

Orchids

IN NEW ZEALAND



Volume 13—No. 5
September/October 1987



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Orchids

IN NEW ZEALAND

incorporating 'The New Zealand Orchid Review'

OFFICIAL PUBLICATION OF

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NEW ZEALAND ORCHID SOCIETY

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EDITORIAL

Price rises are a fact of life these days, after a succession of Governments dedicated to reducing inflation (hal hal). With inflation running at about 18%, and postal increases of unknown magnitude a virtual certainty for the near future, our subscription rates for Vol. 14 (1988) will rise to \$18.00 (individual) and \$16.50 (bulk subscriptions through Orchid Societies). This is the absolute minimum that could be applied. To sweeten the pill, this issue will contain more illustrations than any previous one. In fact we have plenty more colour coming up in the future.

We have been pleased to notice a distinct improvement in the quality of orchid photography being forwarded to us, but not yet any great increase in the quantity! Please remember that good illustrations are the key to any quality publication, and keep them rolling in.

CONZED NEWS

At the Annual General Meeting of the Orchid Council of New Zealand, held in Wanganui on Saturday 20th June 1987, the following Officers were elected—

Patron His Excellency the Right Reverend Sir Paul Reeves

President Mr Andrew Easton

Vice-Presidents Mr Syd Wray
Prof. Dennis Bonham

Executive Committee

Mr Harold Bayram

Mr Ken Christie

Mr Roy Clareburt

Mrs Patricia Elms

Mrs Edna Newton

Mr Ron Roy

The Treasurer and Secretary have now been appointed—

Secretary Miss Jane Foster,
Auckland

Treasurer Mr Peter Anderson,
Rotorua

The 4th South Island Seminar will be held 2nd-4th October 1987, at the Ascot Hotel, Invercargill.

The A.G.M. next year will be held at Gisborne.

COLOUR FUND

The Editors are grateful for the following generous donations to our Colour Fund—

Mr Norm Porter
New Zealand Orchid Society.
(\$500.00 towards illustrating
the Geoffrey Laird Memorial
Lecture as featured in this
issue).

Mrs J. H. Goffin

FRONT COVER

In keeping with our major article on the history of *Cattleya* hybridising, we show here a very colourful *B/c*. Sunset Gorge (*Lc*. Mem. Albert Heinecke x *B/c*. Citron Pass), typical of the many vigorous and brightly coloured hybrids produced during the 1970's. Grown and photographed in the Auckland sunshine, even in these days of mini-catts it still makes an impact.

Grower and Photographer: N. C. Miller

BACK COVER

Thelymitra longifolia

Photography: Bob Goodger

13th ANNUAL PRESIDENT'S REPORT

(abridged)

I hereby present my final report for the Orchid Council of New Zealand, now in its 13th year of operation. This year has perhaps not been as exciting as one may have hoped but we have concentrated on establishing reserve funds to enable a sound base to be formed with the prospect of the 1990 World Orchid Conference now a reality within the World Orchid scene.

We have, however, been able to express ourselves internationally both in Australia and in Japan and we have now formed a strong relationship with all overseas Orchid people. Membership in some societies seems to be decreasing but there still continues to be three to four new societies formed each year in outlying areas. We have had two new societies affiliate to Council (Stratford and Tokoroa) and we welcome them and trust that their participation and involvement with this Council and with Orchid Societies throughout New Zealand will be most enjoyable.

It is extremely gratifying to me that, with the availability of speakers and inter-society relationships, the strength of the Council is growing and the development of society visits, interchanges of speakers and meeting ideas have certainly fostered the development of those smaller societies who have in the past felt a little out of touch. There is certainly still room for improvement in this area but it is something that can only be developed over a period of time.

FINANCE

With the limited source of funds for the development of Council activities together with what is required for administration costs etc., it is always difficult to achieve any object of major concern; however the establishment of speakers' funds and the results of the successful raffle will now provide a basis where perhaps development can go ahead with reserves that are now in hand. Although Council has

reasonable reserves we must not overlook the fact that unless we continue to increase capitation fees to meet rising costs, etc., the reserves that have been established will only dwindle away and not necessarily be put to the use and development that is intended.

The additional cost of GST together with general increases of postage, travelling, etc., will be an additional burden to Council's funds but it won't be until the end of this year that a full year's activities can be appraised as to the effect of these costs. It is also imperative that we do not run the risk of making capitation fees a burden to societies which they will perhaps find difficult to justify to members. Retaining these at minimum levels means Council's funds and expenses must be limited accordingly and therefore may place restrictions on any activities that may require assistance from the national source.

'ORCHIDS IN NEW ZEALAND'

Again 'Orchids in New Zealand' continues to develop into a magazine of world-wide importance. The success of promotion in Japan and the acknowledgement of many international orchid writers attending the 12th World Orchid Conference give cause for sincere congratulations on the publication.

We now have a circulation of approximately three thousand subscriptions and comparing this on a world-wide basis, it is certainly a high distribution. We are now undertaking

an international marketing promotion as it is the intention of the 13th World Orchid Conference Committee to use 'Orchids in New Zealand' as our National and International communication.

There are obviously still difficulties with the production of 'Orchids in New Zealand' and delays are certainly an embarrassment to the Editors and those concerned. Steps continue to be taken to rectify these difficulties, especially in the bulk distribution, in an effort to avoid delays that had been occurring between the individual society systems.

We still need the support of many members through the country promoting 'Orchids in New Zealand' through their own individual members and to outside areas. This has taken place in some instances and Fleur Gardens, Rotorua, are now selling some fifty or sixty copies each issue, in their sales area.

I would like again to emphasize the fact that 'Orchids in New Zealand' is administered and run by individuals on a part-time unpaid basis. Council are still receiving many letters of congratulations and assistance by way of donations to the Colour Fund, as an appreciation of the standard of the magazine. I would sincerely like to thank the assistance of our Editors, Nick and Elizabeth Miller and the co-operation of Bill Deed, the printer, for their services to 'Orchids in New Zealand'. The distributors, Lyn and Bev Godwin, also have a mammoth task of continually upgrading subscriptions and we thank them for their efforts and trust that the purchase of a computer will be of great assistance to distribution in the future.

JUDGING

The standards of judging orchids throughout New Zealand is continuing to become more uniform and this perhaps can be attributed to the success of national seminars and

international shows that have assisted with this development. The examination of new trainees and the quality of their papers have shown that with encouragement we can only achieve higher standards in our judging system. The redrafting of the standards have been completed and we are now completing the final stages of up-grading the by-laws to enable the completion of a new judging handbook. The redrafting of rules is a laborious and time consuming task but necessary in the aspects of stream-lining and upgrading the existing rules. We have come a considerable distance from the original standards set down and with amendments that have been created we are now getting closer to having judging rules completed. The ratification of awards which was an area of delay has been changed so that all awards except A.M. and F.C.C. can be verified by the Registrar General for ratification, subject to all the conditions being met.

Congratulations to Mr Ron Maunder for this year winning the 'Orchid of the Year'.

1987 WORLD ORCHID CONFERENCE

The focus of the World Orchid Conference is now on New Zealand. This was established in Japan and all those who attended could feel the eyes of the world upon them once the 12th World Orchid Conference was completed. The effort of New Zealanders in supporting the World Conference with flowers and the promotion going from our display provided an excellent platform to build from in the promotion of this prestigious event.

Planning is well underway in the establishment and formation of various committees and the involvement of orchid people from outside the Auckland area, will produce a combined effort from New Zealand, not only from the Auckland area.

A company has been formed to operate the financial aspects of the Conference. It has been formed with the equal participation of the New Zealand Orchid Society and CONZED Incorporated, having three Directors each. It is necessary to form such a company to protect the resources of Council and individual societies and personnel over the large costs that are anticipated in the procedure to this event. The support of societies throughout New Zealand is tremendous to date and I know that many have planned for participation at this event. Many societies are already operating conference funds to assist with their participation. I must stress again that any financial gain from this World Orchid Conference will be put back into orchids and societies throughout New Zealand. Continued contact is being undertaken with the American Orchid Society, the Australian Orchid Council and other International Orchid bodies to enable progress and inter-relationship of orchid promotion to take place.

LIAISON

We now have confirmation that our own orchid awards will be published jointly with the Australian awards and it is hoped that it can be established this year as a promotion for the orchids we grow in this country. The South Island is unfortunate in that there are many miles between centres in New Zealand and this makes contact with our southern societies a little difficult. We are, however, grateful for the work of Judy Coburn and Edna Newton in visiting many societies in that area this year in the promotion of orchids and Council activities. The seminar to be held in Invercargill in October needs the support of southern societies and it is hoped that this can be provided to make it a success.

ORCHID RESEARCH

We continue to fund research via the foundation for native orchid

research through the D.S.I.R. Palmerston North, where trials are undertaken with germination of native orchid seeds. Steps are also being taken, with the co-operation of the Taupo Orchid Society, to establish a reserve area of native bush in their region where some thirty-odd native species can be found together. This unique area needs protection and it is hoped this will be able to be continued through the Forestry Corporation.

NATIONAL RAFFLE

This major fund raising activity of this year has produced a fund containing some eighteen thousand dollars to assist in the continued development of our aims.

I'd like to thank all individuals and societies for their participation in making this so successful and a special thanks go to Syd and Joy Wray for their efforts in the final administration of such a difficult task.

CONCLUSION

Council Administration and promotion is still perhaps the greatest challenge that the Executives have and although there are difficulties at times we are succeeding in establishing a body that obtains National and Government recognition. Council Executive have continued where possible to visit societies and express the desires and needs of the Council and I would thank them for the assistance they have given in this area.

It was sad to receive the resignation of Ron Maunder this year. Ron's efforts on behalf of Council have been extremely valuable and his efforts must not go unmentioned in the activities of the Orchid Council.

I wish to extend to all the Executive and especially our Secretary, Mrs Pearl Martin, our thanks to their continued effort in the administration of Council affairs. Large memberships of societies and the

continual growth of new developments have made their tasks again quite demanding and perhaps have resulted in some delays in forwarding information. Without their efforts the Council would not operate and the achievements would certainly not have been so high. It is the individuals who devote their spare time to administration tasks that enable the continued development of Orchid growing throughout New Zealand. As this is my retiring year as President I would like to express my thanks to all who have assisted and

helped over my 12 years with the Orchid Council and I trust that I have been able to give some assistance and direction to many individuals and societies throughout the country and overseas. It is difficult for me to devote perhaps the time that one should to such an activity that could almost be a full-time occupation but I trust that the Orchid Council has developed over this time within the guide lines and aims of its objectives.

Happy Orchid growing.

D. K. Bell

A Message from our new President . . .

I would like to thank all those affiliated Societies whose delegates supported my nomination for President. As I mentioned in Wanganui, I would really like to have the job for no more than two years, as I feel those two years of hard work will help greatly in laying some of the foundations of a successful 13th W.O.C.

One of my promises in Wanganui was to visit and give a programme at any of the Council affiliated Societies that was interested, over the term of my Presidency. Ideally this should be spaced throughout the next two years as you can imagine what might happen if everyone wanted me to visit them over a three month period in mid 1989! With many Societies "closing down" over Christmas and my own fairly heavy commitments in March-April each year for the Northern Hemisphere Spring Shows and in September-October for ours, you will appreciate that I have to get a two year calendar organised quickly. Please, let me hear your suggested itinerary as soon as possible.

Successful communication is vital in all areas of life, not least in the affairs of your Orchid Council. I intend to work hardest in keeping all Societies informed of Council aims and activities, in this magazine and through the Council executive. Already with the co-operation of Professor Bonham and the 13th W.O.C. Committee, we are co-ordinating our meetings with 13th W.O.C. meetings so the Council Executive may sit in and report back on all World Conference developments. Become acquainted with the W.O.C. liaison person in your Society too and make sure that your ideas and offers of assistance for 1990 are channelled to the W.O.C. Committee. Remember this is New Zealand's first World Orchid Conference, our orchid event of the century. I would hope that every affiliated Society plans to stage an exhibit and support the Conference with a 100% commitment. From Kaitaia to Southland, the Conference welcomes, indeed depends on, your enthusiastic involvement.

*Andy Easton
President
CONZED*

New Zealand Orchid Society Winter Show 1987

Held, as always, in the Mt. Albert War Memorial Hall, the three-day celebration of the July flowering Orchid season was a great success. This traditional site presents problems for innovative layout design, but clever use of corners, alcoves and foyer this year gave variety and focus of interest; whilst the stately standard cymbidiums could still stand silently in their regimented lines.

The seven design displays showed initiative and real artistic talent; the prize winning 'Butterflies', put together by Del Gee and Ken Nicholson of South Pacific Orchids, showed to perfection that orchids need space in which to be displayed, whilst Marilyn and Bryan Johnson, of Marble Gardens, with their amusing entry 'Mealtime', gained second place with the clever use of beautiful orchids with suitable names. Add to these a most informative 'growth of a paphiopedilum' display from Geyserland Orchids and quality floral art exhibits and we have a good start to organised displays in 1990.

The N.Z.O.S. Judges were joined by invited CONZED Judges from Whangarei and Marlborough. The panel also included several Judges of the Australasian Branch of the Cymbidium Society of America. This co-operation between the three judging systems is a good omen for 1990.

They awarded prizes in the 23 trophy and 36 open classes, the 12 Novice classes, the five Floral Art classes and, subject to ratification, the following awards were made—

1. New Zealand Orchid Society Award of Merit (AM/NZOS) *Paphiopedilum* Kowloon x *callosum* 'Memoria Hazel Brljevich', grown by Andy Easton.
2. New Zealand Orchid Society Award of Distinction (AD/NZOS) *Odontioda* (*Oda*. Jerispol x *Oda*. Lyoth 'Nimbus'), grown by Del Chandler.

3. New Zealand Orchid Society Cultural Certificate (CC/NZOS) *Paphiopedilum insigne* 'Irene', grown by Des Leahy.
4. New Zealand Orchid Society Cultural Certificate (CC/NZOS) *Paphiopedilum* Silvara 'Tamahere', grown by J. R. Blackman.
5. New Zealand Orchid Society Cultural Certificate (CC/NZOS) *Cymbidium* Amapola 'Milford', grown by Tony Ballard.

At an early morning judging on Saturday 11th July, the panel of the Australasian Branch of the Cymbidium Society of America Judges made the following awards—

1. Bronze Medal, Cymbidium Society of America (BM/CSA) *Paphiopedilum* Keyeshill x Valwin, grown by B. Fraser.
2. Bronze Medal, Cymbidium Society of America (BM/CSA) *Cymbidium* Amapola 'Milford', grown by Tony Ballard.
This plant also received a cultural award.

Cultural Awards were given to—

Paphiopedilum insigne 'Irene', grown by Des Leahy.
Paphiopedilum Silvara 'Tamahere', grown by J. R. Blackman.

A highlight of this Show was the Thursday evening 'Preview', a very happy family affair, where members and their guests could gaze at orchids and chat with friends at the same time. The Official Opening by the Mayor of Mr. Albert, Mr Frank Ryan, the beautiful orchids; the interesting

DISA UNIFLORA

' —a report'

Gwen Thomassen

I got seed from Mr George Fuller in 1985, and followed the instructions, planting immediately into pumice sand and peat moss, in two ice-cream containers, with a strip of blanket to syphon rain water continuously through them. In about one month they germinated.

The containers were placed on the floor under the bench of the cattleya house and pricked out on the 3rd May 1986 into more ice-cream containers. Plants were potted up singly in 5cm pots in September 1986. Now they are quite large and were this week (June 1987) potted into PB 1½ and PB3 bags. *Eighteen* lovely plants are the total survivors to date.

Mix used is the fines of Becks Mix, a few handfuls of pumice sand and the same of peat moss, to a nine litre bucket.

I feed occasionally with Alaska half strength, Lush half strength and sprinkle dried blood at about two monthly intervals.

This winter they are outside under a few cymbidiums. They get a little morning sun and a little in the later afternoon.

The plants are nice and green with semi-shiny 2cm wide leaves about 15-20cm long, with good tubers formed and shoots coming up around several.

11 Harbour View Road
Point Wells
R.D.2
Matakana

◀ continued from previous page

pottery and jewellery demonstrations; and the excellent food and wine, combined to make the occasion one that must be repeated. For once New Zealand Orchid Society members felt part of a contented extended family.

LETTER TO THE EDITOR



Dear Editors,

Re Page 93, Vol. 13, No. 4 (July/August 1987) in an article by Mr George Fuller, he asks whether it is true that *Masdevallia veitchiana* grows amongst the ruins of the lost city of the Incas-Machu Picchu. Early September of last year we spent a week in that area and saw hundreds and hundreds of orchids growing on the slopes up to Machu Picchu, 7315 feet above sea level. These had flowers in the orange-reds, 2-3cm in diameter. Amongst the actual ruins were many large orchids growing on stems of 2-2.5cm. These had large purple-blue flowers which were ending their flowering period because the flowers were right on the end of the stems. These flowers were each as big as the palm of the hand (*probably Sobralias. Ed.*). I found them impossible to photograph as they hung out into space from the old inca terraces with a sheer drop of thousands of feet.

We travelled extensively through Argentina, Peru, Paraguay, Bolivia and Brazil, but it was only at Machu Picchu that we saw orchids growing naturally. It was only at Petropolis, near Rio de Janiero, that we visited a Cattleya grower with many acres of glasshouses.

Strangely, the cut flower trade seemed to favour roses, carnations, gladioli, crysanthemums and very rarely did we see orchid flowers in the flower shops and stalls, which were everywhere as most of the population seem to live in condominiums with no gardens as we know them.

Congratulations on your excellent magazine.

Yours sincerely,

(Mrs) Pam Bartrum
Pleasant Point
South Canterbury

Creators of our Colourful Catts

Part 1

Don Herman

This is an abridged version of the first Geoffrey Laird Memorial Lecture. Grateful thanks are due to the New Zealand Orchid Society for their generous financial assistance in producing the colour illustrations in this article.

NOTE: *Some of the photographs in this article are old and not up to modern standards of quality, but are included because of their historic or intrinsic interest.*

A lot of people cringe when you say "history" but, you know, the really fascinating thing about the world of orchids is not just the orchids. There is no place that you'll meet such a diverse group of people coming from such a diverse socio-economic status and see such great ability to get along, to mix well and to enjoy each other. Orchids are a fantastic field. Tonight I have been asked to speak on the history of *Cattleya* hybridising. Well, that's like giving 'War and Peace' in 20 minutes, but here goes!

We shall start with **Sir Harry Veitch**, one of four sons of James Veitch, who had established a nursery in England in 1808. It was at this particular nursery that hybridising of orchids began, and began with a particular individual, a man named **John Dominy**.

In 1856 he flowered a plant called *Calanthe* Dominyi and this was the first hybrid orchid. The first *cattleya* hybrid was flowered in 1859, and called *Cattleya* Hybrida, followed by

Sir Harry Veitch



John Dominy



Laeliocattleya Dominiana in 1878 (*C. dowiana* x *L. purpurata*). *Cattleya* Enid was flowered at the Veitch Nursery in 1898 and is a major contributor to purple breeding, to semi-alba breeding and even to blue breeding. There are various strains of *C. Enid* (*C. mossiae* x *C. warscewiczii*) and I would call it one of the building blocks of cattleya hybridising. *Sc. Batemanniana* (*C. intermedia* x *S. grandiflora*) was flowered in 1886. If you had a thousand of these today you could sell a thousand—they're very very popular, yet the cross is 100 years old although probably originally made without using the 'aquinii' (splash-petal) form of the *Cattleya* parent.



C. Fabia



Sc. Batemanniana

C. C. Hurst



A real building block was *C. Fabia* (*C. labiata* x *C. dowiana*) made in 1894. It is behind the dark purples. I should mention that some of these photographs aren't very good because of their age, they were taken in the 'thirties and 'forties and come from the Armacost and Royston files, or the Fred A. Stewart files.

In 1897 and 1898 a series of articles called "Curious Crosses" appeared in the *Orchid Review*. They were written by C. C. Hurst, who was

a man ahead of his time. In these articles he pointed out that there were dominant and recessive characteristics operating in orchid hybridising, and he began to understand the Mendelian Theory which was otherwise not really applied to the orchid world until 1906. In 1925 he published a book called "Experiments in Genetics"—an excellent book if you're interested in hybridising. He also put together a list of what he called 'true albinos' so that they could be used in hybridising.

In the 1920's Eileen Low, a member of the famous Stuart Low company of England, made some outstanding hybrids. One of these was *C. Mrs Medo* (1922), one of the building blocks of tetraploid yellows.



Lc. Cavalese

variety and so she really started what we called splash hybridising. The next generation in this line, *Lc. Excellency*, was made in 1932, and is *Lc. Lustre* (again!) x *C. Suavior*.



C. Mrs Medo

Another was *Lc. Cavalese*, which is part of the "Lustre" line. We will look at *Lc. Lustre* later. *Lc. Cavalese* is a parent of the famous *Lc. Bonanza*, which is a parent of *Lc. Mem. Crispin Rosales*—this particular line of strong coloured, well-shaped free-flowering purples comes back to *Lc. Cavalese* (*Lc. Lustre* x *C. Fabia*). We have already mentioned *C. Fabia*.

C. Suavior 'Aquinii' was made in 1930. Veitch had made the same cross in 1887 but Eileen Low was smart enough to use the splash



C. Suavior 'Aquinii'

A person named Moran made *C. Dubiosa* (1890) of which only one clone, the Scully variety, has been used to any extent. His most important cross was *Bc. Mrs J. Lehmann*, the foundation block for *Brasso yellows*.

A man named Orpet, who lived in Santa Barbara, made *Sf. Orpetii* (*S. grandiflora* x *L. pumila*) in 1901. It is one of the first true miniatures.



Sl. Orpetii

Sir Jeremiah Colman was a very wealthy man (*Colman's Mustard—Ed.*), with an estate called Gatton Park (there was even an orchid named *Lc. Gatton Glory*), which must have been quite a place.

Colman often made hybrids that had been made before, but using *coerulea* types. Veitch had made the cross *C. Portia* in 1897 (*C.*

Sir Jeremiah Colman



bowringiana x *C. labiata*) but in 1907 Sir Jeremiah made the blue strain. Similarly with *C. Ariel*, also first made by Veitch, and remade in a *coerulea* strain by Sir Jeremiah in 1915. It is *C. bowringiana* x *C. gaskelliana*.

Probably the best blue I think Sir Jeremiah Colman ever made was *Blc. Victoria 'Coerulea'*, made in 1929 (*Blc. Antionette* x *C. Portia 'Coerulea'*).



Blc. Victoria 'Coerulea'

Everybody always associates Charlesworth's with *Odonts.*, but actually they made some very significant hybrids of cattleyas, such as *C. Iris*, *Lc. Luminosa* and *Sl. Psyche*. Another of their hybrids was *Lc. Charlesworthii* (1900). Charlesworth's were one of the first firms to use the fungal method of raising orchid seedlings, in which a selected fungus is introduced to a culture of orchid seeds. Another Charlesworth introduction is *Sl. Gratrixiae* (*L. tenebrosa* x *S. grandiflora*), which is still being used as a parent. Another famous hybrid from Charlesworth is *Slc. Anzac*.



Sl. Gratrixiae

To me there are three scientists that made really major contributions to the orchid world. The first would be **Dr Lewis Knudson**, who developed the asymbiotic method of germinating orchid seed, which revolutionised orchid culture, by making the growing of seedlings reliable.



Dr. Lewis Knudson

Frederick Sander established the famous firm of F. Sander in 1860. His firm was a training ground for many famous names in the orchid world. Among Sander's hybrids were *C. Ardentissima* and *C. Nigrella*, both descended from *C. Fabia*, and both very influential in breeding dark purples.



Frederick Sander

A fine yellow produced by this firm was *Lc. Edgard van Belle*, named after an employee at Sander's Bruges nursery in Belgium (they had nurseries in three countries).

Lc. Edgard van Belle



Perhaps the greatest name in orchid hybridising was **H. G. Alexander**, who worked for Sir George Holford on the Westonbirt Estate. Until Sir George's death in 1926 all the hybrids produced there were registered under 'H' (for Holford), after this time Alexander took over the collection as a commercial business, and the registrations thereafter were registered under 'A' (Alexander). The business was intended to pass to Alexander's two sons Edwin and Stanley, but this was not to be. Both were R.A.F. pilots, and both were killed in World War II, and H. G. Alexander, they say, never got over this. But he was probably the greatest of all plantsmen—he was a man that made observations that the average person wouldn't see. There is a difference between a person who grows orchids, and a plantsman—the plantsman sees things that the average orchid grower doesn't, and H. G. Alexander was one of those people.



H. G. Alexander and his sons

One day at a judging, he received two FCC/RHS, one for *S/c.* Falcon 'Westonbirt', which probably hasn't yet been surpassed for intensity of colour. The other award on this day was for *Cym.* *Alexanderi* 'Westonbirt'. Alexander was also the creator of *Lc.* *Lustre*, and perhaps no

S/c. Falcon 'Westonbirt' (front), 'Alexanderi' (rear)



Cattleya has been more influential than this—one of the great orchids of all time. He also created *C. Porcia*, of which *C. Porcia Cannizaro* is way above the rest. This was made in 1927, and now we're beginning to see people make hybrids from this again—it's coming back—we've had a siege of mini-catts and now people are beginning to want some of these spectacular old timers.



Lc. Lustre

Another thing created there was *Lc. Orange Gem 'Delight'*—one of the parents of *Slc. Paprika*, and a very nice little plant.



Lc. Orange Gem 'Delight'

The second scientist I want to mention is **Dr. Gus Melquist**—one of the great people of orchids—to me Gus is a teacher because if you come

up and ask him a question he has time for you. In 1949 he went on a Fulbright Scholarship to England, went to Westonbirt and worked with H. G. Alexander, and began to do some chromosome counts. It was he who introduced the importance of polyploidy in orchid growing.



Dr. Gus Melquist

The third scientist is Dr. Georges Morel who began the tissue culture at Vacherot and Le coufle back in the sixties.

C. Horace var '*Maxima*' was bred in 1938 by the Belgian Institute of Horticulture. Today it is very much

C. Horace 'Maxima'



used for breeding—despite its 'washed out' appearance—because it is shape dominant and colour recessive.

I made a hybrid using *Blc.* Mem. Crispin Rosales with *C.* Horace to give *Blc.* Tribute, and when we crossed this with *Lc.* Edgard van Belle (already mentioned), we came up with *Blc.* Silk Road which has very wide petals for a flower of this type—the round full shape comes from *C.* Horace.



Blc. Tribute

Blc. Silk Road



Blc. Xanthette 'Chartreuse'

Blc. Xanthette was registered by L. Sherman Adams (although I think his wife made the hybrid) and the variety 'Chartreuse' has revolutionised the whole field of tetraploid yellows, producing such things as *Blc.* Destiny, *Blc.* Golden Galleon and *Blc.* Fortune. Here is a photo of an average *Blc.* Fortune, this gives an idea of how much the quality jumped when *Blc.* Xanthette was used.



Blc. Fortune

(to be continued in next issue)

Closing Dates

for

Vol. 14, No. 1: 6th November

Understanding Nobile Dendrobiums

Alan Patterson-Kane

To get the best from modern nobile type dendrobiums (Yamamoto dendrobiums) we should look at the climate in the area we find the original species. Nobiles are native to countries like Burma, India and Thailand. They grow in the branches of trees, often in full sun, from lowland regions to quite cool highlands in the Himalayas. Throughout this region, the hot summers are very wet—it rains almost every day. But in winter, when temperatures are lower, rainfall is minimal.

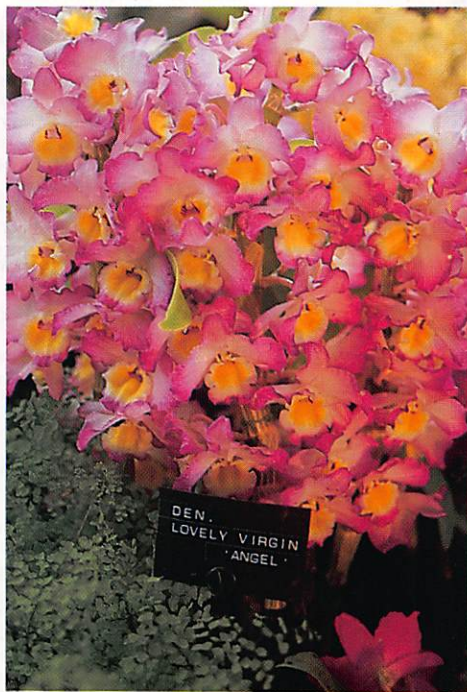
In New Zealand, we find (in theory) the reverse is true, with warm dry summers and a high rainfall in winter. To get the best from nobile type dendrobiums we need to adapt our growing conditions so they approximate conditions in the far east. Temperature requirements are no problem—nobile dendrobiums are ideally suited to our temperate climate. To get good flowering we do need to pay careful attention to light, water and fertilising.

It is a good idea to keep your nobile dendrobiums separate from other orchids, so that they can more easily be given the different treatment they need.

To Encourage Flowering

To produce flowers rather than offshoots (plantlets) we need only imitate the natural conditions of their ancestral home.

- a) **LIGHT**—during spring and summer, nobiles like plenty of light. If there is sufficient air movement they can be in full sun. If air circulation is poor, up to 30% shade is sufficient. For best flowering the canes will be quite strong, and the leaves almost yellow.
- b) **WATER**—keep a direct relationship between temperature, light and water. As temperature rises in the spring, gradually increase watering. In



Deu. Lovely Virgin 'Angel'—a new hybrid from Jiro Yamamoto.

the summer, when temperatures and light levels are highest, almost daily watering is best. During autumn, reduce watering, and when night temperatures reach 10°C only water sufficiently to stop the canes from shrivelling (2-3 times per month).



World's Finest Orchids
Yamamoto
DENDROBIUMS

Nobile Type
Dendrobium

Now available in New Zealand, these modern hybrids from Jiro Yamamoto.

- 293 **Sailor Boy 'Popeye'**. New variety, long lasting heavy substance white. Sturdy stem, with blooms facing forward.
- 4681 **Utopia 'Messenger'** FCC/WOC AM/AOS. Internationally famous—striking dark reddish purple flowers with dark yellow lip. Outstanding substance and conformation.
- 13141 **Orange Gem**. Vigorous grower and profuse bloomer. Yellow when first open, maturing to a beautiful deep orange. New hybrid.
- 11431 **Pink Doll 'Magic'**. Beautiful flower, pale pink with darker tips. Deep yellow throat. Very good bloomer, long lasting.
- 7951 **Hoshimusume 'Smile'**. Creamy white flowers with pink tips. Dark orange lip, firm stems, flowers facing upward and forward (not illustrated).
- 9035 **Pittero Gold 'Grace'**. Beautiful orange yellow throughout. Compact type with good shape for yellow. Good substance.
- 6617 **Christmas Chime 'Asuka'**. AM/AOS. Milky white flower with touch of purple on tips. Yellow lip with dark throat. Profuse bloomer.
- 0-289 **Honey Leen**. New hybrid and good bloomer. Outer half of flower bright reddish purple with white centre. Yellow lip and dark throat.
- 7814 **Fortune 'Juno'**. Large orange yellow with purple tips. Good substance and a profuse bloomer.
- 58136 **Malones 'Picola'**. Dark reddish purple with dark orange throat. Flowers large, round, good substance. Short cane type (not illustrated).
- 6885 **White Pony 'Akamatu'**. AM/AOS. Very large white with bold contrasting throat. Excellent shape and lasts well.
- 4924 **Oriental Paradise 'Aurora'**. Beautiful pastel shades, cream with pink tips and contrasting dark throat. Short stems produce clusters.
- 49012 **Golden Blossom 'Venus'**. HCC/AOS. Very popular clear canary yellow. Profuse bloomer on sturdy stems.
- 5047 **Swallow 'Queen'**. HCC/AOS. Large white with bold dark lip. Grows and blooms well.
- 10062 **Mild Yumi 'Dream'**. New hybrid. Creamy white flowers with dark purple on tips, and orange yellow lip. Extra good bloomer (not illustrated).
- 286A **Fantasia 'King'**. Bright reddish purple of excellent size and shape. White centre, deep yellow lip and dark throat.
- 5641 **Shinonome 'Compact'**. Pink flowers, white centre and bright deep yellow in lip. Stems short and sturdy, blooms in clusters.
- 6201 **Isochidori 'Rainbow'**. Creamy yellow flowers with purple tips. Round flower of excellent shape and substance. Prolific.
- 9704 **Friendship 'Champion'**. Very large deep purple with bold dark lip. New variety with sturdy stems. Prolific.
- 7411 **Lovely Virgin 'Angel'**. Exceptionally profuse bloomer. Elegant pink with darker borders and bold yellow lip. Sturdy stems and flowers face forward.

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All plants medium size, expect flowers next year,
\$16.00 each or 6 plants (our choice) for \$84, or 20
plants (one of each) for \$260.

If you take all 20 we will add a free plant of new
variety.





293 Sailor Boy 'Popoye'



4681 Utopia 'Messenger'
FCC/WOC, AM/AOS



13141 Orange Gem



11431 Pink Doll 'Magic'



9035 Pittero Gold 'Grace'



6617 Christmas Chime 'Asuka'
AM/AOS



0-289 Honey Leen



7818 Fortune 'Juno'



6885 White Pony 'Akamatu'
AM/AOS



4924 Oriental Paradise 'Aurora'



49012 Golden Blossom
'Venus' HCC/AOS



5047 Swallow 'Queen'
HCC/AOS



286A Fantasia 'King'



5641 Shinonome 'Compact'



6201 Isochidort 'Rainbow'



9704 Friendship 'Champion'

All prices include GST, packing and postage anywhere in New Zealand. Bankcard or Visa welcome
(quote card number and expiry date).

c) **FERTILISER**—It is most important to keep nitrogenous fertilisers to a minimum. Use only a 'blossom booster' type fertiliser in the spring and early summer to help produce sturdy canes. Stop all fertiliser in February, and never use slow release fertiliser on flowering size plants.

d) **TEMPERATURE**—To form flower buds, the plants need to be exposed to low temperatures. Canes which grew through spring and summer and have matured in the autumn need about one month of low (10°-14 °C) night temperatures. So don't rush to bring your plants into the glasshouse or indoors as soon as it starts to get 'nippy'. Just leave them outside in the cool and you will get a much better display.

From about the end of April you should make sure they are kept dry.

Potting

Many types of potting mixes have been used successfully. The medium should be open, drain well, but retain some moisture. Pine bark and sphagnum are local products which work well. If you use sphagnum, clay pots will give much better results, while plastic pots work better with bark.

Keep the plants fairly tight in the pot. If the pot is too large the plant will not do well, and will produce vegetative growth instead of flowers. For example, a 20cm to 30cm (8-12 inch) tall plant should fit in a 10cm (4 inch) pot.

THE REWARD

When well grown, nobile dendrobiums will produce masses of blooms of heavy substance and bright, sparkling colours. They will

last for several weeks, especially if kept in a cool place and well shaded, once in full bloom. Water only enough to moisten the surface, about once a week.

Yellow or orange flowers take about a week after opening to attain their best colour. Wait until the flowers have reached this stage before moving them to a cool shady spot where you can admire and enjoy their charm and beauty.

Controlling flowering time

Once the flower buds are formed you can hasten flowering by keeping the plants at a warm temperature (16°-18 °C). Alternatively, by keeping the plants cool (below 10 °C), you can delay blooming time by several weeks.

Repotting and Dividing

Only overgrown and very large plants should be divided and repotted. This should be done after flowering, when the night temperature is about 13 °C. Only plants with more than seven or eight canes should be divided, otherwise the following years growth will be poor. After removing any dead or decaying roots, pot the plant in a pot just large enough to accommodate the roots left. Keep dry for a week or two after repotting, and keep out of the sun for about three weeks.

Any offshoots which appear can be removed from the plant when the roots are 5-10cm long.

Suited to New Zealand

Modern nobile type dendrobiums are well suited to the New Zealand climate. As long as plenty of water is provided in the summer (but not nitrogenous fertiliser) and they are kept dry in the winter, spring will be a glorious and colourful sight.

Suggestions for the Organisation and Planning of Orchid Shows

Part IV

Des Leahy

Des, previously N.Z.O.S. Show Marshal, was responsible for the organisation and planning of sixteen major Shows over a period of eight years.

Now Deputy Registrar of N.Z.O.S. Judges, he is an accredited Judge of N.Z.O.S., CONZED and Cymbidium Society of Australasia, attended three World Orchid Conferences and judged at Miami and Bangkok, as well as being a Panel Leader at both New Zealand International Shows.

ORCHID DISPLAYS

Collecting notes from the observations of a variety of experienced orchid judges on a part of their function which some may consider relatively unimportant, can be an exhaustive exercise. However, one has only to visit a few modern Shows to recognise that there is a rapidly growing swing to display-type formats as opposed to the older 'benched-class flower-shows'. For the connoisseur exhibitor the benched classes will still have some appeal and there is no doubt that this style allows more plants and flowers to be presented for serious judging in a much smaller space but, be that as it may, the objective of this article is to offer some help to those who wish to indulge their talents in more artistic ways.

One expert has declared that a winning display "has the same qualities as a prized painting". That assumes, of course, that the viewer (judge) sees beauty in say—

- (a) the art of Turner, Constable or Monet but may jib at
- (b) Van Gogh's or Gauguin's works and even more so at
- (c) Picasso's or Henry Moore's sculptures

But nobody could deny that groups (b) and (c) are "prized".

It must be conceded, therefore, that the most important (or high-scoring) features of a display are open not only to personal tastes but also to the perceptive talents of the viewers.

Probably in no other form of judging is it more likely that there will be widely differing opinions, so it is most important that a full discussion on each exhibit is held on the various aspects before assessing its value.

A dictionary definition, broadly stated is that "to display is to show or make visible" and those, I would recommend, are the operative words.

But we must look beyond that if we are to establish guide-lines so that a scale of merit can be set down and to that end some other definitions may be helpful. Oddly, the American Orchid Society supplies this in its Handbook on Judging Orchids. "DISPLAY" is an exhibit of cut flowers to show their commercial use in contradistinction to an "ARRANGEMENT" which is an exhibit in which flowers, with or without accessories, (*this is closer to what we would term floral art*) are grouped to convey an arbitrary idea. (Contrary to other groups or classes, the living material is of secondary importance to the idea which it expresses).

("Arbitrary" in this sense may be interpreted to mean "not complying with any set of rules, therefore, at the discretion of the exhibitor"). A few

more definitions are worth keeping in mind.

- (a) **OUTSTANDING EXHIBIT**—one that is prominent and striking for its DESIGN, QUALITY and CULTURAL PERFECTION.
- (b) **ARTISTIC**—pleasing to the eye, conceived with taste and executed with skill and balance.
- (c) **ORIGINALITY**—the quality of being independently conceived but not bizarre or freakish.

Some writers claim that “bigger is not necessarily better”—that quantities of crowded, poorly presented plants, indifferently grown, with inflorescences past their peaks, have been more penalised than any advantage of size or variety may have gained.

Another warns that care must be taken in camouflaging the pots or containers, as one raw pot can ruin the effect you have spent hours creating.

Some exhibitors will introduce mechanical aids such as waterfalls (with pump circulation) or revolving turntables to impart a dynamic feature but if either of these are used, check the effect when the power is turned off. Ask the question of yourself, is the effect just as good when it is static?

FOCAL POINTS should be used with extreme care—don't let a too prominent focal point over-power the balance of the design and NEVER put a focal point plonk in the middle.

LABELLING—pay particular attention to this—don't let big ungainly labels dominate the display but unfortunately it is not always permissible if you are to comply with the Show Schedule.

One effective way is to number the plants with small, but readable labels with a coinciding list of names in an inconspicuous place towards one side.

LIGHTING—be careful also with the use of this aid—use it with discretion but better still, get some expert advice in its use. A good display can be ruined completely if poor, inadequate lighting is used and conversely, just as badly affected if over-bright lights are put in the wrong positions.

BACKDROPS AND OTHER AIDS

If a scene is used it must harmonise and compliment the display, not dominate it. Some-times a plain, muted backdrop is advisable. Look at the wall (if any) behind the display and mask undesirable features such as heaters, ventilators, ugly block-walls, loose wires or cords.

Cover with plain, neutral hangings or drapes, making sure (if space allows) to carry the masking out wider on both sides and top of the display.

This feature is particularly noticeable if you look at a photograph of an otherwise attractive display. Another way to impart “dynamism” to a back drop is to feature a curving road or a line of trees or a beach coming towards your focal point using perspective artistry by reduction of height or width as the feature recedes.

ASSESSMENT

Upon the examination of a variety of judging systems it was found that there is not a great variation in the allocation of percentages (or points) for the desirable features of any given display, be it large, small, static or dynamic. I prefer percentages, therefore the following allocations are offered—

Proportion and balance of the layout linked with harmony of shape and colour	30%
Distinction and originality of the design	30%

Variety and quality of flowers and the condition of plants and accessories (including containers) 20%

Interpretation of the theme or conformity with the schedule including labelling 20%

It is hoped that these suggestions produce a broad basis for evaluation so that fair and equitable assessments, can be made.

They do not purport to be a

dogmatic attempt to say "this is how it shall be done".

If they have provoked thought and discussion on ways to promote greater interest and more satisfaction in the growing and showing of orchids they have achieved their purpose.

Use them if you wish—vary them if it suits better, or even ignore them and do it by other methods—it is your choice—but above all, be consistent.

*5 Coronation Road
Mangere Bridge
Auckland*



Cattleyas Without Heat

Bob McCulloch

The most common question asked at the Sales Table is 'Does this plant need heat?', followed by a sigh as the plant is returned to the Table.

But it is possible to grow Cattleyas without providing heat if you choose the plants carefully. The Cattleya alliance has species in it which are tolerant of cool conditions, and a hybrid which has one or more of these species in its parentage is likely to grow in cooler conditions than normal.

There are two types of growth as well, in one type the plant produces a new bulb which flowers in the same year, and in the other type the bulb rests over winter before producing flowers in the spring.

So if you want to try growing Cattleyas without heat, pick a plant which is cool tolerant and which flowers in the summer. Use a very open mix to allow the roots to dry out quickly after watering, and when the plant has finished flowering, water it thoroughly to wash all traces of fertiliser out of the mix. During the cooler months don't water the plant,

as this can rot the roots, and it will need every root it has to give quick growth and flowering in the summer. Misting of the leaves on sunny days will prevent the bulbs shrivelling, and growth should just stop for the colder months without damaging the plant. When the roots start growing again in spring, watering can be started, and when the new growth is about 50mm high, fertiliser can be introduced. High nitrogen and less water until flowering is over. Cattleyas normally have a rest period after flowering, and this can be continued over winter.

Study of plants displayed at meetings, and reading all the books you can find in the Society Library will increase your knowledge of what can be grown cold. Some plants may like to be kept in the house over winter, perhaps on top of the 'fridge, or in the wash-house. You really won't know until you try it!

*18 Davis Crescent
Upper Hutt*

11. FRENCH ARTISTS

Ian St. George

The French corvette *Le Coquille*, under the captaincy of Duperry, visited the Bay of Islands from 20 March to 17 April 1822; Dumont D'Urville was first lieutenant, and Rene Primevere Lesson was surgeon-naturalist: the latter "was expected to attend to matters relating to botany", according to Dumont D'Urville's diary.

Back in France *La Coquille* was renamed *L'Astrolabe*, and this time with Dumont D'Urville as Captain and Pierre-Adolphe Lesson (RP's younger brother) as Surgeon 3rd Grade, she reached Tasman Bay, and stayed off the north of the South Island from 14 January to March 1827.

Dumont D'Urville had studied the Forsters' account of New Zealand, and had worked with the botanist Achille Richard even before his first voyage, and the botanical culmination of both these visits was the publication in 1832 of Richard's *Flore de la Nouvelle Zelande*, text by AP Lesson and Achille Richard, with an octavo Botanical Atlas. There were colour and monotone editions; two plates illustrate three New Zealand orchids, *Thelymitra forsterii* (*Thelymitra longifolia*), *Diuris Novae-Zelandiae* (*Orthoceras strictum*), and *Dendrobium biflorum* (*Dendrobium cunninghamii*).

Among the papers of RP Lesson, the older brother, at Rochefort (where the Lessons were born) are watercolours of the last two of these orchids. It is easy to assume that they are the work of RP Lesson, for they are, after all among his papers, and indeed the official report of the *Coquille* voyage contains the words "In the case of plants too delicate to be preserved, excellent drawings were made on the spot by M. Lesson". But the *Orthoceras* drawing is annotated "Nouvelle Zelande. D'Etroit de Cook. Janvier 1827" and the *Dendrobium*, rather pompously, "Grandeur naturelle. Trouvee par Mr D'Urville. Ile Tavai Poenamou. Anse

de l'Astrolabe. (Baie Tasman. D'Etroit de Cook.) Nouvelle Zelande." And in pencil in another hand, "Janvier, 1827". If the date is correct, and (as seems likely) the drawings are field sketches, they are not the work of RP Lesson, for it was his younger brother who was present on that voyage.

Indeed, D'Urville records one of the findings in his diary entry for 16 January, when PA Lesson accompanied him on an exploratory jaunt on the third day of their visit—"The *Phaenergams* show very little variety . . . as it was late in the season, few bore any flowers or fruit. Among the parasitic plants, I noticed some fine *Epidendrum* or *Dendrobium* . . .".

Several artists and engravers were involved with the herbarium specimens in Paris to produce the Atlas plates; under the plate showing *O. strictum* and *T. Longifolia* is the attribution "Vauthier pinx. Rebel sc. J. Tastu edit. Dumenil imp." (Vauthier painted, Rebel engraved, J. Tastu published, Dumenil pressed). A merry little band, but who were they?

Antoine-Charles Vauthier was a natural history painter, born in Paris in 1790; he made drawings for books of butterflies and moths, and for Beaudoin's sixteen-volume *Dictionnaire classique d'histoire naturelle*. He is listed as the artist for the five volumes of Buffon's

►
Plate 1. *Orthoceras strictum*. Watercolour attributed to AP Lesson. Reproduced courtesy of the Bibliotheque municipale, Rochefort, France.



Nouvelle-Zelande
Détroit de Cook
Janvier 1827

Plate 1: *Orthoceras strictum*

Complete Works, but when one goes to Buffon, there is only one engraving by "Vautier". He was apparently important enough to have a plant named after him (*Vauthieria australis*), but we know little else about him. His brother was also an artist and died of cholera. Eleonore Sophie Rebel was a burin engraver of plants. Paul-Chretien-Romain-Constant Dumenil was a natural history painter who

seems to have specialised more in butterflies and insects than in botanical subjects.

45 Cargill Street
Dunedin

Plate 2. *Orthoceras strictum* and *Thelymitra longifolia*, plate 25 of the Atlas Botanique of A Richard and (P)A Lesson's *Flore de la Nouvelle-Zelande*.

TISSUE CULTURE RESEARCH

Professor Joseph Arditti is planning to revise and update his manual of orchid tissue culture propagation and requests researchers to send him reprints or photocopies of their publications on this and related topics.

If possible articles in other languages should be accompanied by an English summary.

Professor Arditti hopes to illustrate the revision and would appreciate 2-3 copies of illustrated reprints since this will allow him to cut and remount some illustrations.

The address is—

Professor Joseph Arditti
Department of Developmental and Cell Biology
University of California
Irvine
CA 92717 USA

Can anyone HELP me?

Back in 1966 I purchased some seedlings from Mr Henry Rudolph of Eastbourne but have never been able to find anything about some of the parents listed.

One cross, number 139 was named as (*C* Bob Betts x *C* St Petersburg) x *C* Marion Davies. I have never been able to find *C* St Petersburg or *C* Marion Davies.

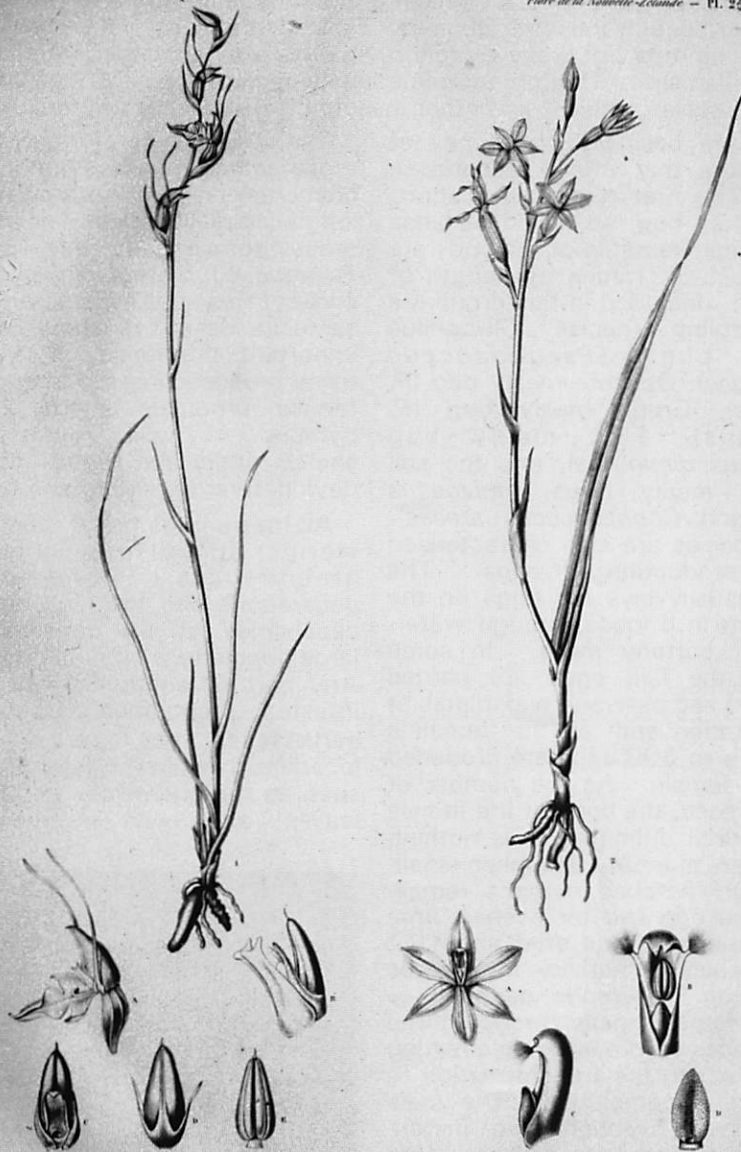
On going through the ads. in the March 1987 copy of American Orchid Society Bulletin I noticed a plant, *Lc* Lorraine Shirai 'St Petersburg' AM/AOS, so looked it up to find that it was registered by Shirai in 1952 which would make it old enough to have been used as a parent for Mr Rudolph's cross. Could this be the parent?

Can anyone help me?

Another plant mentioned by Mr Rudolph that I can't find is *C* Snowson FCC.

Can ANYONE help me?

John McDonald, 396 McQuarrie Street, Invercargill.



1 DIURIS NOVAE-IRELANDAE Nod.

2 THELYMITRA FORSTERII Sw.

Plate 2: *Orthoceras strictum* and *Thelymitra longifolia*

PESTS OF ORCHIDS

5. Mealy Bugs

G. M. Barker

The common name of this unusual group of insects refers to the characteristic appearance of the adult females. Typically they are oval and segmented, with a white mealy or waxy secretion which is often extended into lateral and terminal filaments. Though not immediately apparent, mealy bugs are closely related to scales, aphids, and other insects of the order Hemiptera.

There are basically two types of mealy bugs that infest greenhouse crops. The first type is the short-tailed mealy bug, so called because the terminal filaments of the body are short (0.25-0.3 times the length of the body). Included in this group are the following species: Citrophilus mealy bug (*Pseudococcus calceolariae*); Obscure mealy bug (*P. obscurus*), Grape mealy bug (*P. maritimus*), Flax mealy bug (*Trionymus diminitus*), and the soil dwelling mealy bugs (*Rhizoecus falcifer* and *Chorizococcus arecae*). These species are also characterised by the production of eggs. The female usually lays her eggs on the host plant in a loose, though water-resistant, cottony mass. In some species, the laid eggs are carried about in a sac between wax plates at the posterior end of the female's body. Up to 600 eggs are produced by each female. As the number of eggs increase, the body of the female shrivels until ultimately it is nothing more than a empty shrunken shell. The newly hatched nymphs remain within the egg sac for a short time before emerging, and after about 12 hours dispersive activity they settle for feeding. Nymphs destined to become females pass through three instar stages before entering a resting stage in which the transformation to the adult is completed. The male insects pass through two instars similar to those of the female before seeking shelter to spin a cocoon in which development to adulthood is completed. The adult male mealy bugs are rare and minute. They do not feed but possess wings for dispersal.

The second type of mealy bugs are those which possess long terminal filaments on the body, known as longtailed mealy bugs. The species of most concern in this group is *Pseudococcus longispinus*. The life cycle of this species is essentially the same as described above, with the important difference of live young being produced instead of eggs. Each female produces about 200 live nymphs. These young nymphs shelter under the female for a few days before dispersing and feeding.

All mealy bugs breed rapidly in the warm, humid environment of greenhouses. The multiple generations and the high egg laying capabilities of the females means large populations can rapidly develop. Any part of an orchid can become infested, though mealy bugs have a perverse tendency to pick out-of-sight locations in which to feed and breed; such as the undersides and bases of leaves, and even in the potting



Long Tailed Mealy Bug

medium. Unless the grower remains ever vigilant, mealy bugs can cause severe damage before the infestations are detected and dealt with.

Mealy bugs feed by penetrating the plant tissues with their mouth parts and sucking the sap. Infested tissues become chlorotic. With prolonged infestations, tender growths become distorted or stunted, and eventually die. Plants will show a serious decline in vigour.

Control

Approaches to mealy bug control are similar to those for scale. Cotton wool dipped in methanol or methylated spirits can be useful in killing and removing mealy bugs when infestations are confined to a small number of plants. Where the infestations are widespread within the orchid house, applications of insecticides are required. Since mealy bugs may settle on any part of the plants, including the roots, insecticide applications must be very thorough.

The contact insecticides (see table) are effective provided all plant surfaces receive a coverage of insecticides. The waxy white meal that covers the bodies and egg masses of mealy bugs tends to resist the penetration of insecticides. The addition of a surfactant (wetting agent) in the spray mix will greatly improve the control achieved with contact insecticides. Control is often more effective with systemic insecticides (see table) as these are taken up by the plants and transported in sap on which mealy bugs feed. Dimethoate is particularly useful as it can be applied as a pot drench. Provided the plants are actively taking up water, the insecticide is transported through the roots and into the foliage. Apply dimethoate as a drench only to pots that had been thoroughly watered the previous day, as a dry medium will cause the insecticide to burn the roots.

*Ruakura Soil and Plant Research Station
Hamilton*

INSECTICIDES FOR MEALY BUG CONTROL

Chemical Name	Trade Name	Chemical Name	Trade Name
1. Contact Insecticides			
Carbaryl	Ispray Carbaryl Septan	Malathion	Emulsol Malathion Ispray Malathion
Chlorpyrifos	Lorsban		Rural Malathion
Diazinon	Basudin Dyzol Ispray Diazinon Shell Diazinon Yates Diazinon	Methiocarb Mineral Oil	Yates Maldison Mesurol Sunspray Oil Universal Oil
Dichlorvos	De De Vap Ispray Dichlorvos	Parathion-Methyl Phosmet Pirimiphos methyl + permethrin	Folidol Imidan Attack
	Nuvan Vapona Mavrik		
Fluvalinate			
2. Systemic Insecticides			
Acephate	Orthene Saprene	Dimethoate Methomyl	Rogor Lannate
Aldicarb	Temik	Omethoate	Folimat
Demeton-s-methyl	Metasystox	Oxamyl	Vydate

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SEPTEMBER 1987

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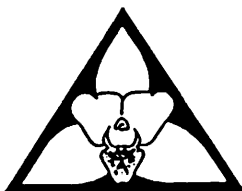
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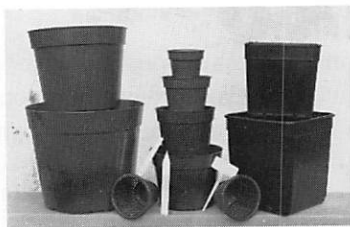
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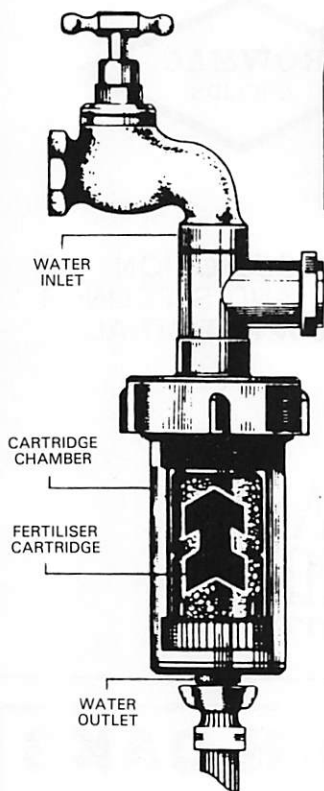
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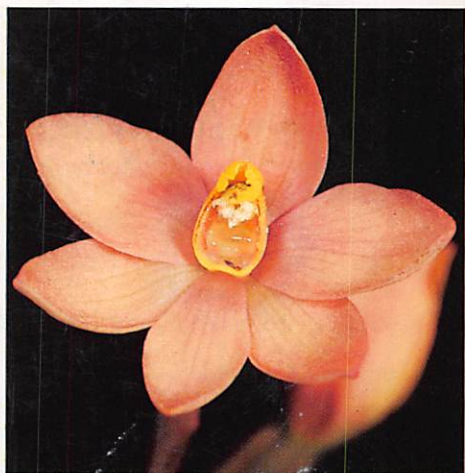


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