# ORCHIDS IN NEW ZEALAND



JULY/AUGUST 1982



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### **ORCHIDS IN NEW ZEALAND**

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Cover Photograph: Cymbidium Balcariga 'Fine Gold.' Photo by courtesy of I.D. James of Hamilton.



# EDITORIAL Orchids in New Zealand

#### Seventh Annual Report

This last year has seen a number of changes in the people involved with the magazine production. The distribution is in the capable hands of Mrs Bev Godwin of the North Shore Society. For the first time this function has been removed from the Editor's home area; there was some doubt as to whether the scheme would be successful but from all reports it appears that everyone is getting their magazine as before — thank you Bev.

Mr Darryl Bell is no longer handling all advertising, he is now our 'Front Man' for new contracts. This gives him more time to make contact with prospective advertisers and further develop this important magazine function. The Editor will continue with existing advertisers, check copy and keep 'tabs' on the financial side.

Another Essay Competition commenced last year, this of course is to encourage people to write for the magazine. The winner of the competition is: Mrs Irene Collins of St Heliers, Auckland. Second — Mr W. James Harper of Palmerston North.

The prizes are orchid plants and these will be forwarded to the winners in due course. All entries, although less than last year, were of a very high standard and the magazine committee found it very difficult to decide upon the winners. I would thank all contestants for taking the time to write their respective essays.

A new Native Orchid group has been formed by the enthusiasm of Mrs Dorothy Cooper of the Wellington Orchid Society and it is hoped that this will become a constant source of native orchid articles for our magazine.

This year we are going to publish in every issue a brief society news page which will consist of the Society's name, Secretary's name and phone number which will provide an up to date contact point for people who are visiting other areas. To make sure that every society is listed I would ask that Club Secretaries keep forwarding their newsletters to me.

Finally, I would thank all those contributors, particularly our regulars, who have taken time to write for us; for without their enthusiasm and effort the magazine would be the poorer.

Graeme Boon EDITOR



#### **SOCIETY NEWS**

The Orchid Council of New Zealand wish to express thanks to the following societies for the donations which they made towards the travelling expenses of Mr Tom French in respect of his recent visit to South Africa.

South Taranaki Orchid Society \$50; Wellington Orchid Society \$300.

Tom's mission was to make representation to the governing body for holding the next World Orchid Conference in New Zealand. Unfortunately our bid for the 1987 Conference was declined (somewhat belatedly) but our chances for 1990 look good.

## PRESIDENT'S REPORT

It is my pleasure to bring you the 8th Annual Report of the Orchid Council of New Zealand. With the assistance of the Executive Committee, Magazine Committee and Judging Committee, not forgetting the valued support that we have had from Societies, I am pleased to report real progress in the promotion of orchids in New Zealand.

#### Membership

Society membership is maintaining a 10% growth rate and it is with pleasure that this year we have welcomed Rotorua, Wairoa, Nelson, South Canterbury and Thames Valley into affiliation.

#### **World Orchid Conference**

The first decision made by Council after the last AGM was to vigorously pursue the promotion of New Zealand as the venue for the 1987 World Conference. It was unanimously felt that we must be adequately represented in Durban. It is history now that we asked Tom French to represent Council and he was joined by Mr Frank Brilevich representing the NZOS. A joint committee was responsible for preparing a comprehensive case. No decision was made at Durban but at a subsequent meeting at Albuquerque Japan was asked to host the twelfth World Orchid Conference in 1987. However, here is an extract from a letter I received from Mr William E. Merritt, Chairman:

"The Committee voted unanimously to instruct me to convey to the Orchid Council of New Zealand the hope of each member that the Council would submit a bid for the 13th World Orchid Conference, 1990."

#### Quarantine Fees

Council was shocked and disappointed by the decision of the Department of Agriculture to substantially increase quarantine fees. We protested strongly at the increase and also at not being consulted. It was explained to us that the fees had not been increased for many years. Furthermore under the Government's user pays policy they would be regularly adjusted in the future.

#### Slide and Speaker Programmes

Thanks to Mr Ron Maunder these have been circulated. I would ask that he receive co-operation in the prompt return of programmes. It is Ron's intention that these lists be regularly upgraded. For particularly good quality slide programmes, contact him. Thanks are also due to Mr Bryan Clark for the preliminary work done in this department.

#### **Plant Varieties Protection Act**

Throughout the year Council has been represented by Mrs K. Black and Mr R. Maunder. The Committee now meets at Hamilton twice a year and is prepared to consider suitable applications at those meetings.

#### Seminar — Walkato

Council, was very happy to be associated with a very successful seminar held in conjunction with the New Zealand Orchid Export Growers. This was hosted by the Waikato Orchid Society. Guest speaker was Mr Joseph Arditti, Professor, Department of Development and Cell Biology, University of California. He was ably supported by prominent New Zealand growers.

#### Seminar - South Island

It was pleasing to welcome growers from many parts of the South Island and lower North Island at the first South Island Orchid Seminar held in Blenheim. The success of this weekend was shown

by the desire of the Canterbury Society to host a seminar on 16th

and 17th October, 1982.

Our thanks go to these host Societies as this is promotion in action. Those intending to visit Canterbury this year would be advised to include Christchurch in their itinerary in October.

I am confident that the future holds many healthy challenges. May your orchids bloom profusely.

W. Ross-Taylor, PRESIDENT

#### **PHRAGMIPEDIUM**

by Walter Syder

The genus Phragmipedium comes from South America — from Panama down to Peru — and consists of 22 distinct varieties. How many specie still exist is anybody's guess but I have fourteen. Their natural habitat is in the pampas and when these were burnt off and sowed with grass seed for beef raising, what the fire didn't kill the cattle trampled in.

I grow my plants in Alán Beck's mix in squat pots as they are inclined to be unstable. They like similar conditions to Cymbidiums and also need feeding the same. They are of two types; one flowers all out together and is quite a picture, the other has a series of blooms so that a spike often flowers for six months and on a fair sized plant is never out of bloom.

There are a few hybrids, one, a natural hybrid between caudatum and longifolium, is known as grande and is superior to most specie and a very strong grower. Another well known one is Sedenii, a pink gem resembling Paphiopedilum delanatii.

# How WE grow Cattleyas

Carvi Sellers

We grow mainly warmth loving genera: Cattleyas, Phalaenopsis and hard-cane Dendrobiums. Our glasshouse is fully lined inside with bubble plastic. (We use Tri Glaze) and we have made a shadecloth cover to go over the roof and half way down the sides on the outside of the glasshouse. We do not use roof vents — we believe that these are a perfect escape route for humidity, so instead, we have an induction fan under bench level, set to switch on when the temperature reaches 26°C. At the opposite end of the glasshouse, set up high, we have a circulating fan, the theory being that fresh air is drawn in to the house by the induction fan, rises as it gets warm, and is circulated by the second fan, then dispelled through louvres set higher up in the same wall the induction fan is in. Our minimum temperature, we keep as near to 15°C as possible, and our daytime temperature, we like to keep around 26°C, but in the summer, temperatures often reach (and sometimes exceed) 37.5°C. When the days are very hot, we endeavour to keep humidity up around 80% by wetting the floor of the glasshouse, which is of course pumice, with a sprinkler hose turned on low. Keeping the temperature up all year round means that our cattlevas do not have a dormant period over winter, and it is not uncommon to flower cattleyas  $2\frac{1}{2}$  —3 years out of flask.

We use clay pots, and make our own mix using chopped Dixonla fibrosa (the soft brown punga found in the Mamaku ranges). To 2½ parts chopped Dixonla we add 1 part of peat moss and 2 parts of pumice, ranging in size from about

1cm—3cm in diameter, and we wet this before use.

We water very infrequently — only 2—3 times a fortnight in the summer, and 1—2 times a fortnight in the winter, depending on the weather and the state of the plants. Because we keep our plants so dry, we don't have any worries with fungus, rot, or botrytis (spotting on flowers). We fertilise fortnightly all year round with Nitrosol, which is a liquid organic fertiliser, and we use it at the recommended strength (1:250) with very pleasing results.

#### **Coloured Catalogues Received**

ADELAIDE ORCHIDS of South Australia have produced another good coloured catalogue of 16 pages with a large selection of photos, primarily Cymbidium, some Cymbidiums miniature Paphiopedilums. Plants, compots and flasks are offered, also a variety of orchid books for sale. Accent appears to be on early flowering mericiones appealing to both hobbyist and commercial flower grower. The two whites, Pymble Hill 'Oakleigh' and Almond Blossom 'Festival' caught my eye. Mr Sid Monkhouse, proprieter of Adelaide Orchids is very well known for his breeding of miniature and novelty Cymbidiums. Scotts Sunrise 'Aurora' and the Tricia Allens particularly appeal. Paphiopedilum seedlings offered are both large hybrid type and novelty primaries. Coloured photos in this section are of the parent plants.

Sole New Zealand agent is Brigitta Estate, P.O. Box 81030, Whenuapai. These people import on your behalf, attend to all documentation, quarantine and forward plants on; orders over \$75 internal freight free. When possible orders will be grouped and in this way freight charges ex Australia will

be considerably reduced. At present Brigitta Estate has 1000's of Adelaide Orchid plants growing in their nursery and a list of these are available on request. Direct service from Australia is also available should this be more convenient.

—P.B.

BURKES ORCHIDS of Whakatane have a 10 page catalogue with three full pages of coloured photos, particularly notable for showing Cymbidium blooms on the spike. this should be of interest to all growers. Thirty-four individual mericlones are offered and my eye is drawn to Puppy Love 'Jubilee' a large white with a lot of red on the labellum and the new offering (Rincon Clarisse 4n x self) x Via Vista) 'Meda' HCC/NZOS. All are available as singles, compots, a number of mini punnets and some flasks.

A good selection of their own seedling crosses in flasks will be available from August 1982 onwards. The emphsis here is on straight stems and bright colours. This is Mr Burke's second year of publication and as far as I am aware is the only coloured catalogue produced in New Zealand. My compliments to Mr Fred Burke.

Catalogues are available on request, please enclose a 30 cent stamp to cover cost of return postage. Write to: Burkes Orchids, White Horse Drive, Mokorua, Whakatane.

—P.B.



Look, no hands!

# How Green is your Thumb?

by Irene Collyns, North Shore Orchid Society

Have you had the experience of being able to successfully grow most orchids, and find that certain ones refuse to relate to you, but will flourish

for another owner?

On questioning my orchid growing friends I find it is an experience shared by most of us. Though agreed that we are usually successful with nearly every plant we try to rear, and therefore qualify as members of the Green Thumb Club, there are particular individuals for whom any and every plant will prosper and flourish to its optimum perfection. They are the lucky ones who possess an even greener thumb — the gift of perfect rapport with all plants. There was one such person I used to know and there is one I know today.

To support my contention, (at least to offer it for consideration), that there exists a distinction of sensitivity between plants and their owners which reveals itself in their respective responses, I tell a story about three little orchid plants, the first of which is ensifolium x 'Rosalita' (Min), pastel pink and

fragrant.

One day I took a neighbour to meet a dear friend, well known in orchid circles. Unlike the majority of us, everything grew for him. Sadly he is no longer with us, but I like to think in a happier way, that for such a great orchid lover who had affinity with all his plants, somewhere in some other dimension there will be grand shade-houses filled with all his old orchid family members and other glorious new ones for him to enjoy — just as he used to do in this world.

As usual, a tour of his orchid house held its usual fascinating interest. To encourage my neighbour to further develop her collection he presented her with a pot of ensifolium x 'Rosalita', bursting with new growths — all beautifully leafy and healthy.

She proudly took this home and placed it among her 40 odd cymbidiums where it flourished, making fresh growths and masses of leaves until the pot was full.



ensifolium x 'Rosalita

However, two years later there was still not a flower in sight, so in disgust she gave me the whole plant which I broke up into three sections, giving two friends the other two divisions. The following year one friend produced a couple of new growths; I produced five new growths and my friend with the super green thumb produced one small growth AND a flower spike.

Then there was VIA REAL 'CARPINTERIA.'

As a challenge to members, our Society a couple of years ago offered small competition plants for sale, without revealing the name, though it was hinted these tiny specimens were the progeny of a beautiful orchid. My unknown purchase was a mere 13cm tall!

The incentive was to produce a beautiful flower, and be one of the first to do so, but we were also required to keep cultural notes for later comparison.

One year later the parentage of our adopted unknowns was announced, giving them the respectability of belonging to one of the best families. So now we could address our mystery charges by their rightful name — Via Real 'Carpinteria.'

Two years later, as requested, we brought along our plants for discussion on growth and appearance. Only six plants turned up, mine being one of the six. This miserable little plant of two small leafy bulbs looked pathetic compared with the others. In spite of tender loving care this wretched little ingrate refused to grow and I began to believe my dejected offspring had been one of the weaklings. I consoled myself that at least I had had the courage to take mine along - incidentally it was numbered 67 and other plants came after mine, so where were the other plants? After each plant had been held up for discussion, we all applauded the winner, for not only was it the largest and best grown plant, but it also was the only one with a flower spike and in full bloom. Quite a feat in two years don't you agree? Can you guess whose plant this was - why yes,

my friend with the super green thumb.

My third example concerns Coelogyne 'cristata' (alba) which supported my whimsical idea of matching wave lengths, this time, between myself and a dying plant which turned out to be one with which I found a personal rapport.

In 1977 my sister gave me a plant of Coelogyne 'cristata' which she found abandoned next door. These neighbours had sold their property and left a few orchid plants to fend for themselves. My heart bled for this pathetic plant and I vowed to bring it to life. Planted in garden soil, it was of course rock hard and dried out; most of the bulbs were brown and withered but there were one or two places which looked promising.



Coelogyne cristata (alba)

Taking the whole apart, I nipped off bulbs with reckless abandon, lined a basket and repotted in fresh mix this victim of neglect, obviously on its last roots.

Months went by and I thought my efforts had been in vain but one year later noticed a few green growths. With renewed effort I fed, watered and nurtured the plant which continued to respond, rewarding me accordingly.

In 1980 it produced two lovely sprays of flowers and lots more

growths until now one could see emerging a happy and healthy plant. Now my friend Mrs super green thumb did not possess a Coelogyne 'cristata' and as I already had a gorgeous basket established in my collection before the arrival of the stranger needing intensive care, I gave my friend the one-time waif, knowing it would have further loving care and the best of homes.

The plant now hangs under a tree in dappled sunlight and one can only marvel at its beauty. Last year Coelogyne 'cristata' bore 40 perfect blooms for my friend — magnificent pure white frilly flowers which arched gracefully over the basket. A wonderful change has occurred since that day back in 1977, one that can only be likened to the magic transformation of a chrysalis into a beautiful butterfly.

# An Introduction to the Genus Lycaste

Alan Beu, Wellington Orchid Society

The genus Lycaste and the closely related Anguloa contain relatively few species of large plants, with large wide (to 80cm x 20cm), thin, folded leaves, large oval pseudobulbs and large, waxy, triangular flowers in which the sepals are the largest parts and the petals and lip are small. Only one flower is borne on each stem, and the buds and new growths of most species appear in the spring around the bases of the previous year's pseudobulbs. They all come from Central America and the Northern part of South America, but as most live at quite high altitudes (1000 to 3000 metres) in the mountains, they are happy in our collections if grown with cattleyas, or a little cooler, perhaps best in the warmest part of the cool house. Most live on the bases of tree trunks, on stumps, on cliff faces, or simply in humus on the forest floor, so this is a major guide to their culture: unlike the strict epiphytes, they grow better if they are never allowed to dry out completely.

Dr J.A. Fowlie has recently published an excellent monograph. "The Genus Lycaste" (published by Day Printing Corp. Calif., 1970. 90pp) to which everyone is referred who is interested in the species. Fowlie recognises 27 valid species and six subspecies. An excellent and thorough account of all the Lvcaste hybrids. "The Lycaste Species and their Hybrids," has recently been published by Dr H.F. Oakeley, in three parts, in "The Orchid Review": Part I Orchid Rev. 85 pp. 349-51, Nov. 1977; Part 2, Orchid Rev. 85, pp 379-83. Dec. 1977; Part 3, Orchid Rev. 86 pp 4-9 Jan. 1978. All growers who are interested to find out the parentage and features of Lycaste hybrids can find them in this article. Unfortunately, there seems to have been no modern review of Anguloa and its hybrids. The trend now is to breed beautiful. more rounded flowers in the hybrid "genus" Angulocaste. The main breeders of hybrid lycastes and angulocastes are Wyld Court Orchids, in England; Paul Gripp (Santa Barbara Orchids) in the U.S. is now breeding them too.

Evervone will be familiar with the very beautiful pink species Lycaste Skinneri; grown by many orchid enthusiasts who have no other lycastes. This is one of the most beautiful of all orchids, and is very variable in colour from white to red. Most plants have pale pink flowers with a darker lip (see colour plates in Fowlie, "the genus Lycaste"). L. Skinneri like slightly warmer and consistently warmer more conditions than all the other species, and grows easily in

cattleva conditions.

Many years ago Mr Henry Rudolph of Eastbourne, imported plants of two lycaste hybrids, just about all the hybrids that were available then. The two, Lycaste Queen Elizabeth (ice green) and Lycaste Betty Sparrow (bright yellow) are large and tall-stemmed and flower easily, so the clones 'Eastbourne' of these two hybrids are often seen in local collections. Until recently, there have been very few other local hybrids, but it's good to see some other hybrids, such as L. Koolena, in local collections now. Species seen in local collections are L.aromatica, L.cochleata, L.cruenta, L.crinita, L.deppei, L.Skinneri, L."strobelii" (?= L.tricolor, L.ciliata), and L.xytriophora. Only Anguloa strobelii seems to be present in local collections, but the much larger and more colourful, tulip-like A.clowesii (yellow) A.uniflora (pale pink with red spots), and A.rueckeri (red) should be grown by anyone

who can get hold of them. Potting: lycastes like to be well drained (i.e. not soggy) and yet perpetually a little moist, so I find they grow best in a mixture of coarse, well-washed pine bark and about 30% chopped sphagnum moss. I grow them in fairly large pots (clay are very good or plastic ones with lots of extra side and bottom holes) and water them often. Species which lose all their leaves in winter (e.g. L.aromatica, L.deppei) are obviously dormant through the winter, and so should be watered less then than they are in summer, but I still give them a little water now and then to keep the mix moist. When flower buds and growths appear around the bulb bases in spring, both deciduous and leafretaining types should be watered and fed heavily. I find large plants grow and flower well if fed a highpotash, low-nitrogen fertiliser; I "Phostrogen." recommend Repotting every year (for babies) or every couple of years (for large plants) is helpful when there is

sphagnum in the mix.

Air Movement: As with all the orchids that have large, thin, folded leaves (e.g. Stanhopea, Bifrenaria, as well as Anguloa and Lycaste). one of the most important things you can do to keep lycastes healthy is give them lots of air movement. In the livingroom where I grow them I have two small, silent fans running continuously, one at each end of the plants, directed over the leaves. Air movement is important both to keep fungus diseases at bay and to cool the leaves, as large, thin, wide orchid leaves burn much more easily in sunlight than, say, the leathery leaves of cattleyas.

Light: because of their wide, thin leaves, Lycastes don't like very much direct sunshine. However, they flower best if given as much light as you can without burning them. When grown in good, bright diffused light they produce attractive short wide leaves, whereas when grown in too little light, they produce tall, narrow, floppy, lank leaves. They can be used as shade for smaller plants that don't like so much light, such as slippers — which is very useful when a large lycaste hybrid is over a metre wide.

Indoors: I grow my lycastes indoors and Lycaste Betty Sparrow, with 8 or 10 large, bright yellow triangular flowers all out at once, on 30cm stems, lasting more than a month makes quite a show. They seem to mind the relatively low humidity indoors less than other orchids do, and will take quite a bit more heat than most cultural guides suggest.

I have them on a rack above a tray of water, in bright light, with two fans blowing on their leaves, at a minimum temperature of 15°C and

they do very well.

I recommend Lycaste as an attractive and easily grown genus — even though the plants are still rather hard to acquire in New Zealand.

### CASTING ORCHIDS IN PLASTIC

by Jim Harper, Galena, Ohio

Australian native orchids are rarely seen at home in Ohio, especially the fascinating terrestrials. While pictures are fine, taking home the real flowers would be better — and casting them in plastic seemed to be a possible answer. Some years ago we had tried to cast orchids in plastic, with generally unsatisfactory results.

In most cases we would lose the true colour of the flowers. We knew some people had been successful in embedding flowers in plastic and while we were wondering about it. we saw a book in a gem-stone hobby shop of casting flowers in plastic. (The book "How to Embed Flowers in Plastic" by E.L. Lutz, Naturegraph Publishers, was published in California, but we had to go to Melbourne, Australia to find it. Since returning home we found an article by Graeme Chequer of Tasmania p1063-64, 1974 A.O.S. Bulletin who obviously got hold of the same book — but whose article lacks detail to have anything more than a bare starting point.)

We began to experiment with the different methods suggested for the preservation of colour of orchid flowers, based on suggestions in "the book." At the same time we began begging flowers at the various orchid society meetings in Melbourne, and whenever we visited someone's orchid collection. Although we are still in the learning process, there has been enough success to share our experiences with other interested hobbyists. In many cases there remains much more research to be done to develop a fool-proof method for preserving the colour of many orchid flowers especially those with multiple classes of pigments in the flower and there are many of these.

#### Colour Preservation:

For detailed information refer to Lutz or to Bulletin Series No. 40 of the Florida Engineering and Industrial Experiment Station, Gainesville, Florida.

Two general methods have been used to preserve colour in botanical speciments: (a) drying the flowers in a dry desiccant and (b) the use of liquid dehydrating agents together with chemicals to preserve colour.

a. Silica gel (40—80 mesh) and table salt (1:1) have been used widely for leaves and ferns. Another mixture suggested is corn meal and salt (1:1). The latter has not proven successful, except as a means of keeping specimens until we could get home to put them into something else. The silica gel: salt mixture was moderately successful, except that the flowers tended to turn dull and lose colour if kept too long before casting.

b. The second and satisfactory method involves using tertiary butyl alcohol as a drying agent. (Obtainable from chemical supply houses). There are eight different preparations that are used to preserve different colours. Many pigments are prone to change colours — some are pH indicators. some are bleached by reducing agents and some turn off colour because of oxygen. When all types are present in the same flower, no single chemical will work. We have used only two solutions, which were cited as being best for orchids: 1. tertiary butyl alcohol (TBA) with 2% citric acid (Solution '#7). this has been good for green, white, orange and brown, also for some yellows. 2. TBA with 1% thiourea (Solution #5.) This has been good for blues.

purples, reds and some whites and vellows.

These were successful for the greatest number of flowers, but did not retain colour in such flowers as Den.canaliculatum, Vanda T.M.A. or Bulbophyllum mcphersonii. The greenhoods were particularly rewarding, retaining full colour when using TBA-citric acid.

The flowers are left in the solution for at least four hours and not more than 24 hours. We have found that it is best to do the final drying in the desiccator, because if fully dry, the flower parts are very brittle and fragile. Small and thin petalled flowers require less time than large or fleshy flowers. Do not try to dry too many flowers at a time.

Eventually the solution will "wear out" and flowers come out limp even after 24 hours. The TBA can be redistilled over sodium sulphate or anhydrous copper sulphate can be added to scavenge water. (Copper sulphate was ground and dried in the oven at 350°F until it lost all its blue colour. It did not affect flower colour).

The flowers were removed from the solution (a thread fastened to the stem makes the flower easier to handle), drained on a paper towel for five minutes and placed in a desiccator with silica gel. (a covered plastic kitchen container works well for a desiccator.) The flowers are kept in the desiccator until cast. The sooner the casting is done the better, since the flowers lose freshness and colour after a few weeks. The dried flowers are very fragile and must be handled with care. Green-hoods (Pterostylis) are especially hard to handle. Flowers that have a waxy coating on the surface, like Vandas, Paphs and some of the larger Greenhoods, should be dipped in acetone or styrene monomer before casting in order to eliminate "silvering" on the flower surface.

Preparing the moulds:

Moulds can be purchased from hobby shops or can be combination of common items plastic ice cube trays, butter dishes and glasses can be used. A good, cheap way of making square or rectangular moulds is to cut strips of formica glued on wood into desired lengths. The strips can be together with screws, assembled and taped to a clean glass plate with masking tape. The formica and glass surfaces give a that does not require finish polishing. Before use the moulds are treated with a release agent, and furniture polish (Pledge) works well. Spray on and wipe off excess with a tissue.

**Embedding the flowers:** 

There is considerable "art" involved in the casting process, and we have not mastered all of it yet. A key to embedding orchids is to keep the heat generated by the chemical setting process to a minimum to avoid the "cooking" of the flowers. We used embedding plastic available in Melbourne, but any embedding plastic should do.

The book states that bubbles are the main concern of the beginner. but they don't tell you how to avoid them. One key is to be careful in the initial transfer to the mixing container and the mixing of the resin. A glass marked in ounces makes a good mixing vessel. Pour the viscous embedding resin into the glass, allowing it to flow down the side to minimize bubbles. Place the resin in a pan of warm water and allow to stand until all bubbles have disappeared. Next add the catylst (enough to give a set in one hour the amount will be smaller for larger castings. We used about 1/2 the amount recommended in the directions). Mix quickly, but without creating bubbles, until the refraction lines — you see at the

continued page 18

### **ODONTS AND MILTONIAS**

Frank Askin

The convenient abbreviated name, odont, is popularly used in reference to the genus Odontoglossum and the hybrid genus Odontioda resulting from the crossing of the two genera, Odontoglossum and Cochlioda. So when we talk about odonts we are generally referring to Odontoglossum and/or Odontioda including their numerous hybrid offspring. As a matter of interest it seems worthwhile tabulating the names of the more popular members of the Odontoglossum group or 'tribe,' a few of their hybrids, and their standardised abbreviations.

Generic Name	Abbreviation	Parent Genera of Hybrid Genus
Odontoglossum Cochlioda Miltonia Oncidium Odontioda Odontonia Odontocidium Vuylstekeara	Odm. Cda. Milt. Onc. Oda. Odtna. Odcdm. Vuyl.	(Odontoglossum x Cochlioda) (Odontoglossum x Miltonia) (Odontoglossum x Oncidium) (Odontoglossum x Cochlioda x Miltonia)
Wilsonara	Wils.	(Odontoglossum x Cochlioda x Oncidium)

Almost all species of the tribe grow natively in tropical and subtropical Central and South America, mostly in the cooler altitudes between 1000 and 3000 metres, though some grow at warmer low levels. Generally the differences in temperature between night and day, summer and winter, are not very marked, nor does day length change much through the seasons at these high latitudes. For the most part these plants grow in areas of high rainfall and, particularly in the mountainous regions, are enshrouded in mist for a good deal of the time.

Most species have adapted well to cultivation, and are fairly tolerant of variations from their native conditions. The numerous hybrids which have been produced by interbreeding between both genera and species are even more amenable to glasshouse culture.

The above brief reference to the native habitats of these plants gives

some clues to the conditions we should try to provide in their cultivation. In this article we will confine our further discussions of culture to the needs of odonts and miltonias, as the inclusion of oncidiums would extend its scope beyond manageable proportions.

The roots of ondonts and miltonias are comparatively fine, so the compost should not be too open. Nevertheless it must be free draining though capable retaining moisture. Bark-based mixes are good in a size range between 1/8 inch and 3/4 inch. To the bark should be added about 1/8th by volume of charcoal chips and the same amount of chopped sphagnum moss. As an alternative, Beck's standard mix with addition of a little charcoal and sphagnum moss is quite suitable. The whole should be dampened two or three days before use, and not allowed to dry out in the interval.



Potting:

Potting-on or repotting of adult plants should normally be carried out about every third year, and preferably in the late spring. Avoid over-potting as odonts and miltonias seem to thrive when the pot is covered with bulbs and the compost tight-packed with roots. When dividing a big plant, each division should comprise at least a leading growth with two in support. Pot such a division into the smallest will pot that comfortably accommodate the roots and allow for, say, an inch between the leading growth and the pot edge a bit more for a big and vigorous division.

Watering:

Be especially careful with newly potted plants — try to keep them just moist and don't water until the compost is drying out. Even in winter odonts and miltonias should

be in continuous growth, and green tipped roots should be in evidence on most of them; so don't let them get bone dry. Only experience will enable the grower to judge the best time to water. In the main growing season from mid-spring to midautumn apply water liberally when necessary, then allow the compost to dry out until it is just moist before the next application.

Temperature:

Most odonts prefer a temperature range during the main growing season, between 14°C at night and 22°C the in daytime. Odontoglossum crispum the coolest growing species, thrives at temperatures four or five degrees lower. Miltonias don't like a wide temperature range, and the nearer it can be limited to between 15°C and 20°C the better they will do. The minimum tolerable temperature for odonts is about 8°C and the shorttime maximum about 30°C.

Miltonias will endure these limits for a short time, but with rather more discomfort.

Light and Air:

Both odonts and miltonias require shading from bright sunlight at all times except during the winter months. But they do require good light for good health — less than suits cattleyas, and more than is necessary for Phalaenopsis and paphiopedilums. Fresh movement around the plants is very important to their well-being as they are susceptible to fungus diseases if this requirement is neglected. A small fan running continuously in the house is a good insurance against stagnant air conditions.

**Humidity:** 

As mentioned earlier these plants come from regions of high humidity and unless we can supply something like equivalent conditions in their cultivation they will languish and probably die. Even in winter, and especially if much artificial heat is supplied, floors,

and benches of the glass-house should be kept moist. Misting overhead is fine in the summer but is risky in the winter. It is well worth while to get a hygrometer to measure the relative humidity of the atmosphere, and to get an idea of how much watering or "damping down" of the surroundings is necessary to give the right sort of conditions. A relative humidity of 70% during the day is about right, with night-time readings at least 10% higher.

Feeding:

A light topdressing — about a level teaspoonful to a 4" pot — of bone meal applied in the spring is a good start for the growing season. Thereafter supplementary applications of any of the well balanced commercial fertilisers can be given with advantage, provided it is done sparingly — say, at one-half the supplier's recommended strength at every fourth watering.

Growing them Indoors:

Odonts, particularly and miltonias, will thrive as indoor plants in a bright and airy room provided the atmosphere doesn't dry out. They don't like central heating! A kitchen window sill suits them fine most of the time, as the atmosphere there is generally warm and moist. But shift them if it gets hot, as kitchens sometimes do. Give them good light but not direct sunlight except in winter, and up to mid-morning and in the late afternoon during the summer.

In other rooms moisture can be added to the air surrounding the plant by sitting it on a pebble bed in a shallow dish filled with water to just below the top of the pebbles. As the water evaporates it provides the moisture in the air that the plant likes. A fine misting on hot days will

add to its comfort.

**Sick Plants:** 

We all have sick plants from time to time, and odonts and their relations are as susceptible to disease as most other orchids, and languish as the result of faulty culture sooner than most. Common ailments are diseased and often wilting leaves, and rotting roots. Most of these complaints result from over-watering, over-feeding, cold and stagnant air or a combination of these lapses from good culture.

If you have a plant so afflicted, tip it out of its pot, wash it in slightly warmed water, trim back diseased leaves and roots and then soak it for, say, half an hour in a sprayingstrength solution of a fungicide such as Captan or Thiram. Then hang it up to dry for about an hour before potting it up into the smallest pot into which it will fit, using the standard compost with about double the normal amount of sphagnum moss. Pure sphagnum moss will do but it must never get more than just moist. Keep the plant warm and well shaded. When new roots and leads appear, as they should do in three or four months, repot into normal mix.

#### **CYMBIDIUM CORNER**

by A.J. Merriman Courtesy of South Australian Orchid Bulletin

In the September issue of the A.O.R. on page 164, Dr J.E. Binnie wrote regarding genetic aberrations in mericiones and also the fact that some mericiones 'whose sole preoccupation seems to be to grow rather than to grow and flower.'

Over the last few years, I have grown many mericiones from flask to maturity and have been amazed at what can happen to a crop of the one clone. For some time now some cymbidium growers have been complaining about lack of flower count, different labellum markings, shorter racemes and non-flowering properties. Is it culture, or just coincidence?

The following are some of the abnormalities that have encountered. Cymbidium Annie Marie 'Sunshine' - lack of flower numbers on the raceme, different labellum markings, in fact one mericione threw two spikes off the one bulb, one raceme was a pure colour and the other slightly different than the norm. After three flowerings this clone had not increased its flower count. Cymbidium San Francisco 'Meadow Mist' — this clone simply refused to flower. We grew them on till they burst ten inch pots, in desperation the plants were divided. After dividing the plants settled down and now grow and flower normally. Cymbidium Culpaulin 'Cecil Park' - this clone was a yellow-green 'pure colour.' The mericlones grew and flowered normally, but oh, the flowers. Some had abnormalities in the column. Others had no texture or shape in the segments, while others had shorter spikes than normal. Other variants included 'splash petal,' like colour break using darker green or yellow as the splash effect in the petals and sepais. One clone wanted to outdo all the others by producing a number of labellums on each flower. Cymbidium El Capitan 'Robert Crisman' produced shorter racemes than normal. Cymbidium Sea Crest 'Baltic' — this clone just refuses to grow. A few of the batch have grown and flowered normally but the majority still have not flowered. The bulbs are about acorn size, fertilizer does not help, dividing has not changed its mood. We thought it possibly could be culture so we placed some in different parts of our growing house to see if they would flower there to no avail. This clone also picked up some leaf-spot along the line. These erratic markings could have been a new type of virus, so we had numerous plants tested for virus. The results showed it was not a

virus but an inherent breakdown in the cells, this caused the black markings on the leaves. Was this caused by the incision of the meristem causing the aberrations to genetic cell? Cymbidium Lunagrad 'Elanora' was originally colchicine converted and some of these clones have now become mericiones. The lack of flowers on the raceme, and some just refuse to grow, seem to be the number one complaint with these mericlones. Cymbidium Wallara 'Gold Nugget' is another clone that can produce different markings on the labellum.

Over the years we have flowered many populations of mericlones which have grown and flowered normally. This leaves the cymbidium grower with the problem, if he buys a mericlone will it be the same as the other plant or will it be a 'Somaclone?'

#### **SOCIETY NEWS**

North Shore Orchid Society

Secretary: Mrs Eden Campbell P.O. Box 33-493, Takapuna 9

Phone: 679-804 Auckland.

**Walkato Orchid Society** 

Meeting: 4th Tuesday of month

except December & January Te Rapa Racecourse.

Time: 8.00 pm. Secretary: Mrs R. H

Mrs R. Haggie, 94 Braid Rd, Hamilton

Phone: 494-612

**SHOW DATES** 

Winter Show: Tuesday 27th July 1982 Spring Show: 1st—3rd October 1982

Both the above are held at the Te Rapa Racecourse

**Nelson Orchid Society** 

Meeting: 3rd Tuesday of month except December and January. Methodist Church

Hall, Teale Ave, Stoke.

Time: 7.30 pm. Secretary: Mr T.H. Wells,

5 Browning Crescent, Stoke, Nelson.

Phone: 79-980 Nelson.

SHOW DATES

Saturday 2nd October, 1982. 10 am to 6 pm. Sunday 3rd October 1982. 10 am to 4 pm. Held at Nayland College, Nayland Road, Stoke.







Dente 30























# NEW STAMP ISSUE FROM VANUATU DEPICTING LOCAL ORCHIDS

The group of islands comprising Vanuatu (formerly New Hebrides) lies about 1500 kilometres off the north east coast of Australia within the triangle suspended between Solomon Islands, Fiji and New Caledonia.

The climate is tropical and the vegetation, whilst perhaps not startling, is interesting and indeed could contain some surprises as quite large areas are still untrodden by the botanists careful foot.

For its latest series of definitive postage stamps (the ones which remain on sale for several years) the chosen theme is local orchids. Hermon Slade, living in the Vanuatu capital, Port Vila, on the island of Efate, who is well known in orchid circles was willingly coopted onto the team which devised the issue and it was he who provided all the necessary basic information during the preliminary stages. He also provided detailed comment at the design stage in conjunction with Dr. Philip Cribb and his colleagues at the Royal Botanic Gardens, Kew, England. The latter establishment was largely responsible for guiding the U.K. artist, Jennifer Toombs, during the actual preparation of the designs.

The stamps depict the following species:

Readers of this magazine can buy the stamps from their local stamp dealer or direct from the Vanuatu Philatelic Bureau, Port Vila, Vanuatu. If buying direct from Port Vila, cancelled stamps are available postfree (VT1108 = AU\$11.08, STL\$7.00, US\$12.50 approx.). For mint stamps you need to add VT100 (Pacific area), VT110 (Asia and America), VT120 (Europe and Africa) to cover postage and registration. The Vanuatu Philatelic Bureau will be pleased to provide details of the services available on request. Three nicely illustrated First Day Covers bearing a full set of stamps will also be available post-free at a cost of VT1183 (AU\$11.83, STL\$7.40, US \$13.20 approx.). Payment by bank cheque, bank transfer, international money order or cash is acceptable but no personal cheques please.

beginning of mixing — disappear. Pour the plastic down a stirring rod into the mould to minimize bubbles.

The base layer: To provide support for the flower, a 0.5 to 1.0 cm layer is poured into the mould and allowed to set. With the resin used, the setting time was one hour with five drops per ounce. The base layer may be coloured if desired.

The anchor layer: The flower(s) are now put into the mould and another layer of resin is added to anchor the flowers into position. Otherwise they will float to the top of the mould. This layer is about 0.4—0.7 cm in thickness. The same amount of catylst is used each time to minimize problems with lines of diffraction at each layer. The different layers are made with as little delay as possible to also minimize diffraction lines in the final casting.

Embedding layers: Depending on the size of the flower, one or more layers of plastic are added sequentially, after the preceding layer has gelled. The plastic is layered slowly around the flower, taking care to avoid bubbles under and on the surface of the flower since they are almost impossible to remove. If the flower has large cavities, like Greenhoods or Paphs, the plastic may be flowed into the cavity before filling the mould. A "float layer" of styrene monomer may be used to ensure the plastic gets into all cavities in the flower. In the embedding process, no layer should be more than 1.5 cm in depth, to avoid overheating. By allowing the layers to set in between, much of the heat is dissipated and overheating minimized.

After casting, the moulds are allowed to stand until hard. The surface exposed to air remains tacky. To avoid this, a glass cover plate (the same size as the mould) is put on top after pouring the last

layer. Care must be taken to avoid causing bubbles.

Finishing:

Until a friend volunteered his lapidary equipment, we were having little success in the final finishing of the castings. The better the moulds and the use of a glass cover resulted in minimal need for finishing. Only final sanding with 400 to 600 mesh wet-dry paper and final polishing with cerium oxide is required. If other than the best moulds are used, then much more effort is needed — starting with 120 grit, followed by 220, 320, 400 and 600. The wet-dry paper is mounted on cork blocks and finishing can be done by hand. However, with a number of pieces, the use of power equipment minimizes the effort.

We brought home about 30 plastic castings of native Australian orchids — including 12 of the more than 100 species of Pterostylis. Now we are getting set up here to continue and try to improve the

process further.

#### **Cymbidium Companions**

by Ros Bickerstaff

#### STANHOPEA, Frost ex Hooker.

This genus was named in honour of the Right Honourable Philip Henry, 4th Earl of Stanhope, F.R.S. (1791-1855), who was President of the London Medico-Botanical Society from 1829 to 1837. Its twenty-odd species are found from Central America to Brazil and Peru. Most of its species have quite large, strangely shaped, heavily scented, waxy flowers which last only a few days in perfection. In nature, they grow as epiphytes with their inflorescences hanging down below

the plants. This means that they must be grown suspended on slabs or preferably, in baskets, as they like being moist at all times. I grow mine in baskets lines with moss and then filled with a mix of moss, fibre. bark chips, and a little pumice or charcoal. Most flower in January to March and make a wonderful show. I grow mine close to the roof of my shade house. Try not to wet the plicate leaves as they are prone to sunscorch and fungus, and yellow readily with unsightly brown marks. I am growing the following species: S.devoniensis. S.tigrina (syn.S.hernandezii), S.ecornuta. S.platyceras, S.wardii, S.oculata, and S.inodora (syn.S.graveolens).

#### SOPHRONITIS, Lindley.

This Brazilian genus is made up of a small group of species that are small in size but have glorious blooms. They were aptly named by Lindley from the Greek word sophron, meaning sensible. prudent, modest, moderate and temperate. All these qualities are possessed by these delightful species. Currently, I am growing Sophronitis cernua and two varieties of S.coccinea (pronounced cock-sin-ee-a). S.cernua grows best when given more sheltered conditions, in a warmer spot, than S.coccinea. Both enjoy humid, shady places; early morning sun does not seem to hurt S.cernua, but hot sun will burn it. Moss mixed with fibre or fine bark suits those grown in pots, although I have grown them on blocks of fern in clumps of moss secured to them, and kept lightly moist. They seem to have no definite rest period; a brief spell after bulbs are mature does no harm.

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CURVIFOLIUM) Expect yellows, oranges and	<b>\$</b> 3.50
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border. ENCYCLIA TAMPENSIS	<b>\$</b> 3.50
A variable species; fawn to apple	<b>\$</b> 3.30
green flowers suffused with deep brown; white lip with	
magenta blotch.	
BRASSIA LONGISSIMA X BRASSIA	
JIPWAPENCES Expect long tapering flowers in	\$4.50
shades of green, white and brown.	
ZYGOPETALUM INTERMEDIUM	\$3.50
Cool-growing plants; green and	40.00
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- CYMBIDIUMS

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Odm. Crispum X Mach Two

Odm. Crispum X Crispum

Oda. Annette 'Lilac Cloud' X Carisette 'Matanda'

Odcdm. Incali X Oda. Joe Marshall

Oda. Aviemore 'Grandos' X Ray Buckman

Oda. Carisette X Flocalo

Onc. Tigrinum 'Una' X Oda. Oreal

Odm. Alspum X Crispum 'Silver Wedding'

Oda. (Sunrise X Sanderae) X Oda. Mem. Donald

Oda. Cornelia X Trixon

Odm. Mach Two X Oda. Volcano

red through to orange red through white

red, wine to purple orange, tan copper tones

fine white, tan

fine white

pink lilac

red Wilsonaras

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pink to lilac tones

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irresistible red

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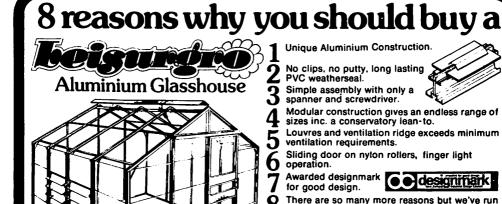
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