

Orchids

IN NEW ZEALAND



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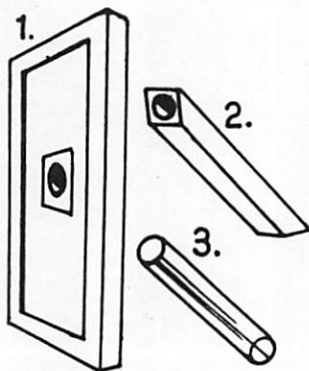
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EDITORS:

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Te Akau Road, R.D.4.,
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Distribution Secretary:

MRS B. GODWIN
P.O.Box 36-297
Northcote
Auckland 9

Back Issues Secretary:

MRS G. ANDERSON
421 Pukehangi Road
Rotorua

All correspondence for:

President

MR A. EASTON

Secretary

MRS J. FOSTER EASTON

Treasurer

MR P. ANDERSON

to:

P.O. Box 390
Rotorua

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Orchids

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NEW ZEALAND ORCHID SOCIETY

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FRONT COVER

Dendrobium Elegant Heart 'No. 3'

A superb example of modern Australian *Dendrobium* hybridising. See article by W. T. Upton in this issue.

Photography: Walter T. Upton

BACK COVER

Calochilus campestris

Photography: Bob Goodger

EDITORIAL

WHY AN ORCHID COUNCIL?

There is a distinct tendency at present, on the part of some of our more parochial orchid societies, or their officers, to question the usefulness of the Orchid Council of New Zealand. "We don't need it. All it does is take money from us" is the chorus. This seems an opportune time to see what the Orchid Council really does for us all.

First and foremost, the Council serves to link the many Orchid Societies scattered throughout New Zealand. Many of us can still remember the days when one Society scarcely spoke to another, when the orchid world of Manawatu was totally unknown in Northland, for instance. At present there are over 40 Societies affiliated to the Council, and much closer together as a result.

Then there is the judging system, which now covers the country. This does not exist for the benefit of "pot-hunters" or "glory seekers" as some have alleged, but rather to improve the standards of, and the culture of, orchids in a country which is a long way from the rest of the world. Certainly, the judging system has its problems—what human institution doesn't?—but it works and it is getting better all the time.

Dare we say that the existence of this magazine is a major benefit bestowed by the Orchid Council? Look back through the last few issues at the quality of the articles and the amount of colour printing that we have used. We feel it's pretty good value for the subscription! Naturally, we will try to do better still, but we feel that we deserve rather better support from some of the Societies than we have been getting lately, judging by the falling subscription list.

Such a trend, if continued too far, can only have one conclusion. We suspect that, like many good things, "Orchids in New Zealand" will be most appreciated when it is no longer around!

A more recent innovation is the Speaker's Fund, established to bring overseas authorities to this country. The first is expected to be "imported" later this year.

The 13th World Orchid Conference, to be held in Auckland in 1990, certainly would never have got off the ground unless we had an Orchid Council. Although the Conference is being organised by an autonomous body, the Council is heavily depended upon for support, advice, co-ordination and finance. This Conference will be a national effort, and any tendency towards parochial isolation would be a very sad thing.

Some other major functions of the Council include the Slide Programme, assistance to new and small Societies in the form of books, magazines and advice, representations to Officialdom on matters such as orchid importing, the obtaining of specialist items such as Sander's Hybrid Lists.

The Editors sincerely hope that members of Orchid Societies think very carefully indeed before they support any motion "that this Society disaffiliate from the Orchid Council". With a general

downturn in interest in orchid growing now becoming evident, it might well be your own throats you are cutting, in the long term. All flowers go through cycles of popularity—enthusiasts of camellias or fuchsias can attest to that—and orchids are no

exception. If a decline is coming the hobby will benefit strongly from being a unified one. It would be a pity if orchid growing was to be eclipsed as thoroughly as the cult of the Auricula or the Paisley Pink was, in the 19th Century.

Remember, 'Unity is Strength'.

More on Fern Poles

J. Campbell

Because of the success in trials with various orchid genera on fern poles, I decided that many more orchids should be tried with this method of culture. I'm no botanist, so I don't know the botanical name of the fern tree I use, but it's the commonest one seen growing in secondary bush on the South Island's West Coast. The central woody stem of these ferns seldom exceeds three inches in diameter. The easiest place to collect them is where farmers have burnt off the secondary bush for grazing. These areas have several advantages over unburnt areas.

Access is so easy as you don't have to fight through the tangled mass of bush to find your ferns. All the rubbish is generally burnt off the fern poles and if it's been a good hot burn, then the fern poles are killed and often dried out a little. The farmer will generally be only too pleased to have his land cleared a bit and most important, you are not ratting our native reserves.

I take home a trailer load of the long poles and cut them into various lengths on the sawbench. They are left lying in the sun for some considerable time to kill them all off and to dry them out well. The spongy pith in the central tube of the poles also shrivels up and I rout this out by shoving an old wood bit or metal rod up and down the hole till most of the pith is removed. If it's left in I find it can become wet and soggy and I feel will hasten the deterioration of the pole. The process of rasping off excess fibre can be tedious so I put the small lengths on a wood lathe at its slowest speed and remove most of the fibre by using an old coarse horse-hoof rasp on the turning pole. It is

easy to remove too much fibre this way so I finish the job with the pole held still on the lathe and rasp the fibre down to the last 2mm or 3mm or thereabouts.

Next I soak the poles in boiling water and bleach to sterilise them and later soak them a couple of times in plain water to remove bleach traces. If this is not done, mildew will grow on the poles when introduced to the humid atmosphere of the hothouse. Untreated poles will also grow fern spores trapped in the fibre, weed seeds and even the odd tree seed.

I drill a hole right through the pole about an inch from the top making sure that the pole is orientated in its natural growing position. This is relatively important because if it is hung upside down, it will shed water like a tiled roof and remain too dry. I put a wire loop through the hole, not too permanently so it can easily be removed later.

With orchids mounted on a round pole, they can grow right round it and you may wish to bore another hole at right angles to the first and shift the

hanging loop so you can display another face of the pole. I just tie the bits of orchid onto the poles with no moss pad as is often advocated when mounting an orchid on a slab. I find moss pads get wet and slimy in a short time and seem to do more harm than good.

Springtime is by far the best time to mount orchids on fern poles or at least at a time when the plant is beginning active growth. You need to keep a watch on the plants for a month or two till they take root and this may mean misting several times a day if the weather is dry and hot. Old roots are not going to attach themselves to the poles so don't try to tie them in neatly, just leave them hanging and they can be cut off in a year or two when the plant is well rooted to the pole.

Concentrate more on lining the lead growth up the pole so further growths will run up towards the top. There are a few orchids which grow down trees so if you are not sure how a particular orchid grows, check as many pictures in books as you can find. Consideration needs to be given to roots running up and down the pole from the new growth so place the lead far enough up the pole to allow quite a bit of space for roots to run down. Generally, roots run down a tree more than up in nature.

Small types of orchid will only need a small pole, I have some as short as 10cm. Orchids like *Laelia purpurata* will cover a 60cm to 80cm pole with roots and even hang roots down from there. The larger varicosum-type Oncidiums also like a long root run and I read an article which suggested a metre-long strip of cork bark for them. You will be amazed at the way some orchids take to these fern poles. It's almost as though they have been sulking in their pots just waiting for something good like this to happen.

I have noticed that orchids take to the older more weathered poles better and it is my opinion that fresh poles

would be best left to weather for a month or two before use. If you don't have a lot of space to hang poles they can be placed on benches if some support is made for each one.

I use well weathered treated 8 x 1 inch timber cut into 8 inch squares. Two or three long nails are driven up through pre-bored holes in the centre of each slab and these are so placed to fit up the centre of the hole in the pole. A rod or piece of dowling in the centre of the square is another way of supporting the pole.

If one wanted to go into poles in a big way, then a frame could be welded up with erect rods judiciously placed to take as many poles as you desired.

A small frame can be made up for exhibiting several poles at an orchid society meeting and just think of the possibilities for an orchid show. A long rod could be set in a concrete block and several fern poles threaded onto it. Instant orchid tree!

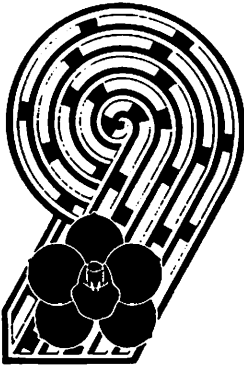
The following list is of orchids I have growing successfully on fern poles. *Acinetia*, *Bulbophyllums*, *Brassia*, *Cymbidium atrovioleacea*, *Cattleya aclandae*, *forbesii*, *harrisonae*, *leopoldii*, *trianae*, *walkeriana*, *luteola* and a few others getting established; *Dendrobium nobile* hybrids love it; *Dend. mohlianum*, *formosanum*, *infundibulare* and *densiflorum*; several reed-stemmed Epidendrums, *Encyclia mariae*, *Laelia anceps*, *lundii*, *pumila*, *dayana* and *purpurata*; *Leptotes bicolor*, *Miltonia spectabilis* var. *Moreliana*, *Odontoglossum pulchellum*; *Oncidium varicosum* var. *Rogersii* and like hybrids, *Oncid. forbesii* and other small oncidiums; The variegata Oncidiums (equitants); *Phalaenopsis lueddemanniana*; Polystachias from Africa as well as some smaller Angraecoids. Long poles are great for containing Hoyas as well.

21 Blakes Road
Prebbleton
Canterbury

13th World Orchid Conference 1990

Auckland, New Zealand

November 1987



6th Newsletter

Promotional Items

A big thank you to the many Societies and Clubs who have put in a lot of effort and sold our badges, spoons, tea towels and car stickers. W.O.C. funds are boosted, and we hope you have enjoyed selling and buying the items through the Spring Show period. Thank you again for your very positive response.

Visits

Not a great response yet for requests for visits to Society meetings. Perhaps you have all been so heavily involved in your Spring Shows, and have not yet put a lot of thought into next year's programme. We will be most pleased to receive invitations to come and talk to you on 1990 planning and to receive your thoughts and ideas on all matters. We also have a good slide programme on setting up and designing displays. A speaker can be arranged, or you can borrow the slides and notes.

Orchid Growers of Note

You all have members who grow orchids better than others. The search is on for these special people, be they commercial or hobbyists. We would like all Societies and Clubs to send in names and details of these so we can set up a portfolio of New Zealand Orchid Growers of Note. All interesting details will be helpful but should include name, address, speciality in orchid growing, and any other consuming interests.

The intention is to use the information for publicity on orchid growing in New Zealand, and perhaps to match up overseas visitors to the Conference. It is a way to bring a personal touch and the people thing to our 1990 event.

Because most of us are far too modest, it will probably fall upon the hard working officers of your Society to send information, but not necessarily so. It seems a good job for a past President or other senior person with wisdom to tackle. If all else fails, you growers of note, send in details of yourselves.

Liaison Officers

The number has now grown to 22, representing 23 Societies, about half way in the total count of affiliated clubs. Your Liaison Officer does not need to be your hard pressed Secretary, although many are. It could equally be another executive member or someone outside your Executive, although in this case you may find it better to then make an additional space on your Executive for better liaison. This could be a good means of increasing member involvement in your Society as well as the 13th W.O.C.

Finance

(Special message from the Finance Committee)

With Conference something under three years away, the Finance Committee is working steadily to establish the necessary funding for this important event. It is estimated that the final budget will be in the \$750,000-\$1,000,000 range

although this figure is subject to constant review and updating.

We are grateful to orchid enthusiasts throughout the country who have responded to our request for initial funding, as it is during the time leading up to 1990 when expenditure on planning and publicity, on which so much of the final success depends, is so crucial. There are some Societies with considerably less than 50 members who have forwarded loans of up to \$1,000; to these we say a sincere thank you.

To date we have received only \$36,000 which falls far short of estimated budget requirements. A number of Societies have indicated that loan money will be available when it is needed; a request for this money will be made in the near future.

In addition to pledges from individuals and loans from Societies,

which will be returned to Societies with interest if a profit is made, the Finance Committee is currently seeking sponsorships within the business community; it may be that you are aware of potential sponsors for this highly prestigious event, we would appreciate any assistance.

Other possibilities include direct loans from individuals, to be refunded to individuals on a similar basis to loans from Societies, and loans from individuals where the capital sum is returned and any profits are refunded to your nominated Society. Indeed, we are happy to enter into any negotiations which will enhance the success of the Conference.

Further information will be communicated to you from time to time.

R. W. Dix
Chairman

Publicity and Public Relations Committee



Recent Conzed Awards

AWARD NO.	PLANT	OWNER	AWARD
18/87	<i>Propetalum</i> Nathina	A. Day	H.C.C.
19/87	SLC Hazel Boyd "Apricot Glow"	C. B. Pritchard	C.C.C.
20/87	<i>Ludisia discolor</i> "Eve"	E. and K. Jonas	C.C.C.
21/87	<i>Dendrobium teratifolium</i>	J. G. Jackson	C.C.C.
22/87	<i>Odcdm.</i> Tiger Butter "Clyde" AM/AOS	F. Brett	H.C.C.
23/87	<i>Cymbidium</i> Via Mar Tranquilla "Waitaita"	Doug Grant	H.C.C.
24/87	<i>Cymbidium</i> Miniatures Delight "Stonehurst" AM/RHS	Mr and Mrs J. R. Green	C.C.C.
25/87	<i>Odcdm.</i> (<i>Onc. tigrinum</i> x <i>Odm.</i> Pescadero) "Sky Rocket"	D. Chandler	H.C.C.
26/87	<i>Cymbidium</i> Bud March "Rosetta"	Jack van Dam	C.C.C.
27/87	<i>Dendrobium kingianum</i> "Stoneleigh"	Tony Connelly	C.C.C.
28/87	<i>Oda.</i> Saint Clement "Lacey"	A. P. Locke	A.M.

R. Roy
Registrar

PESTS OF ORCHIDS

6. Thrips

G. M. Barker

Frequent but rarely seen visitors to our orchid houses are the Thrips. These minute insects belong to the Order Thysanoptera. The species infesting greenhouses in New Zealand belong, for the most part, to a group of Thysanoptera called the Terebrantia, and include Banded Thrips (*Aeolothrips fasciatus*), Greenhouse Thrips (*Heliiothrips haemorrhoidalis*), Palm Thrips (*Parthenothrips dracaenae*), Western Flower Thrips (*Frankliniella occidentalis*), Onion Thrips (*Thrips tabaci*) and New Zealand Flower Thrips (*Thrips obscuratus*). All but the last named thrips are foreign species introduced into this country. A further native Terebrantian, *Dichromothrips maori*, has been collected in association with the native orchid *Microtis unifolia*.

The life cycle of Terebrantians comprises the egg, two larval (nymphal) and two 'pupal' instars, as well as the adult. The latter, which vary from yellow to brown or blackish-brown, have two pairs of narrow wings fringed along their margins with long, fine hairs. When at rest, the wings are laid parallel along the back. In a few species the wings may be either fully developed (macropterous), much reduced in size (brachypterous), or absent altogether (apterous). Females are usually more numerous than males and are distinguished by their larger size (0.5-1mm) and pointed apex of the abdomen. In some species (e.g. Greenhouse Thrips, Onion Thrips) males are rare or unknown; reproduction is then parthenogenetic.

Each female lays about 60 whitish reniform eggs (0.2mm x 0.1mm) singly in plant tissue through a slot cut in the epidermis by the saw-like ovipositor. One end of the egg protrudes slightly from the slot to facilitate the escape of the newly hatched larva. At first gregarious, the larvae later become scattered over the plant surface. The larvae resemble the adults but lack wings. When fully fed, the larvae of most species drop to the soil to transform to the adult stage via the 'pupal' stages. In other species pupation occurs on the plant. During these 'pupal' stages the insects do not feed but remain



Greenhouse Thrips
(*Heliiothrips haemorrhoidalis*)

capable of limited movement. The entire life cycle can be completed in 10-30 days, depending on environmental conditions. The adult female will live for about three weeks after emergence from the soil.

The second group of thrips are the Tubulifera. These are most commonly found on dead wood, in leaf litter, or in leaf galls. Some species, however, feed on plant surfaces. The Lily Thrips (*Liothrips vaneeckeri*) is mostly confined to lilies but will attack orchid pseudobulbs. Tubulifera differ from Terebrantia in that the females lack a saw-like ovipositor and hence merely lay their eggs on the surface of the host plant. A further difference is that there are three 'pupal' stages in Tubulifera, instead of two. In other respects, the life cycles of Tubulifera are similar to Terebrantian thrips.

Damage to plants is associated with two thrips activities—feeding and oviposition or egg laying.

The mechanics of feeding in thrips involves making a hole in the epidermis with the single mandible, puncturing cells with the stylet, and sucking the sap that oozes out of the punctured cells into the appressed mouth cone. Although thrips possess piercing mouthparts, these are very short compared to Hemiptera (e.g. aphids, scales) so that they can pierce only superficial cells of the plants. With removal of the sap, the damaged plant cells fill with air, giving the characteristic silvery flecked appearance on the plant surface which eventually coalesces giving a bleached appearance. Often the damage does not appear until long after the thrips have stopped feeding and moved elsewhere. Though the silvering on the underside of leaves is often hard to distinguish from spider mite damage, a good indication of thrips damage (if the thrips are no longer present) is the presence of black faecal pellets attached to the leaf surfaces (you need a 10x hand lens to see these). The faecal deposits can support growth of sooty moulds. In addition to discolouration, there is often distortion of growth in response to the insects injected saliva. This distortion is most apparent on young leaves and flower buds. In many plants, thrips feeding has been linked to spread of bacterial, fungal and viral plant diseases.

Disposition of eggs within the plant tissue by female Terebrantian thrips causes clear circular spots (windows) to appear on the leaves or flowers. When viewed with a hand lens, a single egg can be seen surrounded by a small cluster of damaged, empty cells. These damaged cells may later turn brown or callus, giving rise to blisters or bumps on the leaves and flowers.

Feeding damage to flowers and leaves can result from adults coming

into the greenhouse, the more usual source of infestation, or from populations arising from eggs deposited in the leaves or flower buds. Oviposition punctures are of no consequence on leaves but on flowers this activity results in permanent clear spotting of the sepals and petals. This damage is most frequent and most noticeable on light coloured orchid flowers.

On a more positive note, many thrips are omnivorous in their feeding habits and will include mites, scale insects and other thrips in their diet. Breeding populations of thrips are rarely encountered in New Zealand orchid houses. Infestations usually arise from outside the greenhouse.

Thrips are very mobile. Flying is their main means of dispersal. They are easily carried by air currents for long distances and generally enter the greenhouse through open ventilators. Most thrips have a very wide range of host plants and hence many plants outside the greenhouse can act as reservoir for reinfestation. For example, the species most frequently entering greenhouses—Banded Thrips, Onion Thrips and N.Z. Flower Thrips—are common in pastures, orchards, and in vegetable and flower gardens. Thrips are present all year and hence there is a potential for greenhouse infestation whenever the ventilators are open. The potential for infestation is greatest, however, during summer and autumn as high temperature, low humidity conditions are most favourable for thrips activity and population buildup.

Control

Approaches to thrips control will vary with the stage of the orchids, whether in flower or not, and also according to the predisposition of individual greenhouses to infestation. Some orchid houses, because of location, are generally free from thrips, while others are subject to infestation by leaf feeding or flower

feeding thrips, or in some cases are subject to both types. Thrips are difficult to observe, but leaf damage can be kept to a minimum by constant vigilance on the part of the grower; just as one should watch for signs of spider mite buildup. Leaf infesting thrips can readily be controlled with a number of contact and systemic insecticides (see Table).

Flower spotting, due to thrips feeding or oviposition, is more difficult to overcome. In greenhouses where this type of damage is a recurring problem the only solution is to maintain an insecticide coating on the buds and open flowers throughout the period of risk. The use of yellow sticky trap cards can be useful in monitoring of thrips movement into the greenhouse over the flowering

period. Several cards, each 0.1 square metre, are painted yellow, given a coat of 'Stickem' or similar sticky product, and hung above the plants at several positions within the greenhouse. The grower inspects the cards frequently throughout the flowering period and sprays insecticide when thrips are detected on the cards. Insecticides which will act against thrips on contact or repellancy, without damage to the flowers, should be used. Suitable chemicals include diazinon, fluvalinate, omethoate, permethrin and pyrethrum. Spraying is continued at weekly intervals until thrips are no longer detected on the trap cards.

*Ruakura Soil & Plant Research Station
Hamilton*

INSECTICIDES FOR THRIPS CONTROL

Chemical Name	Trade Name	Chemical Name	Trade Name
1. Contact Insecticides			
Carbaryl	Ispray Carbaryl	Endosulfan	Malix Thiodan
Chlorpyrifos	Septan		Thiofor
Deltamethrin	Lorsban	Malathion	Emulsol Malathion
Diazinon	Decis		Ispray Malathion
	Basudin		Rural Malathion
	Dyzol		Yates Maldison
	Ispray Diazinon	Methiocarb	Mesuro
	Shell Diazinon	Mineral Oil	Sunspray Oil
	Yates Diazinon		Universal Oil
Dichlorvos	De De Vap	Parothon-Methyl	Folidol
	Ispray Dichlorvos		
	Nuvan	Permethrin	Ambush
	Vapona	Pirimiphos methyl	
Fluvalinate	Mavrik	+ permethrin	Attack
		Pyrethrum	Pyrox Raid
2. Systemic Insecticides			
Acephate	Orthene	Dimethoate	Rogor
	Saprene	Methomyl	Lannate
Aldicarb	Temik	Omethoate	Folimat
Disulfoton	Disyston	Oxamyl	Vydate

**An Update on Native Dendrobium Orchid Hybridising
in Australia - *Walter T. Upton***



D. Pixie 'Biscuit'



D. Tweed

Photography: W. T. Upton

D. Red Baron



An Update on Native Dendrobium Orchid Hybridising in Australia

Walter T. Upton

When I spoke at the 2nd New Zealand International Orchid Conference in Wellington in 1985, approximately 216 hybrids had been registered using Australian Dendrobiums. Now, two years later, over 60 more have been added to the list.

From this it is obvious much work is still being carried out in this field and many excellent hybrids are being produced.

Although it is still too early to forecast, with any degree of certainty, on the future, it is certain this kind of hybridising is really worthwhile and we are not too far away from superb flowers and plants that will make the orchid world sit up and take notice. We must now, however, lose sight of the charm of the smaller but profusely flowered hybrid that is so synonymous with our Australian native Dendrobium. *Dendrobium* Pixie 'Biscuit' is a young seedling flowered in 1986 and is typical.

(see page 10)

Apart from the obvious enthusiasm for these hybrids in New Zealand and Australia, much interest is now being shown in America and Japan and to a lesser degree in the United Kingdom.

One of the great reasons for their appeal is that they are mostly low energy plants; and in these days of high heating cost, what better reason. The compact and small growing plants with numerous flowers are also very appealing to the space conscious.

The majority of the hybrids being made are still within the section *Dendrocoryne* of the subgenus *Athecebiium*. No less than 48 of the 60 new hybrids registered are within this section, and with the exception of two hybrids have *Dendrobium kingianum*, *D. tetragonum*, *D. speciosum* or *D. falcorostrum* in their background.

In the *Dendrocoryne* section hybrids, improvements have been made in the number of flowers produced by using such species as *D. speciosum* and *D. falcorostrum*. Longer and more upright racemes with better substance flowers are becoming more common. With the effective use of *D. Peter* and *D. Sunglow* and good coloured forms of *D. speciosum* and *D. fleckeri*, good yellow coloured flowers are being produced. See photo of *D. Tweed*.

(see page 11)

Very dark reds are now appearing due to the considered use of the best and darkest red *D. kingianum*. In these hybrids this dominant colour is being carried forward to its progeny. An example of this is shown in the photo of *D. Red Baron*.

(see page 11)

D. tetragonum shaped hybrids are still very popular, so numerous new hybrids are being made going back to this species, keeping this delightful shape. These hybrids do not produce as many flowers initially but careful back crossing to multi-flowered species in most instances keeps the *D. tetragonum* shape and increases the flower count.

Many new *D. Ellen* remakes were flowered last year, with lots of new colours and generally improved forms. As a parent *D. Ellen* is proving itself — its progeny are easy to cultivate and good shapes and colours are coming through. In particular, some have excellent broad colourful labellums.

Not many new terete-leaved hybrids are being registered, but those that are flowering are well

worth having, frequently being in flower over a long period.

Three of the recent hybrids I have registered are between the two sub-genera *Athecebiium* and *Dendrobium* (*Eugenanthe*), and in my opinion it is here where the most exciting advances are being made. It is from this kind of hybridising that the florist type *Dendrobium* flowers, of Australian native hybrids, will initially appear. All three of the following hybrids have *D. bigibbum* in their background so the petals are wider than the *Dendrocoryne* section hybrids. They also have longer lasting and larger flowers. I flower all three in an open bushhouse in Sydney.

1. *Dendrobium* Big Fleck (*D. bigibbum* x *D. fleckeri*). Flowered for the first time in May 1986, a good shaped mauve flower about 60mm across the petals. It carried two flowers the first year and three and four flowers this year, but they are still only small plants. The plant form favours *D. fleckeri*.
(see page 14)

2. *Dendrobium* Elegant Heart. (*D. Peewee* x *D. speciosum*). This is a superb hybrid and heralds many good signs for the future. The racemes are upright and are carrying up to ten 90mm, heavy substance flowers; no doubt as the plants become larger they will carry more flowers. The flowers are a deep red with varying degrees of white on the basal third of the segments, they last about three to four weeks. They are mostly flowering between May and September, and a number of plants seem to be following the flowering habit of one of its earlier parents *D. tetragonum* var. *giganteum* and are producing a second lot of flowers about three months after the first ones. Its ease of culture and the general appearance of the plant are also encouraging. It readily accepts pollen, with some

of the progeny already growing well in flasks.
(see page 14)

3. *Dendrobium* Lorikeet. (*D. Peewee* x *D. Ellen*). The flowers of this hybrid are also red to purple in colour with excellently shaped and coloured labellums. The flower size is approximately 70mm. It flowered for the first time last year from a very small plant and only carried two and three flowers, but I anticipate up to twelve flowers, at least, on a mature plant.
(see page 15)

Dendrobium Peewee is proving to be a very good parent, particularly as its progeny are easy to cultivate and if crossed with a cold growing *Dendrocoryne* section species or hybrid will grow easily in bushhouse conditions here in Sydney. When the short pseudobulbous stemmed *D. bigibbum* var. *compactum* is used in the *D. Peewee* then small compact plants are being produced. I have used the short pseudobulbous stemmed *D. speciosum* var. *pedunculatum* in conjunction with this hybridising programme and so far the seedlings show signs of being short and compact plants; I hope the flowering will also come up to expectations.

In addition to advancing our hybrids we are also endeavouring to produce superior species by carefully considered sibling crosses between two superior clones of one species. An example of this is shown in the photo of *D. tetragonum* 'No. 1' (a northern N.S.W. form) pollinated with the pollen of a *D. tetragonum* var. *giganteum* (North Queensland variety). The resultant *D. tetragonum* flowered from a pseudobulbous stem only 50mm long and produced two flowers; since then up to eight flowers have been produced on the raceme, as well as flowering at least twice during the season. It also has the superior labellum of the northern N.S.W. form.
(see page 15)



D. Big Fleck

More Australian Dendrobium Hybrids

D. Elegant Heart 'No. 2'
(*D. Peewee* x *D. speciosum* 'Chesse 12')





D. Lorikeet (D. Peewee x D. Ellen)

COMING SOON

Wal Upton will be visiting New Zealand in early April giving talks in a number of cities—

Christchurch	6th April
Dunedin	7th/8th April
Wellington	9th/10th April
Gisborne	11th April
Tauranga	12th/13th April
Whangarei	14th/15th April
Auckland	16th/19th April

Check local Societies for details.



All photographs in this article are by Walter T. Upton.



There is still a long way to go but the results to date are most encouraging.

Judging by the number of flasks and seedlings that we are now sending to New Zealand, we should expect a good showing at your 1990 World Orchid Conference Show, with, no doubt, many Australian native orchid classes.

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2101 N.S.W.

D. tetragonum 'No. 1' x D. tetragonum var. giganteum



Where to Now with Cymbidium Orchids?

Mrs Pat Greenfield

The bottom has fallen out of the market for those of us who produce and sell cymbidium orchids. The signs are everywhere, flowering plants being sold for \$5.00/\$7.00—if you can sell them. Why has the glut happened and will the same thing happen to world markets in the near future? Has our small size meant that it has hit us sooner and eventually other, larger countries will be hit by the ever-burgeoning orchid industry?

I believe one of the root causes (excuse the pun!) of the problem has been the large number of plants being sold in flasks. The normal flask contains 25 plants but others can contain smaller amounts of 10 or 5. One need not be a mathematician to see that it wouldn't be too long before there would be a veritable flood of plants hitting the market.

A lot of plants now being offered for sale would be flowering seedlings and instead of the plants being discarded because they are not up to scratch, they are being flogged off to the general public. People must be prepared to dump below standard seedling stock in the future and not continue to sell on an already glutted market, thus ruining it for superior varieties. I am not condemning seedlings *per se* — they are the lifeblood of the generations to come. The future champions are within their ranks, as are the duds. It is these duds to which I am alluding to here. They must be discarded—not sold off, thus ensuring only quality stock, be it seedling or mericlone, survives in the future. Just imagine what would happen if thousands of rose seedlings hit the marketplace every year. People would soon be put off growing roses because of the rubbish which would be about. Rose breeders only sell their best seedlings and this is only after exhaustive trials to determine the superior plants. Anything less is

discarded and this is how it should be with all plant genera.

Too many mericlones as well have depressed the market with most of the avid orchid growers already having such stalwarts in their collections of Wallara 'Gold Nugget' and Burgundian 'Sydney'. A lot of people, in efforts to reduce the space in their bulging shadehouses have switched to miniatures. The more experienced growers have also contributed to this glut by reducing their collections and culling by selling of varieties that no longer warrant bench space for whatever reason.

In one way or another, all sellers of orchids (cymbidiums) have been the instigators of the depressed market now upon us. Like the sharemarket crash, some growers just can't get out of the marketplace quick enough and are having to dump their stock at ridiculous prices.

Ultimately, the general public and the cymbidium orchid itself will suffer from this bounteous harvest of plants. With flowering plants fetching such absurdly low prices, it is just not worth the growers' efforts to market and sell the plants. They would be better to cut their losses and dump, than put years of work and effort, plus the cost of advertising, planter bags, bench space, potting mix and sprays into an end result of perhaps \$5.00 a plant. I would say that around

\$15.00 for a first flowering plant (named variety) would be a fair reward for time and effort expended in obtaining the end result. Flowering seedlings should cost less and in my opinion, unless of a certain standard, should be dumped and not flogged off to the public to recover the owner's original cost. This lowers the standard of plants being offered for sale and when the general public become more educated as to quality, as they are already showing signs of doing, then they will no longer be prepared to accept some of the rejects being offloaded, such as some old named varieties which have long since outlived their usefulness.

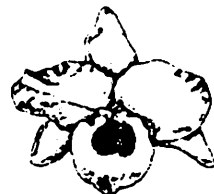
The end result of this glut could mean that in the end, only the really large commercial nurseries will survive and that in itself is a bad thing because it will limit competition and variety of choice. It will also be detrimental to the improvement of the cymbidium orchid in that fewer people will be working towards breeding newer and better types.

We are a small nursery specialising in plant breeding. At the prices at which cymbidiums are selling for at present, it does not pay me to offer more mature plants to the general public. Small plants out of the flask which fetch \$2.00 are a viable proposition as are larger seedlings at around one year old or less, at \$5.00. For a person in my position, to keep plants any longer than this make it uneconomic. Because demand is so poor (except overseas at present), then I will not be bothering to advertise future crossings in New Zealand and in the interim, will be content to do it for myself and to keep a few of my loyal customers involved in my breeding programme. This is disappointing nevertheless, because my breeding programmes are just starting to yield worthwhile results. I also work with lilliums and roses so am fortunate in that I do not have all my eggs in one basket.

With the advent of tissue culture, many thousands of plants can be ultimately produced from the one original. Some laboratories reproduce flask material without even waiting for the mericloned plant(s) to flower. This in turn can lead to inferior plants being offered for sale, to the detriment of the original superior clone. I think one way around this problem would be to patent really outstanding plants such as *C. Jubilation* 'Geronimo' and limit the reproduction of such plants so that the quality is not squandered over a period of time. It should also go without saying that all plant material to be reproduced should be virus indexed first. This has not always been the case in the past. Tissue culture is an excellent method of obtaining quickly, a large number of plants which are highly suited to the cut flower trade.

Most orchid growers have the ultimate control of the future of cymbidiums in their own hands. They must learn to cull out varieties such as inferior seedlings, as opposed to selling them. Virused or diseased plants should be burnt and not sold off to some unsuspecting member of the public. Some old, named varieties which have seen better days and cannot keep pace with the pick of the newer varieties should likewise be discarded and not sold off. This will be hard to do because most of us do not like to lose money, but unless we exercise some sort of quality control, ultimately the cymbidium genus could lose out, as could the people who are in the business of selling them, and finally, the people who buy them.

*The Hightae Plant Nursery
16 Coronation Street
Takapuna
Auckland 9*



13. SVEN BERGGREN

(1837-1917)

Ian St. George

Berggren was a Swede who visited New Zealand in 1874-5 under the auspices of the University of Lund; he studied marine life and collected lichens and cryptogamic plants. He was a Professor of Botany at Lund, and an expert on mosses and phanerogams. He was introduced to Sir Julius von Haast by a letter from Prof. S. Loven of Stockholm, a zoologist who had asked Haast to send specimens from the south seas.

Berggren travelled extensively in New Zealand in 1874-5 studying the flora, and became one of Haast's close friends. He discovered a number of new plants while he was here. G. M. Thomson, the Dunedin schoolmaster who studied the fertilisation of New Zealand orchids, read a paper describing three of Berggren's new plants to the Otago Institute, and John Buchanan copied the paper out in longhand in his diary (now in the Hocken Library in Dunedin). The plants were named for Haast, Kirk and Buchanan.

The Alexander Turnbull Library has watercolours by Berggren. Among the new plants he found was *Thelymitra intermedia*, which he drew in a very stylised fashion, and reproduced in the paper he entitled

"Nagra nya eller ofullstandigt kanda Arter Nya-Zeelandiska fanerogamer". The orchid is at the right in the crowded lithograph shown in the plate, along with "*Kelleria villosa*" (now *Drapetes villosus*) and "*Isolepis subcucullata*" (now *Scirpus aucklandicus*, a grass-like plant). Berggren pointed out that his species is different from *Thelymitra longifolia* and *T. ixioides*, though E. D. Hatch regarded it as a variety of *T. longifolia*. *T. intermedia* is now thought to be a hybrid between *T. longifolia* and *T. ixioides*.

45 Cargill Street
Dunedin

Plate. *Drapetes villosus*, *Scirpus aucklandicus*, and *Thelymitra intermedia*. Lithograph by Sven Berggren. *Minneskr. Fisiogr. Sallsk. Lund* 1878, Art. 8, 21, t.5, f.21-24.

CORRECTIONS

Unfortunately there are some caption errors in the second part of Don Herman's article on Cattleyas, in the last issue, Vol. 13, No.6, p.168, 169.

The correct captions should read:

- p. 168, top left: Walter Armacost
- p. 169, top left: Ben Bracey
- p. 169, top right: J. M. Black

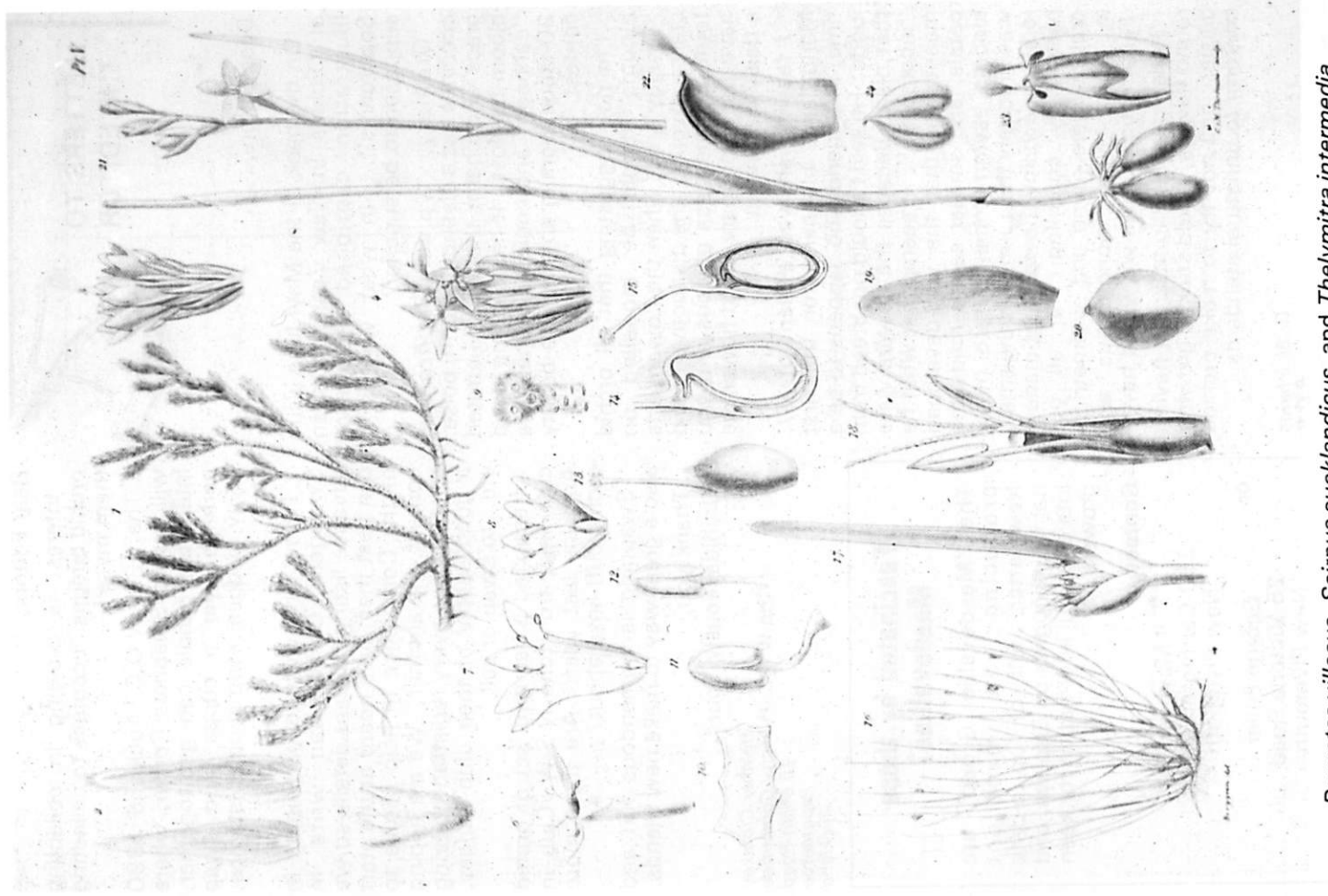
INDEX to Volume 13

An index to Volume 13 will be included in Volume 14, No. 2 (March/April)

CLOSING DATES

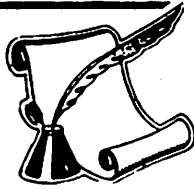
FOR

Vol. 14, No. 3: 11th March
Vol. 14, No. 4: 13th May



Drapetes villosus, *Scirpus aucklandicus*, and *Thelymitra intermedia*

LETTERS TO THE EDITOR



Dear Editors,

On the back of the May/June issue of *Orchids in New Zealand*, is an illustration captioned "Superior *Sophronitis*". In what way is it supposed to be superior?

Ordinary, typical *Sophronitis coccinea* has a distinctive form, poise, grace and charm that the illustrated bloom has lost. It has become just a "cabbage" and could be likened to a 20-stone woman entered in a beauty contest.

I'm not suggesting that all orchid blooms should be modelled on "Twiggy", but when the flower parts start to overlap, the distinctive orchid form becomes less obvious and you have just an ordinary round flower like a daisy or gloxinia.

I recently showed a plant of *Sf. Mariottiana*, blooming for the first time, to a friend who happens to be a judge. He said I should not breed from that plant, because the flowers were "incomplete". It seems that what he meant was that the well-developed petals, and smaller sepals made the blooms asymmetrical, but to me it was precisely this form, and the small, red lip in a yellow flower, that made it particularly charming. If all our orchids were round and symmetrical in form, what monotonous and uninteresting shows we would have.

I wish people who insist on having round flowers, would stick to growing daisies, and not try to make orchids conform to unnatural standards.

O. Blumhardt
R.D. 9
Whangarei

Dear Editors,

Interest is growing in collecting orchid badges. I confess to collecting them myself.

The 13th W.O.C. Auckland 1990 will have a Swappers Corner, where interested people can get together, perhaps over a cuppa, and swap away, badges, even spoons, stamps, etc.

Those who wish to participate in Swappers Corner can write in advance listing relevant details so we can post them on a board at the start of the Conference to help people to contact one another. We are hoping to encourage every registrant to bring a good supply of their club badges, etc., to swap or sell.

I acquired a beautiful set of orchid cuff links from one N.S.W. Club in Adelaide last year. Are there more orchid cuff-links about?

Swapping is tremendous fun and also a great way to make new friends.

Thank you,

Orchidaceously Yours,

Heather Crofskey
13th W.O.C. Publicity Committee
45 Milan Road
Papatoetoe
Auckland

Fascinated by those Masdevallias?

The 'Masdevallia Group' are producing an excellent Newsletter, full of up-to-date names, thoughts on displays, and lots of useful information for keen growers.

Contact

Phil Mayhead
360 Carrington Street
New Plymouth

or

George Fuller
25 Victoria Road
New Plymouth

Slipper Orchids—How I Grow Mine

Peter Stephens

Until just over five years ago, when I joined the Golden Coast Orchid Society Inc., I had never grown an orchid. I had always been fascinated by the Slipper Orchids, and these beautiful plants, were the first and only orchids I have grown. I now grow nearly 200 of these plants, mainly species, a few primary hybrids and some hybrids.

To grow these orchids well you will need to know something of the conditions under which they grow in their native habitats. This applies particularly to the first generation or primary hybrids.

Most of your modern round-petalled hybrids are far removed from their ancestral species, and will usually grow well under more or less average conditions.

The species grow mainly in the tropical regions and are found in India, Burma, China, Vietnam, Thailand, Malaysia, the Philippines, Indonesia and Papua New Guinea. Some are found growing in cool conditions in the high country and some in much warmer locations in the lowlands, as well as near the sea.

Although their native habitats are so widely diverse they can be successfully grown together in the same glasshouse. They like warm, shady, moist conditions, and dislike sudden temperature changes.

The cooler growing varieties like a temperature of about 12 °C, and many of those plants with either plain green leaves, or plants with mottled leaves in light or dark green shades, grow well in temperatures of about 15 °C or above. I find that to grow these plants well and to get the best performance from them, you will need a glasshouse. For the majority of us who grow orchids as a hobby, the type and size of house will be largely controlled by the purse strings.

Shading on the Glasshouse

My house is approximately 2.7m x 2.1m and is kept lightly shaded all the year round. I use white acrylic house

paint, broken down with water on a nine to one ratio, which I apply with a paint brush. The use of acrylic paint enables me to apply extra shade to different parts of the house where necessary. During the summer months extra shading is applied in the form of shade cloth. This is placed over the roof on a pipe frame 22cm above the glass, this being to allow the passage of air between the cloth and the glass.

Heating

I use electricity for heating the house. Glass being a poor conductor of heat, when the sun goes off the house it cools down fairly rapidly, so I have double-glazed my house, in an effort to save more of the heat. This helps to keep my heating costs down. The temperatures in the house don't have to be very high for your plants to grow. I keep my daytime temperatures down to about 65 °F and drop them at least 10 °F at night. This helps to encourage bud growth.

Growing your Plants

A climate must be created. This can be accomplished by three things—WATER, AIR and LIGHT. Each of these things affects the others. The humidity of a glasshouse remains constant only if it is replaced as air circulation, light or warmth, brought with light, takes it away. Therefore WATER comes first.

You must have a good air flow about the plants because one of the sources of food for slipper orchids is carbon dioxide which is taken from the air by the leaves. The carbon is retained for use by the plant and the oxygen is returned to the air. So if

you are unable to get air to flow naturally around the plants, it should be assisted by the use of ventilators and fans. Plants breathe so in the order of things AIR is second on the list.

When you water your plants they should be thoroughly soaked, so that the air in the potting material is replaced by water, and as this runs away a fresh flow of air is induced in the pot. No plants will survive without light, and slipper orchids should get sufficient, but not so much that it burns the leaves. So LIGHT comes third in spite of its necessity.

If you use a closed bench system it is easier to stabilise a glasshouse. You need to keep the whole house moist to wet—the benches, the floor and the walls. On windy days, with good ventilation and the use of fans, a glasshouse with an open bench system will soon dry out, whereas a closed bench will retain its moisture. Humidity needs to be about 70%.

The Growing Medium

The growing medium must be free draining, not allowed to get soggy, or become bone dry. Slipper orchids will grow in a variety of mixes and pine bark seems to be the most simple and effective to use. I use plain bark from which I sieve out the fines, etc. I soak the mix in water for two or three days. In this mix I include—

- 1 Tablespoon Dolomite Lime
- 1 Tablespoon Superphosphate
- 1 Tablespoon Blood and Bone
- 1 Tablespoon Lush (or some other liquid fertiliser)

I make this up in a 9 litre bucket and I stir the mix up at least once a day, as the ingredients tend to sink to the bottom of the container. When it is ready I tip the mix onto newspaper and let it dry off outside in the sun until it is just damp. I then put it in a bucket ready for use. I only make up enough mix for the plants I wish to repot. When I repot I add chopped up oak leaf, along with dried bracken



One of the many attractive species of Slipper Orchids, *Paphiopedilum hookerae*.

Photography: David Menzies

fern. The oak leaf (decaying) helps to provide phosphoric acid and trace elements, while the fern keeps the mix open.

Fertilising

Slipper orchids do not need large amounts of fertiliser. I use very weak doses of any high nitrogen fertilisers at approximately every second watering, as species slippers are growing and flowering all year round. I also give them a dose of magnesium sulphate (epsom salts) about once every two months.

Watering

This is a very difficult problem for most people. I water my plants once a week during the winter months and about every three to four days during summer. These times of course depend on your growing conditions, etc. With a lot of small plants, you would need to water more often in the summer. In conclusion I would like to say to all orchid growers, if you have not already obtained a few of the paph. species plants, do so as they are very rewarding, and if you build up a collection of these plants you can have them flowering all the year round, the same as I do. 4 Tudor Court Paraparaumu Beach

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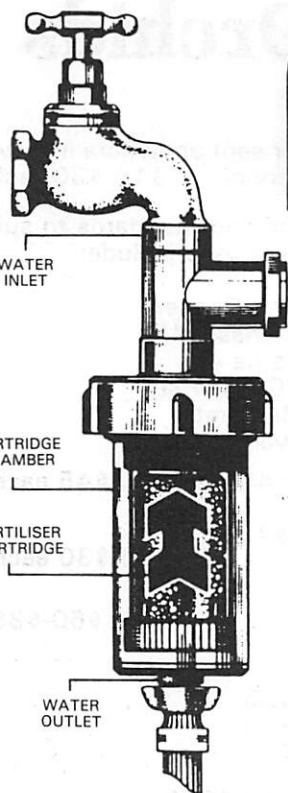
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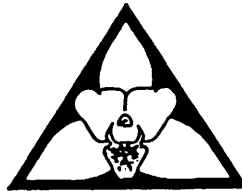
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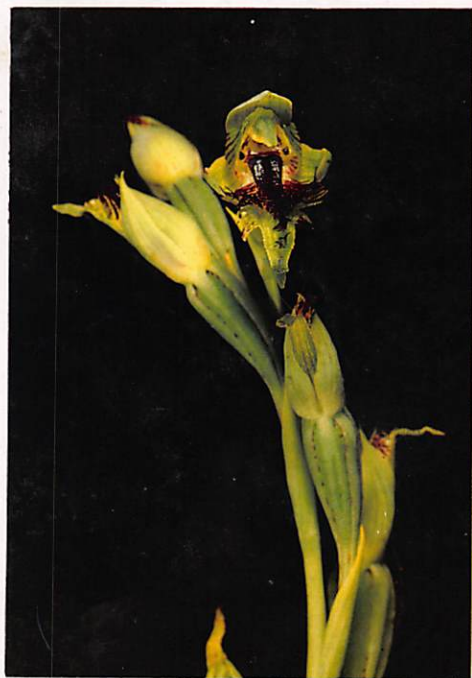
PORTRAITS OF NEW ZEALAND ORCHID SPECIES



Calochilus campestris

This fascinating flower is very rare in New Zealand, although it occurs throughout Australia.

The recent interest in it is because it was rediscovered by Doug McCrae in a swamp near Kaitaia, after no observations for almost 40 years.



Photography: Bob Goodger