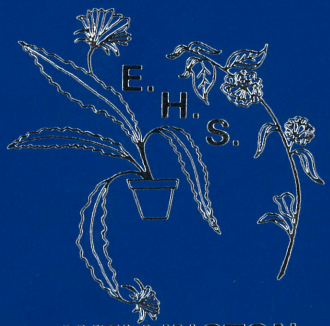

WELLINGTON

EPIFLORA

EPIFLORA

Volume 6, number 1 **March 1997**

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The President's Page

Dear Fellow Epiphyte Lovers

As I write this letter we are still enjoying the long, lazy days of summer and watching and listening to the cricket. Being a summer person I just wish that this season would go on and on. I certainly don't share that strange argument that some people put forward that you need winter in order to appreciate summer!

For us its been a very successful flowering season for both epiphyllums and hoyas and I hope that this has been the case for you too. It was also a thrill to see ceropegias that were planted as seed last April coming into flower for the first time. The test will be to see whether we can keep them alive during the winter so that they flower again next summer.

This is the year of the Wellington Epiphyllum and Hoya Convention and I do hope that you have already put the dates in your diary - 14-16 November. The Convention Committee are developing some good ideas for the week-end which will include talks, workshops, visits to collections, opportunities to buy plants and other goods as well as the chance to catch up with old friends and make new ones. Plus other attractions. If you have any ideas for the Convention do let me know so that I can pass them on to the Committee. Registration forms will be available shortly.

With a full programme of activities for monthly meetings, the possibility of taking part in one or two events to promote the Society and the Convention we are promised an exciting and busy next nine months. I look forward to seeing you involved either as a local member or for corresponding members I hope to see you at the Convention.

Kind regards

Jane Griffith

Jane Griffith

The Programme for 1997

Meetings are at Johnsonville Union Church (Dr. Taylor Terrace) and start at 2.00 pm. Library books etc. are available at 1.30 pm.

March 8th	Workshop on Hoyas
April 12th	Tillandsias
May 10th	Panel discussion on Schlumbergeras
June 14th	Workshop on Epiphytes
July 12th	Midwinter Function
August 9th	Visiting speaker
September 13th	Propagation by means other than seed
October 11th.	Ailing Plants - and how to help them - panel
November 8th.	Rhipsalidopsis
November 14 - 16	Convention
December 13th.	AGM and Christmas function

News About People:

Alison Beeston: - travelled last month to Indonesia - to be present at the wedding of their son Alan.

Other people who have been on the move since the last edition include **Isobel Barbery** who went to UK and Germany for Christmas, **Nola Roser** who went to Australia and **Andrew and Lissa** who went to Pukerua Bay. The plants are following them.

That was the Year, that was ..

At the December 1996 meeting of the society - before the bun-fight commenced - our President, Jane Griffith, presented her report for the past year.

Presidents Report 1996

At this the sixth Annual General Meeting of the Society it gives me great pleasure to present the Presidents Report for 1996.

The year has been a busy one for the Society with a wide range of topics covered in our monthly meetings and involvement in three shows. In February the Society mounted a display at the Hutt Horticultural Summer Show; in May we had a display at the Capital City Orchid Society Show at the Johnsonville Community Centre and in October were invited to Masterton to put on a display at the Wairarapa Orchid Circles 21st Birthday celebrations. All occasions were opportunities for those on the stalls to answer questions from interested members of the public, advertise the Society as well as sell plants and thus increase the number of people growing epiphytes. Displays can only be mounted with the involvement of people to set them up and be available to spend time at them during the show. We were able to be at these three occasions because of members willingness to participate - thank you.

As in previous years the attendance at monthly meetings has continued to be good. Our excellent library, with new books being regularly added, sales of pots, fertilisers, etc. as well as the informality which encourages each of us to participate are all factors which make meetings varied and successful. An added feature of meetings since September has been the monthly competition judged by members votes.

Our magazine, Epiflora, is in its fifth year of production and over the years has become a high quality magazine enjoyed by local members, postal members within New Zealand as well as members in the United States of America, Britain, Germany and Australia. This year two of the four editions have included photographs and the Committee has suggested that we consider having a Photograph Fund to which members might like to contribute. Such a Fund would enable the Editor to use photographs more regularly in the magazine.

Although the Wellington Convention is a year away plans are well underway to ensure this will be a memorable event. A Convention Committee was established mid way through the year and I thank the members of this Committee for the time they have already expended and thank them in advance for their work in 1997.

A society such as ours operates successfully because of the involvement of all members and I thank you for your contribution this year. It is also dependent on the hard work of those who are prepared to be on the

Committee and therefore I thank, on your behalf, the 1996 Committee - Alison Beeston as Secretary doing all those secretarial tasks including keeping track of the President; Nola Roser for keeping our books in order as Treasurer; Robyn Gibson for carrying our library to and from meetings and keeping track of books; Jenny Askwith for storing and selling pots, fertiliser and other sale items; Roy Griffith in his role as Editor of Epiflora for twisting your arms to contribute; Morris Tarr who has organised the raffle again this year; Sue Rapira for ensuring tea, coffee and other supplies for our afternoon teas and Andrew Flower for organising the monthly competition. Thank you all for your particular contributions and for your involvement in Committee meetings.

A small society like ours must always be concerned to promote ourselves and to attract new members.This was our aim this year and I hope that we will continue to make membership our focus in 1997.

Jane Griffith
December 1996

The 1997 Committee.

The following were elected to be officers and committee members for 1997:

President: Jane Griffith
Secretary: Alison Beeston
Treasurer: Nola Roser
Librarian: Robyn Gibson
Epiflora Editor: Roy Griffith

Committee: Jenny Askwith, Peter Beeston, Andrew Flower, Sue Rapira

Looking After Schlumbergeras..

The following article is reprinted from the December 1996 edition of "The EpiGram" the newsletter produced by the South Bay Epiphyllum Society. Editor - **Dick Kohlschreiber**

Repotting Schlumbergera

Do not be too eager to get your plants into a larger pot. I have lost more plants because of overpotting than for any other reason. If I repot now, I increase the pot size gradually. If I start out with a 3 1/4 inch pot and if the plant grows well, I'll move it to a 4 inch pot. The next move would be to a 5 inch pot. Once they are established in a 6 inch pot, they can stay in there for a long time. Repotting isn't always beneficial for Schlumbergera plants. Rather than repotting the plants, you can mulch them with some fresh peat moss or leaf mould or even old tea leaves. In an old issue of "Epiphytes" they reported about a Christmas cactus four feet in diameter in a 7 inch pot, in fine condition and full of blooms. It was stated to have been repotted 32 years previously!

Pruning Schlumbergera:

The prettiest Schlumbergera plants are plants that are perfectly round - even on all sides. Dolly Kolli, who has done a lot of experimental hybridization of the Schlumbergera, likes to have plants that will make a nice round plant when started from a single segment or joint and many of her hybrids have this trait. Many of the Cobia hybrids are bad about sending out long rangy growth and the only way to keep a nice shape to the plant is to prune it. I like to do this after the plant has bloomed and before it starts to put out new growth. The only way I've been able to get nicely rounded plants with some of the Cobia Hybrids is to plant three or four joints in a single pot. If you only plant one joint of some of the hybrids, you may get a plant with one long branch.

Don't Forget ...

The 1997 Epiphyllum and Hoya Convention will be held in Wellington; on the weekend 14-16th November.

Come ...

Catch up with friends,

Hear interesting speakers

- and much more ..

more details next issue -

.... Is the date in your diary?

Using Sprays Safely

Penny Luckens *reports on the talk given at the February meeting by Dr Lissa Judd, an occupational medical specialist, who spoke about the effects that pesticides have on us and the precautions we should take when using them.*

She began by listing some of the chemicals and the trade names of sprays that include them -

Chlorothalonil (Bravo)
Diazanon
Malathion (Maldison)
Fluvalinate (Mavrik)
Acephate (Orthene, Shield)
Myclobutanil (Shield)
Permethrin (Target)
Pirimiphos (Target)

Chlorothalonil is an organochlorine whose skin absorption is not very high. It can cause severe eye and skin irritation and dermatitis. It is reported to cause allergic reactions, anaphylaxis (an acute reaction to a substance that the body has already encountered) and light sensitivity. Chlorothalonil is regarded as a potential human carcinogen as it has been shown to cause kidney and bladder cancer in experimental animals.

Malathion, acephate and diazanon are all organophosphates (OP'S). These are absorbed by ingestion, inhalation or through the skin. The dose that results in toxic effects may vary widely with different organophosphate sprays. With Malathion women are three times more sensitive to toxic effects than men. Organophosphates do not accumulate in the body and most are excreted within one to three days. However they inactivate acetylcholine esterase (ACH), and this is only regenerated at about 1% per day. If the dose absorbed is enough to halve the levels of esterase then it will take two months for them to return to normal. Repeated exposures cause progressive drops in enzyme levels with symptoms occurring when the enzyme levels reach 50% to 60% of normal. Acetylcholine (ACH) is involved in the transmission of nerve impulses for both skeletal muscles and the parasympathetic nervous system (controlling the functions of the organs, including the brain, and glands). Acetylcholine esterase is the chemical that turns off the nerve signals. If it is reduced or absent then the muscles work excessively then become fatigued and weak. Thus OP's may cause headaches, fatigue drowsiness, impaired intellect, nausea, vomiting and diarrhoea, salivation, sweating, constricted pupils, coma, lack of breathing and death; depending on which systems in the body are most affected. Some people have low levels of ACH esterase and so are more at risk than the general population.

People who handle organophosphates for more than 30 hours per month need regular blood tests to determine esterase levels. They should use rubber, neoprene or nitrile gloves, goggles and a half-face respirator

equipped with appropriate filter cartridges which should be replaced regularly. If skin is exposed to spray it must be decontaminated immediately by washing with warm soapy water as toxic levels can be absorbed through the skin.

We should read labels carefully on all sprays and should be aware that the personal protection specified on the label is the lowest standard required. It is based on the assumption that the operator will already be wearing a long-sleeved shirt, long trousers, gloves and a hat. Other measures, such as respirators must be added to this basic wear. Skin protection is always necessary when diluting concentrates and cleaning equipment after use as well as when spraying. When spraying in a glasshouse or other enclosed space you need more protection than when spraying outside.

All purpose sprays such as TRISPRAY (contains carbonyl and maldison) and SHELL GARDEN SPRAY (contains carbonyl, malathion and maneb) are harmful to people if swallowed, inhaled or absorbed through skin; they will kill bees if sprayed on flowers and can contaminate water supplies.

The time it takes for sprays such as Shield to break down depends on where they are. The half life (the time for half the material to break down) is three days in aerobic soil (one with plenty of oxygen available to the microbes - open with lots of pore space) but six days in anaerobic soil (perhaps waterlogged or compacted allowing little access to air and with low microbe populations). On clothing sprays will degrade slowly over time. Beware of contaminating surfaces where pets or children with bare feet may walk.

Pyrethrum daisies contain several natural insecticides called pyrethrins which cause prolonged stimulation of nerves. Insects are more susceptible than mammals (including humans). Pyrethroids are more stable, more selective (against insects) synthetic equivalents. Pyrethroids are poorly absorbed through skin and readily metabolised so are fairly safe. The commonest problem is tingling - which may be helped with vitamin E cream.

White Flowered Epiphyllums

the third in a series of articles - by **Jane Griffith**

When considering white flowered epiphyllums the grower has the choice of species plants or white hybrids and therefore in this article both will be discussed.

The majority of Epiphyllum species do in fact produce white, highly scented, often spectacular flowers at night. Although twelve species are named in the Epiphyllum Society of America's Directory of Species and Hybrids less than half of these grow satisfactorily in our New Zealand climate. As we are aware, our climate has numerous macro and micro climates all of which are very different from the tropical conditions of Latin America.

Species plants are most rewarding to grow, both for their foliage and their flowers but they require plenty of room as demonstrated by our plants of *E. oxypetalum, anguliger, cartagense, crenatum* and *phyllanthus.* It has been our experience that these plants require warmer temperatures than the hybrids if they are to produce flowers, and need to be fairly large plants before they do flower. But having waited patiently for those first flowers you will be rewarded annually with more glorious blooms. The first time *E. crenatum* flowered for us will always be indelibly printed in our minds as Roy, myself plus my brother and sister-in-law kept a half-hourly vigil on the progress of the flowers opening one Christmas night. It was about 11.00pm when Roy and Gerry started taking the first photographs! Interestingly, flowering has been later in recent years and the same plant flowered during the third week in January this year.

For those who either haven't the room to grow species plants or the necessary warm conditions there are many beautiful white hybrids - some pure whites and others with pink, red or yellow outside petals. In order to trace the lineage of present day white flowering hybrids back to species plants with white flowers we would probably need to call in the genealogists although Eckhard Meier in an article reproduced in the November 1996 issue of "Epiphytes"[1] attributed to the French hybridiser Charles Simon the crossing of *E. crenatum* with *Selenicereus grandiflorus* (`Queen of the Night'). From this cross or from similar sources evolved what has become known as the `Cooperii' class of hybrids with scented large blooms and white flowers.

Many of the white hybrids in our collections today come from crosses which have no white parentage, or whose parentage is unknown. Of the

[1] Meier, Eckhard, 1994, "On Yellow-Flowering Phyllocacti". Epiphytes 20(80) pp84-85 (originally published in KAKTUSBLUTE (1994))

larger flowering varieties I would recommend `Astarte', `Ice Follies', `Ben's Laura', `Eden', `Beyond Desire' and `Supersonic'. `China Bowl', with its white centre and yellow outer petals, is an attractive flower - but for us is a very reluctant flowerer.

Two pure white small-medium flowering epiphyllums we have in our collection are both highly recommended as both `Pete's Snowflake' and `Snowflake' flower profusely, usually more than once per year. `Innisfree' and `Wedding Bells' are both little beauties with their pink back petals giving away their parentage - `Christmas Red'. `Moon Baby', a *Disocactus nelsonii* cross is also a free-flowering small white to be recommended.

Earlier, mention was made of `Epiphyllum Cooperii'. For several decades there has been debate as to whether such a hybrid exists. In England Gordon Rowley and Clive Innes argued for such a hybrid, argument based on Rowley's own hybridisation of *Selenicereus grandiflorus* and *Epiphyllum crenatum* producing the bigeneric formula x `Seleniphyllum Rowley'. Whereas Myron Kimnach in America argued that `Cooperii' was not a hybrid but a variety of natural species found in Mexico which has now been named *Epiphyllum crenatum var kimnachii.* A good synopsis of the debate has been written by Will Tjaden in the November 1995 issue of "Epiphytes"[2] - a debate which will probably continue to stimulate interest for a while to come. Whether you see `Cooperii' as a variety of species or as a hybrid there is agreement that it has a fine fragrance and a beautiful shaped flower although the plant itself is prone to spots and other blemishes.

Variability in Flower Colour.

This year two of our members have reported instances of variegations or variations in flower colour between flowers on the same plant. In this issue we publish a collection of articles on the subject. Both our members write about their plants, and Penny Luckens writes on the mechanisms that cause flower coloration.

John Horobin (Editor of the British journal "Epipytes") comments that a plant with two different colours:

" .. is not unusual. Basically it is a sport - a genetic mutation occurs in the meristem of one bud which grows on, and everything from

[2] Tjaden, W. "Epiphyllum cooperii?", Epiphytes 19(76), pp 107-111

An epiphyllum (parentage and name unknown) exhibiting variability in flower colour - grown by Peter Beeston.

that initial mutation has the same, different flower colour. Sports like this occur all the time in many different plant groups. They tend to occur more frequently in newer varieties. Old varieties which have been around for a long time do seem to show fewer sports. I'm not really absolutely sure of the reasons for the mutation rate slowing down - but a number of factors could come into play ..."

The phenomena is certainly not new. The March 1996 issue of "The Bulletin"[3] has a lengthy and useful article which contains the following passage:

".. Theresa Monmonier was one of the founders of the ESA, an epi hybridizer and the owner of Ventura Epiphyllum Gardens. Mrs Monmonier contributed an article titled "Mutations(Sports) in Epiphyllum Hybrids" for the ESA Bulletin 1:3-19, mid-winter 1945-6. Portions of the article are taken from her 1940 (and possibly earlier) nursery catalogue. She says -

> One example of a MUTATION is the beautiful and popular `Moncherie'. This is one of the first of its kind and was .. a mutation of `Amber Queen'. On display we have an extra large specimen of `Amber Queen' bearing the two kinds of flowers at once .. we are now flowering seedling plants where the `Moncherie' was used as the parent. These seedlings have the characteristic stripings, only in different colours.

"..Neither Mrs Monmonier - nor Scott E Haselton writing in 1946 mentions the possibility that the `Moncherie' sport was caused by a virus. .. The fact is that viral infections in succulents and cacti had not been studied at that time..

"In the light of current knowledge - there appear to be some contradictions in the conclusions drawn in the 1940's. Experts generally agree that virus infected plants do not transmit the virus to their seeds. Seedlings are virus free when germinated. If Monmonier obtained variegated seedlings from `Moncherie', then `Moncherie' is a true sport, that is a genetic mutation capable of passing on its variegating genes to its progeny..

"Experts today believe that variegation in cacti is (often) caused by one of two viruses; cactus virus X or Saguaro cactus virus. Both of these virus' are contagious .."

The Bulletin article goes on to warn that:

"Concern over the spread of the viruses is growing .. growers have been reluctant to destroy plants with spectacular colour patterns caused by viruses... Growers must realise these viruses are a threat to the entire epi population. They weaken infected plants, make vegetative propagation difficult, and shorten the life of the plant. In some cases infection prevents flowering, stunts growth and kills the host plant.

[3] published by the Epiphyllum Society of America

Finally the Bulletin asserts:

"Until we have the facts, take steps to minimise the spread of viruses" and in a companion article notes that:

"The most common way the two viruses are spread is by contaminated tools and hands. Sucking and chewing insects are also a problem. Until more is known, it is best to quarantine infected plants; sterilise pruning tools with heat, not alcohol (or get a separate set of tools and label them) and control aphids, mealy bugs, spider mites and other sucking and chewing insects".

And now our members write ...

Flower Variegations in Epiphyllums...

Yvonne Brunton.

> *"Oh, what sweet mysteries do these beautiful flowers and plants hide from us mere humans .."*

During my last two flowering seasons I have had one or two plants flowering with variegations in the petals. My first plant to do this was `Lady Edna'. This plant had flowered regularly every year for three or four years and last year one leaf, or stem, flowered with a variegated flower. The flower shape and base colour was the same but white variegated flecks had appeared. This year the whole plant has been affected, there is not a plain flower in sight. I removed the first stem or leaf and took cuttings to see if these flowered with the variegations. I found that the cuttings were slower to develop their roots but they have now flowered and - yes - the flowers are variegated. Is this a virus as was first thought, or a chemical imbalance in the mix it is planted in or perhaps the cause is chemical sprays?? The mind boggles. Now this season my `Mrs G.E. Fields' has performed a double, presenting me with a glorious variegated bloom dramatically marked with white blotches and variegations. `Mrs G.E. Fields' is another pink flower, but the plant was nowhere near the plant of `Lady Edna' in the shadehouse.

If this is a virus, from which end of the plant is the invasion starting? I am inclined to think that it is starting from the flower as only one leaf or stem is affected in the first year, then it seems to spread to the rest of the plant. If this is the case, insects could transfer the virus too. Why not to all plants? Perhaps different genetic structures are less tolerant to these invasions.

I would be interested in hearing other growers' theories on this topic.

The Luck of the Draw...

Or "Dr Jekyll and Mr Hyde"

Peter Beeston describes one of his plants ..

Some years ago while visiting a collection of the unmentionable plants (cacti) the dear lady (Mrs Alcock) gave me a cutting of an Epiphyllum. At the time it didn't mean much to me - so it was potted in a hollowed-out ponga log with a bit of soil about its roots and, I must confess, quietly forgotten about. It did flower now and again, nice variegated magenta flowers, just a few to remind me that it was alive.

One weekend my wife and I had a quiet dispute and think perhaps that is where MMP started and has caught up with top ranked politicians. As it was Saturday I looked in the paper and saw an advertisement for the Epiphyllum Society and went along and haven't regretted it. I knew most of the people but the subject was foreign to me. I bought a couple of somebody's rejects and started my collection.

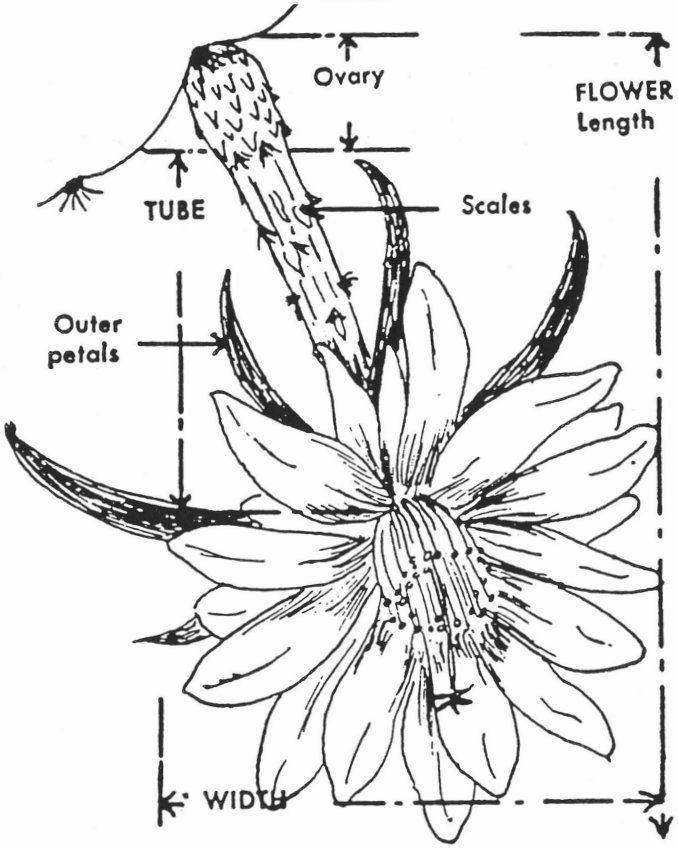
Out came my mouldy magenta epiphyllum to join the rest. Repotted and trimmed it didn't look so bad. The next season my magenta plant presented me with a cascade of flowers that blew me away. From then on I had some success with growing them, but to do them justice I really need more time (Don't we all .. *Ed.)* I don't have time to chase mealy bugs with a needle and have the joy of spearing them that way so I use the old meths and brush trick. I like to think that all my mealy bugs are "methos".

Last season my original plant flowered as usual but with one difference. There was one deep red flower beside the normal magenta flower on one of the stems. I thought it was a novelty and mentioned it at the club and was told it couldn't really happen and to look again next season. Well this season my plant has done it again but this time on a grand scale with five deep red and seven magenta flowers. I have tried cross pollinating between the red and magenta flowers both ways.

Jane and Roy Griffith were called in to verify what was happening - and photos were taken. Both the magenta and the deep red flowers are the same size and cup and saucer shape.

Flower size (medium)	7.5 inches wide
	6 inches length
Tube	3.125 inches
Ovary	0.5 inches
Scales	6 to tube, reddish black
Petals (inside cup)	3.25 inches
Pistil and stamens -	creamy white with much pollen

The red flower has fairly deep red petals with just a hint of a blush tinge about the outside of each inner petal The outer petals are narrow and recurved and deep red.



What makes flowers coloured anyway?

Penny Luckens

Colour in plants is due to the presence of pigments of various kinds. Those dissolved in cell sap are known as anthocyans and give red, purple or blue colour to the petals. The same anthocyan may give different tints depending on the acidity (pH) of the sap or the maturity of the flower. Flower colour may be related to several factors that may be inherited in varied combinations. Dissolved "flavones" give a deep yellow with alkalis, but are colourless in the usually acid sap. Most yellow, orange and red flowers have colour contained in plastids similar to those which contain chlorophyll. These colours include carotenes and xanthophylls. All these chemicals have a complex chemical structure with a range of minor variations. The texture of the petal surface also affects the colour that we perceive.

Sometimes a single gene may control a plant character but for such things as flower shape and colour the interaction of several genes is required. Such gene interdependence is a reason why the best planned crosses may not produce the desired results.[4] Temperature may also affect flower colour; Zygocactus "White Christmas" has pink flowers if it is too cold.

Mutations in reproductive cells (pollen and egg cells) will affect future offspring, but changes in body cells - somatic mutations - affect the plant itself. The plant then is formed of cells of different genetic structures. The appearance of these different genotypes depends on which cells have been affected by the change but the organism is then known as a "Chimera". The best known examples are variegated plants (where the mutation has affected the chloroplasts) and thornless blackberries and loganberries. Depending on which cell layers are affected the mutations may, or may not, be inherited by the seedlings of these plants. Seedlings of thornless loganberries bear thorns. Seeds of cream edged variegated NZ flax will produce white seedlings, lacking chlorophyll, which will not survive.

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Sir Edward Salisbury, G Bell and Sons, London, 1946
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Genetical Principles and Plant Breeding
Watkin Williams, Blackwell Scientific Publications, Oxford, 1964

[4] See **"Genetical Principles and Plant Breeding"** by Williams for details of work on flower pigments in *Streptocarpus*

Hoya Habitats.

In this article of her series, **Von Cross** *continues her globe-trotting and comes a little closer to home - reaching New Guinea, Solomon Islands, Vanuatu, New Caledonia, Fiji, Samoa and Australia.*

Another large group of hoya species is found in these areas.

The Australian species are confined to the eastern coast, from northern New South Wales, Queensland (particularly Cape York Peninsula) and Arnhem Land to the Kimberleys, growing in such diverse conditions as rainforest, dry woodlands, rocky outcrops and sandy coastal areas.

They include:

H. australis and some of its many variations eg *H. keysii* and *H. sanae*
H. nicholsoniae
H. macgillivrayi

The form and colour of the latter two appear to vary considerably, depending on the area where the plants were collected from.

A number of species originate in Papua New Guinea, some of these are familiar to us

H. anulata (this is the correct name of the species we know as *H. poolei*)
H. archboldiana
H. coronaria
H. dimorpha
H. eitapensis - this species was discovered in north east Papua New Guinea, near Eitape, on trees about twenty metres above sea level.
H. flavescens
H. kenejiana - found in north east Papua New Guinea at an altitude of 150 metres. I believe this to be the one we know as Sp. 354233
H. pseudolittoralis (a synonym for *H. anulata*)
H. sp. WMZ - the `New Guinea White' as we know it
H. sp. 354239 - a `Nicholsoniae' type

The other islands are home to relatively few discovered species

From the Solomon Islands comes one species
H. cominsii

While from Vanuatu comes
H. neoebudica

In New Caledonia two species have been discovered
H. limoniaca
H. neocaledonica - which is an `Australis' type

In Fiji hoyas tend to grow on the wetter sides of the mountains - so

far two species have been identified
H. diptera
H. vitiensis

In Samoa - the last of the countries in this part of the journey - four species are to be found
H. australis
H. betchei
H. chlorantha
H. samoensis (which is a synonym for *H. sp. 76150*)

Knowing where hoya species originate from - and the climatic conditions they evolved in certainly helps us to understand the types of conditions we must seek to provide if we are to grow them successfully in New Zealand.

Recent Additions to the Library List.

Photographing Plants and Gardens

Clive Nichols produced this very useful book which is published in association with the Royal Horticultural Society. The opening sentence of the book is "*It is important to realise that good equipment on its own will not produce stunning images .. depends on the skill and judgement of the photographer to produce outstanding pictures*" Most of this book is devoted to helping the reader develop these skills.

Future Publication dates ..

EPIFLORA is published quarterly by the Wellington Epiphyllum and Hoya Society.

Comments and contributions are most welcome. Please address correspondence to:

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Strathmore Park,
WELLINGTON 3. NZ.

Closing dates for contributions:

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Spring 1997 Edition - 9th August
Summer 1997 Edition - 8th November