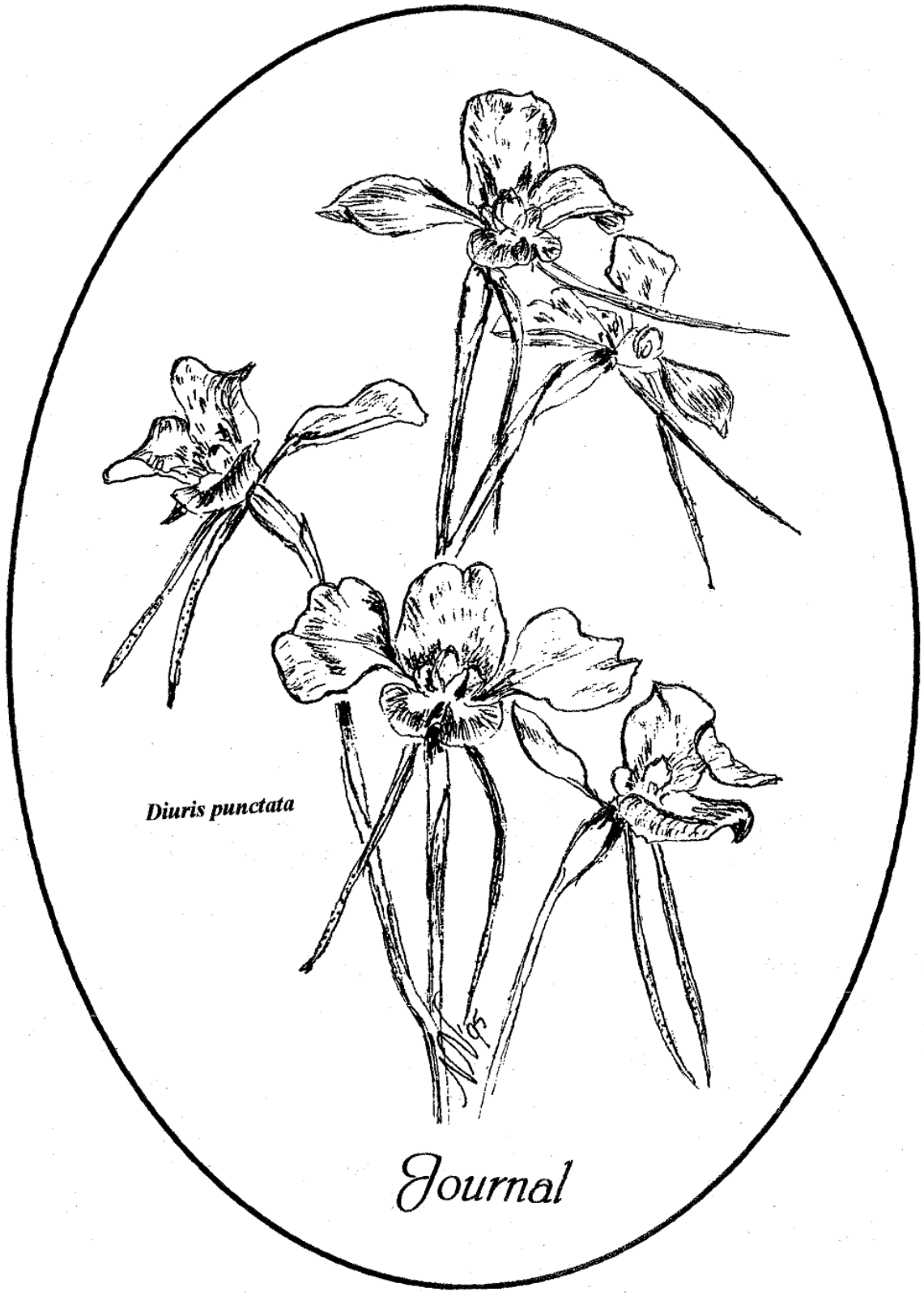
Native Orchid Society of South Australia Inc.



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NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA INC.

P.O Box 565,
UNLEY S.A 5061

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 the 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.

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Views and opinions expressed by the authors of articles within this Journal do not necessarily reflect the views and opinions of the NOSSA Management Committee.

Price: ONE DOLLAR

NATIVE ORCHID SOCIETY

OF SOUTH AUSTRALIA INC

DECEMBER 1995 Vol. 19. No. 11 JOURNAL

FEBRUARY MEETING
Tuesday, 27 February, 8.00 pm: at St Matthews Hall, Bridge Street, Kensington. Speaker to be announced. Doors to the hall will be open at 7.15 pm for those wishing to borrow books from the library or take in items for the trading table.

THE PRESIDENT AND N(OSSA MANAGEMENT COMMITTEE WOULD LIKE TO WISH ALL MEMBERS AND THEIR FAMILIES A HAPPY CHRISTMAS AND AN ENJOYABLE AND PROSPEROUS NEW YEAR

COMMITTEE MEETING
To be held at 7.30 pm Friday March 1st.

DIARY DATES

Jan 10 Dipodium roseum special. Mount Lofty Botanic Gardens
Feb 10 Spiranthes special. Southern Swamps

FIELD TRIPS

Orthoceras strictum special. Sunday December 17th. Meet Forreston P.O. at 2pm. We will see the various colour forms growing along Telephone Road.

Dipodium roseum special: Sunday 14th January. Meet at the top Car park of Mt Lofty Botanic Gardens at 9am

Spiranthes special: Southern Swamps. Sunday February 18th. Meet Mount Compass Boardwalk 4pm. Orchids to look for *Spiranthes, Pterostylis* aff. *aphylla, Genoplesium ciliatum, Eriochilus* sp. *nov*.

ON THE BENCH

Terrestrials: *Cryptostylis leptochila, C. ovata, C. subulata, Diuris brevifolia, D. drummondii* & *D. drummondii* yellow form, *D. brevifolia x sulphurea, D. drummondii x venosa*

Epiphytes: *Bulbophyllum elisae. Cymbidium canaliculatum, Dendrobium delicatum* 'alba', D. fleckeri, *D. prenticei, D. pugioniforme, Sarcochilus* Lois x *cecilae*.

There are four *Cryptostylis* species in general cultivation in Australia and we saw three of them on the bench. The grower promised us it would be all four next December. All are evergreen species with creeping underground rhizomes. The *C. ovata* from WA and *C. subulata* from SA were very similar, the leaf shape being the most noticeable difference! A fifth Australian species *C. hunterana* is leafless and not easily cultivated. There are about a dozen species in the world confined mostly to the Indo-Pacific region. A new hybrid shown for the first time was *Diuris drummondii* x *venosa*, the flowers attractive, soft yellow with suffused stripes.

Thankyou to all members who brought in or bought up items. Thanks to our auctioneer Les Nesbitt and his helpers. A total of $300+ was raised.

CONSERVATION NEWS

Torrens Valley Weed Control. The Torrens River Valley and Millbrook Creek are set to become a bench-mark for weed control in Australia. Local councils and the TV association are providing over $100 000 each year for the next five years and this may be matched by SA Water! A coordinated effort between these groups. Landcare, land holders, Trees for Life, Volunteer Friends groups and NOSSA with money paid to contractors for the removal of willows, blackberries, gorse, broom, etc and the return of native trees and shrubs should see a natural environment along the river in ten years.

PARACALEANA ?TRIENS IN SOUTH AUSTRALIA by R. BATES

In the early 1970's Stan Finke and his wife made several trips to Western Australia. They were keen on orchids and in particular the large duck orchids *Caleana major* which they were familiar with in the Kuitpo and Cox's Scrub areas of SA so they took good note of the Duck orchids *Paracaleana nigrita* in Western Australia. It was after one of their WA trips that the Finkes visited Cox's Scrub to photograph the duck orchid *Paracaleana minor* which they were told grew there. They were quite surprised then to notice that the duck orchids they found looked identical to the ones they had seen a week earlier in the Esperance area of Western Australia. They consulted with local orchid expert Ray Nash who excitedly told them they had found a new orchid for SA and a flower was taken to the State Herbarium and confirmed as *Paracaleana nigrita* a species previously known only from WA .

The following year the Finkes returned with friends to Cox's Scrub. No Paracaleanas were in evidence and it was believed that some unscrupulous person or persons had dug them up. Searchers in subsequent years failed to locate a single plant. Some doubt was even cast on the authenticity of the original plants (rather unfairly I guess but understandable under the circumstances) and hardly a mention was made of *P. nigrita* in the South Australian Flora which came out in 1978.

It was not until 1988 that the species was found on Kangaroo Island in similar habitat ie white sands under *Eucalyptus baxteri* on a firebreak that had recently been doused with fertiliser. As with the Cox's Scrub site no plants were found in successive years.

In 1990 Hoffman and Brown's book on Orchids of South-Western Australia dealt with the *Paracaleana* in Western Australia and showed that *P. nigrita* was really several species, one of these, which they called *Paracaleana triens* seems almost identical to the South Australian plants.

By 1992 it seemed likely that the species *P. triens* was extinct in the Mount Lofty Ranges. In 1993 the same species was found in Western Victoria. As there is similar habitat in our South East it seems likely that it may occur there.

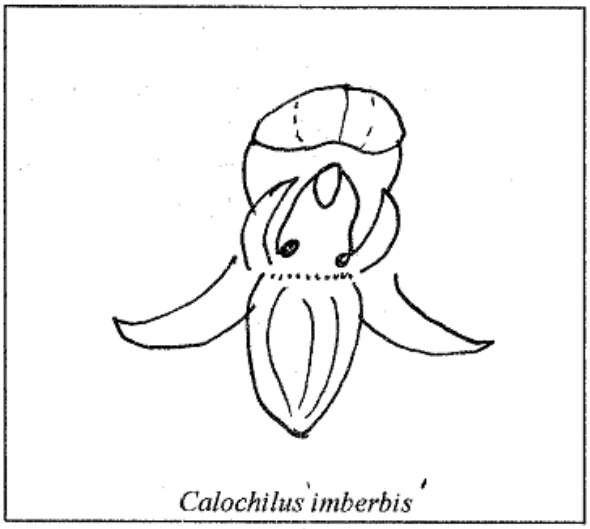
In 1995 after numerous searches of suitable habitat in the Mount Lofty Ranges *P. triens* was found in at least two populations by Rosemary Taplin and Denzel Murfet (purely by accident of course) on the edge of a track. It seems that this species is never found by those who are looking for it!

I wonder if the plants will re-appear next year. If enough populations can be found we may have a special trip in 1997 to allow the photographers access but at this stage the location is being kept a secret.

Paracaleana triens is pollinated by sexually attracted thynnids (or flower wasps). These have not been observed on the SA plants so we don't know if they even occur in SA. It may be useful to hand pollinate any further flowers found to ensure the future of the species in this state.

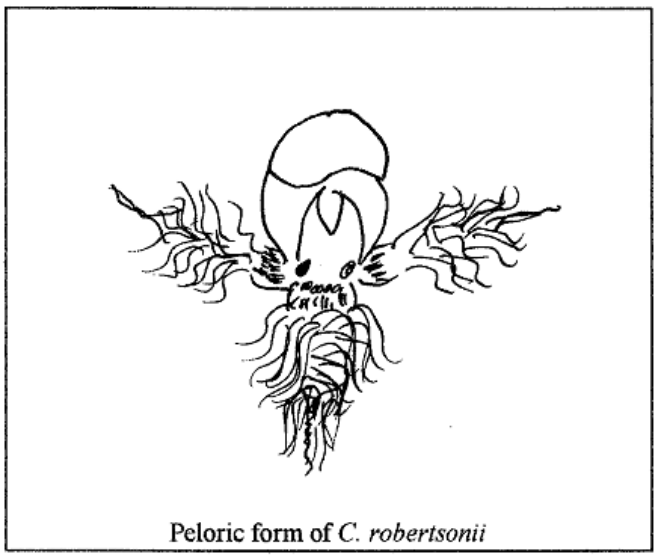
CALOCHILUS ROBERTSOII - FORMS & FREAKS IN SOUTH AUSTRALIA by R. BATES

Calochilus robertsonii the common bearded orchid in South Australia seems to be prone to appearing in odd guises. Actually it has been said that Calochilus are closely related to *Thelymitra* so maybe the beard itself is something of a disguise!



Calochilus imberbis

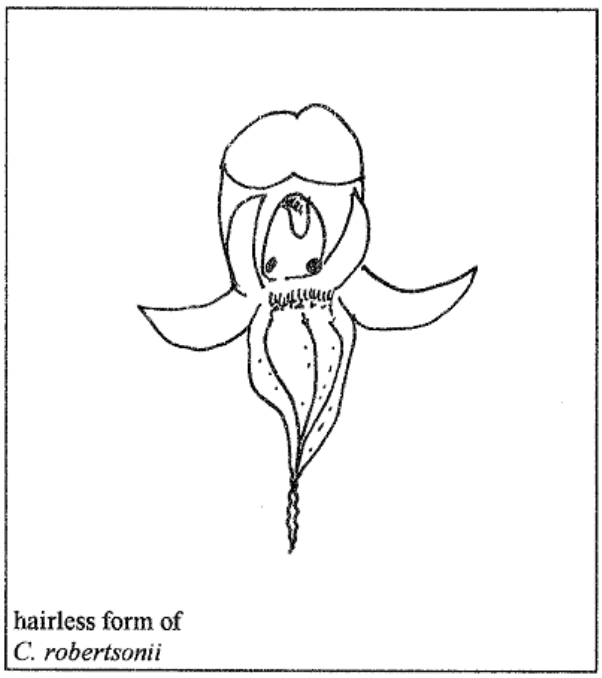
One of the most beautiful forms of *C. robertsonii* I've seen is the albino; the silvery beard of this albino has a ghostly sheen. Sometimes there is a faint tinge of pink. Such albinos appear about once in every 1000 plants.



Peloric form of *C. robertsonii*

Perhaps the weirdest freak I've seen is the peloric form where all petals are bearded (see illustration). Sometimes whole colonies of this beauty occur and we have seen some on NOSSA excursions.

Occasionally the beard of *C. robertsonii* is lacking and the labellum is a simple petal without adornment. This form is sometimes treated as a distinct species *C. imberbis* (meaning naked), but as it turns up at random in populations of normal *C. robertsonii* it should not be treated at species level. Such beardless 'beardies' have been found near Spring Mount (Southern Lofties), Parndana (Kangaroo Island) and near Penola in the South East.



hairless form of
C. robertsonii

On a trip to Kyeema on October 25 this year, two plants were located of a form with a labellum of the normal shape ie with a long tail and not a rounded petal as in *C. imberbis*, but without any cilia. In colour the labellum was striated red and green. Curiously I have seen photos taken by Bob Markwick of an almost identical plant in Victoria! A collection was made and photo taken of this strange Kyeema form which once again was growing with normal *C. robertsonii* (see illustration).

Of course there may be more than one species of beard orchid in SA going by the name of *C. robertsonii* as there is a more colourful swamp form which differs in having a purple leaf (not glaucous as in the woodland form) and with striped petals. In any case the South Australian forms are quite different from the type or true form of *C. robertsonii* and may even be close to *C. gracillimus*. They are likely to be given a new name however.

I'd like to hear from any reader who has seen other unusual forms of our common bearded orchid

ANDREW PAGET VICTORIAN ORCHID GROWER EXTRAORDINAIRE
Extracted from ANOS Victorian Group Bulletin, April 1995

Andrew Paget is a young man of ambition. He has a burning desire to supply terrestrial growers with species not readily available through the Tuber Bank, and hopes to help our Society set up a Terrestrial Cultivation Competition similar to the one we provide for our epiphyte growers. We wish him every success!

Orchids have developed many different strategies to encourage pollen transfer and seed production. However, for the purpose of this report, we must accept that pollination (by insect or man) has taken place; the seed pod has matured; and the seed is ready for flasking.

Orchid seeds are so tiny, and produced in such large numbers, that they are often referred to as "dust seed". Generally about lmm or less in length (and weighing from less than 0.5 micrograms to 10-14 micrograms) they lack the food reserves found in the seeds of other flowering plants. Each seed consists of an embryo tightly enclosed in a transparent seed coat.

In nature, orchid seed will only germinate and form seedlings when it comes in contact with an appropriate mycorrhizal fungus ... which may occur in the soil, on the bark of trees, or in other habitats. From the thousands of seeds produced in a single capsule, a very small proportion of seed finds that ideal situation, and very low numbers of seed germinate and grow into mature plants. (Few seeds come in contact with an appropriate fungus in their immediate vicinity.) This situation can be reversed in the laboratory as the modern day technician can provide an artificial environment ideally suited to orchid seed germination.

Most Australian spring-flowering terrestrial orchid seeds ripen quickly (four to six weeks from pollination), although winter flowerers may take around 12 weeks to mature. Temperature appears to play a vital role in long-term orchid seed storage. Little is known about the longevity of seed in nature, but mature seed of many terrestrial orchids, if kept cool and dry, remains viable for several years. Andrew told us how Thelymitra seed, kept at room temperature for five years was "no good", while seed from the same genus, kept in a domestic refrigerator for eight years, germinated almost 100% under laboratory conditions.

At home, the hobbyist may use a glove box or a home-made laminar flow cabinet to create the conditions necessary for the sterilisation and sowing of orchid seed and the replanting of orchid flasks. After flasking, the jars should be placed under lights, or in a bright, airy position.

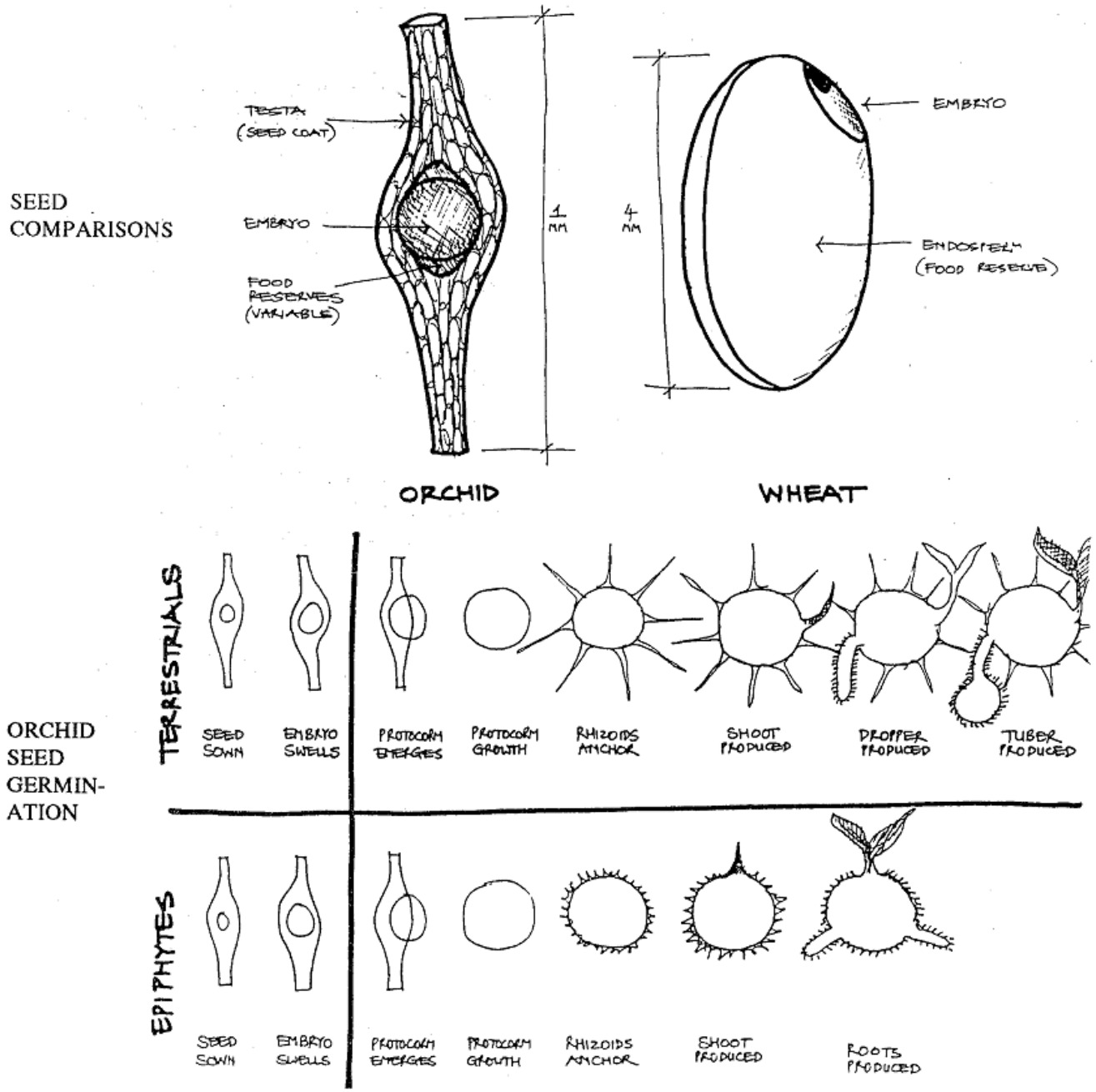
For those of you who do not have the time, or the facilities, to flask at home, seed may be sent to a laboratory. But please note that some laboratory technicians have reported a lack of success germinating seed sent in envelopes, through the mail. Andrew prefers his suppliers to mail seed, clearly labelled, in non-crushable containers. He also advises to cross pollinate from one plant to another as many species will not self pollinate. (A pod may form but it often does not contain viable seed.)

Andrew has found that most orchid seed takes an average of three to four weeks to germinate (some take three to four days, others ten to twelve weeks); however, a few species can take as long as ten to fourteen months.

Once you have received your flask, you do not necessarily need to plant out your seedlings immediately as there is usually enough food in the flask to last for several months to a year or so.

Andrew is interested in terrestrial orchids from all around the world and, thanks to his work, many species in short supply in this country will soon be readily available to the hobbyist. *Dactylorhiza* is

a genus distributed throughout Europe, into the Middle East, through temperate Asia, with a single North American species, *D. aristata*. Andrew is currently propagating some of the European members of the genus and showed us slides of *D. elata* which carries a tall raceme dense with magenta flowers, and *D. maculata* which has spotted leaves and pale pink flowers variously marked with lines and spots of purple.



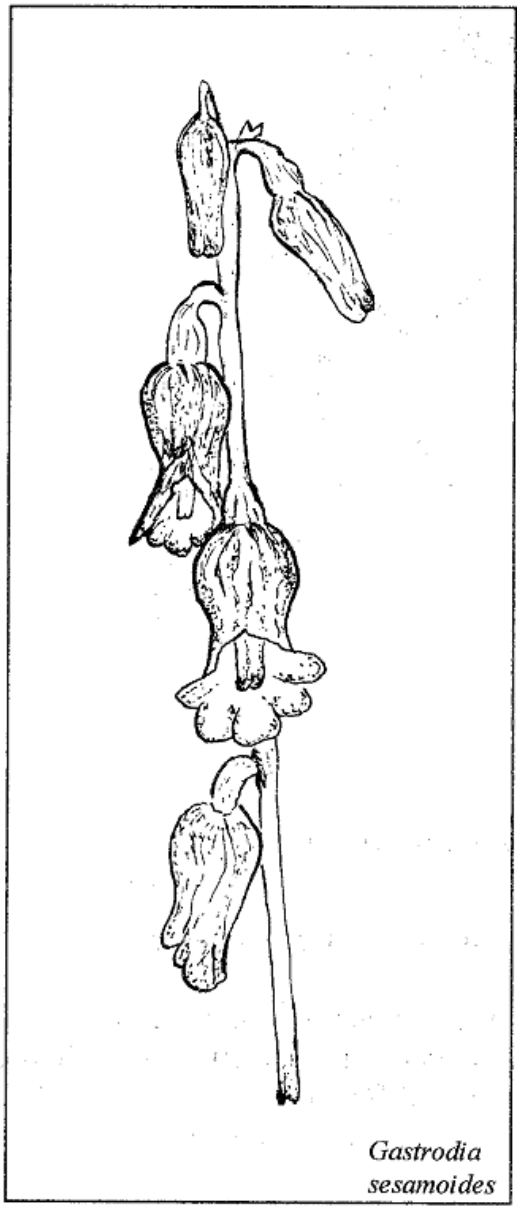
Andrew has experimented with mixes for some time .... and has reached the conclusion that equal parts polystyrene "crumbs" and dry hammer milled sphagnum moss - "Austmoss" from Tasmania (it expands to twice the size) is superior to all other mixes he has tried (although he warned us that some people don't like the polystyrene - "it flies all over the place ... it looks as though it's been snowing in my shadehouse!").

The polystyrene "opens the mix and the sphagnum moss holds moisture and is pH stable. Because the moisture level is a lot higher, Andrew's Chiloglottis have been up for months! If you want your plants to experience a dormant period you must be careful to dry off the mix over summer. Tuber removal, in the polystyrene/sphagnum moss mix, has been fantastic! Andrew did not have much success using the old "standard mix" and this is one of the reasons he looked for "something new".

NOTE: One member told us that polystyrene beads (for bean bags) have been treated and are not suitable for orchids. The polystyrene/sphagnum mix does not contain food for the orchids, so a very weak application of fertiliser is necessary. Andrew recommends Maxicrop or dilute liquid Dynamic Lifter. He purchases polystyrene "crumbs" from Foamex in Bayswater. Austmoss is available from RMB 2290, Cranton, Tasmania 7030.

It's over to you! How about giving this new mix a try? But, don't go overboard and change your whole collection at once. Conduct a controlled test. Try a few pots of common species in the polystyrene/sphagnum moss mix alongside a few pots in the standard mix.

FIELD TRIP REPORT: CAROLINE FOREST RESERVE, NOVEMBER 24 1995



Gastrodia sesamoides

Several NOSSA members met at the Caroline Forest Headquarters at 10am and proceeded in convoy to the Devils Sink Hole. This spectacular hole in the ground is the result of a cave collapse in the limestone karst. Fifty metres below we could see the cold blue-green waters. People do rope their way down and a fern collected there many years ago is the only record for South Australia (*Blechnum* sp.). The bush here has been much disturbed but we did see some *Diuris sulphurea*.

We then visited a burnt limestone flat nearby. Clearly this had been grazed but there were some huge *Prasophyllum elatum* amongst the flowering yaccas (*Xanthorrhoea australis*). There were lots of *Microtis* mostly *M. arenaria* and a few slender 'pink fairies' which we determined as *Caladenia vulgaris* on account of their small flowers. Most of us had not seen this species before.

By now it was lunch time so we drove into the woodland reserve and sat up under a huge Blackwood. There were plenty of Cinnamon bells (*Gastrodia sesamoides*) here and they were being worked by some red native bees. In a patch of damp sand and rotting trunks of *Xanthorrhoea* we found several dwarf *Gastrodia* which may have been *G. vescula* judging from the fact that they all had only 1 to 3 flowers on less than 10cm stems and a rather pale grey appearance. The bees were not interested in these flowers and we noted that they lacked the cinnamon fragrance of the taller species. It is possible that there are actually three species of *Gastrodia* in SA

Our next exciting find was a single plant of the bearded orchid *Calochilus paludosus* right in the middle of the fire track and buzzing around it a large black wasp. Unfortunately our presence must have frightened it off so we did not get to see any pseudo copulation event. None of us had ever seen wasps attracted to *C. paludosus* before although your guide had managed to attract wasps to the common *C. robertsonii*. As there was only a single bearded orchid here we were not going to bait further wasps. *C. paludosus* is very rare in SA certainly there would be less than 100 plants left!

There were several spider orchids which were just coming into flower. We decided they were the Summer comb Spider *Caladenia dilatata sensu stricto* or *C. necrophylla*. We were unsure as to where one species begins and the other one ends. All flowers had glandular tips to both sepals and petals but those on the sepals were not as long as they usually are on *C. necrophylla* which we had seen a day earlier at Desert Camp. May be they are just forms of the same species anyway (although your guide's experiments had previously shown that they have different pollinators.)

We finished off at the relict Snow Gum Forest (This is the only place in SA that snow gums grow) and were lucky to find a large patch of *Caladenia congesta* with its brilliant carmine flowers on 80cm stems. These grew amongst the rushes of a swamp margin amid *Microtis rara* and leaves of *Cryptostylis*.

A final walk around the sandy edge of the swamp led us to a patch of duck orchids *Caleana major* a species the locals had not seen before as it is very rare in the South- east. One eagle-eyed member spotted leaves and buds of the little duck orchid (Para) *Caleana minor*. A much easier species to locate was the tall sun orchid *Thelymitra aristata*. Although reminiscent of our Adelaide Hills *T. grandiflora*, these differed in being later flowered, having red bases to the non glaucous leaves, deep blue flowers with purple-red buds and bright yellow column tops which were flat and not curved. The habitat of the two species is quite different also. These *T. aristata* grew in sandy swamp margins. *T. aristata* is very rare in SA, probably fewer than 50 plants are known so this was another exciting find.

Growing in the swamp itself were *Thelymitra mucida* and *T. holmesii* and a possible hybrid of the two. One we really wanted to see was *Thelymitra malvina* with its purple-pink hairtufts but in this quest we were unsuccessful. We did find a probable 'new' species of *Thelymitra* a *T.* aff. *paucilora* with very short column cut off with a v-shaped wedge and sparse hair tufts. Like the others it is a taxon confined to sandy swamps.

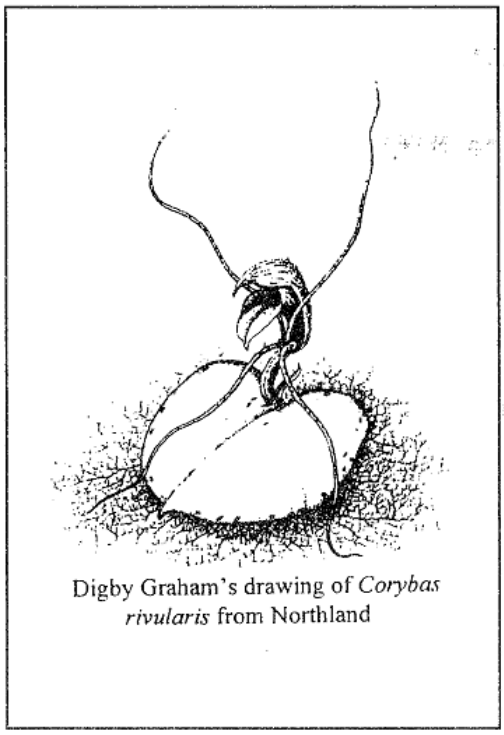
Caleana major
Drawn by Barbara Bayley

Species seen: In flower: *Caladenia congesta, C. dilatata, C. vulgaris, Calochilus paludosus, Caleana major, Diuris sulphurea, Gastrodia sesamoides, ?G. vescula, Microtis arenaria, M. parviflora, M. nana, Pterostylis nutans, P.* ?*smaragdina, Thelymitra aristata, T. holmesii, T. mucida, T aff. pauciflora*.

In bud or leaf or seed: *Cryptostylis*, (Para) *Caleana minor, Dipodium*? *campanulatum, Pterostylis* spp. *Spiranthes*.

NEW ZEALAND HELMET ORCHIDS

Fifth in a series adapted from the article - *Corybas* in New Zealand by Dan Hatch (The NZ Native Orchid Group Journal, 1994).

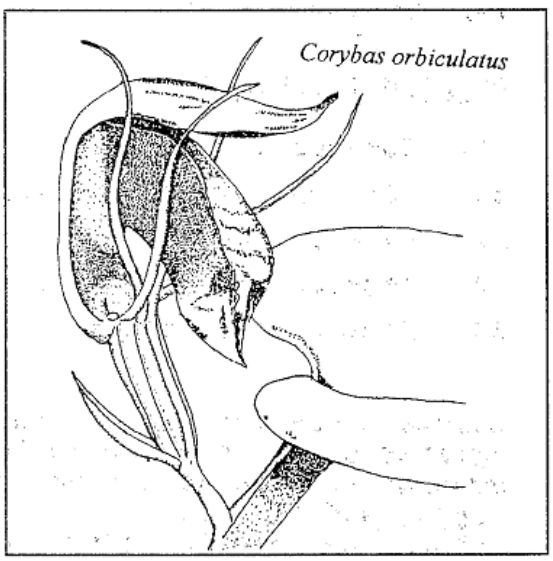


Digby Graham's drawing of *Corybas rivularis* from Northland

Corybas orbiculatus. (col.) LB. Moore. (1970) = short tepals
Syn. *Corysanthes orbiculata* Col. (1891)

Brian Molloy, examining Colenso's type material, found that *orbiculatus* was in fact the plant named 'C' and 'short tepals' by Bruce Irwin, and was not part of the *rivularis* complex as Moore supposed. Labellum disc dark red, the margins inrolled to produce a narrow-acuminate appearance. Petals and lateral sepals conspicuously short, only slightly longer than the labellum.

Distribution: 'Central, western and southern North Island; Nelson, Canterbury, Otago and Southland; Stewart and Chatham Islands'
Flowers: July - October.



Corybas rivularis (A. Cunn) H.G. Reichb. (1871) = pertaining to streams.
Syn. *Acianthus rivularis* A. Cunn. (1837)
Corysanthes rotundifolis sensu Cheesem. (1906) - not of J.D. Hook.
Corybas orbiculatus sensu L.B. Moore (1970) - Not of Colenso.

A much misunderstood plant, discovered by Allan Cunningham on 6 November 1826 in a gorge near Wangaroa, and named by him *Acianthus rivularis*, this species was misinterpreted as *Corysanthes rotundifolia* by Thomas Kirk in 1864, and until 1970, when Lucy Moore erroneously resurrected for it Colenso's name *Corysanthes orbiculata* q.v., *rotundifolia* and its variety *pandurata* Cheesem., were the names by which it was known. It was not in fact until 1983, when Mark Clements found Cunningham's type material at Kew, that the mystery was finally solved.

1995/1996 TUBER BANK ORDER FORM

EASY SPECIES :

1. Chiloglottis diphylla (Craven NSW)
2. Chiloglottis trapeziformis
3. Corybas dilatatus (Knott Hill SA)
4. Corybas hispidis
5. Cyrtostylis reniformis (Guntawang NSW)
6. Diuris corymbosa
7. Diuris sulphurea
8. Leptoceras menziesii
9. Microtis unifolia
10. Pterostylis curta
11. Pterostylis curta x pedunculata
12. Pterostylis x ingens
13. Pterostylis longicurva
14. Pterostylis nutans (Range SA)
15. Pterostylis ophioglossa
16. Pterostylis pedunculata
17. Pterostylis truncata
18. Thelymitra sp.

DIFFICULT SPECIES:

19. Corybas fimbriatus
20. Glossodia major (Lucindale SA)
21. Lyperanthus sp.
22. Pterostylis biseta (Barossa SA)
23. Pterostylis cobarensis (Nyngan)

Circle those lot numbers that you wish to order. Mark [subst.] against those lots you would like if your first choice is not available. Lots will have from 1 to 10 tubers, depending on supply and demand. Tubers that are in short demand will be issued on a first-come, first-served basis.

CLOSING DATE FOR ORDERS is the last mail 19th January. Tubers will be posted 22nd January. POST TO: Thelma & Terry O'Neill, 19 Parana St., FLINDERS PARK 5025.

Price: $1.00 per lot. Cheque/Money NAME . Order (made payable to N.O.S.S.A.) is enclosed: ADDRESS $ for lots.

P/C. . [ ]I will be away and wish posting to be delayed. L

Please post after date PLEASE PRINT CLEARLY