



# BULLETIN

*OF THE*

WESTERN AUSTRALIAN NATIVE ORCHID  
STUDY AND CONSERVATION GROUP  
(INC)

*SEPTEMBER 1997*



OFFICE BEARER	ADDRESS	PHONE
PATRON	Dr. Steve Hopper	
PRESIDENT	Steve Phillips	
VICE PRESIDENT	Noel Clarke	
VICE PRESIDENT	Ian Geeve	
IMMEDIATE PAST PRESIDENT	John Eaton	
SECRETARY	Joni Eaton	
TREASURER	Christine Lock	
COMMITTEE	John Haynes	
	Tony Lock	
	Don Manners	
	Joan Greeve	
FIELD TRIP COORDINATOR	Stuart Harris	
LIBRARIAN	Bill Burton	
EDITOR	Noel Clarke	
AUDITOR	Ross Wilton	

### OBJECTIVES OF THE GROUP

- a To promote interest in and preserve Western Australian indigenous orchids.
- b To learn the best means of cultivation and do all things possible for the conservation of native orchids in their environment.
- c To learn their habitats and keep records.
- d To have field days and learn to recognise the different genera and species.
- e To hold meetings for the exchange of knowledge and furthering of interest in Western Australian orchids.
- f To affiliate with kindred organisations.
- g To make rules of the Group's domestic affairs.
- h To do all such other lawful things as are incidental to or conducive to the attainment of the above objectives.

*Note: The opinions expressed by contributors to this Bulletin are not specifically endorsed by this group.*

POSTAL ADDRESS OF GROUP: PO Box 323  
Vic Park 6979

**NEXT COMMITTEE MEETING**

Wednesday, 17 September 97 at 7.00 p.m., Kings Park  
Administration Centre.

**NEXT GENERAL MEETING**

Wednesday, 17 September 97 at 8.00 p.m., Kings Park  
Administration Centre.

**GUEST SPEAKER**

Brendon Lepski "The Role of the Herbarium"

**FORTHCOMING MEETINGS**

September 17 .. General Meeting.  
September 20 (Sat) .. Field Trip to Kings Park.  
September 21 (Sun) .. Field Trip to York Area.  
September 27/28/29 .. Field Trip to Stirling Range.  
October 11/12 .. Field Trip to Boyup Brook - Tonebridge.  
(Note change)  
October 15 .. General Meeting.  
October 19 (Sun) .. Field Trip to Dale.  
November 8/9 .. Field Trip to Augusta. (Date change)  
November 19 .. General Meeting.  
December 6/7 .. Field Trip to Walpole and Xmas Party.  
Field Trips marked \* are tentative ones.

**ANNUAL GROUP MEMBERSHIP FEES**

The Group membership fees are as follows:

Single Membership \$20.00 pa  
Family Membership \$20.00 pa

**BULLETIN CONTRIBUTIONS**

Contributions are needed for every edition of the Bulletin.  
Articles should be sent to Noel Clarke, [REDACTED]

[REDACTED] The article submission deadline for the next  
issue is 1 October 1997.

**SUPPER COST**

Each month our supper is generously donated by group members  
(per the list on the back of the Bulletin), while the group  
supplies the tea, coffee, sugar and milk.  
To recoup some of the cost of these supplies, a modest fee of  
50 cents applies. This can be left on the supper table and  
will be collected by the Treasurer at the end of the evening.  
Also please rinse out your cups when you have finished with  
them.

**\$ FOR SALE \$**

Rufa Trip Report \$10.00  
New Caladenia flava badges \$4.00 to members, \$5.00 to non-  
members.  
Name badge \$8.50  
Orchids of WA (2nd Ed) \$9.00  
Orchids of SW Australia \$40.00  
Car stickers \$1.50  
Pat Dundas cards \$8.00  
Bush Survival Kit \$4.00

**FIELD TRIP (SAT) 20 SEPTEMBER TO KINGS PARK**

Meet at 10 a.m. at the Tobrook Memorial, corner of Saw Ave & May Dr. BYO for BBQ lunch. Bill Burton will lead.

**FIELD TRIP (SUN) 21 SEPTEMBER TO YORK AREA**

Meet at West Talbot Rd and York Rd at 9.30 a.m. Please advise Stuart Harris [redacted] if attending.

**FIELD TRIP WEEKEND 27-28-29 SEPTEMBER TO STIRLING RANGE**

Meet at Stirling Range Caravan Park at 11 a.m. Sat 27 Sept. Please advise Stuart Harris [redacted] if attending.

**FIELD TRIP WEEKEND OCTOBER 11-12 TO BOYUP BROOK/TONEBRIDGE**

Meet at Boyup Brook water reserve in Jayes Rd (Bridgetown Rd) near Terry Rd approx 1 km from town centre at 10 a.m. Sat 11 Oct. Overnight bush camp at Tonebridge. Please advise Stuart Harris [redacted] if attending.

**FIELD TRIP SUN 19 OCTOBER TO DALE AREA**

Meet at Yarra Rd and Brookton Hwy at 10 a.m. Please advise Stuart Harris [redacted] if attending.

**KINGS PARK WILDFLOWER FESTIVAL 20-29 SEPTEMBER**

Plants are once again required for the display. Please contact Andrew Batty, phone [redacted], if you have any plants available. He will arrange to pick them up if you cannot deliver them.

**ANOS WORKSHOP/ SEMINAR SUN 5 OCTOBER**

ANOS WA are holding a workshop at Murdoch University, Robertson Lecture Theatre on Sunday 5th October from 9.15 am to 4.00 Pm. Registration fee is \$20.00 which includes papers, morning & afternoon tea/coffee. Enquiries phone [redacted]

**FIELD TRIP REPORT MOORA JULY 27 BY STUART HARRIS**

We left Perth in cloudy & wet conditions with the thought that the further north you go the better the weather. Not this day, so in wet and cold conditions the group met at Moora and started the search for orchids. Large numbers of *Pterostylis scabra* were still in flower, *Pt aff nana* (broad petalled snail), *Pt aff nana* (with sawtooth leaves), *Cyaniculla deformis* and a few *Caladenia exilis* subsp *vanleeuwenii*, most were white with only a few plants with colour.

We then continued to Watheroo to the *C. talbotii* site. Only 8 or 9 plants were found and once again most were white. 3 or 4 clumps of *C. vulgata* were also found here.

Everybody had lunch then we went further north to the Gunyidi-Wubin Rd to some salt lakes to find *C. exilis* subsp *exilis* in large numbers (1000+). *Cyan deformis* was also in this area. After this it was time to head home via the odd patch of bush.

**ANSWERS TO AUGUST'S JUMBLED WORDS**

- |              |             |
|--------------|-------------|
| 1. leporella | 6. globula  |
| 2. voigtii   | 7. macrotys |
| 3. nivalis   | 8. scaber   |
| 4. deformis  | 9. mutica   |
| 5. serratus  | 10. crinita |



## *Thelymitra spiralis* In The York Shire

Most of us spend a lot of time and travel to find *T. spiralis* because they seem so hard to locate.

During the past ten years I had known of only one population of 20 or so alongside the York Road in the York Shire. Early this year another population in the State forest further south was brought to my attention. Here what started out as a population of 10 or so plants, was soon found to be a much larger population of approximately 50 flowering plants.

I wondered then whether *T. spiralis* was really "rare" in the York Shire.

I decided to do a deliberate search and the results proved fruitful. Getting a "feel" for the typical location seemed to help... look for winter damp areas in sunny locations with a hilltop aspect. Look out for low scrub including *Borya*, *Andersonia lehmanniana* and rounded or strapped leafed sedges.

This knowledge has helped in finding four more populations averaging about 30+ flowering plants. Locations have been from 5 to 15 kilometres apart.

In the York Shire *T. spiralis* started flowering at the end of July. When the sun shines there just seems to be more and more of them. As at the 20<sup>th</sup> August they are in full flower with just a few buds and just a few gone over. On sunny days the flowers are easily seen in the open *Borya* or in the low scrub.

Flower colours have been interesting:

- |          |   |   |
|----------|---|---|
| A few    | - | the palest of pale – almost white                     |
| Lots     | - | light pink  |
| Others   | - | bright pink to pink/mauve with bright pink/red edging |
| Some     | - | lightly striped – pink/white                          |
| A few    | - | pink/mauve and spotted                                |
| Many     | - | spotted on the rear of the sepals                     |
| A couple | - | almost red  |
| One      | - | light orange with stripes                             |

To quote Pat Dundas, "The colours are unbelievable!"

- \* Flower size varies from 20-35 mm.
- \* Flower shape varies from star shaped to more rounded, cupped petals/sepals.
- \* Plant height varies from 15-30 cm.
- \* The leaf is generally well spiraled but some are straighter with just the touch of a twist.

I still have the urge to find more of these beautiful orchids!

Fred Hort

20 August 1997

PS: A large population of *Pt aff nanas* of the short sepal – *breviseppala* type is flowering in the York Shire. Do these short-eared snails similar to those in Gnangarra pines, grow in other inland areas?

## The Path to Saving Our Endangered Terrestrial Orchids

Andrew Batty  
Kings Park & Botanic Garden

There are a large number of endangered species in Western Australia, the majority of which are facing extinction through human activities such as agriculture and urban development. In the short period of European occupation large numbers of plants and animals have been adversely effected with more than 30 plant species in WA disappearing. Over the past 10 years the number of species that have become extinct or require conservation action have steadily increased.

Many of these endangered species now only survive in areas of remnant bushland. These pieces of remnant bushland will become increasingly important to us all, both as habitat for the increasing number of endangered plant species, often representing last examples of specific habitat types, and as tools in the role of environmental education.

Many rare species now exist in urban bushland outside the safety of the conservation reserve and are generally surrounded by housing or industrial sites. Where these remnants are privately owned they are constantly at threat from sale for development. How often do we see pieces of remnant bush one day and find them gone the next??

There are considerable pressures placed on remnant bushland, especially when it is located in an urban environment. Rubbish dumping, weed invasion, disturbance from recreational activities and the introduction of disease are real threats to these areas of bushland.

Western Australia has over 300 species and 27 genera of orchids, one of the richest floras in the world. Many taxa have been reduced in number and are now only found in a few locations. Western Australian orchids comprise the most significantly endangered plant family in the top 20 endangered species. The best way to conserve these species is to manage them in their natural habitat before they become critically endangered and in need of intense conservation effort to prevent them from becoming extinct.

When a species is recognised as critically endangered often the first step to saving the species is the preparation of a recovery plan. Through surveys of existing populations risks are identified and a list of actions are drawn up. Actions usually include some form of research into the species biology, as it is difficult to conserve a species if we don't know what is essential for it's survival. This is especially so for terrestrial orchids due to their complex associations with specific mycorrhiza and highly evolved pollination systems.

Kings Park & Botanic Garden together with Western Power are conducting research into the biology and conservation of endangered orchids of the Perth Region. The Study species include; *Thelymitra dedmaniarum*, *Caladenia huegelii*, *Drakaea elastica*, *Diuris micrantha*, *D. purdiei*, and *Epiblema grandiflorum* ssp. *cyanea*. Research is divided into ex situ (usually laboratory based) and in situ (field based) studies.

Ex situ conservation includes studies into the long-term storage of orchid seed and mycorrhiza in liquid nitrogen (-196°C) as a back up in the event that critically endangered species become extinct in the wild. This may give us a second chance for some species. This is definitely only a back up and is in no way meant to replace conserving the species in their natural habitat.

The plunging of orchid seed into liquid nitrogen has been found to increase germination percentages for a range of orchid species. This can be used to increase germination of seed from endangered orchid species where seed is often in short supply. Further research will determine the physical factors involved in orchid seed dormancy.

Understanding the distribution of orchid mycorrhiza is being investigated using dormant tubers and tissue cultured orchid plants. Sampling roots from these plants and isolating mycorrhiza should help us understand the distribution of orchid mycorrhiza in the field. This information will be important in future attempts to return orchids to the field and in understanding the distribution of orchids.

Studies into the in situ germination of orchid seed in field sites have shown that good germination can be obtained however it was unlikely that many of these seedlings would survive summer dormancy.

Laboratory produced seedlings were also returned to field sites in attempts to establish orchid plants to field sites. Monitoring of field sites has shown that 38% of *Pterostylis vittata* seedlings survived summer dormancy but no seedlings of *Caladenia arenicola* survived.

Studies into propagation methods for endangered orchids has produced flowering *C. arenicola* plants within 18 months of the seed germinating.

The production of dormant tubers in the glasshouse and returning these to field sites is a method that is currently being used to return individuals of *Thelymitra dedmaniarum* to the field as part of a research translocation. The main aim of the translocation is to understand the survival of orchid seedlings returned to natural field sites and the behaviour of the associated mycorrhiza at these sites.

It is hoped that the outcomes from this three year study can be applied to a broader range of endangered orchid species.



# MORAWA FIELD TRIP BY ROSS & MARGARET FOX

We left about noon on Friday for our weekend at Caladenia Ridge with our first night at the Western Flora Caravan Park. On our way we saw a burnt area at the Moore River N.P. and of course we had to stop. All we could find were lots of *Caladenia flava* and a few *Cyanicula gemmata*.

Our next stop was the Cataby Roadhouse where we were hoping to find some *T. variegata* (we've wanted to find one for years). We had been told exactly where to look, as some had been found 3 weeks before. After searching for several minutes Margaret almost stepped on the only one to be found, it had one flower and two buds. We were so elated we took some photos.

We arrived at the caravan park in time to go on Allen Tinkers nature walk which was very interesting. We saw some *ms Diuris tinkerii* and a protected *C. crebra*. That evening we enjoyed a barbeque with Tom & Glenys Blinco.

Stuart Harris had told us of a site about 16 km away along the railway line where other *Caladenias* grew, so early next morning we set off with Tom & Glenys. It was worth the trip as we found *C. footeana*, *T. antennifera*, *Cyan. deformis*, *Pt. vittata*, and some *Diuris* we could not identify.

We then sped off to the rendezvous at Caladenia Ridge where we were elected to write the report. Don and Eva Smith actually arrived later after losing a wheel off their trailer.

After settling in we trekked off with Helen and the boys pointing out the areas and various orchids. We were not disappointed. After discussions amongst the experts we think we saw *Caladenia footeana*, *C. vulgata*, *C. incensa*, *C. latifolia*, *C. reptans*, *C. pendens*, *C. roei*, *Pras. gracile*, *D. aff recurva*, *D. sp aff porrifolia*, *D. laxiflora*.

After lunch we went to the eastern side of the property and found much the same but not as abundant, with the addition of *C. vulgata* x *C. roei*.

That night we filled our hosts living room to view slides. As the night was cold most went to bed early.

The next morning after thanking our host we set off for Canna for a final scout around. The following were found but not in any quantity - *C. roei*, *hirta* subsp *hirta* & *rosea*, various white spiders, various *Diuris*, *Cyan. deformis*, *Pt. aff nana* (hairy stem). We all then parted to make our own ways home. At Moora we met up with Don & Eva and we told them we were headed to a site before GinGin where we found dozens of *Ely. brunonis* about 2 years previously. We found we were too early, however we found several types of orchids just finishing or starting and hundreds of leaves. We feel it would be a good site for the group to look at in the future. (A field trip for next year Ross. Ed). We intend going back about the end of September to see if the enamel orchids are out.

We believe a good time was had by all.



# **FIELD TRIP BY GRAHAM ANDERTON & NOEL CLARKE**

Prior to the Morawa trip we visited the Walpole, Albany, Bremer and Pingaring areas. Following the Morawa trip we were joined by Dave Parker and visited the Horrocks & Kalbarri areas. *Thelymitra spiralis* or *T. variegata* were the highlights of the trip. The variation is magnificent. We saw lots of *T. spiralis* round Walpole but Gloria & Bill Jackson did not lay on the good weather for them to open. It was open at Kalbarri & Pt. Gregory. In all we saw 56 species in 13 genera.

## **WANOSCG GENERAL MEETING 20/8/97**

**PRESENT** - As per Attendance Book.

**NEW MEMBERS/VISITORS** - Nil.

**MINUTES** - It was moved Arends/Clarke "that minutes of General Meeting of 16th July be accepted. CARRIED.

**BUSINESS ARISING** - Nil.

**CORRESPONDENCE** - As per Correspondence list.

ANOS WA gave notice of a Workshop/Seminar to be held at Murdoch University, on cultivation & conservation of Australian Native Orchids. This will be held on Sunday 5th October 9.15 am to 4 pm and will cost \$20. This includes morning and afternoon tea and copy of papers presented.

**TREASURER'S REPORT** - Treasurer's report was circulated.

**FIELD TRIPS** - Details of planned field trips will be published in the Bulletin. Forthcoming field trips were discussed and several members spoke on individual trips taken.

**PLANT TABLE** - Plants were brought in and described by John Arends and Bill Burton.

**GENERAL BUSINESS** - Thanks were extended to all those members who lent orchids, and gave their time to man the display at the Galleria Shopping Centre. Don Manners has had some of his orchids tested, and it seems they might be infected with some form of Phytophthora.

The raffle was provided by Noel Clarke and won by Ross Fox, and the supper was provided by Ross & Margaret Fox.

A very interesting talk and slide show on saving our endangered orchids was provided by Andrew Batty. The meeting closed at 9.50 p.m.

	SUPPER ROSTER	RAFFLE ROSTER
SEPTEMBER	Christine Lock	A de Haan
OCTOBER	Sarah Atkinson	Don Manners
NOVEMBER	Margaret Wilton	Eva Smith

WANOSCG  
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Victoria Park 6979

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Forthcoming Field Trips

20 September to Kings Park  
21 September to York Area  
27-28-29 September to Stirling Range  
11-12 October to Boyup Brook/Tonebridge  
19 October to Dale