E. H. S.

WELLINGTON

EPIFLORA

Volume 13 No. 2

June 2004

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CONTENTS

From the President

Dear fellow epiphyte growers

Autumn has been magnificent here on the Kapiti Coast with beautiful clear days and crisp nights. As I look out the window trees are in their autumnal colours and in some cases leaves have gone leaving the bare look of impending winter. This is the time when we put our plants "to bed", only watering very lightly when necessary to avoid any damage from an unexpected frost. We have already brought a few of our more precious hoyas down into the house from the plastic house and are treating them royally as we wheel them into the lounge at night! What we do to pursue our hobby!!

A reminder to you that next meeting, 12 June, is our midyear pot luck lunch. Do hope that you will be able to be there and hopefully bring a friend along too to enjoy the wonderful range of food we always have at these gatherings and to listen to Bethney McLennan. Bethney writes for the gardening section of the Dominion Post on Saturdays and since visiting our collection to write about epiphyllums and hoyas, has been a great supporter of our Society. This year the fun competition is for a horticultural shoe or boot. Let your imagination run riot and bring some footwear to enter in the competition!

Plans for the Taranaki trip in November are progressing well with Andrew Brunton proposing an interesting and busy programme for us for the week-end. It is not too late to join the eighteen who have already shown interest. A deposit will secure your place.

I hope that the winter months will treat you and your plants kindly.

Keep warm and well. Kind regards

Jane Griffith

27th May 2004

The Programme for 2004

Meetings are at Johnsonville Union Church (Dr. Taylor Terrace) and start at 2.00 pm. Library books etc. are available at 1.30 pm.

Those on duty are responsible for preparing the room, assisting with tea and tidying the room at the end of the meeting and bringing a plant or other item for the raffle. If for any reason you are unable to do your allocated duty please arrange for someone else to do it.

June 12th	**Midyear Function(starts at 12.00 noon)** On Duty: Brian Read, Nola Roser, Robyn Gibson
July 10th	**The Genus Hatiora** On Duty: Lois Bond, Isobel Barbery, Dianne O'Neill
August 14th	**Care and Culture of Hoyas** On Duty: Kaye and Merv Keighley, Penny Luckens
September 11th	**Epi slide show**
October 9th	**Ceropegias**
November 13th	**Tillandsias.**
December 11th	**AGM and Christmas Function**

Taranaki Trip - 2004.

The trip to Taranaki has been planned. It will take place on the weekend of 19th to 21st November. There will be visits to gardens, parks (Pukekura and Pukeiti) and to nurseries,

including Craigmyle Epiphyllum Nursery.. As last time, everything will be done to make the cost of the weekend as economical as practicable. Put the date in your diary now.

As Taranaki accommodation is heavily booked in November we have made a booking at a New Plymouth motel. If you would like to join us and will not be at the June meeting (maybe you do not live in Wellington or are just unable to attend for some other reason) - please phone Jane or Roy Griffith (04-9041954) to reserve a place.

Please put your thinking cap on

At our last committee meeting in May we raised the issue of declining numbers attending meetings and the committee asked me to write a piece for this Epiflora.

It has been observed that since the beginning of the year the numbers attending meetings are less than last year. Being such a loyal group as we are the Secretary always receives apologies from people who are unable to attend and we really appreciate this. But the committee are wondering what the Society could do even better to encourage increased numbers.

We are mindful of increasing commitments people have on week-ends and the fact that many societies are struggling for members. But maybe our programmes need re-vamping to become more enticing.

Please give this matter your thought. At the August meeting we will be asking for a list of ideas for programmes for next year – your wants and wishes. If ideas come to your mind before then and you want to pass them on do phone a committee member and tell them what you have in mind.

Look forward to hearing your thoughts.

Schlumbergeras

The topic for our May meeting was Schlumbergeras - or, "Christmas Cacti" as they are called in the northern hemisphere. The talk had been prepared by ***Penny Luckens****, and was presented by* ***Jane Griffith*** *.....*

Christmas cactus, also known as zygocactus or winter-flowering chain cactus, are popular as house plants both with the public and with nurseries. Because their bud formation is initiated

by a light and temperature regime, they can, like chrysanthemums, be produced to order. Hence their prominence in shops in bud or flower at Easter or Mothers' Day. Although they are a cactus Schlumbergera lacks spines except as young seedlings – another point in their favour as a house plant

Not all the species of *Schlumbergera* (the correct generic name for the Christmas cactus) are spineless. I well remember seeing my first plant of *S. opuntioides* (at that time under a different name) in a cactus and succulent collection in Northland. I've not seen as large or floriferous a specimen since. My first thought when I saw it was that it belonged in the same genus as the Christmas cactus because of its flowers. However its stem segments looked like small opuntia pads. Another species with spines on small cylindrical segments is *S.microsphaerica*. Both of these spiny species are also found growing in rocky crevices or on rocky ground. The presence of spines is said to be neoteny – the retention of juvenile features by an organism in its mature state. Might it not also serve to deter grazers and be retained for that reason (like holly hedges retaining their spines)?

The genus *Schlumbergera* commemorates a Frenchman Frédéric Schlumberger who in the mid 19th Century had a well-known collection of cacti at his chateau near Rouen. This is the species now known as *S. russelliana* but originally proposed by Lemaire in 1858 as *S. epiphylloides*. This specific name *russelliana* was suggested by George Gardner who found the species in the Organ Mountains in 1837 and introduced it to England in 1839. It honours his patron Lord John Russell the 6th Duke of Bedford who was a keen gardener and naturalist with a famous collection of cacti at Woburn Abbey, the family seat. It was sent to England as *Cereus russellianus*. I will not go into the name changes afflicting some of the, at present, six subspecies in the genus, except to note that when I looked in the NZ Nursery Register 2001-2 the Christmas cactus appeared under "Schlumbergia" (sic). Several nurseries listed both "Schlumbergia" (sic) and *Zygocactus* in their generic list of plants grown. Altogether sixteen nurseries admitted to listing either or both "Schlumbergia" (sic) and *Zygocactus*. Eight of these listed *Hoya*, four listed *Epiphyllum* and four listed *Rhipsalidopsis*. Only four nurseries had quarantine facilities.

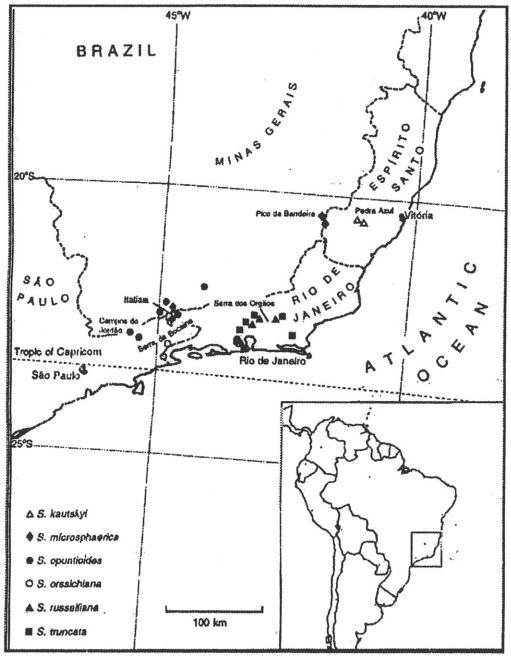
Two species *S. kautskyi* described in 1991, and *S. microsphaerica* (eight generic changes of name from 1890 to 1970) are both self-fertile and will set seed without cross-pollination. Neither of them will cross with other species in the genus. *Schlumbergera opuntioides* will cross with *S. truncata* and perhaps with other flat-stemmed species.

The three species that have contributed most to our present day hybrids are *S. truncata* and *S. russelliana* from the 1800's and *S. orssichiana* after its discovery in 1978. While *S. truncata* and *S. russelliana* have elongated floral tubes resulting in elongated flowers either zygomorphic in *S. truncata* or regular (radially symmetrical) in *S. russelliana, S. orssichiana*

has a floral tube only 10mm long with flowers that open widely. The best known crosses with *S. orssichiana* parents are the butterfly series ("Madame Butterfly", "Butterfly Sunset") and "Bristol Queen", "Bristol Arancia" and "Hatherton Charm".

Until the 1980's the hybrid colour range had been from white through pinks to lavenders, reds and oranges. The first yellow "Gold Charm" was a sterile triploid developed by B.L. Cobia over fifteen years of breeding. "Christmas Flame" (also called "Gold Fantasy") is a deeper yellow mutation of "Gold Charm" with red flower buds. "Cambridge" shares the same ancestry but has an increased number of chromosome sets. It is one of the new line of hybrids with larger flower buds, wider petals and thicker and more rigid upright growth which is very suitable for pot culture. The original six varieties in this Cobia® Collector series (also called Showcase Zygos in Australia) were "Bridgeport" (white), "Cambridge", "Santa Cruz" (orange-red), "Sanibel" (light salmon), "Pasadena" (red) and "Windsor" (lavender) which were released in the US in 1988.

Other hybrids, including the range bred by Thoroplund in Denmark, are marketed through the Park Nursery under the rainbow label in New Zealand. Most of these newer hybrids are registered and may only be propagated by licensed nurseries.



Cacti are distributed from Canada to the south of mainland Argentina and Chile. There are three main centres of distribution (central America, the western side of South America and Brazil). The third region is in the south-east of Brazil and in this region the forest cacti, particularly the epiphytic species, are prominent. This is the home of some *Rhipsalis* species, *Schlumbergera* sub-species and the Easter Cactus (*Rhipsalidopsis gaertneri*) . Both *Schlumbergera* and *Rhipsalis* are said to be lime-sensitive in cultivation.

The six species of *Schlumbergera* are all found on the granite peaks and highlands (see map which is reproduced from page 11 of "Christmas Cacti" by McMillan and

Epiflora

Horobin) From herbarium records (McMillan and Horobin 1985) the altitudes at which the various species are found are:

S. kautskyi - 900m
S. truncata - 100-1200m
S. orssichiana - 1000-1300m
S. microsphaerica - 2300-2787m
S. russelliana - 1100-1900m
S. opuntioides - 1900-2500m

Although the coastal lowlands have a humid tropical climate with a rainfall of 1-2m (40-80") a year spread over most of the year, and an average annual temperature of over 20°C. (Rio de Janeiro 23.2°C, Santos 21.9°C), the upland and highland areas are cooler but still well watered. The area is in the path of the southeast trades for most of the year. Winds passing over the warm Brazilian current pick up moisture, which they drop as rain or cloud on the seaward slopes.

David Hunt on his way to the rocky peaks of the Agulthas Negras, the highest point of the Itatiaia area, in July 1966 speaks of botanising in the cloud forests "in continuous, cold Atlantic drizzle". At 2000m they broke through to brilliant sunshine above a sea of cloud. That night at 2350m the temperature fell to -4°C with ground frost. The next day at 2787m in a cleft near the summit he found *Schlumbergera microsphaerica* where Dr Rose had discovered it 50 years before. It was growing with the filmy fern *Hymenophyllum fucoids* in a moist and shady cleft of the rocks, not as an epiphyte on a tree. The previous day on a barren rocky slope at 2650m he had found a clump in a crevice between granite boulders. A common plant in the area was *Hippeastrum psittacinum* in full flower in midwinter - a drier season of the year at this altitude. A nearby area known as the "valley of flowers" is a mass of colour in the rainy season. An up to date reference to the area says "The Parque Nacional Itatiaia was founded in 1937 on the Serra de Itatiaia in the Montiqueira chain of mountains, the first park to be created in Brazil. The town of Itatiaia is surrounded by picturesque peaks and lovely waterfalls. There is a Museu de História Natural (closed Mondays) and a wildlife trail Três Picos which starts near the Hotel Simon. A good area for climbing, trekking and bird watching (Footprint S. American Handbook 2004)"

The Organ Mountain National Park is the area where both *S. truncata* and *S. russelliana* were first found, the latter species being illustrated in the Botanical Magazine in 1839. Both species are epiphytes whose seeds are distributed by birds. The Serra dos Órgãos, so called because their strange shapes are said to recall organ pipes is an 11,000 ha National Park (created in

1939 the second oldest in the country). The park is close to Teresópolis the highest city in the state of Rio de Janeiro. Buses leave Rio hourly for Teresópolis. In the early 1960's the park authorities had written to British nurserymen requesting plants of Christmas cactus to re-establish the depleted areas of the Organ Mountains. One nursery sent 500 rooted cuttings of all available varieties and though other nurseries were also asked by the Brazilian Agriculture Department none obliged. Nothing like getting field botanists completely confused.

If you want a glimpse of what life was like 100 years ago in this part of the world Wellington Public Library has a copy of "Brazilian Paradise" by Guy Walmisley-Dresser who left New Zealand as a six year old with his family to live on a ranch beside Itatiaya (sic) where his father was to experiment with introducing British breeds of cattle.

Pollination

Most species of Schlumbergera are pollinated by humming birds, butterflies and Euglossa bees. Eleven species of humming bird are found at 1000m at Teresópolis and several of these species have been seen near the peaks in the Organ Mountains National Park (PNSO Parque Nacional da Serra dos Órgãos). The flowers show typical adaptations for hummingbird pollination in that they are tube-shaped, hanging and radially or bilaterally symmetrical. Their colours are also vivid and often shades of red.

Plants usually evolve rewards that reflect the needs of their pollinators. Nectars vary widely in sugar concentration (15 to 88% by weight) and different kinds of pollinators are associated with different concentrations of sugar. Nectars may include glucose, fructose and sucrose as well as amino acids.

Humming birds strongly favour a high ratio of sucrose to glucose and fructose but other nectar-feeding birds and many insects favour low sucrose to glucose and fructose. Abundant red tubular flowers in mountains of Central and South America testify to the importance of hummingbird pollination at high elevations where insects are disadvantaged by cool temperatures. In the lowlands a larger proportion of green, white and yellow flowers signals

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Schlumbergera Tropical Sunset

Schlumbergera Bridgeport

that insect pollination may be more important. Humming birds have a poorly developed sense of smell so the flowers they pollinate may lack scent, but as they have a high metabolism (a 5g bird uses 18 calories per minute hovering) they would not usually visit nectar-less flowers. Schlumbergera flowers lack scent and hybrids seem to lack nectar[1] but have abundant pollen. The flowers remain open at nighttime as well as in the day. The pollen is at the tips of a mass of white or pink filaments. Are hummingbirds duped by the shape and colour to visit the flowers, expecting nectar to be available?

One reason for the popularity of Christmas cacti is that unlike hoyas and epiphyllums they do not drip nectar onto tables and carpets. Is this true only of the hybrids or also of the species?

I find the comments of McMillan and Horobin about *S. opuntioides* interesting. "*S. opuntioides* (and *S. microsphaerica*) are of limited value for breeding. They are difficult to grow on their own roots and are best grafted. Their most useful feature may be the cold tolerance of forms from higher altitudes (2000 to 2800m) where night temperatures can drop as low as -10°C. They will not tolerate a cold, damp British winter outside for long when unprotected."

The upland areas of southeast Brazil seem to have drier areas at high altitudes. Certainly below 2000m they can be both wet and cold in the winter (Hunt 1966 trip). On the inland side of the highlands there is a dry season in the winter.

In New Zealand we tend to grow cacti on their own roots. I have seen large plants of *S. opuntioides* although it is known to be prone to sudden collapse. We do tend to grow our plants under cover but without heating. Certainly Christmas cacti will grow outside in Wellington without protection from rain. They do not like competition from weeds or the presence of slugs and snails. Many organisms are restricted in nature not to the places that they could grow but to the places that other organisms will let them grow. Rocky slopes over 2000m may not be the place of choice, but it may be that an absence of herbivores such as snails may be a major factor. Snails like *Hippeastrums* also, and in fact are often attracted to mucilage-laden plants (eg agapanthus). At higher altitudes there is less competition from fast growing weedy plants.

[1] Although the specific descriptions for all species except *S.kautskyi* mention a nectar chamber at the base of the floral tube.

Plants that Eat Meat....

*At our March meeting **Roy Griffith** talked about carnivorous plants. This is what he said .. (more or less)*

For most plants the process is simple. To put it crudely - they have roots and leaves – the roots collect moisture and nutrients from the soil in which they grow – the leaves absorb sunlight and carbon dioxide – and various processes ensue.

But what if the ground in which the plant grows is devoid of nutrients? There are a number of classes of plants that can cope. These include Tillandsias – which will be the subject of a talk later this year – and the so-called "carnivorous" plants.

"Carnivorous" plants are found on every continental landmass (with the exception of Antarctica) and on many islands – excepting most of those in the Pacific. Worldwide the group consists of 9 families, 16 genera and about 600 species and sub-species. New Zealand is home to two genera – and the distribution of these is widespread (but not widely known).

A carnivorous plant, by definition is flesh-eating. In reality most species are relatively small and their prey consists almost entirely of insects – however some of the larger species have been known to capture frogs, lizards and rats – but whether their death was intended or accidental is disputable. The plants adopt a number of techniques for enticing and trapping prey – and we will discuss these in more detail as we consider some examples – but basically – to be considered carnivorous a plant has to meet several criteria. It must ..

- Attract prey
- Capture and retain the prey
- Kill the captured prey
- Digest or assimilate useful substances from the prey.

The most important – and also the most controversial – of these criteria is the last "the ability to digest or assimilate". True carnivorous plants must be able to absorb metabolites from captured prey to supplement the elements missing from their environments. The large complex molecules that make up an insect's body must first be broken down into smaller units before they can be utilised. The proteins must be broken to amino-acids and peptides – which can be readily absorbed – and then used for the plants growth and development. Quite a large number of plants do not satisfy this test – they can catch insects – but make no use of the nutrients.

To aid the digestion process some plants may use bacteria or fungi as agents to assist the initial

decomposition. It is difficult in some cases to be sure whether the plants own enzymes – or those of the bacteria are involved in the digestion process.

Carnivorous plants are mainly perennial – but quite a significant number are annuals. Plants may range in size from the tiny pigmy sundews and bladderworts, less than one centimetre across, to the large pitcher plant vines of Asia that can grow to over 30 metres tall.

Now let us consider some examples of carnivorous plants and talk about where they come from and how they catch their prey…

Dionaea Muscipula

As soon as I tell you that the common name for this is "Venus Flytrap" you will know the plant I am referring to. These plants actually come from the same family as the sundews – of which I will speak presently – but they employ a unique mechanism to trap their prey. It is the only species in its genus and seems to be on the verge of extinction in the wild as its limited range (in the coastal area of south-east North Carolina) is fast diminishing. Attempts to introduce it to other, apparently similar, habitats have failed.

The trap is baited with nectar and has a number of trigger hairs on each of the lobes. When two or more of these are stimulated the trap starts to close – and repeated stimulation continues the process – so the more the fly tries to escape – the tighter the trap shuts. When it has closed tight acid and enzymes pour forth from the digestive glands. When digestion has been completed all that is left are the chitinous skeleton and the wings of the fly. The trap opens – and they blow away. A trap cannot normally catch more than three insects in its life – after doing so it becomes inactive or dies.

Pinguicula

These are commonly known as Butterworts. There are 48 known species in this genus. They are found widely throughout the northern hemisphere. They are found through North America and Mexico, Europe (including Britain) and North Africa.

The leaves do not appear to secrete nectar, though they are lightly scented. They tend to catch midge-sized flies, winged aphids and the like. The movements of an insect alighting on a leaf are immediately impeded by the sticky glands, its presence stimulates them into exuding further mucilage and the victim is shortly overwhelmed and suffocated. The enzymes in the mucilage then aid digestion and absorption.

Pinguicula wesser

Drosera

The sundews are widely distributed throughout the world (both northern and southern hemispheres)– including through parts of New Zealand. They range widely in form and size – from small compact rosettes to long branching tendrils. The leafblade may vary in length from as little as 1.5 mm to over 60 cm. The genus is a large one comprising over 90 recognised species. While most grow in poor soils and bogs in Australia many species have evolved which are adapted to grow in much drier habitats. Indeed we saw some on a trip to Queensland in what, at the time, was a quite arid area (though doubtless it would have been rather different in the wet season).

The upper surface bears tentacles. These consist of gland-tipped stalks of fairly complex structure. The glands are unique in serving three distinct and equally important functions. They not only secrete the mucilage which catches and overcomes the prey in the first instance, but they also secrete the enzymes which in association with a weak acid dissolve all but the skeletons of their victims. Lastly they provide in part the means by which the resulting fluid is absorbed into the plant's system.

Sarracenia

The common name for this plant is the pitcher plant. There are two main forms – prostrate and upright. They are native to some of the eastern states of the USA and parts of eastern and central Canada. Some of the upright pitchers are so impressive that they are now used in floral displays both in the USA and in Europe. The size of the traps varies widely – some of the smaller ones can be no more than 15cm high – while the tallest can reach over 1 metre.

The plants have a passive trapping mechanism – which has similar characteristics in all plants of the family – there is a pitcher with a hood above it. First insects are attracted by nectar glands which are most abundant at the top of the pitcher and the entrance to the mouth. Once inside the insect quickly loses its footing on the slippery surface and falls into the potent brew of digestive enzymes at the base. Escape is very difficult at this stage as long downward pointing hairs above the liquid make it extremely difficult for an insect to climb out. The insect is then slowly dissolved and digested.

The flowers are most striking. They grow annually on a tall stem that shoots up from the surface. The unusual and often beautifully coloured flower stands erect in a nodding position.

Nepenthes

The "tropical pitcher plant" is typically found as a climber in tropical rainforests throughout southeast Asia, and in Australia, Madagascar and India. However some species may be found in drier open places. There are 82 species and are some of the most spectacular of all carnivorous plants. Some of the species are vigorous climbers and can grow up to 15m high. The pitcher size, coloration and shape varies widely. *Nepenthes rajah*, the king of them all, produces pitchers the size of footballs and has been known to capture rats. The traps operate in a similar manner to those of the Sarracenias. The cover on the trap has a second important function – as well as forming part of the lure by producing nectar - it keeps out the rain.

Utricularia

The bladderwort is another species that is quite widespread in New Zealand as well as in many other countries in the world. I do not have any samples. It is an aquatic plant and the traps are situated on the roots under water – to catch small creatures from the water. It requires someone more knowledgeable than I to find plants in the wild though.

Now let us turn our attention to care and cultivation for the grower here in New Zealand. There are as many sets of advice on this subject as there are growers – however I will tell you what has worked for me.

I have had most success when the plants were grown, standing in saucers of water, exposed to full sun for at least half of the day. The water needs to be kept topped up regularly – as I try not to let the plants dry out. I prefer to use water that has been left standing until it reaches room temperature – and not cold water direct from the tap.

The plants will die down in autumn and winter – and the entirely dead material can be trimmed off (if only because it is unsightly). New growth comes in spring. Flowers will come and you may well get seed formed. Seed from droseras is usually viable – and unless you are careful you will have small sundew plants starting to grow in every pot in your collection. Just look at some of the examples before you.

When a plant needs to be repotted I have used sphagnum moss, and I have used peat. Both of these seem to be entirely satisfactory. I do not use soil or potting mix though some books suggest potting mix should be used for droseras.

Funnily enough carnivorous plants (especially sarracenia) can be susceptible to pests like mealy bugs and scale. Most varieties are susceptible to infestations of sciara flies – whose larvae live in the mix. I have found Orthene can be used without problems.

Finally – if you have begun to get interested – where can you go from here…

Well – for information – head first to your local book shop or library. There are quite a number of useful books on the subject (rather more than I know of on the subjects of epiphyllums and hoyas combined).

There is also the New Zealand Carnivorous Plant Society[1], who publish an excellent magazine from time to time. They also have a seed bank – and sometimes have specialist books for sale. The only meetings of branches of the society are held in Auckland and Christchurch – and, so far, attempts to get a Wellington branch going have failed. Inevitably – quite an amount of information is available on the Internet – for those with access to it.

[1] NZCPS, PO Box 62 007 Mt. Wellington, Auckland.

Plants may be obtained from your favourite garden centre – though to get a range of plants will require repeated visits as most centres seem to have only one or two varieties for sale at any one time.

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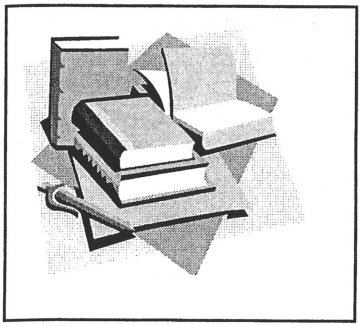
Workshop on seasonal care of Epicacti.

Our April meeting took the form of a workshop, led by ***Alice Hannam*** *on seasonal care of epicacti. The invitation was to "bring a plant or two" and many people did just that - together with cutters and other equipment. Tables were laid out and sheets were laid on the floor. After a brief introduction by Alice - sleeves were rolled up and work commenced. At the end of the session there were a number of well-pruned plants and a wonderful array of labelled cuttings- which immediately disappeared. During the work there was much discussion on the merits of various approaches, and on other aspects of care and cultivation. As they say "you really had to be there"! Thank you Alice for leading such a useful session.*

Further Reading.

Our society receives journals from a number of other societies with similar interests. These journals are all available from our library. In the last couple of months a number of interesting items have been published.. Here are three that you might find interesting....

In the March 2004 issue of **The Epiphyllon** (produced by the Epiphyllum & Hoya Society of Australia) there is a nice short article on propagating schlumbergeras. In it they enthuse over copra-peat or coco-peat as an environmentally-friendly alternative to peat-moss. Here it is marketed in compressed form as coir.



The re-namers are at it again. In the April issue of **The Epi-Gram** (the newsletter produced by the South Bay Epiphyllum Society) Dick Kohlschreiber continues the topic he started in March - and this time sets out what the committee on *Hylocereae* is recommending for the genus *Epiphyllum*..

And continuing the theme of naming things - the January-March 2004 issue of **Fraterna** (which is published by the International Hoya Association) has an article by Dale Kloppenburg on the "sections" into which the genus Hoya can be divided. Lots of examples and pictures to illustrate the point.

These publications - and many more besides - are all in our library - look for them.

Now is the time.....

What you should be doing right now depends on the temperatures you are experiencing (at night as well as the day-time ones). If you need to water your plants this is best done early in the day (as the nights can be very cold).

Epicacti - *it is still work-time so you can prune and repot if necessary. Water with the greatest care.*

Hoyas - *it is best not to water at all unless the plants look really dry, and then only give a small amount of water on a fine day. Some days are still warm so keep checking for mealy bugs and other pests.*

Schlumbergeras - *enjoy the flowers and water sparingly. Keep varieties such as "Gold Charm" and "Bridgeport" warm at all times - or the flowers will have a pink tinge.*

Rhipsalis - *water very sparingly.*

Aporophyllums - *water infrequently. If you have not done so - prune lightly and repot with great care (and with gloves probably)*

Epiflora

Ceropegias - *lay off the water unless the plant looks very dehydrated. Then give only a small amount of water in the morning on a fine day. The stems of some varieties die back entirely at this time of the year. Keep checking for pests.*

Odd Cuttings and Seeds

Hangers for hanging plants.

When you need to have hanging plants inside - where do you hang them? Especially if you want to move them into a warm room at night. A visit to Mitre10 (or other hardware store) might provide the answer. The other day we spotted a "single garment pipe hanger" costing around $30. It has castors and is light but sturdy. It can take five plants or so hanging from the cross bar.

Pesticides.

At one of the meetings this year it was suggested that it was planned to withdraw a number of pesticides from the market next year. Brand names mentioned included Orthene and Mavrik.

A check with one of our suppliers elicited the following response.

"I have spoken to Nufarm who distribute both of the products you mention. There are no plans to withdraw either of these products from the market, in fact further label registrations are being sought. The main change will be that after the reclassification of all agrichemicals (currently underway after recent legislative changes), some products will only be available for purchase by "Approved Handlers". These people will have to obtain an approved handlers certificate possibly through some polytechnics. Because some of the products may only be available to approved handlers after reclassification, these products may no longer be available in small "home garden" packages. Which products come into this area is not known yet. We will have to wait and see!"

Occasional Cards from GB Designz

A new range of occasional cards with a botanical theme and Cats and Teddy Bears and People and Arty and New Zealand Scenery and Musical and "Wild life" and.. and..

and.. they are beginning to appear in Auckland shops. A range - and growing - of over 60 different cards. GB Designz has been trialing a mail order system too. He's got a catalogue. According to Grant Bayley, the brainchild of this concept, people have been curious and found that people liked getting some of their cards this way. What I noted, when I ordered some cards, he put a few extras in and this was a nice surprise. If you were curious and wanted to see a sample, I'm sure he'd be happy to mail you one with his catalogue. His contact details are PO Box 9-1066 Auckland or by e-mail at gbdesignz@clear.net.nz

Shade Houses.

We recently went to the Feilding Garden Festival at Manfeild Park. One of the stands there was showing a range of prefabricated shadehouses of various sizes. They were well constructed and seemed to be an excellent design. You can see the details of their designs on their website at www.petersglenshadehouses.com

and our library has a copy of their leaflet.

Back Numbers of "Epiflora" .....

The first edition of Epiflora appeared in March 1992. We have limited stocks of back-numbers for most issues from Volume 2 - issue number 1 (March 1993) onwards. Prices are 50c per copy plus postage (if applicable) - contact the Editor.

Future Publication Dates..

EPIFLORA is published quarterly by the Wellington Epiphyllum and Hoya Society.

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Closing dates for contributions:

Spring 2004 edition -14th August 2004
Summer 2004 edition - 13th November 2004

Subscriptions:

Subscriptions are due on 1st of January and are:

Members -	*$12.00*
(overseas members	*$NZ24.00 or $US12.00)*
Additional Associate Members -	*$4.00*
(At same address as a member)	

Society web address:

Find us on the web at : www.anwyl.com/epihoya

printed by: **RAPIDCOPY** Ltd; Wellington, NZ - ph: 04 4712537