

WELLINGTON

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# EPIFLORA

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Produced by the

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Wellington Epiphyllum & Hoya Society



### Editorial.

Welcome to the post-Convention, pre-Christmas edition of Epiflora. No problems finding copy this time. What with Convention reports and notes, along with material already supplied there was enough for a super edition. Thanks to you all.

The Convention was, for us, as novices in the Epiphyllum and hoyo world a great opportunity for learning. We even bought a few plants. And we certainly enjoyed the opportunity to see some of the collections we hadn't seen previously. It was fun too showing the Stones around Wellington on the Sunday night, although we noticed they didn't linger long outside the car at the Mt. Victoria summit. Can't think why. It was only mildly windy and wet by Wellington standards.

Christmas greetings and good growing to you all

Alison & Peter Beeston

Don't forget the sales table!

We continually need your help for our monthly meetings. Produce, veges, fruit, plants, food, books etc. Every little bit helps.

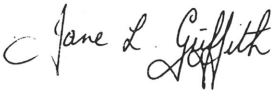
Dear Fellow Epiphyte Lovers,

Since writing in the last edition of Epiflora so much has happened, especially during this past month. November started with the Society staging a small display at Newtown Public Library - this display was ideally situated and gained a great deal of interest. This was followed by the annual Lower Hutt Show jointly arranged by the Horticultural Society and the Cactus and Succulent Society. Our display was extremely colourful and packed with interesting plants. We used the idea gleaned from our recent trip to California for the display of Epiphyllum flowers and found that not only did the flowers look splendid in the sphagnum moss but also many lasted longer than they do on the plant. The main reason for taking part in the Lower Hutt Show was to attract new members and we welcome those who have joined us as a result of the Show.

The highlight of November was the Convention. Robyn has written a full account of this great week-end and even though the weather was not as ordered it was wonderful meeting up with fellow growers from throughout the North Island and from America. I would like to thank all those who contributed to make the week-end such a success. The success was entirely due to the co-operation of each of one of us. What a great team we make!

I do hope that it has been a good flowering season for your Epiphyllums - ours have been just splendid this year. I hope also that your Hoyas are coming into flower and will give you many weeks of pleasure.

Roy joins me in wishing you joy and peace this Christmas; relaxing holidays and a happy and prosperous New Year.



Jane L. Griffith  
(President)

## 1993 Epiphyllum & Hoya Convention

*Held at St. John's Prebyterian Church, Willis St. Wellington  
on Friday 19 - Sunday 21 November*

On arrival on Friday evening we were greeted by a happy buzz of voices. Wine, orange juice and nibbles were laid out in our bright conference room. Jill and Aynsley did a sterling job serving the drinks. Myra and Nola sold tickets for the first of our daily raffles, each offering a choice of four prizes. The sales room was a hive of activity between 7 and 8.30 with members and visitors gathering armfuls of plants. The society's wire hoya and epiphyllum frames proved very popular with bundles going back to the States via Margie and Robert Stone. Perhaps Morris should claim designer rights.

Jane welcomed visitors and members at 8.45pm. At 9pm we all attempted Merv's quiz and supper was served. (Now, Merv, it's not fair to include epi photos and ask us to identify the bloom when you don't know the answer.) Morris auctioned off bundles of raffle tickets, the raffle was drawn and the meeting closed at 10pm.

The weather on Saturday was not the best with rain and wind but at least it wasn't cold. Nola introduced Herman, our first speaker, who showed slides of his wonderful collection of aporophyllums. He gave a brief history and then swung into close-ups of glorious flowers. This was very popular judging by the requests from the floor for Herman to name the varieties again as we hurried to note them down.

Merv introduce Mike Capenerhurst of Wanganui who spoke about ceropegias, illustrating his talk well with drawings. A roar of laughter greeted his assertion that ceropegias, like epiphyllums, are boring for eleven months of the year - BUT then they flower! It was a very comprehensive talk from one who claims he isn't an expert. We didn't believe him! He spoke of various potting mixes, propagation and the need for regular repotting to keep growth stimulated, watering and feeding regimes. Merv thanked Mike and gave him a small gift to show our appreciation.

After morning tea and another browse through the sales tables we broke into our groups for photography, ceropegia, hoya and epiphyllum workshops. A buffet lunch was served and Brian then introduced Jane's talk on epiphyllums called "Small is beautiful" which was humorous and well illustrated with slides. Afterwards Brian paired up drivers and their passengers and quickly sorted out destinations so each display wasn't inundated with cars arriving all at once.

We returned to St. John's at 6.30pm for pre-dinner drinks, the judging of the photo competition and slides. Paul

Cable, our judge awarded the epiphyllum photo prize to Roy, the hoyas photo prize to Morris, and the "all other subjects" photo and overall top award to Morris for his superb tillandsia photo. Roy presented a small gift to Paul in appreciation of his work.

Merv read the text with the epiphyllum slides, then we all walked downstairs for a buffet dinner, returning for hoyas slides presented by Jane and slides of recently bred Australian aporophyllums presented by Herman. The raffle was drawn and the evening ended at 10.30pm.

Sunday brought another wet morning but our spirits weren't dampened. Workshops started at 8.30 am with the sessions covering aporophyllums, epiphyllums, schlumbergeras, hoyas and grafting. Midmorning we drove to Otari Native Botanical Garden in Wilton where the curator, Mike Oates, talked to us about the aims of Otari and what we would be able to see on the conducted tours. He offered long and short walks and he and the Supervisor at Otari, Carol Leitch, led groups of eager observers around the dripping native forest where we saw many epiphytes including ratas, orchids, astelias, supplejack and ferns. We acquired lots of information about our native trees and plants besides the epiphytes, with much admiration expressed for the large area of Chatham Island forgetmenot (*Myosotidium hortensia*) in bloom, looking very healthy and lush. After eating our packed lunches we visited six collections, ending up at Herman's for our barbecue tea. We admired his enormous glasshouse full of cacti of all shapes and sizes and aporophyllums in flower.

After tea our American visitors, Margie and Bob Stone, were given Absolutely Positively Wellington T-shirts as mementoes of their visit. The convention committee, in particular Jane and Roy, were thanked for their hard work, ensuring the success of the Convention despite the weather and Herman was thanked for hosting our barbecue at his home. The last raffles were drawn and our convention guests departed. It was hard to say goodbye.

It has been a marvellous experience for all of us which we hope to repeat in four years time. See you all in Auckland in 95.

Thanks go to the following for their donations which contributed to the success of the Convention.

Trustbank Wellington for supplying the writing pads.  
Shell New Zealand for supplying the pens.  
California Gardenworld for supplying the bags.  
Wellington Information Centre for supplying the maps and brochures.

Robyn Gibson

# Photographing Epiphyllums

(Notes taken from the October meeting led by R Griffith)

I saw a TV program some years ago which Lord Lichfield began by showing two photographs enlarged to 10' by 6'; one had been taken with a box brownie, the other with a Hasselblad. The one taken with the box brownie was clearer! This just makes the point that it does not matter what camera you have got - its how you use it that is important.

My objective when taking photos of Epiphyllums is to record the flowers so that:

- the colour and shape show to best advantage
- the photograph layout is pleasing.

and these objectives apply to both prints and transparencies - there is no difference.

I find it very easy to take bad photographs so I can write much on the subject. The mistakes I most commonly make are:

- \* getting some of the flower out of focus
- \* getting the exposure wrong
- \* losing the detail and shape of the petals
- \* having a background that is distracting

The basic requirements for a good photograph are:

1. Good Light
2. Correct Focus
3. Appropriate Background/setting/layout

so to take these in order:

## LIGHT:

There must be enough to give the flower shape and distinction, but it must not be too harsh or it will make the petals shine. You can use flash - but only if it is diffused - or the colour will be lost. Take care when setting the exposure (choose a slow shutter speed - this means a small aperture can be used, but the camera must be held steady). The light must be falling on the front of the flower - if it comes from the back the colours will not show up well.

## **FOCUS:**

You need to get close enough to fill the frame, but you also need good depth of field so use a small aperture. Choose the point of the flower on which you focus with care. You can take your time with this - the subjects don't run away

## **Background/Setting:**

The flower being photographed is the important part so the background needs to be unobtrusive (watch out for odd shapes and bright colours). One way of solving the problem is to use a special sheet, cloth or card - or just make sure the background is completely out of focus. When composing the picture - take care if you are not using an Single Lens Reflex camera (because you cannot see exactly what you are taking!!).

What equipment do you need?

The camera - age does not matter - but it must be able to focus on an object at short range. A cable release and tripod are both very useful.

The flash - (if you want to use one) choose one that automatically determines the amount of light needed - and diffuse the light with a tissue held in place with a rubber band

The rest - a black cloth for background, holders or supports for the flower, plastic ties and canes, to hold unwanted foliage out of the way; and most important of all - a notebook or pad to record what flowers you have photographed.



## The Farmer's Mule and what happened next

A farmer bought a mule and decided that the animal would be of more use to him if it were trained, whereupon the mule was taken to a mule trainer. The mule trainer looked at the mule, walked around it, then picked up a sledge hammer and hit the poor animal between the eyes. "Hey" said the farmer, "I hired you to train the mule not to kill him." "Sure," replied the mule trainer "I'll train him, but first I've got to get his attention."

The same goes for photography. It's no use taking what could be a really nice picture if your viewer has nothing to focus his attention on. Use the visual sledgehammer. This can be done with colour, size or sharpness. As a rule it's fair to say that the larger an object is within the area of the picture the more importance it assumes. Get close to the main object so that it becomes the picture and draws the viewer's attention.

Different focusing is perhaps the most effective way to draw attention to what you most want taken notice of. You want to focus accurately, sharp and clear so the eye is drawn to your story in the frame. Then there is no way the viewer's eye will stray onto any other part of the picture.

Really what you are trying to do is depict a three dimensional subject on a two dimensional piece of paper, so perspective governs the relative size of object within the picture. Perspective depends entirely on the distance between the camera and the subject and not on the focal length of the lens in use. Focal length simply controls how much of the subject is included and therefore the size of the subject in the picture. It is best to choose with care both the focal length of the lens in use and the distance at which you use it.

Once you've decided what you want in your picture you must select a suitable viewpoint to make sure that all the objects within the picture are arranged as you want them. You may, for instance, decide to change your viewpoint slightly to alter the relationship between the foreground and background.

One of the most important things to do is to suit the composition of your picture to the subject. There's really only one way to become proficient in picture construction and that is to take pictures and look at your own and other people's pictures and see how they work. It's much easier to take pictures if one goes out with some sort of theme fixed in one's mind. In that way you are not just snapping away

for the sake of it and hoping that most of your film has the right picture construction, depth of field and colour.

Instead of just taking one shot of the subject, walk your way around it photographing all the time. In this way you will get a much better idea of the use of light and shade and shadows. Think first and then press your shutter release and your pictures will show the thought you've put into them. Composition or picture construction is a very personal thing so please yourself first and if other people like it it will make you feel good inside.

When using colour you have to be sure that colours harmonise with one another or contrast with each other to suit what you are trying to say. In colour photography the hues can harmonise or clash to suit the mood of the picture. If you have a picture in which the predominant colour is green and the object you want to feature is also green then it will tend to merge into the background and virtually disappear.

Contrast can be obtained by using another colour for background, or by using shadow, or highlighting the main feature. The easy way with floral photography is to change the background colour when taking photos indoors. But don't be afraid to experiment.

Peter Beeston

## SMALL IS BEAUTIFUL

(Small - Medium Sized Epiphyllums)

For many of us our first encounter with an Epiphyllum was a pure coincidence - we found that there was this rather uninteresting, slightly prickly plant in the garden when we moved into the new house. The beautiful red or white flower that appeared in late Spring made us decide not to pull the plant up. Then a friend gave us a cutting saying "I've got a lovely purple (or red or white). My grandmother had it growing in a pot on her porch for years, it flowered profusely every year." And so the bug gradually creeps in!

When another friend shifts house your collection expands and this is aided by a visit to the local Horticultural Show where the Epiphyllum and Hoya Society have a splendid display. The sales table at the Show attracts you like a magnet and surprise, surprise you come away with several plants. You find places to house your Epis on the porch or in the glasshouse and then next November off you go to the Show again. The Epiphyllums on display and the beautiful coloured photographs prove too great a temptation and so you arrive home with another five or six plants. Is there grounds for divorce when your spouse sees the new acquisitions! Or is this a challenge to his creativity - he always said he was good with a hammer and nails! A shadehouse would be ideal. And having signed up membership of the Epiphyllum and Hoya Society at the Show there is no doubt that your collection will continue to expand.

The above story could be yours or maybe your story is slightly different but has the same general trend.

As our collections grow it is not unusual that we start developing a preference for a particularly size, shape or type of Epiphyllum. Maybe you are fascinated by large and extra large flowers or a particular colour. Of recent years it is the small-medium flowered plants that have particularly interested me.

Small-medium flowered Epiphyllums often take up less room than the larger flowering plants and this is a great advantage where space is at a premium. Many of these plants grow best in baskets and therefore if you have more hanging space than floor space you may be persuaded to think small. The majority of small-medium flowered Epiphyllums flower profusely, nearly all of them bloom several times annually and therefore provide colour almost every month of the year. Some of these plants, unlike most Epiphyllums, produce flowers from the same aerole on more than one occasion and it is not unusual to see several buds growing from the one single aerole. It has also been suggested that the seedlings of the smaller flowered Epiphyllums bloom at least a year earlier than the large flowered Epiphyllums. All very good reasons to think small.

The Epiphyllum Society of America classifies Epiphyllum flowers according to size and therefore uses the term Extra Small for

those flowers which are under 2" (5 cm) in diameter. George's Favourite, Baby Showers, Tiny Treasure and Eve are therefore all Extra Small. Flowers which are between 2 - 5" (5 - 12 cm) in diameter are classified as Small (e.g. Pink Snowflake, Early Girl, Kami, Rhodamine). The term medium is used for flowers of 5 - 7" (12 - 18 cm) in diameter.

The German Epiphyllum specialist Eckhard Meier studied small flowered epiphyllums (calling them "mini-hybrids") and classified them into five groups.

His first group includes *Nopalxochia phyllanthoides* crosses. This group have daffodil shaped blooms which strongly resemble *Nopalxochia phyllanthoides*, having a diameter of about 4" (10cm). A example known to most of us is Wedding Bells.

Meier's second group include *Disocactus nelsonii* crosses. The blossoms are bell-shaped and according to him bear a faint resemblance to lily blossoms. Most of this group are smaller than *phyllanthoides* hybrids and their leaves are thinner. Cheerfulness and Sweet Kisses are both *Disocactus nelsonii* crosses.

The third group are *Disocactus biformis* and *Disocactus eichlamii* hybrids. This group have very small flowers and small foliage. Meier suggests that this group prefer warm temperatures and are most sensitive to the cold. Sugar Baby, Eve, Pete's Snowflake and Gold Coin are all cited as examples and it is my experience that all these cope with the conditions in our shadehouse where the temperature never drops below zero in winter. It maybe that if you do have more severe winter temperatures it is best to treat these hybrids as houseplants.

Meier's fourth group include *Disocactus macranthus* hybrids. The flowers of these hybrids open wide and are often wheel-shaped and fragrant. Lollipop, Solis Glow and Fred Boutin are all examples from this group. Frequently these plants are off-season bloomers and have more than one flower from each areole.

Eckhard Meier's final group gather up all the hybrids which cannot be fitted into the preceding four categories. These include hybrids which have been crossed with large Epiphyllums and as a result they frequently have large foliage and are fairly robust. Snowflake, Sugar Plum Fairy and Pilands Pride are all examples known to us.

Our collection of small-medium flowered Epiphyllums continues to expand and I would certainly recommend these little beauties to all Epiphyllum enthusiasts. This year we have started hybridising from our own collection so it seems inevitable that small-medium flowered Epiphyllums will remain an important part of the Griffith collection for many years to come.

Jane L. Griffith

Notes from Workshops at the 1993 Epiphyllum Convention

Aporophyllums

Talk given by Herman Kortink

Temperatures:	Medium to warm during spring/summer when growth is strongest, but will tolerate quite cool temperatures during winter
Light	Appreciate good light conditions
Water	Ease water during winter, but increase during spring/summer - recommends the use of a water meter: winter - just moist, summer - moist to wet
Feed	Herman uses Sierrablen slow release twice a year - early spring/summer and autumn.
Pests	Herman uses pyrethrum
Ventilation	Good ventilation is important

Ceropegias

Talk by Mike Capenhurst

Origin	Come from wet areas of tropical regions
Temperature	Will tolerate cool in winter, warm in summer
Feeding	Dilute phostrogen
Soil	Uses commercial bark with sand/pumice/and potting mix - repots annually - prefers rather shallow pots
Pests	Watch for root mealy bugs
Water	Keep slightly dry during winter, mist frequently, increase watering during summer

Hoyas

Workshop conducted by Morris Tarr

Potting mix	3 parts granulated bark half a part peat half a part coarse sand half a part vermiculite 250 m sierrablén 250 m blood and bone
Feeding	Phostrogen, orchid blossom booster, or African Violet feed Gives about 1 tsp dolomite per pot early spring Applies feed spring to end of April
Watering	Keep just moist in winter, increase water spring/summer - recommends using a water meter
Pests	aphids - mealy bugs: uses Target Places Diazinon Prills in lower part of pot and again near the surface with some potting mix over the top - water in. Controls mealy bugs.
Cuttings	Uses Dalton propagating sand mix in a heated propagating box - about 4 weeks, then pots up individual pots.

Epiphyllums

Workshop conducted by Jane Griffith

'Small Is Beautiful'

Advantages	Frequent flowering, sometimes several times a year Flowers tend to last longer, up to a week
Sizes	Extra small: Under 2 inches dia Small 2 to 5 inch dia Medium 5 to 7 inch dia

Cuttings	Dust the cut scar with sulphur (from chemist - granules then grind finely) Remove dead foliage and top growth to promote lower strong growth. Allow the cutting to dry at least 2 weeks, sulphur on cut face, then pot up. Prune regularly to keep plant tidy and free of dead foliage especially where chewed by snails.
Watering	Ease water during winter, but do not dry out the plant. Increase water spring to summer.
Feed	Sierrablen, phostrogen

### Schlumbergeras

Workshop conducted by Merv Keighley

Potting mix	Variable - Mix bark with normal potting mix Good drainage essential
Feeding	Phostrogen, sierrablen (try sheep pellets)
Watering	Ease water during winter, increase spring/summer.
Temperature	Not too high - tendency to turn pink colour when too hot. Cool tolerant - brings out good colour in flowers.
Propogating	Small pieces tend to drop off the plant - this may be a natural method of the plant to increase itself. Easy from small cuttings.
Pests	Aphids

Grafting

Workshop conducted by Herman Kortink

- Stock Must be quite tall specimen to allow the graft space to cascade.
- Cleft graft: . Slice top clean off fairly tall cactus to expose the central moist core known as the 'bundle'.  
Cut the piece to be grafted on an angle and attach to the central moist core using fine spike - Herman uses spikes from cactus plants, boils then keeps clean. Dust the cut area with sulphur - keep sulphur off the new graft piece. Place a weight on top to keep the graft in place. Graft should take in 2-3 weeks. Keep the host plant potting mix just moist - not wet, and never let dry out.
- Wedge Graft Cut a wedge 'v' shape on top of host plant, and cut the angle on piece to be grafted to fit the 'v' wedge. Push into the cut part and fasten with spike - weight on top. Same comments apply re watering etc as above.
- Plants to use Must be very healthy stock - chose strong growth. Opuntia ideal to graft on to.
- Tools Steralise all tools - use fine steel knife very sharp for all cuts - keep everything clean.

Don't be discouraged if the first attempt is not successful. Try again.

Jill Griggs  
22 November 1993



## CEROPEGIA

Guest Speaker at one of our meetings considered himself a non-expert on the genus and suggested that his only qualification as a speaker was that he had more than two Ceropegias, and that it might be a case of "the blind leading the blind". It soon became obvious that Mike had done much study on the genus, and related members of the family ASCLEPIADACEAE, which includes *Asclepias*, *Hoya*, and *Staphanotis*, among the more than 300 genera and over 2000 species.

The name *Ceropegia* is attributed to the botanist Holzschnitt in 1673, and was retained by Linnaeus in his classification system. More recent workers on the genus include N E Brown, H Huber, R Schlecker, R A Dyer and P V Bruyns.

*Ceropegia* is derived from the Greek words meaning wax and fountain - a reference to the shape and appearance of the flower. There are about 200 species most of which come from Africa (including the Canary Islands) but a few extend east through the tropics to SW China, Indonesia, Malaysia, Philippines, New Guinea and Northern Australia. Most of the species found in cultivation are more or less succulent. Succulent species are found in drier areas and may have fleshy stems or leaves, tubers or fleshy roots, or leaves may be reduced or absent. In wetter areas leaves are larger and thinner but different authors differ in whether the genus originated in wet or dry areas.

Even within one species such as *C woodii* (now referred to as *C linearis* ssp *woodii*) growing conditions may effect the succulence and colour of the leaves. This was shown by specimens brought along by Mike and by Brian. Moist and shady conditions result in thin green leaves while under drier conditions the leaves become thicker, succulent and with silver markings and reddened edges.

Different experts have split the genus into from 3 to 14 groups depending on the flower form and/or plant structure for their various classifications. Leaves are opposite or in whorls of three, usually with leaf stalks and range from heart- to lance- shaped, and in degree of succulence. Roots may be fibrous, fleshy or even a caudex or tuber. Tubers may also develop along the stems and be used for propagation or as grafting stock for other species. Some tubers both of this genus and also the related *Brachystelma* species are eaten by Bantu and Lesotho herd boys as well as by porcupines, baboons, rodents and insects.

The main interest in the ceropegias is in their weird and wonderful flowers which cover almost all the possible variations possible on basic structure. This is basically a bulbous lower portion, a thinner central portion, and a wide variation in the form and size of the corolla tips and lobes which may be separated along their length, joined at their tips, or joined and expanded to form a lid over the flower tube. The flowers come in a range of colours from greens, through to white, cream and yellow to brown and purple, with the richest colour inside the corolla tube - for the enjoyment of the insect pollinator during its wait inside the flower.

As in *Hoya*, *Asclepias*, *Stapelia* and almost all genera except *Periploca* in the family Asclepiadaceae the pollen grains are massed in specially shaped bundles known as pollinia which are found in joined pairs on each anther. The pollinia adhere to the heads and legs of insect visitors and are then placed in suitable positions to effect pollination of another flower. Many flowers have downward pointing hairs which trap insect visitors until the flower alters its orientation on the hairs collapse. This

presumably ensures that flowers are cross-pollinated. While Mike has had numerous seed follicles develop on his *Stapelias* he has yet to produce and seed follicles on his *Ceropegias*.

*Stapelias* may take up to 12 months from pollination to seed follicle development, but *Ceropegias* produce their seed pods soon after fertilisation. The numerous small seeds come complete with parachutes and are liberated in a similar manner in the two genera. If you don't want seeds spread through your glasshouse it is an idea to bag the pods before they are ripe.

Propagation of *Ceropegias* is by cuttings, corms (including grafting), layering and seed. Some overseas seed sources have failed to produce plants true to family, let alone species label, but that is another story.

Nodal cuttings of succulent species may be taken in autumn, planted in dry mix and watered sparingly after a month. Top growth should eventuate the following summer after spring repotting. In nature succulent stems may dry up in one patch so a section of stem drops to the ground where it may then root. Succulent leaved species such as *C sandersiniae* are said to be able to be propagated from leaf cuttings but Mike has not tried this.

The soil mix for *Ceropegias* should be rich and porous. Mike uses the same mix as for his cacti - 3 parts of commercial potting mix to 1 part of sharp sand/pumice (pumice encourages roots by holding water).

Jacobson suggested a mix used for stapeloids would be suitable - 2 parts old cow manure, 4 parts leaf mould, 1 part old loam, 2 parts coarse sharp sand, broken brick, charcoal and mortar rubble.

Nottle suggested 2 parts sand, 1 part peat or sand, 1 part peat, 1 pine bark (fine).

Annual repotting results in better growth. Repotting may be done at any time of the year. Mike fertilises with phostrogen and top waters although some authorities recommend bottom watering and good drainage to prevent root rot.

Mike corresponds with an American *Ceropegia* Round Robin and envies them their wide choice of available plants. *Ceropegias* may suddenly die for no apparent reason so it pays to take cuttings to provide spare plants. With userpays it becomes too expensive to import plants. Altogether this was a most interesting talk illustrated by a range of flowering plants.

Reference material mentioned by Mike included a number of specialised works as well as more general works on succulents and their cultivation.

"*Ceropegia*, *Brachystelma* and *Riocreuxia* in Southern Africa" by R Allen Dyer (who died recently) is still available.

Issue No.17 of the journal *Dintenia* for July 1984 includes the papers "*Ceropegias*, *Brachystelma* and *Tenaris* in SW Africa" and "*The Genus Ceropegia* on the Canary Islands" by P V Bruyns.

Others who have contributed to work on this group include N E Brown, R Schlechter and H Huber.

The information on fertilisation in the article "Structure of the highly specialised carrion flowers of *Stapeliads*" by G Reese in *Cactus* and

Succulent Journal (US) Vol.45:18 (1973) applies equally well to Ceropegias, although all appear to have unscented flowers.

*Ceropegia cimicidora* was named because of the similarity of its flower odour to that of the bedbug (*Cimex*). Mike had not noticed any odour on the flowers of his plants but had never smelled bedbugs either!.

Thank you Mike for a wealth of information, most ably presented, and for bringing your flowering plants.

**Reported by Penny Luckens**

# THE FLOWER DEVELOPMENT IN RHIPSALIDOPSIS

BRITTON & ROSE

By Elmar Bachthaler

Translated from K.U.A.S. 9/42/91 by Herman A. Kortink.

Rhipsalidopsis has a relatively small natural habitat in the higher mountain ranges near the coast in Eastern Brazil probably a little above about 1000 metres. The most notable habitats are in the State of Minas Geraes Parana and Santa Catarina where they grow in the trees in the mountain areas mostly in collections of humus in trees and crevices in rocks. The plants grow into small bushes which have their own particular growth habit of developing the overhanging branches with the botanical name of *Phyllocladien*. These have the function of the flowering outside leaves and are equipped on the front face with more or less brown bristled arouses from where these *Phyllocladien* under inductive conditions will form buds and eventually flower.

The genus *Rhipsalidopsis* consists of 2 species and a hybrid which in habitat separate themselves as follows. The most well known species is *Rh. gaertneri* (Regel) Lingren, the Eastercactus as it is known in Europe. It has proportionally large longish epilittical mostly grey leafy surfaces and scarlet red flowers which have when fully developed a diameter of about 6 to 8cm, quite large.

The second species *Rh. rosea* (Lagerheim) Britton & Rose. It also goes by the common name Whitsunday Cactus. It is in reality much smaller, 3 by 5 sides and flat forming or epilittical green or redtinted along the edges of the phyllocladien and light rose coloured flowers and when fully open have at the most a diameter of 3.5cm. The third species was created by A. Graeser from Nurnberg, Germany, in the early thirties, by crossing *Rh.gaertneri* with *Rh. rosea* and has an identical chromosome count (2N=22) make up. As a species hybrid in its own right it was named Rh. x Graeseri (Werderman) Moran. Its Phyllocladien and flowers are intermediate between its parents and are the second largest of the three. The colour of the flower of this F1 hybrid are sealwax red and after self pollination and subsequent intercrossing a number of hybrid species were created with large flowers and a variety of colours. The best of these were selected worthy of further culture and were offered to the hobby and the trade. The sorts "Frulingszauber and "Ostergruz" ( in England Spring Dazzler and Paleface) and also "Electra" have with their special free flowering habit, found special popularity.

Further crossings and for a part backcrossings with the original species has given us in a number of years a whole row of interesting sorts. These flowers are larger and the colours are a definite improvement which in the collectors description are called "new doubles".

Rhipsalidopsis are spring flowerers and in their native habitat (south of the Equator) flower in the months of October-November. From that we must conclude that for all species budforming will only start in cooler temperatures. This has been proven with research in both species and also for their hybrids.

So it is now known that for flowerbuilding *Rh.gaertneri* requires temperatures of about 10 to 15 degrees C. These temperatures are an optimum, with temperatures of 10 degrees C. flowerbuilding will start

regardless of the length of day but with temperatures of 15 degrees C. short days with about 8 to 12 hours of light are required. Lower temperatures for all species and hybrids under 8 degrees C neither hinders or promotes flowerbuilding but frequently will cause the dropping of the phyllocladien (bristle carrying flowering leaves). Temperatures of over 15 degrees will retard the flowering-building quite often, especially with long days (with more than 12 hours of light).

Under optimum conditions the plants must have at least 50 days and for maximum flower effect possibly more. For outstanding phyllocladien and flowers, plants probably should be kept cool for about 70 to 80 days, at the same time low light of about 1.000 lux should be provided proportionally, frequently on wintry days.

At the end of the cool period temperatures should be accelerated from 15 to 18/20 degrees C. normally at the end of March (Europe) September (Southern).

The flower development through the correct combination of temperature and light conditions should be reached after about 50 days. *Rh. gaertneri* var *tiburtii* has a similar flower reaction as the species, however the cool period for budforming and flowerbuilding is somewhat shorter. Also *Rh. rosea* reacts to the flower development in a similar fashion although the workable temperature reach is somewhat lower and the lead up time should be longer than *Rh. gaertneri*. Optimum would be about 10 degrees C under short day and light availability in winter months. In that case the cool treatment must be between 90 to 100 days.

If the temperature is consistently from 18 to 20 degrees C under long day conditions, the flower buds would be, for the first named species, fully open after about 50 days. *Rh. graeseri*, with regard to the flowering reaction is most of the time intermediate, the clone selections seem to be in the temperature range of *Rh. rosea*, so are the researched hybrids for the flower development. Temperatures of 10 to 12 degrees C and short day conditions are the most advisable and for good flower effect, a cool period of 60 to 70 days is required. Also a proportionally relative low illumination of about 1.000 lux should be provided. After optimum cool conditions speed up conditions again from 18 to 20 degrees C with long days for the flower development. This should be reached after about 50 days.

The remaining applies for all species and hybrids that after the cool period and by low light intensity the temperatures should not go above 20 degrees C as the development of the flowers will be severely hindered and most will be dropped in the bud stage. For many years Rh. Species and hybrids were grafted onto fast growing grafting stock like *Pereskia aculeata* and *Eriocereus jubertii*. Today Rhipsalidopsis are rarely grafted anymore as they grow quite well without problems on their own roots and produce flowering size plants in a shorter time than grafted ones and under favourable conditions *Rh. gaertneri* and *Rh. x graeseri* flower in their first year.

With *Rh. rosea* this is however only possible in two years. It should be pointed out that this species is somewhat more exact and needs a little more size than the first named.

The flowerbuilding takes place in the first instance on more mature standing phyllocladien in Autumn. By withholding most of the water normally given, hardened up, the reduced temperatures and the drier conditions will discourage the development of new leaves and therefore allow the present standing phyllocladien to fully ripen.

Further cool temperatures, possibly around 10 to 12 degrees C especially during the night and the natural short days in the following winter months will encourage good bud development. With the increasing temperatures in March and the longer days in April-March a rich and steady display of flowers can be assured.

*Rh. gaertneri* and *Rh. x graeseri* make quite an impression with their colourful buds and after full development the colours and the size of the flowers. *Rh. Rosea* is known for its flower richness and sheer numbers and the pleasant scent.

In bringing this to a close and in the framework of reorganising nomenclature of what the suggested changes are in the cactus systematic, in the subtribe Rhipsalidinae Rhipsalidopsis to abolish as a genus and therefore to rename this cactus *Hatiora gaertneri* (Regel) Barthloth Comb. Nov. *Hatiora rosea* (Lagerheim) Barthloth Com. Nov and *Hatiora x graesneri* (Werdermann) Barthloth Com. Nov.

## 1994 Programme

January 8th.	Propagation from cuttings
February 12th.	Flowering Hoyas
March 12th.	Seasonal care of Epiphytes - 1 (Epiphyllums and Aporophyllums)
April 9th.	Seasonal Care of Epiphytes - 2 (Hoyas and Schlumbergeras)
May 14th.	Growing Tillandsias from seed
June 11th.	Schlumbergera Workshop.
July 9th.	October 8th.
August 13th.	November 12th.
September 10th.	December 10th.



