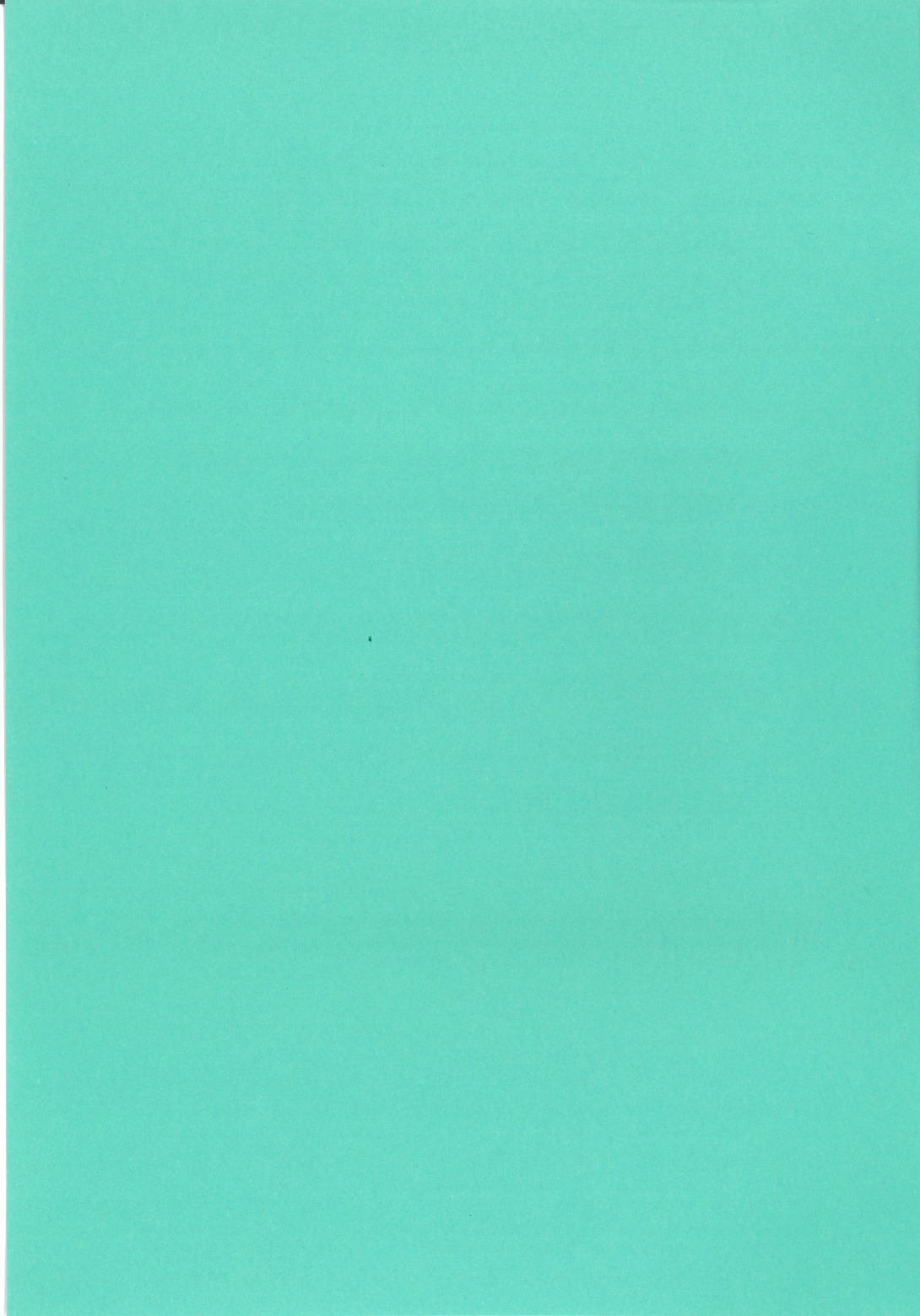




EPIFLORA

Volume 13 No. 4

December 2004



Epiflora



EPIFLORA

Volume 13 No. 4

December 2004

President's Letter	2
The Programme for 2004/5	3
The Trouble with Tillandsias....	4
Taranaki Trip 2004	5
Visit to Liddle's Nursery	8
Cultivating Ceropegias	8
Pictures of David Liddle and some of his collection	9
Further Reading	13
Now is the time	14
It is subscription time again!!	15
Odd Cuttings and Seeds	15
Future Publication Dates	17

President's Letter

Dear Fellow Epiphyte growers

Summer has officially arrived today and certainly the warmer weather is much appreciated by ourselves and our plants. For us in Waikanae it is an exceptionally good flowering season for epicacti and already we have numerous hoyas flowering their hearts out. At this time of year one realises that all the hard work put in earlier in the year has been well worth it as we appreciate the wonderful flowers of our epiphytes.

On the third week-end in November fifteen of us had a great time in Taranaki seeing gardens, garden centres, and other places of interest in the New Plymouth region. A report of this visit will be found later in *Epiflora* but I do want to thank Andrew and Yvonne Brunton for all their hard work in making our week-end such a success. Week-ends and days away do widen our horizons and give us new ideas for our gardens and indoor plants.

Our next meeting is our AGM and Christmas afternoon tea – do hope that you can be there as our AGMs are usually very brief and then there is an opportunity to enjoy each others favourite plants. I hope that you are already thinking which one you will bring in and I'm sure nobody will mind at all if you end up bringing more than one. What a difficult decision it is to choose one's favourite plant of all those in the garden or indoors?

As you prepare for the Christmas season with its rush and hype I hope that you find time to sit and contemplate the beauty of the trees, plants and flowers. Both Roy and I wish you peace and happiness at this time and hope you can join us for the Society January meeting in Waikanae.

Kind regards

Jane Griffith

1st December 2004

The Programme for 2004/5

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 11th	AGM and Christmas Function <u>On Duty:</u> Jane and Roy Griffith, Mary Hardgrave.
January 8th	Crawl toward Waikanae (with a BBQ at 249 Te Moana Road). <u>On Duty:</u> Brian Read, Nola Roser, Robyn Gibson
February 12th	Digital Photography. <u>On Duty:</u> Phyllis and Bruce Purdie, Anne Goble
March 12th	Cultivation of Hoyas. <u>On Duty:</u> Lois Bond, Penny Luckens, Mary Hardgrave
April 9th	Afternoon visit - details to be confirmed
May 14th	Epi Cacti propagation from seeds
June 11th	Details to be confirmed
July 9th	Mid Winter! (lunch and a visiting speaker)
August 13th	Botanical Illustrations
September 10th	Bromeliads
October 8th	Rhipsalis
November 12th	Field trip - details to be confirmed
December 10th	AGM and Christmas Function

December Meeting:

Please don't forget to bring a fancy plate with something other than the design on it - afternoon tea you understand. Please also bring a Lucky Dip Gift (costing no more than \$5) and wrapped in Christmas paper

The Trouble with Tillandsias....

At our November meeting the speaker was **Andrew Flower** – he talked about the problems of growing Tillandsias ..

Andrew took as the underlying theme for his talk the difficulty that one of his customers in Singapore has in growing some of the species that flourish for Andrew in Wellington but which die in Singapore where it is rather warmer – and also more humid. By a process of trial and error (or more accurately trial and death) it became obvious that the plants least likely to survive originate from high altitudes.

We are all familiar with the problem of not being able to grow plants in our own garden, greenhouse or shadehouse – and often the cause is quite simple – the plant comes from a place with a warmer climate than the one we enjoy. In this case the solution is also simple (albeit potentially expensive) – supply more heat and/or humidity!

Tillandsias however are quite unusual in the way they grow. Since they grow without conventional roots they have evolved strategies to minimise water-loss. Thus they do not respire or photosynthesise in the same way as most other plants. They seek to minimise their water loss during the day – and so keep their pores closed. This means they cannot take in carbon dioxide to fuel the photosynthesis process during the day as “normal plants” do.

So Tillandsias open their pores at night – to take in carbon dioxide and convert it to malic acid. During the day they convert the malic acid back to carbon dioxide to fuel the photosynthesis process. Using this somewhat lengthy and convoluted process has some consequences

- Tillandsias are slow growing
- Tillandsias should not be watered at night – as this will block the plants’ pores and prevent it from absorbing carbon dioxide.
- The CAM (*Crassulacean acid metabolism*) respiration process (the one that involves conversion of carbon dioxide to malic acid) will only operate at temperatures less than 15°C. Such temperatures would be normal at the high altitudes where the plants originate.
- The usual night time temperature in Singapore is over 20°C – hence the process does not operate and the plant cannot absorb carbon dioxide.
- It dies.
- Oh dear how sad.

With his usual thoroughness Andrew had done a series of experiments to determine which plants were using the CAM respiration process. He described these experiments to us. He placed each plant in a closed vessel and used a sophisticated (ie expensive) meter to determine whether the concentration of carbon dioxide had reduced overnight.

He found that the species that did not absorb carbon dioxide overnight were the ones that will grow in Singapore (and coincidentally originate from locations close to sea level). Conversely those species that did absorb carbon dioxide are the very ones that snuff it in Singapore.

If you are planning a sojourn in Singapore – ask Andrew and he will happily advise you on the plants that you can and can't grow....

Taranaki Trip 2004

*Last month a group of us headed back to Taranaki for another weekend of visiting nurseries, gardens and parks. **Lois Bond** writes about some of what the group did and saw (Lois did not include anything about our trip to Pukeiti - because she was not with us on that day .. Ed)*

Streets Motel, Coronation Street, New Plymouth was the temporary address of some of our members as we toured around New Plymouth and its suburbs enjoying a feast of many different gardens, nurseries and Pukekura Park. Andrew had the task of shepherding a convoy of 5 cars through unknown territories throughout the city. This he managed admirably and cheerfully with 100% success. Well done Andrew.

Our first visit on Saturday morning was to The Girlz Garden Centre whose proud boast Gota Lota Giftz has to be seen to be believed. So many varieties of seedlings, plants, tools, and accessories as seen in most commercial nurseries but here they were displayed in sections each giving innovative ideas for our own gardens. One large Spiral Aloe in flower was greatly admired, but its size probably not the \$400.00 price meant we couldn't transport it back to Wellington. However some retail therapy was achieved and we left for our next stop Pukekura Park.

Here Andrew introduced us to Ken Davey Technical Officer of the Fernery and

Epiflora

display house. He gave us a very interesting tour through part of the park and told us a little of its history. It was opened in 1876 and was originally a barren swampy valley set aside as a recreation area for the local community. We had to chuckle as he showed us the site where the local policeman sat to ensure the safety of the women swimming, making sure no males could view this very daring deed. Ken mentioned this was quite a popular duty amongst the force.

Pukekura Park, although man made it has been developed over the last century. It contains dense native bush land, walkways abundant with birdlife, native and exotic tree collections, lush fern gullies and colourful hidden dells, broad sweeping lawns, formal flower beds and fresh water lakes and streams.

The Fernery and Display House is used to display plants from all over the world. The three original glass covered houses were excavated into the hillside and are below ground level, which creates a cool environment suitable for ferns in particular.

The first house is naturalised planting of over 100 different native ferns. The next two houses have ferny banks complemented by a wide range of flowering and foliage display plants. The last upper house is gas hot water heated to suit a range of tropical and subtropical pot plants.

We enjoyed lunch at the Park kiosk.

Publitz Garden, a private garden which is one of the gardens on the Festival Route. Here we meet Joy and John who have developed their garden as rooms using different plants and colour themes to achieve this. They have cacti, succulents, grasses, roses and water features in these rooms and have used mirrors very effectively. John makes and sells garden ornaments.

Colsen Road Garden Centre was our next stop – a more traditional centre but very reasonably priced so further retail therapy was done here.

Off to Craigmyle home of Yvonne and Andrew where we were warmly welcomed with afternoon snack and left to explore their fantastic awesome range of epiphyllums and then up to their new home and a stroll throughout their huge gardens, all with different features to offer, so beautifully set out and tended. What an inspiration and a pleasure to explore.

We were treated to a barbeque with lashings of well cooked food and desserts and plenty of fun and laughter and sharing. So much fun in one day.

Epiflora

Day 2

This started with a visit to a cacti collection at a private home four huge glasshouses filled with such a variety of cacti and succulents, an amazing collection which was really appreciated by the cacti lovers in our group. A few specimens were purchased.

A quick tour of Living Trends mainly a pot and garden accessories outlet was our next brief visit.

Les Taylor's garden was our next destination on the outskirts of town. This sprightly octogenarian showed us through his garden set out in three main areas, all with different themes and a wonderful array of foliage, flowering trees, shrubs and roses. The primula candelabra and different species of maples, hostas and irises set in the bog garden with vistas looking up to the mountain were the main feature I recall. The gardens contained a rhododendron and azalea area, the bog area and a rose and perennial section.

We lunched at Big Jim's Garden Centre Café, and then spent time wandering through the adjoining retail outlet.

Bri ree Garden another inspiring private garden at the home of Brian and Marie who run a dairy farm. Marie started her garden when she was working at a nursery 17 years ago and brought home a few rhododendrons. She now has 3 extensive separate gardens. The scented garden close to the house includes lavenders, stock, geraniums, roses, sweet peas and a fragmintissima, just a few of the scented species planted here. The next feature was a vegetable garden laid out in a circle and use of different colours in this garden was very appealing. Her third garden was a real old English garden, down a path to a small pond and water garden and below this a hillside garden facing north and extensively planted.

A brief stop at the Rock Shed which had many different rocks, crystals and pendants and jewellery crafted from these for sale.

Back into our vehicles and on to Cedar Lodge, an outlet for cedar trees and conifers with the grounds set out in a hillside walk to show these trees in a practical attractive and advantageous setting. At the same venue some of us visited the Christmas Shop, which contained many, many traditional and innovative ideas for the Christmas season. A pleasant way to finish a very busy and inspiring day and time to reflect and compare treasured purchases, and prepare for the Monday trip to Pukeiti Rhododendron Gardens before setting out for home again.

Visit to Liddle's Nursery

Jane Griffith writes about a recent visit to a hoya nursery in Queensland.

Whilst holidaying in Northern Queensland in early October we decided to visit the hoya nursery run by David Liddle at Mareeba. Liddle's nursery is located between Cairns and the Atherton Tableland in Tropical Queensland. The land here is covered with low growing scrub and gum trees which at this time of year were looking very parched.

We had made a previous visit to the nursery about six years ago but were surprised to see how the place had expanded as part of their land had been sub-contracted to people growing gerberas. The hoya-growing shade houses had also expanded and all the plants were now hanging rather than some being grown on benches. Was this change to detect snakes more easily?

Fortunately David Liddell was at home so he showed us round the vast array of hoyas – a range that made one drool with envy. David mentioned that he goes collecting in the field up to four times a year and therefore many of the hoyas that are to be seen in the nursery are ones that have only recently been discovered in their natural habitat. This year he talked of having been in New Britain and in Sabah and was planning to return to Sabah within a month of us visiting.

The day that we visited Liddle's nursery the temperature was around 30° C – a clear blue sky and low humidity. David noted that their minimum temperature only went down to 15° C and usually only for one or two nights of a year. With high annual temperatures and periods of high humidity hoyas thrive.

Cultivating Ceropegias

In October a small select group heard Merv Keighley talking about Ceropegias. For the benefit of the rest of us who missed his talk - here are his notes..

As at 1983 there were some 160 species of ceropegia ranging from the Canary

Epiflora

Islands in the west through Africa into India and the Far East to China, to New Guinea and in Northern Australia.

There are probably considerably more now, as there was a move to amalgamate other genera into *Ceropegia*.

Ceropegia are perennial herbs, sometimes succulent with tubers, or fugiform (spindle shaped) caudic or sometimes, fibrous roots.

Stems are dwarf to elongate i.e. “**eeh long ah t.**” prostrate to erect, sometimes dangling, scrambling or climbing.

Leaves are opposite, stalked or stalkless, sometimes not on fleshy stems.

Flowers are often in umbrella-like clusters i.e. like *hoya* or 1 to several developing together or in succession.

Mainly lateral at the nodes.

The corolla has a tube, often somewhat inflated near the base, with or without hairs on the outside. Often with hairs within.

The hairs within the flower usually point downwards to the base of the flower. These act as prison bars to the small insects that fertilise the blooms. They enter the flower through often small openings 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 from exiting until they have done their duty. When pollination has taken place, the bloom wilts allowing the insect to escape and go to the next flower.

Pollination is not easy, as with simple flowers.

Pollen is not the simple dust that most flowers produce, and a paintbrush is useless as an instrument for pollination.

Pictures of David Liddle and some of his collection

The pictures overleaf were taken by Jane Griffith and show David Liddle and some of the hoyas in his collection. None of these plants is on his “for sale” list.

Epiflora



Epiflora



Epiflora

Ceropegia flowers have pollinia - as do orchids. The pollen is paste-like and is contained in a pair of particularly shaped vessels. These - as in most asclepiads i.e. stapeliads, hoyas, etc. are designed so that when an insect enters the flower, the pollinia becomes caught on the insect's legs or hair. On entering another flower the pollinia sometimes becomes wedged into a groove designed in the shape of the pollinia. Sounds simple but it is extremely difficult to replicate by hand.

Some flowers are scented. I haven't yet smelled any but a method to observe the scent is to place some flowers in a glass jar for a time with a lid on. On opening the lid, breathe deeply!!

After the flower is pollinated, usually two seed horns or follicles appear. These contain the dark seed which are attached to parachutes similar to thistle for dispersion by any breeze.

The follicle opens by splitting lengthwise along the inner side. Under the opening there is a straplike membrane which gives protection to the seeds while the follicle is starting to open and to which the ends of the silky white hairs that are attached to the seeds press against, bending outwards in their middle part 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 seeds are flattish, wider at one end, and surrounded with a narrow wing which is bent towards to sides.

Follicles take from two to six months to ripen.
Germination takes from three to fourteen days.

I have sown seed collected from my own plants just as the follicles start to split. They have germinated within two days. Therefore, the fresher the seed, the more chance of success.

Some species die down each year then reappear the next spring.

Quite a few have large caudex's.

Epiflora

The majority of ceropegia can be propagated by cuttings. Cuttings of the finer stemmed plants are difficult to root. I have had some success this last season with *c.setifera*, *c.crassifolia*, *c.cufondontis* and *Brachystelma mafekinensis*, (syn *c.mafekinensis*). I put the cuttings in a pot of pumice, keep moist, not wet, and place the pot on a hot pad.

Layering is also an easy way to propagate. Plants will often wander around the glasshouse and set roots in other pots that happen to get in their way, or may go under a pot and then put out roots. The stem may be cut north of the roots and the southern piece [potted up as a new plant].

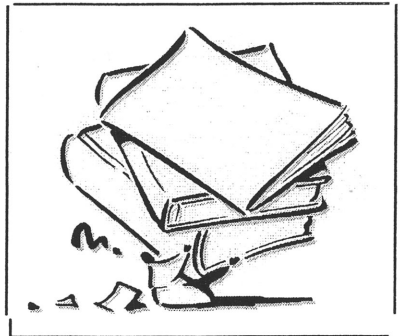
Further Reading

Our Society receives journals from a number of other societies with similar interests. These journals are all available from our library. In the last couple of months a number of interesting items have been published. Here are some snippets that you might find interesting. (Of course you really should go and read the articles for yourself!)

In the latest issue of **Fraterna** (Vol 17 No 4) Ted Green writes more on the topic of raising Hoyas from tissue culture. (His original article is in Vol 15 No 2.). In due course this might be an economical way of introducing new species to our collections in New Zealand.

Have you ever thought that the flower colour of one of your hoyas does not look right? You are not alone. You might like to read the article by Rex Hardy in volume 14 no 16

of **EpiGram** (published by the Epiphytic Cacti and Hoya Society of Australia) in which he discusses the matter. In the same issue Hazel Mendonca describes the day she was hooked by hoyas!



Epiflora

In the September issue of **Epi-Gram** (South Bay Epiphyllum Society this time) Dick Kohlschreiber writes about a new book he has received "Cacti of Eastern Brazil" by Nigel Taylor and Daniela Zappi. *(It sounds very interesting - the only problem is that so far it is not available through any supplier I have checked with .. Ed)*

And finally in the latest issue of **The Bulletin** (Vol 59 No 4) Keith Ballard writes on "preserving the legacy" where he discusses the problems of preserving hybrids produced by past and present hybridisers. The fact that there are currently 9760 registered epicacti hybrids indicates the magnitude of the problem.

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 Albany or Ashburton you may need to adjust things a little. Although summer is supposed to be here - we have been subjected to a long run of cold nights - with temperatures going down to 8 °C at times however some days have been quite warm - so you can find plants getting dehydrated.

Epicacti - *Start watering regularly - preferably early in the day, enjoy the flowers as they come. After a plant has finished flowering - you can re-pot 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 re-pot 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.*

Epiflora

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

It is subscription time again!!

Didn't the year go fast... !!

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 - or will be happy to receive your money at the December meeting.

Odd Cuttings and Seeds

Pest remedies

Some of us on the recent Taranaki trip had interesting conversations with those tending the plants in the fernery. They have some wonderful specimens of hoyas and epi's and we wondered what they did to control pests (spraying everything liberally is not really practical in places that are open every day to the public). They said they did make use of parasites to control things like mealy bug (just as Wellington do) - these have to be reintroduced every year as they die off in the winter when it gets cold. They said they also use Imacloprid as a soil drench (being systemic - it then spreads throughout the plant).

Epiflora

Epi's on display...

All those who have been to the café at Zenith's Garden Centre recently would have seen the fine display of epi's in flower. Now would Neville Chun have had anything to do with that?

Books Books Books ...

Rainbow Gardens Bookshop now have a range of second hand titles available for sale. To view the list of over 250 different books go to their website (www.rainbowgardensbookshop.com) and click on the "Used Books" section.

Back numbers of "Epiflora"

The first edition of *Epiflora* appeared in March 1992. We have limited stocks of backnumbers for most issues from Volume 2 (March 1993) onwards. Ask the editor for details.

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.

Please address correspondence to:

249 Te Moana Road,
WAIKANAE.

Or: griffith@globe.co.nz

Closing dates for contributions:

Autumn 2005 edition - 12th February 2005

Winter 2005 edition - May 14th 2005

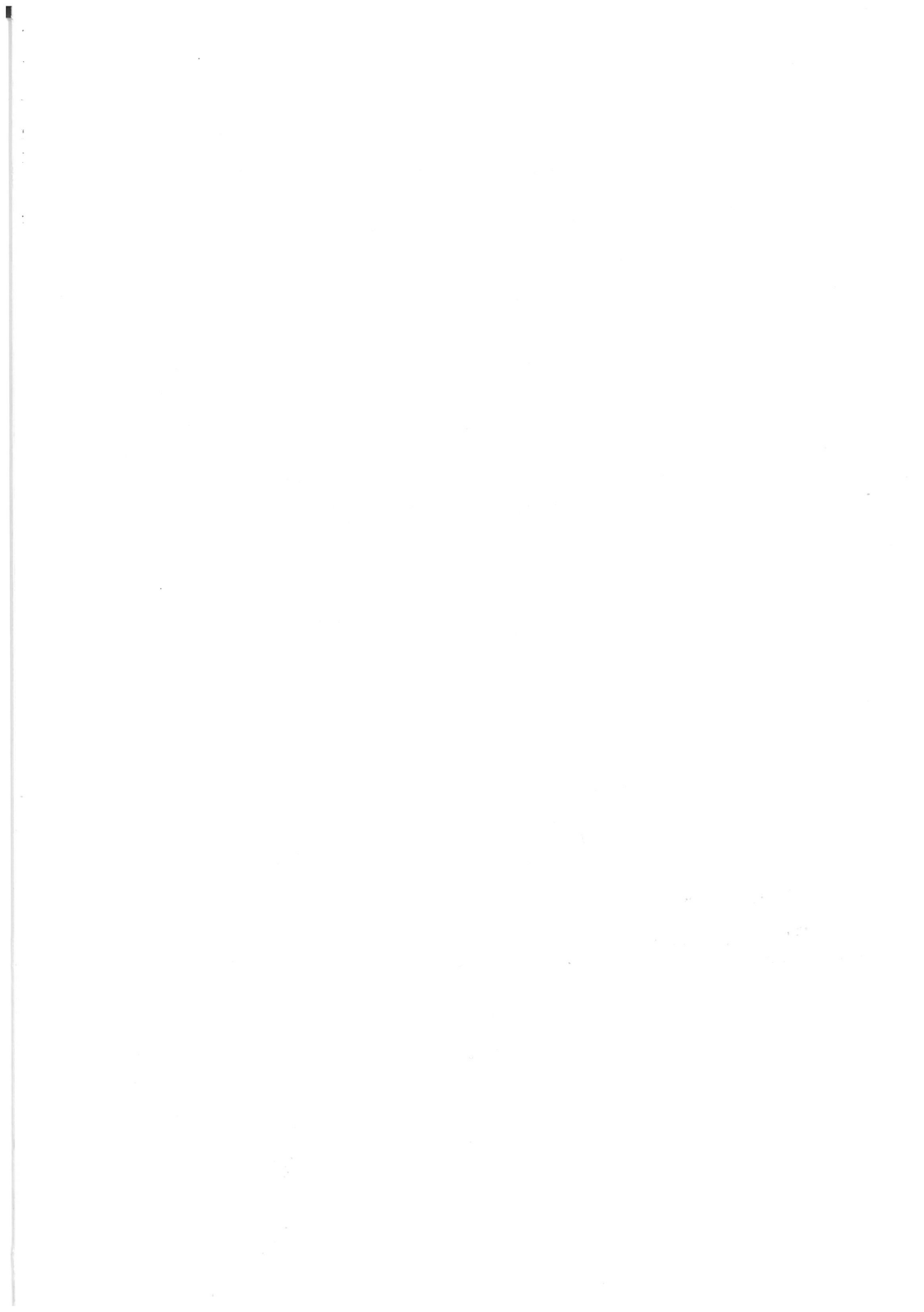
Subscriptions:

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



The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. This includes not only sales and purchases but also expenses, income, and any other financial activity.

The second part of the document provides a detailed breakdown of the accounting process. It starts with the identification of the accounting cycle, which consists of eight steps: identifying the accounting cycle, analyzing and journalizing the transactions, posting to the ledger, preparing a trial balance, adjusting the accounts, preparing financial statements, and closing the books. Each step is explained in detail, with examples and practical advice.

The third part of the document focuses on the preparation of financial statements. It covers the balance sheet, the income statement, and the statement of owner's equity. It explains how these statements are derived from the accounting records and how they provide a comprehensive view of the company's financial health.

The fourth part of the document discusses the importance of internal controls. It outlines various control procedures, such as segregation of duties, authorization, and documentation, which are essential for preventing errors and fraud. It also discusses the role of the auditor in verifying the accuracy of the financial statements.

The fifth part of the document covers the final steps of the accounting process, including the closing of the books and the preparation of the final financial statements. It explains how the temporary accounts are closed to the permanent accounts and how the final financial statements are prepared and presented.

