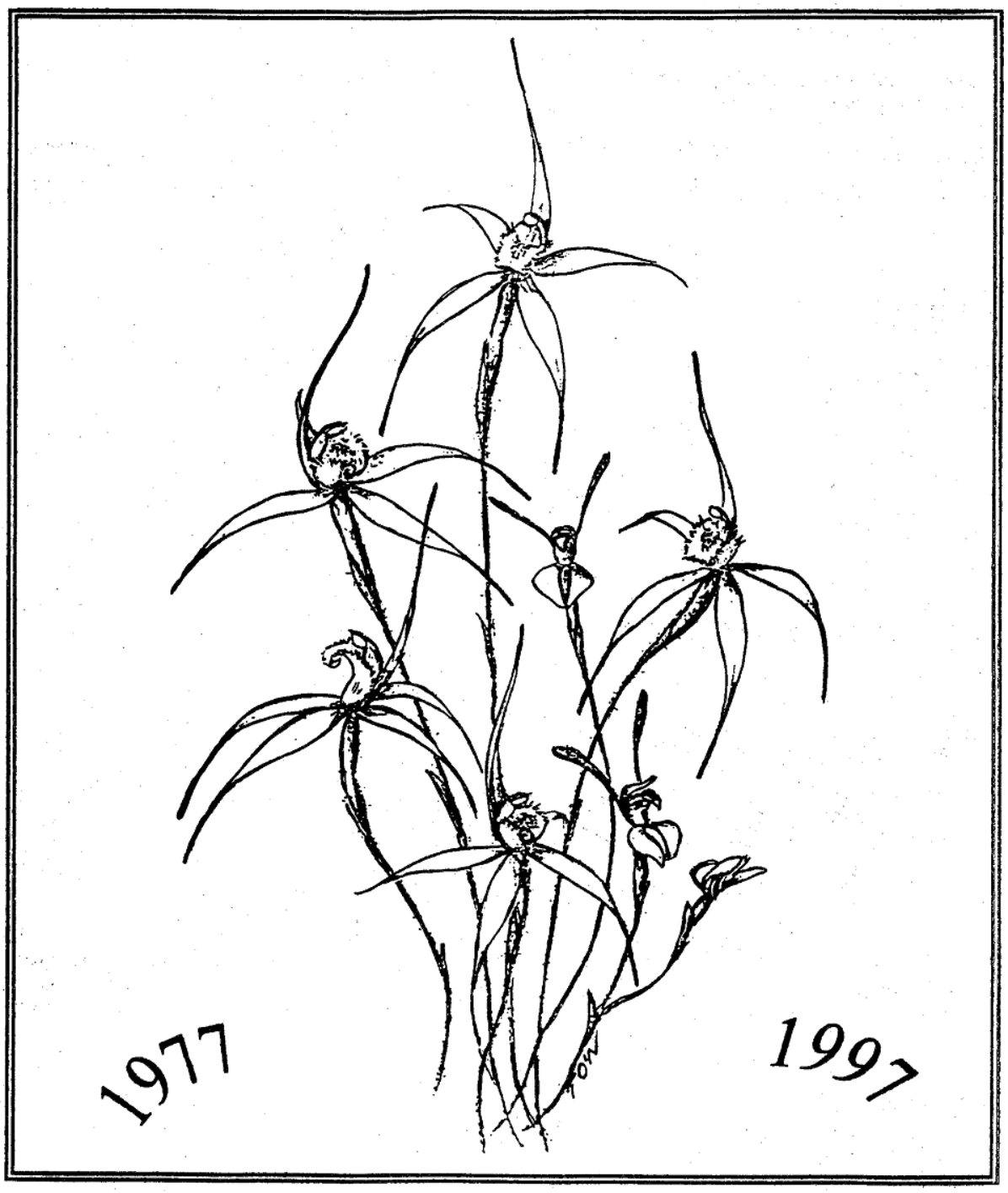
JOURNAL
of the
NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA INC.



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SEPTEMBER 1997

NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA INC.

PO Box 565,
UNLEY SA 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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NATIVE ORCHID SOCIETY

OF SOUTH AUSTRALIA INC

SEPTEMBER 1997 Vol. 21. No. 8 JOURNAL

SEPTEMBER MEETING

Tuesday, September 23rd at 8.00 pm: at St Matthews Hall, Bridge Street, Kensington. Past President Reg Shooter will talk on the Culture of Aussie *Dendrobium.*

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.

DIARY DATES

Sep 19 - 21 N.O.S.S.A. Spring Show
Sep 29 NEDOS Show North Park Plaza
Sep 27 - 28 S.G.A.P. Show & Conference St Peters
Sept 28 Conservation Group Belair & Scott Creek
Oct 12 Conservation Group Kuitpo *Monadenia* control
Oct 26 Conservation Group Belair
Nov 30 Christmas Barbecue Hazelwood Park
April 19 *Genoplesium lineare* Special Halbury

COMMITTEE MEETING

To be held at 7.30 pm Monday September 29th at the home of Iris Freeman 18 Justina Place Surrey Downs

See you at the Show ! St Peters Town Hall September 20-21.

ON THE BENCH
Terrestrials:
Acianthus pusillus, Caladenia latifolia, Caladenia reptans x latifolia, Caladenia stellata, Caladenia Fairy Floss, Chiloglottis formicifera, Chiloglottis platyptera, Chiloglottis. trullata (from the type location), *Chiloglottis truncata, Corybas incurvus, Cyanicula deformis, Cyrtostylis huegelii, Diuris behrii, Diuris conspicillata* (Esperance), *Diuris corymbosa* (Bunbury), *Diuris longifolia* (Collie), *Diuris palustris, Diuris pardina, Diuris* Pioneer, *Glossodia minor, Lyperanthus suaveolens, Pterostylis concinna, Pterostylis cycnocephala, Pterostylis curta, Pterostylis erecta, Pterostylis* aff. *longifolia,Pterostylis nutans,*(normal, albino and variegated), *Pterostylis* Bantam, *Pterostylis baptistii x foliata, Pterostylis* Nodding Grace, *Pterostylis* sp., *Thelymitra nuda*.

Epiphytes: *Bulbophyllum* sp., *Dendrobium speciosum, Dendrobium* Ellen, *Dendrobium* Glen Starr, *D. pedunculatum, D*. Rutherford Surprise, *D speciosum, Dockrillia teretifolia,* D. Zeppelin, *Sarcochilus falcatus,*

There were many terrestrials on display for the first time including an undescribed member of the *Pterostylis* longi*f*olia complex from Tasmania which was almost l metre tall, the hybrid *Pterostylis foliata* x *P. baptistii*, which is the first *P. foliata* hybrid we have seen, although it hardly seems useful to make such a drab cross, and the *Chiloglottis platyptera* and *Chiloglottis trullata*. It was useful to see both *Chiloglottis formicifera* and *C. truncata* together to see how distinctive they are. It was great that 10 different genera of terrestrials were on display!

Bob Bates gave the commentary on the Terrestrials
George Nieuwenhoven gave the commentary on the Epiphytes

JUDGING

Terrestrial species
1st *Pterostylis* aff. *longifolia* grown by Thelma O'Neill.
2nd *Diuris conspicillata* grown by Jan Burford

Terrestrial hybrid
1st *Caladenia* Fairy Floss grown by Thelma O'Neill
2nd *Caladenia stellata* crossed? grown at Black Hill

Epiphyte species
1st *Dockrillia teretifolia* grown by Geoff Burford
2nd *Dendrobium pedunculatum* grown by Kevin Western

Epiphyte hybrid
1st *Dendrobium* Zeppelin grown by Gerald Hawkins
2nd *Dendrobium* Graham Hewitt grown by Gerald Hawkins

POPULAR VOTE

Best Terrestrial: *Diuris conspicillata* grown by Jan Burford

Best Epiphyte: *Dockrillia teretifolia* grown by Geoff Burford

Plant Of The Night
Dockrillia teretjfolia

AUGUST MEETING - SPEAKER.

Foundation President Les Nesbitt who has been exhibiting at shows for nigh on 30 years ie at the Royal Show, NEDOS and NOSSA shows as well as interstate demonstrated how to set up a table-top display: topics as various as plastic or papier-mache rocks, hot-boxes, home-grown moss and tricking the judges were discussed. (See also NOSSA Journal Aug 1996 for advice on setting up for shows.)

WANTED: ferns for the Spring Show: Black Hill is not able to supply ferns this year.

FIELD TRIP TO MONARTO CONSERVATION PARK 3/8/97 by Thelma Bridle

July 1997 proved to be a very dry month, with less than 1/5th of the average monthly rainfall. A group of 7 members met at Callington on August 8 to repeat a trip made at this time in 1996. This year we travelled through clouds of dust to private land about 4km. south of Callington. The paddock was bone dry and had recently been grazed by sheep. Bridal creeper withstands drought conditions but the only native plants not suffering were the *Lomandra*, some of which had been grazed, but a number of which were in full flower. There were a few clumps of *Wurmbea dioica* (early nancy) but no other native flowers.

Orchids were really suffering. *Cyanicula deformis* could not be found, *Pterostylis cycnocephala* and *Diuris palustris* were only just budding. *Cyrtostylis* sp. were leaves only. *Caladenia* leaves found were largely yellowing off and only a few had buds - possibly in drought conditions the orchid assures tuber survival by withdrawing food after growing a leaf.

The track to the SW corner of Monarto Conservation Park was dry and easy to negotiate this year. Here in Monarto there were mallee eucalypts in flower, attracting many birds. After lunch in the sun, we went walking in the dry park. *Caladenia* and *Cyrtostylis* leaves and *Pterostylis cycnocephala* rosettes were prolific - far more than in 1996 but only one *P. cycnocephala* was flowering. Many rosettes were yellowing off. *Acianthus pusillus* had a few flowers in the shelter of a shrub. *Pterostylis plumosa* rosettes looked quite healthy. A very large colony of *Pterostylis*, some with flowers already over caused some discussion for a while, before we concluded they were *Pterostylis dolichochila*, which we hadn't seen in this area of the park before and which had flowered early. A few scattered *Eriochilus cucullatus* leaves were noted, then a large colony of over 100 crowded leaves, but no evidence of flowering could be found.

It must have been a particularly good year for *Eriochilus* as Phil and I have seen several large colonies where we have not found plants in previous years. Where *Thelymitra* seedpods were still standing from last year, no leaves had come up this season. Having visited 2 disappointing sites we resolutely drove around to the NE corner of Monarto expecting very little difference. However, here we counted 14 different spring shrubs in flower or bud. Of particular note were the many bushes of *Baeckea crassifolia* with flowers ranging from deep purple to almost white. A few fungi were in evidence, indicating more moisture, including several *Geastrum fenestriatum* (earth stars).

Our first orchid find was a number of *Pterostylis sanguinea*. Some at the base of a eucalypt were a foot tall with up to a dozen flowers. Most others clumps were of a shorter variety with only 2-4 flowers. These ranged in colour from almost black to a light red. There were a number of different *Caladenia* leaves, some with buds forming. *C. filamentosa* var. *tentaculata* leaves were definitely identified. A number of *Genoplesium* sp., some *nigricans* and some possibly *rufum* had finished flower spikes. Several clumps of *Pterostylis dolichochila* were located, mainly with flowers finished and an occasional seedpod. (Observing these plants confirmed our earlier finding of *P. dolichochila*). A few good flowers were found and photographed, but mainly the stems were thin and unable to support the weight of

the flower. In 1996 the *P. dolichochila* were in full flower at this time. *Pterostylis nana* were just beginning to flower and large colonies of these were found. Very few orchid leaves had been chewed in great contrast to previous years at Monarto, when rabbits have voraciously attacked both orchids and other plants. Their demise could be a great advantage to orchid numbers in more arid areas. None of us had seen such large orchid colonies in Monarto in the past. We saw a number of birds during the day and I was delighted and amazed to have seen a White's thrush close-up when it landed briefly on a nearby shrub. Babblers, parrots and honeyeaters were plentiful.

Orchids recorded

Acianthus pusillus b,c flowers
Caladenia sp. a,b,c leaves & buds
Diuris palustris a bud
Pterostylis cycnocephala a,b,c flowers b,c
Pterostylis dolichochila b,c flowers
Pterostylis nana c flowers
Caladenia filamentosa var. *tentaculata* c leaves
Thelymitra sp. b seedpods
Cyrtostylis sp. leaves
Pyrorchis nigricans a leaves
Pterostylis sanguinea c flowers
Genoplesium sp. c flowers over
Eriochilus cucullatus b leaves
Pterostylis plumosa b rosettes

a - Callington b - SW corner of Monarto CP c - NE corner of Monarto CP

WANTED Articles wanted for your journal, either on paper or on IBM computer disk. Especially on epiphytes or field trip reports. We are also keen to get original art and photos suitable for photocopying.

A Pollination Study of the Endangered Orchid

Caladenia rigida - by Doug Bickerton

Part 3: Pollinators

The first two articles in this series focus on the primary concerns of my study; those of the benefits of hand pollination, and the relevance of the number of orchids in a patch to a flower's chances of pollination. This article deals with an incidental question :- What is (are) the pollinator(s) of *Caladenia rigida*? Although this issue is of interest to me, the constraints of time meant that it was given less attention during my study.

In his 1984 "S.A. Naturalist" article, Bates writes that a native bee (*Exoneura* sp.) is the pollinator of *C. rigida*, and in fact Bates & Weber (1990) includes a photograph of one such bee which has landed on a *C. rigida* flower. The orchid offers no nectar or pollen reward and emits no detectable fragrance (Bates & Weber, 1990), and so it has been presumed that the pollinator bee is young and inexperienced ("naive"). The flower has two glands at the base of the column which were thought to be pseudo-pollen or the source of kairomones (pheromone imitations) (Bates, 1984).

One aim of this study was to identify whether the orchid has more than one pollinating agent. Many Caladenias are known to be pollinated by the pseudo-copulation behaviour of native wasps (Stoutamire, 1975, 1983; Bower, 1992). C. rigida is a member of the same species complex as *C. reticulata*, and generally this complex is pollinated by *Thynnid* wasps. Such orchids usually exude kairomones from osmophores on the clubbed sepals. However, no observations have been made of wasps pollinating *C. rigida* flowers. Five insects were caught and later identified at the Adelaide Museum. One was a beetle and possible predator of *C. rigida* fruit (see Part 4 of this series). Also caught were two native bees, an introduced honey bee, and a native wasp.

Observation details -

The first sighting was of an insect with the appearance of a native bee (it was not caught), landing on a *C. rigida* flower. It climbed well inside the flower, and appeared to be attempting to reach the two "pseudo-glands" at the base of the column. The labellum moved only slightly, and the insect did not seem

troubled by it. Twice the insect flew away and returned to the same flower, once resting on the sepal, and once climbing inside again. Finally it flew to another *C. rigida*, but I saw no pollen removed or deposited. However, the first flower closed up within a week and was later shown to be successfully pollinated. Unfortunately the second flower was damaged within a few days. Three days later, another bee (apparently native) was observed inside a *C. rigida* flower. The insect remained deep inside the flower for over 10 minutes, as if trapped. No attempt was made to catch it, for fear of damaging the flower. When this flower was inspected later, pollen had been deposited, and this flower went on to fruit dehiscence. The first insect to be caught was a native bee (*Halictidae homalictus* sp.) resting on a *C. rigida* sepal. It remained there for about five minutes, and did not attempt to climb inside the flower. The flower remained open for 7 days, but was eaten soon afterwards. It is unlikely that it was pollinated. The most interesting catch was of a male Thynnid wasp (a native). It had been moving rapidly in a figure-eight motion for over ten minutes on one of the bags placed over a *C. rigida* flower. The wasp would have been unable to enter the bag, and no insects were inside the bag. Its figure-eight movement is typical of mating behaviour. The other two insects caught were visiting flowers of other species. One was a honey bee (*Apis mellifera*), caught whilst visiting a *Pultenaea largiflorens*. These bees were seen visiting flowers of various species. There was an abundance of honey bees at both sites, and one should not disregard the suggestion put forward by Bates (1995) that feral bees are competing effectively with native bees for food, thus causing the numbers of native bees to diminish, and populations of *C. rigida* to suffer as a result.

Sexual Deception - As already mentioned, wasps are particularly attracted to the *Caladenia* genus, through sexual deception. The male Thynnid wasp which was caught during this study was exhibiting mating behaviour. The females of this family are wingless (and therefore earth bound), and, attract the males by producing pheromones. The males fly to the females, pick them up and copulate with them in flight. Whilst still coupled, they then fly to a nectar producing flower, generally *Leptospermum* spp. (Wakefield 1954; Breeden & Breeden 1972; Stoutamire 1975), and *Eucalyptus* spp. (Stoutamire 1975; Ashton 1975; Matthews 1976) whereupon both wasps feed (Armstrong, 1979). Since the study area is *Eucalyptus* woodland, with a prevalence of *Leptospermum* spp., this site is well suited to Thynnid wasps. Additionally, since osmophores are present on the sepal tips, it would appear that *C. rigida* employs sexual deception as a primary pollination tool. (NB. *L. myrsinoides* blooms in profusion in this area, but usually only as the *C. rigida* season is drawing to a close. Thus, there would be fewer wasps about when the orchid is in bloom. These early season wasps are more likely to be "naive" and more easily deceived.)

There is now evidence to suggest that *C. rigida* achieves pollination both by wasps and by bees. This augers well for the orchid's future, since a species that has co-evolved with only one genus of pollinators is likely to have a more unstable future. Furthermore, the orchid appears equally capable of good seed set from either self pollination or cross pollination (see Part 1). Given these factors, the chances of reproductive success for C. rigida are apparently favourable, but in spite of this, the orchid remains an endangered species. Will the answer to this mystery be in the final issue of this series?

Armstrong, J.A. (1979). Biotic pollination mechanisms in the Australian flora - a review. N Z J. of Bot. 17, 467-508.
Ashton, D.H. (1975). Studies of flowering behaviour in Eucalyptus regnans F. Muell. Aust. J of Bot. 23 (3), 399-411.
Bates, R. (1984). Ecology and biology of *Caladenia rigida* (Orchidaceae). S.A. Naturalist 58, 56-59.
Bates, R. (1995). Recovery plan for white spider orchid *Caladenia rigida* R. Rogers. D.E.N.R, S.A.
Bates, R.J. & Weber, J.Z. (1990). "Orchids of South Australia". Govt. Printer, S.A. Bower, C. (1992). The use of pollinators in the taxonomy of sexually deceptive orchids in the subtribe *Caladeniinae* (*Orchidaceae*). Orchadian 10,331-338.
Breeden, S. & Breeden, K. (1972). "Australia's South East. A Natural History of Australia: 2." Collins, Sydney.
Matthews, E.G. (1976) "Insect Ecology". Uni. of Qld. Press.
Stoutamire, W. (1975). Australian terrestrial orchids, Thynnine wasps, and pseudo-copulation. Orchadian 6, 110-111.

Stoutamire, W. (1983). Wasp-pollinated species of Caladenia (Orchidaceae) in South-western Australia. Aust. J of Bot. 31, 383-394.
Wakefield, N.A. (1954). Notes on a Phynnid (sic) wasp. Vic. Naturalist 70 (2), 222.

FROM YOUR LIBRARY by Geoff Edwards, Librarian

Just four items to report this month but recognising that Roy has again given me a stack of material for the library which, at the time of producing this article, I have not had time to sort out.

The two new items are;

Australian Orchid Review, June 1997.

A number of enjoyable articles, especially that featuring Sarcochilus ceciliae by Gerry Walsh. For those interested in a wide cross section of plants, Walter T. Upton has a good article covering 'Orchid species in flower every month of the year'. Many Aussie natives feature in the five tables that cover different growing situations in the Sydney area. P.S. Lavarack has an article on Dendrobium luteocilium Rupp. The August/October 1996 new orchid hybrid list is also included.

The Orchadian, Volume 12, Number 4. June 1997.

With a stunning cover featuring *Dendrobium cuthbertsonii* 'Orange Picotti' HCC/AOS 1997, the journal has its usual wide cross section of articles and illustrations. Our own Bob Bates provides the lead article on Microns in the 'Arid Lands' of Western Australia, while Roy Hargreaves (you can't keep him down or out of it!) provides the History of the Native Orchid Society of South Australia. Two rare new species of *Pterostylis* and a new recording of the Eastern Underground Orchid are reported on.

The two existing books that I have chosen come from the opposites;

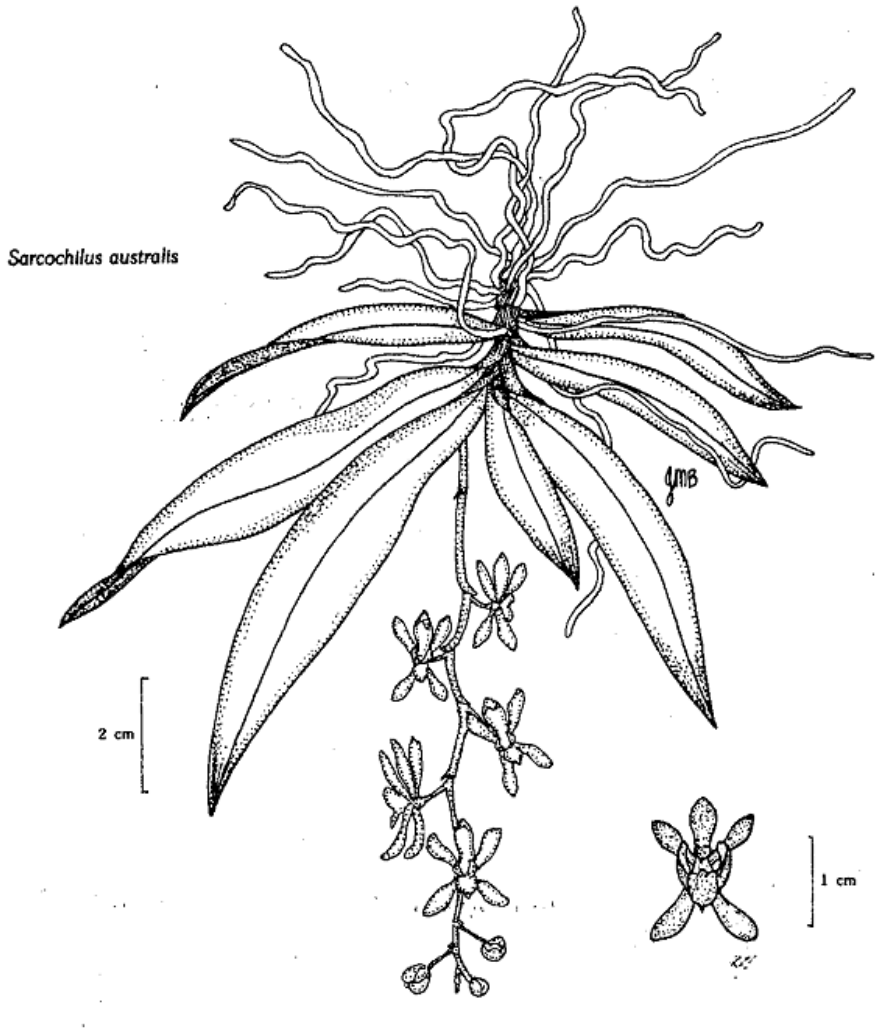
It's Blue with Five Petals (Wildflowers of the Adelaide Region), written and illustrated by Ann Prescott. Published 1988.

Many will remember when Ms Prescott attended a NOSSA meeting, spoke of her book and personally signed the copy which is now in our library. Bob Bates and NOSSA provided information and material that made its way into the text of this 400 page book which is an easy to use colour coded field guide with over 1000 wildflower illustrations. The book is written for those who wish to keep it simple and is about flowers, their colours, their textures, their smells and their shapes. It is designed to help people to enjoy the flowers they see in the bush. As the author states in her introduction, "Please take this book to the flower, not the flower to the book".

Tropical Orchids of Australia by P.S. Lavarack and B. Gray. Published 1985.

As we know, orchids belong to one of the largest families of flowering plants. This book discusses about 230 species which grow in habitats as diverse as hot paper bark woodlands and cool misty rainforests. The known facts and accepted theories on habitats, ecology, origins, conservation and taxonomy are drawn together. Many new species (for that time) are fully described and illustrated in fine black and white plates.

First Aid Kit NOSSA now has a first aid kit which will be taken on official excursions. (Thanks to D. Pettifor who organised the kit).



SARCOCHILUS AUSTRALIS
Extracted from ANOS Geelong Group Bulletin, February 1997

The *Sarcochilus* genus is almost exclusively Australian, with 16 species being endemic and one extending to New Guinea. Two species grow in Victoria, *S. australis* and *S. falcatus*. *S. australis* grows as an epiphyte in fern gullies and damp forests of North Eastern NSW to East Gippsland, the Otways and Tasmania.

The dark green leaves have a leathery appearance, several growing from a short stem which has many overlapping leaf bases. Roots often extend for over a metre along the host tree. Usually about 12 flowers grow on a pendulous raceme during late spring through summer. The distinctively shaped flowers are scented, coloured brownish green, a large white labellum with reddish stripes on the inside.

S. australis has proved impossible to maintain in cultivation, but has been used to produce attractive hybrids with its characteristic shape, such as *S*. Jane using *S.fitzgeraldii*. With *S. hartmanii* it produces *S*. Southern Cross and with *S*. Lois we have *S*. Otways. With *S*. Pinky, *S*. Penny Ann is produced, and with *S*. Melba, *S*. Olive Nymph.

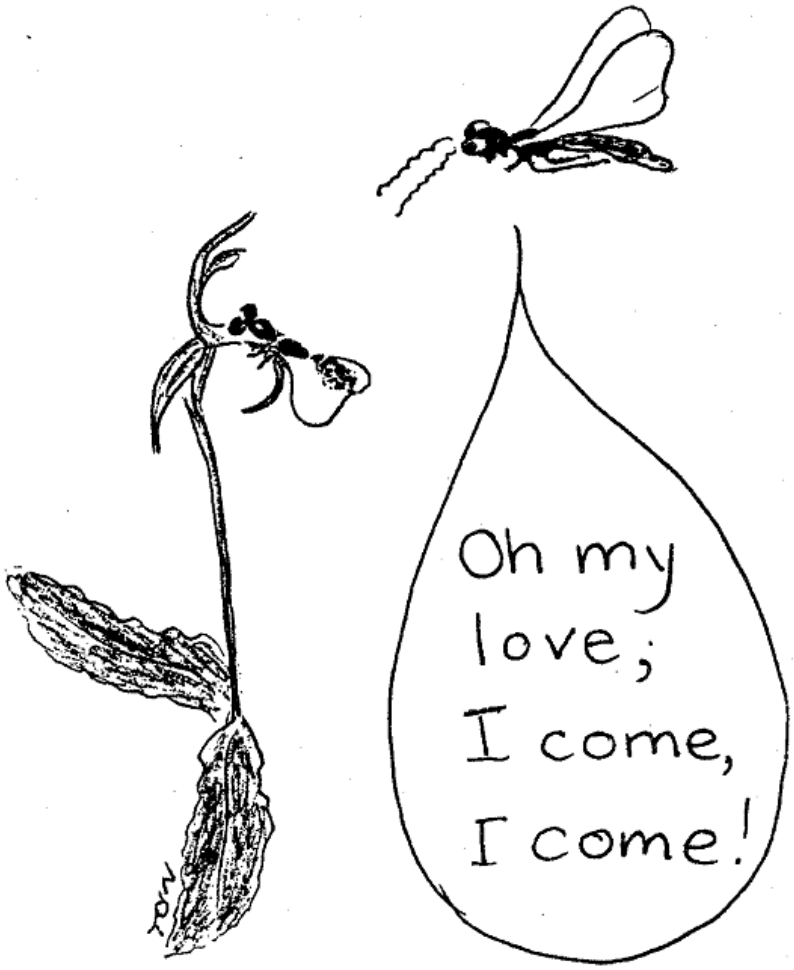
NOSSA SUPPORT FOR THE AOF

A recent letter from Gerald McCraith AM, Director of the Australian Orchid Foundation thanks NOSSA for our donation, (NOSSA supports the AOF with an annual donation) and for our support in many other ways. This includes : sending seed for the seed-bank now run by Andrew Paget. Orchids collected in the wild and sent to David Jones to assist in his research. Growing on tubers sent to David Jones for research. The AOF has supported many South Australian projects over the years This includes: The R.S. Rogers Orchid House at Black Hill. Research projects on taxonomy and orchid pollination. Conferences. Sending copies of research projects.

Gerald writes 'The Directors have pleasure in including the name of your Society in the HONOUR ROLL OF CONTRIBUTORS and will keep you advised of the projects that are, and will be financed and undertaken by the Foundation.'

Chiloglottis The Ant Orchids

At the August meeting there were more species of *Chiloglottis* than most of us had ever seen before. Most of these were superbly grown by Thelma O'Neill from tubers sent by Helen Richards in Melbourne.



Chiloglottis and friend.

In 1986 only five species of *Chiloglottis* were recognised ie *C. gunnii, C. cornuta, C. trapeziformis, C. reflexa* and *C. formicifera* but following the research of David Jones, Mark Clements, Colin Bower and others there are now considered to be over 30 taxa in the genus! The South Australian ones are *C. trapeziformis* from the South-east and introduced in the Adelaide Hills, *C. cornuta* (green form) from the lower South-east and *C. valida* which has been introduced near Glencoe and is recorded from the Fleurieu Peninsula perhaps in error. Very likely a *C.* aff *reflexa* would have occurred in the Mount Gambier area before settlement as I have seen it in the Glenelg River NP not far from the border.

Chiloglottis species are pollinated exclusively by small male, thynnid, wasps. These are attracted to the flowers by wind- borne pheromones similar to those given off by the female wasps to attract males for mating. These wasps attempt to mate with the calli on the orchid labellum which in some species bears a remarkable resemblance to the female wasps themselves. In its attempt to mate the wasp may remove pollinia from the flower and on repeating the act on other flowers transfer the pollinia. The act is known as pseudocopulation and the orchids are said to exhibit sexual deception.

It is thought that as many as 150 species of Australian orchid are pollinated this way. *Chiloglottis reflexa* is a species that is currently under investigation. It is likely that none of the populations presently given this name are true *C. reflexa*, a species originally collected in Tasmania. Continuing pollination studies will tell us more. The story goes that the Type collection of *C. reflexa* had its labellum removed because the collector thought it was an insect and might have eaten the flower! That certainly makes it hard for identification. Thanks to Thelma O'Neill for this amusing illustration!

Chiloglottis diphylla

Chiloglottis formicera

Chiloglottis seminuda

CONSERVATION NEWS

Pterostylis arenicola: Things continue to look better for this orchid as an area on Poltalloch Station (Lake Albert) where a large population of *Pterostylis arenicola* occurs is in the final stages of being placed under a Heritage Agreement. (This information is from Birgitte Sorensen whose work with this species has ensured that not only has the species been taken off the Endangered species list but that all known populations are thriving. Well done Birgitte and the many NOSSA members who have assisted.)

EXCESSIVE OPTIMISM IN CONSERVATION

Recently we have heard how wonderful the release of rabbit calici-virus has been for orchid regeneration; but do not be fooled, there are still rabbits in every part of South Australia, given a couple of good years they will breed much faster than their predators eagles, foxes and cats which have also suffered a population crash. It doesn't matter where you go in South Australia there is less orchid diversity than there was fifty years ago!

The fact that the 90's have had the most el Nino or dry years in any decade since rainfall records began indicate that even climatic conditions no longer favour native orchids. Every year an average of ten new weeds take hold in South Australia. Who would have predicted in 1980 that there would be 100 million *Monadenia* in South Australia less than 20 years later! What weed will be next to replace our native orchids?

We are always hearing wonderful stories of goat control in South Australia but without a doubt wild goats are increasing in range and number every year and droughts don't seem to worry them. The best chance for our orchids will come with lower human-population-growth, improved attitudes and education and changed farming practices away from intensive sheep and cattle grazing to farming kangaroos and emus, less use of herbicides and chemical fertilisers and better pest animal and plant control.

NOSSA JOURNALS 1977-1986: YOUR LAST CHANCE TO OBTAIN THESE

Back copies of NOSSA journals for 1977-86 are to be cleared out. These are available as Volumes (11 issues per year) at $5 each. Tables of contents for each year will be available for viewing at the September meeting.

After complete volumes have been sold (numbers are limited), individual back issues may be purchased at 20c each. Please complete a request form and return to Thelma Bridle or any committee member. Volumes and Issues will be available for collection with payment at the October general meeting.

Name:
Phone no.
I would be interested in purchasing the following VOLUMES of NOSSA journals at $5 each

Vol. 1 (1977)	Vol. 6 (1982)
Vol. 2 (1978)	Vol. 7 (1983)
Vol. 3 (1979)	Vol. 8 (1984)
Vol. 4 (1980)	Vol. 9 (1985)
Vol. 5 (1981)	Vol. 10 (1986)

WISE WORDS FROM ROGER RANKINE

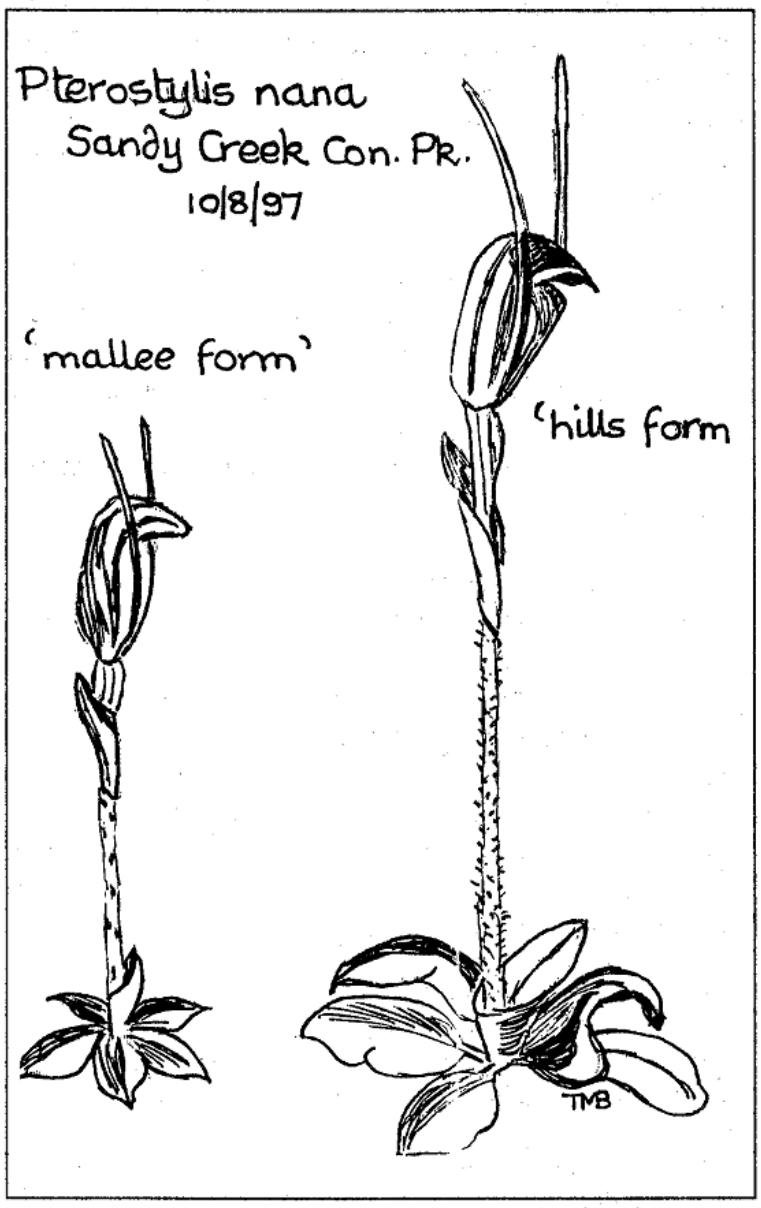
A verbal description of an orchid is not worth the paper it is written on.

A person is expanding his orchid collection too fast if he flowers a new orchid before he can pronounce its name!

You are on the road to success when you realise that failing to flower this year gives a plant a better chance to build up for next year.

FIELD TRIP REPORT- SANDY CREEK CONSERVATION PARK 10/8/97
by Thelma Bridle

A large group of orchid enthusiasts met on the sunny morning of Aug: 10th for a walk in Sandy Creek Conservation Park. Rain during the week had encouraged a carpeting of green moss. A number of shrubs were in flower - *Hibbertia stricta, Astroloma conostephioides, Hybanthus floribundus* and *Cryptandra tomentosa* particularly striking. *Acacia* sp. were beginning to flower and a number of birds were feeding in the bushes. Despite the warmth few *Drosera whittakeri* flowers were fully open although the *D. auriculata* were flowering freely.



There were *Caladenia latifolia* leaves just by the entrance and *Pyrorchis nigricans* leaves throughout the park in the sandy soil, although we did not find any flower buds. *Pterostylis sanguinea* were of both the tall forest variety with 6-10 flowers and the shorter form with only a couple of flowers. *Cyanicula deformis* were flowering but only as scattered individuals. At the top of a rise on the Wren trail were a number of large colonies of *Corybas incurvus* amongst leaf litter under eucalypts. Some were in flower, many in bud and an even greater number just leaves. Along the trackside was a good colony of the mallee form of *Pterostylis nana*. These plants are short-stemmed with small nodules rather than hairs on the stem. The flowers have short sepals and the tip of the galea is quite blunt. Further information on. the different forms of *P. nana* can be found in a comprehensive article by Bob Bates : "*Pterostylis nana*: really a complex of species in South Australia"; NOSSA Journal, Vol. 12, No. 10, 1988.

Again at the top of a rise, this time on the Boundary track *Cyrtostylis robusta* were flowering. Here also was a *Cyanicula deformis* living up to its name with the lateral sepals joined together, and also a colony of what we thought were *Corybas expansus* mainly in bud, although the photographers did manage to find a couple of flowers partially open. In the afternoon Bob Bates confirmed that these *Corybas* were actually *C. despectans*, an unusual and very pale form. *C. expansus* is only found growing on coastal sand-dunes and when the flower is fully open the hood is completely hidden. The sands here were more likely to be desert sand and thus an unsuitable habitat.

By 2.30pm it was beginning to rain, exactly as had been forecast for the start of the Crows/Port Power football match, so we felt it was time to conclude our pleasant walk in Sandy Creek. A number of the party then went to David Pettifor's for a cuppa and a look around his shadehouse

Orchids seen : *Caladenia latifolia* (1) and other *Caladenia* sp. (I) *Corybas incurvus* (f), *C. despectans* (f) *Cyanicula deformis* (f) *Genoplesium* sp. (f) *Glossodia major* (b) *Leporella fimbriata* (1) a new record for the park *Microtis* sp. (1) *Pyrorchis nigricans* (1) *Pterostylis nana* (f) hills and mallee forms *P. sanguinea* (f), *P. biseta* (rosettes & buds) *P. plumosa* (rosette & bud) *Thelymitra* sp. (seedpods &1)

(1) leaves, (b) buds, (f) flowers