WELLINGTON

EPIFLORA

Volume 12 No. 4

December 2003

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EPIFLORA

Volume 12 No. 4 **December 2003**

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From the President

Dear fellow epiphyte growers

This is the last time I will write to you as President - so I need to start by handing out some bouquets. I would like to thank all the members of the committee. They have worked hard during the year to ensure that meetings are interesting, trips are planned and all the other behind the scenes tasks are done. Without them - we would not have a society. On your behalf - I thank them for all they have done. It is always dangerous to single out individuals - but what the heck. I must express my own special thanks to Mary who has worked tirelessly as our secretary - without her quiet efficiency my job would have been so much harder.

Our epi's are now flowering beautifully, I hope yours are too. Have you tried cutting them and bringing them into the house (keep them in a bowl with damp sphagnum moss) - the flowers usually last rather longer than they do on the plant - and you get the pleasure of seeing them more. Why not take one or two to work - you never know - one of your colleagues may get bitten with the bug - and we might get a new member!! Don't forget to bring some to our Christmas meeting - then we can all enjoy your achievements.

Talking of our Christmas meeting - please don't forget ..

- ❑ to come
- ❑ to bring a little something to share for afternoon tea
- ❑ to bring a small gift ($2.00) for the lucky dip
- ❑ to bring some of your epi-flowers to brag about (either by themselves - or attached to the plant)

I look forward to seeing you all on the 13th.

Jane joins me in hoping that you all have a most enjoyable Christmas, and that 2004 will prove to be an absolutely magnificent year for you. We look forward to seeing you at the December meeting.

Happy growing and kind regards

Roy Griffith

4th December 2003

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.

December 13th	**AGM and Christmas Function** On Duty: Virginia Stead, Keith Greer, Alison Beeston
January 10th	**Visit Waikanae** Visit Alice and Rex - then Jane and Roy - then a BBQ
February 14th	**Hoyas in Flower** On Duty: Mary Hardgrave, Penny Luckens, Marion Austin
March 13th	**Ceropegias**
April 10th	**Epi Workshop**
May 8th	**Schlumbergeras**
June 12th	**Epiphyllum slides**
July 10th	**Midwinter**
August 14th	**The genus Hatiora**
September 11th	**Care and Culture of Hoyas**
October 9th	**Bromeliads**
November 13th	**Tillandsias.**
December 11th	**AGM and Christmas Function**

Reflections on Rhipsalis.

At our September meeting ***Kaye Keighley*** *spoke on this genus - here are her notes*

Rhipsalis, accented on the first syllable (Rhip) and named from the Greek Rhips for wickerwork, is a genus of epiphytic cacti, pendant and creeping and mostly spineless. I could not find much written except lists of all the different species with their individual descriptions. From reading the lists I have learned that they have a great variation in stem formation; flowers are small and sometimes quite inconspicuous; and berries that are often more striking than the flowers.

STEMS

There are over 75 species of Rhipsalis, the most common and prolific are the cylindrical stem types. Other descriptions of stems are: short and densely bristly; sometimes long and hairless; taper-like, 10 - 15 mm wide; flat 2.5 to 3.5 cm wide with margins on minute spines; cylindrical and very thin; stems angled 3 - 4 and jointed and over a cm thick; cylindrical and very long; conspicuously woolly; pendant; upstanding; flat to multi-ribbed, with or without spines; - and so a great variation.

FLOWERS

The flowers are symmetrical (not zygomorphic) and are usually very small and yellowish-white. But there seem to be many other colours - yellowish, pinkish-white, orange, purplish, greenish-yellow, light green, greenish-cream with red centre. And they vary in size and shape. Some are found along the stems, some are terminal. Some have long floral tubes and some are campanulate (bell-like).

BERRIES

The berries come in various colours - white, red, whitish, rose, light pink, purple, scarlet cinnabar red.

GEOGRAPHICAL AREA AND HABITAT

I gleaned some information off web sites - there are 1841 sites containing Rhipsalis but there is not much information on them.

Rhipsalis are found throughout Central America, parts of the Caribbean and a great part of northern and central South America, Africa, Madagascar, Sri Lanka, India and Nepal. But by far the overwhelming majority of species come from South America.

One species *R.baccifera* Miller is found throughout the range in the western hemisphere as well as parts of Africa, Madagascar, Sri Lanka, India and Nepal. Two theories are used to explain dispersion of *R.baccifera.* Roland-Gosselin (1913) and Kimnach (1961) have suggested the seed was dispersed by migratory birds and regional birds.

A second theory suggested that this white-berried plant, known as mistletoe cactus, was carried to the Old World as a substitute for mistletoe during the Christmas season (Rowley, 1965).

Not only do we not know for certain how the species got from one continent to another or even from one area to another within the same continent, we do not know which species of animals eat the fruit. Ken Friedman tried to feed rose-purple fruits to caged Australian finches and Pekin robins but the birds refused to eat them, preferring red prickly pear cactus slices 100 % exclusively , so despite a long history, we know very little about *Rhipsalis* and much of what has been written about the genus is obscure and confusing.

The greatest concentrations of *Rhipsalis* species are found in eastern Brazil in the states of Rio de Janeiro, Minas Gerais and Sao Paulo. The vegetation and climate along Brazil's east coast apparently encourages most of these species.

Britten and Rose reported a great many species collected in the Organ Mountains near Rio. Habitat photographs suggest that at least some of the species grow on tall pole-like trees that lack dense leaf cover. Other photos show them growing everywhere on tree trunks and branches, on rock outcrops along the coast, and on limbs sticking out from waterfalls.

In addition to growing in the mountain ranges, some of the species are found in subtropical humid semi-deciduous forests that cover parts of Sao Paulo and Minas Gerais. Some *Rhipsalis* favour areas where summers and winters are warm and where the climate provides moderate summer and winter rain.

Rhipsalis are found in Bolivia, Argentina, Uruguay, Peru, Ecuador, Venezuela, Surinam and Guyana, but apparently in nowhere the numbers found in Brazil. Barthlott travelled extensively in South America and Africa and suggested that despite the earlier reporting of the species from only limited ranges, there is in fact a much wider distribution.

Newton (1974) reported *R.baccifera* near Kumasi, Ghana, and has contributed useful

photographs of document habitat. Barthlott reported *Rhipsalis* all over Africa including the Ivory Coast, Transvaal, Swaziland and Cameroon (1977). He also found *R.erythrocarpa* near Mt.Kilimanjaro just as Schumann had done in the late 1800s. Barthlott said that although the specimens look different, all were probably derived from the same parent.

Quite a few *Rhipsalis* are found in Madagascar. Guillaumet (1972) reported *R.baccifera* found generally as an epiphyte in dense forests at sea level up to 1700 metres; *R. horrida* limited to forests on sandy shores of the east coast; and *R. suateziana* living on rocks along the dry west coast.

R.fasciculata has been linked to Madagascar vegetation and despite its great vegetative similarity to *R. horrida*, is verified by Barthlott's specimen of the same name. Barthlott reports a number of *R.baccifera* forms from Madagascar and at the same time he spoke about this distribution, listed collected specimens only by identification numbers (1977).

PROPAGATING

Rhipsalis can be propagated by seed or cutting. Propagation by cutting is probably the most common method because it is so easy and the results are much quicker.

FERTILISING

One UK grower describes his succes with fertiliser. He uses Miracid which has 30 per cent nitrogen and lots of iron: one teaspoon per gallon of water. If a plant is in bloom or fruit, he uses Miracle Grow. He also uses a combination of the two – one tablespoon Miracid and one tablespoon of Miracle Grow to two gallons of water. This gives high phosphorous percentage that helps promote flowering. Sometimes he uses liquid iron to green up the plants.

GROWING CONDITIONS

Here are some notes from two areas of the world.

From America -
Ken Friedmann lives in Bethlehem, Philadelphia where temperatures often are in the mid

Rhipsalis grandiflora

(Synonym** Lepismium grandiflorum **and numerous others) This plant originates from Brazil, it prefers light shade or shade - and cannot tolerate frosts

90s Fahrenheit in the summer. He plants them outside under maple trees. He puts them out in mid May right after the seeds of the maple tree have stopped falling otherwise he gets thousands of little maples. In most summers they don't need much hand watering as the rain provides enough. He hangs his plants from a modified A-frame which lets him hang shade cloth over the top or on the sides and he can move them about if necessary. By the end of October he brings them indoors well before any sign of frost. While outside the temperature can go to 32 degrees Fahrenheit, the green house only dips to 45-50 degrees as he heats it with an electric heater (expensive!).

From Australia

Derek Butcher says that because of his position on the southern side of a rather large continent, with deserts to the north, the dry climate is more like that of Los Angeles. He says that his area does not have epiphytic plants so he cheats by extra watering in the summer months. They also need shade cloth which stays put summer and winter. Water from the taps is high in salts so the plants look forward to winter for what Mother Nature serves up. Temperatures down to 2 degrees Centigrade don't seem to worry his plants and many bloom in this period.

So we can sum up by saying that Rhipsalis grow mainly in trees. They are shaded by the tree canopy. They root into the debris in the tree crotches and in to the tree itself. They are rained upon frequently, but the water drains rapidly.

The lesson learned from this is to use a gritty mix that drains quickly so that you can water more frequently. Liberal use of perlite, horticultural charcoal and/or wood shavings in the potting mix will give good results. Rhipsalis are shade loving plants that do well indoors in a bright spot.

Now - this talk was advertised to be on both Rhipsalis and Rhipsalidopsis. They are two different animals, or so I am told. Except with some latest research taxonomists are stating that Rhipsalidopsis is a synomym of Rhipsalis. Anwyl Bromeliads states on his home page that the plant we all know as Rhipsalidopsis rosea is now called Hatiora rosea (F.Supplie 7/9/2002)

A number of plants may be known as Hatiora - again it depends on which taxonomist you listen to.

Glossary

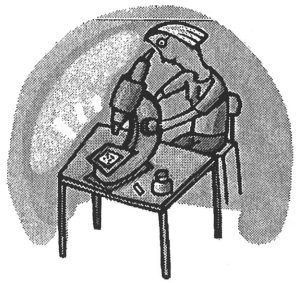
- abscission zones = where branches may fall off in times of stress
- acrotonic = branching from the tip of the primary branch
- actinomorphic = having radial symmetry
- apical = top
- areole = where you expect a bud to emerge; either naked, hairy or bristly
- axil = the angle between the stem and branch (armpit)
- bract or scales = a specialised leaf or leaf-like part usually at the base of the flower
  In Rhipsalis, a small leafy attachment sometimes occurring next to the areole.
- campanulate = shaped like a bell
- clone = a replica of another plant i.e. a root cutting
- dimorpic = having two shapes on the same plant
- epiphytic = growing on trees
- epilithic = growing on rocks
- erumpent = bursting through the skin like a boil or pimple
- glaucous = having a dusty coating as a cabbage
- lateral = on the side
- meristem = embryonic tissue found in the core of the plant. Is close to the surface of the plant at the growing tip.
- mesotonic = branching from the side of the primary branch
- neotonic = looking like a seedling but having the ability to flower.
- pendulous - hanging
- perianth-segments = petals (in Cactaceae you cannot discern petals from sepals and this term is used. Sometimes called "tepals")
- pericarp = that which surrounds the ovary
- pistil = all the flower parts taken together
- podaria = elevated places
- scarious = thin, dry, and membranous
- sepal = the outermost group of a flower parts covering petals before they open; absent in Rhipsalis.
- stamen = consists of a stigma and an anther
- stigma = the part of the flower that receives the pollen.
  In Rhipsalis, the number of "lobes" varies by species.
- style = the part of the flower which holds the stigmas on at its tip.
- subtend = to enclose or embrace in its axil
- terete = tubular
- terminal = at the end
- terrestrial = growing on the ground
- zygomorphic = divisible into similar halves by one plane only (lopsided)

Disocactus or Phyllocactus?

Are you terrified of taxonomists? Are you nervous about names - or do you ignore the whole lot and hope it will all go away? ***Grant Bayley*** *has been giving the matter some thought.....*

Why not leave names as they are and stop giving people a headache over the naming of our plants?! I guess I like to tinker and think about my plants...
The epiphytic cacti that we grow seem to suffer a number of names – Epiphyllums, Epicacti, Phyllocactus, Disocactus, and then the 'common names' like Orchid cacti, Rainforest cacti, Peacock cacti, and still, we have people renaming plants. Silly really, as we know what they are, (or do we?) who cares what the name is, just as long as we can enjoy our plants... even if we can't all agree on a name... but the confusion is here and really needs to be sorted. The plants aren't confused, it's just our heads that do this!!!

With the present taxonomic knowledge we have, I would expect a clear classification of epi cacti to be forthcoming. But, I guess by retaining some sort of confusion, this maintains a sort of status quo! Or is that 'par for the course?'



I have been growing 'epis' for some time now and have been learning as much as I can. Well, don't we all? There have been things to me that 'don't add up'. For example, in the last Auckland Epi and Hoya Newsletter it showed differences between E. crenatum and E. cooperi (where in other publications these two species were referred to as the same). On the present classification of Disocactus amazonicus - I question the classification of this plant into disocactus (refer to the afore mentioned newsletter - I have a few spare copies if you want to read these articles).

Now, what I find strange is the group of plants called Disocactus has excluded E. crenatum. If E. crenatum was included in the same group that these 'disocactus' (most of them) are included, it would make sense genetically! It doesn't make genetic sense where it is at present classified.. Why? Because E. crenatum hybridises with most of the disocactus species and doesn't hybridise with (most or all other) epiphyllums.

The features also considered are hybridising/incompatibility, the length of time the flower is open, the growth pattern of seedlings – juvenile to adult forms, and so on. The Epiphyllum phyllanthus type flowers open for one evening only, (12 hours) and do not hybridise with any in the disocacti group. Disocactus flowers open for more than 24 hours – usually 72 hours or more. The juvenile to adult growth is not distinct in E. phyllanthus as shown in the previous magazine. Anyway, I made a list of plants that Anderson refers to (The Cactus Family – 2001) and then sorted them with E. crenatum and E. anguliger in the disocacti group. I believe that E. crenatum tightly belongs in 'disocacti'...well it is genetically similar to them - otherwise they wouldn't easily hybridise and produce fertile seedlings.

Something I understand from taxonomy is, there is a 'priority' in naming ... the oldest name has precedence over a newer name, proving certain criterion are met... This may be a little complex, so I made a list of the plants that Anderson considers are the species and put the date when that plant was named and what name it was at that time. Then, considering these, I thought I'd follow the 'priority' method...note dates. – Some of the early names I have not included – like Cactus phyllanthoides for a plant later named Epiphyllum phyllanthoides, and Cereus phyllanthoides...(The Dutchess* has it all!) (...* Deutsche Kaiserin?)

Looking through Anderson's work , I see under the name Disocactus, that 'Disocactus' was used in 1845 followed by a list Aporocactus (1860), Wittia (1903), Heliocereus (1909), Chiapasia (1923), Nopalxochia (1923), Bonifazia (1944), Lobeiria (1944), Pseudonopalxochia (1958), and Wittiocactus (1982). The names Epiphyllum or Phyllocactus are not included. With the Epiphyllum group, the name was first used in 1812 – by Adrian Haworth - this was followed by Phyllocactus in 1831.

E. crenatum was called Phyllocactus crenatus (Lemaire 1845). If E. crenatum is moved into the disocactus group, because I believe that's where it belongs, then through priority would this change the present naming system? Would phyllocactus take priority over disocactus? I grow phyllocactus, disocactus, epiphyllums, orchid cacti, peacock cacti, rainforest cacti, and non desert cacti – and any other name I could think of!!! and still my plants think they are beautiful when they flower – and I do too.....and they don't care about what they are named – as long as they are cared for!

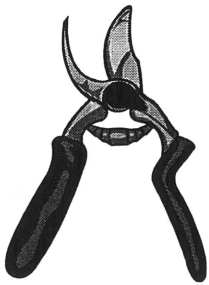
Taken for granted naming system	Currently used name	Old name or not so old name	Old name
Phyllocactus ackermanii (1842)	*Disocactus ackermanii (1991)*	*Aporocactus ackermanii + other names*	*Epiphyllum ackermanii (1829)*
Phyllocactus amazonicus (2003!!)	*Disocactus amazonicus (1982)*	*Disocactus amazonicus (1982)*	*Wittia amazonica (1903)*
Phyllocactus biformis (1853)	*Disocactus biformis (1845)*	*Disocactus biformis*	*Disocactus biformis (1845)*
Phyllocactus eichlamii (1911)	*Disocactus eichlamii (1911)*	*Disocactus eichlamii(1913)*	*Phyllocactus eichlamii (1911)*
Phyllocactus flagelliformis (2003!!)	*Disocactus flagelliformis (1991)*	*Aporocactus flagelliformis*	*Aporocactus flagelliformis (1860)*
Phyllocactus macranthus (2003!!)	*Disocactus macranthus (1942)*	*Disocactus macranthus (1957)*	*Pseudorhipsalis macranthus (1942)*
Phyllocactus martianus (2003!!)	*Disocactus martianus (1991)*	*Aporocactus martianus*	*Aporocactus martianus (1920)*
			Aporocactus conzattii (1920)
Phyllocactus nelsonii (1918)	*Disocactus nelsonii (1942)*	*Chiapasia nelsonii (1923)*	*Epiphyllum nelsonii (1913)*
Phyllocactus phyllanthoides (1831)	*Disocactus phyllanthoides (1991)*	*Nopalxochia phyllanthoides (1923)*	*Epiphyllum phyllanthoides (1826)*
			Phyllocactus phyllanthoides (1831)
Phyllocactus speciosus (2003!!)	*Disocactus speciosus (1991)*	*Heliocereus speciosus (1909)*	*Heliocereus speciosus (1909)*
Phyllocactus anguliger (1851)	*Epiphyllum anguliger (1855)*	*Epiphyllum anguliger (1855)*	*Phyllocactus anguliger (1851)*
Phyllocactus crenatus (1845)	*Epiphyllum crenatum (1855)*	*Epiphyllum crenatum (1855)*	*Phyllocactus crenatus (1845)*
Phyllocactus cooperi (1884)			

Taken for granted naming system	Currently used name	Old name or not so old name	Old name
Epiphyllum cartagense (1902)	*Epiphyllum cartagense (1902)*	*Epiphyllum cartagense (1913)*	*Phyllocactus cartagense (1902)*
Epiphyllum caudatum (1913)	*Epiphyllum caudatum (1913)*	*Epiphyllum caudatum (1913)*	*Phyllocactus caudatus (1913)*
Epiphyllum grandilobum (1913)	*Epiphyllum grandilobum (1913)*	*Epiphyllum grandilobum (1913)*	*Phyllocactus grandilobus (1902)*
Epiphyllum hookeri (1829)	*Epiphyllum hookeri (1829)*	*Includes E. strictum etc*	
Epiphyllum oxypetalum (1829)	*Epiphyllum oxypetalum (1829)*	*Epiphyllum oxypetalum*	*Epiphyllum oxypetalum (1829)*
Epiphyllum phyllanthus (1826)	*Epiphyllum phyllanthus (1826)*	*Epiphyllum phyllanthus*	*Epiphyllum phyllanthus (1826)*
Epiphyllum pumilum (1913)	*Epiphyllum pumilum (1913)*	*Epiphyllum pumilum (1913)*	*Phyllocactus pumulum (1913)*
Epiphyllum thomasianum (1895)	*Epiphyllum thomasianum (1895)*	*Epiphyllum thomasianum (1913*	*Phyllocactus thomasianus (1895)*

this list may not be exhaustive, but as far as I know it includes all species found in New Zealand - although there could be more.

Hoya Workshop .

Our September meeting took the form of a hands-on work shop on hoyas. ***Jane Griffith*** *led it - and members had been encouraged to bring in plants that required attention and all necessary equipment - some brought one plant, other brought a truck-load.. Several tables were set out and everyone hoed in with gusto - and some guidance. About four million cuttings were prepared from the material pruned off. There was much discussion on the techniques and objectives of pruning, the need for repotting and, ways of taking cuttings. As they say - you really had to be there!. The work-shop was greatly appreciated by all participants. Thank you Jane for leading it.*



Wairarapa Field Trip.

Anne Goble *organised our October expedition to four gardens in the Wairarapa.*

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We all met at the Greytown Memorial Park. The park has many amenities - but out objective was to take the bush walk to see parts of "O'Connor's Bush" which is one of the last remnants of lowland forest in the Wairarapa. There are totara, matia, titoki and kanuka - and, of course, there were epiphytes.

From there it was a short trip round the corner to visit the "Westwood" garden. This is a recently laid-out garden - and it has been done with a grand plan. The centre-piece of the

garden is an Italian inspired herb garden laid out with geometrical precision. The garden features a number of timber and stone sculptures created by a local landscape designer.

From there we travelled (some managed to avoid the temptation of a visit to a garden centre on the way - most did not) to a garden just out of Carterton that is being developed by Gary Morris and Bill Edginton. This again is gardening on a grander scale than most of us aspire to - it was fascinating to be escorted round by Bill and Gary, and hear of their concepts and future plans.

Finally we stopped at Awaiti Gardens. Some of the party went to explore the walks and vistas - but a much larger proportion rushed to explore the delights of the tea shop.

These were four very different gardens - each with its own interest and charm. Thank you Anne for arranging such a splendid trip.

Epiphyllum anguliger

Epiphyllum anguliger comes from southern Mexico. It prefers light shade and some humidity. It cannot tolerate frosts. This is one of the many plants with the popular name "Queen of the Night".

Now is the time.....

What you should be doing right now depends not a little on exactly where you live, Here are some suggestions for the Wellington growers. If you live in Taranaki or Timaru - you will need to adjust a little. Watering is best done early in the day (as the nights can still be cold)..

Epicacti - *start watering regularly preferably early in the day, enjoy the flowers as they come. After a plant has finished flowering - you can repot and prune it*

Hoyas - *water when dry. Fertilise. Keep a wary eye out for mealy bugs. Start enjoying the flowers. It is not too late to take cuttings.*

Schlumbergeras - *still a good time to repot using a slow-release fertiliser in the mix. Water when dry.*

Rhipsalis - *water regularly as rhipsalis come into flower. A little fertiliser will assist the plants..*

Aporophyllums - *Water regularly. Enjoy the flowers. After flowering a plant can be lightly pruned.*

Ceropegias - *Flowers may be beginning to appear. Water when dry. You should start the daily task of untwining runaway growth. Keep a very warm environment for maximum flowering..*

Now is also the time.....

To renew your subscription. The society's year runs from January to December. A membership renewal slip is included with this issue. Alice Hannam (our treasurer) would love to hear from you!!.

Odd Cuttings and Seeds

San Francisco Epiphyllum Society.

We have started to exchange journals with the San Francisco Epiphyllum Society. The issues for this year so far are now in our library. There are some interesting articles - including one on "Organic Pest Control". In the May issue was a picture

of none-other than Dick Kohlschreiber (South Bay Epiphyllum Society).

Pests.

Nematodes are one of the "nasties" that one hears referred to from time to time. Anyone who wants more information on Nematodes can find descriptions, treatment and pictures on some new pages in the "Pests" section on the Cactusclinic website at http://cactusclinic.telenet.be

Hoyas in Habitat.

It is always good to know more about the situations in which Epi's and Hoyas grow naturally. Jane wrote last time about the plants we saw when we were in Queensland - and I am sure we all enjoyed the talk Andrew gave a little while back on their trip to South America. This last week we got a flyer by e-mail advertising a trip to see hoyas growing in Borneo. I have the flyer - and anyone interested can also look at the company's website www.carlotasborneo.com

Mealy bugs -vs- ceropegias - *a follow-up*

You may remember that we commented in the last issue about the fact that one of the problems with keeping your plants nice and warm is that this provides a magnificent environment for pests as well. We heard that using "Orthene" was not recommended for ceropegias (we have never had any problems from using it on hoyas) - so we decided to use Imacloprid (Conqueror). Our plants have now had their second spray .... and we can report that they still seem to be doing well ..

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:

Autumn 2004 edition - 14th February 2004
Winter 2004 edition - 8th May 2004

Subscriptions:

Subscriptions are due on 1st of January and are:

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