WELLINGTON

EPIFLORA

Produced by the Wellington Epiphyllum and Hoya Society

No: **6**

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Subscription:

Full Member	$10.00	1 January–31 December
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Advertising: Contact Editor

Editorial

A new Editor has been found! Even Two!
Thanks to the Beestons - Alison and Peter.

This is my final publication. Thanks to all who have written articles and reports, who have commented and criticized. I feel that we have a journal we can all be proud of. Please continue with your writing. Our new Editors will still want articles, long or short. Can anyone draw? Line drawings would be very acceptable.

Now we look forward to our new Epiflora and to the Convention in November. Watch your letter box for information and enrolment applications. Get in early - it promises to be a great time.

Regards and goodbye.

Merv Keighley
Retiring Editor.

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Dear Fellow Epiphyte Lovers,

Firstly I would like to welcome those members who have joined us since the last magazine was produced. I do hope that you will enjoy our monthly meetings and our quarterly magazine. You will notice that we will no longer be talking about "the magazine" but Epiflora -a title which aptly describes our interests in Epiphytic flora.

During the past few months I, like many of you, have been pruning, repotting and doing all the other tasks so necessary at the end of summer and during autumn. Each year the task becomes greater as the number of plants has grown throughout the year and once again Roy and I are likely to be working in the shadehouse during the cold winter days if we are to give all our plants the once over.

The Convention Committee has been working extremely hard on your behalf. Meeting monthly the Committee has produced a tentative programme for the Convention and finalised registration details. Further information is given elsewhere in Epiflora. I do hope that you are planning to be at the Convention in November as it promises to be a most interesting and exciting weekend.

In the last magazine Merv Keighley gave us notice that he was retiring from the Editor's chair after this edition. Merv has done a magnificent job as Editor -starting off the magazine for us, he has cajoled many of us into writing articles and reports. Thanks Merv for initiating the magazine and providing us with a high quality production which has enabled us to exchange magazines with epiphytic societies overseas.

And lastly a reminder that we are having our annual Society mid-winter dinner after our regular meeting in June. If you have been unable to attend meetings of late we do hope that you will make the dinner which will be at the home of Myra and Morris Tarr. You will receive a phone call from one of the Committee in due course to finalise details.

In the meantime good growing and I hope that the forthcoming winter treats all your plants kindly.

Jane L Griffith

Jane L. Griffith
President.

SCHLUMBERGERA AS GRAFTING STOCK

By Prof.Dr Gerhard Jurzitza in K.U.A.S. 36/12/85
Translated by Herman A. Kortink

Grafted plants look in my eyes somewhat unnatural and I can't even with my best intentions find these artificial looking plants beautiful. On the other hand this system of cultivation is a way out to combat the combinations of dangers of soil and moisture and after all I have (and am not the only one) lost some valuable plants this way and quite often it is only noticed when it is far too late to do something about it.

Nevertheless I grafted as it is a worthwhile technique to bring seedlings to the flowering stage in the shortest possible time (?). It is also a means to save sick plants. For some years now I have been using Schlumbergera "Wintermarchen". It flowered beautifully but then things started to go wrong. If I got a little careless with watering the root system rotted. I tried to root pieces of the plant and in the end it was saved.

A segment was grafted on *pereskiopsis* and after a while I had plenty of material for further experiments. "Wintermarchen" is also an excellent candidate for "double grafting". These should, if possible, look as natural as possible, also I reveal an unusual request as I for grafting stock just use a common schlumbergera without name which can be bought in flowershops etc. These plants can be abused by overwatering many times without the ultimate punishment.

Strong growing leaves are cut off at the top of the leaf to prevent new shoots to develop, the top of the leaf is then cut 5mm across and a leaf of "Wintermarchen" is cut keelforming and inserted into the cut and fixed with fine slender cactus spines, which are pushed right through the stock leaf, as soon as the scion (graft) shows steady signs of growth they are taken out of.

In Autumn I grafted 2 "Wintermarchen" on a stock with 3 leaves and the grafts grew well but not as fast as on *pereskiopsis* or *selenicereus* (in my experience schlumbergia makes a good grafting stock) and plants grafted on this type look as natural as plants on their own roots in time.

Now the grafts are about 4 years old and the stock starts to go woody carrying the new growth quite well. I hope in a few years the growth of the stems will be so advanced that the plants will look as if growing on their own roots as if grafting has not found place and I will have no complaints about flowering either.

NATURAL GROWING ENVIRONMENTS OF EPIPHYTES

What is an Epiphyte?

- plants growing on other plants (ie tree trunk, branch or crevice in trunk)

- have independent root system therefore not parasites

- obtain mineral nutrients from trickling rain water containing ions from dead and dying cells of the host tree's bark

- obtain water:
  - by long aerial roots absorbing water
  - from rain water trickling down trunk or branch of tree
  - absorbing water soaked in humus on which plant grows
- store water in fleshy leaves

Epiphytes "hitch a ride" on other plants and gain more advantageous site in tree canopy

Epiphytes are common in the Tropics and Sub-Tropics, but rare in Temperate regions. They predominate in cactus, orchid, asclepiad, bromeliad and gesneroid families and also occur among ferns, aroids, peperomia and nepenthes. They usually root into accumulations of moss or debris in crotches or into rough bark and in rare cases they attach to green leaves or stems. Epiphytes do not draw nourishment directly from the host tree but may intercept light, water and nutrients that would otherwise reach the soil and nourish the host. Many epiphytic species may be found as lithophytes (or rock perching plants).

We think of epiphytes as vascular plants, but they also include algal species, lichens (particularly in dry sub-alpine forests), mosses and liverworts.

In tropical forests the epiphyte load seems to increase with altitude with epiphytes being less abundant in lowland forest and more abundant in mountain and cloud forests. (Cloud forests have gnarled trees less than 20m high with crowns, branches, limbs and trunks heavily burdened with epiphytes).

In semi-deciduous tropical and sub-tropical forests most trees are drought resistant and shed their leaves in the dry season. The mountain and cloud forests of this type bear xerophytic epiphytes such as *tillandsia usneoides* that can withstand periods of drought.

Successful epiphytes must be adaptable - able to survive changes in light intensity, humidity and rainfall, cope with sudden deposition of dead leaves and debris among them, or a plunge into the forest depths when a supporting branch breaks or a tree is blown over. An ability to regenerate from a small piece, or to attach more firmly by adventitious roots when adjacent plants have fallen from the branch is clearly advantageous.

Different epiphytes live in different places on the tree - mosses may be dominant on lower trunks, some orchids may live only on twigs in the canopy. Some plants may grow epiphytically as seedlings, then grow roots down to the ground and overgrow or strangle the host tree.

The seeds of epiphytic plants vary greatly - orchids have fine seed, some epiphytes have seed with parachutes whilst epiphyllums have relatively large seeds in fleshy fruits readily eaten by animals. Epiphyllum seeds stick readily to anything they touch and are therefore very easily transported to a new locality to germinate. Seeds may start to grow within the fruit while still attached to the plant almost like an orchid seed in its nutrient agar jelly. Some primitive orchids have small but relatively heavy seeds borne in a somewhat pulpy fruit. These include *vanilla* which is probably the longest orchid plant, being a large vine which may climb many metres up a cliff or a tree.

Most epiphytic seeds are either animal pollinated or dispersed through wind movement.

Epiphytes enjoy:-

i good light (compared with the forest floor)
ii constant air movement which prevents the plant being cooked by the sun
iii better exposure to pollinators
iv greater seed dispersal
v avoidance of slugs and terrestrial herbivores.

As members of the Epiphyllum and Hoya Society we grow a great range of epiphytes which are found in various localities within the Tropics. For some of these plants they suffer the problem of seasonal lack of water - such plants are adapted to this environment having water-storage organs in their roots, stems or leaves. Another problem for some plants is the great diurnal range of temperature and once again the plants are adapted to this condition. The majority of epiphytes suffer from a lack of mineral nutrients but have become tolerant to low substrate fertility.

The natural environment of the main epiphytes which members grow will now be considered briefly:

EPIPHYLLUMS

- 20 - 30 species; over 10,000 hybrids

- jungles of Mexico and South America

- humid, warm (20-30 C), little seasonal variation

- moist all year

- air movement important in canopy trees

- fast draining acidic mix

HOYAS

- approx 150 species

- grow throughout Eastern Tropics - Nepal, NE India, S. China, Japan (north of range), Indo-China, Philippines, Indonesia, Malaysia, New Caledonia, Samoa and NE Australia. **Greatest concentration - Malaysia, Philippines & New Guinea.**

- 4 main Australian species - *Australis, Nicholsoniae, Poolei, Macgillivrayii*

- warm temperatures, little seasonal variation nearer Equator. In Northern extremity of cultivation slightly cooler winters

- humid conditions

- moist all year some regions, others seasonal drought.

- primarily lowland and hill forest plants. Greatest variety of different species occurs between sea-level and 500m

- majority of hoyas climb up trees, twine upwards gaining nutrients from decomposition of outer layers of tree's bark.

DISCHIDIA

- no monograph available, uncertain size of genus (c.50)

- S.E. Asia and N. Australasia. Centre of distribution Indonesia and Malaysia

- almost entirely in Tropics therefore temps 20 - 30 C

- Seasonal droughts except near Equator

- Lowland and mountain species especially in Malaysia

- climb up host tree

APOROCACTUS

- Mexico

- 6 in species, 2 still in cultivation today -*Flagelliformis* and *Conzatti*
- warm temperatures, little seasonal variation

- humid conditions

- air movement in canopy of trees and on steep rock faces

CHIAPASIA

- grows in Mexican state of Chiapas, monotypic genus **(Chiapasia Nelsonii)**

- warm temperatures, cooler nights because of altitude

- grown between 900 - 1800 m.

RHIPSALIS

- Florida, Mexico and West Indies in North to Argentina in South. **Greatest distribution States of Rio de Janeiro, Sao Paulo and Minas Geraes in Southern Brazil**
- Also found in Tropical West Africa, East Africa, Madagascar and Sri Lanka **(Maybe result of migratory birds).**

- over 60 species in 4 sub-genera

- warm temperatures - 20-25 C
- rain all year round, some in areas of high humidity

- Epiphytic therefore grow in canopy of trees, in semi-shade

- some grow on rock surfaces

- some species have fibrous aerial roots which cling to tree trunks or rock surfaces

SCHLUMBERGERA AND RHIPSALIDOPSIS (HATIORA)

- located in Brazil - especially Northern States of Rio de Janeiro, Sao Paulo and Minas Geraes

- Schlumbergera 6 specis; Hatiora 5 species

- warm temperatures - 20-30 C; little seasonal variation

- humid conditions

CEROPEGIAS

- distribution - Canary Islands, Africa (South of Sahara), Madagascar, India, Indonesia, Malaysia

- over 150 species

- great range of temperature because of distribution

- warm summer temperatures, varying winter temperatures but no very cold localities

- except in Equatorial regions seasonal rainfall but no season of complete drought

- not all ceropegias epiphytic

- in natural environment inconspicuous. Tend to grow in isolation rather than in dense populations

- grow in shade of denser shrubs.

CYNANCHUMS

- location - Madagascar Republic, other parts of Africa, N. Australia

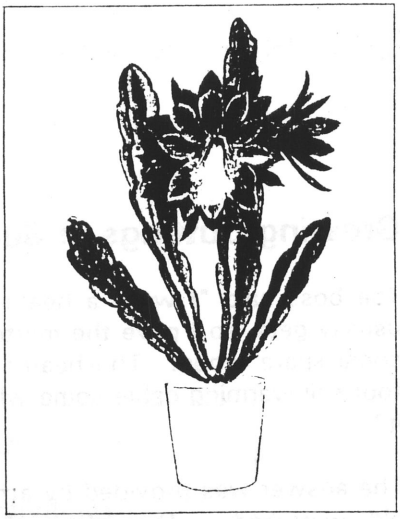
- warm temperatures - 20-25 C

- grow in areas of low rainfall

- very hard to detect because "leafless"

- not all epiphytic, only twining species

Jane Griffith and Penny Luckens



WANTED - by Merv Keighley ph 388 2008 Wellington.
Epiphyllum Chrysocardium - cutting please.
Ceropegia - any named or unnamed.

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The Epiphytic Plant Study Group

This group, based in the UK produces the **Epiphytes** magazine which some of our members may have seen. We wrote to John Horobin, the Editor, suggesting that we exchange journals - and received a most enthusiastic and encouraging reply. In this letter he noted that:

-... we are making some progress in identifying some of the old (Schlumbergera) clones. I wondered if the readers of your journal could be of any help? Basically I am looking for clones that are known to be over 100 years old, particularly any which might have names to compare with what we have already found. Particularly interesting would be anything under the names **"Ruckerianum"**, **"Rollissonii"**,or **"Russellianum Rubrum"**, **"Cupreum"** or **"Snowii"**.

so comb attics and memories - and we will forward any discoveries on to John.

Growing Cuttings in Bed.....

The boss said "I want a heated propagating box". What she wants she usually gets, so I gave the matter thought. The box itself was easy - I had some spare wood. The heater was no problem - Dad gave her a twenty foot soil warming cable some while ago; the question was - how to control it?

The answer was provided by a friend who had kept the thermostat from an old waterbed. That does the job perfectly, tests showed that the thermostat calibrations were very accurate and the range covered (18 to 25 degrees C) is just right for the plants' requirements. The temperature sensor is also waterproof.

The project is a success. Ceropegias, hoyas and tricky epiphyllum cuttings take root and thrive, so if anyone wants to give up their waterbed.......

+++ 1993 EPIPHYLLUM AND HOYA CONVENTION +++

PHOTOGRAPHIC COMPETITION

One of the features of this year's convention will be a photographic competition. All attending are eligible to enter. There will be three classes:

Epiphyllum
Hoya
"Other" epiphytic cacti (including Ceropegia, Aporophyllum etc.)

Conditions of entry

* Photographs are to be 6" x 4" (15.2cm by 10.2cm approximately.)
* Membersa are limited to two photographs in each class.
* If the name of the subject is known it should be written on the reverse of the photograph or on the mount.
* The entrant's name should be clearly shown on the reverse of the photograph.
* All photographs are to be delivered, or posted to reach us in time for judging at 12 noon Saturday 20 November.

WANTED **by Roy and JaneGriffith**

Cuttings from the following Epiphyllums

Red Elf	**Coral Lace**
Labour of Love	**Miss Escondido**
Crushed Velvet	

Also

Rhipsalis pachyptera
Rhipsalis trigona
Rhipsalis rauhiorum

The 1993 Epiphyllum and Hoya Convention will take place in Wellington

19 - 21 November

hosted by the
Wellington Epiphyllum and Hoya Society

Further information and registration forms may be obtained from:
Mrs D O'Neill, 7 Blackbeech Street, Upper Hutt.