

Orchids

IN NEW ZEALAND



Volume 12 — No. 2
March/April 1986

Larsen's Orchids

**SPECIALISTS IN STANDARD CYMBIDIUMS FOR THE COMMERCIAL
CUT FLOWER GROWER**

Our high performance clones are chosen especially for the export trade. We offer a good range of whites and colours in early and mid-season flowering times. Our flasks are top quality, and the plantlets are vigorous and healthy.

Price list on request.

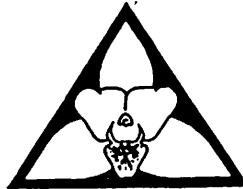
HELMER AND JANICE LARSEN

Nursery: 16 Parker Road, Oratia, Auckland
Phone: (09) 817-8429

MacLeod's Exotic Orchid Nurseries

Mail Order Specialists

P.O. Box 4469
Christchurch
New Zealand



We always have an interesting range of hybrids and species of most genera . . .

Miltonia, Cattleya, Dendrobium, Vanda,
Paphiopedilum, Cymbidium, Odontoglossum,
Lycaste, Zygopetalum, Phalaenopsis,
Masdevallia, Coelogyne

. . . and lots more

If you are a serious grower or just starting you should be on our mailing list.

Write today for your free copy of our current illustrated catalogue.

We ship year around and guarantee safe arrival, anywhere!

Nursery: 547 Harewood Road, Harewood, Christchurch
Visitors are welcome by appointment

O.C.N.Z. OFFICERS:

President:
MR D. K. BELL
(Waikato O.S.)

Secretary:
MRS P. MARTIN
3 Morriss Place,
Cambridge

Treasurer:
MR M. CLARK
C/o 3 Morriss Place,
Cambridge

EDITORS:

N. C. & E. M. MILLER
Te Akau Road, R.D.4.,
Rotorua

All editorial and advertising material
to be sent to the Editors.
Advertising rates available from the
Editors.

SUBSCRIPTIONS:

Vol. 12, 1986 (6 issues)
(including postage): \$10.00

Subscriptions and all enquiries
relating to subscriptions to:

Distribution Secretary:

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

Back Issues Secretary:

MRS G. ANDERSON
421 Pukehangi Road
Rotorua

Opinions expressed by authors are
not necessarily endorsed by the
O.C.N.Z.

The O.C.N.Z. does not assume
responsibility for any transactions
between readers and advertisers.

Colour Separations courtesy of
Quadra Scan (Wellington) Ltd.

Printed by W. J. Deed Printing Ltd
9 Martyn Street, Waikuku
Phone (085) 69-630

Orchids

IN NEW ZEALAND

incorporating 'The New Zealand Orchid Review'

OFFICIAL PUBLICATION OF

ORCHID COUNCIL OF NEW ZEALAND
NEW ZEALAND ORCHID SOCIETY

VOL. 12, No. 2

MARCH/APRIL 1986

CONTENTS

Pesticides - to be used with respect, not fear - Gary M. Barker	43
Taupo Orchid Society Annual Field Trip for Native Orchids - Max Gibbs	49
Phalaenopsis Culture - Bill Livingston	55
2nd N.Z. International Orchid Conference - 'An Element of Chance' - Mike Wilton	58
- Cattleyas in the Conference Show - I. D. James	60
- Slipper Orchids at the Wellington Conference - Ronald Roy	63
- Trophy List	65
Johann George Adam Forster (1754-94) - Ian St. George	66
Norm Porter's Gold Medal	68
Cymbidium Culture Notes - G. Maney	69
Taranaki Orchid Society Summer Show - D. Whittaker	69

ILLUSTRATIONS

<i>Caladenia lyallii</i>	50
<i>Adenochilus gracilis</i>	51
<i>Calochilus robertsonii</i>	52
<i>Aporostylis bifolia</i>	53
<i>A. bifolia</i> , 2 forms	54
<i>Odontioda Valerie</i>	58
<i>Sarcochilus hartmanii</i>	59
<i>Dendrobium Sunglow x tetragonum</i>	59
<i>Miltonia Mary Stewart</i>	59
<i>Odontoglossum trilobum</i>	59
<i>Oncidium Moir x Odontioda Eridge</i>	59
<i>Sl. Afric 'Kaimai'</i>	60
'Waikato Milk Churn': Miniature <i>Cattleya</i> Hybrids	61
<i>Lc. Chit Chat 'Tangerine'</i>	61
<i>Paphiopedilum Goultenianum 'Geyserland'</i>	64
<i>P. haynaldianum</i>	64
<i>Microtis unifolia</i>	67
<i>Thelymitra longifolia</i>	67
Norm Porter's Gold Medal	68

FRONT COVER

Maxillaria Sanderiana: Considered the finest of the Maxillarias, this species originated in Ecuador. The flowers are large (up to 15cm) and fleshy. It should be grown in a basket, as the short flower scapes (or stalks) are usually inclined downwards.

Grower: J. Campbell

ANNUAL GENERAL MEETING

of the ORCHID COUNCIL OF NEW ZEALAND

on SATURDAY 21st JUNE 1986
at GRAND HOTEL, BANK STREET, WHANGAREI
(detailed information is available from your Society Secretary)

Delegates and Observers are welcome.

To allow for planning, please inform **CONZED SECRETARY,**
who will be attending, as soon as possible.

PROGRAMME

Friday 20th
Evening

Drop-in Centre: Hard of Hearing Centre,
Mill Road.

Saturday 21st
Morning
1.00 p.m.
Evening

Nursery visits
A.G.M., Grand Hotel
Smorgasbord, Grand Hotel
\$16.00/meal, NO LATE BOOKINGS.
Book directly through
S. Wray, P.O.Box 489, Whangarei

Sunday 22nd
Morning

Nursery visits.

ACCOMMODATION

Book EARLY direct to motel/hotel of your choice. Your Society Secretary has information on these. Some private accommodation is available. Again, see your Secretary for information, and notify the organisers NOW.

CHECK

- Tell: 1. Conzed Secretary - who coming
2. Syd Wray - dinner bookings
3. Motel/Hotel - for booking

(or organisers for private accommodation)

The 38th ANNUAL GENERAL MEETING of the NEW ZEALAND ORCHID SOCIETY (INC.)

will be held at 8.00 p.m. on
WEDNESDAY 21st MAY in the
MT. ALBERT WAR MEMORIAL
HALL

2nd N.Z. NATIONAL JUDGING SEMINAR

Queen's Birthday Weekend at
Taupo

All OCNZ and NZOS Judges and
associates are invited.

Please contact your regional
chairman for details or the
organiser - Mr R. Maunder,
P.O.Box 2107, Tauranga South.
Phone (075) 25-570.

PESTICIDES - TO BE USED WITH RESPECT, NOT FEAR

Gary M. Barker

The growing of orchids for hobby, show or commerce requires the use of pesticides for the prevention and elimination of pests and diseases. The use of pesticides is often approached with a great deal of apprehension, basically resulting from a lack of understanding of the chemicals involved and their correct use.

This article provides some basic information on pesticides, so orchid growers can go about selecting and using pesticides in a safe and efficient way.

PESTICIDE FORMULATIONS

Pesticides we use may be thought of as an *active ingredient* plus a *carrier*. The carrier mainly provides a medium in which a relatively small amount of the active ingredient is dispersed in a convenient form.

In a commercial product the active ingredient(s), the amount present, and the formulation are stated on the label.

SOLID MATERIALS

The amount is usually expressed as "% w/w" (weight to weight). This means the weight of the active ingredient per 100 parts by weight of the formulation. For example, a wettable powder or water-soluble powder containing 25% w/w of active ingredient would contain 25g of active ingredient per 100g of formulation. To determine the quantity to put in the spray tank you would measure by weighing.

LIQUID PREPARATIONS

The strength of these is expressed as "% w/v" (weight to volume). For example, a 25% w/v emulsifiable concentrate would contain 250g of active ingredient per litre. This method of measuring liquids has the advantage that concentrates can be measured by volume, not by weight.

The different formulations of agricultural chemicals are described here.

SOLIDS

1 Powders

- (a) *Water-soluble powders (WSP)*: Powders which readily dissolve in water to form a true solution.
- (b) *Water-insoluble powders*: These include
 - (i) *Dusts (D)*: Finely divided powders not soluble in water.
 - (ii) *Wettable powders (WP)*: Finely divided powders that form a moderately stable suspension in water.
 - (iii) *Colloidal powders (CP)*: Very much finer than wettable powders and form a virtually non-settling suspension in water

2 Pellets (P) or Granules (G)

These are a mixture of active ingredient(s) and an inert carrier with a particle size greater than dusts.

There are two types:

- (a) *Dispersible*: Fairly rapidly disintegrated, particularly by water.
- (b) *Non-dispersible*: The active ingredient is slowly released.

3 Baits (bt)

In baits the active ingredient is mixed with a food, and possibly other materials, to attract the pest.

LIQUIDS

1 Aqueous Concentrates (AC)

These are solutions of the active ingredient in **water**. They form a true solution when diluted with water.

2. Non-aqueous Concentrates (NAC)

These are solutions containing the active ingredient in oil or other solvent - **not water** - and used as such or diluted to form a true solution.

3 Emulsifiable Concentrates (EC)

These are solutions containing the active ingredient in oil or other solvents and when water is added they form an emulsion of **oil in water**.

4 Inverted Emulsifiable Concentrates (In EC)

These are solutions containing the active ingredient in oil or other solvents. When a specified amount of water is gradually added they form an emulsion of **water in oil**.

Note: This differs from the emulsifiable concentrate which forms an emulsion of oil in water.

5 Suspension (Sn)

These are dispersions of solid particles of active ingredient in a non-solvent liquid.

6 Colloidal Suspensions (CSn)

These are similar to suspensions but the solid particles are very much finer.

GASES

1 Fumigants (Fum)

These function or disperse as a gas.

2 Aerosols (A)

Preparations of active ingredients in solution which when liberated, using liquidified gases as a propellant, form a cloud of very finely divided solid or liquid particles that may remain suspended in air for several hours.

3 Smoke (Sk)

Preparations of active ingredient and a heat-producing material which,

on burning, disperses the active ingredient as vapour or particulate matter.

APPLYING AGRICULTURAL CHEMICALS

The manufacturer formulates the chemicals so that they are convenient for application. It is the users' task to see that they are properly applied. To do this take the following steps:

- (a) Check that it is permissible to apply the materials.
- (b) Know how much to apply.
- (c) If mixing is necessary, calculate how to mix the material so that the correct quantity is applied.
- (d) Check that the mixture is in a suitable form for spraying.
- (e) Spread the material evenly and in such a manner that drift or health hazards are reduced to a minimum.

After diluting to the concentration required for application, check the following points:

- (a) Check that the correct diluent has been used.
- (b) If a water-soluble powder is used, see that there is no undissolved material in the spray tank. The solution should be clear.
- (c) See that wettable powders are evenly suspended. There should be no lumps of material in the tank.
- (d) Diluted emulsifiable concentrates should be homogeneous. See that there is no settling out into layers of liquids.

TOXICITY

LD₅₀ is a measure of toxicity and refers to the amount of active ingredient necessary to kill 50 percent of the test mammals (e.g. rats). It is usually expressed milligrams (1/1000th of a gram) of chemical per kilogram body weight of the test animal. Tests are carried out to determine toxicity when fed through the mouth (oral) and when applied to

the skin (dermal). Low figures indicate greater toxicity than higher figures which are relatively safer.

For example, ocamyl is very toxic when taken orally, as it has an oral LD₅₀ of 37 mg/kg. It is relatively safer if absorbed through the skin as it has a dermal LD₅₀ of 2960 mg/kg.

Under the Toxic Substances Act 1979 pesticides are classified by hazard which takes into account the concentration of active ingredient and

their state (whether liquid or solid). Criteria used to classify the hazard of chemicals are shown in Table 1. These figures provide only a broad outline of hazard classification as other factors may also have an influence. The signal wording warnings provide instant information to the user as to the likely hazard when using a pesticide. However, precautions on the label should also be consulted prior to handling and application.

Table 1: Hazard Classification

Class	Signal wording	Oral LD ₅₀		Dermal LD ₅₀	
		Solids	Liquids	Solids	Liquids
1	Deadly poison	5 or less	20 or less	10 or less	40 or less
2	Dangerous poison	5-50	20-200	10-100	40-400
3	Poison	50-500	200-2000	100-1000	400-4000
4	Harmful substance	500+	2000+	1000+	4000+

SAFETY

READ THE LABEL!

Providing you follow the instructions on the label, you are unlikely to harm either yourself or anyone else.

The health precautions are generally put in a rectangular box to highlight them. These precautions are decided upon after careful analysis of the data submitted by manufacturers on the toxic properties of the pesticides. Labels for the more toxic chemicals include details of first aid; for highly toxic chemicals they also describe the symptoms of poisoning.

WEAR PROTECTIVE GEAR

Protective clothing is important. Many chemicals can be absorbed into the body through the skin, resulting in poisoning. The risk of this is greatest in hot weather when the user is sweating. As well, many chemicals can burn or irritate the skin. Always

wear a long-sleeved shirt, long trousers or overalls and a hat of some sort. For more toxic chemicals, you also need gloves, waterproof outerwear (preferably made of heavy PVC) and gumboots. The label will give details.

Clothing worn during spraying should be washed after use. Contaminated clothing should be washed separately from the general wash to avoid cross-contamination.

When working with liquid concentrates, there is often a danger of a splash in the eyes. This not only damages the eyes, but also allows a significant amount of the chemical to be absorbed in the blood stream. Simple goggles or a face shield will protect against this. Eye protection is most important if you wear contact lenses, because the chemical can get in behind them. They must be removed before the eyes are washed and in the time this takes, serious damage can occur.

PROTECT YOURSELF FROM INHALING FUMES AND SPRAYS

The gear you use depends on the pesticide you are using.

A simple gauze nose mask (dust mask) will only protect you from dust and liquid particles. It will not protect you from gases or vapours. Use one only when handling nuisance dusts and very low hazard pesticides.

Use a cartridge or canister-type respirator when:

- There are toxic dusts or vapours.
- The droplet size is very small (e.g. ultra low volume spraying).
- Spraying indoors or in confined spaces.

Use the correct mask or respirator for the pesticide you are using.

There are two main types of respirators:

One or two cartridge respirators:

These are light and protect you from dusts and low concentrations of gases. They have a filter and an absorbent cartridge. The filter collects dust and mist. The cartridge removes gas and vapour.

The full face respirator: These have a large canister to filter the air you breathe in. Use one when there is likely to be a high level of toxic vapours, or when you are in a confined space for a long term.

Cartridges or canisters need to be changed after eight hours use, or immediately if you can smell the pesticide through your mask.

Personal Hygiene

Always wash your hands and face before you eat, drink, smoke or use the toilet. Wash straight after you have finished using or mixing the pesticide. Also take a shower after you have finished spraying, so any spray is washed away from you. Detergents are better than soap for removing oil-based materials. Wash by rubbing your hands, or using a

cloth. Don't use a scrubbing brush, as this can damage the skin and help pesticides enter your body.

Mix Chemicals Carefully

Greater precautions are necessary when mixing than when spraying as you are handling the concentrated material. Make sure your measurements are accurate and clean up any spillages promptly. Always use a paddle for stirring to ensure there is minimal skin exposure. If any concentrate is spilled on your skin, wash it off immediately.

Store Chemicals Safely

By preference, all chemicals should be stored in a locked shed, safely out of reach of children. Over 60 percent of all poisonings with pesticides involve children under five years old, who cannot read the label. It is your responsibility to ensure that children cannot come into contact with chemicals.

Chemicals should also be kept away from work areas and separate from other stored materials such as animal foods. Always leave chemicals in their original containers, or if you must put some into another container, at least make sure it is not one normally used for food or drink. Check that containers are not likely to leak.

Dispose of Empty Containers Properly

Empty containers must be disposed of carefully, so as to ensure that rivers, streams and other water sources are not polluted and that unsuspecting people or animals are not exposed to residues of concentrate. Crushing or burning, followed by burial, is generally the best method.

Compatibility of Pesticide Mixtures

Most pesticide labels now carry information on a range of compatible products. There are two aspects which should be considered:

Physical compatibility

When two or more compounds can be mixed without affecting each other's physical properties, they are said to be physically compatible. Incompatible chemicals react with each other and flocculate in the spray tank.

Some chemical mixtures will always flocculate, but mixing procedure can substantially alleviate potential problems.

Pesticides should not be mixed as concentrates. The correct procedure is to partly fill the spray tank with water then add each pesticide individually. The agitation system should be used to thoroughly mix each pesticide before adding the next. The mixture should then be applied immediately and not allowed to settle or stand for any period.

Mixing order is important with some chemicals. Flocculation can be avoided by following the procedure suggested on the label.

Biological compatibility

When two or more compounds can be mixed together without affecting each other's pesticide properties, they are said to be biologically compatible. Incompatibilities can occur as a result of physical reactions between the pesticides or through interference with their specific mode of action.

Strongly alkaline materials such as Bordeaux mixture and lime sulphur can reduce the effectiveness of many insecticides and some fungicides.

The possibility of emulsifiable concentrate formulations causing damage on crops can be enhanced when used in mixture with some normally safe wettable powder or suspension formulations.

A slow-acting translocated herbicide can have its function impeded when mixed with a fast acting contact herbicide.

P.O.Box 90
Ohaupo

Table 2: Fungicides used on orchids

Chemical Name	Trade Name	Hazard Classification	Mammalian Toxicity LD50	
			Oral	Dermal
Benomyl	Benlate	Harmful substance	5000	1000
Captan	Yates Captan 80WP	Harmful substance	8400	-
	Captan 80	Harmful substance	8400	-
	Orthocide 80W	Harmful substance	8400	-
Copper oxychloride	Cobox	Harmful substance	800	-
	Cop-ox	Harmful substance	800	-
	Cuptravit	Harmful substance	800	-
	Copper oxychloride	Harmful substance	800	-
	Recop	Harmful substance	800	-
Cupric hydroxide	Kocide 101	Harmful substance	700-1000	>1000
Etridiazole	Terrazole	Harmful substance	2000	1366
Iprodione	Royal	Harmful substance	3500	-
Mancozeb	Dithane M45	Harmful substance	5000	-
	Mancozeb 80W	Harmful substance	5000	-
	Manzate 200	Harmful substance	5000	-
Metalaxyl + manozeb	Ridomil	Harmful substance	met. 515-868	met. >3130
Procymidone	Sumislex	Harmful substance	6800-7700	>2500
Triforine	Saprol	Harmful substance	>6000	-
8-hydroxygquin-dine sulphate	Chinosol W	Harmful substance	1200	-

Table 3: Insecticides/Miticides/Molluscicides

Acephate	Orthene 75	Poison	866-945	>2000
Acephate + triforine	Saprene Shield	Harmful substance	See individual chemical	
Azinphos-methyl	Gusathion	Dangerous poison	7-13	280
	Ispray Azinphosmethyl		7-13	280
Azocyclotin	Peropal	Poison	76-99	1000
Carbaryl	Ispray carbaryl	Poison	400	1500
Cyhexatin	Plictran 600F	Poison	>2000	
Diazinon	Basudin 50	} EC poisons WP harmful substances	300-600	1200
	Dyzol 80EC		300-600	1200
	Gesapon 80EC		300-600	1200
	Ispray Diazinon 50W		300-600	1200
	Shell Diazinon 80		300-600	1200
Dichlorvos	De De Vap	} Dangerous poison	25-30	75-900
	Nuvan		25-30	75-900
	Vapona concentrate		25-30	75-900
Dicofol	Kelthane 35	Harmful substance	809	1000-1230
Dimethoate	Rogor	Poison	200-300	700-1150
Endosulfan	Malix	Poison	80-110	
	Thiodan	Poison	80-110	
	Thiofor	Poison	80-110	
Maldison	Emulsol malathion	Poison	1400-1900	>4000
	Ispray malathion	Poison	1400-1900	>4000
	Malathion 25WP	Poison	1400-1900	>4000
	Rural Malathion 50	Poison	1400-1900	>4000
	Yates Maldison 50	Poison	1400-1900	>4000
Metaldehyde	Metaldehyde	Poison	600-1000	
Methiocarb	Mesuroil	Poison	100-135	300-700
Methomyl	Lannate L	Dangerous Poison	27	>1600
Naled	Dibrom 870	Poison	430	800-1100
Omethoate	Folimat	Dangerous Poison	50	700
Oxamyl	Vydate L	Dangerous Poison		
Permethrin + Pirimiphosmethyl	Attack	Harmful Substance	per .1479	per . >4000
		Harmful substance	pir .1100	pir . >2000
Propargite	Omite 30W	Harmful substance	1350-2500	250
Tetradifon	Tedion V-18	Harmful substance	>14700	>10000
Thiometon	Ekatin	Poison	100	>200

Closing Dates

for

Vol. 12, No. 4: 28th May
Vol. 12, No. 5: 30th July

Take advantage of our

CLASSIFIED ADVERTISEMENTS

Up to 25 words for \$5.00
Send advertisement with payment,
to the Editors.

TAUPO ORCHID SOCIETY ANNUAL FIELD TRIP FOR NATIVE ORCHIDS

Max Gibbs

Carnival Day in Taupo (7 December 1985) marked the start of a two-day native orchid hunt by the Taupo Orchid Society. Once again we were pleased to welcome Dorothy Cooper to join us. This year we also had visitors from Rotorua, Tauranga, Auckland and the Gold Coast to swell our ranks and two sites to visit. True to form and Walter De Bont's unfailing prediction, the day was fine and eventually sunny after early morning clouds. With the carnival to cater for family members not wanting to join the hunt, the enthusiasts met at the Woolworths car park to form a cavalcade to the first destination -Whakamoenga Point.

The road past Acacia Bay was unsealed and soon we were all (except the lead car) engulfed in choking pumice dust. A short respite from the dust but not the heat was taken to examine the roadside cliffs which were hung with large mats of *Earina mucronata* most of which had finished flowering. The moist layers in the pumice banks were thickly encrusted with terrestrial orchids, mostly *Thelymitra longifolia* and *Microtis unifolia* although some plants of *M. parviflora* were also identified.

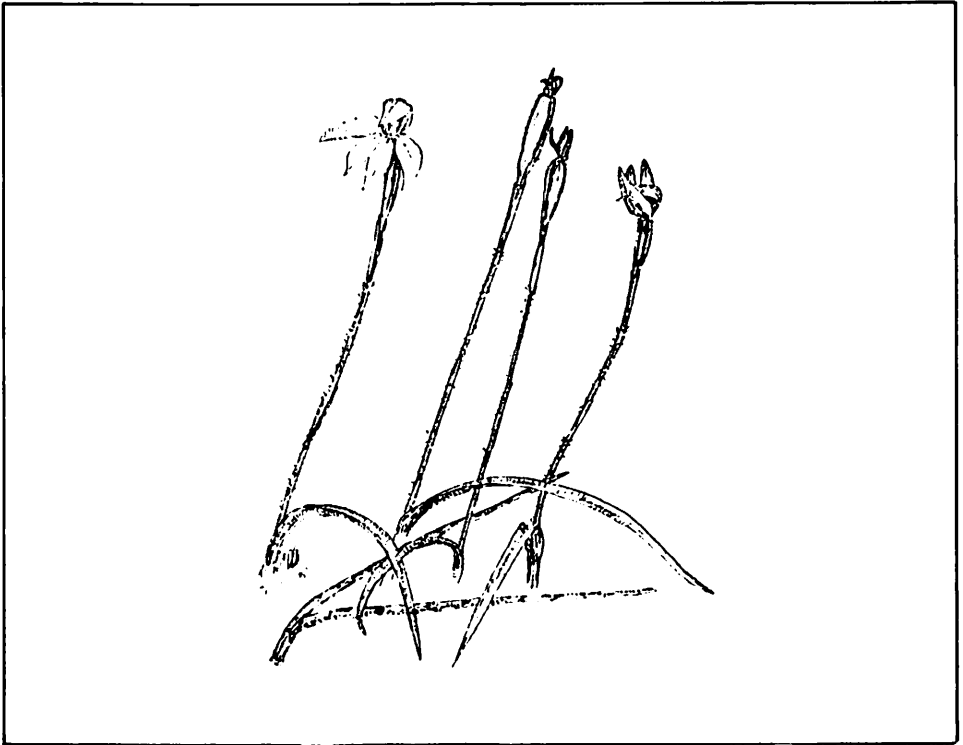
After another short dusty drive we reached Whakamoenga Point and, thanks to Mr and Mrs Bob Gower, we were allowed to walk through the scrub land out to the rock carvings. With Dorothy Cooper and Bob Goodger leading the way and discussions, the hunt was on.

The first find was a few plants of *Chiloglottis cornuta* in bud and this was quickly followed by finds of *Thelymitra longifolia* and *T. pauciflora*. By this time the group was spread some hundred metres along the track so who found what and when is purely academic. Needless to say the tally grew quickly with finds of *Caladenia carnea*, *Orthoceras strictum*, *Acianthus fornicatus* and *E. mucronata* which was growing on the rocks in the track. Three species of *Pterostylis* were also found: *P. alobula*, *P. banksii* and an unnamed species. Those with a steady

disposition and more agility navigated a treacherous little crumbly drop in the track to get onto the path to the rock carvings. The carvings were as beautiful to see as always and the land approach gives a different perspective. They were well worth the extra effort and clumps of *Earina mucronata* were found growing on the rocks just above the lake.

Before we returned to the town to rejoin family and friends at the carnival, we ventured below the car park to the caves at the point itself. Here, in contrast to the upper track, there were few orchids - *T. longifolia* and both species of *Earina*. The reason for the scarcity may have been the low light levels. This was also seen in the *Earina's*, as they had extremely long stems, upwards of a metre long, compared with the very short stems on the plants previously found. Our intrusion into the area of the caves was duly noted by the resident morepork who surveyed our party from various vantage points and was probably very happy when we left.

The return trip to town was as dusty as the outward bound journey, only the order was reversed so he who previously lead, this time came last and copped everyone else's dust. In the evening the society members and visitors gathered at Doug and Dawn Mitchell's house for a barbeque tea and discussion of the day's



Caladenia lyallii at Iwitahi, 8/12/85, by Max Gibbs

activities. The orchid count for the day was 13 species. It was a great evening enjoyed by everyone.

Sunday morning dawned cool and misty with an expectation of rain. This was not enough to dampen the spirits and the contingent from the Rotorua Orchid Society beat most of the local members to the New World car park meeting place. The destination for the day's shunt was the Iwitahi camp site and neighbouring forestry plantations under the guidance of Ken Scott.

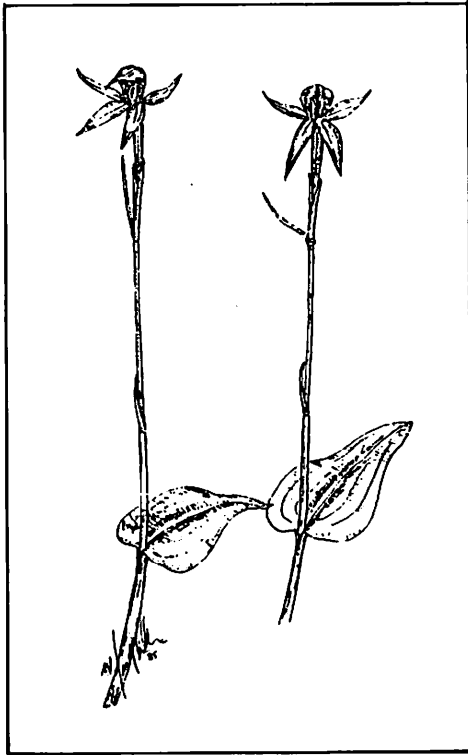
With a permit to enter the forest the group set off in a light drizzle along a forestry track beside a stand of mature Douglas Fir. We were soon finding patches of *Thelymitra* in the less grassy areas. Although no flowers were open because of the drizzle, *T. pauciflora* both pink and blue forms, *T. longifolia* and *T. decora*

were identified. As we moved in amongst the trees on a dense carpet of pine needles a fourth species, *T. venosa*, was also found. At this stage it became apparent that we were not just standing on pine needles and our group was having a devastating effect on the carpet of *Chiloglottis cornuta* on which we were walking. As our eyes became accustomed to not seeing only pine needles in a totally brown carpet, other species of orchid became apparent. Graceful delicate flowers of *Adenochilus gracilis* could be seen turning their starry flowers to the light. At first they were found in ones and twos as was the occasional plant of *Caladenia lyallii*, then in larger groups some with several dozen flowers held well above the needles. The pine needles were also host to several large patches of *Corybas trilobus*, which had finished flowering, and a few isolated plants of

Caladenia iridescens with their flowers a full half metre above the ground. The opportunity for photos was too good to miss and Bob Goodger was soon demonstrating his techniques for close-up photography of orchids.

As we penetrated deeper into the plantation we came across some isolated plants of *Orthoceras strictum*, *Pterostylis cardiostigma* and the unnamed species standing like sentries in the still forest air. Down a slope, over a stump, past a fallen tree and there at the base of a large fir was an extensive patch of *Aporostylis bifolia*, with their hairy purple speckled leaves partly hidden in the pine needles. This clump was in bud with some flowers showing colour - white and hairy with a thin purple stripe on the back of each petal - a

Adenochilus gracilis, at Iwitahi, 8/12/85, by Max Gibbs



sharp contrast to the hairless glossy green of the ever present *Chiloglottis* flowers.

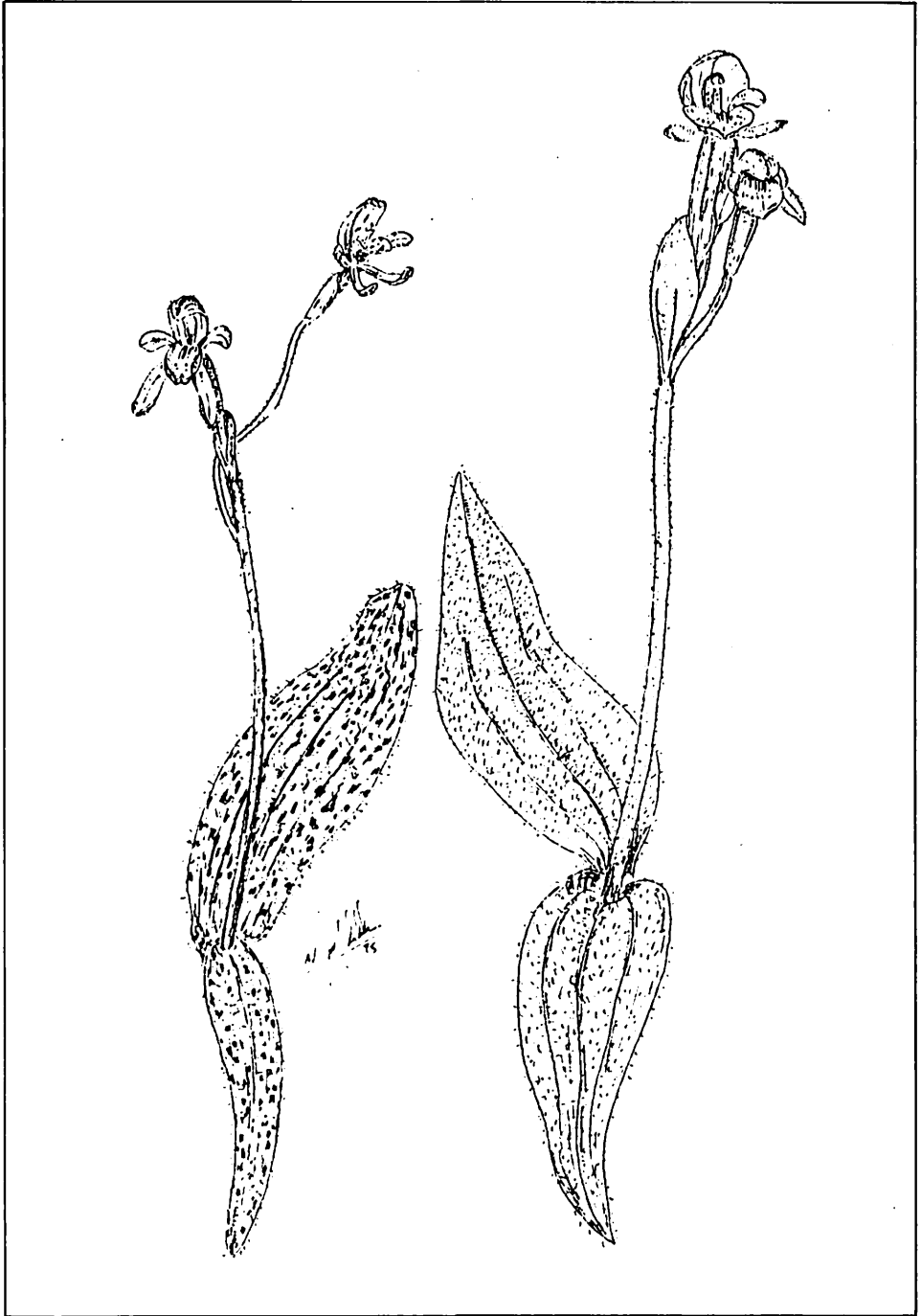
Our procession presently came to another forestry road and as we emerged from amidst the trees we came through a band of *Microtis unifolia* only a few of which were in flower. The carpet of orchids under those Douglas firs had been truly amazing as had the sheer numbers of each species encountered and in flower too.

We crossed the road into a slightly more open planting of trees and were immediately immersed in a sea of *Chiloglottis* and *Adenochilus* plants in full flower. Where there had been dozens before, here there were hundreds. Walking parallel to the road, we returned to the car park on a carpet of orchids. A slight diversion took us through the Iwitahi camp grounds where we found the banks with their concreted-in-stones were sprouting stunted plants of *T. longifolia* and *M. unifolia* - proof of how hardy these orchids really are. Further on under some mature gum trees the *Thelymitra* was replaced with a stand of *Calochilus robertsonii* many of which were in full flower with their iridescent purpley-blue beards glowing in the now strong sunshine. What an incredible sight.

A picnic lunch was had on the camp rugby field and a welcome change made out of heavy coats which had been so necessary earlier. After this short break we drove to another patch of mature pines to find an even greater number of nearly all of the orchids found that morning. Here the *Aporostylis bifolia* plants were more advanced with some flowers fully open. No doubt the bright sunshine helped somewhat. Although *Aporostylis* has only one species member in New Zealand, it can vary greatly in form. A clump of about 50 plants were found which had neither the purple speckles on the leaves nor the stripes on the flowers. Their



Calochilus robertsonii, at Iwitahi, 8/12/85, by Max Gibbs



Aporostylis bifolia, at Iwitahi, 8/12/85, by Max Gibbs

flowers were also much larger and heavier set than the striped form. The flowers were essentially white with a yellow to green throat while the back of each petal was covered with raised lumps at the base of each hair and the tip of each lump was red-purple. Visually quite different from the other form but still the same species . . . or is it?



Two forms of *Aporostylis bifolia* found at Iwitahi, near Taupo.

Photography: Max Gibbs

Left hand flower: striped flowers, purple speckled leaves.

Right hand flower: no stripes on flower, plain green leaves.

In the midst of such a profusion of orchids the rare and spectacular quickly became abundant and the more abundant species became common until the carpet of orchids suddenly stopped. Everywhere the ground had been turned by pigs and, with the precision of their French counterparts searching for truffles, they had taken every tuber.

We hear that a well-known Auckland Lady Bowler has forsaken that game - and has returned to her (neglected) orchid collection. She is quite determined to be amongst the 1990 prize-winners!

In the face of such devastation we returned to the cars to search for another site closer by the Rangitaiki River. There we found a few sunburned *Thelymitra* plants, probably *T. pauciflora*, and two or three plants of *Prasophyllum colensoi* on the bank of a small spring.

At this point the group split up with those wanting to get away doing so leaving the rest to investigate the bush at Opepe on the way home. While I missed the Opepe bush search I am told that both species of *Earina* were found - *E. mucronata* in flower - and a specimen of *Gastrodia* identified by Dorothy Cooper as *G. cunninghamii*.

All in all it was a very enjoyable and successful weekend. The orchid count for Sunday was 19. Eight of those had also been found the day before at Whakamoenga Point, indicating the range of habitat some species will tolerate. The grand total for the two day hunt was 24 different species. The general consensus of opinion was that another field trip should be organised for next year - and it has. Next year we plan to do the two mountains . . . Rainbow and Ruapehu (or the Desert Road past the mountain). I wonder what species we will find there?

15 Rahui Street
Taupo



One society is pondering how best to invest the loan money returned to it after the 1985 Conference, for use on a 1990 project! Not a bad idea.

PHALAENOPSIS CULTURE

Part 3 Let's Talk Watering and Fertilizing of Phalaenopsis

Bill Livingston

What has first priority is really difficult to say when growing Phalaenopsis. Is it water, fertilizing, potting, humidity, light or temperature? The list could still go on. They could be first, but it takes all of them working together to complete the whole process of growing successfully. Watering and fertilizing go hand in hand, and that is why they are being discussed together.

We know a lot of people say they water their plants, and we have found they are actually sprinkling their plants. There is a difference you know. In order to water properly we recommend you get a water breaker, which will attach to the end of a hose. The water passes through the head of the breaker which has a screen with many small holes so as to break the water up into very small streams of water. This prevents a heavy stream of water washing your growing medium out of the pot. They are available at most garden nurseries.

When we refer to watering in this article it will be including fertilizer. We will let you know when we do not use fertilizer. Now that we now have a water breaker attached to the hose, and the water running fairly briskly through it, we proceed to apply water to the plants so that the water will rise up to the top of the pot. We call this method "deep watering". This insures the plant is getting a good supply of water and nutrients into the potting medium.

When you sprinkle you are only wetting the upper portion of the potting medium. You will find the roots do not grow too long or very large around. You have them on the dole. They know you are going to give them water every day or so, and they don't have to put forth much effort to grow roots. You feel sorry for them because the bark dries out more quickly when sprinkling. This is how people kill their orchids. Remember more are killed with kindness than with neglect. You need to get a good large root system to get

the best growth, and flower production out of your plants. The roots have to go down deep into the pot. When you deep water there is a small layer of water and moisture that lingers in the bottom of the pot. The roots sense this, and as the plant needs water and nutrients the roots will go for this moisture. You will find roots will be much larger and fleshy when deep watered properly.

Phalaenopsis should always be moist, but not soggy wet. They do not like their roots sitting in soggy decomposed medium. Never let your plants dry out, and then feed and water them; this is a sure way to lose them. If you feel they are dry you can give them straight water without food added. The next watering you can resume watering with feed.

Watering should always be done in the early morning to allow the plants time enough to dry off before night. Water not dried off, and setting in the crown of plant can cause crown rot, and you can usually say goodbye to the plant. (We will talk about crown rot in another article). Sunny days with at least six hours of sun are preferred, especially when feeding. This is necessary to remember when watering in the winter time, otherwise the plants cannot assimilate the nutrients you are giving them. Several days of sun after feeding helps. I know sometimes the weather can trick us. We reduce the watering in the winter, meaning we don't water as often in the winter. This also helps control fungal problems, which we will discuss in another article. If your plants don't dry off by night time you

can increase the temperature in the greenhouse to 20°-21 °C. If grown in the home take a towel to wipe off the leaves, especially the crown.

As to how often to water, and feed, we feed half the recommended nutrient strength at every watering, and every fifth watering we use clear water without nutrients. This watering without nutrients flushes out the accumulated inorganic salt build-up. Plastic pots do not build up as much salts as clay pots. Nevertheless the medium can build up the salts. If you start seeing an accumulation of a white substance on top of your potting medium, this is telling you that you are not flushing your pots well enough with straight water.

How often you water and feed depends upon the size pots you are using, and weather as mentioned above. The smaller the pot the more often you will have to water. Naturally, the larger the pot, the less watering. We group our pots according to size. This makes watering much more simpler, but don't start over-potting so you won't have to water as much. (See article 2 on potting).

Another point to be taken into consideration is the light intensity within the greenhouse or home. The higher the light intensity the more you can increase your fertilizer. The lower the light the less fertilizer.

Other items to consider when watering are: temperature of greenhouse, temperature of the water, over-watering and under-watering. When greenhouse temperatures are running high the plants assimilate their food better than when temperatures are 14 °C daytime. Phalaenopsis do not like cold water. We find the temperature of the irrigating water should be no lower than 16 °C. If your greenhouse is running considerably hotter, then the water temperature should be raised some. Over-watering can be

detrimental to the plants as well as under-watering. Over-watering rots roots very quickly, especially if the growing medium has started to deteriorate. Over-watered plants generally are lost, as opposed to under-watered. If you are a person that over-waters, you can prevent this by drilling more holes in the bottom and sides of your pots.

We have a method that we tell customers so that they will know when to water. You take a pot the same size as the plants are potted in, and fill it with the same growing medium. Water it at the same time as you do your plants. When you think your plants need water, take this pot that you are using as a water indicator and empty it out. This way you can see how much water is still left in the pot. If it is still wet pour it back into the same pot and don't water. If it appears dry, then it is time water. Another method is the lifting method. You take a pot and fill it with the same potting medium that your plants are potted in, that's dry medium. Lift it now. See how light it is? Now water it as though it had a plant in it. See how much heavier it is? After awhile you will know when to water, just by lifting your pots.

Watering can vary from greenhouse to greenhouse. We water when we see the plants need it. Just because it is Tuesday and that should be water day, is wrong in our book. The weather plays a great deal in when to water as does temperatures. Electric heated greenhouses dry out much faster than natural gas heated houses. Use the above methods as we have outlined and you soon will see what we are talking about. You will find you will be watering several times a week in the summer and less in the winter months. It is best you find what works best for you.

We will now discuss the types of fertilizers which will give your plants good growth. A well balanced fertilizer which has trace elements

added is what we recommend. We have grown for years using a 30-10-10 chemical fertilizer which we mix ourselves. For those who may not know what the numerals on the labels of fertilizers represent we will give you a quick run-down. The 30 is approximately 30% nitrogen, 10 is 10% phosphorus, and finally 10 is 10% potash. I really do not want to get off on the subject of chemicals as that is a subject of its own. There are other people more qualified than we are, to discuss this subject.

There are some good fertilizers available in New Zealand, and they are being used very effectively by many growers. We do not feel we should endorse any one product. We suggest you find a fertilizer and give it a try. Don't use it for a few waterings and then change. Use it for a year at least. Orchids do not respond that quickly to new products. It takes at least a growing season to be able to analyse the results.

We feel slow release types of fertilizers are poor for Phalaenopsis. They can burn up your roots if you are not careful, and you do not know how much nutrients the plant is getting each time you water. They get a lot of nutrients to begin with and less as time goes along. The type we are referring to is the pellet type that you add to the top of the growing medium.

You may find with using a 30-10-10 fertilizer your plant's leaves may get rather lush and soft. If this occurs you may want to increase the amount of light the plants are getting. This will allow the plant to use up more of the nutrients through photosynthesis, and the leaves become firmer. Going to a 10-10-10 or 18-18-18 type fertilizer could help firm up the leaves. High nitrogen is very good especially when the plant is actively growing. We have been discussing inorganic types of fertilizers.

Organic fertilizers such as fish emulsion are good fertilizers. Live-

stock and fowl dung used as a watered-down tea can be used effectively. When you use these types of fertilizers you can run into more problems than with chemical types. First they are smelly; secondly, you are more susceptible to different forms of mould and bacteria. Closely watch for these problems if you use organic fertilizers. They also break down your growing medium more quickly if used continually.

We are sure there is more we could discuss on this subject, but we tried to cover the basics. This will give you something to ponder over and we are sure you will develop your own technique for growing.

Our next article will cover temperature, air, light and humidity, and should prove to be of interest to all.

128 Hughes Road, Watsonville, California, U.S.A. 95076.

DO YOU REMEMBER?

We want to make sure the history of orchid growing in New Zealand is well recorded. But ofcourse we don't know who started things off in your area. The earliest growers were on their own, before societies were formed. The young NZOS helped growers exchange experience and plants. Some orchid groups began as part of local horticultural societies.

Record the memories of orchid growing and early collections from your older growers - don't put it off! Tony Ballard (21 Boyd Avenue, Mangere East, Auckland) is interested in collecting any historical information or reminiscences on orchid growing in New Zealand, especially from out of Auckland.

We would like to share some historical background with our readers. Please send us, or Tony, anything you think of special interest.

Editors

"An Element of Chance"

Mike Wilton

Hybrids of the Odontoglossum Alliance in general are notoriously non-seasonal, capable of flowering at any time of the year, so having an Odont in flower for a show involves a fair amount of luck. One such lucky grower was Ron Maunder of Paradise Orchid Nurseries, with a fine show of quality and colour. An excellent example of the modern shapely white *Odontoglossum crispum* won **Best Odontoglossum** and **Best Species of the Show**, and a large, eye-catching mauve and maroon *Oda*. (Fremar x Sunpania) 'Picotee Purple' won **Best Coloured Odontioda** for Ron. Several clones of *Oda*. Memoria Len Page caught my attention, large shapely bronze red 'Paradise' and 'Paradise Perfection' and the very dark maroon 'Paradise Ebony'.

A surprise was a magnificent specimen of *Odm. laeve* on Sherlock's stand. It was the first time I had seen this species. A very robust plant carrying 2m spikes of blooms resembling an *Aranda* more than an *Odontoglossum*. Most spectacular! Another surprise was found on the L & R stand - the not often seen (in New Zealand at least!) *Cochlioda noezliana* - a lovely orange coloured clone of the species that gave odontiodas their colour.

A photograph of *Cochlioda noezliana* appeared in Vol. 11, No. 3, p. 94.

Another odontoglossum, *Osmoglossum pulchellum*, appears in Vol. 11, No. 3, p. 101. Editors

Intergenerics with *Oncidium tigrinum* were quite well represented with mericlones of *Odontocidium* Tiger Hambuhren, Tiger Butter and Tigersun about the hall. I particularly noted an excellent flowering specimen of *Odcn. Tigersun* 'Nugget' on the North Shore stand; the large yellow flowers with red blotches on the tepals really stood out. On the Whangarei stand, a seedling *Onc. tigrinum* x *Odm.* Crowborough with large full yellow lip and tepals heavily marked with brown, I thought showed great potential.

Down on the Wellington stand was the winner of the **Best Trigenic**, the unmistakable blood red tepals and large white lip splashed with red, *Vuykstekeara* Cambria 'Plush' grown to perfection by Danny Nel. It is amazing to think that this orchid has been around since the early 1930's but is still unbeatable in its class. I heard a story that this plant was held in a cellar for several weeks to maintain it in good condition for the Show. The ploy obviously paid off.

15 Maire Street
Levin

Odontioda Valerie on South Auckland O.S. Stand.

Photography: N. C. Miller





Sarcophilus hartmanii

Grower: R. Woodhouse



Odontoglossum trilobum

Grower: L. & R. Orchids



Dendrobium Sunglow x tetragonum

Grower: E. & J. Harper

**2nd NEW ZEALAND
INTERNATIONAL
ORCHID SHOW -
WELLINGTON 1985
ODONTOGLOSSUM
ALLIANCE
AND OTHERS**

Photography: N. C. Miller

Miltonia Mary Stewart

Grower: John Campbell

Oncidium Moir x Odontioda Eridge

Grower: K. Christie



Cattleyas in the Conference Show

I. D. James

The 2nd New Zealand Orchid Conference held much of interest for the grower of cattleyas. Two of the ten or so papers read in the lecture sessions were about cattleyas and staged in the show were more plants of this alliance than seen at any previous New Zealand Orchid Show.

Makoto Hanajima of Japan presented an excellent slide programme which included many hybrids new to New Zealand enthusiasts. Many were probably surprised to hear of the large numbers of flowering cattleyas sold to the public in Japan as pot plants. Frank Fordyce from California talked to us about miniature cattleyas, and showed some nice colour slides, many of which, we suspect, were taken by his wife Madge. It was a pleasure to have such world famous authorities and hybridizers with us at the Conference.

The cattleyas exhibited in the show were divided into two separate divisions to compete for the two major trophies provided. The Marlborough Orchid Society trophy for the Champion in the alliance was awarded, appropriately enough to a plant in the display of that society. This was *B/c.* Ports of Paradise 'Emerald Isle', a plant with a stem of three large flowers of an intense lime green colour. The owner was Mrs J. Coburn. The other trophy winner found among the many New Zealand hybridized miniature cattleyas on the Waikato Orchid Society display, was *S/c.* Alchemist 'Magic', a plant with four round flowers (on two stems) of an unusual burnt orange colour. In addition to the Sellars trophy for the champion miniature *Cattleya* this plant was recommended for an Award of Merit by the OCNZ Judges.

Sherlock Orchids displayed a number of well grown cattleyas including a robust plant of the famous intense

yellow *B/c.* Fortune 'Golden Throne', two interesting plants of *B/c.* Yellow Ball 'Sunshine' (colour and form not as good as depicted in the catalogues from Taiwan) and a nice near red *S/c.* Vallezac 'Magic Fire'. Also on this stand was a fine plant of *Cattleya intermedia* var. *amethystina* with its white blue-lipped flowers. There were in fact several well presented plants of this species in the show. A well grown one owned by D. & H. Hazelwood on the boundary between the Wellington and Golden Coast displays was adjudged the best specimen plant in its category. Yet another in the L. & R. Orchids display won first placing in a class for species.

The contiguous displays of the Capital City, Wellington, Golden Coast

S/l. Afric 'Kaimai'

Grower: B. Cullen Photography: N. C. Miller





'Waikato Milk Churn': Miniature Cattleya Hybrids including *S/c.* Alchemist 'Magic', grown by Mr James.

SOME CATTLEYAS AT THE SHOW

Photography: N. C. Miller

Lc Chit Chat 'Tangerine' in the South Pacific Orchids display



Societies and the Hutt Valley Orchid Circle contained a large number of interesting cattleyas. Unfortunately a few were too far back to be identified or appreciated fully, a problem with deep displays of this kind. We did notice *Cattleya walkeriana* x *Bc.* Pastoral, a flat medium size pinkish flower which won the best in the lavender class for H. Wortman. Admired from a distance were a good form of *B/c.* Orange Nugget 'Kadooka' with its unique orange colour and a blood red *Sophrolaeliacattleya* we would have liked a clearer look at. It appeared to be *Slc.* Natalie Canapelli but the label said *Slc.* Madge Fordyce 'Scarlet Orb'.

L. & R. Orchids put on the colourful display we have come to expect of them. *Cattleya amethystoglossa*, a bifoliate pink with maroon spots caught the eye of everybody. Possibly too tiny to be noticed by all were the thimble sized plants of *Laelia liliputiana* and *Laelia reginae*. These rock dwelling micro-minis from Brazil are among the smallest of the *Cattleya* alliance. Another smallish plant on this stand, *Sl.* Jinn 'Ellen' was judged the 'Best Novelty without *Cattleya*'. *Lc.* Seagulls Gold 'No. 2' with solid lemon yellow flowers and shape dominated by the *Laelia briegei* parent was the best of this cross we have seen.

The Orchid Society of New South Wales sent over a colourful collection of cut flowers including *Lc.* Chit Chat, *Lc.* Rojo and other cluster types mostly in shades of yellow and orange. Unfortunately some of these flowers did not travel too well. *C.* Princess Bells 'Hozu' exhibited in the Orchid Club of South Australia display was one of the best of the large white cattleyas but this flower also did not reach the show in the best of condition. It would have been passed over by the judges in favour of a well presented *B/c.* Ranger Six 'A-OK', a plant which first captured world attention when it won a silver medal at the 1966 World Orchid Conference in Los Angeles. On this occasion it was exhibited with other white cattleyas in

the display of all white orchids staged by the New Zealand Orchid Society. The owner was Mrs E. Mountfort.

The lasting impressions of the cattleyas in this 2nd International New Zealand Orchid Conference are ones of colour. In addition to those already mentioned one recalls the many plants of *Sl.* Jinn, with their bright red flowers and the several plants of *Lc.* Chit Chat 'Tangerine' with their heads of many bright orange flowers. One of these grown by C. & S. Brindle and exhibited in the New Zealand Orchid Society display, won the best cluster type. Then there was that very fine plant of (*Lc.* Waianae Flame x *Lc.* Chicanery) 'Orange' in the display by Geysersland Orchids. We noticed that few people with cameras could resist shooting this plant with its many 80mm solid orange flowers.

We made notes about other plants in exhibits not mentioned above but space does not permit coverage of all of them. In general what we saw in the show were largely spring flowering cattleyas. They gave us colour, but we did not, and could not expect to see many of the large exhibition type cattleyas which would normally flower in the autumn and winter months. One wonders what would emerge if such a show as this one was held in New Zealand in the autumn months.

R. D. 2
Hamilton



NOTE FROM APOROSTYLIS

One of the most interesting lectures I thought was Brian Rittershausen's one on "The history and hybridizing of the *Odontoglossum* Alliance in Great Britain". What a lot of researching and photography of paintings, books, etc., he had done.

I could almost give up cymbidiums for odonts after hearing his talk!

SLIPPER ORCHIDS AT THE WELLINGTON CONFERENCE

This article was to have been written by the late Frank Askin who would have given a much better report than I can compile. I have worked from Frank's jottings and slides which his wife, Joyce, kindly sorted out for me.

Ronald Roy

It was pleasing to see a good representation of slipper orchids in most of the society and commercial displays. The very great majority were paphiopedilums but here and there a phragmipedium or cyripedium attracted attention, more for its novelty than for the beauty of the blooms. Several plants of *Phragmipedium sedenii* were noticed but the pick of the non-paphs was a well grown plant of *Cypripedium formosanum*, a species that has only recently become available. The heavily pleated leaves look as if they have been clipped off with hedge shears; the flowers borne singly on shortish stems are white with a sprinkling of dark spots; the pouch is huge and blown up like a balloon. Congratulations on its culture to the lucky owner in the Tauranga Orchid Society.

Society and commercial displays that made a feature of paphiopedilums included the following:

Golden Coast A good number of quality hybrids including First (*P. Moonstone*) and Third (*P. Susan Tucker*) for white paphs. Both plants grown by E. T. Bartosh.

Marlborough Some well grown modern hybrids, mainly large reds and

spotted, plus a few species - *P. argus* and a very good *P. hirsutissimum*.

Black's Orchids About 30 paphs including Best Red - *P. Harrisianum* 'Ball's variety'. This choice clone of the very first hybrid paphiopedilum (*P. barbatum* x *P. villosum*) has a depth of colour that has to be seen to be believed. It contrasted beautifully with some excellent whites and Maudiae-type greens.

L & R Orchids An award winning display of species which included groups of at least ten different paphs. A bed containing ten *P. sukhakulii*, three *P. delenatii* and fine plants of *P. hirsutissimum* and *P. villosum* caught the eye.

Geyserland Orchids This attractive stand was non competitive but it certainly attracted attention with a group of well grown paphs including *P. delenatii*, *P. Vintners Treasure* (very dark red, almost black) and a huge dark red flowered *P. Goultenianum* 'Geyserland'. This last hybrid is a primary cross of *P. callosum* and *P. curtisii*, obviously a recent remake using the darkest forms of the two species.

South Australia Best display by an overseas society. Included 15 cut flowers of species and primary paphs, plus a few modern hybrids.



Paphiopedilum Goultenianum 'Geyserland'

Grower: Geyserland Orchids Photography: N. C. Miller

Tauranga A large display with a fine collection of slippers, mainly paph species. Included were some fine plants of *P. argus*, *P. hennisianum*, *P. urbanianum*, *P. haynaldianum* and the earlier mentioned *Cypripedium formosanum*.

Wellington This large display showed the influence of several experienced paph growers who have encouraged the cultivation of this genus in the area. The range of species and hybrids and the quality of the blooms was a real delight. The centrepiece of the stand was undoubtedly the beautiful plant of *P. St. Swithin* (*P. philippinense* x *P. rothschildianum*) grown by Mr F. R. Askin. It fully deserved its award of Reserve Champion Orchid of the Show.

36 Seven Oaks Drive Christchurch 5

Two photographs of Paphiopedilum's were included in Vol. 11, No. 3, p. 94 - *P. delenatii*, and *P. St. Swithins*. Note that although named *P. St. Swithins* 'Wellington' in that issue, the correct name is *P. St. Swithins* 'Evans Bay'.

Paphiopedilum haynaldianum

Grower: W. Liddicoat Photography: N. C. Miller



SECOND NEW ZEALAND INTERNATIONAL ORCHID CONFERENCE

TROPHY LIST

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1 GRAND CHAMPION OF THE SHOW
<i>Lycaste</i>. (Macama x Koolena) Linwood Orchids North Shore Orchid Society</p> <p>2 RESERVE CHAMPION OF THE SHOW
<i>Paph.</i> St. Swithins F. Askin Wellington Orchid Society</p> <p>3 BEST DISPLAY BY AN OVERSEAS ORCHID SOCIETY
Orchid Club of South Australia</p> <p>4 BEST LARGE DISPLAY BY A NEW ZEALAND ORCHID SOCIETY
Capital City Orchid Society</p> <p>5 BEST SMALL DISPLAY BY A NEW ZEALAND ORCHID SOCIETY
North Shore Orchid Society</p> <p>6 BEST DISPLAY BY A SOCIETY AFFILIATED TO THE ORCHID COUNCIL OF NEW ZEALAND
Capital City Orchid Society</p> <p>7 MOST ORIGINAL DISPLAY OF MIXED GENERA
Kaitia Orchid Society</p> <p>8 BEST DISPLAY BY JOINT OR INDIVIDUAL GROWERS
George Fuller, New Plymouth</p> <p>9 BEST DISPLAY BY A COMMERCIAL GROWER
L & R Orchids</p> <p>10 CHAMPION CYMBIDIUM
<i>Cym.</i> Rae James 'Cameo' I. D. James Waikato</p> <p>11 CHAMPION COLOURED CYMBIDIUM
<i>Cym.</i> Tamatea 'Tahi' Norm Porter Orchids</p> <p>12 CHAMPION SEEDLING CYMBIDIUM
<i>Cym.</i> Jack Hudlow Longview Orchids Waikato Orchid Society</p> <p>13 CHAMPION INTERMEDIATE CYMBIDIUM
<i>Cym.</i> Bulbarrow 'Will Scarlett' M. Liddell Waikato Orchid Society</p> <p>14 CHAMPION MINIATURE CYMBIDIUM
<i>Cym.</i> Touchstone 'Janis' M. Wilton Levin Orchid Society</p> <p>15 CHAMPION SPECIMEN CYMBIDIUM
<i>Cym.</i> Mary Margaret 'Granados' W. Ross Taylor South Pacific Orchids</p> <p>16 CHAMPION CYMBIDIUM SPECIES
<i>Cym. lowianum</i> var. <i>concolor</i> New Plymouth City Council</p> <p>17 CHAMPION PAPHIOPEDILUM ALLIANCE
<i>Paph.</i> Thule 'The Globe' AM/NSW Joyce Spence OCS Australia</p> <p>18 CHAMPION PAPHIOPEDILUM SPECIES OR PRIMARY HYBRID
<i>Paph.</i> St. Swithins F. Askin Wellington Orchid Society</p> | <p>19 CHAMPION CATTLEYA ALLIANCE
<i>Blc.</i> Ports of Paradise 'Emerald Isle' J. Coburn Marlborough Orchid Society</p> <p>20 CHAMPION MINI-CATTLEYA
<i>Slc.</i> Alchemist 'Magic' AM/NZOS I. D. James Waikato Orchid Society</p> <p>21 CHAMPION PHALAEENOPSIS
<i>Phal.</i> Antarctic x Spitzberg K. Brown New Zealand Orchid Society</p> <p>22 CHAMPION PHALAEENOPSIS SPECIES
<i>Phal. stuartiana</i> Sherlock Orchids</p> <p>23 CHAMPION DENDROBIUM (other than Phalaenopsis type)
<i>Den.</i> Alice Iwanaga 'Happiness' C. Young and M. Beaumont</p> <p>24 CHAMPION DENDROBIUM (Phalaenopsis type)
<i>Den.</i> Kanahoe Beauty 'Kimi' Keiths Nursery Townsville</p> <p>25 CHAMPION DENDROBIUM SPECIES
<i>Den. miyaki</i> M. C. Levien North Shore Orchid Society</p> <p>26 CHAMPION VANDA ALLIANCE
<i>Vanda</i> Sarojini A. M. Clark Waikato Orchid Society</p> <p>27 CHAMPION SPECIMEN ORCHID (other than Cymbidium)
<i>Pterostylis banksii</i> V. Conaghan Whangarei Orchid Society</p> <p>28 CHAMPION ODONTOGLOSSUM ALLIANCE
<i>Vuyl.</i> Cambria 'Plush' D. Nel Wellington Orchid Society</p> <p>29 CHAMPION SPECIES, ODONTOGLOSSUM ALLIANCE
<i>Odm. crispum</i> Paradise Orchids</p> <p>30 CHAMPION ANY OTHER ORCHID
<i>Lycaste</i> (Macama x Koolena) Linwood Orchids North Shore Orchid Society</p> <p>31 CHAMPION SPECIES OF SHOW (regardless of genus)
<i>Odm. crispum</i> Paradise Orchids</p> <p>32 CHAMPION CYMBIDIUM SEEDLING HYBRIDISED IN NEW ZEALAND
<i>Cym.</i> Hallmark I. D. James Waikato Orchid Society</p> <p>33 CHAMPION SEEDLING (other than Cymbidium) HYBRIDISED IN NEW ZEALAND
<i>Phal.</i> (California Pink x Herb Hagar) K. H. Clark Waikato Orchid Society</p> <p>34 BEST FLORAL ART ARRANGEMENT IN SHOW
Mrs M. Fifield North Shore Orchid Society</p> <p>40 MOST OUTSTANDING ORCHID EXHIBIT
<i>Epidendrum cinnabarinum</i> L & R Orchids</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

2. JOHANN GEORGE ADAM FORSTER

(1754-1794)

Ian M. St. George

When Cook sailed in the *Resolution* on his second voyage, he took the naturalist J. R. Forster, the artist William Hodges, and, as Forster's botanical illustrator, his seventeen-year-old son, George.

They arrived at Dusky Sound on the 27th March 1773, too late for most of our orchids, and left on the 10th May. J. R. Forster writes in his diary,

"I found myself quite tantalised with the sight of innumerable plants and trees, all new ones, none of which had flowers at this season and the fruits either were quite unripe or already gone; so that my collection fell short of my expectation".¹

But they had seen "a very fine *Epidendrum* in flower, which spread a very agreeable smell". It was *Earina autumnalis*, of course. George sketched it - and labelled his sketch "*Epidendrum Autumnale* . . . N.Z. Dusky Bay 29th March 1773". There is a partly coloured drawing in the British Museum (Natural History), and an uncoloured lithograph, copies of which are in the National Museum, Wellington and the Auckland Institute and Museum.

The *Resolution* was in Queen Charlotte Sound from 3rd to 25th November. On the 13th they ". . . went over to Long Island and mounted the hill, where we found several fine plants . . . We returned to dinner, having found a new Orch and another new plant nearly relating to the Class of Orches, but of a very singular structure and making absolutely a new genus". The former was *Microtis unifolia*, the latter *Thelymitra longifolia*. November was (and still is) a more rewarding month than March for orchid watchers.

George made detailed drawings of the flower parts of the *Thelymitra*, and from these a lithograph was made later for publication. The fully coloured illustrations of both species shown here are in the Banksian Collection at the British Museum (Natural History).

Suspensions, anxieties, accusations and ill-feeling prevented the proposed publication of the voyage's natural

history. The Forsters were a self-righteous pair, the father was difficult to the point of paranoia, they were Cook's second choice of naturalists, there was never enough time for plant collecting (it was clearly well down in the Captain's priorities), their quarters were impossible. Perhaps a sloop on a three year trip, with only a small part of that time at anchor, is just not the best place to foster conviviality. Cook would not take a naturalist on the third voyage.

George wrote his *Voyage*, a well written general account published in 1777. *Florulae insularum australium prodromus* followed in 1786; it has brief latin descriptions of the plants including the three orchids as *Ophrys unifolia*, *Serapias regularis* (the name given by Solander), and *Epidendrum autumnale*: there are no illustrations.

What then happened to the mass of drawings? A set of 301 was sold to Banks in 1776 for 40 guineas and now forms part of the Banksian collection housed at the British Museum (Natural History). George lost many of his personal effects in a shipwreck when he left England. There are drawings at Gotha, Weimar and Jena, and in Leningrad.

Right: Watercolour drawings by Johann George Adam Forster, 1773. Reproduced courtesy of the British Museum (Natural History).

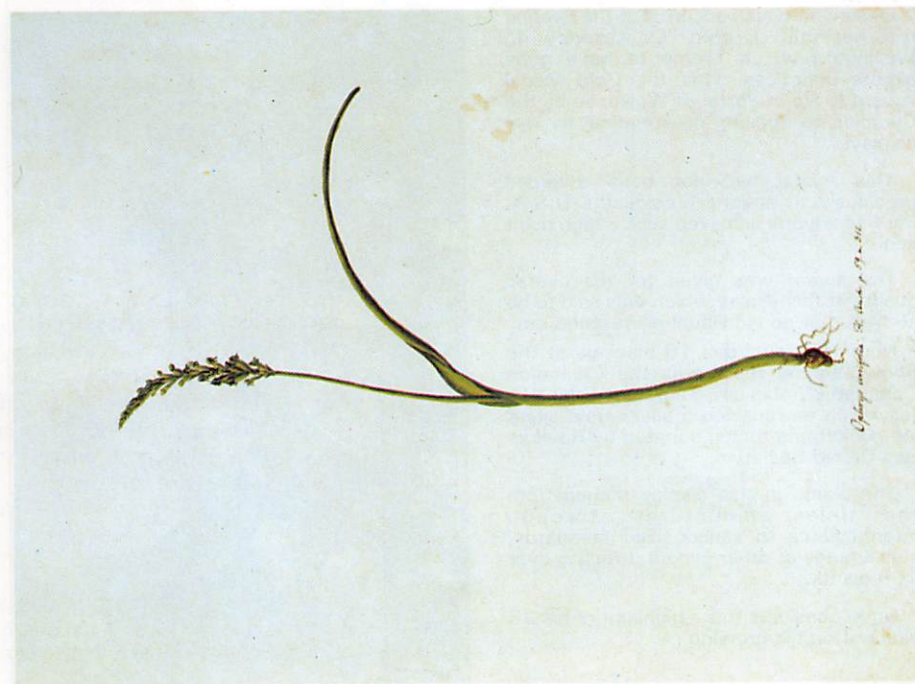


Plate 1. *Microtis unifolia*.



Plate 2. *Thelymitra longifolia*.

Some dismiss him in a sentence: "Johann George Forster, another protege of Banks's, accompanied Cook on his second voyage; his work is far inferior to that of Parkinson".⁴ But others disagree: "He was a natural history artist of keen and scrupulous eye".⁵ "His botanical sketches were done with great delicacy and in the most minute detail . . .".⁶

References

1. Hoare M. E. *J. R. Forster's Resolution Journal*. London: Hakluyt Society, 1982.
2. Reed A. H. and Reed A. W., eds. *Captain Cook in New Zealand. Extracts from the journals of Captain James Cook giving a full account in his own words of his adventures and discoveries in New Zealand*. 2nd ed. Wellington. Reed, 1969.
3. Forster G. *A Voyage round the World, in His Brittanic Majesty's Sloop, Resolution, commanded by Captain James Cook, during the Years 1772, 3, 4 and 5*. 2 Vols. London, 1777.
4. Blunt W. *The art of botanical illustration*. London: Collins, 1950.
5. Joppien R. *Drawings from Captain Cook's voyages. An unrecorded collection of fourteen ethnographical and natural history drawings relating to the second and third voyages*. (Catalogue of exhibition and sale, 13 September-1 October 1976). London: Hartnoll and Eyre, 1976.
6. Begg A. C. and Begg N. C. *Dusky Bay: in the steps of Captain Cook*. Christchurch: Whitcombe and Tombs, 1966.

45 Cargill Street
Dunedin

NORM PORTER'S GOLD MEDAL A FIRST FOR NEW ZEALAND

One event which occurred at the Second International Orchid Conference in Wellington which seems to have gone almost unnoticed, was the Gold Medal Award to Norm Porter of Waikanae by the Cymbidium Society of America for his display.

This medal had not been awarded previously to anyone outside the U.S.A. nor had anyone achieved such a high point score.

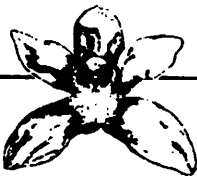
The award was given for the overall quality of the display which was said to be so high that no individual plant stood out.

Norm was awarded 16 placings at the Show, among them was the Champion Coloured Cymbidium, Tamatea 'Tahi' 4N, for which he received a silver tray, silver ice-bucket and tongs, donated by Hawkes Bay Orchid Society.

The plants in this display ranged from the tiniest miniatures, through intermediates to saucer-sized standards, plus a range of other genera, totalling over 100 plants.

Norm considers this a highlight of his 28 years of orchid growing.





CYMBIDIUM CULTURE NOTES

MARCH/APRIL

Gordon Maney

Because there are lots of flower spikes showing now, it is most important to feed regularly thus giving strength to the spikes as they grow, and of course colour to the flowers. If you're using micro-feeds, keep using 214 with an N.P.K. of 16.3.27 till the end of March, and then revert to 212 with an N.P.K. of 22.5.18 from April on. I also use dried blood on young plants in March, this gives a good boost through the winter months and it won't burn. I simply broadcast it. However, water very thoroughly before and after.

In fact always water thoroughly before you feed and then again three to five days later to stop any build up of salts.

If you've wondered why your plants show black tips on the leaves, (called leaf tip necrosis) salt build-up is usually the reason.

Although you will have finished your potting by now, keep a close watch particularly on the ones you have cut up. If any of them are looking sick have a look at the roots and if necessary pot back into a smaller pot, removing any dead roots of course.

Keep the Mesuroil Slug Bait around your plants - an absolute must, if you don't the snails and slugs do terrible damage. Because at this time of the year there always seem to be caterpillars around, I usually dust with rose dust, the one mixed with Sumicidin, is most effective.

Red spider too can be a problem at this time. Spray once a month with Kelthane, interchanging with Omite or Thiodan. However, do use a good mask and protective clothing.

Its a good idea as the spikes get longer to stake them so they can be trained where necessary.

Fix all leaks and don't leave any rubbish lying around.

*7 Harrow Place
Palmerston North*



TARANAKI ORCHID SOCIETY SUMMER SHOW

D. Whittaker

The summer display held recently in the Pukekura Park Cricket Pavilion, provided an opportunity for the many people to view unusual Genera, which are not in flower at the time of the spring exhibition. As visitors entered the Pavilion, the aroma of the many exotic plants caused much comment as did the sight of the *Disa uniflora* growing happily in a goldfish bowl.

A *Neobenthamia gracilis*, looking rather like a fine bamboo, with a head of flowers, rather like that on a snowball tree was also much admired.

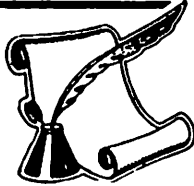
Oncidium variegatum provided a corner of bright yellow cheer, with their little "Dancing Ladies" blowing in the breeze.

Other Genera receiving praise for their beauty were Dendrobiums, Vandas, Phaius, Aerides, Oncidiums, Cattleyas, Oncidiodas, Paphiopedilums, Stanhopeas and Miltonias.

Altogether a total of 157 plants were on display from the 18 very fine growers who participated.

*2 Nelson Street
Waitara, Taranaki*

LETTER TO THE EDITOR



Please can you explain why 'Orchids in New Zealand' is so often late?

The conference issue was late, which was very disappointing for advertisers and I have just received the November-December 1985 issue during the last week of January 1986.

To my mind, not good enough, when you consider that I had received my American Orchid Society Bulletin (January 1986) during the first week of January!

When are we to expect the first issue for 1986 to arrive?

*Caryl Sellers
R.D.2., Waiuku*

P.S. Keep up the good work - it's a magazine worth waiting for!

The Editors freely acknowledge that problems with lateness have occurred in the last three issues of "Orchids in New Zealand". To take the matters complained of in order:

(a) Special efforts were made to get the Conference issue out **before** the due date, but problems were experienced at the printing stage. Delays are sometimes bad luck rather than anyone's fault.

(b) The November-December 1985 issue was sent out to direct subscribers on the 9th December. Copies sent out by Orchid Societies would have to wait until their first Newsletter of the year was ready. As explained in the Editorial, this issue was held back to enable material pertaining to the Wellington Conference to be included. The Editors have no control over the time required for photographs to be processed, or contributors to write their articles.

(c) The January-February 1986 issue was very late, for reasons explained in the Editorial in that issue.

(d) Perhaps the Complainant receives her A.O.S.B. by air, as at the time this letter was received (early February) the Editors had only just received their November copy by surface mail, and some of the 1985 issues of this journal have been received several months late!

It must also be pointed out that the A.O.S.B. has a sizeable full-time paid staff. "Orchids in New Zealand", for all except the printing, depends entirely on volunteers, who have to fit this work around their everyday lives. Some people have very regular lives - just lately ours has been very irregular!

However, the point has been taken. In particular, the delays in sending out bulk subscriptions (i.e. through Orchid Societies), are causing concern, and this system may well be altered in the near future. The Orchid Council has this matter under study.

Editors

FOR SALE

**COOLHOUSE PAPHIOPEDILUMS
OLDER TYPES**

INSIGNE AUREUM COBBIANUM
KRISHNA MILD KITTY
MULTIPLE DIVISIONS

\$5.00 to \$25.00 plus freight

LEWIS ORCHIDS
R.D., Te Kauwhata
Phone 849 Waerenga

WANTED TO BUY

ORCHID BOOKS AND MAGAZINES

Please reply to:

S. Wray, P.O.Box 489, Whangarei
Phone 60-515

stating condition and price.

ORCHID SPECIES ERUPTION SALE

MT TARAWERA HAS BEEN SILENT FOR
100 YEARS AND WE ARE CELEBRATING
- IT'S JUST OVER THE LAKE!!

THOUSANDS OF ORCHIDS

- BUBBLING DISCOUNTS
- MOLTEN BARGAINS
- FREE PLANTS - WHAT A BLAST!
- KEITH'S DONE IT THIS TIME

DON'T MISS OUT

ERUPTION EDITION CATALOGUE AVAILABLE

Visits weekends until June 10 or by arrangement

Phone 28-237 Rotorua

Nursery - 283 Spencer Road, Lake Tarawera



UNTIL JUNE 10, 1986

ORCHID SPECIES

BOX 2039

ROTORUA

DON'T LEAVE IT TOO LONG!

Winter and GST are both approaching

Take advantage of our low prices and add to your collection now.

PHALAEOPSIS

\$12.00 - \$20.00

\$12.00 - \$20.00

A wide range of colours and sizes up to flowering size in some varieties.

POLYMINIATURE CYMBIDIUMS

\$5.00 - \$10.00

\$5.00 - \$10.00

We have a good colour range. Many varieties are suitable for the export flower market, and as well, we offer the home grower an excellent selection.

MAIL ORDERS WELCOME

(Prices Plus Freight) BANKCARD accepted. Please include card number and expiry date.

East-West Orchids (N.Z.)



Rob and Denise Hulford
Kaipara Flats Road
R.D.1., Warkworth

Telephone: WW (0846) 8145

(2 km north of Warkworth, turn left to Kaipara Flats and we are 700m from main road on the right).

NEW ZEALAND EXPORT GROWERS ORCHID ASSN. INC

NZ E.G.O.

All intending and exporting orchid growers, orchid plant retailers, orchid tissue culture laboratories, orchid export companies and interested persons, are invited to write for further information regarding the above Association to:

**The Secretary,
NZ E.G.O.
P.O. Box 2107, Tauranga**



ORCHIDS IN NEW ZEALAND BACK ISSUES



Send for list of available issues, or with particular requests to:

Back Issues Secretary,
Mrs G. Anderson,
421 Pukehangi Road,
Rotorua.

**Vol. 1-8:
Vol. 9-10:**

**50¢/issue
\$1.00/issue**

INTERMEDIATE GROWING CATTLEYS

From Ken West Orchids, Hawaii we have a large variety of top quality plants in colours of lemon, lime, yellow, yellow-red lip, orange, orange-red lip, reds and white. Five assorted plants offered (our selection) 3" pots normally \$40, NOW \$30. Please state colour preference.

Also available:

Mini Cattleyas \$7.50 ea.

(Lc Lisa Ann x C. Nigrella) x C. ardentissima 'Burma Ruby' dark red purple

Slc Naomi Kerns 'Fireball' AM/HOS x C. ardentissima 'Burma Ruby' red

Epidendrum \$7.50 ea.

atropurpureum var Randii - tannish green, white lip, magenta centre

Encyclia \$7.50 ea.

tampense - chartreuse, lip tinted purple

Add \$3.00 for postage bare root or \$7.00 door to door New Zealand Carriers.

HOUSE OF ORCHIDS

145 Manuka Road, Glenfield, Auckland 10

Phone: 444-9771

TAURANGA BARK LTD.

trading as Tauranga Granulated Bark

BRUCE AND SANDRA KENNY

Graded Orchid Bark granulated in six different sizes

also ideal for garden uses

No. 3 ¼" - ½" suits young plants

No. 4 ½" - ¾" usual orchid mix

No. 5 1" coarse

No. 6 extra coarse

Available in bulk, bagged or by the trailer load

Delivery available throughout the North Island

Open Saturday

Maleme Street, Tauranga

P.O.Box 3213

Greerton

Tauranga

Phone 85-741

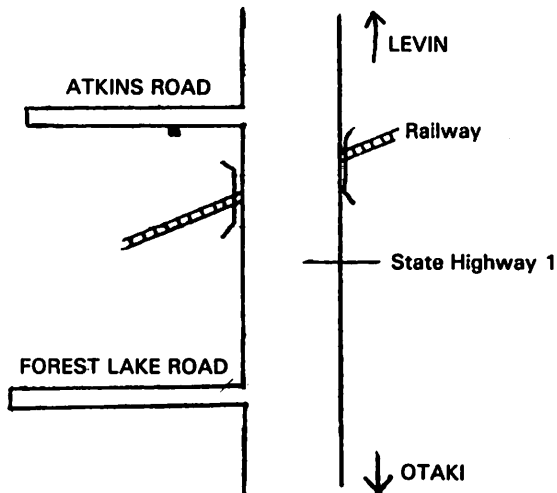
After Hours 62-664

Sherlock's Orchids

WE DO NOT PRODUCE A CATALOGUE

but when next in our locality, why not call in - we are only five minutes drive north of Otaki, and are open

9.00 a.m. - 5.00 p.m. Thursday-Sunday (inclusive)
or phone for an appointment



We grow orchids in the intermediate-to-warm range, i.e.

*Cattleyas, Dendrobiums, Odontoglossums,
Paphiopedilums, Phalaenopsis, Vandas*

and sell flowering size plants ex nursery only.

KEVIN AND LYN SHERLOCK

Atkins Road, Manakau Tel. MNK 698

NEED BOTTOM HEAT?

First time available in New Zealand is the new Tech Mirage heating pad. Ideal for orchid growing to give the bottom heat needed during the colder winter months.

The Tech Mirage heating pad is an impregnated carbon cloth which is laminated between 2 sheets of PVC and is then further encapsulated in an outer cover to provide protection and easy cleaning.

Unlike nichrome wire, there are no hot and cold spots. Heat radiates from all the surface between conductors, giving a 100% even heat spread, assuring quick even growth.

- Supplied as complete moveable unit which is able to be bent freely.
- Easily stored when not in use.
- Electricity consumption is considerably less than nichrome wire.
- Easy installation - no costs involved as it is not necessary to install in sand, earth, etc., unless required and can be laid straight on top of bench.
- Supplied with a Solid State (electronic) controller, accurate to less than $\frac{1}{4}^{\circ}\text{C}$.



Heating pads can be custom made in any length up to 3 metres in four different widths (i.e. 40cm, 55cm, 85cm and 100cm). Prices on application.

Examples:

		PAD	CONTROLLER	
A.	2 metre by 40cm	136.30	44.75	= \$181.05
B.	1 metre by 100cm	154.35	44.75	= \$199.10
C.	2.4 metre by 55cm	177.00	44.75	= \$221.75
D.	3 metre by 85cm	308.80	44.75	= \$353.55

ALL PRICES PLUS FREIGHT - Delivery 3-5 weeks

Further details available from:

TECH

P.O.Box 51-518
45 Ben Lomond Crescent
Pakuranga
Auckland
New Zealand
Telex: NZ 60709
Phone: 562-257

MIRAGE INDUSTRIES LTD

SIX NEW, NEW ZEALAND-RAISED PHALAENOPSIS SEEDLINGS

- 1760 P. Ana Hernandez # 1 x (Maria Vasquez x Ana Hernandez)
"Geyserland"
Crisp clear stripes on branching sprays
- 1761 P. Zuma Sweetheart "Geysers Glow" x Ana Hernandez # 1
Stripes and flushed stripes with paler central area
- 1765 P. Spring Silk "Geysers Girl" x Sabine "Jack"
Here we expect some of the new pink spotted types
- 1766 P. Spring Silk "Geysers Girl" x (Mattie Mae Chambers x
Pepperdine University)
Soft pastel pinks, washed and flushed coloration
- 1768 P. Spring Silk "Geysers Girl" x Lippeglut # 1
Large exhibition pinks on tall sprays
- 1816 P. (Mattie Mae Chambers x Pepperdine University) "Mt.
Cook" x P. stuartiana "Green"
Will these be greenish shades or whites with ventral
spotting?

Established plants in 10cm pots, leaf span at least 15cm, \$12.00 each. A collection of six plants, one of each cross, for \$50.00. For packing and shipping by New Zealand Couriers add \$10.00 per order.

Yes, we have Cymbidiums, Cattleyas, Paphiopedilums, Odontoglossum Alliance and Botanicals too.



*Fleur International
Orchid Gardens*

Hinemaru Street (P.O.Box 541), Rotorua
Phone 476-699

The New Zealand Orchid Centre

MULTIFLORA PLANT TISSUE CULTURE LABORATORY

Orchid Virus Testing

Identify and eliminate those virus infected plants!

Multiflora is pleased to offer an orchid virus testing service which identifies the common orchid viruses. Highly specific goat antisera have been developed and using immunoprecipitation methods large numbers of orchids can now be tested efficiently and reliably. Get your orchids tested now!

For information on methods and prices write to:

Multiflora
34 Kingsview Road
Mt. Eden
Auckland
New Zealand
Telephone: 604-133 Auckland

or

Multiflora
4 York Street, Newmarket
P.O.Box 9516
Newmarket
Telephone 542-766 Auckland

CONFIDENTIALITY ASSURED



**McBEANS
ORCHIDS**
(AUSTRALIA) PTY. LTD.

For new and exclusive Cymbidium Mericlones and Seedlings of outstanding quality. 1984/85 colour catalogue and stock list still available at \$1.50, post free, refunded on first order of \$15.00.

ROWLAND & McCARLIE
Annandale Road, R.D. 1, Kumeu

ROWMAC
ORCHIDS

Norm Porter Orchids

* CYMBIDIUMS

Now In Flower, Available from Nursery or sent anywhere in New Zealand by Newmans Bus - Depot to Door Service ...\$20-\$25 each

Seedling Flasks - Wide selection including Mini and Standards to suit the hobbyist and commercial grower. Parents used include:

Sue, various 4N clones
Pink Peach, 4N
Vanguard 'Mas Beauty'
Winter Fair 'Nancy'
Mighty Mouse 'Minnie'
Tamatea 'Tahi'

Red Beauty 'Carmen'
Rincon 'Clarisse' 4N
James Wattie 4N
Babylon 'Castle Hill'
Coraki 'Margaret'
Fred Stewart, etc.

... \$45 each

Back Bulb Propagations. A very comprehensive selection

... \$3-\$10 each

Plants - Seedlings and Mericlones in a wide range of colour and flowering times ... \$3-\$15 each

CYMBIDIUM AND PAPHIOPEDILUM

Community Pots - 10 seedlings or 5 mericlones for \$15.

* PAPHIOPEDILUM FLASKS

Both Primary and Modern Hybrids,
Flasks contain 30 plants

...\$65 each

* IN SEASON: CATTLEYA, PHALAENOPSIS AND PAPHIOPEDILUM PLANTS IN FLOWER

...\$15-\$25 each

* ODONTOGLOSSUM ALLIANCE - Odontocidium, Wilsonara, Odontioda, Odontonia, Vuylstekeara Seedlings and Mericlones

... \$8-\$30 each

ALSO - Vandas, Zygopetalum, Cattleya, Miltonia and Dendrobium plants.

1986 List Now Available

Send to:

NORM PORTER

"CYMBIDIUM ORCHID SPECIALIST"

Nursery - 23 Parata Street (Opposite Woolworths), Waikanae

Phone: (058) 36-977

Hours: Tuesday-Saturday 9.00-5.00 p.m.

During the flowering season, May-November, the Nursery is Open
Sundays and Public Holidays

Mini Cymbids

ARE OUR SPECIALTY

Over 120 varieties

ALSO STANDARDS

Small to Flowering Size Plants

QUALITY PLANTS
PLUS
FRIENDLY SERVICE

Send S.A.E. for Catalogue to
Longview Orchids

Eric and Vorrei Jones
Main Waihi Road,
Bethlehem,
Tauranga

Phone: (075) 64668



*It's
Interesting
Illustrated
Informative*

*It's the all new
Orchid Species
Catalogue*

free from

Box 2039, Rotorua.

TWIN OAKS BOOKS

4343 Causeway Drive, Lowell,
Michigan U.S.A.

Phone: (616) 897-7479

MASTERCARD AND VISA

ORCHID BOOKS

*Send for FREE descriptive
list of just about 300
currently available Orchid
Books . . . Sent Surface
Mail anywhere in the
world, postpaid!!!*

The Phally House

TAUPO

SPECIALISING IN
PHALAENOPSIS

Varieties and prices available
on request

Visitors welcome by prior arrangement

TREVOR NICHOLLS
33 Hinekura Avenue, Taupo
Phone (074) 84-813
(Answerphone)

Tucker's of Bayswater

Special Collection for the Beginners

While we make every effort to make our catalogues as understandable as possible, many amateurs thinking of starting a collection probably do find it confusing. We now offer the following Special Beginners Collections.

These require cool conditions, i.e. "no frosts", are strong, healthy, flowering size plants that are potted up and ready to reward you for your purchase.

Special Collection No. 1 **only \$40.00**

4 Flowering size Standard and Miniature cymbidiums, different colours of our choice sent in pots, postage and packaging extra.

Special Collection No. 2 **only \$55.00**

4 mixed genera orchids of flowering size of our choice sent in pots, postage and packaging extra.

Special Collection No. 3 **only \$77.00**

4 house plant type orchids. This is specially designed for growers without greenhouse facilities. Plants of our choice sent in pots, postage and packaging extra.

FOR THE COMMERCIAL CYMBIDIUM GROWERS WISHING TO UPDATE THEIR STOCK WE HAVE THE WIDEST POSSIBLE SELECTION.

FOR THE MORE EXPERIENCED GROWER, A WIDE RANGE OF QUALITY PLANTS INCLUDING ODONTOGLOSSUM CRISPUM

Send to

Mr Ross Tucker

51 King Edward Avenue, Bayswater, Auckland 9
Phone 456-692

Burkes Orchids

MINIATURE CYMBIDIUMS

Autumn Flowering Varieties

(75-125mm leaf length)

Mini Splendour 'Easter Show' - red
Sue 'Spring Bride' - oyster shade
Sue 'St. David' - Blush pink
Sue 'St. Joseph' - bronze yellow
Dear Lisa 'Willow' - apple green
Mini Mint 'Kiwi Jade' - pure colour green/yellow

**10 of any variety or combination to make 10:
\$3.00 per plant**

11-50	\$2.70 per plant
51-100	\$2.55 per plant
101-150	\$2.40 per plant
151-200	\$2.25 per plant
over 200	\$2.00 per plant



FREE 1985 colour catalogue available

BURKES ORCHIDS

White Horse Drive, Whakatane

Telephone 88-648

PORTRAITS OF NEW ZEALAND ORCHID SPECIES



Earina autumnalis

Photography: Bob Goodger

Earina autumnalis is a charming epiphyte of the New Zealand bush, flowering, as its name suggests, during the autumn months.

Racemes of waxy white flowers are borne on stiff stems, and the leaves are distinctly shorter and broader than the spring flowering species, *E. mucronata*. Its scent can often help in locating it in the bush.

There are about ten species of *Earina* scattered through the Pacific Islands, with two in New Zealand.