Orchids
IN NEW ZEALAND

Volume 13 — No. 1
January/February 1987

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IN NEW ZEALAND

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NEW ZEALAND ORCHID SOCIETY

VOL. 13, No. 1 JANUARY/FEBRUARY 1987

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Restrepia striata, or 'Cockroach' Orchids, come from Colombia, in Tropical America, often from high altitudes, and enjoy cool-intermediate conditions.

Photography: Bob Goodger Grower: Ron Maunder

BACK COVER

Caladenia carnea

Photography: Bob Goodger

EDITORIAL

Now that our readers have returned, refreshed, from their summer holidays, this seems an opportune time to solicit a fresh supply of articles for "Orchids in New Zealand".

For some time we have been fortunate in having a stockpile of material awaiting publication, but this 'information mountain', is dwindling (unlike the 'butter mountains' or 'wine lakes' of Europe). If you grow orchids, you must surely have something interesting to put down on paper!

We note that other, more illustrious journals have the same problem. A recent issue of 'The Garden'—the Journal of the Royal Horticultural Society, ended a similar plea by quoting these lines penned by J. C. Loudon, editor of 'The Gardener's Magazine' in 1826. We feel that what he wrote 161 years ago is still very valid. He invited

"all those who take an interest in gardening to assist us by . . . information on every subject connected with the work. We especially invite practical gardeners to come forward . . . Let them not make excuses as to want of style, etc., but fix on a subject and begin at once, and write straight on to the end, regardless of anything but the correctness of their statements. This done once or twice, a good style will develop of itself!"

CONZED NEWS

National Raffle Report

Congratulations to the winners who were:

1st Prize: T. Nienkemper, 68 Western Hills Drive, Whangarei, Tkt. 102161

2nd Prize: J.J. Newton, Awahuri Road, Feilding, Tkt 130616

3rd Prize: Mrs P. Forde, 2/84 Long Drive, St. Heliers, Auck., Tkt. 149447

Thank you to all the member societies who participated in this raffle. The final figure is not known at this time as we still have to audit the books sold and present a report to council.

Twenty five societies sold all of their books but it was a little disappointing that only seven societies sold more than their quota, and two societies elected not to support the raffle at all. With a little extra effort from these areas the raffle would have been an even more successful event and would have shown there was a lot of enthusiasm and support for the Orchid Council. However, we have all learnt a lot from this excercise.

In particular, I would like to thank the three non-affiliated societies for helping: Stratford & Districts, Hibiscus Coast Orchid Society and Tokoroa & Districts (50 books from 18 members - not bad!), also to Ron Maunder who promoted this raffle wherever he went. The Society who sold the most tickets on a member percentage basis was Bay of Islands who worked extra hard under the helm of Mr & Mrs Bob Douglas who were the Society's distribution officers. To all those members who sat outside supermarkets and

shopping malls, a very special thank you. Thank you also to the four Societies who waived their commission and to those societies that purchased the unsold tickets out of their quota. This certainly made my job a lot easier and of course, increased the total sales. A very special thanks to Mrs Marion Wright, Mrs Betty Vance, Mrs Margaret Liddell and Mrs Shirley Gray for the communication and close contact throughout which was very much appreciated.

Syd Wray
Raffle Organiser

Overseas Speakers Travel Fund

The newly set up Overseas Speakers Travel Fund is now established, with several large three or four figure sums promised or donated by Societies.

This special account has been set up by OCNZ with the intention of bringing top overseas speakers to New Zealand. Speakers will tour the country with engagements in regional centres, where a small door charge will be made to replenish the fund. It is intended to vary the regions visited with each tour so a wide coverage of Societies can be made. Societies will be encouraged to organise bus trips to their nearest venue when not themselves on the current tour.

Any Societies wanting to loan or donate surplus funds to this fund or requiring further information, should write to the OCNZ Secretary or Executive Member Mrs Edna Newton, 'Lauridale', Awahiri Road, Feilding.

If sufficient funds come in, two or three speakers could be arranged for 1987.

Sanders Hybrid Lists

To encourage a greater interest and knowledge in orchid growing in New Zealand, the OCNZ Executive has decided to investigate bulk buying Sanders List of Orchid Hybrids for Society Libraries, Judges or any interested growers.

These books are specialist reference books for growers interested in hybridizing and tracing parentage of orchid crosses.

The five volumes usually cost $US25 each or approximately $NZ250 plus freight. By bulk buying, we can get a 10% discount or $25.00 plus saving. You will never get them cheaper! The books record all orchid hybrids registered with the RHS from early days to 1980, with a 6th volume for 1981-1985 currently at the printer (would be an extra cost). Information includes parentage back to species of all orchid hybrids, name and address of hybridizer, date registered and in latter volumes a record of which parent was pod parent (female). A concise list of genera making up multi-generic hybrids is also given. The books have no pictures, are not available in bookshops and have excellent resale value! Please order your sets (or individual volumes) through your local Society Secretary, so Council can get an account to you.

Orders will also be taken for the 6th volume, which will be bulk ordered later. Secretaries please note—this offer closes with OCNZ Secretary, Mrs P. Martin, 3 Morriss Place, Cambridge, on the 10th March 1987. Late orders not accepted.

Orders for the 1985 revised "Handbook on Orchid Nomenclature and Registration", approximately $NZ10 and "Sanders Orchid Guide", approximately $NZ40 are also being taken—these also subject to a good discount if sufficient orders received.

Be ready to pay during April!

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Index by Author

The editors wish to thank all contributors, both listed and unlisted, to the previous two volumes, for their support. Without them there would be no 'Orchids in New Zealand' to publish.

We Tried It—We Like It!

Caryl Sellers

Open your latest American Orchid Society Bulletin, and you will see an advertisement for New Zealand Sphagnum Moss, also called "Super Miracle Moss"—and I quote: "The most special and fantastic product to grow orchids, used by the majority of professional growers in Hawaii and the Far East".

WELL, you may think, I've been using local sphagnum for years, and all I have successfuly cultivated are garlic snails which thrive in the stuff and eat all of the new roots of my orchids! I tend to agree with you—please read on . . .

At the 2nd N.Z. International Orchid Conference, held at Wellington in 1985, I had the pleasure of meeting some very interesting people, one of whom was Makoto Hanajima of Hanajima's Orchids Co. Limited, Japan. As you may already know, Makoto is a well known grower and hybridiser of my favourite orchids—Cattleyas—and I was intrigued when he asked me why New Zealand growers didn't use Sphagnum Moss as a potting medium.

I didn't have any reasonable answer to this one, and as I was about to make a change in my potting medium, I decided to investigate further. Makoto assured me that many Japanese orchid growers use moss as a potting medium, and it is all imported from New Zealand. I called up some contacts on the West Coast of the South Island and found that it was possible to buy this moss by the bale. It cost ME more freight per bale to Waiuku than it cost Makoto to Japan—but I was undaunted, and soon after the Conference I began my potting marathon.

The first important thing I found out was that the moss which is exported overseas (the same that I buy) is far different from that found in swamps in the North Island. It is dried before packing and used dry for potting, then watered. This moss, when watered, becomes wet! My previous experience with North Island moss was that, once dried, it took an awful amount of soaking to become wet again—so far, so good. In the months that followed, I found, to my great joy, not one garlic snail, and, four bales later, my tally of snails is still nil!

The moss is a truly wonderful potting medium—much quicker, cleaner and easier to use than bark—fabulous for freighting plants, lighter, easier to pack and less messy, with the obvious advantage that plants grow wonderfully in moss. It has been generally known for a long time that any sick plants should be transferred to sphagnum moss to promote root growth—well, try this on a healthy plant, and, of course, it races away!

A couple of words of caution, however, to those of you who, like me, want to leap in off the deep end . . .

During the winter, we kept our cattleyas fairly much on the dry side—if the moss was dry but the weather rainy and cold we held off watering until a fine day. We also made sure there were no draughts in our greenhouses—we all know that cattleyas that are kept wet and cold are not long for this world.

Now that Spring is in the air, we are watering more frequently, although ensuring that the plants are undergoing a wet and dry cycle— not kept constantly wet.

Feeding plants growing in sphagnum moss can present problems. Organic fertiliser is a no-no, as it tends to form a black sludge over the top of the moss which prevents fresh air movement around the roots. There is a school of thought that cattleyas growing in

sphagnum do not need fertiliser, however, I am not quite that radical, and am using Peters All Purpose with pleasing results. Peters fertiliser has been used world-wide for years, but has just recently hit the New Zealand market. If you feel that you would like to try sphagnum as a growing medium, I would be happy to answer any of your queries to the best of my ability—I am by no means an expert, but we have been using West Coast sphagnum for just over a year, and are really pleased with the results.

The Cattleya Sellers
R.D.2.
Waiuku

NOTES FROM APOROSTYLIS

Taihape, population 2,000—four square on the Main Trunk line! What's it famous for? Frosts! Gumboot capital of N.Z.! Where a sleepy OCNZ Executive member camped the night in the rubbish tip! Unstable hillsides above the town! Hospitality!

Now its orchids that are the attraction there. Latest news from travelling ambassador Ron Maunder, is that an Orchid Society has been set up for two or three months, with 30-40 members and reports of another 20 potential members from nearby Mangaweka. Ron reports great enthusiasm, and hospitality from those committee members he met at a hastily arranged night meeting. "They even came back next morning for a potting demonstration", he said! Canadian, Chinese and Maori accents made for a really cosmopolitan atmosphere there.

They meet on 3rd Thursday nights in the local Court House at present and have already staged a display in the town. Tony Ellis, the local Probation Officer (next to the Court House) is Secretary—Phone (0658) 80-855 A/H and Mrs Meagan Wilson is President—Phone (0658) 81-153.

Any potential speaker or enthusiast passing through should contact these people.

Reports are coming in of another orchid group forming in Whangamata. Whangamata is a picturesque and popular seaside resort on the Pacific Coast of Coromandel Peninsula—not far from the equally popular neighbouring Tairua and Pauanui resorts.

Imported flasks. Do you have any trouble with plants in imported flasks collapsing on arrival or within a week or two when left in the flask? Several people are. Symptoms are plants in flask going black and then brown/transparent—almost overnight. Common factors include

(1) flasks/test tubes made from plastic;
(2) coming from Northern Hemisphere by air;
(3) always unvented (no breather hole with cotton wool);
(4) not all flasks affected;
(5) plants have often been in flask for six months or more;
(6) no sign of contamination in flask;
(7) sound of air escaping (pressure) when lid removed.

Theories as to the cause are varied —CO_2 build up, ethylene build up, change in temperature and pressure causes problems, pH of media going acid in old media and killing plants, and toxic vapour escaping from plastic container.

If you have any answers or theories or have observed these symptoms in normal vented glass flasks, please drop the Editor a line so we can try to solve the problem.

Where did all the Red come from?
or has Cymb.i'ansonii Rolfe been overlooked?

George Fuller

I wonder how many of the multitude who ogle over the latest developments in the field of cymbidium breeding stop at any time to ponder over where the special attribute they are admiring, or perhaps a fault that they are criticising actually originated? Not many would think to go beyond the immediate parents of the particular hybrid and it seems precious few would dare to go back to the species (the wild ones) where it all began, yet it is only by going back so far that we can have a full understanding of how far breeding has moved. This knowledge is a precious tool in influencing the direction of future breeding, especially if imagination and flare are to flourish, but the subject of future direction is a very complex one, for I see four quite distinct categories into which cymbidiums fall and there are requirements in each which are incompatible with those in others.

Commercial cut flower use with very prescribed requirements has now become big business even in New Zealand and follows a course of its own, distinct from the other large and very rigid grouping, that of exhibition which has as its objective not so much monitary gain as the obtaining of awards. The other two interests centre around decorative virtue, one on the home scale and the other public display. Within these four categories there is some overlap and enormous scope for experimentation but recent experience has indicated that a knowledge of the input of each species will be helpful in the breeding trends in any of the four.

Let's take just the colour as one factor. Red has always been strongly sought after in all categories of cymbidiums and there are now many fine examples. Hands up those who know where it comes from? There are no species of cymbidium which could be described as strongly red, with the exception of the miniature *C. pumilum* which has only relatively recently been introduced into breeding. Those which have what could be described as influences towards red in the standard size have other characteristics which have not always endeared them to purist breeders but there is one mystery species about which there appears to be a great deal of confusion and that is *C.i'ansonii.* Even the spelling and pronunciation of the name have fooled generations and that is only a part of a very interesting story.

I feel that this species may be the missing link in strengthening red colouration.

While training in England in the late forties and early fifties I had the great fortune to work with and meet old men who had lived through and could relate experiences from the entire history of cymbidium breeding. How unfortunate that I had no means of recording the conversations of Fred K. Sander, Arthur Conningsby and others and did not think to write down their tales. Certain points I do remember, however, and amongst them was the element of great uncertainty that was generated when a plant said to be *C.i'ansonii* flowered

in 1954. Amongst a gathering of experts here was a very important breeder which had been in cultivation for over 40 years yet there was still no resolution over whether it was a species or a hybrid between *C. lowianum* and *C. tracyanum* or anything else for that matter. I had become used to these idols at Sanders being able to identify even rare species out of flower almost with their eyes closed and I recall being quite mystified at their collective confusion, but fortunately I was able to photograph the plant in colour on film for which I had to chase all over London so at least I obtained a visual record which has proved very useful since.

These were the heady days just after the war when the powerful influences of *C.* **Ceres 'F. J. Hanbury'** and *C.* **Alexanderi 'Westonbirt'** were rocking the cymbidium world and good reds were very slowly beginning to appear, largely in the progeny of the former. It is worthy of note here that of all parents used in breeding up to 1946, including species, **C. Alexanderi** *(C. eburneo-lowianum* x *C. insigne* 1911) had been used 127 times, **C. Ceres** *(C. i'ansonii* x *C. insigne* 1919) 84 times and **C. Pauwelsii** *(C. lowianum* x *C. insigne* 1911) 71 times. There is a big drop to the next contender, so we can see the importance of *C.* Ceres.

From 1889 until 1980, *C.i'ansonii* had been used 29 times in hybridising, never more than 3 hybrids occurring in any one year. As a comparison, over the same period, *C. insigne* had been used 77 times peaking at 7 recorded in 1914 but this is well behind *C. pumilum* which has 155 hybrids recorded. No less than 26 appeared in 1966 though the first was only in 1942. It could be concluded from these figures that considering its potential, *C.i'ansonii* seems to have been a very under-used species, the last hybrid having been registered in 1966.

On looking back, it now seems very strange that no hybridising was done with the plant of *C.i'ansonii* which mysteriously appeared in the Sander collection in 1954 because it was well known that *C.* Ceres was producing strong colours and this could mainly be attributed to the influence of *C.i'ansonii.* One would have expected the re-appearance of this rare 'species' to be an opportunity for re-introduction but I suppose that then, as now, even some of the keenest breeders were afflicted with tunnel vision which only projected 'forward' and precluded any glance back over the shoulder.

The whole story of *C.i'ansonii* is so intriguing and anyone interested is well advised to refer to the section on 'History of the Species' in Rentoul's 1980 book, 'Growing Orchids—Cymbidiums and Slippers'. He covers the subject quite thoroughly and discloses that it was imported from Burma with *C. tracyanum* originally at about the turn of the century and later from Thailand. He also provides a very good illustration which coincides well with my 1954 photograph.

Another writer, Irene Lohschutz suggests a different source of introduction, in 'The Orchid Journal' of November 1953. Here it is said to have come in with a shipment of *C. lowianum* and was later collected by **George I'Anson** (goodness knows how that is pronounced) in Upper Burma. In a very interesting table of introduction in the same article, the year of discovery by an unknown person is given as 1900 and the first introduction by Hugh Low and Co., in 1911. It was obviously destined from the outset to be a mystery species.

After 1954 my next encounter was in 1971 and it turned out to be equally mysterious and frustrating. While visiting the glasshouse displays at Wanganui, I noticed with excitement, an unlabelled plant in flower which I couldn't contemplate as being

Cym. ceres 'F. J. Hanbury'
Note the erect habit, good form and strong colour which made it a very important breeder. A remarkable advance for a primary hybrid.

All Photography: G. Fuller

anything other than the elusive *C.i'ansonii.* Enquiries revealed that some years previously, vandals had destroyed a number of labels and the name and origin of this plant was now unknown! At least the confusion was historically consistent with it being *C.i'ansonii.*

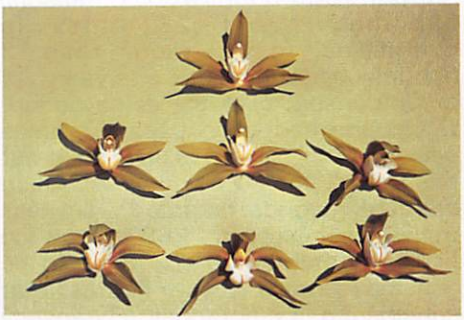
My request for a piece on grounds of research was met in generous manner and I was able to carry out self pollination with the objective of determining whether in fact this was *C. i'ansonii* by studying the characteristics of a range of seedlings. When they flowered, I was very relieved to find that they showed very little variation from the parent and this applied to flower characteristics, colour, season, habit, everything—they were indeed like peas from a pod.

With admittedly limited knowledge of taxonomy and genetics, this seemed to indicate to me that two conclusions could be drawn—

(a) The plant I had found in Wanganui was in fact *C.i'ansonii.*
(b) That *C.i'ansonii* is true breeding with absolutely minimal variation in seedlings from a selfing and therefore not of hybrid origin. Nor would it appear to be a varietal form of another species as has been suggested, for its inherent characteristics as to colour, particularly that of the lip, pseudobulb shape and colour, the presence of sub-tending bracts to the flowers, leaf shape and general habit are quite notably distinctive and unique.

In 1980 at the Auckland Conference, further verification came when a person, whose name I have now forgotten, showed me a plant labelled *C.i'ansonii* and having all the characteristics of the Wanganui plant of which it could well have been a division. On the same occasion, Jim Rentoul was over here and was satisfied that we were now all talking about the seemingly long-lost *C.i'ansonii* and that it should be regarded as a species in its own right.

One of my current concerns is that botanists now seem to be regarding *C.i'ansonii* as a variety of *C. lowianum.* It certainly is more like this



*Cym.*i'ansonii
Six seedlings resulting from the selfing of the upper clone.

*Cym.*i'ansonii
Unopened buds. Note density of colour even at this stage, and presence of bracts which may be up to 25mm (1") long.

*Cym.*i'ansonii
Semi-pendulous. Note density of colouring, pale labellum, and pale lip marking formed of characteristic parallel lines.

species than any other but as far as I can determine it responds as a true species.

To take matters a stage further, I will repeat a selfing using either two seedlings or one of the seedlings and the original parent that I selfed to produce them. Has any geneticist any theories about this? It is very important that such matters are tidied up and botanists have a serious responsibility to ensure that their deliberations are very well founded, especially where use for hybridising is involved. We run the risk of a repetition of a predicament faced by Sir Jeremiah Colman as recorded in 1931, in his forward to Sanders List of Orchid Hybrids and involving this very species.

Sir Jeremiah, who made his fortune from Colman's mustard, owned an estate called Gatton Park and was well known in the early part of this century as an orchid breeder, many of his hybrids being named after his estate. He crossed *C. lowianum* and *C. tracyanum* and instead of calling it *C.*i'ansonii, in conformity with learned thinking of the time, called the hybrid *C.*Gattonense, thus arousing protests from the botanists of the day at whose behest he reluctantly changed the name to *C.*i'ansonii and then released plants. Subsequently, when the two flowered simultaneously it was conceded that a mistake had been made and the name *C.* Gattonense was reinstated but in the meantime hybrids had been made using it under the name of *C.*i'ansonii, thus placing in doubt the authenticity of early hybrids claiming this species as one of the parents. This doesn't make the task of tracing the influence of *C.i'ansonii* in breeding any easier, of course, especially if *C.* Ceres 'F.J. Hanbury' happens to have been one of those produced during the years of confusion.

It was also thought at one time that *C. lowianum* and *C. giganteum* were the two parents. This cross produces what is now named *C.* Iris.

The re-introduction of this species should be of interest to anyone breeding for red or dark colouration for when studied closely, it will be found to be carrying a saturation of more red pigments in the base of the sepals and petals than any other species and this is very noticable in the unopened buds. There could even be merit in re-making some of the primaries using superior clones and then introducing the progeny into modern programmes. Where else can we obtain new gene sources for standards?

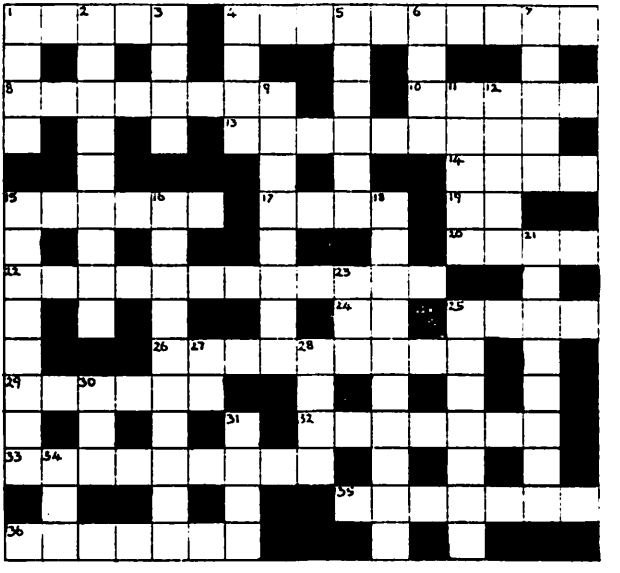
Perhaps not surprisingly, relatively few reference books dare to give a description of *C.i'ansonii* and where they do, it is almost in an apologetic vein. Would you believe that the daring and exhaustive Alex Hawkes doesn't even mention it in his massive encyclopaedia? Jim Rentoul on the other hand offers exceptional coverage though at that time he seemed to accept it as a natural hybrid and goes into detail about the confusion, finishing with theories like mine on the potential for breeding stronger colours. He suggests that up to fifteen blooms may be produced per spike and Sander records 'fewer than *C. lowianum'* which doesn't help much because that could still mean 30 and that is not possible. Our plants have had up to 12 on spikes which are a little longer than the foliage and arching. The blooms are neatly arranged on the spike and I have noticed that each usually has a bract where it joins the stem, those on the lower flowers being the length of the ovary, up to 25mm (1 "). Flowers are about the same size as *C. lowianum,* 100-125mm across and are described as light tawny-yellow or buff-yellow. The bases of sepals and petals are suffused with reddish-brown which extends as faint veins out to the tips but not as strongly as in *C. tracyanum* or *C. giganteum.* Most distinctive is the white labellum on which the colouring occurs as a dart or V pattern formed of short parallel lines with a single central stripe very much as in *C. lowianum* but instead of being intense maroon-red it is a subdued tawny-yellow, almost as if it was a concolour-factor. The flowering season here is October-November and the blooms are quite durable.

Plant habit resembles *C. lowianum* with extended and pointed pseudobulbs yellowish in colour but the leaves arise with rather slender and elegant bases which help to make the plant identifiable when not in bloom.

I haven't traced all the history of this species, but I have at least convinced myself that it has the unique attributes which justify its recognition as a true breeding species. I cannot help but ponder on several unexplained factors however, amongst which is why it seemed to fade into oblivion even when plants were still about at the time when the great virtues of *C.* ceres as a breeder of colour were being realised. Why has it never been re-introduced from the wild? How is it that the greatest number of surviving plants appear to be in New Zealand or Australia with few, if any, in the United States of America and England? In the days of controversy why did someone not think to self it to get a lead on whether or not it was a hybrid? These and many other factors will perhaps remain a mystery but it is gratifying to know that at least we still have this species with us and I predict that we will be hearing more about it in forthcoming breeding programmes. Perhaps others with more to add would be willing to write to the editor.

George Fuller, Curator
Pukekura Park, New Plymouth
13th October 1986

MAINLY ORCHIDS #1



ACROSS

1 Potting table
4 Cane orchid
8 Green species
10 Necessary in summer
13 Cymbidium (type)
14 Increased collection
15 Introduced species
17 15 down is found on this
19 Orchid name ending
20 Conserve
22 Hybrid
24 Natural magnetism
25 Land measure
26 Of large proportions
29 Small land owner
32 Native to
33 Withered bulbs
35 Wart-like excrescence on plants
36 Moss (type)

DOWN

1 Orchid food store
2 Often mistaken for flower spike
3 Some orchids need this
4 Large container
5 Break up
6 Banish
7 Mite side of leaf
9 Pansy orchid
11 Compost
12 Fragrance
15 Perching orchid
16 Watering
18 Reed orchid
21 Whorl type growth
23 Decay
25 Lively
27, 28 } Conditions of plants with 33 across
30 Orchid Council of America (initials)
31 Flower support
34 Chart

We are grateful to the imaginative contributor who supplied this item.

SOLUTION: Page 22

An Introduction to Paphiopedilum Species

(Part 7)
Ronald Roy

This continuation of the Indonesian species covers those paphs. which occur in Java and the nearby islands of Sulawesi and the Moluccas. They are closely related to species in the neighbouring areas of Sumatra, Borneo and New Guinea.

Paphiopedilum celebesensis A recent introduction from the island of Celebes (now renamed Sulawesi). Described in the Orchid Digest January-February 1980. Occurs in the central highlands at about 1000 metres elevation growing in the shade of bracken and tall grasses. Leaves 10-12cm long, silvery grey mottled with bright green. Flower scape about 25cm tall, single flowered. Flowers 8-10 cm across, similar to *P. bullenianum* which occurs in nearby Borneo. Dorsal sepal small, green, upper margins curve forward giving a hooded effect; petals horizontal, narrowly spathulate, light green with rose blush on outer half, a few large dark brown spots; pouch narrow, brown-green with pinkish veins; staminode yellow green with notch on upper and lower margins.

Intermediate conditions. Flowering time spring—summer.

Paphiopedilum celebesensis
Grower: J. Campbell

Paphiopedilum glaucophyllum
Grower: D. Shaw

Paphiopedilum glaucophyllum Discovered by Verhey in 1900 in East Java growing at elevations of 200-300 metres on soft limestone outcrops where the roots can penetrate a coating of moss and humus. The leaves are up to 25 cm long and 5 cm wide with a glaucous (blue-green) coating which disappears with age. Unlike its close relative, *P. chamberlainianum,* there are no hairs on the lower leaf margins. Some purple coloration is evident on the underside at the leaf base. Flower stem upright then gradually arching, dark purple with numerous short hairs, bearing several flowers successively over a period of some months. Dorsal sepal roundish, green with narrow white margin, brown towards base and with a number of

dark brown veins; synsepal green; back surface of both sepals thickly covered with short brown hairs. Petals horizontal, twisted, yellowish green heavily spotted dark red, margins fringed with long hairs. Pouch large, yellow green overlaid with wine red. Staminode rhomboid, convex, lower portion deep wine red, upper third greenish. Overall width of flower 8-10 cm.

Flowering period spring. Intermediate conditions.

Paphiopedilum javanicum

Grower: J. Campbell

Photography: R. Roy

Paphiopedilum mastersianum #2

Grower: W. Syder

ATTENTION PAPHIOPEDILUM GROWERS!

Thanks to the generosity of John Rowe of California, and a well known New Zealand grower, we have a copy of 'The Paphiopedilum Grower's Manual', by Lance Birk, available for sale. It is the Special Award Edition.

This volume, valued at US $75, will go to the person who submits the best bid over $100 to the Editors by 1st April. Bids may be made by letter or phone (073-24-747), but do NOT include payment with your bid.

The successful bidder will be advised by telephone.

Proceeds will go to the Colour Fund.

Paphiopedilum javanicum Occurs in central and eastern Java at elevations of 1000 to 1800 metres. Original discovery was by the Dutch botanist Reinwardt in 1826 but the plant was not introduced to European cultivation until 1840. In its natural state it grows in deep mossy humus between large boulders on mountain ridges or on damp cliff faces which receive good light for some part of the

Paphiopedilum moquetteanum

Grower: J. Campbell

day. Abundant moisture is always available.

The leaves are grey green mottled with dark green on upper surface, gently tapering to a bluntish point and up to 15 cm long. Scape to 30 cm tall, single flowered, flowers to 10 cm long and 8 cm wide, all segments except the lip ciliolate. Dorsal sepal narrow, yellowish with bright green veins. Petals strap shaped, deflexed, green changing to dull rose purple towards tips, heavily dotted with minute black warts over most of their length. Pouch brown-green with darker veining. Staminode broad, light green with dark green veins, a deep narrow cleft in upper margin, broad sinus on lower margin.

Intermediate temperature, must not be allowed to dry out, moderate shade. Flowering season summer—autumn.

Paphiopedilum mastersianum From the islands of Ambon and Ceram in the Moluccas which lie to the west of northern New Guinea. First described in 1879. A highly desirable species that has never been readily available. It is a robust plant with leaves 20-25 cm long and 4 cm wide, light green with faint darker mottling. Flower scape 25-35 cm tall, purple, densely covered with short hairs, single flower 8-10 cm across. Dorsal sepal heart shaped, yellowish green with broad white margins. Petals horizontal, spathulate, colour varies from tan to red, fine dark brown spotting along inner margins. Pouch large, also tan to red but usually lighter than petals, yellowish around aperture. Staminode green-brown with long incurved teeth that almost touch. All segments highly polished in appearance.

Intermediate to warm conditions. Flowering season spring.

Paphiopedilum moquetteanum Very closely allied to *P. glaucophyllum* and sometimes regarded as a variety of this species but there are easily recognised differences. First described by J. J. Smith in 1906. *P. moquetteanum* is a lowland plant, elevations 100-300 metres, usually found on damp mossy limestone cliffs. Leaves are light green on upper surface, grey-green below. As with *P. glaucophyllum* there is some red coloration at the leaf bases. Immature leaves show strong red on underneath mid vein and on leaf margins but this fades as leaves mature and at this stage the leaf margins become noticeably waved.

Flower scape similar to *P. glaucophyllum* in habit but flower is brighter in colour. Dorsal sepal greenish yellow with numerous fine, red-brown spots. Petals spreading, white basally with crimson spots which intensify towards tips, twisted, ciliolate on margins. Pouch large, rose pink with white around aperture. Staminode rhombic in shape, dark red.

Intermediate to warm conditions. Flowering season variable, winter-spring-summer.

36 Seven Oaks Drive
Christchurch

VALE

We are saddened to report the death of Melva Allen, stalwart long-time secretary of the Hawke's Bay Orchid Society. She has been a loyal supporter of Conzed since it was founded. Our sympathies to her family and friends.

Closing Dates for

Vol. 13, No 3: 13th March
Vol. 13, No 4: 15th May

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VARIEGATA ONCIDIUMS

or The Equitants

J. Hart, North Shore Orchid Society

These gems from the Caribbean Islands are gaining popularity in many quarters but somehow are reputed to be "tricky" to grow. This usually signifies that the grower is not providing the conditions suitable to the plants. But first of all what do they look like. The foliage and growing habit are most unlike any other Oncidium. In fact for a long time now several authorities have advocated creating a separate genus in which to accommodate the equitants. "Equitant" is the botanical name to describe the habit, i.e. "leaves which are conduplicate (two pairs folded together lengthwise) and which stand inside each other, in two ranks, in the manner of an Iris". They do not have pseudobulbs.

The plants are small, mature plants with many growths may measure 15-20cm in height but need a comparatively small pot (7cm).

The inflorescence is thin and wiry. It can be over 30cm or more long in mature plants.

Flowers are similar to conventional Oncidiums but the colour range is far greater. The plants available in New Zealand are usually hybrid seedlings with colours of white, pink, orange, light medium and dark red, purple and yellow. The prized ones have a large spotted lip.

Roots are thin and wiry and many aerial roots which wander outside the pot look for airborne moisture. The proportion of roots in the mix and aerial roots differs considerably depending upon the ancestors of the cross. Those which are "stoloniferous", mainly aerial rooted, do best mounted. The species in nature are mainly epiphytes, growing on trees or small shrubs but some are lithophytic, attaching themselves to rocky outcroppings.

In Jamaica they grow naturally, on thin branches in citrus plantations.

In their natural habitat they have adapted to a six month pattern of hot, dry weather—normally from November to May (Northern Hemisphere). But, and this is important, they receive daily dew during this period and therefore do not dehydrate.

The leaf structure is fleshy, if cut crosswise they would show roughly a

Oncidium Pink Royale x Golden Sunset

Oncidium Gotcha x Puck

Oncidium Rainbow x Buffy flowering in community pot, 18 months out of flask
All Photography: J. Hart

triangle. This structure provides for water storage. Most species inhabit the lower altitudes. Those who have had the privilege of visiting the Caribbean may remember the heat but also the fact that there is always a breeze. To duplicate their natural habitat we must now seek to duplicate these conditions in our growing environment, as near as possible.

Temperature

The modern hybrids are quite happy with a minimum temperature of 60 °F (15 °C). Maximum temperatures are of no great concern. A warm house with Phalaenopsis is ideal, but the equitants need more light. The plants will do quite well with a lower minimum temperature at night of 55 °F (12 °C) in winter but growth will be slowed and you may only get one flowering period a year instead of two or sometimes three!

Light

Good light is necessary, a little less than Cymbidiums or about the same as Cattleyas. When the sun is low and therefore weaker in winter, light levels can be quite high. Let the leaves be your guide. If they turn reddish, light should be somewhat reduced, if dark green increase light. If the leaves show a light green colour with small red-brown spots your light is right. Large plants will take more light than small ones.

Ventilation

This is the most important aspect. A fan should be playing gently on to the plants continuously. This can be achieved by a ceiling fan revolving slowly.

Watering

The secret is to water often but make sure they dry out between watering. Mine are watered every morning in clear weather after the house

temperature has started to climb. If the weather is dull I do not water.

Potting

To dry the mix quickly I advocate clay pots—5cm or 7cm as they get larger. If you can't get small clay pots, plastic propagation pots can be used with two inches of polystyrene chips or clean gravel or scoria in the bottom for drainage. Make sure the drainage holes are clear and cut vertical drainage strips upwards about two inches. Use a soldering iron for this. The mix can be punga fibre mixed with charcoal but I prefer bark with charcoal and some pea-size scoria mixed in. The bark should be sieved to about 0.5cm for young plants and up to 1cm for large plants.

After a thorough watering the mix will be virtually dry in an hour or two in clay pots with the fan providing the light breeze.

Humidity

This is no different from most other genera. As mine grow with Phalaenopsis I endeavour to maintain a minimum of 60% relative humidity.

Mounts

If the humidity in the environment can be kept up to about 60% or more these plants grow well mounted. Mounts can be twigs of manuka, citrus, feijoa, cork. I have my doubts about punga slabs. Unless they are thin they will hold water too long. Tie the plants on with narrow strips of panty-hose. Perhaps a little fibre under the roots to hold a *little* moisture while the plants are establishing themselves. Some varieties produce masses of aerial roots and these are better mounted as they will climb out of their pots. If the plants become too large for their mount do not disturb the roots, put original mount on a new, larger mount.

Fertilising

These plants are not gross feeders but benefit from weak — ¼ of recommended dose on the packet or bottle—feeding according to the mix used. Once a week appears to be sufficient using 30-10-10 in bark. If light is strong the frequency of fertilizing can be increased somewhat.

As the plants mature the number and size of flowers increase each flowering. Many will flower more than once in each year. The flowerstem is very thin and usually needs staking.

Do NOT cut the spikes as they often produce a further crop of flowers. Some varieties will thus flower for many months.

Do try to add these miniatures to your collection, they take up little space and reward you handsomely with sprays of many-coloured gems.

24 Albany Highway
Glenfield
Auckland 10

IMPORTANT NOTICE
To All Cymbidium Breeders & Enthusiasts

1989 marks 100 years of cymbidium hybridising
(C. eburneo-lowianum. Veitch 1889)

What are you going to do about acknowledging the efforts of your predecessors?

Varying Habitats of New Zealand Orchids

Part 3

Jean M. Jenks

Jean writes on her observations made throughout New Zealand, over a number of years...

Common in grasslands, *Prasophyllum colensoi* will also be seen in scrub on clay banks, wet mossy herbfields like Key Summit, pakihi lands, in decomposing granite and natural open tussock. Plants appear to thrive in both wet and dry environments. *Prasophyllum nudum* and *Prasophyllum pumilum* have both been located under light shade in a clay type soil and the pakihi areas of north-west Nelson where *Prasophyllum pumilum* is now quite widely distributed.

Orthoceras strictum thrives in some of the poorest and driest of conditions seen. Near Pauanui very large specimens were growing in clay banks. Other situations for this hardy plant are pakihi and in quartz grit of weathered granite.

On the Desert Plateau tussock land clumps of tiny *Microtis parviflora* are found in odd clay areas, but in the south its habitat is mainly in pakihi lands.

Lyperanthus antarcticus is usually confined to the higher altitude herbfields of Arthur's Pass, or alpine tussock, or damp swampy and mossy situations.

Cyrtostylis reniformis is often found under coral lichen, with its pink flowers only just visible, but clay banks covered with moss near Kaimaumau and litter-covered scoria deposits were other habitats for this dainty little orchid.

Until recently *Beilschmiedia taraire* in the North was the main cover for *Yoania australis.* However, now this species emerges from under nikau palms near Westhaven Inlet in the south.

Acianthus fornicatus, like the majority of native orchids prefers filtered light growing under scrub, in moss, under beech trees, in clay beneath manuka or as seen on Auckland's offshore islands on scoria deposits.

Two more dainty little terrestrial orchids are *Adenochilus gracilis* and *Aporostylis bifolia,* often sharing similar areas which range from the litter of mixed upland bush, to moss by tarns in the Lewis Pass, in clay humus mixture, the floor of beech forests and sphagnum swamps. It was in a sphagnum swamp near Tahakopa that a hybrid of *Aporostylis bifolia* was found with a narrow labellum devoid of any ornamentation.

Damp or dry, it doesn't matter to *Chiloglottis cornuta,* but large colonies are often found on decaying logs, under beech trees to 1300 metres in the mountains, clumps in tufts of moss, under manuka or in clay under pine plantations.

Calochilus robertsonii and *Calochilus paludosos,* easily recognized by the highly ornamental bearded lip appear in scrubby places, clays and *Calochilus paludosis* is not uncommon on pakihis. A few isolated plants grown under pines near Kaiteriteri.

(to be continued)

R.D.2.
Upper Moutere
Nelson Province

7. THOMAS DUNCANSON

Ian St. George

Duncanson was not a major figure of the world of botany, so little information is available about him.

He had been a gardener at the Royal Botanical Gardens in Edinburgh, but came to Kew and in 1822 was employed by W. T. Aiton drawing the new plants for Aiton's proposed second volume of the *Epitome of Hortus Kewensis.* This he did for four years until 1826 when he had a mental breakdown. The three hundred drawings he executed in that time are in the Kew collection, but are filed by species rather than by artist, so it is hard to find all of them. They are expertly done, beautifully coloured, almost luminous in their clarity. In my opinion Duncanson would have been a great botanical artist had he been able to continue and to publish.

One drawing in the Kew collection makes him especially interesting for us. Number 64 of his drawings at Kew is of *Thelymitra longifolia.* It is annotated in ink "Received in 1823 from New South Wales from Mr Cunningham"—as are a number of the drawings; Alan Cunningham sent many plants back to Kew. In another hand, in pencil, is written "?Bond. Thelymitra forsteri? June 1823".

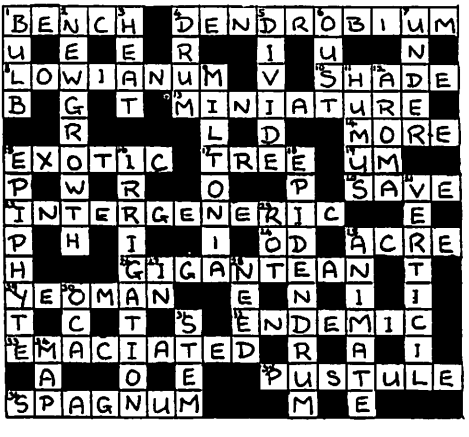
Under this, in the same hand, is a pencilled note initialled by Robert Allen Rolfe, Director of Kew at the turn of the century. He writes, "The name written here, 'Thelymitra forsteri' should refer to a New Zealand plant. The date pencilled 'June 1823' should indicate the date the drawing was made—presumably from a plant at Kew. Allen Cunningham in *Hook. Comp. Bot. Mag. ii 376,* enumerates Thelymitra forsteri S.W. as N. Zealand, Northern Island, shores of the Bay of Islands in open fern lands—1826, A. Cunningham . . . The ink record seems to have been done later, when a large collection of such drawings was made up, probably in part from memory, and may not be correct (from various sources), for the specific name is correct, and I see no evidence of this form growing in Australia . . .".

Rolfe was suggesting that the *Thelymitra longifolia* must have come from New Zealand in 1826 rather than from New South Wales in 1823. If that were true, Duncanson would already have left Kew and the drawing should have been made by his successor, Bond.

Not true, I am afraid. The plant does grow in Australia, and the drawing is stylistically certainly by Duncanson. Rolfe was wrong. It is a good drawing, though, and we reproduce it here.

45 Cargill Street
Dunedin

CROSSWORD SOLUTION
from Page 13



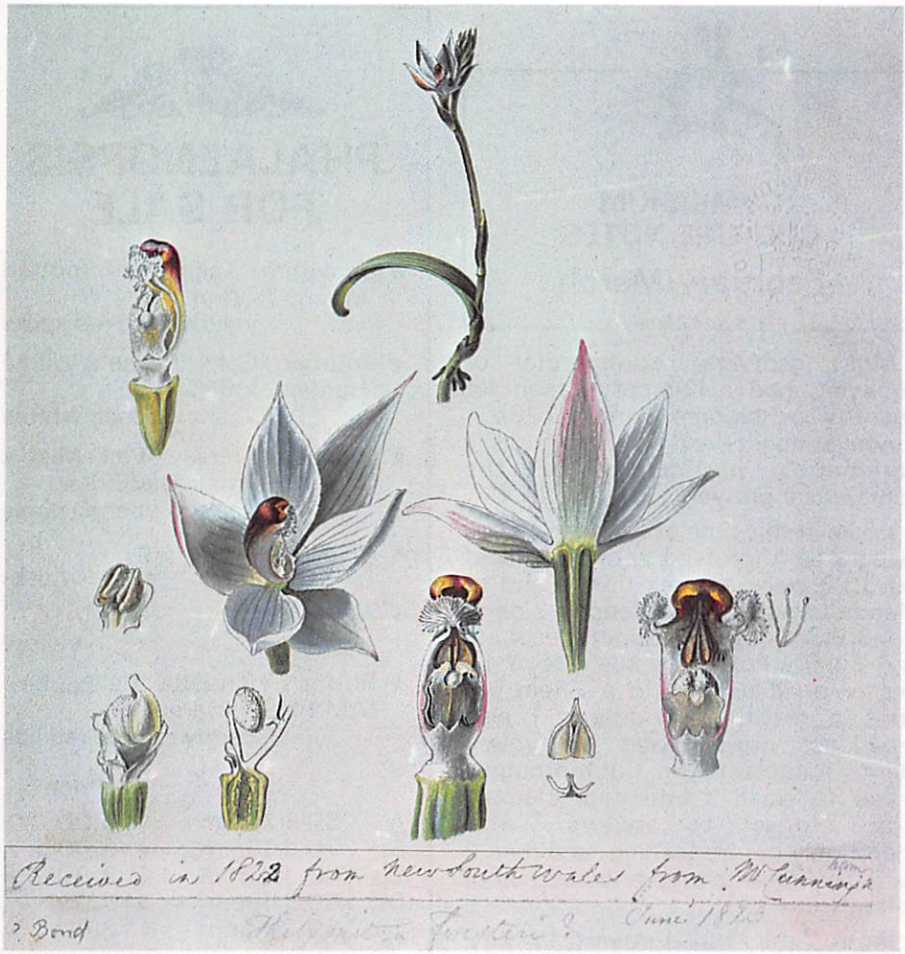


Plate. *Thelymitra longifolia.* Thomas Duncanson. From the Kew Collection and reproduced here courtesy of the Librarian, Royal Botanic Gardens, Kew.

Fourth
South Island Orchid Seminar

will be held at

INVERCARGILL

2nd — 4th October 1987

Speakers include Frank Fordyce of California

INFORMATION FROM:
Mr J. Russell, 35 Compton Street, Invercargill

CYMBIDIUM CULTURE NOTES

February/March

Gordon Maney

Most growers, commercial or hobbyist, had a bumper season for quantity of blooms during 1986. However quality and size of blooms is paramount, particularly for the commercial grower.

While at this time of the year we are using 214 Microfeed with an NPK of 16:3:27 once a week till the end of March, I also use a dry feed of 2 parts Dried Blood, 6 parts Superphosphate and 2 parts Potash, at the rate of 15 mls or a tablespoon to a 25cm pot once a month. In March I also broadcast dried blood on young plants; it doesn't burn, but thoroughly water to wash it into your plants. Don't forget to always water thoroughly before feeding, and then 3 to 5 days later to stop any build up of salts.

From April 1st, I revert to 212 Microfeed, which has an NPK of 22:5:18, and a dry feed of 4 parts dried blood, 4 parts Superphosphate, and 2 parts Potash, again at 15ml to a 25 cm pot once a month.

Because many growers will still be repotting, I repeat **don't pot on** under any circumstance; always knock out all the old mix and repot into clean pots.

Because the buds are set during January, February and March, the feeding programme I've set out is vital for quality and indeed quantity of flowers, and well grown plants.

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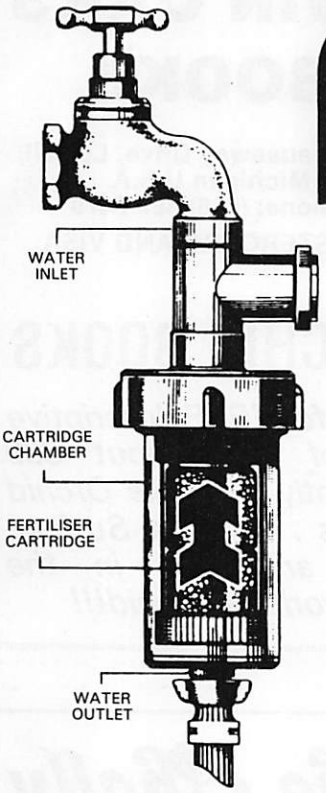

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Two analysis of fertiliser available: ''Quick Green'' corresponds to the U.S. recommendation for orchids of 30-10-10 or N.Z. 30-5-8.

''General Purpose'' corresponds closely to the U.S. 10-10-10 for orchids in spike (generally known as the blossom booster).

Fert-O-Mat provides the three main elements N.P.K. in the proportions recommended by both U.S. and N.Z. Orchid experts for orchids. (American Orchid Society Bulletin, N.Z. Orchid Review, Department Scientific & Industrial Research, Ministry of Agriculture & Fisheries). Both formula of fertiliser contain essential trace elements.

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PORTRAITS OF NEW ZEALAND ORCHID SPECIES

▲ *Caladenia carnea*
- white form

Photography: Bob Goodger

The genus *Caladenia* is most strongly represented in Australia, and our three N.Z. species also occur there.

The plants have conspicuous hairs on leaf, slender stem, and the outside of the flower.

The narrow leaved species, *Caladenia carnea,* may be found, singly or in groups, on open forest floors, under light scrub, or occasionally in clear areas.

The flowers are 1-2 cm in diameter.

▲ *Caladenia carnea*
- pink form

There is a range of colour forms, including pure white, greenish, pink, red and some combinations of these.