MANCHESTER BRANCH NEWSLETTER

AUGUST /SEPTEMBER 1998

Apologies are in store at this juncture. The August letter was ready but unfortunately the photocopier wasn't. When I arrived at the Presbytery, all geared up for production, it was to find that the machine had suffered a major disfunction that might even necessitate a new model. However here we are in print again with a double issue which I hope you will enjoy. It would be helpful to receive some feedback about your perception or enjoyment of this publication.

I am pleased to say that gradually more people are prepared to offer articles for your perusal. It does not matter whether these are just a few lines or longer. What is important is they are offered for all to read and thus they become a point of view. Everyone has a view of the hobby and nobody's view is wrong.

HAVE YOU NOTICED??

This question is posed by Ivor Crook as is the article after this one.

Have you ever noticed that when you buy a new car, all of a sudden the roads seem to be swamped with that particular model or colour of car? Although they were there before you bought your car you never notice them until you purchase your new vehicle. Well, a similar thing has happened to me recently with Opuntia flowers. I only became interested in the Opuntia group of plants earlier this year but for the first time in as long as I can remember I have noticed a lot of them are in flower this year. Even the Garden Centre plants, most of which emanate from the Nurseries of Holland, are full of flowers. I don't recall seeing Opuntia flowers before in this country. One theory is that the mild February weather this year with lots of unbroken sunshine provided the plants with more UV light than usual in the early part of the year thus stimulating flowering. My reading confirms this to be a possibility as one author suggests placing plants under artificial UV light in December and claims it increased flowering in his plants (1). So, come on ladies and gents, is it just me that's noticed something that has been there all along or are there really more flowers on your Opuntias this year and is it due to the unusual February weather? Comments to the editor please.

References.
(1) Chris Holland in Tephrocactus Study Journal; July 1998, P. 255.

** THE TEPHROCACTUS STUDY** **********GROUP**********

Whilst visiting Gordon Foster's nursery near Barnsley last year I was asked to transport several Tephrocacti back to Manchester. At the next branch meeting I discovered these plants were a gift to our branch and, in common with several others, I sliced off various pieces to add to my collection. To my surprise not only did all the pieces root but they are all now in growth and have, to date, produced between one and three new pads each this summer. My quest for more knowledge about these plants was answered by the discovery of the Tephrocactus Study Group. I quickly dispatched my £10 annual subscription and was rewarded a few days later by my first copy of the journal and a warm letter of welcome to the group. The group is around 40 strong with members mainly from Britain and a few in Europe.

Your ten pound subscription brings four copies of the 32 page journal each year complete with colour photographs. Articles on cultivation and nomenclature are included between comments from articles in previous issues and other general information. I found the first issue I received so absorbing I was twenty minutes late for work as I read it from

cover to cover over breakfast before I moved from the table! There is an annual study day and occasional seed offers too. The group covers related genera of Maihueniopsis, Puna, Airampoa and Pterocactus. For only the cost of six pints of beer or four packets of cigarettes it's a must for any member of the BCSS with an interest in these plants.
If you're tempted, why not send for a subscription to: Rene Geissler, Kingston Road, Slimbridge, GL2 7BW.

PSEUDOCOCCIDAE

Whatever is that? To you and I it is the humble mealy bug - the oft appearing, highly intelligent pest that enjoys the job of infesting our pride and joy if we fail to keep our eyes open and our minds alert.
"Intelligent?" I hear you say. Certainly! Why else would they hide on the other side of our plants as we look at them. Can you or do you walk round the outside of the greenhouse especially in winter to look for them? No? They know this and so Spring arrives and there they are in profusion when you pull out that plant that doesn't seem quite right.

How do you kill them? Is it a long, sharp needle through the thorax and watch them squirm? Or maybe a bone crushing motion of thumb and forefinger if you belong to the organic growing fraternity. On the other hand chemicals provide a time saving exercise though Fowler's Mealy Bug Destroyer is almost a thing of the past. But, of course, other proprietary brands appear on the shelves of Garden Centres which prove semi successful – some of the bounders escape to procreate for the sake of future generations of chemists. But more of that later.

To quote another writer (and perhaps incur some wrath on the way), "This is a great shame as they are fascinating animals and well worthy of closer attention." (1)

"Has the man gone totally mad? Is he in need of help from the funny farm?" I hear you mutter darkly as you stare at me with a sympathetic and knowing look.

DO NOT WORRY BUT READ ON AND SEE THAT SANITY HAS NOT QUITE DISAPPEARED.

In the strict sense of the word mealies are insects, of the order of true bugs. They share this distinction with grasshoppers, frog hoppers (cuckoo spit insects) and aphids (greenfly, blackfly etc.). The structure of their mouths is where the similarity lies. They are destined to pierce and suck as their means of feeding. In many instances, as they carry out this life enhancing deed, they also inject toxins into our beloved plants which can cause failure to produce chlorophyll which eventually leads to certain death. Some produce blockages of the food carrying tubes so no further growth beyond the point of attack is possible. Yet again they play a major role in the spread of plant viruses. Reprehensible aren't they? On the positive side they do have uses, some reappearing after decades of man made substitutes. Shellac, cochineal and various waxes are obtained from them.

Mealies are placed apart from the aforementioned bugs into the super-family Coccoidea which also includes another gem, the scale insect. As they have slight differences from scale insects, those in the know have given them their own family, Pseudococcidae

The first British mealy was described in 1868 by J. Hardy. By 1903 12 species, of which 7 were British Nationals, had been described. 1977 saw 42 known species in Britain-28 outdoor, 14 indoor (especially greenhouse) lovers. And it is expected that many more will be discovered as Europe has in excess of 80 known species and expanding. (What a joy to be part of the Union.) If you have recovered from the shock of possible mass invasions, perhaps through the

Tunnel, along the line of Hitchcock's "The Birds" of Whyndam's "Day of the Triffids" then read on to discover more tasteful facts about our wondrous and affectionate friend.

Widely spread throughout the world, some of them will attack whatever plants come to foot and mouth., while others are excessively particular in their tastes. They stick to one type of plant. Thankfully very few relish the taste of cacti and succulents. I hear great sighs of relief and the rustle of handkerchiefs as they mop sweating brows.
Some prefer to live above the ground munching on the succulent, well-watered stems of choice plants, while others enjoy the hidden kingdom of roots where they can gorge virtually undetected until the damage is done and they have moved on to the next pot via the hole in the bottom.

There are varieties that co-habit with ants, each providing a valuable service to the other. Ants uncover roots, mealies feed on the same and produce honey dew. The ants feed on this exudation and all is well with the insect kingdom but the plants suffer greatly. Honey dew is a sweet, syrup-like liquid exuded by the insect coming from the excess sugar imbibed by it from the sap of the plant. This is true of the relationship between some ants and aphids.

The most notable mealies found on cacti and succulents are:
1. Spilococcus cactearum - a lover of cactus stems.
2. Rhizococcus cacticans and
3. Rhizococcus elongata both enjoying the roots.
Spilococcus cactearum is by far the most common pest so we will examine its life history in some detail.

The female was first described in 1928 by McKenzie from specimens collected at Laindon in Essex. The first American counterparts had to wait until 1941 to be recorded. However scientists had overlooked a small point of creativity. And it wasn't until 1966 that someone in California's University suddenly realised it takes two to tango. Bingo! The male of the species was discovered. Below follows the life history of the insect (to be studiously learnt and repeated by heart at the September meeting for an unspecified specimen).

Instar is a term to denote the stage of life of the insect. Thus caterpillar, chrysalis and imago are three instars of the butterfly.
The three figures shown are divided in half down the middle showing the Under (U) and Top (T) of the creature (SLIGHTLY MAGNIFIED for clarity).

Eggs
|
First Nymphal Instar *fig.1*
|
Second Nymphal Instar
|
|---|---|
| *Third Nymphal Instar* | *Prepupa, Male* |
| *Adult, Female* *fig. 2* | *Pupa, Male* |
| | *Adult, Male* *fig. 3* |

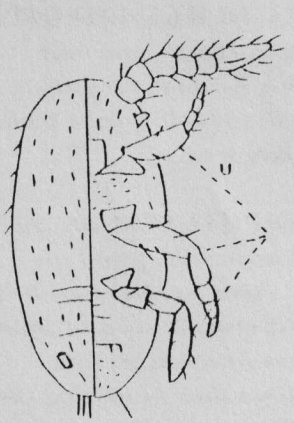

Fig. 1
First Nymphal Instar

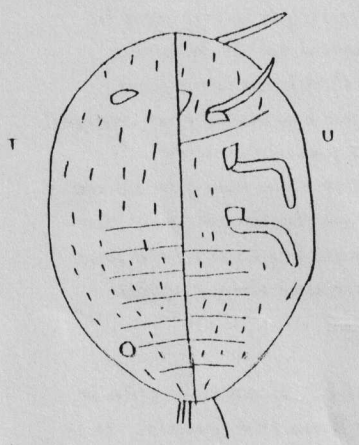

Fig. 2
Adult Female

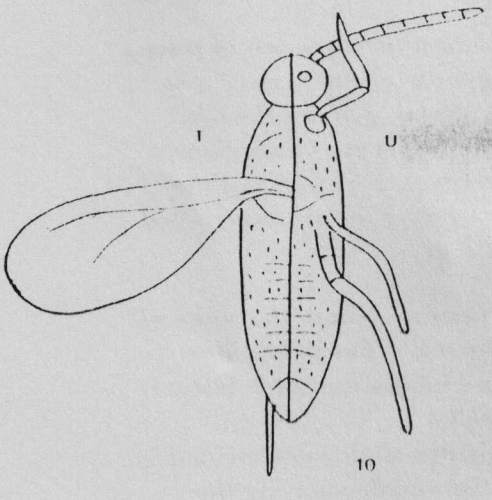

Fig. 3

Adult Male

Here follows a few words about each stage.

EGGS. Dependent on virility and industry the female will lay from 20 to 200 yellow eggs. Each measures 0.35mm long by 0.18mm wide. The clutch is enclosed in an ovisac. They hatch after about a fortnight.

FIRST NYMPHAL INSTAR. Here we have a voracious, enthusiastic, far ranging, yellow-brown insect that indulges in mass mayhem amongst our plants carrying the motto "HAVE MOUTH WILL TRAVEL AND EAT ALL I CAN". It is 0.42mm long and 0.19mm wide. 13 days of gorging ensue before it ends this stage by being covered in white wax.

SECOND NYMPHAL INSTAR. In contrast, this is an idle, good for nothing, grey creature that has dark brown eyes (it may be seen to flutter great eyelashes at unsuspecting microscope users thus rendering them unable to resist its wondrous charms). This delightful nymph is covered in white wax, bloated to the massive proportions of 0.93mm long and 0.46mm wide and probably so overfed that it couldn't possibly move anywhere. These also last for 13 days after which those destined to be the male of the species spin a white wax cocoon from whence they emerge eventually as:-

PREPUPA MALE. Here the male is totally distinct from the female. It is 0.92mm long and 0.36mm wide, dark brown and wax free. It has wing pads but no mouth parts and can't feed. That's the permanent state we need them all to have. This stage is a short one of 4 days

PUPA MALE. This stage lasts some six days, the legs are well developed and the insect is very active. In spite of the lack of food in the previous stage it has now attained 1.20mm long and 0.32mm wide

ADULT MALE. Its well developed wings are rarely used but it has been known to speed 4 feet through the air - a veritable Olympic leap. The male mates and dies after about 8 days (ecstasy or exhaustion?).

From the SECOND NYMPHAL INSTAR we also have those destined to be female.

THIRD NYMPHAL INSTAR -FEMALE. In this stage the insect is 1.20mm long and 0.70mm wide, brownish-grey with a white wax coating. It is inactive during this stage at the end of which it becomes the adult female (obviously gathering strength for the future).

ADULT FEMALE. These are mobile but not very active. They frequently form colonies of 10 to 20 creatures after mating, each colony being covered in white waxy wool exuded by the insects. Eggs are laid on the plant surface under the wool. The females are 2 to 3mm long, 1.80mm wide, dark grey with dark brown eyes. Mated females live for about 43 days.

Thus the life span of a female from egg to death will be anything from 90 to 100 days and a male from 55 to 65 days. So we can see Spilococcus cactearum has a fairly normal life cycle like so many others amongst the insect kingdom. In some species reproduction can occur without fertilisation while in others the eggs hatch inside the female and emerge as first instar insects. Where conditions are suitable (and often our greenhouses are) 40,000 mealies per year can arise from one clutch of eggs laid in Spring.

Wow! With this alarming piece of news how to kill them. The answer is not so simple and they are hard to remove from the greenhouse - a point I made at the beginning. The wax coating provides excellent protection against any water based insecticides. For years treatments have involved alcohol (methylated spirits) or petroleum emulsions (nicotine, white oil) or by adding soap to the insecticide solution. The problem here is not only do the mealies suffer but so also can the wax coating of the plant be damaged through a "scorching" effect to the skin.

More recent introductions (at least 30 years old now) are insecticides containing malathion or diazinon but these both have to be sprayed or dabbed on the pests. Best of all are the systemic insecticides that can be watered into the soil or sprayed on the plants. This is absorbed by the roots and stored in the plant tissues awaiting the unsuspecting feeder.
Unfortunately, under recent legislation, such chemicals, especially those containing dimethoate, have been outlawed by Government scientists. Though harder to find nowadays, it is still possible to find some systemic insecticides with which the plants may be suitably watered.

Both Murphy's Systemic and Tumblebug are available to the general gardener. As they are identical it matters little which you use. Commercial growers can obtain Dimethoate which can be used as a drench. A new concept which has become available this year is Intersept which Levington have added to one of their composts. It is also around, again only commercially, as a drench. This could be useful as there is some thought that it could help to control the latest pest, the western flower thrip, which can be a huge pest headache as nothing was controlling it at all....more on this pest later.

Of course dead mealy bugs should be removed from the plant wherever possible because they can still cause mayhem in this condition. One main problem is found in the black mould that quickly covers the corpses which may lead to a major plant infection. At the very least it is unsightly. A suitable tool for the job is the humble cotton bud (as used in cleaning out baby's ears).

Naturally prevention is better than cure. Regular checks are useful. Systemic insecticide used twice a year, early and late, is effective at culling the colony. However, use of the same one over and again can lead to a semi immunity in the insect.

TWO CAUTIONS

1. Avoid breathing the vapour, keep the solution off the skin as both are fairly toxic to humans.
2. Some plants can be damaged, especially by spraying, so consult the instructions carefully. We are often told that members of the Crassulaceae are susceptible.

They are also toxic to cats, dogs, fish and various useful garden creatures. They should be kept well away from prying children's fingers. Use strictly to the manufacturers instructions and recommended strengths. Overdosing results in death by misadventure - personal experience.

Biological control is possible but is not a suitable alternative in our minute collections (as comparable with agriculture). If you were growing vast acres of plants then ladybirds, such as Cryptolaemus montrozieri could be used.

In conclusion, may you view your mealies (should you be lucky enough to possess any) with the joy a now educated eye can bring in the future.

(1) Quote from the author below.

Bibliography: Pseudococcidae, their life and death by Brian Plunkett in the Sussex Cactus and Succulent Year Book 1976-77.

AUGUST'S SPEAKER

It gives me great pleasure to introduce Bill Weightman to you especially for those of you who could not attend last month. I had never met him in the flesh before the August meeting,, though I have seen him at National Shows.

He is a natural and talented photographer who has featured regularly in the journal. John Pilbeam has relied heavily on his expertise as the photographer for his copious volumes that you have encountered in our branch library and elsewhere. He is very knowledgeable about plants in the wild, having visited many habitats with various notable personages from Britain. He has also been accompanied by a number of American aficionados on his many trips.

As part of his tour of Zone 19, he enthralled us with accounts from his most recent (or almost most recent as I am unsure whether he has been this year) trip to Mexico, a country he loves to visit. I have no hesitation in assuring you that it will be impossible to be anything but enthralled, as his reputation precedes him.

I would just like to add a postscript where I can say the evening went magnificently. I doubt any contradiction will be forthcoming when I say I am sure everybody present, and it was a goodly crowd for an August evening, thoroughly enjoyed the delivery of the talk and the excellence of the slides. A most pleasurable evening and one I offer copious thanks for; well done Bill.

SEPTEMBER'S SPEAKER

Mrs Jacqi Watts is our speaker this month and we welcome her warmly. Her subject will be dear to the hearts of many a cactophile, Bromeliads as companions to cacti. Certainly there are many colourful plants from the Bromeliads to be seen in local Garden Centres. Tonight however I am quite certain we will be led much deeper into the realms of these plants.

Jacqi is an international director for the Bromeliad Society International which I understand is the American Bromeliad Society. She is also Editor and Chairperson of the European Bromeliad Society. She now lives in North Wales though for a number of years she was resident in the United States of America.

Her interest in Bromeliad plants originates around 1970. She is a regular visitor to Conventions about Bromeliads in both Britain and the States.

On a more personal level, she is the Personnel Manager for a breakfast cereal firm, in Chester I believe. Her husband, Julian, has been a keen grower of cacti in his time but presently business commitments preclude his being able to spare the time for the upkeep of a collection.

I am sure we are in for a lively evening and look forward to the encounter with these sister plants.

SPECIAL! SPECIAL! SPECIAL!

It is not often we manage to acquire the services of renowned speakers. Last September we were delighted to have the services of Steve Hammer from the States to top the bill at our first zonal convention. This year, at short notice, we have engaged no lesser authority than TED ANDERSON also from America.

For those of you who are new to the hobby or don't read foreign journals Ted is acclaimed world wide for his work with cacti especially in the South West States and Mexico. In fairly recent times he has produced two very knowledgeable papers, one about the "Peyote" (Lophophora) and the other about Opuntias in the Galapagos Islands. Even more important is his review of the genus Ariocarpus. He has also written in our

publication "Bradleya" about Neolloydia and the genus Thelocactus. Earlier this year he presented two lectures at the Society Convention.

He is due to talk to us on Sunday 4th. October 1998 at the Zeneca buildings in Alderley that we successfully used in September last year for the zone 'do'. We are already assured of massive interest in this event as ours is the only venue for cactophiles in the north of England. The capacity is 90 on a first come first served basis. The event will start at 2p.m. and be finished completely by 6p.m. The cost will be around £6 to £6.50, including refreshments of a lightish variety.

His two talks, with slides, will be exceedingly easy on the ear. They are:

1. *Rare cacti of Mexico*
2. *The puzzle of cactus classification (which I understand is done in jigsaw puzzle fashion and is very enjoyable and in no way dry).*

All details will be available at this evening's meeting.
DO NOT BE DISAPPOINTED, BOOK IMMEDIATELY. *There will be no second chance. We require numbers by September 30th. for the caterers and whilst we would not wish to turn people away on the day admission could only be on condition there was room in the auditorium.*

PLANTS I LIKE TO GROW

GYMNOCALYCIUM STELLATUM

This is a plant I like more than a little. The fact that I have at least a dozen plants and variants proves the point. I find it a delightful plant that is easily grown. Body colour varies, in my specimens, from dark green to chocolate brown, with most being of the latter hue.

For 50 years there was great confusion about this particular gem. The two names Gymnocalycium stellatum and G. asterium went side by side in literature (and on nursery sales tables too). However in 1975 the knot was finally untangled by Richard Strong of Kew who showed conclusively that the plant should rejoice in the name G. stellatum.

It is closely related to G. quehlianum, G. bodenbenderianum and G. ragonesii. Fric also suggested G. occultum be considered here. All the plants named are easy to raise from seed and will flower readily, often in the second season. They are large and attractive, lustrous white blooms with a rose coloured throat. In G. ragonesii, which is always diminutive, the flower tube is noticeably elongated.

Two varietal names exist. Variety paucispinum refers to the fact that spines are few in number, typically 3 spines, downward pointing, per areole. Variety minimum I have never seen but I suppose it could refer to an unusually small growing clone or even G. ragonesii in another guise.

It is quite normal for them to reach 8 - 10 cms in diameter in time but in the 70's there were a number of very much larger specimens in European collections. These were notably specimens collected by Fric in the 20's. They were housed in the Prague Botanical Gardens. They produce a sizeable taproot necessitating the use of long tom pots to allow this to grow correctly.

If they produce seed pods after flowering it is a bluish colour. The body is always flattish and the root will often pull the body down flush with the growing medium. In habitat they can easily be pulled down into the ground and be covered with dust and other detritus.

These plants hail from Argentina, particularly around the regions of Catamarca, La Rioja and Cordoba. The weather than can become typically hot and arid for long spells.

The chequered history of G. stellatum began in 1905 when Spegazzini

described it as Echinocactus stellatus. This was amended in 1925 to Gymnocalycium stellatum by the same author. In 1952 Y. Ito claimed the naming to be invalid for various reasons, proposing G. asterium instead, but he didn't do the job properly himself. 1957 saw B. Dolz try to subsume it as a variety of G. quehlianum. At last Richard Strong laid the saga to rest. If you wish to read the full article it is to be found in volume 30, number 2 (June 1975) pages 49/50 of the National Cactus and Succulent Journal. However if your interest is merely to enjoy growing a lovely plant that wont take up a lot of space then this plant has much to recommend it.

*******SOME INTERESTING*******
*********MAMMILLARIAS*********

The cry is often one about lack of space, the need to build a greenhouse or add another one to the already dwindling garden space. Of course there is another way, one which eventually affects every grower. Move large plants on to other homes or perhaps not grow those which eventually reach larger proportions than space will permit.

With this in mind I suggest to you a few members of a group of Mams which will never cause a huge space problem. These plants belong in the section Lasiacanthae. This section was erected by David Hunt in an article in the Cactus and Succulent Journal of Great Britain, Volume 33, No. 3 August 1971 entitled "Schumann and Buxbaum Reconciled". He brought the thinking about the whole Mammillaria genus into focus. This article was also reprinted by the Mammillaria Society.

This section contains some of the most beautiful and smaller growing Mams. Their flowers do not match up to the splendour of plants in the section Longiflorae (more of these at a later date) but their body form is undeniably resplendent. In the 1970's these were hard to come by plants but that is not so nowadays. Though they were labelled as hard to grow I believe experience has refuted these allegations.

I consider that these plants will grow well in a soil based on John Innes no. 3 mixed with sharp sand and liberal amounts of grit. The addition of either lime chippings or some other source of lime will enhance the production of roots and body. As the soil is very open they will take good amounts of water throughout the growing season provided they are allowed to dry out between waterings. As far as possible I grow them quite close to the glass in a greenhouse that remains cool in winter (down to 3 degrees C quite often). Some sources recommend repotting each season as they are in small pots. I am not always able to manage this luxury so I will feed from time to time.

1. M. lasiacantha. The plant for which the series is named, can also be equated with M. denudata, M. magallanii and maybe M.roseocentra. They are all very similar. It is a small, densely white spined plant so much so that the plant body is completely invisible. The flowers, produced in late winter, are white with a central midstripe which varies from brown through to deep red.

In the 70's most people considered this a plant which remained solitary. My experience is that after many, many years of patient growing it will eventually clump up to make a truly handsome plant in a 4.25 inch pot or maybe even slightly larger but don't hold your breath. I have quite a few of them showing a wide range of variability. Perhaps the nicest form is that with rosy tips to the newly formed spines. It forms a tuberous root as do most, if not all, the plants in the series.

2. M. lenta. This tends to be a slightly more difficult plant to grow. Certainly it is one to repot with extreme care as, in my experience it resents being repotted. As with the previous plant the dense white spines obscure the plant body. Again, after many , it will clump up. I have both seed grown

plants and those purchased from Nurseries. Only one has acquired the girth to be put in a 4.25 inch pot, and that only after many seasons.

The flowers, which can be produced regularly, are not multitudinous in number. They are pretty, being white with a pale purple midstripe. In the 70's nearly every specimen of this plant you saw was an imported one, hence the bad press it received about its impossibility to keep. Seed grown plants are much more amenable.

3. M. plumosa. This is a well known plant that most Mammillaria enthusiasts have in their collections. A beautiful, feathery spined plant, it shows few inclinations to difficulty of growth. With extreme age it may acquire dimensions in excess of one foot across but we are talking many years to reach such a girth.

Whereas the majority of the Lasiacanthae produce a tap root that can far exceed the top growth, this plant seems to always bear fibrous roots that demand a shallow pan once it reaches a 5 inch diameter. It is a shy flowerer and prefers to grow in the autumnal/winter periods. This would probably indicate a need to keep it warmer if you continue to water into this period. Personally, I never bother as the flowers are not exceptional, adding nothing to its natural all year round beauty. It will not flower before it is at least 4-5 inches across anyway.

There are two completely different forms of M. plumosa. The first is small headed, offsets very readily, growing quite rapidly (for this plant at least) in the early stages and remains a low, flat mound. The second is more eye-catching as it has golf ball like heads which are individually much bigger than the first form. It attains more height but is considerably slower growing. It used to be much less common but gradually it has caught up in the availability stakes.

4. M aureilanata. Now here we do have a plant that is slow in growth. It really is a little gem that never gets big. Very superficially it looks like a slightly more open M plumosa as a youngster. Above ground it is a flat plant with long, thin tubercles surmounted by radial spines like long, fine hairs. Below ground it has a tap root that can be ten fold the size of the plant body. This can necessitate a pot that seems over sized at first sight.

It is a plant that, in my experience, does not offset unless damaged in the growing point. It produces flowers very early in the growing season which are creamy white. Two forms exist which are only separable by the spine colour, one being white the other more of a golden hue. The former used to be known as "variety alba" but this is not a justifiable naming.

5. M. herrerae. This is a really slow growing gem. Often just a single headed plant, the pectinate spination totally hides the plant body. Some plants are reputed to offset and clump into a splendid specimen but the greater number remain as one or two headed plants. The tap root can equal or surpass the mass of the body above ground. One plant belonging to our late society chairman was 1.5 inches above ground and a massive 9 inches below ground where it had coiled round and round inside a smallish square pot. It had to be repotted in a 4 inch square pot making it appear grossly overpotted.

Normally the flowers are a bright pink and stand out about 1 to 2 cm from the white body. Only with some age will they flower with any regularity but never prolifically. There is a supposed form albiflora where the flowers are white with a brown midstripe but that is the only significant difference and does not deserve varietal status.

6. M. egregia. Rarely seen on its own roots in my experience this is an extremely slow growing member of the Lasiacanthae. It closely resembles plants in the M. lasiacantha complex but has flowers that are mainly brown in hue with white margins, when it flowers that is.

This is an enigma because the collection locality was not cited thus rendering it invalid. However it is known to grow in localities from eastern and north eastern Mexico into New Mexico. If you do manage to grow it on its own roots a plant the size of a golf ball can be reckoned at least 8 years old.

I will offer another six of these splendid, small growing Mammillarias in the next edition of the newsletter.

SALES PITCH

We all have experience of the misleading nature of adverts, often from personal misadventures. Imagine, if you will, the scene if our plants were advertised for sale in a similar way.

A la car salesperson:

'1994 Mammillaria perbella, one owner from seed, excellent spines all round, perfect skin coloration and without blemishes, new label recently fitted, pot in first rate condition, no MOT (mealybug on tubercles), a well maintained specimen of this popular plant.....'

OR- an estate agent:

'Detached Gymnocalycium in excellent decorative order, 3 flowers, 5 buds with usual features, standing in its own plot (or is that pot), well screened for privacy by surrounding Bryophyllum, ample space for offsets, must be viewed.....'

OR- a furniture salesperson:

'Low, low prices on a range of Rebutia plants, exclusive styles in spination, massive range of seedlings, small plants and multi clumped specimens, huge range of flower colours to suit any decor, only offered by Britain's leading nursery, 30 years experience means you can depend on quality of product, nursery prices direct to public, unbeatable value, visit greenhouse now, offer ends Sunday 5pm.....'
Then there's the travel agent:

Don't miss this fantastic value Ariocarpus, price includes visit to most prestigious exhibition of grafting day old seedlings: pristine pot, completely fresh soil, excellent grit collar to maintain correct humidity, all fertilisers inclusive in price.
For three days from 14th October for just £xy.

Advice from the DIY magazines often tempts one to "give it a go." I liked this article I read from a magazine published in the early 70's.

"DIY magazines provide helpful articles but even they miss out the odd important point as I discovered the other day when I had to fit a new pane of glass in the greenhouse(I got the glass cut at the local shop, of course). I gathered all the necessary bits, glass, putty, hammer, screwdriver, pipe, tobacco, matches, etc. in my arms and walked down to the greenhouse and promptly met my first unexpected snag - the door was closed. So I had to balance everything in one hand while I opened the door with the other. Then I had to return to the shop for another piece of glass. Once in the greenhouse came the next dilemma - where to put the tools - have you ever met a cactus grower with space on his staging? This time I put the 'repair kit' on the floor while I moved some of the pots - you have to be very careful where you step doing this but I was lucky - the man at the glass shop gave me a discount for being a good customer. I fitted the glass quite easily, following the article's advice, but it didn't warn me that if my hands were full I should not use my elbow to close the door if I had a hammer tucked under my arm. However, the next repair didn't take so long - I was getting into practice. Still the money spent on the magazine was not wasted - it had some interesting adverts in it, which was where we came in!!!