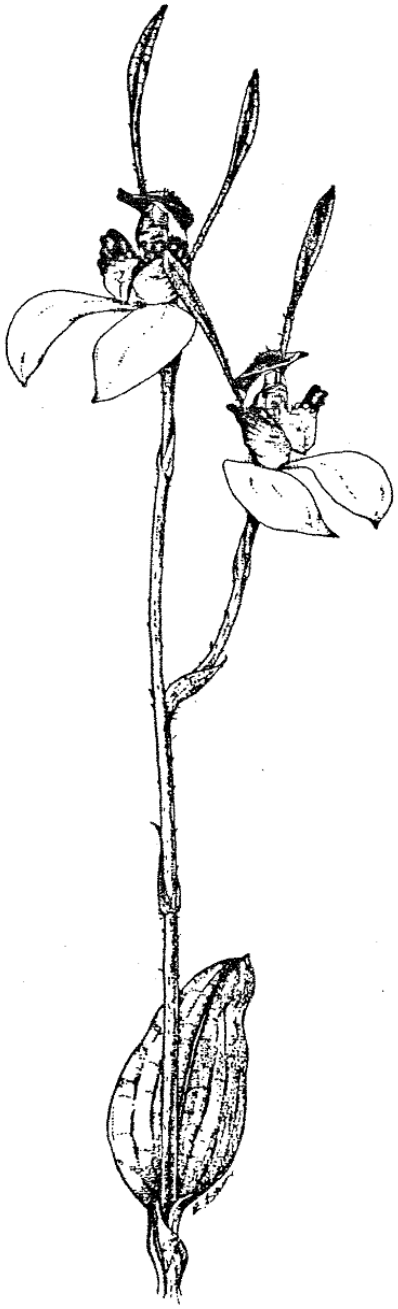
NATIVE ORCHID SOCIETY

of

SOUTH AUSTRALIA INC.

JOURNAL



Caladenia menziesii R.Br.

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JOURNAL

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CONTENTS

Next Meeting

When: Tuesday, 25 February 1986
Where: St. Matthews Hall, Bridge Street, Kensington
Topic: Winning slides from the spring Photographic Competition, together with those that received commendation, will be shown. Mr A. Clements will also comment on the quality and indicate what the judges look for in a competition of this type.

New Members

David Geyer, Tranmere
Volker & Kathy Scholz, Delamere
Ruth Heddle, Unley Park
Catherine Howes, Fullarton

Notice of Annual General Meeting 1986

The Annual General Meeting of the Society will be held in St. Matthews Hall, Kensington at 8.OOpm on 25 March 1986. At this meeting all offices of the Committee (except 2 committee persons) will become vacant.

Nomination forms to fill these vacancies are available from the Secretary or at the February General Meeting. Completed forms must be in the hands of the Secretary 21 (twenty one) days before the election.

W.K. Harris, Secretary

*Please have all written material to editor by Tuesday 4 March for consideration for March edition of Journal.

Papua New Guinea Orchidaceae Pt. 4 by N.H. Howecroft

Persons who ordered the above book, can collect their copy at the February meeting from George Nieuwenhoven at $13 per copy.

Some people carry cards in their wallets authorising surgeons to remove organs for transplant after death. Members of the Orchid Society of Great Britain carry cards saying: 'Orchids need expert care. In case of death or illness of owner, contact the secretary of the Orchid Society of Great Britain...Delay may be fatal.'

'In the event of death or serious illness, it is all too easy for an orchid collection to be forgotten,' the society explains.

FIELD TRIP TO SOUTHERN MOUNT LOFTY RANGES - 3/11/85
(R. Markwick paper continued from Vol. 9, No. 11)

The official part of the excursion now over, a small group visited scrubland on Peter Creek Road near Kuitpo Forest (7). Here, in addition to turning up several species seen at other places during the day, flowers of *Caladenia leptochila, Thelymitra antennifera*, some pink-flowered *Thelymitra* hybrids and a very robust form of *T.* x *truncata* were found.

Variation in the columns of the pink *Thelymitra* hybrids was notable. While most displayed shortish column arms with crowded finger-like papillae (+ consistent with similar plants found in the area since 1979), at least one plant carried bright yellow column arms distinctly reminiscent of *T. x macmillanii*, but perfectly smooth.

The flower-spikes of the *T. x truncata* were tall-standing and carried up to eleven flowers. It is suspected that their discovery only a matter of metres from a very robust form of *T. pauciflora* is no mere coincidence.

There are, in fact, three true breeding races of *T. pauciflora* in this patch of scrub. The one already mentioned grows tall, carries numerous flowers and has a broad strap-like leaf. The other two are smaller in general form and flower-size. The larger of these two has a red-orange post-anther lobe to its column which is + constant in colour and form. The other is the more frequently encountered smaller plant which carries fewer, smaller, white and blue flowers. Both have narrower leaves than the larger form. The smallest *T. pauciflora* is suspected to be a putative parent of the less robust form of *T. x truncata* found elsewhere in Kuitpo forest.

A short drive brought us to our final destination in Kuitpo Forest (8). Here, in a fire-break, another group of pink *Thelymitras* similar to the hybrids previously discussed, were examined with great interest, for, although it was late in the day, the flowers were still open and could be inspected closely. Colour varied from bright pink to brownish pink. The processes borne on the column arms varied from finger-like yellow papillae to short, rather thick, densely crowded yellow hairs.

Thelymitra rubra and *T. antennifera* have been suggested as likely parents for some of the suspected hybrids found scattered in this area, but the differences in colour and morphology observed on this trip give some cause for considering the possibility of other putative parents. *T. rubra*, in fact, has not been observed growing at this particular location (although it may have flowered here earlier), but *T. antennifera, T. mucida* and *T. pauciflora* were all flowering in the immediate vicinity.

Since the suspected hybrids were growing with *T. antennifera* it is fair to assume that this species may be the pod parent, but is it possible that there may be several pollen parents? This is an interesting possibility. Even if all of the progeny represented by this variable group issued from only a single seed-pod, the theory cannot be dismissed lightly. An indiscriminate pollinator could collect pollinia from several different species and complete a transfer to a receptive stigma, more-or-less at random. The pollen of more than one species germinating in these circumstances, may account for the differences in the hybrid offspring. This interesting hypothesis, based on comments made by Bob Bates, is advanced as one possibility for the observed hybrid variation.

Thinking that we had seen all species likely to be found we set off for home, but just before leaving the forest, there on the side of the track (9), grew *Thelymitra aristata* in all its glory, adding another new species for the area.

I feel that I cannot close the report on this most interesting field trip, without some comment on aspects of conservation.

Excursions such as this provide the opportunity to compare Conservation Parks with Private Lands containing remnant scrub and swamps. Clearly the best areas for orchids are to be found on private land since, because of the superior nature of the soils, this land was chosen as being suitable for pasture and other agricultural pursuits. Soils in Conservation Parks on the other hand are generally poor, being nutrient deficient and (because of topography) often skeletal in nature, hence, in reality, these Parks are more often than not areas rejected as unsuitable for agriculture. They are usually also poor in orchid species.

If the habitat of a rare or endangered orchid is threatened and provided the orchid's distribution is known, I believe a case could be raised for transferring at least some of the threatened plants to other suitable habitats (interstate if need be) where there may be a better chance of preserving gene diversification. Quarantine protocol should not be disregarded. Threats to habitat could include considerations such as the potential for destruction by natural causes, e.g. uncontrolled wild fires; indiscriminate or insensitive clearing of bushland; poor conservation management e.g. stock agistment and other incompatible activities such as trail bike riding in our National Parks and Forest Reserves; draining and inappropriate grazing of wet lands; etc.

This suggestion will, I expect, upset some purists. If so, I am sure their counter-arguments would be welcomed as contributions to this Journal.

Locations Visited

(1) South of Kuitpo Colony
(2) Blackfellow Creek
(3), (4) Mount Magnificent Conservation Park
(5) Nangkita Quarry and Swamp
(6) Glenshera Swamp
(7) Peter Creek Road
(8), (9) Kuitpo Forest

Orchids Seen

In Flower:

Acianthus reniformis (3)
Caladenia carnea var. *minor* (2)
C. dilatata (1),(3),(4),(6),(7),(8)
C. leptochila (7)
C. reticulata (6)
Caleana major (4),(5)
Calochilus paludosus (6)
C. robertsonii (1),(3),(6),(7),(8)
Diuris brevifolia (4)
Gastrodia sesamoides (2)
Glossodia major (3)
Microtis parviflora (6)
M. unifolia (6)
Pterostylis nutans (2),(6)
Pt. pedunculata (2)
Thelymitra antennifera (7),(8)
T. aristata (9)
T. holmesii (5)
T. ixioides (6),(7)
T. merranae (6)
T. mucida (8)
T. pauciflora (2),(3),(6),(7),(8)
T. x *truncata* (7)
Thelymitra hybrids, un-named (7),(8)

In Bud:	*Caladenia dilatata* (7)
	Caleana major (3)
	Gastrodia sesamoides (2)
	Pterostylis pedunculata (2)
	Thelymitra pauciflora (6),(7)
Setting Seed:	*Acianthus caudatus* (6),(7),(8)
	A. reniformis (3)
	Caladenia carnea var. *minor* (2)
	C. dilatata (4)
	Calochilus robertsonii (5)
	Corybas sp. (7)
	Diuris longifolia (7)
	Glossodia major (3),(7)
	Pterostylis nutans (2),(6),(7),(8)
	Pt. pedunculata (2),(4)
	Thelymitra antennifera (7),(8)
	T. flexuosa (6)
	T. pauciflora (1)
	T. rubra (7)
Past Flowering:	*Corybas* sp. (6)
	Thelymitra fuscolutea (7)
	Thelymitra hybrids, un-named (7)
Basal Leaves:	*Caladenia menziesii* (3),(8)
	Lyperanthus nigricans (1),(3)

TOTAL SPECIES SEEN = 32 (including hybrids)
24 of which were in full flower.

METHODS & MADNESS OF AN ORCHIDOLOGIST (paper by R.C. Nash cont:)

Caladenia menziesii is another species that is widespread throughout the southern part of Australia and in some cases form quite large colonies with some so thick that the leaves are pushing against each other to get to the light. It flowers freely after a fire passes over their area during the previous summer and it is common to find odd plants flowering after a period of no fire. Soil disturbances can also cause this species to flower, e.g. after a small land slide in the Belair Park a colony was found to be in full flower the following winter. I know of no instance where this species has hybridised.

Many years ago when more bush land was about, and people were not so concerned with preserving native plants, in fact you were considered to be mental if you did, *Cal. deformis* R. Br., used to be very common about Blackwood, the Belair Park included. Out in the Mallee areas near Hartley and down on Yorke Peninsula, this plant often formed thick carpets of blue when in flower. Alas, all the above beauty has gone in the name of progress and this species now is extremely rare compared to days gone by.

Before going to Canberra, I often collected a few plants from areas being cleared but only once did I have a plant survive for more than five years. This one plant used to live in a five inch terra cotta pot under a rosemary bush, after a long period it became two plants and eventually three and once flowered. The pot contained a light loamy soil collected from some bush land area. Since being back from Canberra, I have made a few attempts to grow this species and my last has been the most successful. This collection was made quite a few years ago from land under threat and consisted of four plants. I planted them in a mixture of native soil (a very light loam) and fine sand. This mixture was placed into a 15cm terra cotta pot and placed in a moderately sunny spot on the top shelf. I have three plants this year and two are daughters of a single plant. In the past few years, I have had more plants and they come and go in numbers, but thankfully persist. I have not put any humus material on the top and each autumn give the pot a light sprinkling of powdered limestone.

Caladenia deformis is supposed to have hybridised with *Glossodia major* R. Br., to give us *Cal. tutulata* R.S. Rogers. I have heard of no other natural hybrids of this species, but there could be some around especially in W.A.

Cal. carnea R. Br., (note that I am not calling it catenata), is another plant that I have tried to cultivate on several occasions, especially in my younger days when it used to be far more common than now. The usual thing was for these plants to persist for a year of two, then vanish. After returning from Canberra, I collected one plant from near Hahndorf and potted it up with a few tubers of *Thelymitra antennifera*. This plant flowered and set seed, actually I had hand pollinated it with the idea of passing the seed on to Dr Warcup, but the seed fell before I realised it had gone. The following May, in an adjacent pot about four small orchid seedlings appeared. By the end of June, I was certain that these plants were *Cal. carnea* and early in September each carried a small bud spike which in turn opened into pink flowers, one plant had two flowers on its spike. Now I think you may think this is a bit far fetched, but it did happen, for I think I made mention of this very early in the Madness somewhere. I suppose those seeds that fell into the pot made contact with the right fungus and so they were able to come to maturity quickly. This would also explain why this species is often scarce in an area and then suddenly appears in numbers. One more point about these plants concerns the flower colour, the parent had white flowers and incidently it multiplied vegetatively until I mistreated it, and always the flowers on this clone were white. The seedlings produced pink flowers, all four of them and continued to do so until I brutally killed them off in some way. I often feel that IF I had not shifted these plants from the eastern wall at the back of my house to my plant house and had not applied too much hot humus material on top of the pot, then I would still have them. Also, re-potting did not help, it just hurried up their demise.

Cal. carnea comes in several varieties, the more commonly known ones being the var. *gigantea* of which I have my doubts as I have seen this species in some areas more or less normal and then after an extraordinary event, fire, drought or a wet year, appear as very large flowered plants and no normal flowered plants about. The var. *pygmaea* does seem to be constant and even though it is rare in the M.L.R. it is common on parts of Eyre Peninsula. In the southeast there is a very small flowered form that is self pollinating which continues into Victoria and I have also found this plant near Bathurst in N.S.W. (1984). Of the other recorded varieties, I am not going to discuss, for I have had little experience with them and in such circumstances it is best to say nothing than to say things that are not really true.

This species has quite a range down the eastern side of Australia for I have seen it from the Atherton Table land, in northern Queensland, down the coast into S.A. as far as Eyre Peninsula, as well as many inland places between.

To my knowledge, it has hybridised only with *Cal. latifolia* as mentioned above, but I do not see why it should not have hybridised with other species and why it cannot be done intentionally.

Caladenia dilatata R. Br., is a plant which is most sought after and also often tried in cultivation, many times have I tried to grow this species and the only long term success that I have had were plants that came up from seed. This seed came from a plant that had been collected from Fairview Park about 1970 and it had fallen into a pot with *Acianthus exsertus* and the one or two plants that still survive still live with this species. I had to re-pot them once, as the *Acianthus* had become very crowded, as it is again. As at that time I lost most of the *Caladenia*, I could very well loose the few plants I now have if I re-pot. The mixture of this pot has quite an amount of loamy soil in it.

This Spider shows quite an amount of variation across S.A. It has hybridised with several other members of the genus especially about the Alligator Gorge area and in the far western part of southwest Victoria.

Cal. leptochila Fitz., is a plant that I have often tried to grow with no long term success whatsoever, and have never managed to get seedlings to last for more than a year or two. I know of no cases where this species has hybridised.

Cal. gladiolata R.S. Rogers, is a species that I have tried to grow but once, and only one plant survived to last for over 10 years being killed off by my putting too much humus material on top of the pot. This plant flowered each year and sometimes I self-pollinated the one flower to obtain seed which was viable, for often small seedlings appeared at the base of the adult plant during the next season, these however, failed to last for more than two years. This plant was grown in a red loam mix with very little humus material added.

I have seen hybrids of this species and Cal. dilatata in the Alligator Gorge area.

Cal. toxochila Tate, is another plant that I have grown for many years in a pot containing a loamy soil and sand mix. This plant multiplies vegetatively and must not be allowed to dry out too quickly at the end of the season as plants do die under these conditions. Also, it does not like too much humus material on the top of the mix. This plant is, I think, a variant on *Cal. gladiolata* and not a variety of *Cal. dilatata* (*Cal. dilatata* var. *concinna*). It has hybridised with *Cal. dilatata* at times and possible *Cal. reticulata* in the wild.

Cal. filamentosa var. *tentaculata* Tate, was a plant that I had growing and multiplying vegetatively before going to Canberra. It was grown in a mixture of Mallee soil, from Mallee roots and fine washed river sand. Since being back from Canberra, I have tried a few times to grow this species, but have not succeeded. I have seen hybrids of this plant with the red flowered variety *Cal. filamentosa* var. *filamentosa* R. Br., near Hartley, unfortunately the area has now been cleared. In W.A. *Cal. filamentosa* and its varieties do hybridise with other members of the genus.

Cal. patersonii R. Br., is a species that I have tried to cultivate on occasions with no success, however, I have seen some fine plants in cultivation in other collections. This species has several named varieties, one, the variety *concolor* is full red and has occurred about the Mt. Lofty Ranges, the nearer Mallee lands and in the southeast where it hybridised with one of the white forms. Much variation can be found in this species throughout its range.

Once at Cherry Gardens, I found a plant that was a natural hybrid between this species and *Cal. reticulata*. At the Alligator Gorge I have seen hybrids of this species with other members of the genus and in the southwest of western Victoria, Mark Clements collected hybrids between this species and *Cal. dilatata*.

Of the other *Caladenia* found in S.A. I have had very little success with them here at Blackwood, but other people have demonstrated that this genus can be cultivated with quite an excellent amount of success elsewhere.

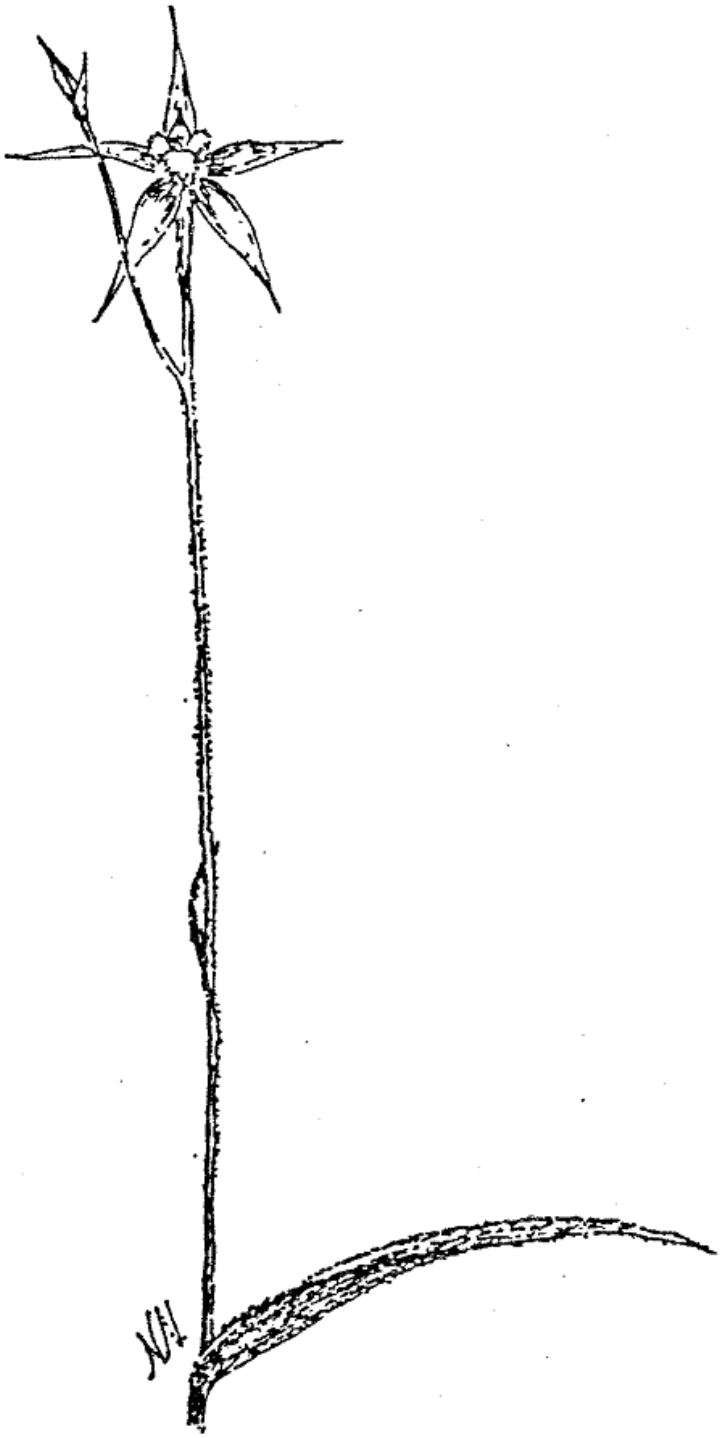
In the west (Western Australia), there is to be found a large range of species in this genus, many have yet to be categorised and named. On occasions I have tried to collect plants in W.A. and am amazed at the distance one has to go to find the tubers. None of the plants that I collected myself or those sent to me from the above state have grown for more than three years, pity as they have some lovely species over here.

Eastern Australia has a few species that we do not have, but again I have tried to cultivate but a few of these and always without success.

The above may be a bit depressing, but I feel sure the way to go with this genus is to attempt cultivation from seed to be successful.

CALADENIA PATERSONII X *LATIFOLIA*

This hybrid was first displayed at our NOSSA meeting August 1985. Although it has been reported to occur in the wild as a natural hybrid (Bates 1983), it has never previously been on display. The purpose of making the hybrid was to combine the attractiveness of the large filamentous *Caladenia patersonii* with its regular flowering habit and the lovely pink form of *Caladenia latifolia*, one of whose most desirable features is its habit of multiplying rapidly in cultivation.



While it is too early to tell if the hybrid will multiply, it has taken most of its colour from *Caladenia latifolia* with the tips of the sepals and petals being white, the colour of the labellum is mostly white with the combs pink with white tips, the tip of the labellum is also pink.

The shape of the labellum is similar in appearance to *C. patersonii* with the shorter combs.

The petals and sepals are broader than *C. patersonii* with glandular tips. All segments are held out fairly rigid except for the dorsal sepal, which curves gently upwards.

In all, it is a beautifully coloured and attractive plant and a desirable addition to any orchid collection.

G.J. Nieuwenhoven

FIELD TRIP - '*DIPODIUM* SPECIAL' 12/1/86
by Paul Reece

Around 16 persons assembled in the upper Carpark of Mt. Lofty Botanic Garden for an afternoon's orchid hunting, led by Bob Bates. We were honoured to find some '*Dipodium punctatum*' in bud within the Botanic Garden grounds, beneath large eucalypt trees. It was difficult to see the dark brown stalks and a few people's feet had to be directed sideways. None of these were in flower as they were on a slope facing east and were quite high up at 630 metres. Flowers should appear in a month which is very late for this orchid, due to the unusually cold 85/86 Summer, the coldest in 20 years for Adelaide.

We moved on, crossing the Freeway to Waverley Ridge Road, where it makes a junction with Ayers Hill Road. Dozens of massive tall eucalypts grow beside the road and a hundred or so *Dipodiums* were seen, mostly in bud with approximately 10 in full flower. The elevation here was 560 metres and again facing east. The Mt. Lofty Range is this orchid's most westerly habitat for Australia, being confined to SE Australia, including Tasmania. At the church in Milan Terrace, we found some more plants, this time in a more advanced stage of flowering due to the lesser altitude (510 metres) and more protection. Our leader pointed out some pure white flowering *Dipodiums* in another property which tempted the photographers amongst us. Nearly all the plants seen so far had ants running up and down them, apparently in search of nectar at the base of the pedicels or milking their 'herds' of aphids for honey dew as some plants had aphids on the flowers.

In the upper part of Aldgate Creek we found *Microtis parviflora* still in flower with one such plant in flower bud. This doubled our plant list for the day. By then we were used to the sight of the *Dipodiums* and they would be all along the roadsides, popping up wherever tall eucalypts grew.

To cap off the trip, we stopped in Heather Road outside a house that had a garden of Petunias and other imported flowers. The owner lady, was home and spoke with a northern English accent. There were *Dipodiums* coming up amid her flower beds. She did not know how to care for them, she said. We let her know that they grew best if let be, without fertiliser or weed killer. A large eucalypt grew at her fence and sheltered two plants of *Microtis parviflora* both in flower and in her garden.