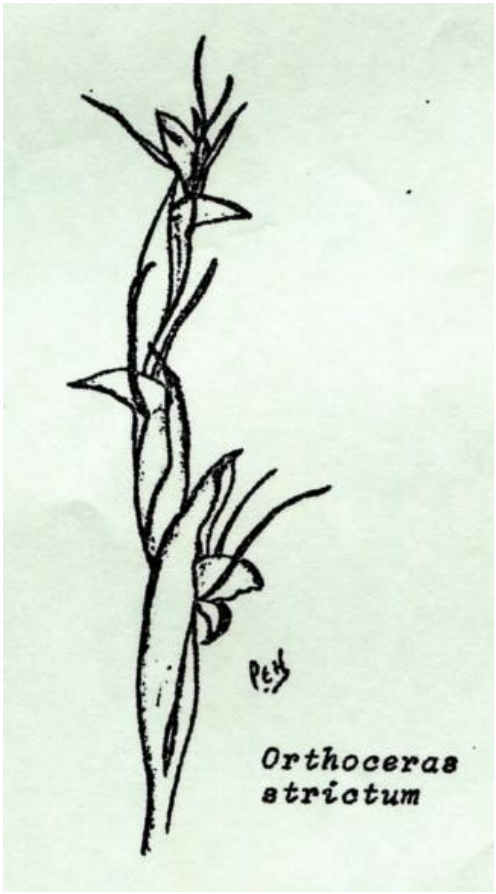
NATIVE ORCHID SOCIETY

of

SOUTH AUSTRALIA



NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA

NEWSLETTER

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Mr K.W. Western
Mr. J.T. Simmons

NEXT MEETING

Tuesday, 22 November, 1977, at 8.00 p.m. sharp.

Goodwood Boys High School, Hardy Street, Goodwood.

This will be our final meeting for the year and a rare opportunity to hear Mr Harold Goldsack on South Australian orchids. Harold is undoubtedly the most experienced of our native orchid botanists and knows more of the history of our orchids than anyone alive. A terrestrial repotting demonstration will be given by Les Nesbitt.

Plant display and commentary, raffle and trading table.

LAST MEETING Attendance 51

A slide programme was shown on the Fifth Australian Orchid Conference in Perth including the local orchids and places of interest. With a little prompting from the audience we remembered most of the species names.

POPULAR VOTE

Terrestrial: Phaius tankervilliae, the Queensland Swamp Orchid, grown by Les Nesbitt. There was one spike with six flowers, white outside and reddish brown inside. The plant was growing in a cymbidium mix in a 30 cm plastic tub. It is grown in a shadehouse in summer. The compost is never allowed to dry out. It is moved into an un-heated glasshouse after the spikes appear in autumn and remains there until flowering- is over. The buds spot severely if left out in winter rain.

Epiphytes: Cymbidium canaliculatum var sparkesii grown- by Mary Earle. This plant was growing in a hollow log and had three spikes with 30-40 very dark maroon flowers on each spike Huge plants can be seen growing out of holes in gum trees in New South Wales and Queensland on the drier western side of the Great Dividing Range. The roots penetrate deep into the rotting wood in the centre of the tree-trunk.

RAFFLE — Prizes last month were Dendrobium falcorostrum, Den, tetragonum and Pterostylis pedunculata.

FIELD DAY

Belair Recreation Park, Sunday, 22 January, 1978,

There will be no monthly meetings in December or January but we will get together to search for *Dipodium punctatum* and *Orthoceras strictum*, our two summer-flowering species, during this break.

Meet at 2.00 p.m. inside the Belair entrance near the Belair Railway Station. The gate will probably be closed so enter-the park through another gate. A reminder will be inserted in the daily papers before the event.

CONSTITUTION

The proposed constitution sent out with the October newsletter is only a draft. Members have the opportunity to suggest detailed changes, in writing, by December 15, 1977. Committee will consider all submissions and prepare a final draft. Any changes to the initial draft will be published in the February newsletter. Members will vote yes or no for the adoption of this final draft at the Annual General Meeting. The final draft will become the Society's constitution if a majority of members vote yes at the A.G.M.

SLIDES FOR BLACKS FLORA

For those members who have reasonable slides of South Australian orchid species Blacks Flora, Volume 1, is to be reprinted in December or January and the Government Printers hope to include a centre spread of orchid pictures.

They would like to give as many South Australian enthusiast photographers as possible the chance to have their slides included - if you would like to assist please send a selection of ten or. so slides to:

Dr. Jessop
Herbarium
Botanic Gardens
ADELAIDE

Be sure to put your name clearly on all slides so they can be returned safely.

NEW MEMBERS

Mr and Mrs M.I. Webb, Stirling
Mr and Mrs G. Bradley, Stirling
Mr P.M. Ekers, Unley
Mrs M. Crouch, Banksia Park
Mrs P. Minihan, Mitcham
Miss T, Reichstein, Magill

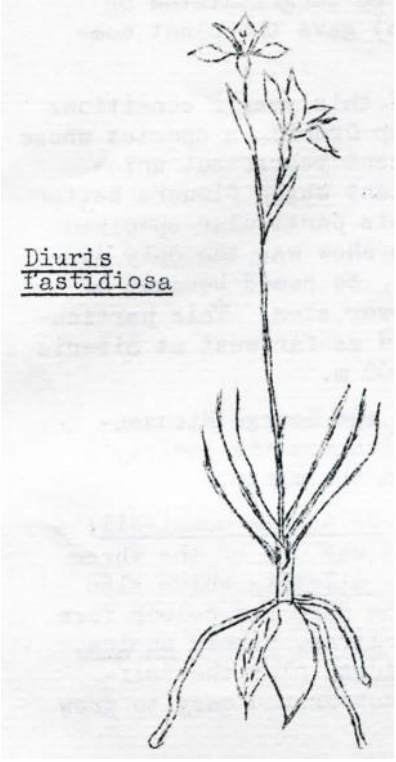
LIBRARY NOTES - November 1977

The following books and publications have been added to our library during the month:

Rosa Fiveash's, Australian Orchids, text by Noel Lothian.
This second copy has been purchased by the Club.

The Orchid Review - 1976,
The Orchid Review - 1977 to date.
This is the monthly magazine, published in England, with worldwide circulation.

OUR RAREST ORCHIDS - No. 7 R. Bates



Only recently discovered in South Australia *Diuris fastidiosa* Rogers is a natural hybrid between *D. pedunculata* and *D. palustris*. It could of course occur wherever both parents flowered together, but normally *D. pedunculata* is much larger than *D. palustris* thus ensuring that an insect with pollinia from one would not be the right size to pollinate the other.

In the Southern Flinders Ranges grows a large form of *D. palustris* and a small form of *D. pedunculata* thus removing the size barrier, and it is here at Alligator Gorge and Wirrabarra Forest that the hybrid occurs.

Only ten cm tall, with one or two bright yellow flowers above 5-8 very short leaves, *D. fastidiosa* has a faint cinnamon odour. It appears to be a sterile plant and can only increase vegetatively.

1977 is the first time it has been recorded for fifty years as the original colony was in a Melbourne suburb.

EUCALYPTUS SAWDUST AS HUMUS R.C. Nash

For quite a number of years I have recommended the use of eucalyptus sawdust, buzzer chips, etc., as the main humus source in the compost used in the cultivation of our native terrestrial orchids. I now have a warning on the use of this material for I have recently been using it in the fresh and dry state with disastrous results. The sawdust, etc., should not be used until it has rotted down. This may be achieved by mixing an equal part of sand with the material and then keeping it damp for about six months. During watering the addition of urea, or other nitrogen rich mixtures, included occasionally, will help speed up the formation of the humus.

In making up the compost with this humus, first add an equal or larger amount of sand, varying amounts of peat and some chopped up sphagnum moss are beneficial. This compost should be placed in the higher regions of the pot with more sand added as the material is carried deeper. Any rejected compost at repotting time should be steam sterilized or heated in a similar manner for about one hour. Upon cooling this material may again be used for potting; it is rejuvenated.

I would be interested if readers have the same experience as I have with this rejuvenated compost, for about two years it really makes things grow, then its viability seems to depreciate. On being reheated it again becomes active. I have been told by Dr. Warcup at the Waite Institute that the heating may release organic nitrogen compounds .

PLANTS ON DISPLAY - 25 October, 1977

1977 has been a particularly dry year and many of the orchids growing in the wild have consequently flowered much later and in less profusion than usual. This lateness has also carried over into the cultivated products and probably accounts for the unusually good display to be seen at this month's

Plants on Display (contd)

meeting. The President, Les Nesbitt (who is also to be congratulated on becoming a member of the Australian Orchid Foundation) gave the plant commentary on the terrestrials.

One of the plants on display to suffer as a result of this year's conditions was his own *Phaius tankervilliae*, the Queensland Swamp Orchid, a species whose natural habitat has been curtailed drastically in recent years, but which survives extensively in home cultivation. It is a plant which flowers better if kept dry through our South Australian winters. This particular specimen won this month's popular vote. Another tall plant on show was the only Australian example of the cosmopolitan genus, Spiranthes, so named because of the way the flower sequence spirals up around the flower stem. This particular one, *S. sinensis* is also found in New Zealand, and as far west as Siberia and the Himalayas where it extends to altitudes of 2500 m.

At the other end of the scale, we all had a chance to see George Nieuwenhoven's pot of *Chiloglottis gunnii*, from Victoria, which won the Society's Grand Championship award at the Marion Show earlier in the month.

Another species to win a prize at the Marion Show was *Caladenia menziesii*; a species which is easy to grow but shy to flower. This was one of the three Caladenias on show, the others being a large pot of *C. dilatata* which also contained numerous seedlings, and a cut specimen of the dark red colour form of *C. reticulata*. Other cut specimens were two Thelymitras, namely *mucida*, from south-west Western Australia, and the local *ixioides*, plus the self-pollinating *Calochilus robertsonii*. This latter has not proved easy to grow in cultivation.

We also saw *Caleana major* and *Paracaleana minor* from Mylor, whilst one of the more numerous plants on display were three pots of *Microtis unifolia*, plus an example of *Prasophyllum validum*, a plant endemic to the Mount Remarkable region of the Southern Flinders Ranges.

Finally, there were five Pterostylis on display, including late examples of *curta* and *pedunculata*, together with three dry-land species, namely *rufa*, three pots of *biseta* - which flowers from a withered rosette suggesting that by that stage the tuber has formed, and the flower stem is effectively self-sufficient. Pride of place must go to *P. hamata*, the pot we have seen regularly since last June, indicating the extreme longevity of its flowering. Perhaps it is time it was pollinated and put out of its misery!

Neil Christoff , Past-President of the Orchid Club of South Australia, gave the commentary on this month's epiphytes, and also gave some tips on their cultivation. His method is to feed them with powdered pellets of Osmocote 100 about three times a year — an ideal system for busy people who do not have much spare tine.

The selection included two Cymbidiums; two examples of *suave* and one of *canaliculatum var sparkesii* growing in a portion of tree trunk. The latter won the popular vote . The most numerous plant on display was *Sarcochilus hartmanii*, with five examples to be seen, including one excellent specimen. Its popularity reflects the desirability of this the Sarcochilus with the best growth habit to produce an attractive plant . We also saw two examples of *S. falcatus* and one of the deliriously coloured green S. olivaceus.

There were two Dendrobium hybrids, the "antelope" type, so-called because the lateral sepals twist upwards like antelope horns, Gloucester Sands (*D. discolor x canaliculatum*) from North Queensland and three examples of Ella v. Leaney (*D. kingianum x ruppianum*), one very pale, a fine mid-pink specimen, and one truly pink, showing the variability to be found in this particular hybrid. Dendrobium species included two examples of *monophyllum, linguiforme*, and a strong coloured and excellently shaped cultivar D. kingianum "Kirrawee". We also saw an example of *D. dicuphum* from the N.T. growing on a piece of palm and one "foreigner" *D. pierardii* from Burma.

FIELD DAY - 30 October 1977 Roy H.

After meeting us at the Coromandel Valley junction at 2 p.m. Mr Lean led the way for the four cars and seven members to, his home, about 2^ miles away. From the back of his home there is a magnificent view of the upper area of the valley with its tree-covered steep hills then to the left we could see the built up area of Coromandel Valley across to the brown paddocks of Craigburn to O'Halloran Hill in the distance.

Mr Lean kindly escorted us around to the far side of the valley then down along a tree-lined track until we branched off through the scrub. Not really knowing the way (to Mr Lean it was like the back of his hand) we soon realised that our host had a good knowledge of our native orchids and that they and the need for their conservation was very dear to his heart. His apt comment was "they are here to be seen - not handled".

The beginning of the track was very dry and the first flower we saw was *Caladenia dilatata* which was feeling very much the worse for not having had a drink recently. Further on there were many Thelymitras (probably *rubra*) with an abundance of seed pods, then several *Pterostylis plumosa* came into view. These were beginning to dry off, and one in particular had a beautiful seed pod. Then we saw a single plant of *Thelymitra aristata*, but because of the dull day the blue flowers were closed. Next we saw a Diuris with several seed pods . *C. dilatata* were now in greater numbers; then one plant in flower, C. leptochila. A little further on another single plant with one flower was the yellow-with-brown-spots *T. fusco-lutea* not noted on previous field days. Then many pollinated Microtis plants just too late to see them in flower and a dried stem, probably *P. vittata*, 10 flowers originally, but only five left on the stem.

Then down and up and through the blackberries and slosh to where *C. dilatata* were in abundance, some with two flowers. A mat of *P. pedunculata* which had to be seen to be believed was nearby. Jim Simmons was fossicking amongst the dry leaves of a yacka and found leaves of corybas and also probably *Acianthus exsertus*, the purple under the leaves was fading.

Before the climb up to the cars we rested a while as we did several times before reaching the top. Mr Lean made coffee and after showing us through his home bade us farewell 3½ hours after having met us. We are very grateful to him for the time and information so freely given, also for the kind invitation to visit his property earlier next year.

THE RECOVERY OF SMALL TUBERS AT REPOTTING R.C. Nash

If you are troubled over the possible loss of small tubers and seed when repotting, then try the following:

First remove the top inch or so of the compost, then sieve this through a piece of aluminium flywire. Keep both fractions separate in containers. When the plants have been repotted first place the coarser fraction on top of the potted compost and then sprinkle the finer fraction over the coarser. A few gentle taps on the pot should settle the materials.

After the top material has been saved you may now sieve through the rest of the compost . For tubers to pass through the flywire they must be quite small. If any of the finer fraction is to be used or mixed back into the new compost, then .it should be placed in a shallow tray to save any tubers that may still be in it. When the small plants start to grow and as soon as they appear they may be picked out and placed into a more correct container. The coarse fraction is spread out in a tray and any tubers amongst it are easily picked out and selected for repotting.

All the above sounds a little tiresome but it is worth doing to save the worry of lost plants especially if a complete change of compost is made.

TERRESTRIAL ORCHIDS - IS THERE A LIFE CYCLE? W.J. Clayson

I refer readers to "Observations in the Field", paragraph 5 - Declining Orchid Numbers (September newsletter). For many years on the side of a seldom used bush track grew a small colony of *Caladenia patersonii* amidst bracken and heath. This colony was really a gem: large flowers, brilliant colour detail, strong, slender stems, really at their best in early November. Imagine my surprise when paying the yearly visit in 1968 not a single plant was to be found; a thorough search for any disturbance of the surrounding ground revealed nothing. Intrigued at their disappearance I decided to visit this spot each year, why I don't know, however, curiosity does sometimes pay dividends.

In November 1975 I was equally surprised to find ten small plants in leaf form only. By the size of the small single leaves of each plant it seemed quite apparent that these small plants had germinated from seed. Last year the number had increased to twelve (still no flowers), however, this year in November I suspect that some will flower.

The circumstances that nature had provided led me to try to evaluate some reasons for this small colony's disappearance in 1968 and then its reappearance eight years later. It would seem that it was some type of disease, or through the lack of something which was vital to the plants survival. As to reappearance it would be fair enough to assume that the small plants had germinated from seed. Why it took eight years one can only guess. I feel that climatic conditions such as rainfall, etc., could have had no bearing whatsoever as the yearly pattern is practically identical: maybe some assisting fungi had to re-establish itself. This also poses the point of how long dispersed orchid seed remains viable.

In quite a few cases we read where a known species disappears for a number of years and then reappears. When this situation occurs I think a reappearance of a species could be by seed germination, rather than from tubers which have lain dormant for many years. In support of this theory I recommend reading a paragraph appearing in the W.A. Native Study and Conservation Group Newsletter, May 1976, which by the way is well worth subscribing to.

Also while dealing with orchids of the Mt. Burr Range and adjacent close areas it is pleasing to note in recent years the recording of two new species. However, I firmly believe that it is quite possible that these species were here many years ago but undiscovered. Let me put forward some reasons for supporting same.

The natural forest remaining is mostly on the eastern side; swamps are numerous, the larger covering many hectares, some contain water all the year. Dense Ti Tree and rushes head-high surround these swamps up to 200 metres from the waters edge. The home of tiger snakes, a thorough search of these areas is extremely difficult. Before large areas were planted to *Pinus radiata* and *P. pinaster*, the only persons in these areas were men cutting posts and firewood, and would probably have no interest in native terrestrial orchids, and to my knowledge no thorough search of these areas has taken place, so in the future other species will be found.

As to any species that can be found in pine plantations surviving, is very debatable unless these areas are left as they are now, and not clear-felled. Let's examine afforestation and the life cycle of *Pinus radiata* as we know it today. After the initial planting the first thinning takes place at approximately 15 years of age, subsequent further thinnings take place about every 6 years, the final stand is clear-felled when the trees are approximately 50 years old. Generally within twelve months the remaining pine slash is winrowed and burnt, the ground is scalped, ploughed or ripped for the new planting of pines and weedicide is applied to control competing vegetation — so what chance has the terrestrial orchid? Unless the area where it is found has some form of preservation, I'm afraid the species is fighting a losing battle. In "Observations in the Field" I mentioned "what price progress".

CONTROLLED BURNING - FOR AND AGAINST R. Bates

South Australia's Mediterranean climate, with its pattern of winter rainfall, vigorous spring growth and hot, dry summers with dry electrical storms, has always ensured an average period between natural fires of ten to twenty years. For this reason our native vegetation has developed a resistance to fire and in fact many species require burning to ensure regeneration. They will not germinate or flower freely without bushfire stimulation.

In an area of native vegetation that is artificially protected from fire there is a gradual increase of leaf litter and dead growth and the scrub becomes more dense - not only is this unsightly and unpleasant to walk through but it ensures that when a fire does occur it will be far more serious, more destructive and more difficult to control. In the mean time plants dependent on fire for regeneration die out and are replaced by less desirable species. Wild flowers are reduced, variety of plants reduced and although greater shelter is provided for birds and animals there will be less food available for them . All these points indicate the necessity for controlled burning.

On the other hand since most bushfires occur in the period December to March controlled burning outside these months will be harmful. Before December plants are still flowering or have not developed seeds, birds are nesting and animals have litters of young. It is a critical period - a fire before December would be disastrous. Regeneration the following year would be of seeds blown in from outside the bush - exotic plants, introduced plants, weeds: the bush would be ruined. Similarly controlled burning after March when young shoots are appearing and orchid tubers have just sprouted, etc., would also be very damaging. Before settlement, birds and animals were wiped out in a fire but soon returned from adjacent bush and multiplied, feeding on the lush new growth. Unfortunately if an uncontrolled bushfire razes an area of bushland today it is often so isolated as to make it impossible for native animals to return from other similar reserves. Thus it is imperative that controlled burning is regular and involves only about one tenth of the total reserve area annually. This would ensure that over a ten year period the whole reserve would have been control burned, thus reducing the chance of complete destruction from a total uncontrolled, burn.

Total management would necessitate the removal of weeds introduced to the area burnt. It is an unfortunate fact that controlled burning does increase the percentage of introduced species.

To sum up — controlled burning is necessary but must be carried out between December and March and followed up with careful management to prevent erosion and weed infestation.

OUR COVER

Our October newsletter featured *Lyperanthus nigricans* (elephant's ears). All parts of the plant turn black when it is pressed or dried, hence the species name. It rarely flowers except after bushfires when good displays may be seen. It grows in colonies in well-drained locations, either in deep sand or on stony ridges. I find it difficult in cultivation because plants rot easily. I use very sandy soil in clay pots to reduce moisture retention after rain. The new tubers are never formed under the plant but always on the end of horizontal roots which may be up to 30 cm long. Consequently tubers are always found at the side of the pot so annual repotting is essential.

Our cover this month depicts *Orthoceras strictum*, the horned orchid. This orchid has several grass-like leaves and flowers in late spring and early summer. The flowers are green and brown with a yellowish tongue.

RESUMED FIELD TRIP - 9 October 1977

Fortunately, two families saw the notice in the local press concerning this revised trip, and so a small but select band eventually set forth. What a day we had! The organiser celebrated by depositing litter in various parts of the countryside. For reasons best known to himself, he left a shoe somewhere on the outing, and followed it up by losing a lens cap later in the day.

Anyway, we started with a short halt to see a spot where *Dipodium punctatum* may be found later in the season. At this stage, all we found was a couple of stray *Diuris longifolia*, and one *Caladenia dilatata* in flower, together with a big patch of *Caladenia menziesii*, none of which looked like flowering this year. From there we moved to the main patch at the back of Morialta. Here we found places where the ground was a veritable carpet of *Glossodia major*. It is amazing how much local variation these show. They ranged in colour from a deep purple through to the very palest of tints, while some were strongly tinted with pink. They ranged in size from some scarcely more than 15 mm across to truly magnificent specimens, and occasional plants had two flowers. At one spot, we also located a patch of nine plants with pure white flowers.

Overall, *Glossodia major* were so plentiful that we soon became quite blasé about them, and turned our attention to other species. The second most striking find was Diuris. We found big clumps of *longifolia*, and occasional odd examples of *maculata*, though for the most part these have finished flowering by now. What we also found, were patches of plants that are almost certainly natural *maculata x longifolia* hybrids; big robust plants with large flowers, mainly yellow but tinted brown.

The temperature reached 29°C the previous day, but for us the best was about 21°C early, and by the time we got there, there was a light cloud cover, and a cold wind blowing, while it tried to rain. This meant that we were not treated with any real displays of Thelymitras but we did find one *antennifera* that had forgotten to close. However, we saw plenty of them, together with *rubra*, that had obviously reached the flowering stage. The biggest disappointment of the day was finding a really splendid example of *T. aristata* (syn grandiflora) with 27 buds, many of which were at the flowering stage. Our consolation was finding a *pauciflora* with two buds, one of which was wide open.

This week we also found odd examples of *Microtis unifolia* coming into flower, and a diligent search unearthed a solitary *Lyperanthus nigricans* in flower amongst an extensive patch of basal leaves. We saw several *Pterostylis vittata* that had dried up to a pale brown, and a few *nana* with fat seed pods, but generally still green. At the other end of their season, we found Prasophyllum tubular leaves, which will probably turn out to be odoratum.

Finally, we recorded many small clumps, and more individual specimens of *Caladenia dilatata*, and rather less plentiful but still quite common examples of *C. leptochila*.

On the way out, we stopped once more to view a huge patch of Diuris, probably the hybrid already named, and cameras clicked like fury before they all disappeared.

We adjourned for lunch at Horsnell Gully, and with no additions to our party decided to transfer out affections to the National Park. There we made our way smartly to an area near the spot we visited earlier this year. On the way we noticed a patch of *Acianthus exsertus* leaves, and one solitary flower stem, with a couple of withered flowers. It really must be the last *exsertus* for this year.

Once again, our way was littered with *Glossodia major* - what a pleasing sight they are. Arriving at the special patch, we found a solitary *Diuris longifolia*, and several rather more open *Thelymitra antennifera*, but again the rubra were shy, though by now the sun was peeping through a thin haze more

than cloud, and it was much warmer. Again *Caladenia dilatata* and *C. leptochila* were present, the former being much bigger plants than we generally found at Morialta, probably due to a greater rainfall in this a particularly dry year.

We found the main object of our visit to the Recreation Park in two examples of Prasophyllum, with several *pallidum* in flower, and an odd *P. occidentale* amongst then, one of them growing in the midst of a patch of *Corybas dilatatus* basal leaves.

At this stage Mr and Mrs Wells left us, reducing the party to four, and we decided to spend a little while longer looking to see what we might find, and our tenacity was soon rewarded. The organiser's assistant, forging ahead, recognised the rear end of Ray Nash poking out amongst the undergrowth (four-year-olds are remarkably perceptive these days). Ray was busy photographing *Pterostylis plumosa*, and it was not long before we found quite a few of them. Ray also guided us to a nearby patch of *Thelymitra macmillanii*, without doubt the most significant discovered of the day. Ray's view is that this will probably turn out to be a hybrid, possibly between *antennifera* (which it closely resembles; and *rubra* or *luteocilium*.

From there we were led on through the undergrowth to a patch of *Pterostylis curta*, just to show Roy Hargreaves what they look like in the wild. Since none was in flower, he was not too impressed. (The area could have benefited greatly from a certain wash trough or possibly a few old paint tins from the laundry!) We also saw the first of the many *Caladenia carnea* we were to see during the rest of the afternoon.

After a trip through Echo Tunnel, we emerged into a wilderness of exotics that have largely made that part of Belair Park their own, but amongst the thick grasses on the damper south facing slopes we found an extensive mass of really large Pterostylis pedunculata. From their size it looked as if they really thrive on competition .

With time running out, we were forced to abandon our search for *Pterostylis cucullata*, and the three remaining excursionists adjourned to see the captive specimens in Ray's shadehouse, Unfortunately, by that time, we were really too satiated to appreciate what he had to show us, but at least we know what to look forward to on another occasion - after all, it is not often we find seventeen species, plus a possible hybrid, in flower in one day.

Once again, we are grateful to Mrs Hocking for faithfully recording the plants that were seen. This time there was certainly plenty for her to do'.

P.S. a search the following day recovered the shoe and the lens cap, and, much more importantly, also unearthed some of the elusive *Pterostylis cucullata*, growing in association with *P. curta*, a species of similar size and shape. Thus we can rest assured that there are still a few of the former to be found in Belair Recreation Park (of. Our Rarest Orchids - No. 4; R. Bates, NOSSA Newsletter l(5), page 5; August 1977).

Plants Recorded - 9 October 1977

	Morialta Conservation Park	Belair Recreation Park
	Glossodia major	Glossodia major
	Caladenia dilatata	Caladenia dilatata
	G. leptochila-	C. leptochila
	Thelymitra antennifera	C. carnea
	T. rubra	Thelymitra antennifera
In flower	T. Pauciflora	T. rubra, T. pauciflora
	T. aristata (syn grandiflora)	T. macmillanii
	Diuris longifolia	Diuris longifolia
	D. maculata	Pterostylis pedunculata
	D. maculata x longifolia (?)	P. plumosa
	Microtis unifolia	Prasophyllum pallidum
	Lyperanthus nigricans	P. occidentale

Resumed Field Trip (contd)

	Morialta Conservation Park	Belair recreation Park
Non-flowering	Pterostylis vittata	Pterostylis curta
	P. nana	Microtis sp.
	Prasophyllum sp.	Thelymitra sp.
	Thelymitra sp.	Corybas dilatatus
	Caladenia menziesii	Acianthus exsertus

SHOWTIME SPECIAL 1977, Part I Peter Hornsby

September and October are the main months for orchid shows, and this year I managed for the first time to visit four of the local ones . It occurred to me that it may be of interest to society members to know how our native orchids fare at other shows, but unfortunately the idea only occurred after most of the events had taken place. Consequently I have to rely heavily on my fallible memory for two of them, and so I apologise in advance for any omissions that occur.

Three of the shows I attended were competitive, namely the S.A. Orchidaceous Society show at Arndale Shopping Centre, the Orchid Club of S.A. chow at John Martin's city store, and the South Coast Orchid Club show at Marion Shopping Centre, which also included our own section. Finally, there was the non-competitive show of the Northern and Eastern Districts Orchid Society show at Broadview.

Of the four, probably the last one has traditionally been the show to place the greatest emphasis on our native orchids, and this year was no exception. The terrestrials on display (l-3 September) included four Pterostylis - *baptistii, curta, nana* and *pedunculata*, and three Diuris - *longifolia, maculata* and *pedunculata*. Also on show were *Caladenia rigida* and *carnea, Acianthus reniformis* and *Thelymitra aristata*. The weather was dull and cool, and so the latter refused to open during the course of the show. Epiphytes included various Dendrobiums, both species and hybrids, with pride of place going to well-established examples of *speciosum, kingianum* and Bardo Rose, together with *gracilicaule*, the pure yellow *gracilicaule var howeanum x gracillimum, striolatum* and *falcorostrum*.

There were few terrestrials at the Orchidaceous Society show (25-30 September) and the three native awards all went to epiphytes, all Dendrobiums — *kingianum, linguiforme* and Bardo Rose.

Tho Orchid Club of South Australia show has classes for terrestrials and separate classes for epiphytes. The awards went to *Diuris longifolia* and *Pterostylis curta* for the terrestrials, and again all to Dendrobiums in the epiphyte sections - *gracilicaule, speciosum* and Bardo Rose . All told, they had fifteen varieties of terrestrials and eleven epiphytes on display (18 - 24 September). The terrestrials included four Pterostylis – *curta, nutans, pedunculata* and *plumosa;* and three Caladenias - *dilatata, menziesii*, and rigida. There were three Diuris - *longifolia, maculata* and *palachila*, plus two Acianthus - *caudatus* and *reniformis*. Finally there was *Glossodia major*, an unspecified Chiloglottis and (a real score this one) *Lyperanthus nigricans*.

Again the epiphytes were all Dendrobiums - speciosum, kingianum, *falcorostrum, gracilicaule, gracilicaule var howeanum* and *striolatum*. Dendrobium hybrids included Bardo Rose, *delicatum* (plus a cultivar INOPING (?)), gracillimum and Andrew Pearson (*speciosum x falcorostrum*).

The last show to be included in this issue of the Newsletter is the South Coast show (1-8 October), the club who generously allowed us space for our own first public display of native orchids. The South Coast Club display included just three terrestrials; two Caladenias, *dilatata* and *menziesii*, plus one unspecified Pterostylis. Once again, Dendrobiums virtually monopolised the epiphytes, with displays of four species — six examples of

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linguiforme, nine of *kingianum*, four *gracilicaule* and one *beckleri*. The hybrids included seven Bardo Rose, three *delicatum* (including one cultivar Apple Blossom), one *gracilicaule x kingianum* (= suffusum) and *kingianum x ruppianum* (syn fusiforme) - Ella v Leaney (not in flower).

The exception escaped many, including myself, but not the eagle eye of Les Nesbitt. One of the smallest natives, and certainly the smallest epiphyte on show was the tiny monotypic *Peristaranthus Lillii*, with brownish green flowers and a fragrant perfume.

NOSSA exhibit

Our own exhibit was characterised more by range than depth with twenty-three terrestrials (43 exhibits) and fifteen epiphytes (20 exhibits). Amongst the terrestrials, Pterostylis was the most extensive genus represented, with two pedunculata and one each of *curta, nana, nutans, biseta* and *plumosa* . There were four Caladenias - *dilatata* (four exhibits) *carnea* and *menziesii* (two exhibits each) and *leptochila*; and four Diuris - *longifolia* (four exhibits), and one each of *maculata, sulphurea* and *aurea*. There were two Thelymitras - three exhibits of *aristata* and one of *rubra*. (The reluctance of these to flower in an artificial environment usually makes them poor indoor exhibits, but at Marion they opened on several warm days.)

There was one example each of *Acianthus reniformis, Microtis unifolia* and *Prasophyllum occidentale*. The most populous example was *Glossodia major*, with nine exhibits, and the most significant were the two Chiloglottis - *trapeziformis* and *gunnii* (which won the show championship).

The epiphytes included the following Dendrobium species - *linguiforme* (three exhibits); two exhibits each of *beckleri, gracilicaule*, and *kingianum*, plus one exhibit each of *pugioniforme, tetragonum, canaliculatum var nigrescens* and the tall *discolor* (syn undulatum) plus a *speciosum* not in flower. Hybrids included one exhibit each of suffusum, delicatum and a delicatum cultivar, Apple Blossom . This time there were also examples of another genus, namely Sarcochilus - one each of *falcatus, hartmanii* and a magnificent *ceciliae*.

The display was set off by the use of pine needles, and authenticity was supplied by the kangaroo droppings seen by the more observant visitors.

Conclusions

What conclusions may be drawn from these? First words go to our own display. While the range was extremely gratifying, a bigger total number of plants would have better justified the amount of space that was allocated to us. In this respect, we should have done better — there were more exhibits at the last monthly meeting than at the show, "while we may see ourselves as a non-competitive Society, we also owe it to the general public to enable them to see our native orchids — a glance at the lists above shows that we are in the best position to do this because of our specialisation, What are your views?

The second conclusion arose from a closer inspection of the actual exhibits. The variety of colours of *Dendrobium kingianum* on show, ranging from deep pink to almost pure white, and the consequent variation in Bardo Rose, are in themselves indications of the extent to which commercial growers have been trying to improve and develop their stocks. Unlike last year when there was a profusion of *Dendrobium speciosum* to be seen, this year there were few examples on display, but all of these, together with *x delicatum*, tend themselves to develop into large and spectacular plants. It is undoubtedly for this reason that they occur with such frequency at shows not

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specialising in native orchids. Paradoxically, although strictly speaking they are epiphytes, most of the big specimens are pot-grown. We have only one terrestrial genus that assumes proportions that could be considered spectacular, namely Phaius, with the two species *tankervilliae* and *australis* being the showier. It is only plants that have this characteristic that are likely to appeal to the general grower, so the opportunities for the public to see the more delicate specimens will remain with societies such as our own.

Finally, it seems fair to say that our original sponsors, the Orchid Club of South Australia, can still show the way when it comes to putting on a good display of natives, but they should have found reason to feel pleased with the progress their offspring has made in the few months of its existence. I know I do.

Footnote

As a footnote, may I add that the Society for Growing Australian Plants show (15-16 October) took place too late to be included in this commentary but hopefully a report will appear under Showtime Special 1977, Part II, in the next Newsletter.

POLLINATION OF SOUTH AUSTRALIAN ORCHIDS - Part 6 R. Bates

The Genus Diuris

It could be thought that such large colourful orchids as the Diuris would not need to emit an insect sex lure but use of the funnel trap indicates that sex pheromones are involved. I recently collected a total of 45 native bees of the genus Sasioglossum on flowers of Diuris pedunculata and all were males. Research by others also adds weight to the theory that Diuris, the "double tales", use pheromones for insect attraction.

Diuris pedunculata has a faint musky odour and *Diuris palustris* a definite spicy fragrance and this makes a third lure. The labella of the Diuris often have a raised central channel and guide lines to ensure that the insect is positioned correctly to contact the viscid disc of the pollinia.

Observation of the male bees on the flowers showed that they stayed in position for as long as several hours and often stumbled about when they finally left the orchid. They could be removed from the orchid and placed on the hand, where they appeared dazed. Suspicious of these actions I removed the stigma of several *D. pedunculata* and had the secretions examined at the University of Adelaide. A cocaine-type substance was discovered. A tingling, numbing sensation is produced when the tongue is placed on several *D. pedunculata* stigma. My conclusion is that this drug is used to ensure that the insect stays in position long enough for the viscid disc to be firmly glued to the insect's head. Since the insect is sexually attracted it seemed unlikely that the drug was a lure, although it may account for the frequent Diuris hybrids as dazed, drugged insects were more likely to visit different species and effect cross-pollination.

Because the pollinia of Diuris are situated behind the stigma self-pollination is not possible -so Diuris have really evolved an unusually complex set of methods to ensure that their gene pool is constantly expanding - showy blooms, large size, perfume, sexual attraction, guide channels and drugs, with also a very distinctive morphology show Diuris to be a fascinating genus.

Next episode: Caladenias — the spider gets the fly.