
CYMBIDIUMS OF QUALITY

FLASKS

MERICLONES

(Large and Small Propagations)

SEEDLINGS

Catalogues **FREE** on Request

J. S. HANNAH

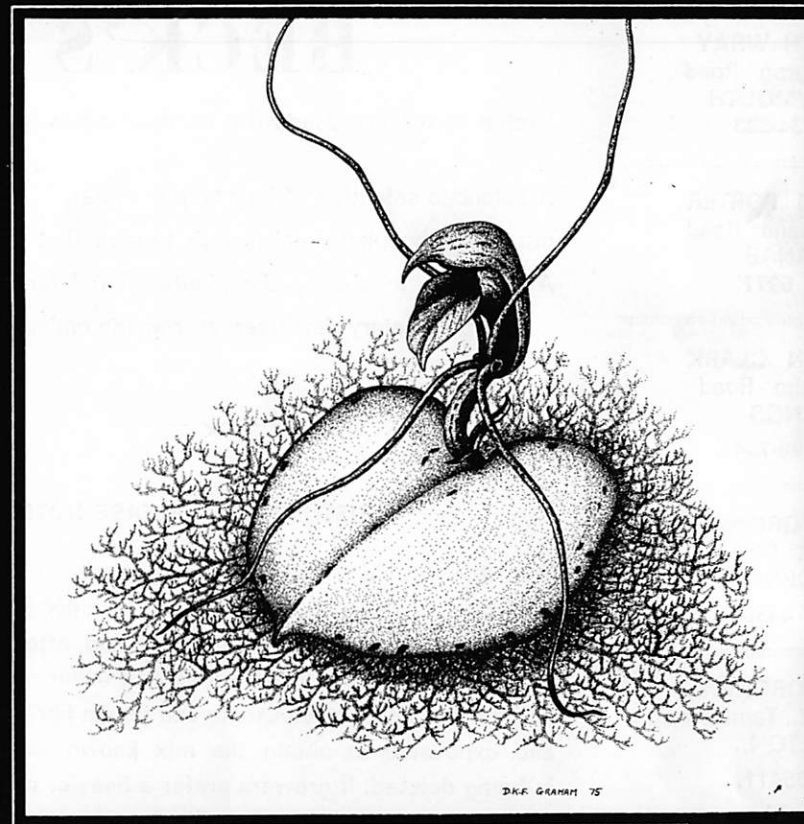
R.D. 2 (WALTERS ROAD)
PAPAKURA

Phone 84-287 Papakura

Registered at P.O.H.O. Wellington as a magazine.

Printed by Taranaki Newspapers Limited, New Plymouth, N.Z.—17970

ORCHIDS IN NEW ZEALAND



D.K.F. GRAHAM '75



November-December, 1976

**BECK'S
ORCHID MIXES**
Available at
A. BECK

R.D. 2, Ngatea, Hauraki Plains.

ASQUITH NURSERIES
67 Asquith Avenue, Mt. Albert
AUCKLAND
Phone 86-2826

MRS. RUTH WRAY
509 Carrington Road
NEW PLYMOUTH
Phone 34-583

MR. NORM PORTER
443 Te Moana Road
WAIKANAE
Phone 6977

MR. BRYAN CLARK
Maraekakaho Road
HASTINGS
Phone 88-734

MR. TOM GRIMSON
162 Stout Street
GISBORNE
Phone 4450

YOUNG'S ORCHIDS,
Cambridge Rd., Tamahere,
HAMILTON,
Phone 65411.

MR. ARTHUR MORRIS,
24 Sussex Street,
MASTERTON,
Phone 6854.

WHY

BOTHER TO MAKE YOUR OWN MIXES ?

SAVE

YOUR TIME TO ENJOY YOUR ORCHIDS

BECK'S

Orchid mixes are used with success all over New Zealand.

A balanced selection of long-lasting materials, fertilised with nitrogen, phosphate and potash to give that start to plants.

After three to six months plants should be manured with a proprietary fertiliser at recommended strength.



CUSTOMERS — PLEASE NOTE

The No. 1 orchid mix is now being screened to remove fine materials. The demand now is for a granular mix that can be manured and watered more safely and often. This mix is now very free draining and will suit a wider range of orchids and as the supply of dicksonia and ponga fibre is too difficult and expensive to obtain the mix known as the 1-1-1 mix is being deleted. If growers prefer a heavier mix the addition of some pot plant mix will give very good results.

New Awards for Valley Orchids

from cut spikes sent to U.S.A. for judging.

ZUMMA BOYD 'TETRAHIGH' A.M.
SLEEPING LAMB 'GOLDEN TETRA' H.C.C.
LUNAGRAD 'ELANORA' H.C.C.
all converted tetraploids.

We are pleased to advise that we have more of **VALLEY ORCHIDS EXCLUSIVE** mericlones and seedlings near selling size after earlier sellouts.

V301	SLEEPING VALLEY 'EXTRAVAGANZA' Large June greens, best seedling Sth. Aust. Winter Show 1973	....	\$15.00
V302	PHARAOH 'REYNELLA' July flowering, pure white, 15 flowers upright spike	....	\$15.00
V303	SLEEPING DREAM 'KINGS RANSOM' A superb full shaped July flowering white	....	\$20.00
V305	SLEEPING DREAM 'TETRAGOLD' AM/RHS Pure colour yellow tetraploid	....	\$25.00
V306	PHARAOH 'ALMIGHTY' Free flowering, pure white tetraploid	....	\$20.00
V307	VALLEY FLOWER 'CHERRY RIPE' Seedling prize winner 3rd Aust. orchid conference. Best pink 1974. V.O. has sold out of plants of this one	....	\$20.00
V401	KATYDID 'VERIDIAN' April flowering pure colour miniature with long pendant multi-flowering spikes	....	\$12.50
V402	VALLEY SONG 'MAUREEN' HCC/AOC NSW. Reserve champ, best cymbid, best export cym. NSWOS June 1975, best cym and export cym NSWOS 1976, Best specimen cym. OCSA winter show July 1976	....	\$20.00
V407	VALLEY GEM 'MAYFAIR' Yellow/green, beautiful and highly productive	....	\$20.00
V502	PEARL BALKIS 'PINK PERFECTION' HCC/AOC SA. Aust. cymbid. of the year 1974, superb show & stud plant	....	\$20.00
V504	SLEEPING DREAM 'GOLDRUSH' AD/SA Very intense yellow pure colour	....	\$15.00

Our minimum sale size is the largest in New Zealand.

The quality is superb.

F. A. BURKE LTD.

246 King Street WHAKATANE Phone 8648
If you are calling — avoid disappointment — please advise.

PHALAEOPSIS

by Cyril Pritchard, Pohutu St, Whakatane

More about the chemical treatment of nodes to induce plant growth and more flower stems.

From observations of the manner of growth produced by the chemical treatment of nodes on the flower stems described on Page 93 of the May-June 1976 issue I have noted the following: Firstly, if the plant has not produced a strong vigorous flower stem it is useless to treat more than one node. The nodes on a strong plant such as the one I treated, produced five plantlets and five new flower stems all from three nodes on one stem. When the plantlets had made good growth I was looking for roots to appear but it became apparent that a little encouragement should be given to induce them. I wrapped damp sphagnum moss around the base of the plantlets on the mother stem. After an anxious month, I couldn't wait any longer, so unwrapped the moss hoping to find rootlets starting "No luck", I left them a further month.

I then removed two plantlets from a less "valuable" plant and potted them together in a small pot of very coarse clean sand, kept them moist and warm and in six weeks they were so well rooted, that one root was growing out of the sand.

The nodes were first treated on 31/1/76 and are now (7/7/76) well rooted and due for repotting from the sand into potting media suitable for the next stage of their life.

As this method is new and was still in the experimental stages when I first got the "Paste", there was little information available, but now, it would appear that once plants have reached a reasonable size, 3 leaflets, they can be removed and potted in coarse sand to induce root growth. I lost time waiting for roots to appear and then trying to induce them using sphagnum. I am sure plants could be rooted and ready for removal to nursery plant media, in four months or less.

MERICLONES

by Russell Martin

Do Mericlones grow faster than seedlings?

Having now raised over 30,000 mericlones from their small vegetative beginning, side by side with a similar number of seedlings, it is clearly evident that their growth rate is vastly superior to seedlings. This is no doubt due to the fact that a meristem is a mature cell of a plant, which possesses all the mature chemicals and hormones necessary for plant growth. A seedling on the other hand begins life as an immature cell which must germinate into life and manufacture its chemicals and hormones as it develops. This process is not fully complete until such time as the seedling flowers.

Generally, mericlones flower in 2½ years to 3 years from the flask, whereas seedlings take an average of 3-5 years. In the case of seedlings, a further period of 18 months to 2 years must be added, due to the fact that from making a cross, to maturity of the seedpod, takes from 9-12 months and after flasking seed, to removal of seedlings from flasks, a further period of 9-12 months must be added. Mericlones can be removed from the flask 3-6 months after plant tissue has been flaked.

SUMMARY:—

Seedlings	Pod	Flask Work	Maturity
	9-12 months	9-12 months	3-5 years
Mericlones	—	3-6 months	2½-3 years

HAWKE'S BAY ORCHID SOCIETY

A warm welcome is extended to all readers who may be in the Bay in January 1977 to meet with us on Monday, 3 January, at the Pakowai Hall at 8 p.m.

Secretary: Mrs. N. F. Allen, phone 83-050 Hastings.

ORCHIDS IN NEW ZEALAND

Official publication of the Orchid Council of New Zealand

Volume 2. No. 3.

Published bi-monthly.

November-December, 1976.

COUNCIL 1976-77

Patron: His Excellency The Governor General, Sir Denis Blundell, G.C.M.C., G.C.V.O., K.B.E.

President: MR. TOM FRENCH, Taranaki Orchid Society

Vice-Presidents:

Lt. Cdr. F. E. J. Mason, M.B.E., R.N.Z.N., North Shore Orchid Society,
Mr. N. G. Wood, Manawatu Orchid Society.

Committee:

Mr. B. F. Clarke, Hawke's Bay Orchid Society, Mr. D. Bell, Waikato Orchid Society.

Secretary/Treasurer: Mrs. R. Wray, 509 Carrington Road, New Plymouth

Editor: Mr. G. Bogn, 30B Waiwaka Terrace, New Plymouth

Associate Editors:

Mr. A. Blackmore, Mr. R. Maunder, Mr. A. Smith, Mr. G. Maney, Mrs. J. Mendoza,
Rev. Fr. B. J. Edwards, Mr. R. Bickerstaff.

CONTENTS

Page

- 35 ANGRAECUMS by Betty Cullen.
36 PUKEKURA CORNER by George Fuller.
37 ORCHIDS FOR BEGINNERS by Jim James
39 ORCHID HUNTING IN NEW ZEALAND by Ros Bickerstaff.
42 GROWING ORCHIDS FROM SEED by J. Campbell.
45 THE CONTROL OF RED SPIDER by Allen Smith.
48 PHALAEOPSIS by Cyril Pritchard.
48 MERICLONES by Russell Martin.

Annual Subscriptions, including postage: New Zealand \$4.80.

Second class air—Australia \$NZ5.80, Great Britain \$NZ7.00, U.S.A. \$NZ6.70.

Surface rate: All overseas countries—\$NZ5.10.

Advertising Rates: Available on request

All manuscripts, photographs, news items etc. to reach Editor six weeks prior to publication.

Views and opinions expressed by contributors are not necessarily those of the Orchid Council of New Zealand.

The Orchid Council does not assume responsibility for any transaction between advertisers and readers.

EDITORIAL

Due to increased costs the magazine committee have decided to increase the subscription rate by one dollar. This represents an increase of approximately 17 cents per copy and is considered not unreasonable. There may be some who consider that \$4.80 is an excessive amount to pay for a slim magazine, but it must be remembered that orchids appeal only to a very small percentage of the population. A number of people have indicated that they would like to see a larger publication but this can only be done with the aid of advertising. The number of large, or specialist growers in our country are very few and thus advertising becomes somewhat limited. When our subscription list grows larger we can use a cheaper method of printing and therefore will be able to increase the size. It is hoped that we can hold this new subscription rate for some considerable time.



NEW BOOKS

Recently I had sent to me a publication from the Orchid Club of South Australia named 'A Book for Orchid Lovers'. This booklet is written by members of the society 'who love orchids for people who have begun to love orchids'. The various authors, all authorities in their own right, have presented articles in an interesting yet simply written form. No section is beyond the comprehension of even the newest grower. Do the articles pertain to New Zealand conditions? So often the information in overseas publications, because of different climatic conditions, do not suit our type of growing, but this fifty-six page volume is southern hemisphere orientated, therefore very close to our own area.

It is a must for your book collection and at a cost of \$A3.00 (includes surface mail postage), it is very reasonable.

D.B.

R.H.S. Application forms for registration of orchid hybrids are available from the Orchid Council Secretary: Mrs. R. Wray, 509 Carrington Road, New Plymouth.

HUTT VALLEY ORCHID CIRCLE

The Circle recently held a display in conjunction with the Hutt Valley Horticultural Society World Daffodil convention and won the Silver Gilt Medal for their efforts. A great deal of work went into this eye catching result. The space allocated to the group was a corner site which they utilised to advantage. The main display was flanked by commercial growers and the theme, a woodland scene, had cascading water running to a pool overlapped at the top with Phalaenopses and edged near the pool with *Earina autumnalis* growing in its natural state on small logs. This opened out to a grassy area which highlighted an orchid tree. The woodland banks held groups of orchid varieties massed together. Truly delightful. Artistic use had been made of dried leaves and greenery, no pots being visible, and illuminated to advantage. An interesting nook held a propagating cabinet supplied by Horticultural Laboratories Ltd., and it was filled with the various stages of seed raising from Frank Askin. Although the Cymbidium was the main genus displayed, there were a large selection of genera represented. This was a display for overall effect and on a second viewing I picked out one or two plants of interest; a bright yellow Cymbidium Coroki 'Daffodil' x Sleeping Beauty 'Bold Gold', a pure colour green Cymbidium Wyanga 'Elnora', Cymbidium San Francisco 'St. Marie' a nice pink, the popular brown Cymbidium Volcano 'Menehuni', a bright yellow Paphiopedilum caught my eye Gaymaid 'Butterfly' and a cluster of orange L.C. Chit Chat.

This is only the second time that this medal has been awarded since 1945. Congratulations Hutt Valley.—Ed.

COVER: Taken from an original drawing by Digby Graham of Whangarei. A fine example of *Corybas orbiculatus* drawn from a live specimen on the bank of a stream in the Mangamuka Range, Hokianga.

LETTERS TO THE EDITOR

Dear Sir,

As the editor of our local society's bulletin I am very much aware of the rise in printing costs and sympathise with your efforts to keep the cost of Orchids in N.Z. down. However I feel it would be a sad loss to see advertising replace the very pleasing photos which have graced the cover of the magazine to date.

I have two suggestion which may be worth consideration and it would be interesting to hear other subscribers comments on these.

If because of costs, advertising must be placed on the cover, could the advertiser be obliged to include a colour photo with the advt. This could be a photo of a plant or plants advertised or a photo of the advertisers choice.

An alternative to advertising could be a system similar to that used in the American publication, Orchid Digest, in which persons or societies donate the cost of the colour photos. An acknowledgement of the donor is printed with the photograph and unless the cost is prohibitive, I feel sure we could work this system here.

Yours faithfully,

A. J. Campbell
21 Blakes Road,
Prebbleton.

GOING TO AUSTRALIA NEXT YEAR

Fifth Biennial Australian Orchid Conference to be held in Perth 12-17 September, 1977.

Time your Holiday to coincide with the Conference.

Mrs. C. Brooke of R.D. 43 Waitara has a coloured slide programme showing highlights of the Perth area. Club Secretaries note: These are available on request from Mrs. Brooke—an excellent supplement to the monthly meeting.

OTAGO CLUB

Inaugural meeting held in July 1976 at the home of Mr. R. J. Thompson, 50 Hargest Crescent, Dunedin. Thirty-five people attended and expressed interest in forming an orchid club. A public meeting was arranged for 25 August, 1976 at the Burnside Saleyards Cafeteria. Twenty-five people attended—Mr Thompson was elected as the first President and Mr. M. L. Young, 61 Argyle Street, Mosgiel was elected Secretary.

A very warm welcome is extended to this club and would other clubs please put Mr. Thompson on the mailing list for their newsletters. This will give a new club ideas on how established clubs are organised and run.

HAWKE'S BAY

Our June meeting developed into a slide evening. After our normal programme, Fred Burke of Whakatane, a most welcome visitor to our meeting, was invited to show some of his American slides that he had with him. Thanks, Fred, for a splendid evening.

July brought a new innovation—for H.B.O.S! We held a Learners' Session before the Monthly Meeting. A bumper crowd attended. The Committee Room was choc-a-bloc with beginners—the more experienced growers were shut out. It was such a success, that this session will become a permanent feature of our meetings (DV.)

At the full meeting later, we had our guest speaker, Mrs. Kathy Black of Black's Orchids, Levin. She gave us a talk on the trends in Cymbidium culture that she had seen in her latest trip through the U.S.A. The talk was illustrated ably by her slides, which she had taken. Our thanks also to you, Kathy, for another interesting evening.

Two of our stalwarts have joined forces. "Lofty" Dawson, our Past-President, has been joined in matrimony with Mrs. Doris Jones, congratulations to you both.

Material	Application	Activity Against	LD50 Oral mg/kg	Rating* Dermal mg/kg	Comments
KELTHANE 35% w/w	43gms/45 litres	Adults	600-2000	100-1230	Slow knock down—Residual activity
TEDION V18 20% w/w	85gms/45 litres	Eggs	566	10,000	Primarily Ovicidal—Residual activity
FUNDALON or GALECRON 50% w/w	57gms/45 litres	Eggs & Adults	250-340	4,000	Ovicidal. Good against young adults—Residual
FUNDAL EXTRA 60% w/w	43gms/45 litres	Eggs & Adults	340	—	Ovicidal Good against young adults—Residual
FOLIMAT 58% w/v	30ml/45 litres	Adults	50	700	Good knockdown of adults—Not residual
PLICTRAN 50W 50% w/w	21gms/45 litres	Adults	235-650	2,000	Slow knockdown—Use early season—Active against adults—very residual
LORSBAN 50W 50% w/w	21gms/45 litres	Adults	82-163	202	Good knockdown—Active toward adults—not residual

Folimat is an emulsifiable concentrate and under some conditions could cause leaf injury. While it is an effective miticide further work is necessary to assess its true tolerance to a wide variety of orchids.

*Extracted from Acute Toxicity Data for Pesticides (1970) by Messrs Ben Dyke, D M. Sanderson and Diana N Noakes from Toxicity Dept., Chesterford Park Research St., Essex.

Remember once the spraying operation has been completed, wash all equipment thoroughly with plenty of fresh water. Above all, store all chemicals away safely in a locked cupboard and from the reach of small children.

From the information provided in this article effective results can be achieved by—

A. Being observant in watching for red spider build up.

B. Treating at the most desirable time during the season. First treatments should be made in early October (Southern hemisphere).

C. Choose the correct miticide to effect the best control. Be mindful of insect resistance

Finally keep on top of the problem. Don't let the pests gain the upper hand. Successful results are very much in the growers hands.

ALLEN SMITH,
Waikato Orchid Society,
16 Beverley Crescent,
Hamilton,

CULTURAL NOTES

NOVEMBER—DECEMBER—

This edition of Orchids in New Zealand brings us to the end of the calendar year but certainly not to the end of the cultural year.

Your Cymbidiums will be finishing flowering about this time and so any repotting not yet done needs to be pushed ahead.

Paphiopedilums should be well into growth now. Watch their shading as the sun increases its strength. This, as for many other orchids, could reduce the humidity to a point that would stunt plant growth. Check by reading your own books or those borrowed from the library, just where Paphiopedilums grow in their wild state.

Cattleyas will also have started into growth in most cases. Pot into a suitable open mixture as soon as those small pinhead green root tips appear under the leading growth. Be very careful not to damage them.

ANGRAECUMS

by Betty Cullen, Kati Kati

Angraecum is the latinised form of the Malaysian word 'Angurek', the name for orchids resembling Vandas and Aerides.

A genus of over 200 species largely restricted to Africa and the islands of the Indian Ocean. The island republic of Malagasy (formerly Madagascar) has 125 species but only about half of these are of interest to orchid enthusiasts.

Articles in the American Orchid Society Bulletins by Fred Hillerman of California caught my eye. A nursery in Sydney advertised small hybrids of Ang Orchidglade (sesquipedale x girame) and Ang Alabaster (eburneum x Veitchii). I potted my new plants in a mixture of dicksonia fibrosa and Astelia banksii and kept them in with my Phalaenopsis plants. A nursery in Queensland had small pots of five tiny plants of Ang. Veitchii and larger plants of Ang. eburneum, these I potted in the same mixture as before but then placed them in amongst my Cattleyas. The light, but cooler temperature plus regular applications of weak liquid fertiliser proved much more successful so my older plants were gradually moved further and further into more light. The improvement in the leaves, roots and growth was most marked. Ang Alabaster has two spikes showing, Orchidglade one. During the winter months the plants do not have need of so much water or fertiliser as in the period of most growth.

The English grower, Wilma Ritterhausen had this to say about the genus, "If the fairytale Queen, who reigns in the Glass mountain, should fall under the spell of orchids, the noble Angraecums would undoubtedly be her faithful companions. The cool icy appearance of many of them together with their clear refreshing fragrance gives them an irresistible appeal to anyone who has grown them."

As an added bonus many of the species bloom in winter.

The only criticism I have heard of the genus is that some of the species take up so much space in a glasshouse. Ang. sesquipedale can be treated like a Vanda, the top growth and roots can be removed to grow on in another container, the older part of the plant will shoot out again into a new plant or plants. Mr. Fred Hillerman is endeavouring to hybridise giants of the genus onto the smaller growing plants to overcome this problem. Several of my plants are in pots, the remainder were placed on large ponga stumps. During the summer months the plants were watered each day with the hose. Liquid fertiliser once a week. In winter the watering has been reduced to that for Cattleyas.

My plants are sprayed with Orthene (a systemic spray) for pest control.

The following species will give some idea of the range of this genus:—

Large Plants (2:2.5m)

Ang. comorense, girame, sororium all autumn or winter flowering).

Medium sized plants (1m:2m)

Ang. sesquipedale, viguieri.

Small Plants (15cm:30cm)

Ang. leonis, magdalanae, praestans, protensum
Less than 12cm

Ang. breve, equitans, rutenbergianum.
sesquipedale, eburneum and praestans grow at 0-600m altitude.

Ang. viguieri, leonis at 600m-1200m.

Ang. magdalanae, longicalan, 1200m-1800m.

Ang. sororium, protensum, 1800m-2440m.

Addresses:: Plants:

Limberlost Nurseries, Freshwater, Cairns, Queensland, Australia.

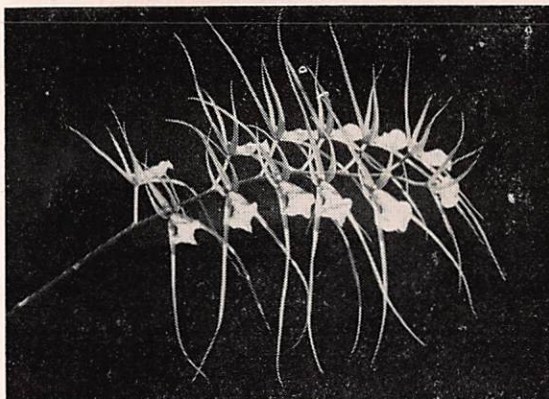
Sunnybank Orchid Estate, 88 Parramatta Rd., Camperdown, N.S.W. 2050, Australia

Mr. Fred Hillerman, Angraecum House, 12774 Meadowlark Ave., Granada Hills, California, 91344, U.S.A.

Has any New Zealand grower Angraecums, apart from Ang. veitchii to spare?

PUKEKURA CORNER

by George Fuller, N.D.H. (N.Z.) Curator



Brassia verrucosa Ldl

Many of the "curiosity" orchids fail to gain popularity because to the average person they are too small or have insufficient decorative appeal. Not so with this "spider orchid" from Guatemala for it is large and impressive enough to be a great eye-catcher. Flowering in January and February when our patronage is at its highest, the 50 to 60cm long spikes with their lime green fragrant blooms are used to great decorative effect.

Sepals can be up to 12cm long, petals a little shorter, spotted with blackish-purple. The labellum is white or cream, roughly heart-shaped, spotted in the same way as the petals, but with the addition of wart-like bumps (hence the naming). Up to 15 blooms are produced per spike and there can be two spikes per pseudobulb—spectacular in every way.

A further attraction with this species is its ease of cultivation, coupled with freedom of flowering. Our plants are grown in an unheated glasshouse along with *Laelia anceps*,

Dendrobium nobile etc. The habit is somewhat rambling with a propensity to divide and make handsome specimens. I have found that they respond particularly well to being arranged over chunks of treefern fibre in a container, the main requirement is coarseness in order to encourage the prolific rooting. Feeding and watering can be heavy in periods of growth but not otherwise and repotting when new roots are just beginning to show.

We have also in the collection *Brassia brachiata* Ldl which is about a month later, almost identical but half as big again in every characteristic. It is difficult to distinguish differences by description, since size can be influenced by culture but the most reliable factor is that *Brassia verrucosa* flowers from pseudobulbs which are already formed, whereas *Brassia brachiata* sends up its spikes from new growths. It also has a rather matt, glaucous appearance on leaves and pseudobulbs and is less reliable in flowering. Some authorities give the two as synonymous.

Brassia verrucosa is a fascinating and showy orchid well suited to the beginner with a glasshouse. Inter-generic hybrids have been made by crossing with the allied genera *Oncidium* and *Miltonia*.

Common names are very dangerous. I know at least three "spider orchids", one of them a New Zealander and all remote from each other.

— || —

Here is a story from an orchid widow down in Dunedin. She vows her husband says "Hello" and "Goodnight" each day to his orchids. Also the kerosene heater from downstairs is out in the glasshouse while according to my informant they freeze in that area of the house. What ever this talking does or does not do there seems plenty of flowers coming up in this collection. To many others this story could well have that old familiar ring.

Hope your new society in Dunedin goes from strength to strength.

THE CONTROL OF RED SPIDER

Red Spider is a recognised pest of orchids and if left unchecked can have a major debilitating effect toward plant vigour. Apart from infecting orchids many garden fruit trees and ornamental shrubs act as host plants. It is from these areas many infestations have their beginning.

The life cycle is not at all complicated. Over wintered eggs hatch during the late spring early summer. Nymphs emerge and being a bright red colour are just visible (0.5mm diameter) with the naked eye. They rapidly mature into adults. Dense infestations of both egg and adult display a red blotching on leaf areas. Each generation can take up to a month to complete a cycle depending on temperature and humidity. It is common to encounter 5-6 generations during a season. Generations overlap one another, hence numerous spray treatments are required. During the height of the red spider season (mid summer), if left unchecked, populations can explode.

Damage to orchids is caused by piercing mouth parts (stylets) being inserted into leaf areas, leaf cells are drained of chlorophyll. Initially leaves become speckled and gradually discolour over the entire surface. With warm temperatures and added moisture stress, this effect can occur quite rapidly.

If a watchful eye is not kept on the rising incidence of red spider, plant damage may occur before it is realised. Then it could be too late and vigour or possibly flowering affected. Visual leaf damage may be seen before it is realised that red spider is the culprit. Unfortunately red spider is quite difficult to control. Chemical treatments are effective in reducing populations but after a period tend to lose their efficiency due to insect resistance. It is well known in the orcharding industry that many miticides only have a useful life of 3-4 years. A grower should stick with a particular miticide until resistance becomes apparent. Don't chop and change your spray programmes.

It should be realised that miticides when sprayed on to plants have varying modes of action. Some effectively destroy egg masses while others are only active against adult populations. A variety of miticides possess quick knockdown effects against populations with little known residual activity. Others rely on their residual activity and affect the emerging nymphs and adults.

Apart from choosing the correct chemical it is essential to ensure that spray coverage is thorough. Poor spraying techniques can allow colonies of red spider to build up. Chemicals which have poor knockdown qualities and rely on residual deposits for their efficiency, require good spray coverage and made early in the season.

The following table provides a number of alternative miticides presently available. Some of these have been on the market for many years. With this being the case insect resistance could have already occurred.

A rate of application is given as well as a guide to its mode of action. Finally a toxicity rating (LD50) is provided as an indication to the safety precautions necessary when handling these materials.

Remember the lower the number the greater the danger.

The chemicals mentioned are specifically recommended to control red spider. Their activity, with the exception of Lorsban 50W and Folimat are not designed to control other insect pests. However these miticides are compatible with other insecticides and fungicides. When used as directed they will be safe to use.

Due to their toxicity normal safety precautions should always be observed. When handling concentrated materials or working with spray solutions adequate protection is necessary. Gloves and a proper mask should always be used especially if prolonged useage is contemplated.

The Orchid Club of South Australia Presents:

A Book For Orchid Lovers

written by eleven separate authors all experts in their own field.

- A Worthwhile Edition to any Library
- A Wonderful Gift
- Full of Information for all Orchid Growers

This quarto-size 56-page book containing 29 colour plates, 70 black and white photographs, 46 line drawings; and comprehensive chapters on the culture of Cymbidiums, Cattleyas, Paphiopedilums, Phalaenopsis, Australian Natives, Soft-Cane Dendrobiums and further chapters on other genera and topics of interest on orchid culture is recommended to all orchid growers.

Price \$A3 which includes surface mail (for airmail dispatch add \$A1) apply to—

Secretary, O.C.S.A., 38 Princes Road, Torrens Park, South Australia. 5062.

We are proud to announce first releases in New

Zealand of Alvin Bryant's Mericlones—

SLEEPING BEAUTY 'INCA GOLD'

These will be sold as soon as leaf length

reaches 15 cm.

PRICE \$10.

Order now from

BLACK'S ORCHIDS

Fairfield Road, Levin.

HATFIELD ORCHIDS

NORMAN G. WOOD

409 Tremaine Avenue, Palmerston North.

Phone 83-489.

Quality Cymbidiums

Mericlones — Seedlings

Back Bulb Propagations

Divisions.

Enquiries and Visitors Welcome.

ORCHIDS FOR BEGINNERS

by Jim James of Hamilton

Occasionally one comes upon a collection of orchids which is not thriving for some reason. If your plants are growing well do not read this article. If they are not, the following check list might be worth investigation if you believe your basic culture is correct.

Zinc

This metal is a trace element essential to plant growth, yet in excess it is highly toxic. Yellow leaves on both old and new growths are a symptom. Do not water plants with water collected from an unpainted galvanised (i.e. zinc coated) iron roof. Do not store water in a galvanised iron tank, or water plants from a galvanised iron container. A galvanised tank can be painted inside with bitumen but it is safer to store water in concrete, wooden, plastic or ungalvanised iron tanks. Zinc poisoning in other plants has been traced to rain dripping from galvanised chicken netting.

Lead

Lead is toxic to plants. Symptoms can be similar to zinc poisoning but leaves have been observed to turn a bright orange before dying. Avoid collecting rain water from a roof, glasshouse or otherwise, painted with a lead based paint. Water contaminated with lead or zinc may be more lethal if watered over leaves than applied to the compost alone.

Creasote

Don't paint anything in the glasshouse with this substance. Even the fumes are said to damage plants.

Fertilisers

All orchids need an adequate supply of plant nutrients for best growth. If you do not understand plant nutrition make certain your fertilising programme is based upon information from a qualified source. If you are applying inorganic salts in solution at a strength of more than about one teaspoonful per 4.5 l there could be problems. Avoid

proprietary products containing unspecified plant hormones and other "growth substances". These may have unpredictable results. The writer avoids using urea as a nitrogen source. Avoid using sodium salts which may be involved in leaf tip die back and also chlorides to which many plants, including possibly some orchids, are sensitive.

Charcoal

The charcoal sold for use in barbecue fires is often made from timber treated with preservatives. These are usually very toxic to plant life.

Treated Sawdust

Here again, the use of sawdust from treated timber can be dangerous, especially if it is not well decomposed.

Airborne Poisons

Exhaust fumes from internal combustion engines, especially two stroke motors can be harmful and should not be used in a closed glasshouse.

Light

Plants need light in wavelengths in the red and blue ranges for photosynthesis. Light of these wavelengths can pass through glass and also through polythene and many other materials. However plastics have been produced which, although apparently quite transparent, are nearly opaque to one or the other of the two useful wavelengths, and plant growth will not be satisfactory under these. Beware of new products not specifically designed for greenhouses. Let someone else try them first. Shading applied to glass should be white. Do not apply coloured shading material.

Virus

Learn to recognise the symptoms of virus infection in the particular kinds of orchids you are growing. No plant with a virus infection will grow as well as it would have if not infected.

A Generation Ahead

Valley Orchids Adelaide South Australia

AS THEIR AGENTS we carry an extensive range of their mericlones and seedlings. Where else can you acquire purecolour mericlones

Where else can you acquire colchicine treated or converted diploids

The result of which has to be seen to be believed. Stronger spikes, wider and heavier Sepals and Petals.

AND NOW seedling flasks with colchicine added to give a percentage of colchicine converted plants.

STILL AHEAD

VALLEY ORCHIDS 1977 catalogue available from us now has all the particulars.

The offering includes

Natural and colchicine converted seedlings and mericlones
Pure colours

WHITES, YELLOWS, GREENS

Standards

WHITES, YELLOWS, GREENS, PINKS, REDS

Growers that don't want flasks, order your single plants from us now for later delivery.

DON'T BE A GENERATION BEHIND

All available from

F. A. BURKE LTD.

246 King St. Whakatane Phone 8648
Nursery — Arawa Road — If you are calling — Please advise

From here on four hands would be a great advantage. A flask is picked up and the top turned in the flame to kill any mould spores which may be present. Next the bung is removed and I like to do this over the flame so that the risk of infection is reduced. I have usually given the blade a quick heat after opening the pod and it is now picked up again and used to scrape some seed from the pod into the flask. I flame the opening of the flask again, flame the part of the bung which goes back in the flask and close it up tightly.

If there are quite a few flasks to be done, I periodically squirt a couple of puffs of bleach solution in the cabinet to help guard against infection. Success or failure is evident within three to four days as mould spores strike very quickly on the rich medium. The fact that sterility has been maintained does not mean that the battle is completely won as quite often with highly hybridised plants the seed is sterile.

In most cases, especially with the green pod method, the seed begins to swell and turn green within two weeks, sometimes within three or four days. Dry seed often takes longer, I suspect this is because it takes a while for moisture to soak into the seed.

Some growers suggest that seedlings should not be left in the one flask for more than three months before being re-flasked or planted out. Slow growers such as Paphiopedilums seem to do better if they are re-flasked a few times. Re-flasking is done under sterile conditions the same way that planting is and a small stainless steel hook is used to lift seedlings from one flask to the other. They often sit for a week before growing away again and can then give a burst of growth for a while.

I place the planted flasks in a cabinet heated to 25 degrees Celsius with double fluorescent tubes 6 inches above them and giving 16 to 18 hours of light daily. Incidentally the first seed I ever planted in flasks was *Cymbidium grandiflorum* and as they are

plentiful enough round here I never opened the flask and it still has some living plants in it after 5 years.

I hope to follow this article with one on care of seedlings from the flasks.

SOCIETY MEETINGS

North Shore—

President: Lt. Cdr. F. E. Mason
Secretary: Mr. A. Andrew, 70 Verran Road, Birkdale, Auckland 10. Phone 438-304
Meeting Place: Senior Citizens' Rooms, The Strand, Takapuna.
Time: 1 p.m.
Date: 1st Sunday in the month.

Bay of Plenty—

President: Mr. E. E. Bush
Secretary: Mr. J. B. Douglas, 46 Grey St., Kawerau. Phone 8330
Meeting Place: Lyceum Club, Te Puke
Time: 1.30 p.m.
Date: 1st Sunday in the Month

Poverty Bay, East Coast Orchid Society—

President: Mrs. Rose Bell
Secretary: Mrs. Marie Jacobs, 6 Buchanan St., Gisborne. Phone 89-531
Meeting Place: Upper Managapa Residents Hall, Osmond Road.
Date: 2nd Monday of every month.
Time: 7.30 p.m.

CYMBIDIUM NOTES

by Gordon Maney

NOVEMBER—DECEMBER—

Flowering has for most of us drawn to a close and potting should be getting to the finishing stage. Late flowering greens I feel are better to be left until February otherwise you risk bulb shrivel. Keep up liquid feeding each week and of course a plentiful supply of water is needed during the hot months.

As I have pointed out in my feeding programme, cut down on nitrogen from end of December, you want flower spikes remember. Spray with a fungicide such as Benlate or Captan, etc.

GROWING ORCHIDS FROM SEED

By J. Campbell

Ever since my first introduction to orchids in 1953 I was fascinated by the description of growing seedlings in sterile flasks. It was to be some 18 years before I had a hothouse and orchids of my own and in those years I read Sanders Orchids many times, especially the section on flask culture.

Within a year of starting my orchid collection I had read as much information as I was able to get hold of, much of it in the Horticultural Abstracts at Lincoln College Library. Before long I was purchasing chemicals, flasks, chemical balance and other pieces of equipment necessary for flask culture.

Great advances had been made in this field since my old book had been printed and the current trend was embryo culture, (the use of green seed before the pod had ripened or split). This method was reputed to be much more successful than using dry seed which has to be thoroughly disinfected and can often be destroyed in the process. As it is necessary to keep things 100 per cent sterile, I built a 'sterile cabinet' consisting of a plywood box with a sealed glass top and two armholes in the front. The cabinet should be deep enough to stand flasks up in, something I did not think of and have cursed ever since. The 7 ply woodwork was coated inside and out with several layers of high gloss enamel which would resist the bleach used to sterilise the inside of the cabinet. Most good books on orchid culture include flasking mixtures so I shall not dwell on the subject apart from saying I used Knudsons formula.

The flasks and mixture were sterilised in an autoclave which is like an oversized pressure cooker and in fact some books suggest that a household pressure cooker is quite suitable.

Many articles on the subject suggest the use of a platinum needle set in a glass rod for planting seed into flasks, platinum being a metal which seems to resist contamination.

I did have one originally but through constant heating and use it broke. I tried a piece of stainless steel wire flattened to a tiny spoon at the end and it worked just fine. In the green pod culture the needle can be dispensed with and I use a sterilised scalpel to cut the pod open. To begin the process I mix up a small bucket of bleach using about half a cup to 3 litres of warm water. Any instruments which I am to use are soaked in this bleach and some is placed in a small plastic spraying container. The inside of the cabinet is sprayed with the bleach solution and the outside of the flasks and rubber bungs are wiped with it also. The number of flasks I intend to plant with one pod are placed in the cabinet along with a small meths lamp and a presoaked glass jar on which I rest the scalpel.

I have tried using gloves of various kinds when working in the cabinet but for such fine work they can be likened to tap dancing in gumboots. Plastic gloves get holes burned in them from the meths, rubber gloves become very slippery with the bleach and flasks and bungs slip from the fingers in all directions so now I simply wash my hands and arms in the bleach solution and commence work. The bleach can be fairly rough on tender skin and my arms usually feel a bit uncomfortable for a day or two after seeding.

I am now ready to start work in the cabinet. I squirt a few puffs of bleach solution through the armholes, take the scalpel from the solution and dip the blade in some meths to wash off the bleach then pass the blade over the flame and lay it over the glass ready for use. The pod is dipped in meths while held with tweezers, then passed over the flame. The resulting flash burning should render the outside of the pod sterile, the seed inside being naturally sterile. By this time the scalpel blade will be cool enough not to damage the seed and I slice off the top of the pod.

ORCHID HUNTING IN NEW ZEALAND

Contd. by Ros Bickerstaff, Napier.

Months later, I returned to this same Reserve with a Ranger to remove the orchids from this fallen tawa tree before they were completely lost. (Remember, that, before orchids or other plants can be removed from Reserves, Crown-lands, etc., permission, which is not easily granted, must be obtained from the Commissioner of Lands, and you must have a ranger in attendance while collecting them). Many of the plants had deteriorated or had died, but some were located. Most of these are now growing happily in other surroundings at home, or in the Napier Botanical Gardens.

It was not very pleasant climbing amongst the dead branches three to five metres above the ground, especially when there were masses of onga onga branches (tree stinging nettle) weaving their way up through these old branches to keep me company. Most of the *Drymoanthus adversus* were on the old upper branches (1-2cm diameter), and always nearly out of reach! I had to hold on to a firm branch with one hand, while reaching as far I could with the other, to retrieve the plants. None ever seemed to be within easy reaching distance. I was reaching for my last plant before going home — the Ranger had already intimated that it was time he returned, as he had another job to be done that afternoon — it was just beyond my fingertips and the branch I was standing on was cracking ominously. I clutched the branch with the orchid; it snapped. So did the branch I was standing on! Luckily, the branch I held with my left hand was thicker and stronger. It remained whole! I scrambled back into the branches to relative safety still clutching the broken branch with the *Drymoanthus adversus* on it. I looked to see if it was still intact. It was, but imagine my surprise! — a hand's width above it was a clump of small silvery-spotted bulbs, some having a single leaf. It was my first sighting of *Bulbophyllum tuberculatum* (Col.)! Back in

the 1880's, Colenso had reported specimens from "the Petane Bush" — (Petane is the old name for Bay View) — but this bush is non-existent today, and has been for many decades. And, here was I finding it again only a few kilometres from the original site! What a thrill it gave me! Since then, I have found further specimens and even flowered them. All were on topmost branches blown down in strong winds.



Drymoanthus adversus

Drymoanthus adversus (Nichols) (syn. *Sarcophilus adversus*) is found in many areas throughout N.Z. I have found it growing on tawa, manuka, kanuka, totara, mahoe and puriri trees, but I have heard of its being found on many others. Most plants were growing on trees sheltered from the midday sun, enjoying well-lit places that received sunlight only in the early mornings. They seem to thrive in places that get plenty of moisture, but, must dry out in airy conditions. Usually they are found growing in association with lichens (*pseudocyphellaria* or *sticta* sp.), coarse brown moss (*Macromitrium* or *Leptostomum* sp.) and/or the climbing fern, *Cyclophorus serpens* (syn. *Polypodium serpens*). Occasionally the epiphyte, *Earina mucronata*, is found growing in close proximity. *Drymoanthus adversus*

flowers easily in cultivation in late winter and in early spring. The spikes emerge from the axils of leaves that are still green, often from beside the old spikes of previous years so that they are protected, as well as hidden from view, by the leaf. The old spikes remain on the plant for many years. The spikes are from 2-5cm long, have numerous small (4-6mm), fleshy flowers which are usually green with dark-greenish maroon markings; some local specimens I have found had deep-red petals and sepals also with the dark-greenish maroon markings. On many specimens, Keikis are found growing; these emerge from the stem, and even from the base of the plant next to the roots. The leaves are vandaceous in growth, emerging alternately from the central stem. The old stems are encased with old sheathing leaf bases — the blade of the leaf is deciduous and falls after a few years. The flowers are readily fertilized by natural means, with many pods appearing. These take about a year to ripen and burst open. Seedlings will appear occasionally (I have had only three appear) among the lichens and moss but develop very slowly.



Bulbophyllum tuberculatum

Bulbophyllum tuberculatum (Colenso) has clusters of oval bulbs 5 - 18 mm in length and 3 - 6 mm in width, capped with one or two leaves 12 - 32 mm in length and 4 - 6 mm in width, which have very short stalks. The blade is usually bent or slightly twisted to the stalk and keeled. The leaves and bulbs are maroonish green; new growths are much paler and emerge from under the bulb at the base. The

leaves fall off after two to three years. Old bulbs are marked with grey and become wrinkled, withering away after a few years. The new growths and flower spikes emerge in spring and summer, and flowers are seen by the end of March. The spikes are 2 - 3 cm long and have tiny flowers 3 - 5 mm, which are very beautiful when magnified. The lip is a bright, deep pink with a wide yellow vertical bar. Unopened buds resemble a miniature dendrobium bud in shape. The roots are straw-coloured, very numerous, thin and wiry, and unlike most epiphytes, lack velamen.



Have You Our Seed Catalogue?

We at Watkins Seeds believe that the time has come for our civilisation to count its blessings — not destroy them. Efforts made to learn about and live with nature will be handsomely rewarded through the preservation of its life-giving cycles and beauty.

Let's all co-operate by taking positive action together.

We can help by sending FREE our exclusive, colour illustrated, flower and vegetable mail order Seed Catalogue.

Write (mentioning the title of this magazine) to

WATKINS SEEDS

21 GOVER STREET, P.O. BOX 468,

NEW PLYMOUTH, NEW ZEALAND.



IMPORTANT ANNOUNCEMENT

The October 1976 issue of *The Orchid Review* will be No. 1,000, a thousand months that span nearly eighty-four years and a remarkable achievement of continuous publication. Despite two world wars and numerous other difficulties, *The Orchid Review* has been printed and distributed each month without fail; bringing news, advice and enjoyment to generations of orchid growers during a period of time that has witnessed a revolution in all aspects of orchidology.

How should we mark this momentous event?

A COMMEMORATIVE ISSUE is a must and we shall be looking backwards through the years to see just how dramatic these changes have been. An international, star studded team of orchidists, specialists in their fields, will write on the progress that has occurred throughout the sphere of orchids since Issue No. 1 in 1893.

Perhaps the greatest strides have been in plant breeding; names like McBean, Black and Flory, Ratcliffe, Mansell and Hatcher conjure up pictures of dedicated pollinators who have been and still are at least partially responsible for the lead Britain has given to the world of orchids. Others will argue that without the scientists, much of the breeders' work would have been in vain; also if the quality of culture had not kept pace many of today's stud plants would not have survived infancy. Therefore, a review of all these aspects will be included in a greatly enlarged, colourful, special Commemorative Issue.

In case you think we are only looking backwards, each contributor has been invited to gaze into a crystal ball and attempt to forecast the future; making the main theme "Yesterday to Tomorrow".

Existing paid up subscribers will receive the special number at no extra cost, but additional copies will be available at £1.00 each post paid. Societies, Nurseries or even in-

dividuals may like to take the discount rate of £7.50 for 10 copies or multiples thereof sent to one address. All enquiries and orders please to the Secretary, 62, Chaldon Common Road, Caterham, Surrey, CR3 5DD.

The Orchid Review is proud to offer this Commemorative Issue and is confident that it will prove of interest and lasting value to all lovers of that queen of flowers — the Orchid.



WHANGAREI SOCIETY

In October 1975 Mr. & Mrs. Blackmore were invited to address the inaugural meeting of the new Whangarei Orchid Society. Ninety people came and since then an average of 68 members have attended monthly meetings. At each meeting we have a speaker or demonstrator, plus a plant commentary. A wide variety of genera are grown in our area. Demonstrations and talks have been given by the following: Mrs. Kearney, a local grower, on dividing, repotting and potting on of Cymbidiums.

Mr. Leahy, of the N.Z. Orchid Society, gave a talk on showing and judging.

Mr. Greenfield, a local grower spoke on the growing of Cattleyas and demonstrated dividing and repotting.

Mr. Fred Burke of Whakatane spoke on commercial growing and Valley Orchids and showed slides of his trip to the Santiago Orchid Show.

Mr. Digby Graham talked on Paphs. The localities where they are found and the history of some.

Mr. Rob Small, President of the Society, gave a follow up talk on the growing of Paphs.

Mrs. Dorothy Foote, Florist, demonstrated the use of orchids in floral work.

A bus load of members attended the July Orchid Show in Auckland and we held a successful non-competitive Spring Show in the Whangarei Ladies Gardening Club Hall on 10 and 11 September.