Native Orchid Society of South Australia Inc.

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N A T I V E O R C H I D S O C I E T Y
O F S O U T H A U S T R A L I A I N C .

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.

Price: ONE DOLLAR

NATIVE ORCHID SOCIETY OF

SOUTH AUSTRALIA INC

DECEMBER 1993 VOL. 17 NO. 11 JOURNAL

WISHING ALL MEMBERS A VERY MERRY CHRISTMAS
AND A HAPPY AND REWARDING 1994

The President and Management Committee of NOSSA extend to all Members and their families Christmas Greetings and best wishes for the New Year

DECEMBER MEETING
The Native Orchid Society of South Australia does not hold a December meeting. Our next meeting will be held on Tuesday, 22 February, 1994, at St Matthews Hall, Bridge Street, Kensington. Gerry Carne will speak on Orchid Pollination. Details will be in the February Journal.

COMMITTEE MEETING
To be held at the home of Shirley and Wally Walloscheck, Friday 21 January, 1994 at 7.30 pm.

DIARY DATES
March 22 1994 Annual General Meeting. All positions will be declared open. 'Hands on' Epiphyte culture demonstrations
May 3 Annual Dinner at the Walkers Arms Hotel.

CONTENTS

NEW MEMBER

The Committee and Members of the Native Orchid Society of South Australia take great pleasure in welcoming Mr. Paul Hallam of Oaklands Park as a New Member. Welcome to N.O.S.S.A. Paul.

NOVEMBER MEETING

Our last meeting of the year and what a turn out - in excess of 80 people were in attendance. The large attendance was of course in response to a very full agenda for the evening.

The meeting began at 7.30 pm, half an hour early, in order that Jan Burford and Wally Walloscheck could demonstrate terrestrial orchid tuber removal and repotting to some of our newer Members. The attendance to this was very large, much larger than many of us would have expected and it was obvious that there is a real need in the Society to provide such practical demonstrations on a regular basis. We intend to include a demonstration on epiphyte orchid culture as part of our March (AGM) general meeting.

We began the business part of our meeting at 8.00 pm. Les Nesbitt, a founder of N.O.S.S.A. and a life Member presented Roy Hargreaves with a framed certificate acknowledging Roy's OUTSTANDING CONTRIBUTIONS AND DEDICATION to the Native Orchid Society of South Australia. Roy, the Society's first recipient of this honour, was not aware that he would be receiving such recognition but did himself proud in his words of thanks. There was a large attendance of people from the Black Hill Flora Research Centre (see page 102) present to witness the presentation and we were very pleased to welcome them to our meeting.

Following the presentation to Roy, we held our Annual Auction. Les Nesbitt acted as Auctioneer for the evening and Reg Shooter, Geoff Edwards and Bill Dear assisted him. Ron Robjohns kept track of sales and receipts. There were, as usual, a large number of items donated by Members, to be auctioned (no, we didn't auction any Members). The items included flasks donated by Bruce Mules (these were in high demand), native terrestrial and epiphyte orchids (some real bargains were obtained here by some lucky members), bookmarks with pressed orchids (Heinrich outbid every one for these), cacti, ferns (we all know from last year's auction that Reg is the Society's expert on these), a set of drinking glasses decorated with orchids hand painted by Thelma O'Neil, a bag of coarse river sand, pots, various native flora including trigger plants, hollow logs, etc. Many thanks to all who so generously made donations for the auction and to those who were so free in removing hard earned money from their pockets and piggy banks after successfully outbidding other Members for the auctioned items. Many thanks also to those who directly assisted in the auction itself. The auction raised $476.50 for N.O.S.S.A. activities.

The evening concluded with one of the best suppers anyone could ever imagine. Each Member brought a plate to share and what a variety! There are a lot of terrific cooks in our Society. Thank you to Ron for organising the coffee, and cordial and to the ladies (and gents) who 'set the table' and helped clean up. Those who brought in plants for display are also to be thanked; many Members congregated around these during Supper - a few raries and all spectacular!

All in all a most enjoyable evening to conclude the year. We look forward to seeing a large turnout at our next meeting in February.

Correction: November Journal - Canunda Shell Growing Medium: The shells are actually not sea shells but rather land based shells. Bob Murray and not Greg Hann undertook the research on the value of the shells as a growing medium.

ANNUAL YEAR END BARBECUE HELD AT MANGIRI PARK, CRAFERS - SUNDAY 28 NOVEMBER

The weather was beautiful, the venue couldn't be better and the food was delicious, The turnout was a little disappointing (about 45 people in attendance) but those in attendance enjoyed the day immensely (I'm known for my superlatives) and those who were not present, well, you missed out. The venue was described in the November Journal and there is no point repeating the details again. One thing not mentioned in the November Journal is the outstanding nursery and gardens which were created and continue to be refreshed and managed by John McArthur's parents, Yvonne and George Duffy. A lot of hard work and sweat has gone into the development of the gardens and the bush walk and the Duffy's are to be congratulated on their results. A visit to the nursery and gardens is highly recommended, in particular if you are interested in the unusual. The bushwalk is also recommended.

John McArthur's main involvement with the property has been with the bush trail although he does take an active interest in the gardens. John has divided the woodland into sectors and is experimenting with various weeding programs. Meticulous records are being kept in order to determine the most efficient means of weed control. John is also very interested in introducing new species of native flora, and in particular orchids, into the woodland.

A very sincere thank you to John and his parents for inviting us to their home and for their most appreciated hospitality.

Les Nesbitt provided a list of the orchids seen along the walking trail:

In Flower - *Caladenia tentaculata, Microtis unifolia.* In Bud - *Dipodium*. In Seed - *Thelymitra rubra, Thelymitra pauciflora, Diuris maculata*. In Leaf - *Leptoceras menziesii, Diuris longifolia*.

THIRD AUSTRALASIAN ORCHID CONFERENCE AND SHOW 1996

The Committee, with strong Membership support, has decided to actively pursue the hosting of the Third Australasian Native Orchid Conference and Show to be held in 1996. A meeting of your Committee and several Members has already been held and a proposal to be submitted to ANOS Council is being prepared. This does not mean NOSSA will be selected to host the 1996 Conference and Show; that is up to a Selection Committee and it is certain we will be up against some stiff competition. Nevertheless, we will endeavour to prepare a proposal which will bring the Conference and Show to Adelaide in 1996.

GONE WALKABOUT!

A bag of Canunda Shell Growing Medium was seen climbing out of Bill Dear's truck at the November Meeting. Bill wants to know if any members might have noticed which direction the bag was heading!!

A SPRINGTIME VISIT TO CATHERINE HOSKING'S WOODLAND NEAR SCOTT CREEK

by Bob Bates

Several N.O.S.S.A. members were privileged to be given a guided tour of the beautiful woodland property of Kate Hosking and her husband. The species illustrated by Kate in her beautiful, recently released, limited edition print were all from this property.

The visit held special significance for me as about 30 years ago I was the Head teacher at Cherry Gardens Rural School, while living at Mylor. I passed the property each day on my way home and of course, regular stops were made in the Spring, especially to see the rare *Caladenia rigida*. At that time

the area was almost pristine bush but shortly afterward sheep were brought in, weeds invaded and the rarer orchids disappeared.

When Kate and her husband bought the property, livestock were excluded and the two new owners immediately began a weed control program while hand pollinating orchids in regeneration areas. The commoner orchids now bloom in profusion, but despite our best efforts we could locate no *Caladenia rigida* or *C. behrii*, both of which Kate has seen on the property. If the *C. rigida* does not appear in 1994, we will reintroduce it as part of the Action Plan to save this endangered species.

Nevertheless, we did see orchids in flower and many beautiful wildflowers. We were even able to locate a wild Koala sleeping in a Manna gum. Manna gum/Stringy bark woodland on fertile soils is an endangered habitat in South Australia and this makes the property even more valuable.

As to be expected of a regeneration property there were several interesting hybrids present.

One of the best known was *Diuris corymbosa x D. pardina*, but one which excited me (because it represented only the second colony of the species known) was *Pterostylis curta x P. pedunculata*.

There were large numbers of the tiny flowered *Caladenia prolata* as well as patches of *C. carnea* and predictably one or two intermediates.

It was exciting to find a double headed *Pterostylis* aff. *plumosa*. An undescribed rufa group *Pterostylis* similar to *P. aciculiformis* rounded off our visit nicely. We pollinated this one.

Orchids Seen:

In Flower
Caladenia prolata, Caladenia leptochila, Caladenia tentaculata, Caladenia carnea, Calochilus robertsonii, Diuris corymbosa, Diuris pardina, Diuris corymbosa x D. pardina
Glossodia major
Leptoceras menziesii
Microtis sp.
Pterostylis pedunculata, Pterostylis curta, Pterostylis curta x Pterostylis pedunculata, Pterostylis aff. *plumosa*
Thelymitra flexuosa, Thelymitra grandiflora, Thelymitra rubra, Thelymitra pauciflora (complex)

In Seed
Dipodium, Acianthus pusillus, Corybas sp.

N.O.S.S.A. OPEN DAY VISIT TO ROSALIE MOORE'S HOME by Graham Burford

This visit was our last Open Day event for the year. Approximately 20 people attended which was about our mean average for the year and reflected the interest shown in these special occasions.

Rosalie's interest in growing Australian Native Orchids stems from a meeting years ago when the idea was put to her by Roy Hargreaves. Today she grows some Dendrobiums, but her love of our Natives is with the Genus *Sarcochilus* and it was her collection of these orchids that most members had come to see.

The area of the backyard originally was open on all sides and affected by winds that swirled up the crescent and down the driveway, but it has been completely enclosed with shade cloth and fibreglass. This provides Rosalie with an area for flowering plants and she has established a large fern area which is important for her growing of the *Sarcochilus*. The 'Sarcs' are grown in pots in a bark mix, are clumped in large plastic trays and suspended from the rafters in the fern area, higher in winter for

maximum light, but lowered amongst the ferns during the warm months. With overhead sprays the dense growth of the ferns provides a micro climate that Rosalie finds ideal for growing *Sarcochilus*. There were plants from small seedlings to magnificent flowering specimen plants and the display was quite spectacular. Some small plants were offered for sale. I purchased one called *Sarcochilus* "Pinky" with a long stem of pale pink flowers which was different from the more usual glistening white flowers.

There was just so much to see. Virtually the whole of the yard has been used for the growing of orchids with glass houses, fibre glass houses, both heated and unheated, and shade cloth growing areas. We all wondered how Rosalie coped with the size of the hobby and I shuddered at the thought of repotting.

This visit marks the close of Jan's and my involvement with the Open Day Visits. If the same interest continues next year we hope that someone will continue the Visits. With the occasions when people have had troubles losing plants from their collections (we can relate personally to this problem), we understand the reluctance of some members in opening their homes for these visits, but we would like to express our appreciation to those members who have made our visits so popular. I am sure that the willing sharing of ideas and techniques is what makes us such a friendly Society.

The N.O.S.S.A. Open Day Group originated as the N.O.S.S.A. New Members Group on 28 September 1990 when Don Wells suggested a need for a New Members Group. Don thought that in order to maintain ourselves as a 'Friendly Society', it was important to regularly bring our newer members together on an informal and sociable basis. Don thought also, that it was important to show our newer members first hand, growing techniques used by experienced growers, in order that they too could become successful growers of our native orchids. Many members would soon lose interest and leave N.O.S.S.A. if they were unable to find success in growing their orchids.

Jan and Graham Burford fully supported Don and it was agreed that Don would co-ordinate a New Members group for an initial period and Jan and Graham would then take over. The first meeting of the group was held at the residence of Bubs and Don Wells on the 27th October 1990. The second meeting was held at the residence of Jan and Graham Burford. To date 28 (my count) New Members /Open Day get-togethers/events have been held, involving 24 different venues.

There is no doubt that the New Members / Open Day excursions are one of the most important aspects of NOSSA. All 28 meetings have been very well attended and a wealth of experience and knowledge has been passed onto many enthusiasts. Several who became members of NOSSA on a fairly casual basis have since become very enthusiastic about the Society's direction and many have become very skilful in their growing of Australia's native orchids. We owe a lot of thanks to Graham and Jan (and to Don and Bubs) for their considerable commitment and contribution to our Society in co-ordinating the Open Day Group. In addition, the articles provided to the Journal on a monthly basis by Graham, have provided those unable to attend Open Day meetings, invaluable information on native orchid culture. Jan and Graham have other commitments which prevent them from continuing in their previous capacity as co-ordinators of the group but without exception, we all appreciate very much the contribution that they have made to NOSSA over the past three years.

MYSIPHLLUM ASPARAGOIDES, OR BRIDAL CREEPER ENEMY OF NATIVE VEGETATION

Ruth Eisner, Yankalilla District Environment Group

Editor's Note: The following article is copied from EnviroNews (November 1993), the first newsletter of the Southern Region Environment Committee. Bridal Creeper is without question a serious threat to many orchid populations in South Australia, and if left to survive, will soon eradicate some of our most important orchid habitats. Bridal Creeper is everywhere in the Mount Lofty Ranges. It is a very aggressive weed and I would rate it as one of the weeds we should be the most concerned about in South Australia. I think I would rate it as being a greater threat than even the ubiquitous blackberry, to our native orchids. The article prepared by Ruth Eisner is well worth reading.

"Bridal Creeper has exploded into our native vegetation, Many love it because of its small shiny bright green leaves, climbing and draping gracefully over fences and any vegetation that offers support. It appears each year after the first autumn rains and dies off in the early summer. In small quantities it creates a fairy-tale ambience, where it is easy to imagine the invisible elemental world of elves, fairies, princes and princesses; you could create a make-believe bridal veil with it; hence, no doubt, its known common name. Unfortunately, it smothers and kills the native vegetation which cannot compete or replenish itself, its tubers eventually form a dense mat below the soil's surface, absorbing soil nutrients and water utilised by native vegetation. It is one of the few pest plants that can establish itself where native vegetation and soils are undisturbed. Many reasonably pristine National Parks are suffering the consequences.

Bridal Creeper was introduced from South Africa as a garden specimen and enjoyed conditions so much it jumped the fence and headed for anywhere birds go; the more trees and native vegetation; the more birds; and the more Bridal Creeper seeds distributed through bird droppings. Until recently, it was still being sold in plant nurseries!

With an apparent 95% germinating success rate, SA now has a serious infestation of the plant. Part of the reason for its explosion to the present level is because there are no economic incentives via Government or corporate bodies to finance its control or to research solutions. It is not a farming problem. Stock graze it so it doesn't take hold in paddocks. It is not, therefore, a priority for Government to invest in its control. Political emphasis needs to shift; the CSIRO has listed it in the top bracket of pest plant to be focused upon; taken funding is being funnelled into biological research control but much more is needed. Hopefully a change of community attitude towards Bridal Creeper will develop with the shifting values towards ecological issues and the valuing of our native animal and plant life.

Many environmental minded people ,will not be pleased that herbicides are the only effective and realistic way known to control this pest plant. Two herbicides recommended to control Bridal Creeper are:

1. Round-up 360, Zero; active ingredient - Glyphosate.
Trials have shown that in combination with Liase (Liquid Ammonium Sulphate - a fertiliser), results are excellent,

2. Brush Off or Ally; active ingredient - metsulfuronmethyl.
To be used with Pulse for maximum effectiveness.

Each herbicide works in different ways. The choice will depend upon the conditions in which the Bridal Creeper grows as well as the experience of the person advising you.

Wanting to avoid the bias of the literature put out by the chemical companies producing these herbicides regarding the safety levels to the ecosystem, I approached the Toxic Chemical Committee at the Total Environment Centre in Sydney, an independent group of concerned people including doctors and scientists, formed in 1979, who work to research the chemical risk, acting as a watchdog on pollution issues. They are involved politically with pollution control. They support the statement that Glyphosate has a minimal negative impact on the environment, but note that not enough information exists on the other ingredients in Round-Up blended chemicals (surfactant or wetting agents) that may be less safe. They were unable to provide specific information on Brush Off (metsulfuronmethyl), but said that since this chemical is not immobilised by clay, they suggest that Round-Up may be environmentally safer.

The enormous complexity of an ecosystem, and the unquantifiable ripple effect on that system by introducing a synthetic substance, really cannot be completely measured by any study, no matter how stringent. Much close observation over many years is necessary, by which time, as we know, unpredicted and undesirable consequences may show up. However, the above findings go some way towards appeasing apprehensions. In 3-5 years, I imagine only a very small amount of spot spraying will be needed to kill new seedlings on the land I caretake.

Unfortunately, we now live in a world where ecosystems are so thrown out of balance by generations of human error, that the choices to be made to try to correct some of them are inherently problematical. Each person has to make decisions for themselves about how to come to terms with solutions that are less than perfect, but are hopefully much better than doing nothing, and putting it in the too-hard basket.

Given the big leap in quantity and density of Bridal Creeper infestation this year on my, and other people's properties in this area, I believe the use of carefully applied herbicide to be the only viable solution for now.

As community awareness grows and Government is pressured to boost funding into biological controls, let us hope a more environmentally friendly alternative will exist in the future. If anyone wants to know more, or participate in Bridal Creeper control either privately or co-operatively, or has useful knowledge of ideas or energy to contribute, contact any of the following people:

Tanya Littlely
Conservation Council of SA (08) 223 2309

Stuart Pillman
Native Vegetation Management Branch (08) 226 3126

Ruth Eisner or Ross Manthorpe (085) 583 029

Yankalilla Environment Group (085) 582 320

In trying to contact Ms. Eisner for permission to publish the above article, I spoke to Ms Tanya Littlely, whose parents have an area of ungrazed, undisturbed scrub in the Yankalilla area. The area is one of South Australia's natural treasures but has unfortunately become severely overgrown with Bridal Creeper. Tanya has been concerned for some time about the intrusion of the weed and its strangling of the native flora and has been experimenting with various eradication methods. Tanya is finding success in her efforts. The Bridal creeper is being killed and so unfortunately are some native plants but mosses soon take over the sprayed areas, thus preventing other weeds from taking a foot hold. Rock ferns and orchids are amongst the first plants to become prominent in this moss blanketed environment. I am very, very pleased that research is being conducted by knowledgeable scientists in an effort to eradicate Bridal Creeper from naturally vegetated areas. Hopefully more funding will become available to ensure that the eradication program is efficiently and thoroughly carried out. ED.

Letter to the Editor AOF SEED AND PROTOCORM BANK

Many of your members may or may not be aware that the Australian Orchid Foundation Seed and Protocorm Bank has been combined into one under the curatorship of the undersigned.

The formation of this resource is to provide a source of seed and protocorms of species orchids. This serves two purposes. Firstly, it allows for the dissemination of material to growers at a nominal cost and assists in conserving the species ($1 per serve of seed, $2.50 per tube of protocorms, plus postage and packaging) and secondly, it is a source of funds for the Foundation for the promotion of orchid research.

My plea to your members is for seed, green pods or even mother flasks that are no longer required. Pollinate your species now! We are desperately short of material and the demand far exceeds supply. Dry seed should be sent in small paper envelopes posted in a small padded bag. Green pods or mother flasks should be carefully packed before posting in a suitable crush resistant container. Should any of your members need more information such as length of time to leave capsules before picking, etc, they can contact me at the address below.

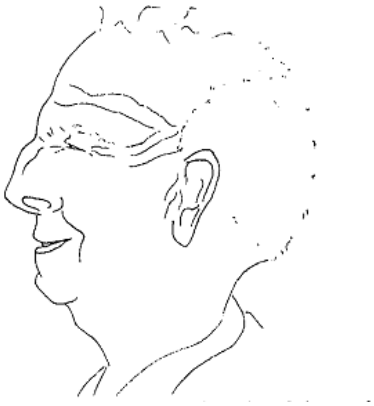
A new seed and protocorm list will be issued in December and can be obtained by sending a stamped self addressed business size envelope.

Yours faithfully,

Wayne K. Harris
6 Carlyle Court,
Toowoomba. 4350
Phone (076) 355 746

ROY HARGREAVES by Birgitte Sorensen
An Invaluable Volunteer and Friend at Black Hill Flora Centre

About 9 years ago, Black Hill Flora Centre were sorting out their seed room and changing the catalogue system from family to numerical order. Roy Hargreaves came as a volunteer to help clean and weigh seed. He noticed that Black Hill had a small collection of orchids that were maintained in a few pots. Having special interest in native orchids, Roy began to care for the orchids, weeding, potting them up every year and increasing the tuber stock. He single-handedly built up the collection to one of significance (the Black Hill collection is separate to the Rogers House collection -Ed). Almost without fail, Roy presents his smiling face and sense of humour at Black Hill every Thursday.



Roy has been (and still is) a great Ambassador for Black Hill Flora Centre. In the late 80's when Black Hill (known then as Black Hill Native Flora Park) was threatened with closure. Roy was amongst the many that fought against the closure. Roy has always spoken highly of his friends at Black Hill and the work they do, whether it be research or nursery work. He has worked voluntary at the Black Hill Flora Centre Annual Plant Sale for the last few years, and the profits from orchids that he sells goes directly into research of native plants at Black Hill.

Roy has won many prizes at orchid shows for native orchids that he has grown in Black Hill's name.

Roy has been involved with trying new orchid mixes and surface mulches in attempt to find the most suitable combination to successfully grow native orchids. With the aid of a sturdy tripod, Roy has taken many photos of orchids, some of which are used for display.

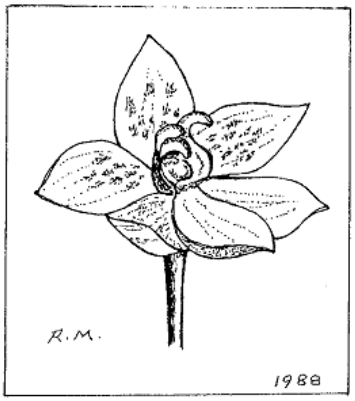
In early 1993, the Rogers House was relocated from the Adelaide Botanic Gardens to Black Hill Flora Centre. Before the pots could be moved, they needed to be tested for the presence of *Phytophthora*. Roy organised the pears for this test and helped T. C. Lee (Senior Scientist at Adelaide Botanic Gardens) to test the soil samples.

Roy is always willing to help people understand about the beauty of native orchids. He will often give work experience students a pot or two of orchids, in hope that they, too, will develop a deep appreciation for them. At the Adelaide Botanic Gardens, he relays new information to the Education Officer, so that school children who visit the gardens will also learn about native orchids. In association with Dr Brian Morley, Roy organised a tour of the Conservatory for N.O.S.S.A. Members, and he also helped organise another tour for them at Black Hill Flora Centre.

Every year at the Black Hill Christmas Party, Father Christmas comes to bring joy and presents to the kids (and big kids). And if you are lucky throughout the year, you can sometimes here Roy practising his "Ho Ho Ho Merry Christmas"!!!

The Spotted Sun-Orchids, *Thelymitra ixioides, Thelymitra juncifulia* and *Thelymitra x truncata*

by Heinrich Beyrle



Thelyrnitra ixioides has a wide distribution throughout eastern Australia, reaching its most western limit in the South East of South-Australia. Plants from the eastern states show large, cheery spotted flowers and are very attractive. These sun orchids are certainly one of the most beautiful in the genus. However, still further west, in the Adelaide Hills, very similar plants occur, which are rather small, 10-20 mm in diameter. and as one can read in "Orchids of South Australia" most forms are self-pollinating. These plants were named *Thelymitra juncifolia* by Lindley and occur also in Victoria, NSW, ACT and Tasmania.

I reported in the October Journal, that the spotted sun-orchids on a plateau near the eastern gate of the Belair National Park are larger than other plants from the Adelaide Hills and obviously not self-pollinating. This was observed last year, giving not much attention to this issue. Therefore, I visited the place several times this year and want to report here some more precise observations. As the flowers open for the first time in the season, they are rather small, about 10 mm diameter. As the opening and closing of the flowers of sun-orchids is associated with growth of the perianth segments, the flowers, when open on subsequent warm days, become increasingly larger. As the flowers are about 20 mm diameter, most of the flowers self-pollinate.

Therefore, the plants from the east gate of Belair National Park are not different from other spotted sun-orchids of the Adelaide Hills. However, at this place, there are quite a number of flowers left, which obviously do not self-pollinate. A closer look at the flowers reveals the pollinia are missing. These flowers last for about 3 to 4 weeks and reach a diameter of 30 mm or even more. The removal of pollinia shows, that the mainly self-pollinated spotted sun-orchid of the Adelaide Hills is still attractive to insects and some outcrossing may be achieved. This can also be seen by the numerous *Thelymitra x truncata* which occur there. These hybrid plants are slender and bear spotted, dark lavender blue flowers, which are not self-pollinating. They may be a cross between *Thelymitra juncifolia* and either *Thelymitra nuda* or *Thelymitra pauciflora*. During the last week in October, most flowers of the spotted sun-orchid were fertilised and only the hybrids and the flowers without a pollinium were left.

At this time, a somewhat different form of the spotted sun-orchid with pale blue flowers can be found. This rare form starts flowering 3 weeks after the normal dark lavender blue flowered form and is also self-pollinating. Actually, *Thelymitra x truncata* does not set seed when cross-pollinated with other plants of *Thelymitra x truncata*, but sets seed when fertilised with pollinia from *Thelymitra nuda*. A chromosomal study into the genus *Thelymitra* might be very rewarding. It may not only reveal relationships between hybrids and suspected parent plants but also shed some light on *Thelymitra ixioides* versa *Thelymitra juncifolia* or even on the *Thelymitra nuda* - *Thelymitra pauciflora* complex. One of the few chromosomal investigations into native Australian orchids was done on two *Bulbophyllum* species. by Rayden A. Rivett. For methods of chromosomal staining, the interested reader is referred to his article in the Orchadian, March, 1979. Research of this kind could be done by a student as part of a degree course requirement. Let's hope someone wants to become involved in the genetics of the genus *Thelymitra*.

1993/1994 TUBER BANK LISTING

1. Chiloglottis trapeziformis
2. Chiloglottis truncata
3. Corybas diemenicus
4. Cyrtostylis reniformis
5. Diuris brevifolia (Mylor)
6. Diuris corymbosa (Avenue Range)
7. Diuris corymbosa
8. Diuris sulphurea
9. Leptoceras menziesii (Kuitpo)
10. Lyperanthus suaveolens
11. Microtis unifolia
12. Pterostylis Bantam
13. Pterostylis curta (Bendemeer)
14. Pterostylis curta (Adelaide Hills)
15. Pterostylis curta
16. Pterostylis curta x P. pedunculata
17. Pterostylis Elegans
18. Pterostylis excelsa (Eyre Peninsula)
19. Pterostylis grandiflora
20. Pterostylis x ingens
21. Pterostylis Joseph Arthur
22. Pterostylis mutica
23. Pterostylis nana
24. Pterostylis nutans
25. Pterostylis nutans x P. x ingens
26. Pterostylis pedunculata
27. Pterostylis robusta
28. Pterostylis rogersii
29. Thelymitra graminifolia (?graminea) (Mt. Roe)
30. Thelymitra pauciflora
31. Pterostylis baptistii Janney

Public Facilities
The Flora Centre's Mason Theatre [seats 100] is available for hire for conferences and meetings of garden clubs and plant societies. [Telephone 228 2311]

The public is also invited to view the displays in the Administration Building foyer which is open Monday to Friday [except public holidays] from 9 a.m. to 4.00 p.m.

Picnic areas are provided under attractive gum trees in adjacent grounds. Toilet facilities are located near the nursery.

Regulations
To help you enjoy the Flora Centre, regulations are essential. For your information a summary of the more important ones is given.

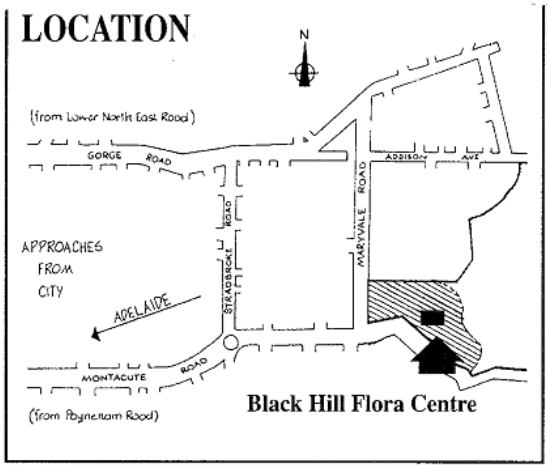
1) Plant material not to be removed or damaged.
2) Vehicles are not allowed in the picnic grounds.
3) Cycles, skateboards or skates are not permitted in the Flora Centre.
4) The playing of ball games or the throwing of any object is prohibited.
5) Radios, musical instruments, amplifiers or loud hailers are not permitted.
6) No dogs permitted.
7) Alcohol is not to be consumed.
8) Barbecues are to be confined to the picnic area. They not permitted during the fire ban season.

Parking
Car Park - off Maryvale Road, Athelstone.

Admission
Free

Opening Times
The picnic areas are open at the following times:-
Weekdays: 8.00 a.m.
Saturdays, Sundays and
Public Holidays: 9.00 a.m.

LOCATION



Black Hill Flora Centre

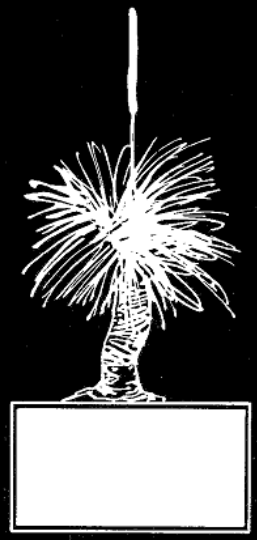
Closing Times
Weekdays: 4.30 p.m.
Saturdays, Sundays and
Public Holidays: closing time posted at the Entrance Gate.

Tax deductible donations
The Board of the Botanic Gardens has available tax deductible Trust Funds for donations of $2.00 and over to provide facilities and undertake research at the Flora Centre. Donations may be nominated to benefit Australian flora research or general scientific research and can be made payable to the Administrative Officer, Botanic Gardens of Adelaide, North Terrace, Adelaide, 5000. Telephone [08] 228 2324.

Joint Research Projects
Such ventures are currently being undertaken and are actively encouraged. For further information contact the Senior Scientific Officer, Black Hill Flora Centre, 115 Maryvale Road, Athelstone, S.A. 5076. Telephone [08] 336 3755.

2nd edn, Botanic Gardens of Adelaide,
February 1990

BLACK HILL FLORA CENTRE



History
In 1974, to establish the Black Hill Conservation Park and Native Flora Park, the State Government acquired the Athelstone Wildflower Garden and Nursery from the Corporation of the City of Campbelltown. In

January 1977, a Director was appointed. The following year a Trust was formed and development of the area commenced. That same year, 1978, laboratories and a nursery were established to provide facilities for research into the Australian flora: these were officially opened in 1979. Since 1986, these facilities have been administered by The Botanic Gardens of Adelaide. The National Parks and Wildlife Service administer the Park.

Objectives
1) To assist in the conservation of the Australian flora by research into the physiology and propagation of native species.

2) To research and develop methods of plant breeding and propagation for the overall development and cultivation of species of both the Australian flora and the exotic flora.

3) To identify and develop the potential of the Australian flora for the horticulture and floriculture

4) To identify and develop the ornamental potential of the Australian flora for private and public gardens.

5) To promote horticultural science and research.

Research
The research interests of the Flora Centre fall into following categories:

1) Research and development of horticultural potential of native plants
Many native plants have enormous potential as cut flowers or as garden plants, both domestically and overseas. This potential has been largely untapped in Australia. Banksias are marketed for the cut flower trade in Hawaii, Kangaroo Paw is grown by the Dutch, Geraldton Wax is grown in and marketed from Israel, and the Waratah is being exploited for the international cut flower trade by New Zealand floriculturists.

Typical of research being undertaken at Black Hill Flora Centre are projects relating to the propagation and cultivation of selected forms of *Ixodia achillaeoides* [Everlasting Daisy], *Clianthus formosus* [Sturt's Desert Pea] and various native grasses.

Studies using seed, cuttings and tissue culture are undertaken to develop the most efficient techniques to raise large numbers of commercially important plants. Plant improvement through selection and breeding enables desired characteristics [e.g. flower colour and size, disease resistance, frost tolerance] to be incorporated into a released variety.

The potential of Australian plants for development as flowering pot plants has not previously been researched. Development of *Ptilotus exaltatus* as a flowering pot plant is another Flora Centre activity.

The technology required to produce plants in the quantities and of the quality required by the market offers much scope for research. The Flora Centre works in conjunction with the CSIRO, Waite Agricultural Research Institute, S.A. Department of Agriculture and universities to provide both technical . knowledge and selected forms of native plants to the . industry.
industry

2) Research on conservation of threatened native plants
There are many species which are either on the verge f of extinction, are isolated to small areas of the state, or the occur in small numbers. The biology of these plants is studied to enable better conservation management practices to be developed. These plants can be multiplied in cultivation, their growth requirements studied, and eventually they can be replanted back into their native habitats

Working in conjunction with other services, such as I.U.C.N., National Parks and Wildlife, and The Society for Growing Australian Plants, Black Hill Flora Centre has assisted in replanting *Prostanthera eurybioides* [Monarto, Mt. Monster], *Olearia microdisca* and *Beyeria subtecta* [Kangaroo Island], and *Todea barbara* [Cleland Conservation Park] into their natural habitat.

3) Co-operative research and development
Black Hill Flora Centre carries out specific research projects for public and private bodies on a contract basis. Examples include revegetation of the flyash ponds at Pt. Augusta power station [in conjunction with ETSA], studies of root intrusion into drainage systems [in conjunction with E & WS Department], research into propagation of specific plant species for the nursery trade.

Seed and Plant Collections
The conservation objectives of the facility are served

by an extensive living collection of rare and endangered species in cultivation, as well as a comprehensive seed bank maintained in a low temperature seed room. All seed and living plants are catalogued for ready access and infoiniation.

Nursery
Black Hill Flora Centre has a modern nursery complex where plant propagation is carried out for the Adelaide Botanic Garden. Research experiments involving propagation and/or plant culture are undertaken in this acility. The nursery plays a fundamental role in training apprentices in plant production techniques. The area is not open to the public because of strict hygiene controls.

Plant Sales
Rare and uncommon native and exotic plants are made available to the public through plant sales held annually at the Flora Centre. These sales are advertised through the local press.

1993/1994 TUBER BANK ORDER FORM

1. Chiloglottis trapeziformis
2. Chiloglottis truncata
3. Corybas diemenicus
4. Cyrtostylis reniformis
5. Diuris brevifolia(Mylor)
6. Diuris corymbosa (Avenue Range)
7. Diuris corymbosa
8. Diuris sulphurea
9. Leptoceras menziesii (Kuitpo)
10. Lyperanthus suaveolens
11. Microtis unifolia
12. Pterostylis Bantam
13. Pterostylis curta (Bendemeer)
14. Pterostylis curta (Adelaide Hills)
15. Pterostylis curta
16. Pterostylis curta x P. pedunculata
17. Pterostylis Elegans
18. Pterostylis excelsa (Eyre Peninsula)
19. Pterostylis grandiflora
20. Pterostylis x ingens
21. Pterostylis Joseph Arthur
22. Pterostylis mutica
23. Pterostylis nana
24. Pterostylis nutans
25. Pterostylis nutans x P. x ingens
26. Pterostylis pedunculata
27. Pterostylis robusta
28. Pterostylis rogersii
29. Thelymitra graminifolia (?graminea) (Mt. Roe)
30. Thelymitra pauciflora
31. Pterostylis baptistii Janney

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 supply will be issued on a first-come, first-served basis.

Closing date for orders is the last mail 21st of January. Tubers will be posted 24th January 1994.

Post to : Mr. Philip Matthews, 1 Jet Road Highbury SA 5089

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

$ for lots

[ ] I will be on holidays and wish posting to be delayed. Please post after : (date)

PRINT CLEARLY

NAME

ADDRESS P code