NATIVE ORCHID SOCIETY

of

SOUTH AUSTRALIA

JOURNAL

Pterostylis unnamed

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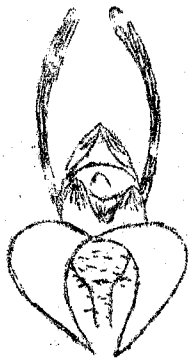

NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA

J O U R N A L

Volume 8, No. 6

July, 1984

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CONTENTS:

NEXT MEETING

When: Tuesday, 24 July at 8.00 p.m.

Where: St Matthews Hall, Bridge Street, Kensington.

Subject: Dr C.O. Fuller will speak on orchids and other flora of the higher ranges in South Australia.

LAST MEETING

Our orchid grower extraordinaire, Les Nesbitt, entertained us with a slide show and commentary on the culture of terrestrial orchids and some epiphytes that received awards at past shows. It demonstrated to us how many of our plants can be grown to perfection with care and planning. Les included some tips on re-potting of terrestrial orchids — basic information so often overlooked by many of us but of great importance to some of the novice growers among those that attended. Les stresses neatness in presentation of his plants and this was apparent in his winning popular vote plant of *Pterostylis concinna*.

Thank you Les for an enjoyable and informative evening.

ON THE BENCH

A good number of plants were benched last meeting, most of them Pterostylis species and hybrids but we are beginning to see some other genera making an appearance. Some that stood out were Acianthus reniformis (green form). This was well grown and to me always looks fresh and bright. An unusually early pot of Caladenia reptans provided a splash of colour with its purplish flowers and Diuris sheaffiana the first of its genus for 1984.

Dendrobium tetragonum was conspicuous as a parent in a number of epiphytes on display, particularly D. Hilda Poxon but more interesting were D. Pee Wee = D. tetragonum x D. bigibbum and D. Rosella an attempt to breed bigibbum colour into a cool-growing plant.

Popular Vote

Epiphytes: D. bigibbum x Johannis - P. Barnes.
Terrestrials: P. concinna - L.T. and M.K. Nesbitt.

Plants on Display

Terrestrials
Pterostylis curta x nutans (3 + bud), P. scabra var robusta (3), P. baptistii (1 + bud), P. nana (3), P. pedunculata, P. vittata (3), P. nutans (1 + bud), P. concinna (1 + bud), P. x ingens (bud), P. grandiflora x concinna, P. affin robusta, P. scabra var robusta, P. sp. affin decurva, P. grandiflora, P. scabra, Diuris sheaffiana (N.S.W.), Caladenia reptans (W.A.), Acianthus reniformis (green form, mallee), A. formicifera, Chiloglottis reflexa.

Epiphytes
Dendrobium tetragonum var. "giganteum" (2), D. Hilda Poxon (spotted form), D. Ellen, D. canaliculatum, D. Pee Wee, D. Rosella, D. bigibbum x Johannis, D. Golden Fleck, D. Chieno, Bulbophyllum macphersonii.

Dendrobium Bardo Rose - 8 plants in seedling competition.

HISTORY OF SOUTH WESTERN AUSTRALIA'S TERRESTRIAL ORCHIDACEAE R. Heberle

COLONISTS WHO ASSISTED CAPT. MANGLES AND BARON VON HUEGEL

G.F. Moore, G. Fletcher, J. Carroll, Captain Mears and Mrs Bull.

Specimens, tubers and seeds were consigned to Captain Mangles by Lady Stirling, his cousin and the Governor's wife.

DR ALEXANDER COLLIE 1835

Surgeon, Magistrate and amateur botanist, King George Sound 1829-1835.

As Resident Magistrate, he took a keen interest in the aborigines, learning their language and customs and showed concern for their welfare. He sent botanical specimens to Dr Lindley who named one of his orchid collections.

Pterostylis vittata Lindley 1840 Vegetative Sketch Swan River Colony at York St. K.G. Sound 1833.

THE VALUE OF LEAF LITTER IN THE CULTIVATION OF TERRESTRIAL ORCHIDS

R. Bates

Under natural bush conditions it is easily observed that many terrestrials grow best where fallen leaves are constantly accumulating. If we as growers are hoping to duplicate these natural conditions we should be adding leaf litter throughout the growing season.

The merits of various toppings have been discussed previously. It seems that there is little difference between chopped leaves, such as pine needles, gum leaves or she-oak needles and actual dried leaf litter collected from the bush. One disadvantage of using leaf litter from the bush is that it tends to contain seeds or tuberoids of wild orchids which are then introduced to your pot - instead of having one species of Pterostylis in a pot you may end up with several.

Advantages of topping pots with leaf litter:

1. It prevents loss of soil and seed or seedlings due to splashing by rain.
2. Leaf litter acts as "insulation". The variation of temperatures in a small plastic pot may be much greater than that experienced by orchids in the bush and may retard growth of cultivated plants. Leaf litter prevents excessively hot or cold conditions.
3. It helps keep a constant moisture level on the surface of the pot, drying out very slowly yet never becoming soggy.
4. Leaf litter acts as a "safe" slow release fertiliser, especially if continually added so that the lower layers are decomposing.
5. A thick layer of leaf litter gives support to flower spikes and prevents plants blowing over during those windy September days.
6. Leaf litter from the bush ensures introduction of native soil fungi which can form a defensive layer against pathogens (although one danger with leaf litter kept watered during hot weather is that rapid growth of bacteria and fungi may actually increase disease).

Why not experiment for yourself - place two similar pots of the same species together. Leave one with a bare surface, to the other add leaf litter and note the difference in growth. For some species it can be remarkable even in a month.

FIELD EXCURSION TO TAILEM BEND

24 June, 1984.

P. Reece

This was a joint excursion between NOSSA, the Botany Club of the Field Naturalists and the Murray Bridge section of the Field Naturalists. A total of thirty people attended at the Tailem Bend watertower, our meeting place.

The weather on leaving Adelaide had been cold, grey and damp that morning but once over the Adelaide Hills it broke into glorious sunshine to be enjoyed by all. Pat Foreman and Bob Bates were to be our leaders for the day and members became acquainted while waiting for the last party to arrive. Roy Hargreaves produced a copy of the new book "Orchids of S.W. Australia" by Hoffman and Brown, much to the interest of some people.

Field Excursion to Tailem Bend (contd.)

The party drove off in convoy on the Meningie Road to a grove of native pines about 5 kilometres from Tailem Bend. We were a little disappointed to see that Bridal Creeper had taken a firm hold on the area. Our leader for this section was Bob Bates and he pointed out leaf rosettes of Pterostylis sp., an unnamed greenhood that would flower later in the season. Also the basal leaves of Pterostylis mutica were seen and then the spade-shaped leaves of rosettes belonging to Pterostylis sp. affin. robusta. There were large colonies of the latter in flower, their hoods a dark brown with white stripes. Some made excellent camera subjects so much so that the party became a little spread out. The soil was almost pure sand and some remnant dune shapes still existed. In a separate part of the pine grove we came across the green form of the brown-hooded Pterostylis and some intermediates. The camera buffs were nearly left behind when the convoy started off for the next site - being Pat and Ross Foreman's property off the Old Pinnaroo Road at Elwomple.

The Foremans are letting the property return to its original state. It has the only patch of native grassland in the region in its north-west corner and therefore contains some interesting plants, including orchids.

The soil is thin; sheet limestone being just under the surface.

Lunch came first amid dozens of leaf rosettes of Pterostylis cycnocephala then Pat Foreman took us around the property. The conditions were a little dry and most orchid tubers preferred to stay dormant but the leaves of some species appeared: namely Acianthus reniformis and Pterostylis sp. affin. robusta with one collapsed flower of the latter. The windswept western boundary had been planted out with a wide variety of native shrubs and trees including a healthy looking Prostranthera in flower. A large colony of leaves of Acianthus reniformis was pointed out beneath a clump of Eucalypts near their house.

The next port of call was Naturi, a small hamlet to the north on the Tailem Bend to Karoonda railway. The dry conditions made hunting difficult but P. robusta was found in flower and Prasophyllum nigricans was setting seed. In leaf were Thelymitra longifolia, Caladenia dilatata and D. filamentosa. We moved to the Army Rifle Range east boundary and scrub adjacent to look in the borrow scrapes, and came up with leaves of Pterostylis nana and flowers of Acianthus exsertus.

On returning to Adelaide we were once more beset with rain and fog.

Orchids found:

(1) Pine Grove, Meningie Road
(2) Foreman's property Elwomple
(3) Naturi
(4) East boundary, Army Rifle Range.

In flower
Pterostylis robusta (3)
P. sp. affin robusta (1) (2)
Acianthus exsertus (4)

Leaves
Acianthus reniformis (2)
Pterostylis mutica (1)
P. cynocephala (2)
P. nana (4)
Thelymitra longifolia (3)
Caladenia dilatata (3)
C. filamentosa (3)
P. unnamed (1)

Setting seed
Prasophyllum nigricans (3)

JULY CULTURE NOTES FOR EPIPHYTES

Reg Shooter

July, along with August, are often the coldest months of the year. Luckily many of our native epiphytic orchids do not mind cold conditions at this time as the plants are really quite dormant - at least the more commonly grown species such as Dendrobium speciosum, D. kingianum, D. falcorostrum, D. gracilicaule, etc., and their hybrids. However, temperatures below freezing will damage plant tissue and, on nights when frosts are forecast, it is a good idea to take a few simple precautions. Sheets of newspaper laid loosely over the tops of the plants will usually give just enough protection to prevent damage. Frost usually occurs on still, windless nights so the problem of securing the paper covering does not arise. Make sure to remove the paper in the morning.

Try to keep your orchids fairly dry at this time as the combination of low temperatures, wet compost and a dormant plant where the root system is not utilising the available water, can be fatal. It has been said many times before but it is worth repeating — more orchids (of all kinds) are killed through overwatering than any other single cause. A fair rule of thumb to keep in mind is — cold and dry, wet and warm. This is probably the most difficult part of orchid-growing to come to terms with, particularly if the grower has previously grown, or is currently growing, other plants which require watering at all times, the temptation "to give them just a little drink" should be resisted.

Many plants will have flower spikes well advanced by now and some may even be in bloom. Plants that are showing spikes in my collection are: Dendrobium x delicatum, D. kingianum, D. speciosum, D. x gracillimum, D. ruppianum, D. gracilicaule, D. falcorostrum, Sarcochilus hartmannii, S. Melba, Cymbidium canaliculatum. Plants in flower are Dendrobium aemulum, D. Ellen and, of course, the ubiquitous D. Hilda Poxon.

While looking through my plants for flower spikes (a popular pasttime for all orchid growers!!) I noticed quite a healthy colony of aphides on a spike of D. Ellen. These were quickly dispatched by gently blowing the blighters off. It really is surprising how quickly aphides can multiply given the right conditions. It pays to make at least weekly inspections to ensure they do not reach plague proportions because they can disfigure a developing spike in a few days which, once damaged, cannot be repaired.

Give the plants all the sun they can get this month. Where possible remove all shading and if the leaves have collected a coating of dust during the summer months now is a good time to clean them. Get a bucket of luke-warm soapy water, a chux, or similar cloth, and gently wipe each leaf top and bottom. Obviously if you have hundreds of plants this is impractible but at least try to clean the more choice plants: you will be surprised just how much the leaves are coated. Removing the dust and grime enables the plant to function more efficiently and makes for a more attractive plant to boot. Combine this chore with the examination for pests and you will kill two birds with one stone, metaphorically speaking of course.

FIELD TRIPS

Details of forthcoming outings are on page 59.

CONCERNING THE STATUS OF THELYMITRA MACMILLANII AND T. CARNEA

R.J. Markwick

Since I do not cultivate native orchids, my observations and knowledge of these interesting plants is confined to my own field observations and other peoples writings. Therefore, it is in this context that Bob Bates' thought-provoking article "Experiments with Thelymitra x macmillanii" (NOSSA Journal June 1984) raises (for me at least) some intriguing questions. Perhaps Bob, or some other orchidologist with far more knowledge and experience than myself, may care to respond with their own thoughts.

Firstly, let me make it clear that I do not take issue with any of Bob's observations. In fact my own field experience would tend to support his conclusion that plants referred to as T. macmillanii in South Australia (and from my own observations, also in the Grampians, Victoria) are hybrids between T. antennifera and T. luteocilium. I have also seen the apparent hybrids between T. rubra and T. antennifera near Kuitpo and noted their resemblance to T. macmillanii,(see "On the Re-discovery of T. mackibbinii in South Australia", NOSSA Journal, February, 1980). Note: although not observed when these plants were originally "re-discovered" in 1979, T. rubra has since been found in the area. Also, although these plants match the South Australian Herbarium specimen referred to by W.H. Nicholls as "T. mackibbinii" in South Australia, this plant most certainly is not the taxon known as T. mackibbinii in Victoria.

Now to the aspects that puzzle me. Noel Hoffman and Andrew Brown, in their recently released book "Orchids of South-west Australia" illustrate the plant known in Western Australia as T. macmillanii. This plant bears a strong resemblance to plants photographed by me near Lake Fyans in the Grampians. There are, however, subtle differences. The anther of this Western Australian form appears to protrude further than in the Grampians form. Also the column-arms appear to have papillae covering almost their entire surface, while the Grampians specimens exhibit smoother surfaces with crenulate margins. This, however, could be explained by normal variation within the species, as Nicholls illustrates Victorian specimens closely approximating the Western Australian form. Finally, the column wings of the Grampians flowers exhibit greater lateral development than Hoffman and Brown's plant, presenting a "fatter" more "enclosed" appearance to the column structure. This too can perhaps be explained away by normal variation.

Why do I compare a Western Australian plant with a Victorian plant in such detail? Because:

(1) the Victorian T. macmillanii grew in clumps (suggesting vegetative reproduction) among many flowers of T. luteocilium;
(2) T. antennifera was observed to be flowering nearby although not at the precise location; and
(3) given the morphological characteristics and the colour there was sufficient circumstantial evidence for me to suspect that these T. macmillanii were of hybrid origin, with the other two plants as parents.

But, if the Western Australian and Victorian plants are one and the same species and they are indeed of hybrid origin, how is the existence of the Western Australian species to be explained, since to the best of my knowledge, T. luteocilium does not extend to Western Australia? Also, if the Grampians T. macmillanii were formed by pollen transfer from T. luteocilium to T. antennifera (as in Bob Bates man-made cross) why were they growing among T. luteocilium and not the putative pod parents?

Concerning the Status of T. macmillanii and T. carnea (contd.)

Although the Western Australian T. macmillanii grows within the range of T. antennifera; T. carnea, the only other plant suggested in literature to be a possible parent, to the best of my knowledge does not. Could the species recognised as T. macmillanii be represented by a group of plants arising from different origins?

On the subject of T. carnea, it is interesting to note that the plant illustrated by Hoffman and Brown and known in Western Australia as T. carnea, bears a closer resemblance to T. rubra than to the plant known as T. carnea in South Australia. In South Australia, T. carnea always grows with T. flexuosa and T. rubra and to my eye, exhibits characteristics intermediate between the two. It also grows in clumps suggesting vegetative reproduction. Could the plant known as T. carnea in South Australia be of hybrid origin? The answer to this question will probably never be known, unless an exact likeness can be reproduced as a man-made hybrid under controlled conditions. Perhaps some of our more advanced growers would like to attempt the challence of testing this hypothesis. As a matter of interest, Nicholls noted that T. carnea resembled T. flexuosa but stated that its closest ally was T. rubra.

The status of T. rubra and T. carnea growing in New South Wales and Victoria and the difference between them, have been debated in the "Orchadian" by C.K. Ingram and P.H.T. Uhlherr. The column of T. carnea illustrated by Uhlherr (Figs A, E, G) and the description given, appears to generally accord with features of the South Australian plant with which I am familiar.

I trust that my observations and questions will not prove to be too controversial. As an interested layman I simply wonder about these things. If anyone wishes to take issue or pass on his or her own thoughts concerning any of these matters, I am sure the Editor will welcome the contribution. I know I will.

References:

Bates, R. (1984) "Experiments with Thelymitra x macmillanii", NOSSA Journal, June 1984, 45-48.
Erickson, R. (1978) "Orchids of the West" (University of W.A. Press).
Hoffman, N. and Brown, A. (1984) "Orchids of South-West Australia", (University of W.A. Press).
Ingram, C.K. (1970) "On the Re-discovery of Thelymitra mackibbinii in South Australia", NOSSA Journal, February 1980, 5-6.
Nicholls, W.H. (1969) "Orchids of Australia" (Nelson).
Uhlherr, P.H.T. (1970) "Thelymitra carnea R. Br. and Thelymitra rubra Fitzg.", "Orchadian" 3:107-110.

NEW MEMBERS

Mr and Mrs R.J. Ellis
Mr M. Jusaitis
Mrs V. Langley
Mr and Mrs A. Naco
Mr I. O'Daniel
Mr H.O. Pohlner
Mr G. D'Aubert
Mrs I Jackson
Mr and Mrs A. Sones
Mr and Mrs O.C. Lee
Mr B.W. Scott

CALADENIA PATERSONII R.Br.:
ITS NATURAL HYBRIDS IN SOUTH AUSTRALIA

(Notes on collections and distribution.)

Caladenia patersonii x C. cardiochila.

This is the most common of the Caladenia hybrids in South Australia. The name C. x variabilis Nicholls is commonly applied to those hybrids which, in the early seventies, could be found in thousands in parts of the upper south east. Vast hybrid swarms occurred and in some places it was difficult to find a "pure" C. patersonii or C. cardiochila. The hybrid is a very fertile one, back-crossing with either parent to produce a confusing variety of forms. Other collections have been made from the Barossa Valley and near Hartley in the Murray Mallee. Representative collection: R. Bates 3275, Mt Boothby Cons. Park, 23.9.83.

C. patersonii x C. dilatata var dilatata.

Although the parent species are often found together hybrids are rarely seen (this is probably due to differences in flower size). Collections have been made from Alligator Gorge in the Flinders Ranges, Mt Pleasant in the Mt Lofty Ranges and from the south east. Representative collection: K. Alcock sub. Goldsack 149, Comaum Oct. 1955.

C. patersonii x C. dilatata var stricta.

So far this is only known from two collections from central Yorke Peninsula. Representative collection: P. Hornsby sn., Stansbury Scrub, 23.9.1979 (this collection has both the putative parents and shows the intermediate nature of the hybrid).

C. patersonii x C. gladiolata.

This hybrid is known only from the Alligator Gorge area of the southern Flinders Ranges where it is often collected. Representative collection: R. Bates 2290, south east of Alligator Gorge, Sep. 1982.

C. patersonii x C. aff. huegelii.

This is another of the hybrids found near Alligator Gorge and probably occurs near Monarto also.

C. patersonii x C. latifolia.

This hybrid which was first reported in NOSSA Journal in October, 1983, has been found only near Maitland on Yorke Peninsula. The first collection was made by D.N. Kraehenbuhl in 1964.

C. patersonii x C. toxochila.

This is a common plant in relict areas of scrub on Yorke Peninsula and has also been collected in the southern Flinders Ranges (P. Martinsen 0036, Mambray Creek, 5.9.1974). Weber and Bates (1977) discussed this hybrid in detail and mentioned the apparent lack of back-crossing; however a recent collection (R. Bates 3190, coast near Maitland 13.8.1983) has plants from a complex hybrid swarm, showing that back-crossing does occur.

Other possible C. patersonii hybrids have been noted. These include plants somewhat intermediate between C. rigida and C. patersonii but there must be some doubt on these.

Caladenia patersonii R.Br.:
Its Natural Hybrids in South Australia (contd.)

Heberle (1982) records the following C. patersonii hybrids from Western Australia:

with C. barbarossa; C. creba; C. dilatata var falcata; C. hirta; C. huegelii; C. lobata; and with several unnamed taxa.

He also notes that C. x triangularis is a hybrid between C. flava and C. patersonii.

Hopper (pers. comm. 1984) notes the occurrence of several C. patersonii hybrids in addition to these so it certainly seems that C. patersonii as a species is prone to natural hybridising!

References:

Heberle, R.L. (1982) "Caladenia in W.A. and Natural Hybridisation", Orchadian 7:78-84.

Weber, J.Z. and Bates, R. (1977) "A Putative Hybrid between Caladenia dilatata var concinna (C. toxochila) and C. patersonii var patersonii" J. Adelaide Bot. Gard. 1:131-134.

COMING FIELD TRIPS

Lobethal Forest Reserve
on
Saturday, August [illegible]

The next field trip is to Lobethal Forest Reserve. Please meet at Lobethal Post Office at 2.00 p.m. This is to see the common winter flowered orchids of the Adelaide Hills.

Moonta-Maitland area
on
Sunday, August 18.

For the more adventurous there is a whole day trip to survey the Moonta-Maitland area on northern Yorke Peninsula. Meeting place is opposite Moonta Post Office. Time 10.00 a.m. on Sunday, August 18.

This area is totally cleared except for minor roadside reserves. Some NOSSA members checked the area in August 1983. This was a wet year and orchids were abundant.

NOSSA SPRING SHOW

We are now getting under way with preparations for our Spring Show.

We would like to feature some displays at this show, e.g.

A. Conservation Display

Incorporating "Rescue and Rehabilitation" to make the general public aware of what can and is being done in this area.

B. Terrestrial Display

The following could be illustrated:

a. Growing: types of soil mixes for terrestrials.
b. Information sheets.
c. Types of mulching materials.
d. Photographs of shadehouses, etc.

(Plus any other ideas that you may have.)

C. Photographic Displays

Some topics could include:

a. Field trips.
b. Camera equipment used in recording orchid information, etc.

We would be pleased to hear from anybody who would like to put a point of view across at the show.

Non-competitive Plant Displays:

Areas will be available for groups to have massed plant displays.

We require people to assist with the following:

1. Trading Table:— people to assist with plant sales, etc.
2. Information Booth — people to help with information and advice.
3. Ticket Sales — admittance and raffle tickets.
4. Set Up and Clean Up — Friday and Sunday nights.

If you would like to assist with the above, could you please put your name on the list circulating at meetings.