attains great size it carries many striking blooms over a period of time. These flowers are an orangish red with a beautiful yellow throat up to 4 cm. long and wide. It is quite a variable plant and the dark coloured bodies provide an ideal backdrop for the bright blossoms.

6. **Neoporteria nidus**

This is a splendid plant that becomes short cylindrical with age and is covered with a dense array of long twisting spines which are suggestive of a bird's nest. These spines range from pure translucent white, through yellow to black. The flowers are magnificent made up of two layers of petals. The outer ring open a little, are a rich magenta in colour displayed against a pale yellow throat. The inner ring

remain tightly closed round the stamens for most of the flowering period.

JULY'S SPEAKER

We welcome the return of Daphne Prichard to Manchester. She has kindly stepped into the breach after our planned speaker's could not manage the changed date.

Daphne and husband Albert have long been in the hobby and were active in the days when Warrington was part of the old Great Britain Society which had its roots well set long before the war. Since the amalgamation of the GB and National Societies they have both had a spell keeping the Warrington branch active. Daphne has recently taken up the secretary's reins again after a period of concentrating on the Euphorbia Study Group (in which she is still very active). For many years she was the Seed Distributor for the Society.

They are both much travelled having visited South Africa, Zimbabwe, the Canary Islands and India.

Another feature they are well known for is the number of times they have manned the Society's Information Stand at Southport Flower Show. They are pillars of the hobby and we look forward to tonight's meeting.

DISPLAY AT DAISY NOOK

As announced in last month's newsletter we carried out the above display at short notice to promote the hobby, the branch and the Society. The weather, as you will recall was less than summery but a number of branch members combined to produce an admirable display, man the stalls and talk to the general public. We hope that a few new members will be the end result.

An enjoyable and fruitful time was spent at the Garden Centre and certainly a modest profit will have been recorded because we were allowed to sell plants and run the Tombola so the coffers will have swollen slightly.

It has already been decided to repeat the event with more time for planning next year. More Garden Centres will be approached to see if they will house similar events.

VISIT TO DAVID RUSHFORTH

Remember it has been arranged for a branch visit to David's collection in the Southport area at the end of the month, July 25th. David will be ready for us from 6.30pm. Maps are available this evening. Please ask.

PLANTS I LIKE TO GROW

Pilosocereus palmeri (Rose) Byl. & Rowl.

This is a majestic columnar cactus that will eventually reach small tree proportions of about 20 feet but only after a long, long time. It started out its life in captivity as Cephalocereus palmeri, a name bestowed upon it by the well known Joseph N. Rose 1862 - 1928, a botanist at the United National Herbarium. It was transferred to Pilosocereus by R. S. Byles, a contemporary botanist, and Gordon Rowley, our Society President.

In habitat it grows tree shaped with many branches from about a third of the way up the main stem and so on to the top. The stems are a dark green, with glaucous overtones that lend it a bluish hue. It is not a highly spined plant with central spines reaching just over an inch in length.

In early life it looks like so many other cereoid cacti but at about two feet in height it begins to show its adult traits. As the next growing season progresses the areoles suddenly start to sprout long grey-white clusters of wool. This is a sign of its imminent intention to flower. In the first season or two of this adulthood a lot of areoles will produce some wool but you will be lucky to have more than two flowers actually mature. After that wool will be produced in much greater profusion.

The plant is a nocturnal flowerer. The flowers vary from almost pure white, through pink, to purple and, in some cases, a brownish colour. These flowers are loaded with hundreds of stamens, all bursting with pollen and accompanied with a rather disgusting, putrid scent if you get too close. All this is to aid the plants ability to become pollinated. This lot

falls to bats which gorge themselves on the pollen and become coated all over the top of their heads.

Consequently the next flower visited has its stigma well covered with pollen as the bat continues its hungry rounds.

Usually a flower will last one night only but I have had them last a second night in particularly dismal weather. In time unpollinated flower remains turn black and drop off. However pollinated blooms produce a spherical fruit, green at first, but turning red later. This splits to reveal a red to carmine pith dotted with black seeds.

Unlike the majority of Pilosocerei, which hail from South America, especially Brazil, this plant is Mexican coming from the State of Tamaulipas. This is close to the Tropic of Cancer thus rendering the plant susceptible to cold damp in winter. I always housed mine at no less than 10 degrees Celsius.

I bought mine specimen from a local Garden Centre which used to have an excellent choice of plants grown in Holland. I had it well over twenty years before it departed to oblivion. I have a seedling or two coming on at present and look forward to flowering days again.

The hair eventually forms down one side of the plant, usually towards south in Britain, i.e. towards the sun. This is called a pseudocephalium, unlike Melocacti which form their bristles on top signifying an end of normal apical growth. The plant will continue to reach skywards until maximum height is obtained.

GRAFTING - THE BASICS

INTRODUCTION

In the present age of conservation grafting is one of the most useful tools available to the modern collector and nurseryman. As conservation awareness has grown, and the importation of habitat collected plants been banned, the need for techniques to increase the stock of material already in cultivation has increased. Grafting and tissue culture along with greatly improved seed raising techniques have enabled species which were formerly thought impossible, to be propagated and offered to collectors. These improvements in techniques are of great importance in the conservation of wild populations, in that they help to alleviate demand for wild specimens from collectors, and enable reserves of material to be rapidly built up in cultivation.

WHY GRAFT?

The main reasons for grafting can be summarised as follows:-

1. Grafting is an invaluable tool in the cultivation of genera which pose problems on their own roots. Plants falling into this category include species of *Sclerocactus*, *Pediocactus*, *Discocactus*, *Uebelmannia* etc. All of these genera can be cultivated without undue problems when grafted on to suitable stocks.

2. Slow growing species can be considerably accelerated by grafting. *Ariocarpus* for example grows quickly when grafted, and may even be flowered in the year of sowing, instead of the 10 or so years needed to achieve maturity on its own roots.

3. Flowering and seed production can be greatly enhanced, grafted specimens of many genera will produce far more flowers than self rooted, and hence the quantity of seed which can be produced is greatly increased.

4. The increased growth rate and ease of offsetting enables rapid propagation of rare species.

5. Seedlings can have their growth greatly accelerated, seedlings may be grafted when only 1 day old and will grow rapidly to a size at which they can be beheaded and re-grafted, leaving the base on the stock to produce offsets, which can be used for further propagation.

6. Specimens which have rotted leaving insufficient material to re-root can be saved, even a single tubercle and areole can be grafted, and will give rise to a fresh plant

AESTHETIC CONSIDERATIONS

The most frequently used argument against grafted plants is that they appear unnatural, with dwarf species perched on several centimetres of *Cereus* stock. There is no need for a grafted plant to appear any different to a

specimen on its own roots, the use of small short stocks, enables the graft to be sunk in the pot within a couple of seasons leaving a plant which to the observer is virtually indistinguishable from a self rooted specimen.

GRAFTING TECHNIQUES

The most commonly used and useful graft is the flat graft, this is performed as follows:-

Both sock and scion should be well watered and actively growing. Commonly used stocks are *Trichocereus, Echinopsis* and *Eriocereus* species, but experiments with other genera are well worthwhile, *Sclerocactus* for example has been found to grow well when grafted onto *Ferocactus* species, and *Ariocarpus* grows well on *Astrophytum*.

The top of the stock is sliced off using a **very sharp blade**. The edges of the cut surface are then bevelled taking off the topmost areoles. The bevelling of edges is performed to prevent pushing apart of the union by the outer epidermis prior to complete union of the graft. It is recommended that after cutting, a second slice is removed to give the final grafting surface, this cut should be extremely clean and done preferably in a single motion. The reason for the second cut is that the surface often becomes concave on cutting due to internal pressures within the plant tissues, this second cut will produce a totally flat surface, increasing the success rate of the operation. This second thin slice is left in place on the stock to prevent drying, and is removed immediately prior to positioning of the scion. The base of the scion is prepared in a similar manner to the stock. The vascular rings visible in both stock and scion are now matched up, and the 2 pressed together. Vascular bundles do not have to match exactly, but should overlap at some point [1]. Once grafted the cut surfaces are kept gently pressed together until union occurs, normally in between 1 and 2 weeks, this is easily accomplished by rubber bands placed in a cross formation over the graft and round the pot [2]. Newly grafted plants should be kept warm and shaded until signs of growth are observed.

[1] Whilst contact between vascular bundles is generally regarded as essential I am not convinced this is necessary, in many cases I believe that sufficient vascular tissue extends to the areoles to enable union and growth to occur when no obvious connection of the vascular system is made.

[2] The use of square pots will make positioning of bands much easier whilst skills are being acquired.

SEEDLING GRAFTING

Seedlings can be grafted as soon as they can be handled, the most commonly used stock being *Pereskiopsis*. The technique is to remove the tip of the stock with a very sharp blade, a further thin sliver is then cut from the stock and left in place while the scion is prepared. The seedling is removed from its pot and held by the root, the base is cleanly sliced off, leaving the top adhering to the blade. The sliver is removed from the stock and the seedling slid from the blade onto the vascular ring of the stock, no external pressure is needed to hold the graft. Newly grafted plants are placed in a warm very humid atmosphere where union will occur very rapidly, growth may be observed within a week.

My grateful thanks to John Miller who submitted this very useful article. I hope some of you will try your hand at this art.