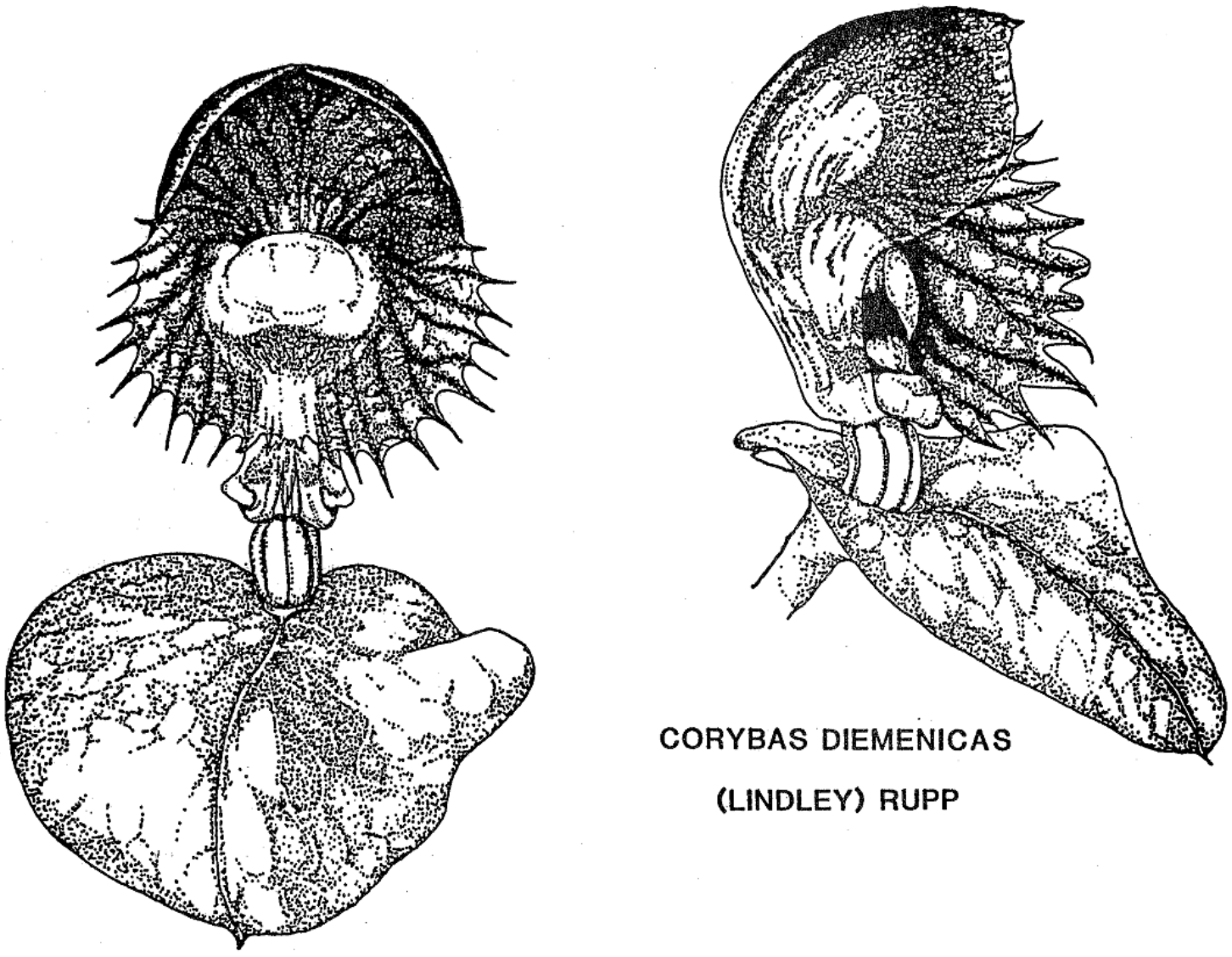
NATIVE ORCHID SOCIETY

of

SOUTH AUSTRALIA INC.

JOURNAL



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(LINDLEY) RUPP

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August 1989

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.

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NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA INC.

August 1989 JOURNAL Vol. 13 No. 7

NEXT MEETING

Tuesday, 24 August, 1989, at 8.00 p.m.
St Matthews Hall, Bridge Street, Kensington.
Visitors always welcome.

Ron Robjohns will be the speaker for August. His topic will be "A Selection of Australian Epiphytes".

OUR LAST SPEAKER

Les Nesbitt, the Society's Registrar of Judges and a well known expert on terrestrial orchids, spoke on "Orchids of the Hunter Valley" .

Les discussed a trip he and his wife Kay had made to the Hunter Valley region of New South Wales and, with the aid of a slide presentation, was able to introduce members to many picturesque areas. Through his talk members were able to visit a number of well known orchid nurseries and some wonderful conservation parks.

NEXT FIELD TRIP

SCOTT CONSERVATION PARK SPRING SURVEY

Saturday, 16 September.

Meet Mt Compass shops at 10.00 a.m.

Bring lunch.

Note: this is the first of our two NOSSA Spring Show days.

Request: Once again can we please have people to organise springtime orchid excursions as our regular leader is not available in Spring! This especially applies to country members. You need only to send your editor a note of meeting place, date and time and this will appear in the Journal.

JULY MEETING - DETAILS

PLANTS BENCHED -

Terrestrials: *Pterostylis* Joseph Arthur, *P. russellii* (two pots), *P. nana* (two pots), *P. nutans, P. erythroconcha, P.* Nodding Grace, *Acianthus fornicatus*, *Corybas incurvus*, *C. fimbriatus*.

Epiphytes: *Dendrobium* Hilda Poxon (two pots), *D.* Kathryn Banks, *D.* Ellen (two pots), *D.* Ellen x *kingianum*.

COMMENTARY -

Terrestrials: Mr George Nieuwenhoven

Epiphytes: Mr Neil Christoph

POPULAR VOTE -

Terrestrials: *Pterostylis* Nodding Grace, grown by Jeff Edwards.

Epiphytes: *Dendrobium* Hilda Poxon, grown by Joan Attenborough.

COMMENTATORS' CHOICE -

Terrestrial Species: *Pterostylis nana*, grown by Blackhill Conservation Park
Terrestrial Hybrid: *Pterostylis* Nodding Grace, grown by Jeff Edwards.
Epiphyte Species: (nil)
Epiphyte Hybrid: *Dendrobium* Hilda Poxon, grown by Joan Attenborough.

CULTURAL COMMENTS -

At the instigation of the Management Committee, cultural comments for both terrestrials and epiphytes were introduced at the July meeting.

Reg Shooter commented on potting mediums and general pointers that should be uppermost on epiphyte growers minds at this time of the year. Bob Bates followed a similar concept in relation to terrestrials.

Members present were invited to put forward any questions they were interested in following up. The session was quite successful and of assistance to growers.

COMMITTEE BRIEF D.R. Butler

The Management Committee meeting was held at the residence of Les Nesbitt on Friday, 28 July, 1989. Apologies were received from Ron Robjohns, Bob Bates and George Nieuwenhoven. A number of issues were discussed including:

1. The success of NOSSA's submission to the Australian Taxation Office and the granting of tax exemption to the Society.

2. Final preparations for the NOSSA Spring Show to be held at Mitcham Girls High School on 16/17 September, 1989. Lorraine Woodcock will co-ordinate the operations of the trading table at the show.

3. The appointment of Mr P. Matthews as Co-ordinator of the Society's Tuber Bank. Mr Matthews will require assistance in the initial stages and members who can assist will be appreciated.

Should any member have any issue which they would like considered by the Management Committee please contact any committee member.

THE *CALADENIA DILATATA* COMPLEX IN SOUTH AUSTRALIA

This complex of spider orchids with large labella having deep red curled-under tip, a creamy lamina and usually deep comb-like margins is widespread throughout the settled areas of South Australia, flowering from mid-winter to mid-summer. All species are pollinated by sexually attracted male thynnid wasps.

In the past we have looked at the similarities rather than the differences and treated them all as one variable species (see Black's Flora, Vol. 1, 1978).

My own work on the group in South Australia has revealed that as many as a dozen different taxa are involved: the distribution, variation, flowering times, habitat preference and pollinators of each taxon is being recorded. Some taxa flower as early as mid-winter - others as late as early summer. The pollinators of all taxa have not yet been collected but those that have been caught clearly show that each of the suspected different species is likely to be pollinated by a different wasp; often wasps of different genera being involved!

The better known taxa are:

1. *Caladenia tentaculata* Schltdl (Fig. 1). I've put this one first as it is the one most readers will be most familiar with. This is the king spider orchid of the Adelaide Hills and the largest South Australian species. It begins flowering in September and the flowers last right through into November, sometimes as late as Christmas. It occurs in all types of forest and woodland. It was named in 1849 from specimens in the Barossa Valley by Hans Herman Behr, but no one was exactly sure what the name referred to as these original collections have, for 150 years, been locked away in a European herbarium and not seen by any Australian botanists. Their true identity was only for the first time suggested by David Jones in 1988. *C. tentaculata* is not to be confused with *C. filamentosa* var. *tentaculata* (the wispy mallee spider orchid) which, incidentally, is likely to be given a new name as a species not a variety.

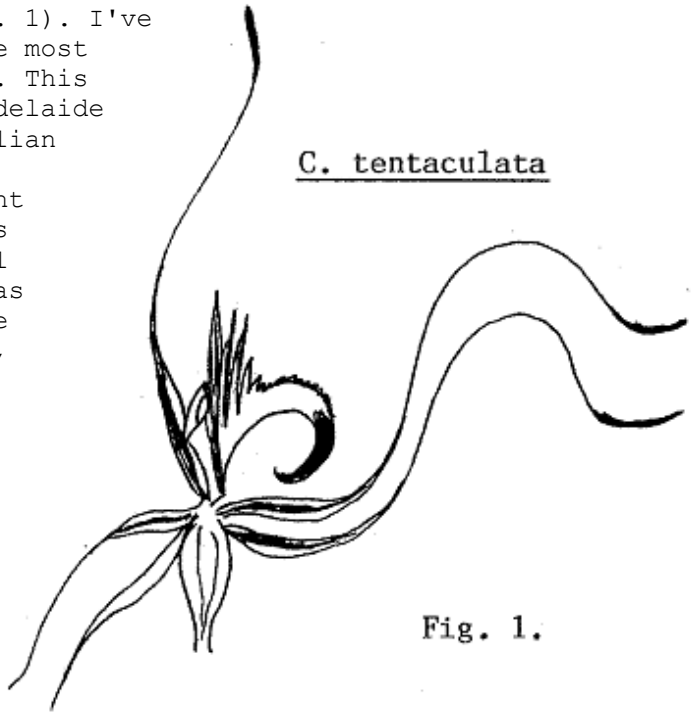


Fig. 1.

2. A species which does not grow in the Adelaide Hills (not any more anyway), but probably once was common on the Adelaide Plains is *C. stricta* (Fig. 2). This can still be found at Monarto to the east of the Hills and at Newland Head Conservation Park near Victor Harbor and is widespread on richer soils of the wheatbelt. It looks very different from *C. tentaculata*, lacking the long falcate sepals and totally without osmophores, although under the microscope one can see tiny glands on the sepal tips of many specimens. Its pollinator is a very large grey-black thynnid, with hairy body and red patch on the thorax. This does not look the same as *Thynnoides pugionatus*, the shinier black wasp without a red patch, which pollinates *C. tentaculata*.

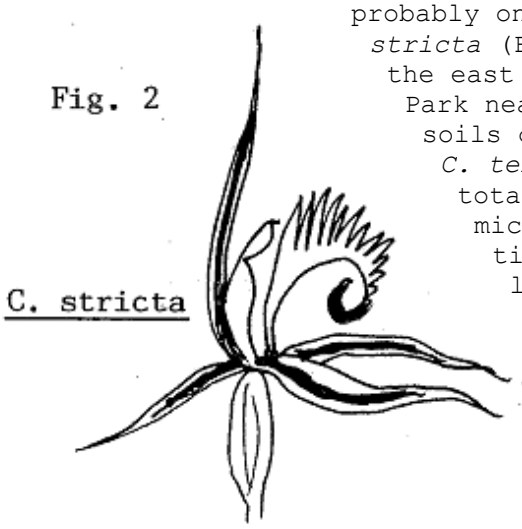


Fig. 2

The *Caladenia dilatata* Complex in South Australia (contd.)

3. Another species, and one long thought to be different, is the little sand-loving, soft-leaved species which has most distinctive pale-yellow osmophores (Fig. 3). At Sandy Creek Conservation Park near Adelaide it grows with *C. tentaculata*, flowering at the same time or slightly earlier. In 1988 I set up flowers of both on a sunny, warm day and they each attracted a different wasp species consistently. Not surprisingly the wasp attracted to the little unnamed species was a much smaller beast.

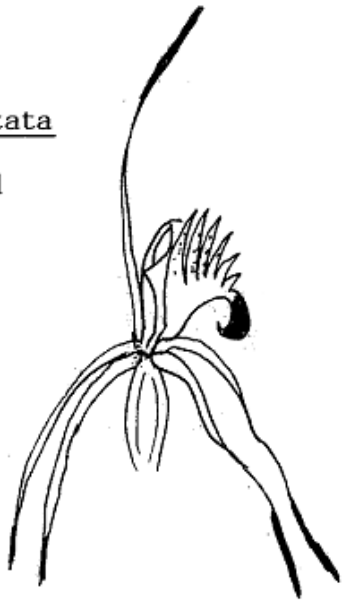
C. sp. nov.

"pale osmo-phores"

Fig. 3.

The little yellow-club spider orchid occurs on Yorke Peninsula and at Monarto and Tailem Bend, where it grows with *C. stricta*. David Jones tells me that it occurs in Victoria and New South Wales too. There is also an orange-clubbed variant which only occurs on red sands but this is almost extinct and probably represents a different sub-species.

4. *C. dilatata* proper - I doubt that this grows in South Australia as the original specimens were collected in Tasmania; but there is a very similar South Australian plant from the South *C. dilatata* East (Fig. 4). This species can be recognised by the presence of osmophores on the petals as well as sepals. Another unusual feature is its summer flowering time (late November-January).



C. dilatata

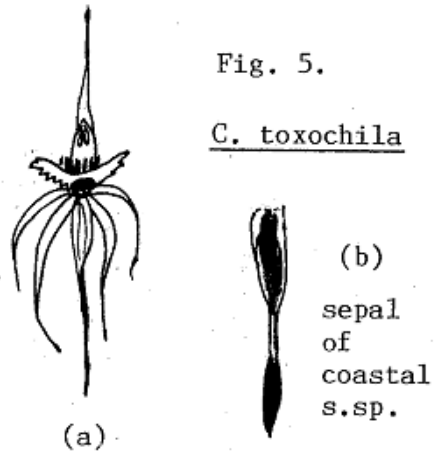
mainland summer sub-species

Fig. 4.

I have attracted but not caught pollinators to this one but they were certainly not the same as white spotted wasps I saw on Tasmanian *C. dilatata*.

There is an inland variant with longer sepals which only flower after the leaf has died. This may be a separate subspecies but further work is needed as it is a rare plant.

5. To jump to the opposite time of the year - winter - we find that *C. toxochila* as presently known is really two taxa in South Australia; namely the taller, inland ? type form with narrow calli (Fig. 5[a]) and the shorter, coastal broombush-associated form with broad crowded calli and flattened osmophores on sepals (Fig. 5[b]) and sometimes petals too. These are certainly different sub-species and work on their pollinators may show that two species are involved. The coastal form of *C. toxochila* was once abundant on the "leg" of Yorke Peninsula in red soils over limestone, a habitat all but gone now. We hope to see it on an August Field Trip to the Peninsula this year! The earliest I have seen *C. toxochila* in flower is July 10 but with this year's phenomenal rains up north, I would not be surprised if it begins flowering in June.



(a)

(b) sepal of coastal s.sp.

Fig. 5.

C. toxochila

The *Caladenia dilatata* Complex in South Australia (contd.)

6. Another very distinctive species is one often associated with the coastal *C. toxochila.* This much larger spring-flowered plant has often enormous, flattened osmophores (Fig. 6). It is still locally common lower Eyre Peninsula on better soils and I was fortunate to locate some near Port Vincent on Yorke Peninsula last year. I would suspect that it also occurred near Adelaide prior to settlement. Its pollinator has not been caught.

Fig. 6.

C. sp. nov. "bayonet clubs"

7. 

Fig. 7.

Another species, long thought to be a stunted form of *C. dilatata*, flowers early in our lower South East and perhaps once grew in the red-gum flats of the Adelaide Hills (at least I can remember seeing odd plants of it near Kuitpo in the 1960s) (Fig. 7). This one often grows with *C. tentaculata* but when I set these two up near Penola in 1988, they both attracted quite different pollinators (*C. tentaculata* attracted *Thynnoides pugionatus*).

An interesting point here is that a NOSSA member Colin Bower of New South Wales attracted the same wasp to this same spider orchid in the hills near Orange.

8. There is a, whole group of straight-sepaled comb-spider orchids to be found in the dry country of Eyre Peninsula, Flinders Ranges, Mallee and Kangaroo Island, all with small osmophores (Fig. 8). The flowers are midway in size between *C. tentaculata* and *C. toxochila*. In some areas there are red-clubbed forms, in others pale-brown. On southern Eyre Peninsula a vivid-red form is common; in the upper South East a pale form. No study of their pollinators has been made, although *Thynnoides gracilis* has been caught on different forms.

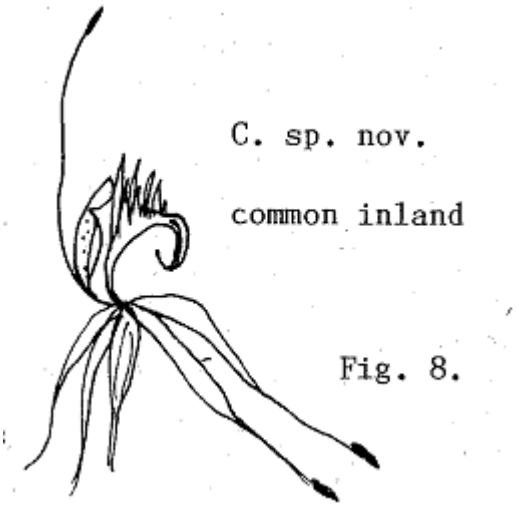


Fig. 8.

Occasionally in relict areas of unusual habitat quite different forms, not matching with any of the above can be found, i.e. one with large golden-clubs found near Alligator Gorge on a NOSSA field trip last year. These may represent relict species or merely be odd forms, but because of their extreme rarity we may never know as appropriate studies cannot be done.

Some of the species mentioned have had hybrids recorded, especially with members of the *C. patersonii* complex.

Near Port Vincent last year I collected and photographed hybrids of *C. stricta x C.* aff. *patersonii, C.* sp. nov. bayonet clubs x *C.* aff. *patersonii* and *C. toxochila* sub. sp. nov. x *C.* aff. *patersonii* all on the same morning. This extreme frequency of hybridising is often a feature of disturbed areas of relict bushland and makes it even harder to study closely related similar species as they too may also hybridise - something that would have been exceedingly infrequent in natural undisturbed conditions prior to European settlement. Taxonomists really have a difficult task under these conditions

The *Caladenia dilatata* Complex in South Australia (contd.)

- however the observations of NOSSA members can make the work easier!

Other members of the *C. dilatata* complex include C. gladiolata in South Australia and C. falcata and *C. Integra* of Western Australia. Dr Steven Hopper of C.A.L.M. in Western Australia has advised that there are several other undescribed species in that state which have been previously included in *C. dilatata*, and Geoff Car and David Jones suggest that the situation is similar in the East, although the complex is perhaps concentrated in South Australia. My estimate is for twenty-plus taxa Australia wide (excluding the hybrids of which at least twenty are already known).

R. Bates

Reference :

Jones, D.L. (1988), Native Orchids of Australia.

FIELD TRIP REPORT

MORIALTA FALLS - JULY 22

It was a colourful group of people who met in the rain by the kiosk at Morialta at 9.00 a.m. wearing rubber boots and each holding a different coloured umbrella. We set off, undaunted by the weather, on the track to the top lookout, known as Lovers Leap due to the 100 metre drop from there into the gorge below.

Orchids were abundant all along the track mostly on the bank at about eye level so that we didn't even have to bend. There were hundreds of the Adelaide Hills form of "*Pterostylis alata*" which we are told is probably an unnamed species. It was amazing how many double-headers there were, most flowers facing each other in a "kissing position". Rather quaint really. There was much noisy discussion as to how the "*P. alata*" differed from *P. robusta* which was also in flower. As usual there were hundreds of *P. robusta* rosettes seen before we located the first flower. The *P. robusta* rosettes were much larger and not as thick textured or blue in colour as the *P. alata* which had taller, more slender stems, smaller leaves and more vividly striped flowers of a rather different shape but really we found it hard to quantify or qualify the differences. Here and there were *P. nana* in green and *P. vittata* in maroon and again we were told that these Adelaide area plants, although long known by those names, were significantly different from true *P. nana* and *P. vittata* and were really awaiting new names of their own.

Other orchids in flower included *Corybas diemenicus* and *Acianthus exsertus*. We did not see as many different species as on a previous NOSSA visit but this was Fl

due to our inability to leave the track.

Despite the rain the scenery was marvellous: the gorge, the three waterfalls, ancient caves and just as ancient grass trees were all fascinating. Who could forget the sight of junior members of the party standing in rubber boots under the falls with the cascade bouncing off their umbrellas. I must say there is nothing like orchid hunting in the rain when one is properly prepared and I do like an early morning hike. Our excursion was over by 11.30 and this still left us most of the day for other activities. All that scenery ten minutes from the centre of Adelaide and we never passed another soul until we got back to the car park (where the mobile hot-dog stand reminded us that "yes" we were still in the city).

Garry Guide

FIELD TRIP REPORT

NEWLAND HEAD CONSERVATION PARK JULY 23

The very next day saw us eighty kilometres south of Adelaide standing by the foaming surf of Waitpinga Beach. Yesterday's forecast had been for fine, cool weather and it had rained non-stop all day: today's forecast was "cold, with showers" and, wouldn't you know it, we had a lovely fine day! And by a stroke of luck we met the Park Ranger in the car park. He kindly loaded us all into his 4WD truck and drove us to the Newland Head Lookout, thereby saving us a 3 kilometre walk.

Within minutes we had found numerous orchids. Two different unnamed *Pterostylis* of the "alata complex", deep red-brown flowers of *Cyrtostylis robusta*, the maroon *Pterostylis vittata* and most interestingly two different *Pterostylis* of the "nana complex". Most common in the park was the tiny "mallee nana" in full flower with just odd plants of the larger "hills nana" in bud.

The habitat here was mallee and heath on calcareous sand and limestone, quite different to the acid soils and forests of the Adelaide Hills. It was interesting to make a comparison between the winter orchids on the white alkaline sand here and those of the white acid sand at Kuitpo! At Newland Head the only *Cyrtostylis* present is *C. robusta* - at Kuitpo there is only *C. reniformis*. At Newland Head the common "*P. nana*" is the mallee species - at Kuitpo only the "hills nana" occurs. At Newland Head no *Pterostylis robusta* but masses of *P. alata* - at Kuitpo no *P. alata*. At Newland Head the only *Corybas* seen was *C. despectans* but at Kuitpo no *C. despectans*, instead *C. unguiculatus* and *C. diemenicus*. The same is true of the spring orchids: Kuitpo has *Caladenia tentaculata* - Newland Head has *C. stricta;* Kuitpo has *Caladenia tentaculata* - Newland Head an unnamed species related to *C. reticulata* and so on. Both areas are south of Adelaide but because of the different soil pH there are some quite different orchids at the two locations!

Most of the Newland Head orchids are close to the headland itself, further inland the sand is so poor that the only orchids we saw were a few *Leporella* and leaves of the *Lyperanthus*.

Other orchids seen at Newland Head included:

> *Acianthus exsertus* (f), *Caladenia latifolia* (b), *C. cardiochila* (1), *C. carnea* (1), *Diuris corymbosa* (1), *D. maculata* (b), *Microtis* (1), *Prasophyllum elatum* (1), *P. rufum* (s), *Thelymitra* (various 1), *Pterostylis plumosa* (1), *P. pedunculata* (b).
>
> (f = flower; b = bud; s = seed; 1 = leaf.)

Much of Newland Head Conservation Park is regenerating vegetation or cleared and grazed paddocks - at present quite devoid of orchids. It will make an interesting long term study to see how long it takes orchids to recolonise the cleared areas.

By the time we made it back to the cars most of us were quite tired so it was fortunate indeed that we had been able to cadge a lift in! If any reader is intending to visit the park - be warned: you face a long, orchid-less walk before undisturbed vegetation! If in the area however, I recommend a short walk in the Parsons Beach section of the park as orchids there occur right up to the roadside.

Garry Guide

NOSSA's next Field Trip will be on September 16
(see page 59 of this Journal).

SOLUTION FOR TREATING BARK READY FOR POTTING

Chemical to treat 1¾ ft^3 bag of bark.

Mix the following dry chemicals -

Urea : 130 grams
Dolomite : 350 grams
Potassium Sulphate : 25 grams
Ferris Sulphate : 35 grams

(1) Add chemicals to bag of bark
(2) Fill with water and soak for one (1) to two (2) weeks.
(3) Drain and rinse thoroughly with fresh water.

Bark is then ready for use.

If the bag will not hold water, put the bag and bark in a bin, and fill the bin with water.

(Reproduced from ANOS Victorian Group Bulletin.
By Neil Finch, Down Under Orchids, N.S.W.
Courtesy of Jan Mayer, Dingley Fern Market, Victoria.)

COMPOST WARNING

The following is a reprint of an article from the September 1984 edition of the Australian Orchid Review:

"Sphagnum Moss has been found to be the carrier of a potentially dangerous fungus called *Sporotricum schenkii*. It can enter the body via cuts, scratches or abrasions.

The fungus lives in the soil but people handling sphagnum moss have been affected by it.

Biochemist, Mr R. Reidl, a member of the Bromeliad Society checked his sphagnum moss and also pieces of wood in his Sydney garden and found them both infected with the fungus.

If not treated early, the entire lymphatic system can be damaged. If treated early, great distress can be avoided. In rare cases, it can be fatal. The danger is in the fact that because it is rare, it may not be immediately diagnosed by a physician. It usually begins as a nodule at the site of the injury. Initial lesions resemble warts, boils or chancres. It spreads through the lymph channels to various lymph nodes.

PRECAUTIONS:

Use rubber gloves when handling sphagnum or fungus-infected garden matter. Wash hands frequently in hot soapy water. Skin damage should be treated promptly. Persistent sores are a signal to seek medical advice.

NOSSA SPRING SHOW 1988

COMPETITIVE SECTIONS

To be staged on trestles in the hall, separated from the rest of the orchid exhibits.

1. All plants are to be benched by 10.00 a.m. on Saturday, 16 September. Hall will be open from 4.00 p.m. to 9.00 p.m. on Friday, 15 September to allow exhibitors to set up.

2. Plants in the displays are also eligible but must be marked with a ribbon (which will be available on the set-up days).

3. A label must be attached to each exhibit clearly showing the correct name of the plant and the exhibitor's number (available from the Registrar).

4. Plants must have been grown by the exhibitor for at least six months before the Show.

5. Hybrids include natural hybrids.

The judging will take place between 10.00 a.m. and 12.00 noon Saturday, 16 September. The A.O.C. judging standards will be used. NOSSA By-Laws will also apply. Any applications for NOSSA awards will be judged by the Committee. No prize money will be awarded, but Class winners will be acknowledged in the Journal. Champions will receive a card.

The Society will accept no responsibility for any loss, damage or infection suffered by any plant exhibited at the Show. All possible precautions against these happenings will be taken. Stewards may remove any plants suspected of carrying disease from the hall.

All orchids will remain on display to the public on Saturday 16 September and Sunday 17 September. Plants are to be removed at 5.00 p.m. on Sunday 17 September.

Les Nesbitt, Registrar of Judges

SCHEDULE

Champion Native Orchid of the Show - ANOS Medal
Roy Hargreaves Trophy (Best Terrestrial Species or Hybrid)
Ira Butler Award (Best Hybrid)
Champion Terrestrial Species (from classes 1-5, 8)
Champion Terrestrial Hybrid (from classes 9-12, 16)
Champion Epiphytic Species (from classes 9-12, 16)
Champion Epiphytic Hybrid (from classes 13-16)

Class	Description (First and Second Prizes in each Class)
1	Caladenia or Glossodia species
2	Diuris species
3	Pterostylis species
4	Acianthus or Chiloglottis species
5	Terrestrial species (other than in classes 1-4)
6	Pterostylis hybrid
7	Terrestrial hybrid (other than in classes 1-4)
8	Specimen terrestrial (species or hybrid)
9	Dendrobium kingianum
10	Dendrobium speciosum
11	Dendrobium species (other than 9 or 10)
12	Epiphytic species (other than Dendrobium)
13	Epiphytic hybrid (cream or yellow)
14	Epiphytic hybrid (pink or red)
15	Epiphytic hybrid (any other colour including white)
16	Specimen epiphyte (species or hybrid)

NATIVE ORCHID SHOW

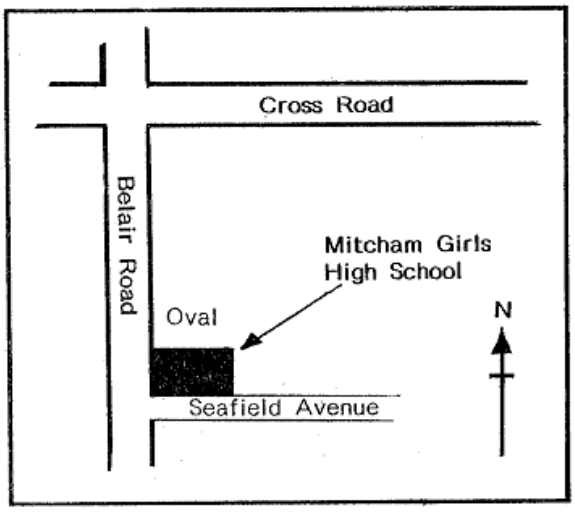
SATURDAY 16th SEPTEMBER

SUNDAY 17th SEPTEMBER

12 noon - 5 p.m.

Mitcham Girls High School
Seafield Avenue
KINGSWOOD

ENTRY $1.00



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