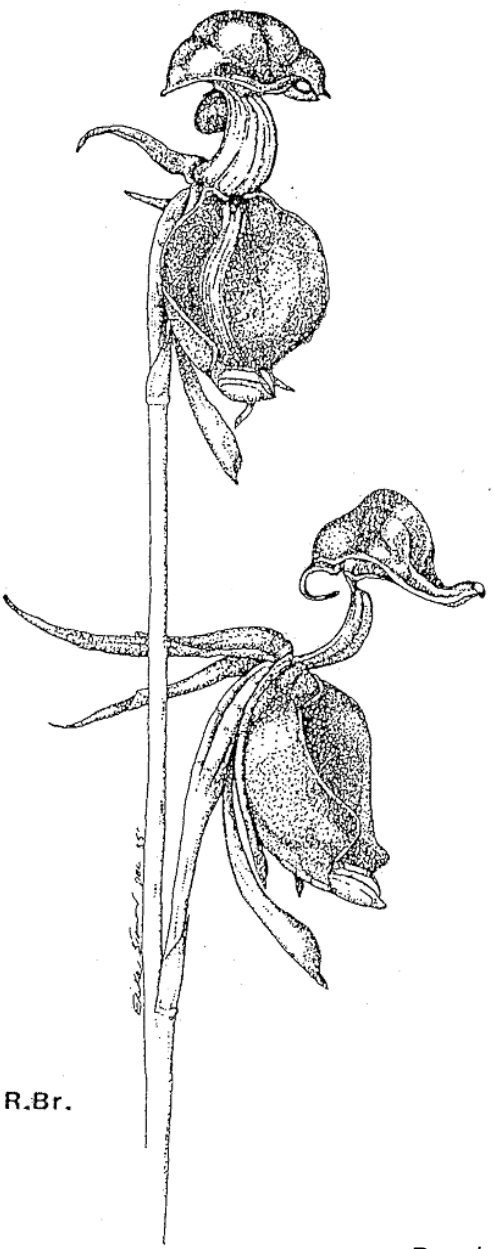
NATIVE ORCHID SOCIETY

of

SOUTH AUSTRALIA INC.

JOURNAL



Caleana major R.Br.

Registered by Australia Post
Publication No. SBH 1344

Volume 11, Number 10
November, 1987

NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA INC.

THE NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA PROMOTES THE CONSERVATION OF NATIVE ORCHIDS THROUGH CULTIVATION OF NATIVE ORCHIDS, THROUGH PRESERVATION OF NATURALLY-OCCURRING ORCHID PLANTS AND NATURAL HABITAT.

EXCEPT WITH DOCUMENTED OFFICIAL REPRESENTATION FROM THE MANAGEMENT COMMITTEE OF THE NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA, NO PERSON IS AUTHORISED TO REPRESENT THE SOCIETY ON ANY MATTER.

ALL NATIVE ORCHIDS ARE PROTECTED PLANTS IN THE WILD; THEIR COLLECTION WITHOUT WRITTEN GOVERNMENT PERMIT IS ILLEGAL.

Postal Address

NOSSA INC.,
P.O. Box 565,
UNLEY. S.A. 5061

Price 60 cents

PATRON: Mr T.R.N. Lothian

PRESIDENT:
Mr K Western
Telephone 270 1331

SECRETARY:
Mr J Jacobs
Telephone 272 9245

VICE-PRESIDENT:
Mr R Robjohns

TREASURER:
Mr R Robjohns

COMMITTEE:
Mr G Brooks
Mr G Nieuwenhoven
Mr R Hargreaves
Mr L Nesbitt
Mr R Bates
Mr W Walloscheck
Ms E Viskic

LIFE MEMBERS:
Mr R Hargreaves
Mr H Goldsack
Mr RT Robjohns
Mr J Simmons
Mr L Nesbitt

TUBER BANK CONVENOR
Mr W Walloscheck,
R.M.B. 777,
via BLACKWOOD, S.A. 5157
Telephone 388 2397

EDITOR:
Mr G Nieuwenhoven,
15 Robin Terrace,
HOPE VALLEY, S.A. 5090
Telephone 264 5825

NOSSA JOURNAL Vol. 11, No. 10. November 1987

NEXT MEETING

Tuesday 24th November, 1987 at 8.00 p.m.
Matthews Hall, Bridge Street, Kensington.

This meeting is the last for this year and is a social event. Please bring a basket of supper. Slides and prints from the Photographic competition plus some selected slides will be screened.

LAST MEETING

Our Editor, George Nieuwenhoven presented an interesting series of slides of European and African terrestrial orchids. He described how various genera of terrestrial orchids have adapted to survive and thrive in widely ranging habitats from extremely cold regions with snowy winters to lowland deserts and in locations ranging from Iran, through Asia, Europe, South Africa and Australia and how the terrestrial orchids range in stature from absolutely diminutive to very large plants such as *Serapius* from Africa.

George went on to say that areas with "Mediterranean type climates" commonly have terrestrial orchids amongst their flora. He noted that most European species reproduced by seed only rather than by vegetative reproduction that (that is, by tuber division), and that some attempts are being made to reproduce the European orchids by artificial culture, particularly by flasking. Noting that this was probably the ideal form in which to import such orchids, George mentioned that the orchids would still have to adapt to the season change from Northern to Southern hemisphere. It was noted that European orchids tend to prefer open grassland which seemed to be well maintained by normal grazing but which became inhospitable if fertiliser was applied or if grazing was ceased allowing grasses to grow too profusely.

With respect to conservation, George noted that almost without exception, European terrestrial orchids were totally protected plants and that locations of populations were not published and that some plants namely *Cypripedium calceolus* in England, were fenced and guarded 24 hours a day to assure their preservation in the natural state. He noted that in Turkey certainly in the past, if not also at present, orchid tubers were collected by the kilogram and processed to make 'salep' which in turn was used to prepare ice-cream.

A series of slides and commentary complimented the presentation.

NEW MEMBER Mr C. Midford

PLANTS ON DISPLAY October Meeting

TERRESTRIALS

Caladenia dilatata, Chiloglottis gunnii, C. trapeziformis, Cryptostylis subulata, Diuris aurea, D. punctata, D. (un-named species), *Microtis parviflora, Pterostylis biseta, P. pedunculata, P. rufa, Spiranthes sinensis, Thelymitra fuscolutea.*

EXOTIC TERRESTRIAL ORCHIDS (benched to complement evening topic)

Aceras orthropodum, Ophrys atrata, Orchis morio, Satyrium carneum (South African), *Serapius cordigera, S. neglecta, S. olbia, S. parviflora.*

EPIPHYTES

Bulbophyllum elisae, Cymbidium canaliculatum (of the colour type formerly known as var. *sparkesii*), *Dendrobium beckleri, D. gracilicaule, D. kingianum, D. lichenastrum, D. monophyllum, D. semifuscum, D.* Ella Victoria Leaney, *D.* (Eureka x Kingrose), *Rhinerrhiza divitiflora, Sarcochilus falcatus, S. hartmanii, S.* Weinhart, *S.* (*fitzgeraldii* x Lois)

Plant Commentary on the terrestrials was given by George Nieuwenhoven. George noted that *Spiranthes sinensis* and *Cryptostylis subulata* have similar cultural requirements preferring always to be kept damp in keeping with their preferred habitats of bogs or marshes. The *Thelymitra fuscolutea* was one originally obtained during a 'rescue dig' in the South East of South Australia. It is a species which George regards as difficult to reliably maintain in pot culture. It was noted that *Pterostylis rufa* and *Pterostylis biseta* were closely related to each other, *P. biseta* preferring sandy soils and *P. rufa* preferring rocky situations. George noted that *Diuris punctata* could be multiplied by the process of tuber removal with very little risk. He noted that this beautiful species was recorded from the South East of South Australia but appears not to exist there now. With respect to *Caladenia dilatata*, George noted that the process of tuber removal seemed not to be successful as a multiplying technique, he suggested that the genus *Caladenia* generally required to be reproduced from seed.

Commentary on the epiphytes was given by Mr Lewis Moore who noted. that *Dendrobium kingianum* and *Sarcochilus hartmanii* were the most common epiphytes benched this evening. Commenting on one exceptional specimen of *Dendrobium kingianum*, Lewis noted that while the canes were near to horizontal, the racemes were almost vertical, and made quite a display. Two of the *Sarcochilus hartmanii* benched had particularly long showy flower spikes and were most attractive. Lewis commented on the unfortunate habit of some growers to apply a location name as a clone name e.g. *Sarcochilus hartmanii* "Blue Knob". Since a clone name refers to an individual plant and any division of it, a distinct clone name is to be preferred, e.g. *S. hartmanii* "Kerri". This would allow the use of *S. hartmanii* (Blue Knob form). It was further noted that a specimen of *Sarcochilus falcatus* was benched growing in a pot and that it was unusual to see pot-culture applied to this species. Lewis noted, while discussing some *Sarcochilus* hybrids, that *Sarcochilus* appear to flower from very small and young plants and that they may be easier to grow and raise than the Dendrobiums. It was also noted that a plant of *Dendrobium monophyllum* was thriving on a mount of rough cork bark. It was noted from the audience that *D. monophyllum* definitely preferred a rapidly drying substrate.

POPULAR VOTE
Spiranthes sinensis grown by L and K Nesbitt
Dendrobium kingianum 'Coo-ee' grown by W Walloscheck

JUDGES CHOICE
Species:- *Spiranthes sinensis* grown by L and K Nesbitt
Dendrobium kingianum 'Coo-ee' grown by W Walloscheck
Hybrid:- *Dendrobium* Ella Victoria Leaney grown by P Barnes

N.O.S.S.A. SPRING SHOW 1988

As a result of correspondence (thank you M Fuller) and discussion by the N.O.S.S.A. Management Committee, it has been decided that the organisation of benching and displays at the 1988 show will basically revert to the usual format. That is, there will be two separate zones-

1. Non-competitive area. Members will arrange their own display or pots in this area. Plants will not be judged.
2. Competitive area. Members will be permitted to arrange their own displays in this area or may bench their plants according to competitive sections defined within the 'composite' area. Plants in competitive areas will be judged.

Diuris longifolia September Popular Vote terrestrial orchid. by R Hargreaves.

One of the aims and objects of N.O.S.S.A. is the preservation of our native orchids and to this end, on a number of occasions with permission from the National Parks And Wildlife Service and landowners, has rescued them before their destruction during land clearing. In this case, at Avenue Range in the South East, the District Council of Penola waived the $20 permit fee to remove them from the defined area.

The landowner had replied to an article written by Margaret Fuller to the Stock journal seeking information re the clearing of land. This owner had left pockets of scrub to shelter his stock. There were two distinct forms of *Diuris longifolia* just over half a kilometre apart. The tubers were close to ground level in sandy soil which was covered with leaf litter. The petals on one form were brown while the other included some yellow colouring and were smaller.

My terrestrial orchids are grown under the shade provided by a collection of four trees in an area about 5 m x 4 m on mesh benches about 0.5 m in height. The tubers are repotted in January in a compost of 50-50 Cherry Gardens area scrub soil and nursery sand with 10% peat moss added. Damping down is carried out at three weekly intervals until the plants emerge. In July flowering plants are transferred to a 50% shade cloth house.

The Popular Vote exhibit was grown in a 12.5 cm plastic pot. There were six plants, 1 plant with 2 flowers and 2 buds; 3 plants with 2 flowers and one bud; 1 plant with 2 buds and one non-flowering plant. Flowers were brown, 4.5 cm across x 5 cm high, the petals were 1.5 cm wide x 2 cm.

Spiranthes sinensis OCTOBER Terrestrial Popular Vote by Les Nesbitt
Common Name:- Ladies Tresses.

Spiranthes occur throughout the world but *Spiranthes sinensis* is the only species found in Australia. Usually it has a row of tiny pink flowers spiralling up the stem in a most appealing and attractive manner. Pure white forms are known. The plants at the

October meeting were a dark pink form from Southern Queensland / Northern New South Wales. They were grown in a heated glasshouse which results in early flowering. This species is rare in South Australia but still occurs on the margins of the remaining swamps in the South of the State where it flowers at Xmas.

Being a swamp orchid it must not be allowed to dry out as it is evergreen. The new shoots appear in February and this is the best time to repot. Annual repotting is recommended. The tubers are really fattened roots and can be propagated by dividing clumps into groups of 3 or 4 roots. Repot into terrestrial orchid soil mix which has extra peat moss for water retention and a pinch of Blood and Bone because *Spiranthes* like rich soil. The top of the tuberous roots should be 5-10 mm below soil level. This species grows well in a shadehouse with epiphytes. It can also be propagated by sprinkling seed on top of the pot. Seedlings occasionally are found to have germinated amongst *Dendrobium* and *Cymbidium* plants.

Pests to watch for are slugs and snails, grubs and scale. Mature plants flower reliably every year. *Spiranthes sinensis* is a beautifully different terrestrial orchid for a mixed collection.

VARIATION IN *Pterostylis biseta* IN SOUTH AUSTRALIA by Bob Bates

Pterostylis biseta Blackmore and Clemesha was described in 1968 from plants collected near Belair in the Adelaide Hills.

The name "*biseta*" means 'two bristles' and refers to the two long setae at the base of the labellum. These bristles are often set in conical mounds (See photo 1). The two bristles are such a distinctive feature that any plant which has that feature has now been labelled *Pterostylis biseta*. I do not think that this is realistic. (*P. ophioglossa* and *P. concinna*) are two greenhoods which share the common feature of forked tongues, but no-one would treat them as a single species). *Pterostylis biseta* is now considered to be a complex of several taxa. If we look past the bristles we can see differences in other features which indicate the existence of several constant species, subspecies and varieties each with its own characteristic habitat, flowering time, distribution and probably pollinators too!

Before 1968 the species was referred to in South Australia as '*Pterostylis rufa*' (rufa = redbrown). Colour can sometimes be a useful guide and there is one form of *P. biseta* in South Australia which always has deep red flowers. This form has very thick fleshy flowers and probably represents a distinct species. It has only been collected near Bordertown but is more common in Victoria. It is a typically tall stemmed species.

In contrast there is a very short stemmed species with very long pedicels so that the flowers droop and may even rest on the ground. These are often referred to as 'var. *despectans*'. A form of this with green and brown flowers was found at Mt. Bryan and was illustrated in the N.O.S.S.A. Journal of Dec. 1979. Recently a form of this with very small wholly green flowers was found on Eyre Peninsula (photo 2). This form is unique in that the leaves die in early October and only then does the scape develop so that the flowering begins in late November and extends into January making it the last of the group to flower in South Australia. What is significant is that 'ordinary' *P. biseta* actually grows near it but flowers from September to October. Their flowering times do not overlap. Current theory would then decree that the two must be distinct species as they are not able to cross-breed naturally.

Another important consideration may be raised here: I have in

the past grown several of these '*P. biseta* ' at my home near Adelaide and it is most noticeable that the two forms of *P. biseta* from the Adelaide Hills are both visited by different fungus gnats and set seed naturally. In contrast forms of *P. biseta* from Eyre Peninsula and the South East are not visited by these gnats and do not set seeds in the orchid house.

South Australia is a big state and forms of *P. biseta* sensu lato occur in much of it. It would be difficult and time consuming to do field studies at flowering time for all the various forms but fortunately I live only 30 minutes driving time from the Sandy Creek Conservation Park, 'home' for at least four different 'rufa group' *Pterostylis.* One of the most interesting of these is the pt [early sandplain form of *P. biseta* with short segments, broad flat lateral sepals and colourful flowers. Large numbers of these were observed in flower in the park during the period September to October 1956. There were both green and red-brown flowered forms of this plant. At the end of October I located populations of another 'rufa group' species in bud. I speculated that it may turn out to be *P. excelsa*. but no, when it flowered there was the paper thin labellum and two bristles of *P. biseta.* When compared with a late flower of the early form it was obvious that there were several differences (photo 3). The two forms are probably sibling species. What will further studies in other areas show? There is much yet to discover *P. biseta* is also thought to form hybrids with other rufa group species, notably with *P. excelsa* but I wonder. Some of the populations previously interpreted as hybrids may in reality be other *P.* affinity *biseta* especially on Eyre Peninsula a region of South Australia particularly rich in *Pterostylis* of this group.

Photo No 1: Close up of *P. biseta* labellum showing the two set from which the species derives its name.

Photo No 2: A tiny green flowered form of *P. biseta* with drooping pedicels. Kimba Eyre Peninsula.

Photo No 3: Two forms of *P. biseta* found at Sandy Creek near Adelaide.

Photo No 4: A teratological specimen of *P. biseta* in which the labellum was an unmodified third petal. (Lyndoch)

FIELD TRIP- REPORT - *Pterostylis cucullata* SPECIAL by Gerry Carne.

INTRODUCTION

For many members one of the most important aspects of NOSSA are the regular expeditions into the field to see, observe and identify native orchids growing in their natural environment. The trips have always been a great success enjoyed by all participants come rain (as is often the case in the flowering season) or shine. NOSSA is very fortunate in having some extremely knowledgeable members who know where most orchid populations can be found in South Australia, who are willing to give up considerable amounts of time to organise and conduct regular field trip outings and who can answer most questions put to them on Australia's native orchids. One of these people is Bob Bates who organised this special field trip.

The field trip was held on the 30th of September 1987 to help members become familiar with and to study the differences in known populations, physical appearance and habitat of *Pterostylis cucullata* and possibly to find new populations.

Known populations of *P. cucullata* in South Australia are few in number so that the more field enthusiasts familiar with the species the greater the number of new colonies likely to be found. Bob explained to us that this species was once known to be present in the fertile valley behind the Hindmarsh Valley Reservoir but this has not been recently confirmed.

P. cucullata, the 'leafy greenhood', is an easily identified

and very attractive species found in Victoria, Tasmania (where the species was first identified) and South Australia. In Victoria it is found on the southern coastal heaths; in Tasmania it extends to alpine areas; and in South Australia where it extends from Lobetha1, to the Adelaide Hills and South to Victor Harbour.

Two forms are found in South Australia, a short stemmed sandhi1l form similar to the ones in Victoria and Tasmania and tall forest form (up to 30 cms) that has been found in the Adelaide Hills only, where it grows in organically rich soils. (Early descriptions of the species refer to a tall form in Victoria and Tasmania but it appears that these populations no longer exist.) Both the short and tall forms (descriptions of which can be found in numerous volumes of the NOSSA library) are on the endangered plant list. They thrive in cultivation and are freely available from the Society tuber bank.

Both forms are uncommon in South Australia, the short, sandhill form, having suffered the greater loss in South Australia. It once grew along the coast in the Southeast; near McLaren Vale and in Tea Tree Gully where it has been reintroduced from cultivation, but this population does not appear to be permanent. The 'tall' form was probably common before settlement but its rich soil habitat has to a large extent been cleared for agricultural and other needs. Populations of this form are found in the Belair Recreation Park, Lobethal Forest Reserve, Forest Range and the Sturt Creek at Cherry Gardens. It is probably still found near the Hindmarsh Valley Reservoir near Victor Harbour.

P. cucullata flowers from August to November (up to January in the Tasmanian mountains). Its pollinator is the fungus gnat (*Myctophila*) which is common in the Adelaide Hills. Man-made hybrids include *P.* Cutie (*cucullata* x *baptistii*) which was the first registered greenhood hybrid and *P. cucullata* x *P. ingens* which has three species in its background.

A complete description of the plant can be found in numerous volumes in the NOSSA Library.

REPORT :-

This special field trip was enjoyed by nine adults and two younger enthusiasts who enjoyed a warm and sunny day visiting four relatively widely separated areas, taking in the magnificent spring scenery of the Adelaide Hills between stops.

Our first venue was the Belair Recreation Park. We entered the park and proceeded to the South-Eastern gate (now closed), to a small piece of forest known for its abundance and diversity of orchid genera and species but excluding *Pterostylis cucullata*. After a brief (15 minute) examination which revealed 10 species in flower with a further 10 species in leaf with either buds or seed pods, we returned to a more central portion of the park at Karka Melville Gully where we saw our first *Pterostylis cucullata.* A small colony was located only a few meters from the main road with several plants in flower. All were of the taller forest form although some relatively short-stemmed individuals were present. Our leader reminded us of the need to be observant, not only of the orchid species itself, but of the general habitat in which the orchid is found. Wise enthusiasts compile a series of checklist of associated plants. Stringy-bark eucalypts and maiden hair ferns are frequently found in association with *P. cucullata* each preferring the same moist, rich soils. *P. pedunculata* and *P. curta* are two orchid species commonly found in association with *P. cucullata.*

Next stop was Long Gully where a second colony of *P. cucullata* grew. Only a few plants were in flower at this location although many others were in bud. *P. pedunculata* and *P. curta* were most

abundant in the immediate area. A short walk took us to a compact colony of a natural hybrid between *P. curta* and *P. pedunculata*. This is the only known colony of this cross. A nearby and well positioned (on a small ledge) colony of *Corybas diemenicus* could not be passed up by the photographers in our group who presented quite a spectacle to a boldly curious magpie.

Our next venue was the Lenswood Recreation Park where we stopped for lunch. So far as we knew, the park had not been surveyed for orchid species and after lunch we split up into groups to see what species were present. Although there was not a large number of orchid species to be found, within half an hour Bob Bates found a small colony of *P. cucullata* growing at the base of a Stringy-bark.

We then proceeded to Lobethal Bushland Park to view a third known colony. Here *P. cucullata* had formed a natural hybrid with *P. nutans*. There was a single specimen of the hybrid in flower (our second natural hybrid for the day and this time involving a relatively rare orchid species) but we did not find any specimens of *P. cucullata* in flower. At least one other colony of *P. cucullata* was known to be nearby but was not sought by the group who decided to make the most of the afternoon and walk around the lake which forms the nucleus of the park. Massive eucalypt stumps bore dramatic evidence of early logging operations within the area.

We drove back to Adelaide via Tea Tree Gully where the rare dwarf form of *P. cucullata* had been reintroduced to an area in which it once grew prolifically. After a considerable search only one plant was found, its flower not fully opened. The area is widely used as a recreation area by children and it appears to be almost impossible to re-establish *P. cucullata* in this sandhi11 area. At the conclusion of the excursion the group thanked Bob for a most enjoyable and rewarding outing.

SPECIES SEEN

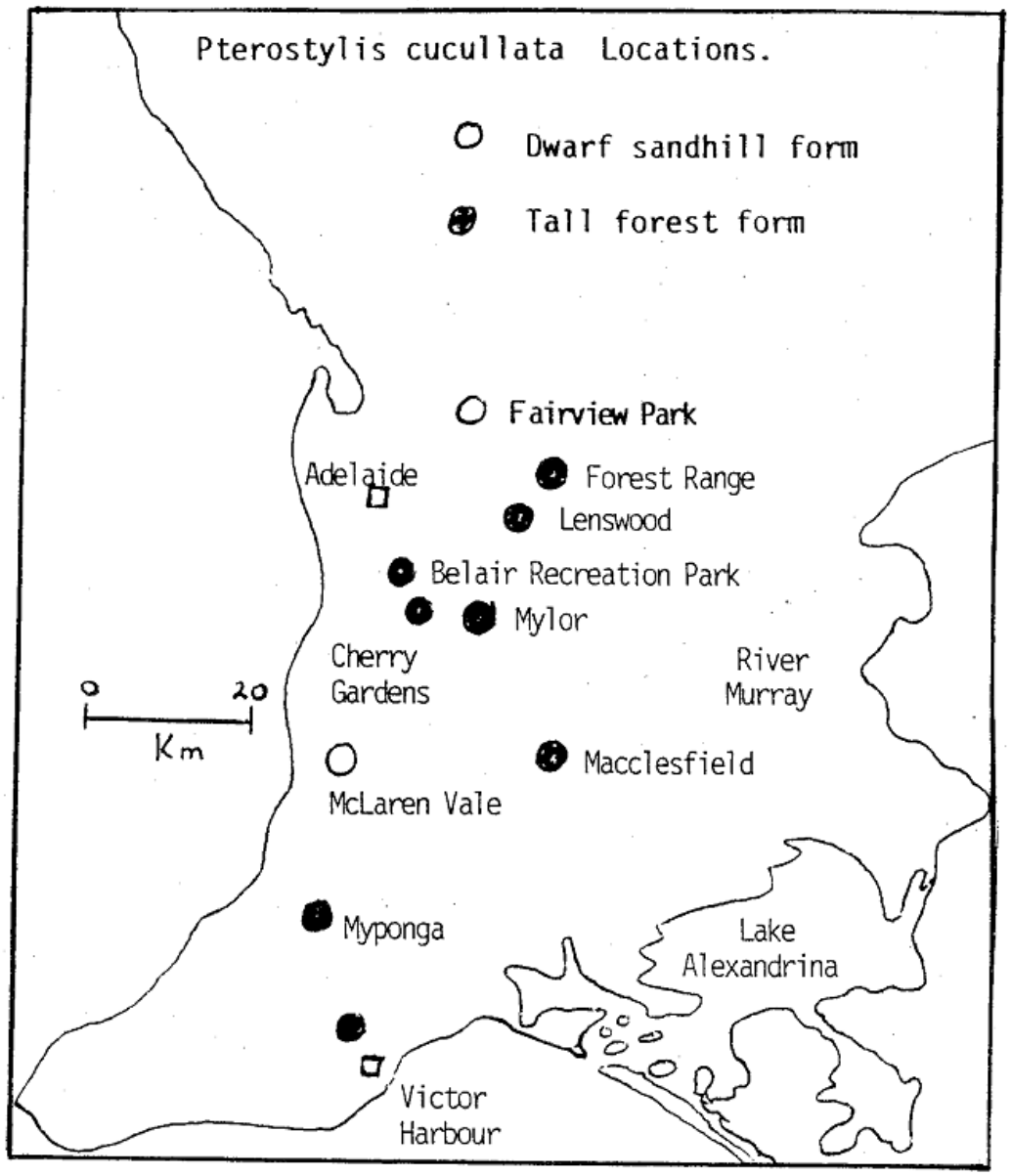
KEY:- A = Belair Recreation Park S-E gate area
B = Belair Recreation Park Long Gully Lenswood Recreation Park
D = Lobethal Bushland Park
E = Fairview Park

In Flower:-

Acianthus caudatus (A,D)
Caladenia deformis (A)
Corybas as species (A)
Pterostylis cucullata (forest form) (A,B,C,D)
P. cucullata x *P. nutans* (D)
Pterostylis longifolia (A)
Pterostylis pedunculata (A B C D)
Pterostylis vittata (A,D)
Acianthus exsertus (D)
Corybas diemenicus (A,B,C,D)
Cyrtostylis reniformis (A)
Pterostylis cucullata (dwarf form) (E)
Pterostylis curta (B,D)
Pterostylis nana (A,C,D)
Pterostylis nutans (A,C,D)
P. pedunculata x *P. curta* (B)

In Leaf with buds or seed pods:-

Acianthus exsertus (A,B)
Caladenia menziesii (D))
Eriochilus (A)
Microtis spp.(A,B,C,D)
Thelymitra spp. (A,B,C,D,E)
Caladenia leptochila (A)
Calochilus robertsonii (A))
Glossodia major (A)
Prasophyllum rufum (A)



AUSTRALIAN DENDROBIUM HYBRID REGISTRATIONS Compiled by G Brooks

REGISTERED NAME	PARENTAGE	REGISTRANT
October/November 1986.		
D. Amaroo	*tenuissimum* x *falcorostrum*	C. Brandon
D. Kookaburra	Star of Gold x Ellen	C. Brandon
D. Omega	Tully x Carawah	C. Brandon
D. Pauline Rankin	Hilda Poxon x *tetragonum*	R. Rankin
December 1986		
D. Colsboys	Jamie Upton x John Upton	W. Upton
D. Delemma	Emma x Specio-kingianum	W. Upton
D. Green Goddess	*adae* x Susan	W. Upton
D. Green Star	Jamie Upton x Golden Fleck	W. Upton
D. John Rose	John Upton x Bardo Rose	W. Upton
D. King Goblin	Goblin x *kingianum*	W. Upton
D. Lemon Glow	John Upton x *speciosum*	W. Upton
D. Ring of Fire	Ku-Ring-Gai x John Upton	W. Upton
D. Whitehart	Nunkumbil x *adae*	W. Upton

AUSTRALIAN NATIVE DENDROBIUM HYBRIDS (Continued)

January/February 1987		
D. Aquarius	Bardo Rose x Star of Gold	R. Harris
D. Collette Fleur Simpson	*canaliculatum* x *monophyllum*	S. Simpson
D. Super Ruffles	Rosemary Jupp x *tenuissimum*	R. Harris
February/March 1987		
D. Ella Rose	Ella Victoria Leaney x Blushing Rose	W. Upton
D. Liela Gilbert	*aemulum* x *gracilicaule*	J. Donovan
D. Penny Rose	Penny Ann x Bardo Rose	W. Upton
March/April 1987		
D. Amber	Peter x *tetragonum*	D & M Crawford
D. Lorikeet	Peewee x Ellen	W. Upton
April/May 1987		
D. Tarantula	Allyn Star x *tetragonum*	W. Skillicorn
D. Zip	Ku-Ring-Gai x *kingianum*	W. Skillicorn
May/June 1987		
D. Aussie Choice	*monophyllum* x *speciosum*	P. Spence
D. Aussie Ember	Aussie Ira x Peter	P. Spence
D. Aussie Flame	Aussie Bonanza x Aussie Freckles	P. Spence
D. Aussie Jewel	Aussie Bonanza x Aussie Mist	P. Spence
D. Aussie Luck	Star of Gold x Aussie Mist	P. Spence
D. Aussie Lust	Aussie Ira x Kingrose	P. Spence
D. Aussie Merit	Ella Victoria Leaney x *ruppianum*	P. Spence
D. Aussie Nave	Aussie Ira x *ruppianum*	P. Spence
D. Aussie Parade	Aussie Ira x Star of Gold	P. Spence
D. Aussie Springtime	Aussie Starlight x Gillian Leaney	P. Spence
D. Aussie Wonder	Ella Victoria Leaney x Ellen	P. Spence

REMINDER The 'Painting raffle' will be drawn during the November meeting. Tickets will be on sale until commencement of the meeting.