

# ORCHIDS IN NEW ZEALAND



NOVEMBER/DECEMBER 1984

# Beck's . . .



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## CONTENTS

### Page:

- 66 My Trip to Flock House by M. B. W. Dove
  - 69 To Cape York and Back by Glenis Day
  - 71 Fifth Asean Orchid Congress by E. O. Campbell
  - 73 Virus Diseases in Orchids
  - 75 Cymbidium Culture Notes by Gordon Maney
  - 77 Unusual Names in the Odontoglossum Alliance by S. G. Wray
  - 79 My Favourite Ten Orchids by F. L. Rowland
  - 80 Fifth Asean Orchid Congress Show by Roy Clareburt
  - 82 Native Orchid Conservation in the Far North by Doug McCrae
  - 84 The Re-Discovery of *Oncidium Splendidum* sent in by Ron Maunder
  - 86 Housing of Orchids by D. K. Bell
- 

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Min Cym Highland Wood 'Cooksbridge Poly' PC/RHS (1983). A bridge orange polychrome miniature of *c. tigrinum* background. (Wood Nymph x Western Rose) from McBeans Orchids Ltd. of England.

# MY TRIP TO FLOCK HOUSE

*by M. B. W. Dove*

I am a Dairy Farmer living in the Far North, middle aged (how I hate that term) with two daughters, both married and away, and was looking for something to do, so hence the interest in orchids.

This started as a hobby in late 1979 until the present time when I now have approximately 600 blooming plants with another 1,000 at various stages following. My wife saw the advertisement for the four day course on orchids to be held at Flock House and had very little trouble to encourage me to apply.

As Flock House is over 800 kms from home, I travelled by N.Z. Road Services coach from home to Auckland and then by the Road Services coach day trip to Bulls. It was a pleasant although rather long trip and I would have to admit that as a Dairy Farmer I gazed with envy at the lush pastures through the Waikato and the Central North Island to Bulls. However, I was not to be sidetracked and arrived at Flock House at 5.15 p.m. on Sunday 23rd September, settled in and then got to know the first of the course members who were already there.

Accommodation is first class and after the first meal I can see that the waist line will have to be carefully watched. We have individual rooms, with shower and toilet facilities shared by two rooms. Lounge, T.V., and supper facilities make up the block. Several married couples are in the group and these have their own units.

Monday morning is spent looking around Flock House and meeting other course members as they arrive. Flock House is situated 14 kms west of Bulls and comprises approximately 1,200 hectares of rolling pastures with mixed farming practices for training the young farm cadets. There is also an extensive piggery, poultry set up, horticulture and gardens and, I believe, that nearly all produce used is grown on the farm. Numerous short courses are held there (ours was one) so with the delightful surroundings of well kept buildings, gardens and lawns all augered well for an enjoyable stay.

Other course members were soon introduced and after the preliminary formalities talk inevitably turned to orchids. Normal discussion would start with — where do you come from, where is that, how many orchids have you, what do you grow them in, what varieties, etc., etc.? The one thing in common, though, was the ever apparent quest for more knowledge.

After our introduction and welcome by the Deputy Principal, the first lecture was under way to approximately 30 eager people.

The course is aimed toward eventual or potential commercial growers but some members were there for the hobby side only. Mary Robertson of MAF Auckland led off with the development of the present cymbidium varieties and followed with Polyploidy, choosing desirable varieties and the potential markets. Member participation was encouraged especially as to their own experiences and way of doing things. Mark Crossley of MAF Auckland then followed with the aims in selecting plants, environment, temperature effects and how to control it. Light intensity drew considerable discussion as did humidity and ventilation control. After afternoon tea Mark went on with glass or duralight houses, best designs and materials and approximate costs. With such a comprehensive programme for the afternoon this led to very intensive discussion over dinner and well into the evening, so even though lectures finished at 5.00 p.m. much was to be learnt by member discussion afterwards.

Tuesday morning with breakfast at 7.00 a.m. we were all ready to get started for lectures at 8.30 a.m. People were really getting into the discussion now and with plenty of controversial matter there was no let up in the endless discussion. Mary led off the morning with pest and diseases and their control. The lists of pests being written up on the blackboard seemed to be endless and combined with diseases makes one wonder that any plants survive. However, good culture must be the first line of defence against these problems and with sprays as a back-up, beautiful blooms are ones reward for all our labours. Mites must undoubtedly be the Number One pest with Pythium, Phytophthora and virus the worst diseases. Mary then gave an outline on the requirements for the export market and the standards required and we were left with no doubts that our quality **MUST** be high. There was a box of packed blooms donated by Flora Pacific so we were able to see what was required there.

Mark then went into detail on setting up an orchid growing business with details of numbers of plants, house size and bench size requirements with a very detailed study of the economics of it all. The economics really got discussion going and though it was all viable the person in for the 'fast buck' would need to think again. No-one has pulled out of the course but I would say there will be some very deep thought in their rooms tonight.

The final session of the day was taken by Alister Jamieson from MAF who specialises in cut flowers for the Department and he spoke on talks he has had with Flora Pacific and Fluer and gave his impressions on the present market and the future market outlook. This was a very interesting address with the outlook good for three years but perhaps a little uncertain after that. Who knows? Lectures finished at 5.00 p.m. but shifted to the lounge over a few drinks and 'orchid talk' continued to dinner time. With so much talk on

orchids one needed something to lubricate the throat.

Wednesday arrived and no lecture room today but field trips had been arranged. A Flock House bus took us first to the D.S.I.R. which is situated on the outskirts of Palmerston North. The laboratory where tissue culture experiments were carried out was the first call and then on to see the temperature control rooms. These rooms can simulate a wide variety of climates for experimental work and in two of these we saw kiwifruit plants growing and also grasses. Even opossum were housed in one at one stage for experimental work.

Of great interest to the group was the glasshouse where capillary watering was practiced. Instead of a bench for the plants a bed was constructed of blocks, a 7.5 cm layer of sand put down, a porous cover over the sand and the plants sat on top of this. The sand is then flooded each day and each plant then draws up its water requirement from this bed by capillary action.

The plants were in bloom and looked very healthy so this display was of considerable interest. A lot of the other non-orchid plants outside are watered this way. In the afternoon we visited Tudor Orchids owned by Mr and Mrs Elms, just out of Bulls, in their commercial orchid house which is of twin plastic construction. Afternoon tea was provided by them in their well kept 1908 gracious old home which in itself was of considerable interest to the group. Our thanks went out to the hospitality of the couple.

A few more drinks tonight with the endless discussion going on until well into the evening. Last night together and I don't think it will be quickly forgotten.

Thursday morning and the final round of lectures. Mary went into more detail of packaging and exporting of the blooms while Mark gave us more detail of the capillary water beds for the orchids plus designs of conventional and

non-conventional benching. He also spoke of research and what was being done at the Levin and Pukekohe Horticulture Research centres.

For the final hour we were split into three groups and separated to discuss cultivar selection and desirable cultivars, our impressions of the Research unit visited the previous day, our impressions of Tudor Orchids Nursery, three things which impressed us most about the course and three things we were less happy about with the course.

We were then brought back together and a spokesperson from each group aired our collective views. To sum up it

has been a very successful week both inside the lecture room and socially in the evenings. Everyone must surely have gained along the way and will now all be on their way home with their own thoughts and the will to do that little bit better. I believe the course is to be run again next year and I would truly recommend it.

I am the last to leave and as I wait for the car to take me to connect with the bus home there is just time to finish these notes, reflect on events of the past few days and then off back home to the one who helped make it possible to have been a participant.



## PRESIDENT'S COMMENTS:

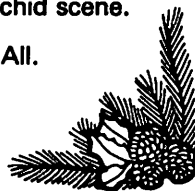
The orchid season was rather hectic. On checking through the Show Dates Schedules, I wonder how we manage to display and attend the Shows we do. Over a four week period, there are some 25 Orchid Shows and many of these 2-3 days in duration. It is rather unfortunate that Orchid Shows all fall in such a short period of time but that is when the majority of flowers are blooming and therefore we are governed by that. This means that many of our Orchids are only seen by people in their own locality. With the International Conference coming in 1985, it will give us the opportunity to see blooms from all around the country at one time, plus a number of blooms imported from overseas.

The Magazine Committee has been extremely active and its success is now showing with the establishment of regional representatives in all areas of New Zealand. I trust you will give them your full support in subscribing, producing articles, and preliminary advertising in 'Orchids in New Zealand'.

Council are now in the initial stage of a World Promotion Campaign to build up to our World Conference in 1990 and we look forward to the 2nd International Conference in Wellington in October 1985 where many overseas guests will be 'seeking out' the New Zealand Orchid scene.

Happy Orchid Growing and Seasons Greetings to you All.

D. K. Bell  
President O.C.N.Z.



# To Cape York and Back

by *Glenis Day of Christchurch*

I enjoy attending the meetings of my local Orchid Society, it is the highlight of the month's activities.

I also enjoy receiving my copy of "Orchids in New Zealand" — it is the highlight of the postie's bi-monthly visit!

So, why do I feel so guilty? Well I keep hearing about lack of material for the magazine and about all the spaces that could have been filled by ?, if only he'd sent it in!

Yes, George Fuller, I **DO** feel guilty and conscience stricken. I've never really thought I had much literary ability, but you assure us all reader's copy can be rehashed — so here goes!

Sometime in 1982 I read an advertisement in the Australian Review for the 8th Australian Orchid Conference to be held in Townsville in late August/September of the same year. Until then I'd only ever been to one Seminar at Blenheim, which was to my new and enthusiastic interest a really great weekend. Lots of learning and new folks to get to know.

I looked at my bank book and then at my ever indulgent husband who surprisingly said "Why not" — Wow! North Queensland during a grotty Christchurch winter!

The registration forms came back — but — what's this? A pre-Conference Orchid Safari to the Iron Range on Cape York. A hunt on the map produced a description of the last remaining lowland rain-forest — a unique, protected National Park full of orchid species in their natural state.

Another look at the bank book. Could it stand a fortnight of safari-ing in North Queensland as well?

Well, with a lot of budget stretching and anticipation, August 1983 finally arrived and we winged our way to Cairns to meet up with 23 others of all ages, including four New Zealanders (why haven't one of them told this story?), a strange looking vehicle called "Mulloki" (Aborigine for Swamp Devil), an

enormous amount of stores to fit "somewhere" and the driver/leader/cook/tour guide, who turned out to be a delightfully cheery ex-patriot young New Zealander.

Our first camp-site was at Helensvale, an historic old pub on the edge of the Bloomfield rain-forest. A trip to this beautiful forest in torrential rain turned up all sorts of goodies. Clouds of *Den. teretifolium* high in the trees, dainty *rigidum* on the lower branches, *smilliea* just within reach (don't touch!), long vines of *Bulbophyllum baileyi* and *Cymbidium madidum*, *suave* and *canaliculatum*. What a treat! It was a whole new world — lovely *Monstera*s, palms, mosses and Bird's Nest ferns everywhere. Seemingly continuous rain keeping it all shiny.

Back on the road heading north. Much dryer now and quite barren, with *Melaleuca* trees the only break on the landscape. The "road" had large areas of "bulldust", which is not obvious until it is hit and the vehicle ploughs through fine, talcum-like red dust which pervades everything.

After several days together, a good spirit of friendship developed with experiences shared and talked over in the evenings around the fire. Someone saw a kangaroo and its Joey and some others an elegant Bustard bird crossing the road to merge with the scrub to look like another termite hill, while yet another group saw a Bower Bird nest complete with coloured glass and stones, built to attract a mate. Clouds of

pink and grey Galahs and colourful green and red Parakeets and the never ending red dust road and termite hills.

Stops were made in Cooktown (where sadly *Den. bigibbum* was hardly to be seen because of collecting), at the historic Quinkan Aborigine paintings at Split Rock, Laura, onto Goen and finally to the Iron Range, where, to quote our driver, it was "goodbye to hot showers and flushing dunnies". Here we were to stay for four days with expeditions to Mount Tozer which revealed clouds of *Den. ruppianum* growing on the rock piles and also *Den. nindii*, *johannis* and *canaliculatum*, *Oberonia carosa* and *Sarcochilus* and our first sighting of a python which just couldn't wait for more than a quick photo before it escaped. A trip to the Aborigine settlement at Lockhart River mission, with all eyes peering up into the trees being rewarded with more orchids, including a large cluster of *Den. discolour* looking magnificent in its untouched natural habitat. The "road" was really a bog track with only the powerful four-wheel drive vehicles getting through (Barry Crump country), with time to stop and skin a long-dead, but beautiful green snake to make someone a belt and hunt for a Brush Turkey next 3 metres across and 1½-2 metres high.

After leaving this nature's paradise behind, we drove to Weipa to tour the bauxite mining and aluminium production before flying down to Townsville and the Conference.

Here we were welcomed by the people of Townsville who had organised a very busy week. The drive down the main street proved it was "orchid country" — lovely *discolour* and *johannis* attached and growing well on all the palms in the centre median strip. Lectures were held at the James Cook University and included such well known names as Peter Laverack, Kevin MacFarlane, Dr. Phillip Cribb of Kew Gardens (a dashing young man who apologised for being "young" after

hearing everyone expected an elderly gent!), Frank Shride of Beall's and the impressive list goes on.

A hive of activity at the Greek Community Hall produced a magnificent show, with flowers, colours and sizes South Islanders could only gape at. They sure know how to grow beautiful orchids in Queensland!

And so home again to my little 3m x 3m with renewed enthusiasm and a nagging dream to do it all again — one day.

If there is a message in this, it is — don't just go to Sydney, Surfers or the other big smokes of Australia — if you are an orchid lover and enjoy the outdoors, get into the rain-forest and dryer forest areas and keep looking up — you will be well rewarded.



#### WANTED TO BUY

HELP! I cannot trace MARCH—  
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Please contact:

GEORGE FULLER  
25 VICTORIA ROAD  
NEW PLYMOUTH



# Fifth Asean Orchid Congress

by E. O. Campbell of Palmerston North

The Fifth Asean Orchid Congress held in Singapore from 1st-7th August had as its theme "Asean Orchids for the World". It was opened by the First Lady of Singapore, Mrs C. V. Devan Nair, and consisted of an orchid show, a seminar and a meeting of Asean delegates.

The beautiful Orchid Show was held in one of the spacious halls of the World Trade Centre which was specially carpeted in green for the occasion. The dominant flowers throughout were the colourful *Oncidium* 'Mary Gold' (now replacing the older 'Golden Shower'), *Vanda rothschildiana*, and the Philippine form of *Vanda sanderiana*. There was a poor representation of Asean terrestrial orchids, and especially of *Spathoglottis* and its many fine hybrids, all of which seem to have succumbed to virus infection.

Large exhibits came from each of the Asean nations — Indonesia, Malaysia, Philippines, Singapore and Thailand. Of these the most outstanding was that of Singapore which was professionally designed and utilised mirrors very effectively for reflecting the beautiful arrangements. Malaysia concentrated on a naturalistic setting of orchids against a background of stream, woodland and bird calls. The Philippines presented their orchids in an elegant, garden setting, reflecting peace and tranquility. Both the latter included a few interesting species orchids, amidst the more colourful commercial cultivars. Thailand and Indonesia relied on massed arrangements of cut flowers.

Many orchid societies arranged exhibits, including those of Johore, Melaka, Perak, Sabah and Selangor, the Nanyang Orchid Society of Singapore and the Royal Orchid Society of Thailand.

Large displays were also set up by public bodies such as the Zoological Gardens, the Parks and Recreation Department and by prominent growers and florists.

In the competitive sections judging was based on principles laid down by the Royal Horticultural Society, London. The award for the best species went to Mr Michael Ooi with an exhibit of *Phalaenopsis violacea* 'Lady Alba', a rare Malaysian native with a white flower ideal for breeding. The best cut orchid spray was a yellow *Cymbidium*, Arcadian Sunrise 'Golden Fleece' exhibited by Mrs Val Bayliss. The best plant of the show and the best hybrid developed in an Asean country was Mr Lee Shong Mai's *Renantanda* of an unusual coppery shade, a cross between *Vanda* 'Thanachai' and *Renanthera* 'Nancy Chandler'.

It was pleasing to find great interest in the exhibit by the North Shore Orchid Society which won first prize in the small landscape group. *Cymbidiums* figured prominently in the display, although many other genera were represented.

One section was devoted to floral arrangements of great beauty and originality, the best in the competitive section being judged to be a basket exhibited by Mr Scully Michael Jerome. The non-competitive section included arrangements by 25 members of Mrs K. B. Toh's Tokyo Flower Design Centre, as well as exhibits by members of the Singapore Sogetsu Association featuring Japanese Floral arrangement of the Sogetsu School. Both the President of the Singapore Sogetsu Association, Mrs Kazue Kim, and a member, Datin Lee Chee Shan, as well as Mrs K. B. Toh of the Tokyo Flower Design Centre gave demonstrations illustrating their methods of design during the period of the Show. These proved very popular with the public.

A large display, educational and trade section was kept extremely busy, with orchid plants and flowers selling at prices that we would consider very cheap. Here were examples of the breeding methods being used to produce types of miniature orchid plants, which are suitable for growing in the limited space of flats, and yet flower freely and frequently. Information on culture methods and equipment was readily available.

One of the main attractions at the show was due to the ingenuity of the Singapore Gardening Society. They realised that 1984 is a special year for Singapore in that it marks the 25th anniversary of the granting of independence. The main celebrations took place on National Day, 9th August.

As a contribution to the occasion they invited the noted flower arrangement artist, George Smith of England, to assist with judging the floral and landscape arrangements and to demonstrate at intervals during the show. He was received most enthusiastically despite a somewhat noisy background at times. He was also guest speaker following the Gardening Society monthly luncheon. On that occasion, in the quietness of the beautiful theatre of the historic Tanglin Club, he held his audience spell-bound for over two hours with his magical artistry and his detailed explanations of the principles on which the designs were based. It proved to be a truly memorable afternoon and more so because I, too, had been invited as a distinguished guest.

Of equal interest to the show was the Seminar programme held at the Goodwood Park Hotel. It occupied 2½ very full days. Speakers came from as far afield as Scotland, United States of America, Germany, Australia, New Zealand, Japan, India and Sri Lanka as well as from the Asean countries. A wide variety of topics was covered. They included orchid research into breeding, cultivation, production and

marketing, orchid physiology, mycorrhiza, diseases and pests, evaluation of commercial fungicides and bactericides, problems associated with plant quarantine, photographic techniques, conservation, folk lore involving orchids of the Asean region, casting orchids in plastic. As well several papers, illustrated by colour slides, showed the remarkable wealth of new or little-known orchid species from regions such as Sabah, Java and India, many of which would seem to have possibilities for commercial growing and breeding. The orchids of Australia and New Zealand, particularly the terrestrial species, also aroused interest.

Fortunately the contributions to the Seminar Programme will soon be available in published form.

It is hoped that New Zealand will also be represented at the First Asia Pacific Orchid Conference in Tokyo, 25th-30th October 1984.



## A LAMENT

*Why do I fail dismally to flower  
Denrobium nobile?*

*The experts say, and they should  
know, it's quite the easiest thing  
to grow.*

*Kind orchid friends, have sent to  
me, pieces of this with 'You will  
see,*

*You cannot fail to bloom this, dear,  
it blooms for me every year'.*

*All agog I watch it grow, lavish upon  
it all I know,*

*Of what the books all say is right,  
water, and bags and bags of light,  
Autumn comes, the nodules swell,*

*Ah! buds I chortle, are they hell!  
As each matures upon my troth, —  
another adventitious growth!!*

**Anon**

# Virus Disease in Orchids

*by Multi Flora — 34 Kingsview Road, Mt. Eden, Auckland*

It is impossible to state just how important virus disease is in New Zealand orchid collections. Figures from overseas give horrifying figures of 20% or more of plants contaminated in some collections. It is extremely important that plants which are virused are not used for proliferating purposes as this will just spread the disease further among growers and collectors especially now that international exchange of material is so common.

The viruses most commonly found in New Zealand are *Cymbidium mosaic virus (CMV)* and *Ondontoglossum Ringspot-Tobacco mosaic virus (TMV-O)*. These are mainly identified in cymbidiums because they are the most commonly grown species. There are a number of other viruses found in orchids but D.S.I.R. reports that these are extremely rare.

Virus particles act by invading cells and they then cause a malfunction in the cells ability to manufacture food. The result is a chlorotic or light coloured patch on the leaf. Other symptoms are colour break in flowers and these may also be mis-shapen and not open properly making them commercially non-viable as a cut flower crop.

At this stage there is no known cure for virus disease and the only method to protect the rest of the crop is to destroy the contaminated plant.

For the future well-being of the orchid industry in New Zealand, it is essential that any nursery or laboratory only propagates from carefully selected virus indexed plants and any organisation that does this has a great competitive advantage in the market place both locally and overseas.

## METHODS OF VIRUS DETECTION

There are three methods in use:

### 1. Indicator Plants

Inoculum from a suspected diseased plant is mechanically rubbed onto an indicator plant and this is

watched for visible symptoms of the virus. The time lag can be from a few days to 2-3 weeks and a large number of indicator plants are needed to test an orchid crop.

### 2. Electron Microscopy

The development of the electron microscope has made it possible to identify orchid virus particles from leaf material. The high cost of the microscopes limits the number of tests that can be done as not all centres have microscopes available.

### 3. Serological Tests

Animals have the quality to react to foreign proteins by the production of antibodies. It is the production of antiserum containing antibodies and its ability to combine with protein that stimulates the antibody formation that forms the basis of serological tests.

Because viruses are nucleoproteins and can induce antibody production serology can, and is being increasingly used for rapid and reliable detection of plant viruses.

Recently extensive work has been carried out using this method specifically for orchid virus testing. Using this serological method large numbers of plants can be tested for virus at one time and whole glass-houses can be checked and results known within one to two days. The method has been checked thoroughly and results correlate with those obtained by electron microscopy. Wide interest has been

expressed in the method in both Australia and U.S.A.

Briefly, the Serological test for C.M.V and Odontoglossum Ring Spot Virus is as follows:

Principle:

1. Small circular plugs of tissue from orchid leaves are punched out and inserted into wells (4mm diameter) cut from the agar gel (gel is 1mm thick).
2. A narrow trough is cut from the agar gel and the appropriate antiserum is pipetted into it.
3. An electric current is passed over the gel (gel is made up in a Barbitol Buffer pH 8.6) 150V (80-100mA) for 1½ hours.
4. Gels are then pressed and dried and stained with Amido Black (0.5% methanol/ water /acetic acid) and destained twice in destainer.

5. Results are seen as a precipitate that takes up stain. Virus migrates towards an opposing front of antibody. This interaction is specific and causes insoluble precipitates.

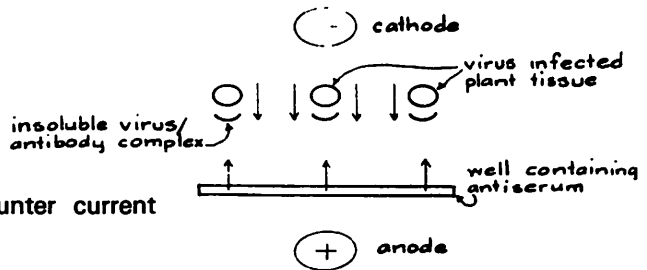
This method can be used to test a large number of samples on one plate. A more simple kit set method can be used and the antisera can be mixed together for this or used separately if individual virus identification is required.

#### REFERENCES:

K. S. Milne: Virus Diseases of Orchids Proceedings of Orchid Culture Workshop 1980 pp43-51. Department of Horticulture and Plant Health Proceeding No. 2.

P. A. Wyatt Cambridge: Some Thoughts on Virus Orchids in New Zealand November-December 1982 pp 78-80.

P. A. Wyatt Cambridge: Some Thoughts on Virus Orchids in New Zealand January-February 1983 pp 95.



Method is known as counter current immuno electrophoresis.

## 1990 WORLD ORCHID CONFERENCE

Submissions are called for a Logo or Emblem design for identification and promotion of the 1990 World Orchid Conference in Auckland.

Submissions may be made to:

The Secretary  
Orchid Council of New Zealand  
3 Morriss Place  
CAMBRIDGE

#### Conditions of Submission

Any item submitted need not necessarily be accepted.  
Submission close on the 20th March 1985.

# CYMBIDIUM CULTURE NOTES

*by Gordon Maney, Palmerston North*

## NOVEMBER — DECEMBER

Well, it's that time again; potting and/or cutting up those precious plants, cleaning all those husks away from the bulbs and examining each plant to make sure it is free of scale, insects, etc. It is important to remember not to overpot for there is nothing that causes more problems, no matter what genera. This applies particularly to the colder areas of New Zealand. Choose a pot that will give two years of growing space. Cut away all the dead roots and thoroughly wash the plant.

When the plants have been repotted place them in a shady place and for the next three weeks just spray over the top of them each day to encourage the new roots. If there is shrivelling of the bulbs it is generally because the roots have rotted, or at least some of them. Knock the plant out, clean off the dead roots and pot back into a smaller pot. With careful watering at this time of the year the plant will soon recover.

Remember never pot-on a plant bigger than a 10cm pot for by then the mix is breaking down and it is of little use to mix new with old; you run the risk of root fungus and a mass of rotten roots in the middle of the plant. I have mentioned this before because it is so important.

Shade your young plants and particularly babies just out of flask, the sun is getting really strong now.

Feeding is very important if you're to have good flowering next season. A dry feed of 4 parts dried blood and 4 parts Super and one of Potash, approximately 15ml to a 9 litre bucket or 25cm pot. Liquid feed once a week also with Lush or any Nitrogen feed until December. Don't forget to thoroughly water the day before feeding. Never feed a dry plant. Because we so frequently fertilize, leaching thoroughly three days after feeding to get rid of any build up of salts is most important.

Good growing and a merry Christmas.

## 40th ANNUAL SANTA BARBARA INTERNATIONAL ORCHID SHOW

On the 13th-17th March 1985, the Orchid Society of Santa Barbara and the Cymbidium Society of America are to host the Spring A.O.S. Trustee' Meeting. This event will be held in conjunction with two other equally exciting Southern California events, the 40th Annual Santa Barbara International Orchid Show and the 10th Annual Congress of the Cymbidium Society of America. Both the Trustees Meeting and the Cymbidium Congress will be held at the beautiful Miramar-by-the-Sea in Montecito. The entire hotel has been reserved for registrants, who will enjoy its private beach (and boardwalk!), tennis courts and swimming pool.

The Santa Barbara International Orchid Show, now in its 40th year, is well known as the show to attend on the West Coast by both domestic and foreign growers. For this very special year, the entire exhibition building at Earl Warren Showgrounds (22,000 sq.ft.) will be filled with orchid exhibits. A

conveniently located 10,000 sq.ft. circus type tent will house the sales booths.

The Cymbidium Congress will provide International Speakers (Holland, South Africa and Japan, so far!) on an unusually wide range of subjects. This is an excellent opportunity to hear speakers that might only be heard at a World Orchid Conference for a registration fee much less than that of recent Conferences.

Many unusual tours and parties have been planned, so if you would like to receive a detailed information package write to:

Santa Barbara International Orchid Convention,  
P.O.Box 1359,  
Goleta,  
California 93116,  
U.S.A.

You are assured of a feast of orchids, orchid talk and warm hospitality.



## SHOW REPORTS FROM NORTHLAND

The Bay of Islands Orchid Society held their first exhibition (over two days) — a great effort with many genera on display. Best Cymbidium in the Show was Allegro 'St. Lita' HCC/AOS, and best any other genera was a basketful of *Coelogyne cristata alba*. The Kaitaia and Districts Orchid Society put on an alcove and proudly presented in their display was a flowering plant of *Cryptostylus subulata*, one of New Zealand's endangered species.\*\* Another outstanding part of this Show was the Floral Art Section — members spent many hours on their displays and it was really magnificent.

\*\* Refer Doug McCrae, 'Native Orchid Conservation in the Far North'.

**Kaitaia and Districts Orchid Society** — Almost a year after formation this Society held its first Annual Show on the 7th September in Kaitaia. Commercial growers from Whangarei, with

their sale plants adding to the colour of the non-competitive displays, helped make this Show an outstanding success.

Much was learned by the Organising Committee from this inaugural event and it is intended that there will be a two-day Show next year. Best in Show was *Howeara Mini-Primi*. This plant had larger flowers than usual and with lots of spikes looked every part a winner.

**Warkworth and Districts Orchid Society** held their first public display in conjunction with the Warkworth Spring Floral Festival. The display area was the stage of the Methodist Church Hall. The central piece was a tree brought in by truck, draped with ivy and moss, surrounded by philodendrons and, of course, orchids of all shapes and sizes at different levels to catch your eye. Also used were large pongas, complete with fronds overhanging their display.

**Whangarei Orchid Society Exhibition** was held in Forum North on the 14th-16th September. This Society is no stranger to displaying orchids. The Show was made up of a mixture of trade displays and members alcoves, a tremendous effort by the members who used trees, water, mosses, etc., to hide and cover up pots wherever possible. This year the prize for best alcove went to Mrs Connie Kearney who used water as her main feature. Best Miniature Cymbidium — *Sleeping Beauty 'Sarah Dream' x pumilum*: Best Standard Cymbidium — *Loch Burnie 'Glen Mist'*: Best Any Other Genera — *Trichopilia suavis*.



## THE BRITISH ORCHID COUNCIL CONGRESS 1986

The British Orchid Council Congress and Orchid Show, 21st-23rd November 1986, will be held in the Fulcrum Centre, Slough, near London Heathrow Airport. The conference hotel is the Holiday Inn, Windsor, Ditton Road, Slough, Berkshire. SL3 8BT.

Enquiries for registration or show space should be sent to N. J. Heywood, Secretary, Thames Valley Orchid Society, who are hosting the show at 'Serendipity', 15 Copped Hall Way, Camberlay, Surrey, England GU15 1PB. Telephone 0276-26641.

Orchid enthusiasts who are contemplating a visit to Great Britain should make note of this important orchid event. They are assured of a warm welcome.

# UNUSUAL NAMES IN THE ODONTOGLOSSUM ALLIANCE

by S. G. Wray, P.O.Box 489, Whangarei

So often orchid growers are frightened out of growing plants because of their names. Everyone knows what a cymbidium looks like and perhaps a cattleya, but there it tends to stop, unless they see those unusually named plants in flower. This is unfortunate, as it is very easy to research their background to learn the growing conditions they require.

The Odontoglossum Alliance is one that is gaining popularity among growers in New Zealand. The Odontoglossum comes from high altitudes and if crossed with a lower altitude plant of a compatible family such as the Oncidium, the resultant seedlings will be more suitable for New Zealand, which means to the hobbyists that they will be hardier and will grow in either cool or warm house conditions. The plant family for this crossing would then be known as Odontocidium.

Another plant that has become very well known throughout the world and in New Zealand, is Vuylstekeara Cambria 'Plush' FCC/RHS/AOS. This plant is being sold in the thousands in the Northern Hemisphere as a pot plant because of the easy nature of the growing conditions required and the fact that it is extremely showy, but who would buy it when confronted with a name like Vuylstekeara from a catalogue. The intergeneric make-up of this plant is as follows: Odontoglossum, Cochlioda and Miltonia, and to think this plant was registered by Charlesworth & Co., of Sussex, Great Britain, in 1931 and it wasn't until the 1970's and 1980's that it became popular.

Lagerara hybrids — are made up of the Odontoglossum, Cochlioda and Aspasia families. Lagerara Imogene Keyes has been the most successful hybrid yet, many clones exist. The variety 'Everglades' which was on the front cover of the American Orchid Society Bulletin, is a rich velvet maroon flower with white picotee markings.

Because of its ability to flower from secondary nodes after its main flowering, this increases the flowering period for up to six months.

Another name which you probably would not look at is Aliceara. This is made up of: Brassia, Miltonia and Oncidium families. The cross of Aliceara Maury Island 'Fantasy' HCC/AOS grows without heat as do all the above. This clone has bulbs 12 cm high, leaves 45 cm long and 10 cm flowers autumn tonings, 8-12 flowers on one metre spikes. Extremely easy to grow and very pretty.

Maclellanara is a hybrid made up of Brassia, Odontoglossum and Oncidium families. Probably the most well known would be Maclellanara Pagan Lovesong 'Everglades' AM/AOS which has large 13 cm across green/yellow flowers with brown markings, semi-filled in star shaped, with heavy substance. A spectacular 'new' shape which will add interest to any adventurous collections.

Beallara hybrids are made up of Brassia, Cochlioda, Miltonia and Odontoglossum families, and with a combination like that you have temperature tolerant orchids which anyone can grow. Of the fourteen registrations from 1970 to 1980, 10 of these have Odontioda on one side, so all the hybridizers are trying to achieve temperature tolerant Odontoglossum type flowers. The most popular to date must surely be Beallara Tahoma Glacier of which two varieties stand out. 'Sugar Sweet' AM/AOS (Everglades Orchids) — this orchid is capable of growing

1.4m spikes, 20 flowers 15cm across, star shaped white with brown markings around the centre only. Another is 'lthan' AM/AOS — flowers 12cm on strong spikes, segments a little fuller, markings darker and more pronounced with excellent lasting qualities on plant or cut spike. Will be popular pot plants.

The plants described above are only a taste of what is available in the world of inter-breeding (intergenerics) of the Odontoglossum Alliance and if you come up against a plant family you are not sure of, get a copy of Sanders Registrations from your local Orchid Society Library and check it out. For all you know it might be something you can grow and perhaps surprise your friends when you flower them. You'll be surprised just how easy they are to grow.

Culture of these plants in our glass-house is as follows: Bark only ½-1cm size, no dust. You can of course use many mixes using charcoal, scoria, rice hulls, pumice or Becks Mix on its own, or do what a friend of mine does, he mixes everything he can find together and has good results. The most important thing to remember with mixes, they must be open. These plants do not like wet feet. We use plastic pots with good drainage and if necessary increase drainage holes (either drill or use soldering iron to melt the plastic). Feeding: we use Osmocote 9 month release and have increased our foliar feeding programme to once a fortnight using fish and lush alternately (there are other brands equally as good on the market). Pests: Red spider is no doubt the most persistent pest we have and have found that preventative spraying is the only way, and we spray using alternative sprays fortnightly. Doesn't matter what sprays you use but the most important thing is to change them as we have found the red spider builds up a resistance to one or two types of spray. Have even found a resistance to temic and now only use this material once a year, in January, when you find the red spider really bad. Be careful

when spraying, cover up with protective clothing and don't hang around after you have sprayed. It is also beneficial to shut your house up (if you can, after spraying) so the heat of the day will help kill your pests.

Because of the higher levels of warmth the insects become more active and there is a big possibility that they will be forced to move over the area that you have sprayed, thus killing them. Also concentrate on the under sides of your leaves.

Another thing that I have never seen written about pests is that if you have a really bad infestation, move as many of your pots and trays around the glass-house between spraying. This helps because if you spray from the same side every time you spray, the other side or back of the plant **never gets sprayed**. In fact, my benches are 50 cm away from the side of the glasshouse thus allowing me to spray from all sides. Expensive but I do have cleaner plants this way.

*Macleanara Pagan Lovesong Murray Anderson was pictured on the front cover of March/April 1980 issue of Orchids in New Zealand.*

Editor



**Aporostylis bifolia**  
[Rupp et Hatch 1946]

This rather quaint native orchid is found in most parts of New Zealand. The pink or white flowers are held on slender upright stems well above the sparse foliage. Also located on some outlying islands.

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# MY FAVOURITE TEN ORCHIDS

by F. L. Rowland of Kumeu

From time to time under this heading we see lists in one or another of the many orchid magazines published world-wide. These are, generally, the favourite varieties of well-known growers and breeders. But what about the preferences of the not so well-known, not so well endowed, hobbyist, collector and even local commercial and semi-commercial growers?

Beauty, we are told, is in the eye of the beholder. Fortunately, every pair of eyes sees differently. Big is beautiful to some, small to others, and there is such an infinite variety of each colour and shape that it is no wonder there is always something that will please someone.

In my own case, my wife and I started growing a few orchids some 37 years ago, shortly after we married, and whilst living in Rio de Janeiro, Brazil. There, we had a few 'things' growing on trees in our garden which turned out to be orchids — clumps of *Oncidium varicosum* and *Cattleya forbesii*. Need I say it was not long before sundry additions were made. At that time my wife's favourite was a *Cattleya aclandiae* which earned us a bronze medal at a Brazilian Orchid Society Show in Rio, and mine was the Colombian *Cattleya dowiana aurea*. I did have a small division of this but we left Brazil before it reached maturity. Since those days, orchids of many different species and innumerable varieties have passed through our hands, many leaving a sense of nostalgia.

Here then, are my favourite ten orchids — not necessarily in order of preference.

**Oncidiums** — for their dainty appearance, especially when in a large 'clump' in the open air. Well known to many as the 'dancing lady' as they flutter in a breeze in their bright fancy yellows picked out in browns.

**Miltonias** — look at you so solemnly and serenely in such a variety of lovely colours. They always give me a sensation of peace.

**Cattleyas** — and with these I include the *Laelias* and others of the alliance. Large and flashy, with almost every possible combination of colour, including a few verging on blue. At one end are the large 'chocolate box' blooms, and at the other the small cluster types, also with a wide range of shape and colour. From tropical to temperate to cool, and some grow naturally on bare rock.

**Cymbidiums** — somehow give me the impression of being stately and proud, perhaps because so many have an upright habit holding their blooms up to be looked at. Adaptable too, whether singly in a buttonhole or corsage or 'en masse' in a bucket.

**Masdevallias** — rather like lovable ragamuffins in their variety of odd shapes and colours, and because of their usually, small size, seem to be shy yet tough and begging to be noticed.

**Sophronitis** — so very bright in their stimulating reds that, in

spite of their size, they cannot be missed. Prolific too, as their colour is sufficiently dominant to be passed on to other species. Lovely in any collection, and always a show piece.

**Aerides** — for their really outstanding variety of eye-catching shapes. Some appear almost pre-historic while others could be science fiction fantasy. Unfortunately hard to grow without special conditions, but occasionally seen in New Zealand.

**Dendrobium** — when speaking of these I am confining myself to the nobile or soft cane varieties. Known to some by their German name 'doll's eyes'. The modern hybrids come in a variety of colours, and they do make a marvellous show when well grown with their long canes covered in relatively small round flowers with contrasting 'eye'.

**Odontoglossums** — and allied genera form another very attractive and decorative type. They are becoming more and more popular. Although relatively tough and hardy, they always appear, to me, as fragile, dainty blooms, enhanced by the variety of markings which, in many instances, resemble lace work.

**Vandas** — somehow always seem to have an exotic look associated in my mind with Malaysia, Indonesia and Thailand, mainly, I suppose, because of their monopodial growth and flowering habit which conjures visions of the native dancing in that part of the world — as seen on T.V., films, etc., as I have merely passed through that part of the world.

And then there are the remaining 17,990 or so varieties, all of which have their own wonderful beauty when you really look at them — as do most things in nature.

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## 5th ASEAN ORCHID CONGRESS SHOW

*by Roy Clareburt of North Shore*

The morning of the 30th June arrived fine but cool, as the group of seventeen, mainly members of the North Shore Orchid Society, gathered at the Auckland International Airport for the journey to the 5th Asean Orchid Congress and Show in Singapore. Over a cup of tea we prepared ourselves and waited with excitement for our boarding call. It duly came at 12.30 and it wasn't long before our flight was airborne. Flight time to Singapore was a long 10½ hours, passing over Sydney to Derby and on to Singapore.

It took some six hours to fly across Australia and one couldn't help but be amazed at the different types of terrain and the dramatic changes in colour from

green to brown and then to the dusty red look and as we approached the Simpson Desert in the middle of Australia, just south of Alice Springs,

the unusual ground formations. From the air it looked as though some giant had landscaped the area.

We arrived at Changi Airport at 7.30 Singapore time and stepped from our aircraft into 30° of heat. Quite a change from the 8° when we left Auckland. The new airport worked like clockwork, luggage arrived promptly, immigration only took five minutes (compare that with Auckland Airport) and within twenty minutes from stepping from the aircraft we were being escorted by our guide to our waiting bus for transport to the Nandiven Hotel.

At 8.30 the following morning found us bright and eager to move to the Show venue. After a slow taxi ride of some 3-4 miles in the heavy early morning traffic we arrived at the World Trade Centre where the 5th Asean Congress Show was to be held. Greeted by the Show Marshall, Show Convenor and Public Relations Officer, we were taken to where our display was to be staged and although all the other displays were completed, we were given an hour and a half to arrange our flowers before the judging started. Great assistance was given by members of the S.E. Asia Society and also six students (without whose help we would have had difficulty in finishing within the allotted time) from the University who were studying Botany and were impressed with our Cymbidiums. We lacked for nothing in the way of materials (a point well worth noting for the 1985-1990 Shows), heaps of fine fibre material — back-up plants — pots of ferns — stones for the edging — plenty of vases and bamboo containers cut in various lengths, from 15cm to 60cm, which turned out to be ideal for our flowers.

The bamboo containers were used in varying lengths and our Cymbidium stems complete with stem tubes full of water were placed in these and packed with the fine fibre material which allowed the flowers to be displayed at the best angle. The Show Committee is to be congratulated, we lacked for nothing.

Before we left Auckland we had arranged for the Maori Art and Crafts Centre at Otara to make up for us several Maori designs which could be carried in cartons and assembled at the Show and used as the main backdrop in our display. The N.Z. Government Tourist Bureau provided posters and photographic scenic cubes and the help given by the Singapore Manager was much appreciated. As we left Singapore before the Show closed, the Tourist Bureau staff dismantled our stand and hopefully they enjoyed the flowers.

We also staged a one square metre display promoting the 1985 and 1990 Conferences. Both displays attracted much interest, not only from the local public but from society members throughout South East Asia mainly because we had, in the main, a wonderful range in colours of standard, polymin and miniature Cymbidiums and these are not seen to any extent in that area.

It wasn't until later in the week that we learned that our display had received the Gold Medal Award for Display in the under Three Square Metres Class. One of the three Cymbidium blooms entered in the cut flower section was awarded 'Best Cut Flower of the Show'. The flower, Arcadian Sunrise 'Golden Fleece' was owned by Mrs Val Bayliss of Howick, Auckland who had supplied blooms for us to take as she was not able to travel. Imagine the surprise of our group when we learned of our wins. However, I must say that the cut flower stood out against all the other exhibits and was certainly worthy of its placing.

Now to the Show itself as viewed later by the group. The World Trade Centre is a huge display building with some five floors available for commercial displays of all kinds. The ground floor is a shopping complex. The Orchid Show covered one entire floor.

The first impression one gained was the spaciousness and the well planned layout. All the walkway floor area was covered with a green feltex type of

covering and inset in bright yellow were broad arrows showing the public the way you should view the displays and this made for less congestion. As well as the many classes of potted flowers in the Show there were many 5-7 metre and larger mass displays by commercial growers, Societies and Florists from nearly all the South East Asian Countries — Thailand, Malaysia, etc., as well as many displays from Singapore. Probably the three most outstanding exhibits were those by the Singapore Botanical Gardens, the Jurong Bird Park and the Orchid Society of Bangkok. The Singapore Botanical Gardens' entry was without doubt the largest and most striking display of orchids I have ever seen. The public walked through Dendrobiums, Renanthera, Vandas, Ascocendas, Oncidiums and other warm growing genera. A truly magnificent display. We were told that it took two full days to stage by 30 staff members from the Botanic Gardens.

The Jurong Bird Park display was in the Over Seven Square Metre Class and contained unique features. In the middle of a jungle of orchids was a combined waterfall-pond and in the

middle of the pond were four ducks swimming around and in the trees were brightly coloured parrots and comfortably perched at one end of the display was a huge owl. Yes, all were alive and appeared quite at home in their artificial surroundings. How they stayed I have no idea but we did notice a 'keeper' standing close by.

The Orchid Society of Bangkok display of a Jungle type setting and recorded jungle sounds, made this a display that let your imagination run wild.

In all, the Show consisted of 83 Classes and the organisers of it are to be congratulated on their presentation, layout, attention to fine detail that makes a Show better than just good. Friendly and helpful attitudes prevailed throughout.

We seventeen travellers will long remember, not only the Show itself and the hospitality shown us, but new friends who share a common interest and a great love for orchids. Our stay of six days in Singapore concluded and it was then off to Penang to visit other growers and just relax — but that is another story.

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## NATIVE ORCHID CONSERVATION IN THE FAR NORTH

*by Doug McCrae*

As a result of becoming aware of the serious and immediate threat to habitat in the Far North, I have devoted much time over the last three years to the conservation of native orchids.

With the intense pressure on much of the 'undeveloped' land for farm production, forestry, and tourism development, most of the best native orchid habitat is threatened. Indeed large areas have already been lost and, as I write, habitat of orchids in the endangered category is in the process of conversion to livestock farms. Due to the shortage of funds, and heavy workloads on area botanists, large tracts of land have never had comprehensive botanical surveys completed. Colonies of uncommon orchids may have been disappearing, without ever having been noted, for decades.

In recent years, as farmers sought income to offset the downturn in farming profitability all millable trees were removed from even the smallest of forest remnants in gullies.

I have seen thousands of epiphytic orchids destroyed in this way and have collected large numbers of dendrobiums, earinas, drymoanthus and bulbophyllum from the heads of felled trees.

Large scale exotic forestry development is presently being undertaken over the whole North Auckland peninsula. Predominantly, the land being used for this purpose is leptospermum manuka covered hill country. This is prime terrestrial orchid habitat, and on some slopes one cannot take two steps without trampling a *thelymitra*, *caladenia*, *pterostylis*, *corybas*, *microtis* or *prasopphyllum*, so dense are some colonies. Forestry development does not damage or destroy habitat completely, and in some instances provides new habitats awaiting orchid colonisation. However, the change in the predominant species from leptospermum to conifer does affect many biological aspects of the soil including moisture and acidity levels. As terrestrial orchids need symbiotic relationships with various fungi for germination and early growth, very specific habitat requirements are vital if colonies are to increase and prosper.

For the last three years I have been harvesting moss from various wetlands in the Mangonui County establishing a sphagnum moss farm on my property. This activity has enable me to spend much time in wetland and swamp habitat. A number of new records of colonies of *Cryptostylis subulata*, *Bulbophyllum tuberculatum*, *Thelymitra carnea*, rare ferns and other plants eventuated.

The pressure on wetlands for farm and tourist developments soon became apparent. I made application to the local Department of Lands and Survey for permission to botanize areas of Crown Land that were earmarked for, or in the process of development. Field and Ranger personel became aware of my 'recovery' work with orchids and offered assistance with information. Local people, who are also aware of my work, pass on information of logging on private land. Subsequently a number of salvage operations have been undertaken. The most recent, and perhaps the most important recovery has been of

about three thousand plants of *Cryptostylis subulata* (one of our endangered orchids). This colony was brought to the notice of the Department of Lands and Survey by the lessee of the property. I was contacted and after three collections, including one with the Kaitia Orchid Society, large numbers of plants were removed prior to new drainage work and grassing.

It is not always possible to save habitat, although this should always be given priority. Plants recovered in circumstances such as this can be transplanted to other safe habitat or to 'holding' areas pending identification of suitable sites.

I have been encouraging our local Orchid Society to become involved with native orchid conservation. As no other area in New Zealand with such diverse and important habitat is under so much threat, the need is great here and the Society can lead the way in conservation. By providing an example to other Orchid Societies, this may encourage orchid lovers to look at conservation in their areas.

To help with the cost of all this salvage work, I have been selling some plants through orchid growers and retail garden shops in the Auckland area. As I was not prominent in Botanical Societies and information on my 'recovery' work not available from the Auckland Office of the Department of Lands & Survey, misconceptions arose amongst conservationists about the sources of these plants. As site records of some of the less common or endangered plants were obviously incomplete, it was assumed that illegal collections were being made from Reserves.

The Native Orchid Group of the Wellington Botanical Society and The Native Conservation Council initiated very comprehensive publicity campaigns to stop these sales and others, presuming all to be based on illegal

collections. Fearing consequent illegal collections from wild colonies, if native orchids were selling at prices sometimes considered high, these people felt that something needed to be done quickly.

I have been in contact with those groups or individuals who showed most concern and trust that I have allayed their fears.

Mark Clements, of the Canberra Botanic Gardens has 'cracked the nut' of growing terrestrial deciduous orchids from seed by fungal inoculation. It is hoped that a start can be made shortly in New Zealand on identifying the various

fungi associated with the different species of orchid. Then breeding programmes can be undertaken which will increase the numbers of uncommon orchids for planting into suitable habitat. This breakthrough also has a commercial application which will help reduce the pressures on wild colonies.

*Doug McCrae has at his own expense saved hundreds, if not thousands, of *Cryptostylus subulata*, *Thelymitra carnea*, and redistributed them, free of charge, to the Orchid Society members in the North to see if they can grow them and some are having great success.*

**S. Wray**  
Orchid Council Executive

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## THE RE-DISCOVERY OF ONCIDIUM SPLENDIDUM

*Condensed from "The Woodlands Orchids" by Frederick Boyle (1901)  
Sent in by Ron Maunder of Tauranga*

Those who own the handsome *Oncidium splendidum* with its 1.030m branched stems of bright yellow and spotted brown 5-7 cm flowers and its heavy rigid 30 cm long by 7 cm wide leaves, may be interested in the following tale.

The plant was first introduced into France by an unknown French sea captain in the 1850's. By the time one flowered, only a few plants were to be found alive. These were very much sought after and divided so harshly that they soon died out. Records show that a plant consisting of one single leaf, sold for 30 guineas at an English auction in 1870.

The famous firm of Sanders of St. Albans, England, tried, as no doubt other nurseries did, to find the captain or the ship, or the part from whence it sailed; all to no avail. Sander, who was a master of organising orchid collecting expeditions to new frontiers, deduced that it came from the America's and most probably Central America. In 1878

he despatched Oversluys one of his most experienced collectors, to Costa Rica on an expedition.

For more than three years Oversluys travelled the country searching and showing a sketch of *Oncidium splendidum* to settlers without any success. During this time he sent back many new specimens in quantity, such as *Cattleya bowringiana*, *Oncidium cheiroporum* and *Epidendrum ciliare*. Eventually he decided that he would have to leave the Pacific side of Costa Rica and travel across to the Atlantic slope or the steaming lowlands beyond. There were no ports, no villages or towns on that coast at that time. In fact Indian tribes there were rather hostile to travellers.

He made his way from San Jose to the tableland where most of the settlements were in those days. At the edge of the tableland where the path descended 6,000 ft. to the Serebpiqui River, he and his guide made camp at a dilapidated old hut for the night. The temperatures were almost freezing. A group of peons bound on picking a fight were camped therein and Oversluys decided to withdraw and take himself and his collectors back a few miles to a hunter's hut for the night. As they departed the peons threatened to catch up with them down at the Serebpiqui River the next day.

Arriving at the hunter's hut just on dark, they met him returning with a deer strung over the back of a small ox. Oversluys was made welcome and that night they all dined on venison. The family's treatment of the ox intrigued Oversluys, who had never seen such kindness towards animals in Costa Rica. On enquiring, he gathered that the ox was used for hunting the deer. Upon more questioning he was invited to join the hunter early next morning on a stalk. The prospect of catching up with the villainous peons next day no doubt encouraged Oversluys to spend the day hunting instead!

The tablelands were mostly savannah or grassland with scattered trees and occasional belts of dense bush. The hunter had cut tracks in all directions through the bush to the edge of various clearings and next morning after testing the wind they set off in the dark with the wind in their faces. Just on daylight they reached the edge of a clearing and could soon make out several deer in the misty long grass of the clearing. The hunter crept out from the trees, walking backwards with his left arm around the ox's neck and his body stooped behind its shoulder. The ox marched on, zig zagging towards the deer. The hunter could see nothing with his back to them. When the deer eventually saw the ox and raised their heads in alarm, it stopped and grazed until they dropped

their guard. Again and again this happened until the ox got within 50 yards, which was about all the hunter's old gun could handle with any accuracy. The deer became more and more alarmed and grouped together. Suddenly just as they were about to flee, the ox wheeled around and a deer rolled over, shot through the chest.

It was broad daylight by now and Oversluys rushed forward to pat the ox and help lift the deer's body onto the ox's back. In lifting the deer he noticed the beautiful yellow and brown flowers and stiff handsome leaves which lay crushed under the beast. Great was his excitement when he confirmed that these were the long lost plants of *Oncidium splendidum* he had searched so long for.

So often had he ridden through the long grass and seen these flowers but never suspected that an *oncidium* would grow buried in long grass on open ground. All others he had seen and collected were found on trees. A short time later thousands of plants were on their way to England, to satisfy the wealthy orchid growers of the day.

The ox? Well it appears it had been trained as a calf, by the painful art of loosening its horns in their sockets and directing its movements by putting pressure on its horns. Later when the horns had healed, the beast instinctively responded to tapping on its horns! Thus in this case, the hunter was able to make his way almost to the centre of the herd of deer with his 'Judas' ox and gun them down at will.



# HOUSING OF ORCHIDS

*by D. K. Bell of Hamilton*

There are many factors to consider before reaching the final decision as to the most suitable type and construction for your orchids.

The following design considerations may help achieve the best greenhouse most suitable to each individual grower.

Considerations should be carried out under the following sections:

## PLANTS TO BE HOUSED

1. List of genera you intend to grow and under each section list the growing conditions each genera require.
2. Consider under each genera the method of staging or benching of these plants. Are you proposing to use tiered or flat benching or hang plants from rails?

Is heating required for each of the genera and note the variation in heat requirements for each of the types?

How do you intend to water and feed the plants plus the method of collection and storage of water and feeding systems?

The above schedule will provide information to assist with the following:

- Minimum size of the house required
- The height of side walls in relation to the staging of the plants grown and the staging methods
- Ventilating requirements together with lighting levels of each genera. This will also give an indication to the cladding and materials required under the construction.

Within the house interior design and layout, consider hanging sun-loving plants from and close to the roof but ensure that the smaller plants are towards the South or East so as not to keep too much sunlight from the larger plants below. Microclimates can be created within the glasshouse by increasing shading over certain areas or by partitioning sections of the house.

The warmer sections of the house should be on the southern end with the cooler sections towards the north. This enables more effective use of the heating system and ventilation is also easier during the warmer months.

Orchids should also be placed in their cultural types to enable watering and feeding, etc., to be more easily carried out. Where plants are hanging or tiered make sure that excess water draining from them does not drip on to pots and plants below — plants and composts may be disturbed, or new growth and spikes will damp off with excess moisture.

Once the requirements for your orchids have been set down, they should be then considered against the following to make the final decision on the greenhouse construction:

## TERMS OF HOUSING REQUIRED?

1. Depending upon the length of time you propose to reside at your present address, consideration should be given as to constructing a permanent or a relocatable structure. Many of the aluminium structures are kitset units and are easily dismantled and re-assembled.

If you will be constructing the greenhouse yourself use materials and construction methods that are easily available and understandable to you. It is obvious that if you are a metalworker and capable of welding structural frames, etc., that this method would be cheaper and easier for you to construct rather



than use materials that you are not familiar with.

It is possible to construct housing of either a temporary or relocatable nature out of any material giving the design and construction methods the correct considerations.

## COSTS

2. When considering the costs of housing it is obvious that the better structure will cost more but equally so, the structure will also have a greater life. Maintenance is a continuous problem with greenhouses where moisture, humidity, sunlight, etc., give materials a 'hard life'. If one uses untreated timber or lighter grade timber, because of its lesser cost, the lasting qualities will be shorter and the cost of maintenance will be higher.

It is therefore advisable to provide the best of materials and quality of workmanship in relation to the amount of funds one can afford to put towards your greenhouse structure.

## SIZE OF GREENHOUSE

3. When considering the size of the house, you should calculate the area you think you require and then build a house twice that size. A greenhouse can never be too large, as it will be only a short period of time before the extra space will be utilised.

In building smaller greenhouses, the smaller the house the greater the temperature differentiation is within the house.

The surface area of the structure in relation to the interior volume is much higher and is therefore more prone to sudden increases or decreases in exterior air temperatures. This creates difficulties in being able to provide optimal growing conditions within the greenhouse.

Smaller houses are also less conducive to free circulation of air within the house and therefore plants need to be spaced further apart to allow for better air circulation or additional fans and ventilation systems are required.

## LOCATION AND SITING

4. In selecting a site for your house a number of aspects need consideration:

- (1) Firstly check with the Local Town Planning Authority for the siting and positioning allowable in your area. This varies in many Local Bodies and considerations are given to area of buildings on your site, access to rear yards, and separation distances from side yards — in some cases dispensation or Town Planning permission is required.

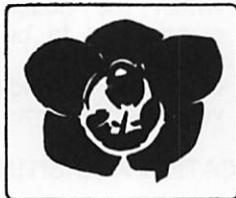
- (2) It is desirable that:

- (a) Early morning sunlight is obtained and is unobstructed.
- (b) Any shading from trees and buildings during the winter is not desirable especially in early morning.
- (c) The siting area should be as draught free as possible, but yet allow a good flow of fresh air to aid ventilation within the house.

If careful consideration is given to the siting and style of the greenhouse it can be made to be an integral part of the garden and landscape and not an obtrusive structure in the back yard.

The expense of the construction together with the valuable orchid collection within the house, it is desirable to use this as an extension of your living space. After all, many of us seem to live in our greenhouses.

In further articles aspects of the various types of constructions and materials will be discussed giving their various attributes for your consideration.



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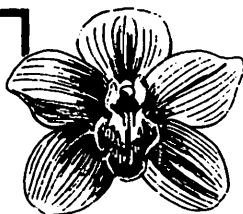
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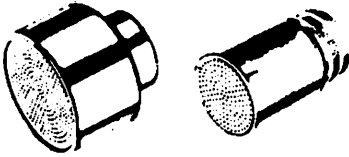
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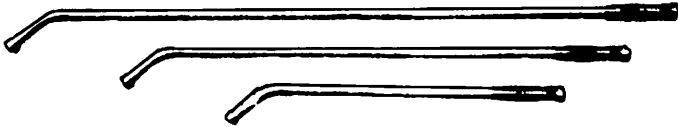
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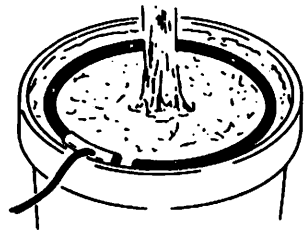
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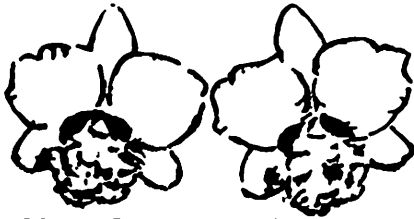


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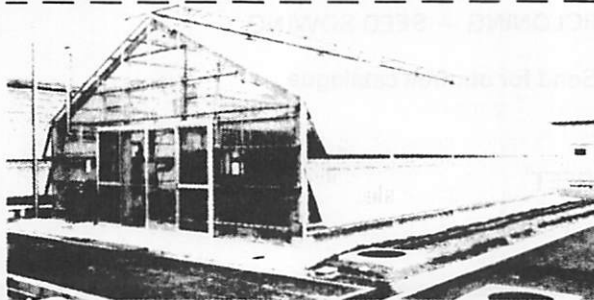
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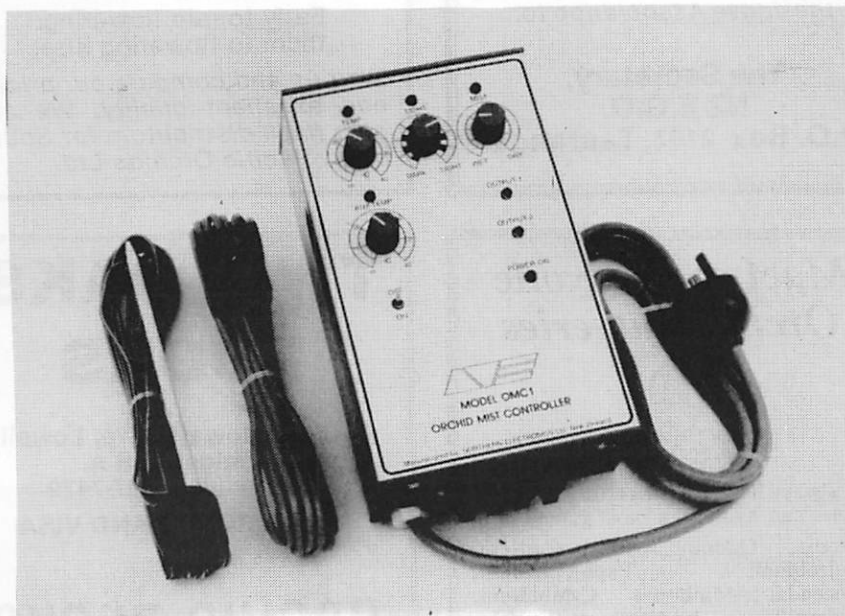
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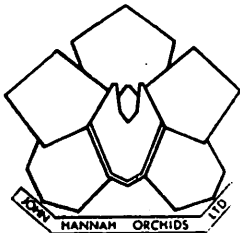
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