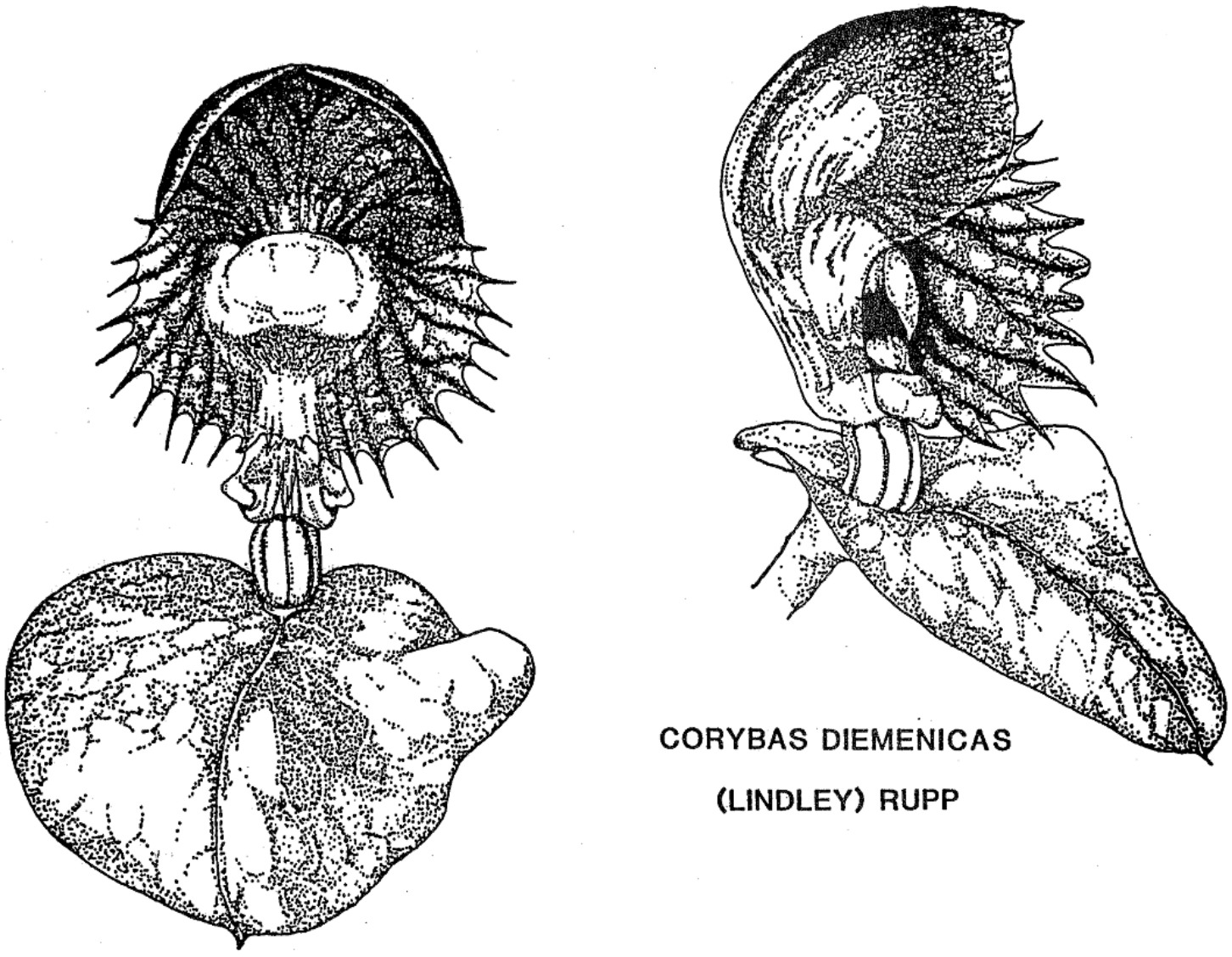
# NATIVE ORCHID SOCIETY

# of

# SOUTH AUSTRALIA INC.

JOURNAL



CORYBAS DIEMENICAS

(LINDLEY) RUPP

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# 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.**

July 1989 JOURNAL Vol. 13 No. 6



## NEXT MEETING

Tuesday, 25 July, 1989 at 8.00 p.m.
St Matthews Hall, Bridge Street, Kensington.
Visitors welcome.

Les Nesbitt will be the speaker for July. His topic will be "Orchids of the Hunter Valley".

## NEW MEMBERS

Dennis Daykin, Warradale, S.A.
Suvina Semmler, Tanunda, S.A.
John and Denise Hibbert, Campbelltown, S.A.

## OUR LAST SPEAKER

Noel Lothian, Patron of our Society, past Director of the Adelaide Botanic Gardens and author, spoke on "Famous Gardens of the World".

Noel discussed the evolution of the Botanic Garden and showed slides of many famous gardens especially in England and Europe. A highlight was the garden of Carl von Linnaeus, the Father of Modern Botany. We also saw slides showing the development of some spectacular modern garden flowers including the red *Delphinium* and some beautiful Cypripediums.

Before the 16th century gardens were more functional: trees for shade and shelter, herbs to flavour food, and fruit trees. The first of the truly ornamental plants were bulbs but selection of numerous wild shrubs and annuals began in the 17th and 18th century and it is only in the last 150 years that there has been serious breeding of purely ornamental plants. We've come a long way in a very short time!

JUNE MEETING - DETAILS

PLANTS BENCHED -

Terrestrials: *Acianthus exsertus* (red), *A. exsertus* (green), *Eriochilus cucullatus* (Adelaide Hills hairy ribbed leaf and one plant of the albino, smooth-leafed form of unknown origin), *Pterostylis alata* (Vic.), *P. dolichochila* (S.A.), *P.* aff. *alata* (S.A., Adelaide Hills), *P.* x *toveyana* (Vic.), *P.* x *furcillata*, *P. biseta* (in bud), *P. nana* (S.A.).

Epiphytes: *Dendrobium discolor* x *D. dicuphum*, *Dendrobium tetragonum* hybrids: i.e. *D.* Hilda Poxon, *D.* Star of Gold, *D.* Aussie Ira, *D.* Essie Banks, *D.* Aussie Zest, *D. tetragonum* x *D. bifalce*.

COMMENTARY -

Terrestrials: Paul Reece.

Epiphytes: Reg Shooter.

POPULAR VOTE -

Terrestrials: *P. dolichochila*, grown by Les Nesbitt.

Epiphytes: *D. bifalce x D. tetragonum*, grown by Edda Viskic.

COMMENTATORS CHOICE -

Terrestrial species: *P. robusta*
Terrestrial hybrid: *P. x furcillata*

Epiphyte species: (no species)
Epiphyte hybrid: *D. bifalce x D. tetragonum*

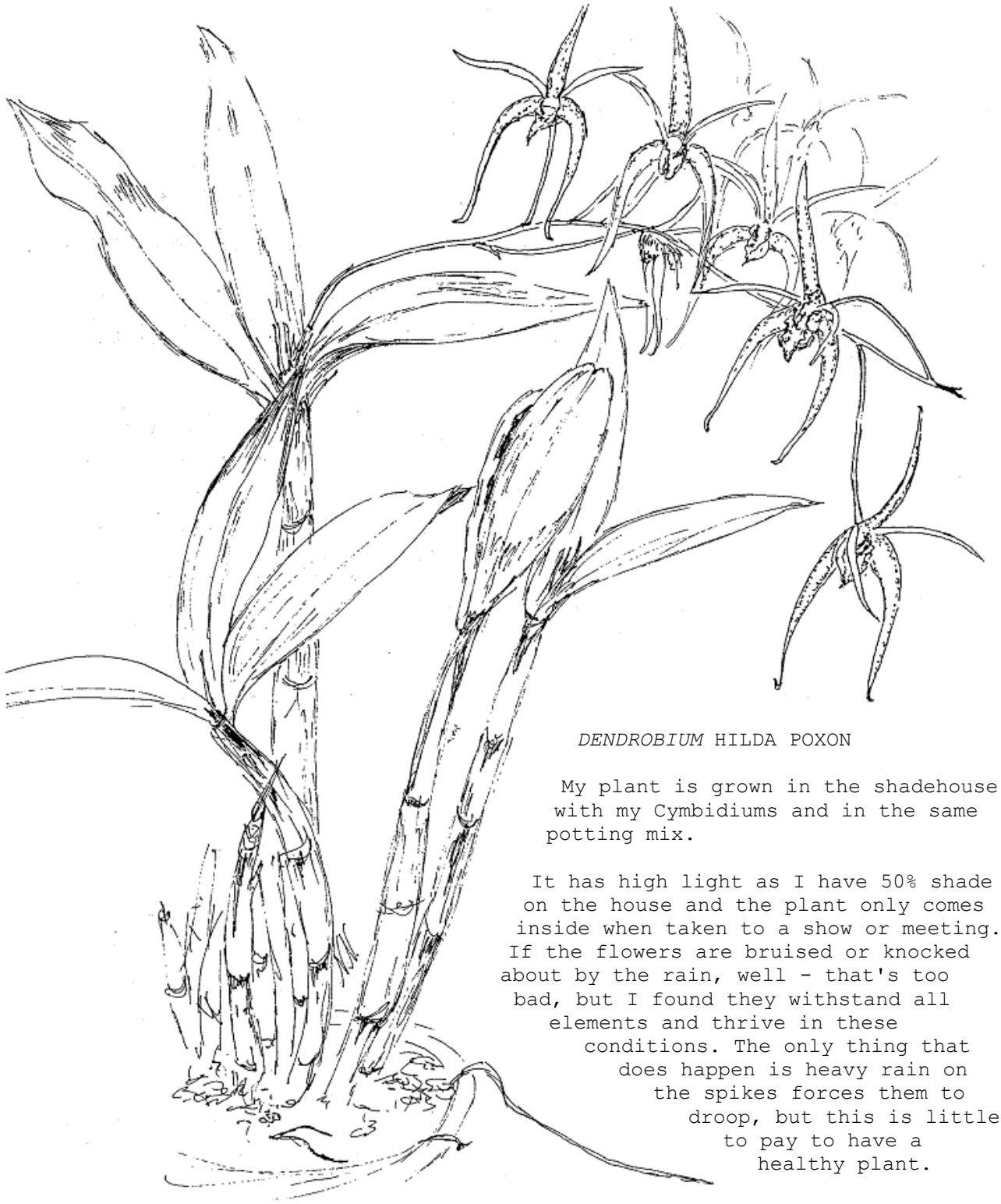
COMMENTS -

Terrestrials: Paul noted that *Pterostylis concava* is a Western Australian species previously known as *P. vittata* var. *subdifformis*. There are two forms of *P. concava*, a tall forest form and a dwarf, usually single flowered, inland form considered to be a distinct sub-species. A beautiful species on display was *Pterostylis dolichochila*, with its wine-coloured blooms on tall stems - this is a South Australian mallee plant.

Epiphytes: Reg noted that *Dendrobium tetragonum* was a parent in all but one plant present and it was interesting to see a new line of breeding between it and *D. bifalce*.

NOSSA SPRING SHOW

The Spring Show for NOSSA will be held on Saturday, September 16 and Sunday, September 17 at the Mitcham Girls High School, Seafield Avenue, Kingswood.



*DENDROBIUM* HILDA POXON

My plant is grown in the shadehouse with my Cymbidiums and in the same potting mix.

It has high light as I have 50% shade on the house and the plant only comes inside when taken to a show or meeting. If the flowers are bruised or knocked about by the rain, well - that's too bad, but I found they withstand all elements and thrive in these conditions. The only thing that does happen is heavy rain on the spikes forces them to droop, but this is little to pay to have a healthy plant.

At present I am experimenting with another plant to see if I have an unusual plant which spells itself after flowering. The plant receives the same fertiliser as the Cymbidiums and my other native epiphytes.

So just remember both parents of Hilda Poxon are fidgety things to grow so a little pampering and finding the right conditions for your plant may be necessary.

When you find the right spot in your shadehouse - leave it there regardless.

Les Burgess

R.S. ROGERS ORCHID HOUSE: 1989 REPORT

Two hundred and fifty species of terrestrial orchid are now growing in NOSSA's orchid house at the Adelaide Botanic Gardens. 1988 was a poor flowering year but 1989 looks much better.

1988 was also a bad year for losses. These were due to two factors:

(1) The very hot, dry '87-'88 summer caused loss through tuber desiccation.

(2) A combination of fungal infection with bacterial secondary infections caused the loss of ten adjacent pots of some very valuable Caladenia species, some of which could not be replaced. This is the first time such a drastic loss has occurred.

The R.S. Rogers House Care Group visits only informally on average one person per fortnight - so the orchids are not being overwhelmed with love and attention. In fact, what is required now is for someone to deal with weeds below the benches!

The main research program for 1989 is a study of "rufa group" Pterostylis from the vast area east of the Mount Lofty Ranges from the Murray River north to Lake Frome, an area about the size of Tasmania. Plant samples are being collected throughout the year and grown on to flowering in the orchid house to give a fair idea of the species occurring in the area. It is, of course, not possible to cover such a huge area at flowering time.

Once again this summer the orchid house will provide tubers for the NOSSA tuber bank!

BOTANISTS OF THE ORCHIDS No. 3

FERDINAND BAUER (1760-1826)

Bauer was an Austrian who moved to England early in his career as a Natural History Artist. In 1799 he met Sir Joseph Banks and was appointed botanical draughtsman to Matthew Flinders' 1801 Australian expedition. He became great friends with the botanist on this journey, one Robert Brown, later to be known as the Father of Australian Botany. Together they collected dozens of Australian orchids as they circumnavigated Australia.

By the time the expedition returned to England in 1805, Bauer had completed no less than 1542 drawings of Aussie plants. Many of his drawings are held today at the British Museum of Natural History. Some of these were recently seen at an exhibition in Adelaide (see March journal).

Bauer returned to Australia in 1815 but continued to paint for English botanists including John Lindley. He published one book titled "Illustrationes Florae Novae Hollandiae". He is often described as "the greatest of all botanical artists" (Stearn 1960).

Cape Bauer in South Australia is named after him. (He was of course on the *Investigator*. when it became the first ship to enter St. Vincents Gulf.)

An orchid named after him is *Genoplesium bauerii*.

Sandy Phillips

COMING FIELD TRIPS

JULY

July 23 (this Sunday)

Newland Head Conservation Park.

Meet park entrance adjacent Waitpinga Beach at 11.00 a.m.

(Or for those who prefer a shorter walk - only 10 minutes from the centre of Adelaide) -

July 22 (this Saturday)

Morialta Falls.

Morning only - meet at the kiosk at 9.00 a.m.

AUGUST

August 19 (Saturday)
Port Vincent (whole day)

Meet Port Vincent Post Office at 10.00 a.m. - un-named spider orchids of remnant scrubs.

SEPTEMBER

Please note that the Gawler Ranges Outback Trip has been officially cancelled, as the shearing quarters intended for accommodation are not available. I will, however, be available at the Minnipa Hotel at 8.00 a.m. on September 25 to guide any adventurers wishing to tour the Gawler Ranges unofficially.

September 16 (Saturday)

Scott Park Spring Survey
(NOSSA Show weekend)

September 23 (Saturday)

*Pterostylis arenicola* Special - Wellington/Tailem Bend.

CONSERVATION NEWS

Nullarbor Conservation Park has been doubled in size and now extends to the South Australian/Western Australian border, including numerous limestone cave systems such as Koonalda.

It is, of course, not good orchid country - only *Pterostylis mutica* and *P.* aff. *excelsa* occur there. *P. mutica* is widespread especially where there is low mallee on the southern edge of the Nullabor proper.

The other *Pterostylis* species is rare and otherwise known only from Western Australia and the extension of the park may help to save it, although the Greenhouse effect may make the area too dry for long term survival.

Readers will have been pleased to note the increased environmental awareness in the media in the last two months. This may have been political but the effects will be beneficial to all.

NATIONAL PARKS FOUNDATION OF SOUTH AUSTRALIA

This foundation was established in 1981 by Warren Bonython. The main thrust of the group is the setting aside of areas or Conservation Parks. At present they are campaigning to raise funds for the saving of natural forest areas in the Adelaide Hills. The group was largely responsible for the acquisition in 1985 of the Kenneth Stirling Conservation Park near Forest Range (an area NOSSA regularly visits on field excursions). For information on how you can help - telephone 212 4738.

HEYSEN TRAIL

The news is that the final section (through the Mid-North) will be completed this year. The trail passes through some good orchid areas and promotes conservation and re-afforestation.

M. Phillips

FIELD TRIP REPORT

*CORYBAS UNGUICULATUS* SPECIAL

Twenty people attended this mid-winter excursion to Knott Hill in the Kuitpo Pine Forest. Our object was to find that elusive helmet orchid *Corybas unguiculatus*. Most of those present had never seen this species before. The area searched was *Eucalpytus baxteri* woodland with bracken and *Xanthorrhoea semiplana* (yaccas) on leached white sands - favoured habitat of the species which is rare in the Adelaide Hills.

With so many pairs of eyes it was only a short time before we located dozens of plants - all in bud - reflecting the very late start to the season. (*C. unguiculatus* has been seen in flower here as early as mid-May.) It took some fifteen minutes before a plant in full flower was located - right in a patch of sunlight, which thrilled the photographers present. One of our younger members located a plant actually in the pine plantation - the first time the species had been seen in such a habitat.

The area where *C. unguiculatus* grew was carpeted with the leaves of *Lyperanthus, Leptoceras, Acianthus caudatus* and *Cyrtostylis reniformis*. We hiked around the small block of scrub finding leaves of various *Caladenia, Thelymitra, Pterostylis, Corybas, Calochilus* and *Microtis*; a small colony of *Acianthus exsertus* in flower, *Leporella fimbriata* in seed and flower and *Eriochilus* and *Prasophyllum rufum* in seed. A few of us who stayed late found the leaves of duck orchids and in the pine forest, *Chiloglottis trapeziformis*, an introduced species.

Here and there were the beautiful tail feathers of yellow-tailed black cockatoos with the forest floor littered with the remains of thousands of pine cones ripped apart by these impressive birds!

The only *Corybas* we have not seen on our field trip is *C. fordhamii*.

We do not intend to have a "*C. fordhamii* Special" as it is an exceedingly messy and difficult job to locate this species in its black, oozing bogs!

Garry Guide

COMMITTEE BRIEF

The Management Committee meeting was held at the President's residence on Friday, June 30, 1989, with all members present except Mr G. Nieuwenhoven. A number of issues were discussed including:

1. The presentation of NOSSA's donation of $4000 to the Botanic Gardens Conservatory in a mutually satisfactory manner so that NOSSA can gain maximum advertising potential.

2. Planning for the 1989 NOSSA show has highlighted the need for the appointment of a Show Marshall to direct the display of plants and a co-ordinator for the trading table.

3. The possibility of re-introducing cultural sessions at our monthly meetings in a format to benefit growers of Australian native orchids.

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

D.R. Butler

# THE WARRUMBUNGLES REVISITED

*This follows an article "Orchids of the Warrumbungle Mountains" which appeared in the April, 1985, NOSSA Journal.

The Warrumbungles is a most attractive range of rocky hills to the west of Coonabarabran. Rainfall is about 500 mm per annum but droughts are not infrequent. The hills are lightly covered with woodland of pine and eucalypt. Much of the area is national park.

It is marvellous what a difference good rains make to such inland areas. The previous article mentioned about 25 orchid species seen during visits in dry years but during a visit in the wet 1987 spring many orchids not seen there previously were found to be common!

The 1985 article noted the similarity of the Warrumbungle orchids to those of the Adelaide Hills. Our 1987 visit further emphasised this. In deep, shaded gullies the ubiquitous *Pterostylis curta* was found, the form here was however the same as that found in the Flinders Ranges, not the larger Adelaide Hills form. In similar but slightly rockier habitat *Acianthus exsertus* and *Cyrtostylis reniformis* were seen. In shallow sand over rocks both the large duck orchid, *Caleana major*, and the smaller *Paracaleana minor* were found together just as they can be found in the Adelaide Hills, but, whereas the *Caleana* were identical to the South Australian forms, the *P. minor* were quite distinct - much slenderer and with insect pollinated, more delicate flowers.

We had a good look at the local *Pterostylis rufa* and it was agreed that these were not the same as those of the Adelaide Hills. Since then the Warrumbungles plants have been named as *P. praetermissa* Jones and Clements. In rocky places where extra water was provided by run off after rain *Thelymitra pauciflora* was found. These appeared similar to the common Adelaide Hills form. Growing with these at Timor Rock was *Chiloglottis trapeziformis*, a species now introduced in the Adelaide Hills.

One surprising find was *Lyperanthus suaveolens*, not the usual coloured form but rather one with verdant green flowers, a form apparently widespread in granite country from here to Stanthorpe in Queensland and apparently considered to be a separate sub-species by some.

An orchid we did not see in flower was *Pterostylis longicurva*, which grows and flowers together with the large inland "*P. revoluta* " and the small northern *P. revoluta*. We were unsure of which (if either) of these is the true *P. revoluta*.

Some of the orchids we had previously seen there could not be relocated. This included *Glossodia major*, which is apparently rare there and *Pterostylis longifolia*, previously known from one colony which had apparently died out.

It was also interesting to note that there are two forms of *Caladenia carnea* present, an insect pollinated (? *C. fuscata*) and a self-pollinated form.

No doubt if we visited again, perhaps after bushfires or floods we might find different orchids, yet that is one of the fascinations of orchid hunting: the same area visited many times always seems to yield up new secrets, especially as one becomes more discerning of different forms.

P. Brew and R. Bates

*Note that the only epiphyte occurring here is *Cymbidium canaliculatum*.

# PHOTOGRAPHING NATIVE ORCHIDS

(Continuing the series of articles first published in the NOSSA Journal during 1980 and 1981.)

## LIGHTING THE SUBJECT WITH FLASH

As we pointed out last month, one of the significant problems facing the native orchid photographer is that of concentrating sufficient light onto his generally tiny subject. Furthermore, when using daylight, exposure times for very close up (macro) work can run into seconds, and here a problem known as reciprocity failure occurs. This failure is the inability of the film to react predictably to an indicated exposure at very long shutter speeds, causing a very noticeable shift in colour balance. When exposure times are greater than one second, Colour Correction Filters or exposure correction factors must be used. More details on this subject will be found in specialist literature, I do not propose to elaborate on it here. One way of overcoming both of these problems is to use electronic flash.

Unless a computer controlled flashgun is used, exposure is controlled by varying the aperture size or the distance of the flashgun from the subject. Neutral density filters can be used to reduce the light output and obviate the need to remove the flash to an inconvenient distance from the subject. Simple masking filters can be made by cutting the white plastic of the familiar yellow and white Kodak slide boxes, shaping it to cover the flashgun reflector and fastening with rubber bands. More than one layer may be used. Of course, this will upset the flashmaker's guide number, and you will need to perfect your flash technique by trial and error.

To make things even more difficult, a problem hinted at in previous articles now complicates the issue. When extension devices or close focusing macro lenses are used, exposure calculations cannot be directly related to the f number engraved on the lens. An "effective aperture" must be calculated. Furthermore, because working distances are close, the tolerances permissible for "long distance" flash no longer apply, and the definition of "distance" used in the guide number formula (G.N. = Aperture x Distance) needs reappraisal. It can be demonstrated that the flash location can be equated to a point source about 5 cm behind the front of the flash. This "point source" error can be quite significant when the 5 cm discrepancy is ½ to ¼ a of the working distance.

The effective aperture problem and the light acceptance angle of most photo-transistor sensors, make it very difficult to develop a perfect technique for close-up flash photography using a standard computer controlled flashgun.

The guide number is a very convenient way of obtaining consistent exposure, subject of course, to the angle of the flash to the subject, and the reflectivity of the subject. However, close-up flash lacks the benefit of normal fill-in, and unless discretely placed reflectors are used, contrast can be very harsh.

In close-up photography, lighting is more effective when the flash is oblique to the subject providing modelling. In fact, it may only be possible to aim the flash at an oblique angle if the camera is very close. Depending on the surface texture of your subject, the light is reduced by approximately 1/3 of a stop at an angle of 55 degrees, 2/3 at 45, and 1 stop at 35 degrees.

Photographing Native Orchids (contd.)

Ring-flash can be used, but the light is shadowless and provides no modelling. Nevertheless, these units can be quite effective where the subject's own colours give depth. They are also useful with segments blacked out, since this produces sidelight with built-in fill-in. It also obviates the need to use neutral density filters to reduce light.

Auto-flash - the latest state-of-the-art SLR cameras take the calculation and guesswork out of flash photography. Used with compatible flash-guns, these cameras electronically control the flash output at the film plane using special flash sensors, quenching the flash when sufficient light has been delivered to the film. Examples of these cameras are the Olympus OM-2, the Contax 139 Quartz, and the Nikon F3.

Photographing orchids in the field using available light can be very frustrating because of long exposure times necessitated by the use of small apertures, and the fact that unless the day is perfectly still, they are rarely without movement.

The greatest advantage of flash is that it can be used to freeze movement to give pin-sharp results, and the photographer can enjoy the benefit of maximum depth-of-field by being able to use the smallest aperture.

(to be continued.)

BOTANISTS OF THE ORCHIDS No. 4

GEORGE BENTHAM (1800-1884)

Bentham was one of the great British botanists. Although he never visited Australia his seven volume "Flora Australiensis" (1863-1878) was a major contribution to Australian botany. As a young man he travelled with his parents through Europe during some 15 years of diplomatic positions. George learnt Russian, German, Latin, Swedish and Greek whilst studying the botany and zoology of the countries visited.

His family was wealthy enough to enable Bentham the freedom to devote his life to botanical pursuits.

He worked with F. von Mueller on the Australian Flora, Mueller sending copious material: specimens, descriptions and notes. He was apparently of a reserved nature, not adventurous but rather methodical, zealous and helpful to others.

The orchids he named include *Prasophyllum, Cyphochilum* and *Calochilus robertsonii*.

Orchids named in honour of Bentham include the leopard sun orchid of the Adelaide Hills: *Thelymitra benthamiana*.

Sandy Phillips

BOOKS DONATED TO THE LIBRARY

The following is a list of the books
generously donated to the NOSSA library
by the late Harold Goldsack.

| | | |
|---|---|---|
| A Book for Orchid Lovers | O.C.S.A. | 1976 |
| A Field Guide to New Zealand Native Orchids | Dorothy Cooper | 1981 |
| A Handbook to Plants in Victoria, Vol. 1 | J.H. Willis | 1962 |
| Australian Native Orchid Hybrid Guide (2nd Edit) | K. Kavulak | 1988 |
| Australian Native Orchids in Colour Leo Cady and | E.R. Rotherham | 1970 |
| Australian Native Orchids (No. 2) | B.G. Mullins | |
| Australian Sarcanthinae | A. Dockerill | 1967 |
| Botany of the Living Plants | F.O. Bower | 1919 |
| Checklist of the Orchidaceous Plants of North Queensland | Dockerill | 1966 |
| Checklist of Australian Terrestrial Orchid Hybrids (two) | R. Bates | 1985 |
| Fertilisation of Orchids | Charles Darwin | 1904 |
| Flora of South Australia (2nd Edit) Parts 1, 2, 3 and 4 | J.M. Black | |
| Flora of South Australia (2nd Edit) Supplement | H. Eichler | |
| Guide to the Orchids of New South Wales | H.M.R. Rupp | 1930 |
| International Code of Botanical Nomenclature | | 1956 |
| Native Orchids in Melbourne (two) | A.N.O.S. Victoria | 1981 |
| Native Orchids of Tasmania | M.J. Firth | 1965 |
| Proceedings of the Orchid Symposium - 13th International Botanical Conference | | 1981 |
| Proceedings of 6th World Orchid Conference | M.J.G. Corrigan | 1971 |
| Orchids for the Outdoor Garden | A.W. Darnell | 1930 |
| Orchids from Seed | P.A. Thompson | |
| Orchids of Green Mountain - Lamington National Park, Queensland | C.W. Harman | 1968 |
| Orchids of South-West Australia | Noel Hoffman and Andrew Brown | 1984 |
| Orchids of the West | Rica Erickson | 1951 |
| Orchids of Western Australia - Cultivation and Natural History | Kingsley W. Dixon and Bevan Buirchell | 1986 |
| Orchids of Western Australia Alex | S. George and Herb E. Foote | |
| Orchids of Victoria | E.E. Pescott | 1928 |
| 6th World Orchid Conference Commemorative Brochure and Programme | | 1969 |
| South Australian Orchid Calendar | D.J. Hunwick and R.C. Nash | 1986 |
| The Orchids - A Scientific Survey | Carl L. Withner | 1959 |
| The Orchids of New South Wales | H.M.R. Rupp | 1943 |
| 3rd Australian Orchid Conference | O.C.S.A. | 1973 |
| Victorian Native Orchids, Vol. 1 C.E. Gray 1966 | | |
| Victorian Native Orchids, Vol. 2 | C.E. Gray | 1971 |
| Victorian Orchids | H.P. Dickins | 1929 |
| West Australian Orchids | Emily H. Pelloe | 1930 |