



# EPIFLORA

**Volume 11 No. 1**

**March 2002**





**WELLINGTON**

# **EPIFLORA**

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## **CONTENTS**

<b>The Programme for 2002 .....</b>	<b>3</b>
<b>AGM 2001..... ..</b>	<b>4</b>
<b>Ceropegia Workshop - encore! .....</b>	<b>5</b>
<b>February visits.. ..</b>	<b>7</b>
<b>Hutt Valley Horticultural Society Show. ....</b>	<b>7</b>
<b>Why won't my Hoya flower?. .....</b>	<b>9</b>
<b>Schlumbergeras on Steroids? .....</b>	<b>10</b>
<b>Hybridising Epicacti - some thoughts..... ..</b>	<b>12</b>
<b>Now is the time..... ..</b>	<b>14</b>
<b>The New Year has arrived..... ..</b>	<b>15</b>
<b>Odd Cuttings and Seeds .....</b>	<b>15</b>
<b>Web Sources of Information... ..</b>	<b>15</b>
<b>Digital photography.... ..</b>	<b>15</b>
<b>Books, books, books .....</b>	<b>16</b>
<b>Asklepios..... ..</b>	<b>16</b>
<b>Red Spider Mites..... ..</b>	<b>16</b>
<b>Back Numbers of "Epiflora" .....</b>	<b>16</b>
<b>Future Publication Dates .....</b>	<b>17</b>

## **From the President**

Dear fellow epiphyte growers

It may be a bit late - but this is the first edition of *Epiflora* for 2002, so let me start by wishing you all "Happy New Year - and good growing!".

The next thing is to express sincere thanks to all the members of last year's committee for the hard work they put in throughout the year to ensure that all our society's activities and events ran so smoothly. This must be coupled with thanks to all those who have agreed to serve on the committee this year.

Our February meeting took the form of a trip north to visit two collections. (There is a report on this later in the journal). Many people said how much they enjoyed the afternoon - and how good it would be to do another trip. I am sure the committee will work on this idea - but I am sure I speak for them when I say "any suggestions of places you might like to visit will be most welcome".

As the newspaper says - "It is official - this summer has been very odd". That is true. For us flowering started early - but I noticed yesterday that our plant of "Texas Flame" had two fine blooms on it - which for such a flower size is very late. We have also been concerned for some of our warm-growing hoyas - which cannot easily tolerate temperatures below twelve degrees Celsius. Already the temperature on some nights has dropped to nine degrees. So the oddness continues. Now each night we watch anxiously for some signs of cloud.

So as the time for enjoying blooms passes and the "caring, cutting and pruning" season arrives - I hope that all your plants are in fine form and that you have had a most enjoyable flowering season.

I look forward to seeing you at the next meeting.

Happy growing and kind regards

*Roy Griffith*

3<sup>rd</sup> March 2002



## The Programme for 2002

*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. If for any reason you are unable to do your allocated duty please arrange for someone else to do it.*

<b>March 9th</b>	<b>Hoyas</b> <u>On Duty:</u> Brian Read, Nola Roser, Joyce Walter
<b>April 13th</b>	<b>Epiphytes in Argentina</b> <u>On Duty:</u> Mary Hardgrave, Aynsley Taylor, Robyn Gibson
<b>May 11th</b>	<b>Workshop on Schlumbergeras</b> <u>On Duty:</u> Kaye and Merv Keighley, Andrew Flower
<b>June 8th</b>	<b>Questions and Answers on Epicacti</b>
<b>July 13th</b>	<b>Midwinter Function</b>
<b>August 10th</b>	<b>Disorders, Diseases and Pests</b>
<b>September 14th</b>	<b>Photography</b>
<b>October 12th</b>	<b>Tissue Culture</b>
<b>November 9th</b>	<b>Visit to Collections</b>
<b>December 14th</b>	<b>AGM and Christmas Function</b>

## **AGM 2001.....**

*This took place at our December meeting. The retiring president presented the report for the year - and a new committee was elected.....*

### ***President's report for 2001***

It gives me great pleasure to present this report for the eleventh year of our Society. Once again we have had a variety of programmes during the year which have increased our knowledge of our chosen plants and given opportunities for participation in discussion. So many of our programmes are taken by our own members and I thank those who so willingly offer, or are persuaded, to take part. As in previous years we had two outside speakers – Sarah Hodge from Horobin and Hodge and Jeffrey Paris from the Wellington Botanical Gardens.

It has been good to welcome new members to the Society during the year – some who can attend meetings and others who live a distance from Wellington, including some who live overseas.

Our magazine, *Epiflora*, continues to be a high quality publication providing us with reports of meetings and articles about various plants which we grow. Thanks to all who contribute and especially to Roy who has been the Editor for the past year.

The highlight of the year has been the Convention which took place in November. A great deal of work went into making the Convention such a great success – thanks to all who were involved and especially to Roy Griffith, Mary Hardgrave and Kaye Keighley who with myself formed the Convention Committee. This year we were delighted to see a good contingent from Auckland as well as epiphyte enthusiasts from the Bay of Plenty and Manawatu. Those who attended completed evaluation forms which indicated a high satisfaction level with the Convention.

Our Society runs well and smoothly because of the participation of so many of our members. Thanks for the part you have taken this year, whether it be on regular roster duties, selling pots, fertiliser, etc., helping with raffles, running the competition, bringing in produce for Kayes Korner or in whatever way you have helped.

As I step down from the position of President I would particularly like to thank the Committee for their work throughout the year – Mary Hardgrave as Secretary, Andrew

## *Epiflora*

Flower our Treasurer, Anne Goble who took over the library during the year, Roy Griffith, Penny Luckens, Merv Keighley and Beryl McKellar. Beryl, Andrew and Merv have decided not to seek re-election to the Committee – choosing to serve for a while and then step down and so allow the opportunity for others to bring their ideas to the Committee.

I wish you all happy holidays and successful growing during the coming months.

Jane Griffith  
December 2001

### **Ceropegia Workshop - encore!**

*At the Wellington Epiphyllum and Hoya Convention last November Merv Keighley presented a very successful workshop on Ceropegias. As many of the Wellington members were not present at that workshop we asked him to repeat it at our January meeting. Once again the workshop created a great deal of interest and questions. The reporter is Jane Griffith.*

As Merv pointed out to us twenty years ago researchers recognised about 160 species of Ceropegias in their natural habitats. These habitats ranged from the Canary Islands in the west through Africa into India and the Far East to China, some Pacific Islands and Northern Australia. Since that time many new Ceropegias have been discovered and there has been an amalgamation of other genera into Ceropegias.

Ceropegias are members of the Asclepiadaceae family. Some are perennial herbs, others succulent with tubers, or fugiform (spindle shaped), caudic or sometimes fibrous rooted. This means that Ceropegias come in a variety of forms as shown by those Merv had on display.

It was noted that the flowers often occur in umbel-like clusters like hoyas. The corolla has a tube, which is often somewhat inflated near the base. It may have hairs on the outside and usually has hairs inside. The hairs within the flower normally point downwards to the base of the flower. These act as prison bars to the very small insects, which fertilise the blooms. They enter the flower through a small opening in the corolla and make their way down to the base of the flower where there is often a secretion to attract them. The hairs prevent them exiting until they have pollinated the flower, after which the flower will wilt allowing the insect to escape and go on to the next flower.

## *Epiflora*

The method of pollination is different from many flowers as *Ceropegias* do not have pollen dust but rather have a pollinia, like orchids. The pollen is paste-like and is contained in a pair of anther lobes. These are designed so that when an insect enters a flower, the pollinia become caught on the insect's legs or hair. On entering another flower the pollinia sometimes becomes wedged into a groove designed to take the pollinia. This is a fine example of the intricacies of nature, which are difficult for humans to replicate. Therefore it is extremely hard to artificially pollinate *Ceropegias*.

After the flower is pollinated two seed horns or follicles appear. These contain the dark seeds, which are attached to "parachutes" in the membrane of the follicle. The follicle opens by splitting lengthwise along the inner side. Under the opening there is a strap-like membrane, which gives protection to the seeds while the follicle is starting to open. The ends of the silky white hairs that are attached to the seeds press against this membrane, bending outwards in their middle parts as though to dry before being released to the wind.

The seeds are in two parallel rows, alternate and partly overlapping. The hairs, which are attached to the narrow end of the seed, point towards the tip of the follicle and when released from the membrane, open out through 200 degrees or more to form a parachute-like tuft. The follicles take from 2-6 months to ripen.

*Ceropegia* seed if fresh will germinate very quickly. Merv cited an example of seed he took from a seed pod, which was just splitting open – this germinated within 2 days. Therefore the fresher the seed the more chance there is of successful germination.

Talking about the growing conditions for *Ceropegias* it was stated that they require a porous soil mix (including sand and pumice) and plenty of water during the growing season. During winter a small quantity of water may be given every 2-3 weeks depending on temperatures. *Ceropegias* generally do not require a great deal of fertiliser with Merv using a small quantity of slow release fertiliser annually.

Some *Ceropegias* grow easily from cuttings which should be taken during summer months. Whereas others are very reluctant to grow from this method of propagation.

Merv's talk stimulated a great deal of interest in these fascinating plants and members were reminded that there are books on the subject in our library and that the society is a member of the International Asclepiad Society, receiving their excellent magazine quarterly.



## **February visits..**

*Because of our involvement at the Hutt Valley show, the February meeting happened on the third Sunday in the month and took the form of a trip north to visit the collections of two of our members. This is what those of you who did not come missed.....*

On Sunday 17 February many of our club members travelled north to visit the collections of Virginia Stead and Leita Crystall. The day was a warm, sunny one making the journey itself a delight.

After a bring your own lunch at the Griffiths a number of cars travelled to Levin where we enjoyed viewing Virginia's extensive collection of schlumbergeras and hoyas, as well as many epicacti. Virginia's schlumbergeras collection grows inside and looks most healthy. Like so many collections the number seems to be ever expanding. With her new outside area Virginia is moving hoyas and other plants into this covered region and already noticing the changing growing habits.

Onto Foxton where we enjoyed the large garden which Leita owns. We were sad that Leita herself was not able to be there but did so appreciate her generosity, allowing us to view her garden and large collection of epicacti, hoyas and schlumbergeras. It was fascinating to see how she grows the majority of her epicacti in the large trees which surround her property. Leita's garden is full of interesting plants, many of which were exclaimed over by members.

We had a great afternoon and were so pleased that Yvonne and Andrew Brunton joined us for this occasion. Thank you to Virginia and Keith and to Leita for opening your collections to member's viewing – many of us realise that this involves a great deal of work beforehand.

## **Hutt Valley Horticultural Society Show.**

The society had a display and sales table at the February show. Sales of plants were good - and a fair amount of interest was reported by those who "manned" the stand. Ten or so specific enquiries were recorded - and these are being followed up.

This time the display co-ordinator was Jane Griffith. Thanks to her and to all others who helped - by providing plants for display; or by putting up, manning or clearing things away



## *Epiflora*

on the Sunday afternoon. We were awarded a "Certificate of Merit - First Class" as a result of your efforts.

By the way - did any of you take notice of the *Ceropegia multiflora* was in flower on the stand? This was a plant, grown by Merv from seed he imported last year from the International Asclepiad Society. The flowers were not quite as big as some of the dahlia blooms that were nearby - but these were the first flowers - and he was very proud of them.

### **Why won't my Hoya flower?.**

*If the society had a dollar for every time people asked that question at the Hutt show - we would be rich. In this article - published in EPI-GRAM (the newsletter of the Epiphytic Cacti and Hoya Society of Australia) Rex Hardy sets out what he believes are some of the common reasons...*

#### **Not enough bright light**

For most hoyas the magic key for getting your plant to flower is *bright light*. This does not mean growing your plant in the sun. That certainly would make them have plenty of flowers but that would be at the expense of the plant itself. What it does mean is *indirect light* and it is generally accepted that this is needed for a minimum period of three to four hours every day.

#### **Plant growth becoming too dense**

In a way this could be related to the previous reason for not flowering. However here it is not so much a lack of bright light but a lack of good air movement through and around the growth of the plant. When growing hoyas on wire frames I have found that as the plants grow and cover the frames, becoming more and more dense, the number of umbels of flowers decreases. It has also been generally accepted that hoyas that are allowed to grow freely without us humans wanting to handle the growth flower better. Whatever we do when we do handle the growth it is important that we do not touch the new growth at the end as it seems this growth is sensitive and will immediately stop growing for a couple of weeks before starting to grow again. This stop-start growing habit seems to be detrimental to the plant producing umbels of flowers.

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### **Ceropegia Paricyma.**

### **The plant is not mature enough**

While some species of hoyas seem to flower when the plant is small and in its first year of growth, other species seem to need to be mature plants which may take up to three years or more. It is generally stated that hoyas need to be root-bound to flower. While this is true in some cases, I believe that in a lot of other cases the hoya is not flowering because it has not reached flowering maturity.

### **A lack of fertiliser (or of the right type of fertiliser)**

All plants need food (a balanced fertiliser) in order to grow and flower successfully. If a plant is receiving fertiliser that has a high nitrogen (N) content then the plant is being encouraged to put on new growth at the expense of flowers. To produce umbels of flowers a hoya needs fertiliser that has a high phosphorous (P) content. Fertilisers that are high in phosphorous usually have a number greater than 10 alongside, or under, the letter (P) on the container of fertiliser where it shows the N-P-K of the fertiliser. These fertilisers are sometimes marketed as "Blossom-Booster" fertilisers.

It is also recommended that to increase the number and quality of flowers on, not only hoyas, but also any other flowering plant - you feed your plant a monthly dose of Sulphate of Potash (Potassium Sulphate). The time to do this is leading up to and during the period of flowering. Usually you will find the instructions on the fertiliser packet as to the rate and how often this should be done.

## **Schlumbergeras on Steroids?**

*This article is reprinted from the July 2000 edition of "The Epiphyllon" the newsletter of the Epiphytic Cactaceae-Asclepiadaceae Society of Australia. One of their members (Leon Saunders) created quite a stir at one of the meetings when he brought in two pots containing good sized plants which he had grown from cuttings struck only the previous spring. Since then it is reported that the plants have suffered no set-backs after their phenomenal growth and flowered heavily again in the following season. Here are details of the method that, for Leon, produces a large flowering plant from a cutting in just seven months....*

1. Take cuttings in September or October. Take single segments, preferably not tip segments, and set aside for a week or two.
2. Stand the segments overnight in Clonex purple to encourage root development



## *Epiflora*

3. For each 200mm pot use potting mix to which a handful of dolomite lime has been added. For larger quantities a 4 kg bag of dolomite should be added to a bag of premium potting mix. Three segments should be put, evenly spaced, in a 200mm pot.
4. Once the cuttings have rooted, say January, and until the end of March (or until buds have started to form) feed with half strength Miracid<sup>1</sup> each two weeks; thoroughly wetting the foliage. At the same time apply Phosacid 200 at the rate of 7 ml per litre each four weeks, also thoroughly wetting the foliage to the point where liquid is running off the plant. The two sprays are compatible and can be mixed together whenever the Phosacid is used. Phosacid is a highly effective fungicide which prevents your plants being infected by the fungi carried by the pine bark contained in most potting mixes. It also acts as a supplementary source of potassium which is lacking in most mixes. Do not apply Phosacid if the mixture is dry. If the plant is in flower, remove the flowers before treating. If the plant is badly infected - it may be better to take more cuttings and start again.
5. After the schlumbergeras have finished flowering, say from the start of October to the end of December, feed with Campbell's Orchid Flowering fertiliser.
6. Spray with potassium nitrate (saltpetre) at the rate of about one teaspoon to a litre of water as a backup in November and January. Spray early in the morning - not in the heat of the day.

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<sup>1</sup>Miracid is a high-nitrogen fertilizer, ideal to give a quick burst of vegetative growth. It contains buckets of urea to do what it is supposed to do: to acidify the soil. What potassium it does have is in the form of chloride. It has no calcium or magnesium.

## **Hybridising Epicacti - some thoughts.....**

*The processes and the costs associated with importing plant material are swiftly becoming impossible for the amateur grower to sustain. One way around the problem that increasing numbers of New Zealand growers are using is to grow your own!! Hybridising epicacti has been actually done here for many years - think of Peter Sinclair and his hybrids - to name just one example..However there is a lot more to this business than getting the two nearest flowers and jamming them together. Over the next few issues we will try to highlight some of the strategies and issues. To start things off here are some comments written recently by Leo A Martin. He was actually writing in a news-group relating to cacti and responding to the comment...*

*"...when looking at... [intergeneric cactus] hybrids, when vegetative characteristics differ, mother's habit is dominant. .. This strongly suggests cytoplasmic inheritance."*

He wrote:

Remember, organisms possessing mitochondria inherit them from the female parent, and plants inherit chloroplasts from the female parent. Sperm in pollen provide only genetic material (DNA.)

Mitochondria are organelles in each cell which convert food molecules to energy molecules (ATP), and help store energy by converting sugars to fats. More efficient mitochondria might imply the organism might produce more energy from the amount of sugar or fat at hand, or convert a higher fraction of sugar to fat for storage, or function better under difficult conditions of water or heat. The mitochondrial inheritance from the female parent might influence the sturdiness and rapidity of growth of the offspring.

Chloroplasts are the organelles in plants which contain chlorophyll and the other enzymes and co-factors responsible for photosynthesis (capturing the energy in sunlight and using it to form sugar from carbon dioxide and water.) Better functioning chloroplasts might allow a plant to conduct photosynthesis under more difficult conditions of water availability, temperature, or light influx. The chloroplast inheritance might also influence the sturdiness and rapidity of growth of the offspring.

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**Hoya Lacunosa.**



## *Epiflora*

Both of these would suggest the growth habit of a hybrid follows the female parent more than the male, since the food production machinery comes from the female parent. This would imply that, when making hybrids, it might be better to use pollen from a weak plant on the pistil of a strong plant.

Flower production and size in hybrids might reflect the strength inherited from the female parent, though colour and shape would be a blend of both parents.

Flowering plant seeds have two components resulting from two separate fertilisations by two sperm nuclei: the embryo, and the food/covering part. Each is formed from genetic material from both parents. It might be expected hybrid seed would have characteristics of the seed of both parents rather than just the female.

*Now people like Dick Kohlschreiber have been saying for years that if you are hybridising - work with plants that have good growth habits and are not prone to spotting, slow growth etc. Now we have to learn to take particular care when choosing the maternal parent.....*

*OK that is a start - what are your experiences and views?.*

## **Now is the time.....**

**Epicacti** - *prune and repot if necessary.*

**Hoyas** - *enjoy the flowers (and check for mealy bugs and other pests).*

**Schlumbergeras** - *fertilise and water carefully*

**Rhipsalis** - *reduce watering prune/repot if you wish..*

**Aporophyllums** - *Water less. Prune lightly - and repot with care (mind the spines).*

**Ceropegias** - *again - enjoy the flowers (and check for pests).*





## **The New Year has arrived.....**

...and so it is past time for this year's subscriptions to be paid. A renewal form is included with this issue for those of you whose renewal has not yet been received. Please send your money soon - we would hate to lose you.

## **Odd Cuttings and Seeds**

### **Web Sources of Information...**

Here is the address of a gazetteer - for those of you trying to work out where those plants actually come from.....

[www.calle.com/world](http://www.calle.com/world)

### **Digital photography....**

A number of our members are getting interested in this topic. Here is a useful reference site - which has recently been updated. Its creator says: "The site is created for amateur digital photographers who work mostly with close-up photography. One part of the site is a gallery of macro photos, mostly of cacti seedlings. There is also a guide to digital photography with some tips for digital close-up photographers."

[digital.photography.tripod.com](http://digital.photography.tripod.com)

## **Books, books, books .....**

Rainbow Gardens Bookshop web catalogue for 2002 is now online for your viewing pleasure at: [www.rainbowgardensbookshop.com](http://www.rainbowgardensbookshop.com)

## **Asklepios.....**

*Some of our members are subscribers to this excellent publication.*

*Alan Butler (editor) recently published this advice:*

“I regret to advise members of the International Asclepiad Society that there will be a further delay in the production of the December journal due to unexpected circumstances .....I am expecting that within a month the journal will be ready to send out. Thank you for your patience. I should just add that the issue in question will undoubtedly be the best ever produced by the society.”

## **Red Spider Mites.....**

*This is often more of a problem for cacti than epicacti or hoyas - but aporophyllums are sometimes affected. Here is a non-chemical approach.*

Red spider mites can be killed by spraying plain water from a spray bottle set as a fine mist. If one does this carefully the soil will not become wet and there won't be any winter rot problems. They adapt to miticides rapidly since their generation time is so short, so using Kelthane or the like may not be a good long-term solution.

## **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.*

*Comments and contributions are most welcome. The society aims to encourage discussion and debate; opinions expressed are those of the authors and do not necessarily represent those of the society. It is the policy of the society to publish corrections of fact but not to comment on matters of opinion expressed in other publications All material in Epiflora may be reprinted by non-profit organisations provided that proper credit is given to WEHS, Epiflora and the author.*

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***Closing dates for contributions:***

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*Spring 2002 edition - 10<sup>th</sup> August 2002*

## **Subscriptions:**

*Subscriptions are due on 1st of January and are:*

<i>Members -</i>	<i>\$12.00</i>
<i>(overseas members</i>	<i>\$NZ24.00 or \$US12.00)</i>
<i>Additional Associate Members -</i>	<i>\$4.00</i>
<i>(At same address as a member)</i>	

## **Society web address:**

***Find us on the web at : [www.anwyl.com/epihoya](http://www.anwyl.com/epihoya)***











