

Native Orchid Society of

South Australia Inc.

Journal



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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ANNUAL SUBSCRIPTION: \$14 FAMILY OR SINGLE. DUE IN MARCH EACH YEAR.

**NATIVE ORCHID SOCIETY
OF SOUTH AUSTRALIA INC**

DECEMBER 1996 Vol. 20. No. 11 JOURNAL

FEBRUARY MEETING

Tuesday, 25th February 8.00 pm: at St Matthews Hall, Bridge Street, Kensington. Speaker to be announced.

Doors to the hall will be open at 7.15 pm for those wishing to borrow books from the library or take in items for the trading table.

There will be no meetings of the Society in December and January

THE PRESIDENT AND NOSSA MANAGEMENT COMMITTEE WOULD LIKE TO TAKE THIS OPPORTUNITY TO WISH ALL MEMBERS AND THEIR FAMILIES A VERY HAPPY CHRISTMAS AND AN ENJOYABLE AND PROSPEROUS NEW YEAR

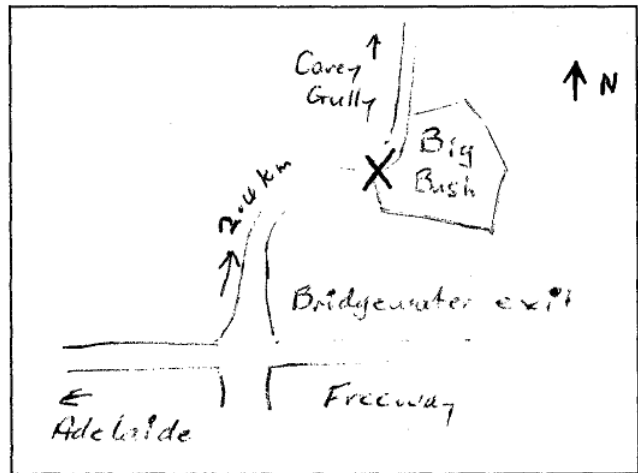
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NEW MEMBERS: NOSSA takes great pleasure in welcoming:

Graham Eakins of Elizabeth

COMING FIELD TRIPS

Sunday 12th January 1997 Carey Gully 'Bigbush',
Dipodium Special
Meet at place marked by 'X' on map at 2pm.



ON THE BENCH

Dendrobium ruppianum x *D. Aussie Gem*, *Sarcophilus* Empress, *Diuris drummondii*, *D. Frogmouth*, *D. Dragonfly*, *Pterostylis biseta*, *P. aff. biseta*, *P. aff. rufa* (Tas.).

NOVEMBER MEETING



65 members attended our Christmas Breakup and Auction. The auction raised \$440. Interesting items included a flask of seedlings of *Caladenia rigida* our threatened Adelaide Hills White Spider orchid, cactuses, hollow logs and early copies of *The Orchadian*. Thankyou to our regular auctioneer Les Nesbitt and helpers Reg Shooter, Geoff Edwards and Bill Dear. Many thanks to all who supported the Auction by buying or donating.

David Pettifore gave a report of his attendance on the A.N.O.S. Victoria excursion to the Grampians.

George Nieuwenhoven was presented with the Kay Nesbitt Trophy for his pot of *Caladenia* 'Harlequin' (*C. flava* x *C. latifolia*).

Gerry advised that Thelma Bridle has for sale cross stitch patterns of autumn orchids at \$10 each.

Gerry thanked Ron Robjohns for his 20 years of service as Society Treasurer.

Roy Hargreaves advised that Andrew Paget is now A.N.O.S. seedbank manager. Please send species seed with locality details whenever you can and support this valuable enterprise.

Conservation Group report:

Thousands of *Monadenia* were sprayed with poison or hand pulled at Kuitpo. (This species was found at Tottness Recreation Park during this years NOSSA survey).

The *Pterostylis arenicola* site at Grange Golf Course was weeded for veldt grass. Another introduced orchid *Serapias* species wild at Morgan Road, Ironbank was dealt with. Hand pollination of *Caladenia gladiolata* (Alligator Gorge), *Caladenia rigida* (Millbrook) and *C. behrii* (Para Wirra) was carried out and seed collected for the A.N.O.S. seedbank (see above).

A big THANKYOU to all who promised tubers and slide boxes, much appreciated!

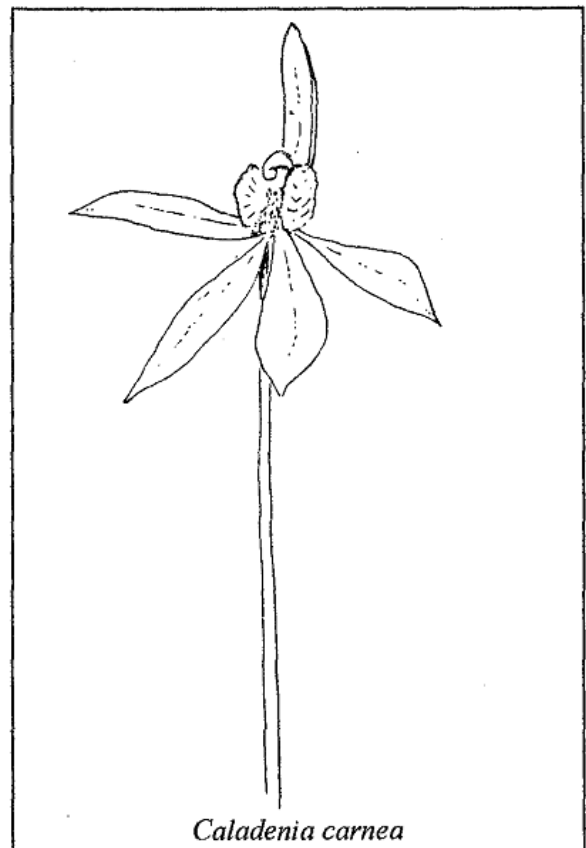
OBSERVATIONS ON ORCHID POPULATIONS IN HARDY'S SCRUB 1992-6

by THELMA M BRIDLE

Hardy's Scrub is an area of 155 hectares of native bushland situated west of Blewitt Springs. The area was logged in the past to provide wood to fire Hardy's brandy stills, hence the lack of large eucalypts, but a predominance of multi-trunked mainly blue and pink gums. Later, the area was used for sheep grazing. In mid 1991 Hardy's Scrub was declared a Conservation Park and the following year was incorporated into the Onkaparinga River National Park.

Phil and I first visited Hardy's Scrub in 1992, and realising the richness of the birdlife and flora - Hardy's scrub is particularly noted for its prolific and colourful display of spring wildflowers - we began making frequent visits. From notes we made on each visit we eventually decided to make a study of some of the orchids in the northern area of the park close to Chapel Hill Road. This is not a scientific study, evolving purely from a curiosity to learn more about orchids in their natural environment and attempt to ascertain the factors that most influence changes to populations. Whilst many of the observations are generalised, a few of the more discrete orchid populations have been more closely monitored with regard to numbers of plants and flowers. We proposed to continue the study for ten years. This is a report on the first five years observations.

Over the past five years the Friends of the Onkaparinga River National Park have cleared away rubbish and carried out weeding, particularly of the South African boneseed (*Chrysanthemoides monilifera*) and have made new tracks in the park and closed off old ones. In 1994 a track in the northern area was closed and another formed, running parallel to Chapel Hill Road linking the Quarry Track with Wine Dam Track. Also in 1994 clearance occurred on the western side of the park, forming firebreaks and eventually extending the park to the



Caladenia carnea

boundary between native scrub and agricultural land. The land surrounding Hardy's Scrub is seeing more visitors each year. All these factors as well as annual variations in seasonal climatic changes need to be taken into account when monitoring orchid populations in their natural habitat.

General weather conditions between 1992 and 1996

	Rainfall	Temperature
1992	Late winter and spring rains	Below average temperatures
1993	Very dry autumn and early winter Winter rainfall	Average temperatures
1994	50% of average annual rainfall	Average temperatures
1995	Dry summer and autumn. Winter rain followed by a dry spring	Average temperatures
1996	Dry summer and autumn. Good winter and early spring rainfall	Below average temperatures until mid-spring

Effects of annual variations in weather conditions on orchid flowering times

1992	<i>Diuris corymbosa</i> and <i>Caladenia carnea</i> flowered early
1993	<i>Thelymitra antennifera</i> and <i>T. rubra</i> flowering season was short
1994	<i>Pterostylis foliata</i> flowered late
1995	<i>Prasophyllums</i> flowered early. <i>Thelymitra rubra</i> over quickly
1996	<i>Prasophyllums</i> a little early

Winter/spring rain seems to encourage some orchids to commence their flowering season a little early, whilst a dry year like 1994 can result in delayed growth, especially of a fleshy orchid like *Pterostylis foliata*. Hot spring days cause the sun orchids to flower in profusion, but reduce the length of their display. The 1996 flowering season began early but slowed during spring due to cold conditions.

General observations on orchid populations 1992-6

Diuris corymbosa flowers are widespread and very variable in Hardy's Scrub, ranging from almost totally dark red to plain yellow, these usually found on more robust plants. *Diuris pardina*, of which only one plant was recorded in 1992, has not been found since.

Microtis sp. numbers have increased considerably since 1992 and are most commonly found in groups at the base of trees and shrubs. *Caladenia carnea* is common, particularly in drier, stony areas whilst *C. prolata* and *C. fuscata* are more frequently found amongst trees and shrubs. *C. leptochila* frequents the drier, stony areas, where it is well represented. Lack of winter rainfall reduced flowering numbers of *Caladenia tentaculata*, *Diuris corymbosa*, *Glossodia major*, *Thelymitra antennifera* and *T. rubra*.

Glossodia major is widespread in the area with flowers ranging from deep purple through to pure white. *Pterostylis robusta* flowering was reduced by the dry winter conditions and whilst not checked in 1996, would be expected to have improved considerably judging by other populations within the Onkaparinga River National Park.

Other *Pterostylis* species observed maintained fairly constant numbers. *Prasophyllum* species increase from seed dispersal as well as vegetatively. This is demonstrated by both *P. fitzgeraldii* and *P. pallidum* which have both spread from their original sites.

Annual variations in orchid numbers 1992-6

Orchid	1992	1993	1994	1995	1996
<i>Acianthus Caudatus</i>	common		← numbers constant		→
<i>Acianthus pusillus</i>	common		← numbers constant		→
<i>Caladenia carnea</i>	common		← numbers constant		→
<i>Caladenia leptochila</i>	common		← numbers constant		→
<i>Caladenia tentaculata</i>	widespread	↓	↓	widespread	widespread
<i>Diuris corymbosa</i>	widespread	↓	> 1993	widespread	widespread
<i>Glossodia major</i>	widespread	↓	>1993	widespread	widespread
<i>Microtis</i> sp.	common		numbers increasing		→
<i>Prasophyllum fitzgeraldii</i>	scattered	6+	numbers increasing	→	widespread
<i>Prasophyllum pallidum</i>	few	4	numbers increasing	→	common
<i>Prasophyllum pruinosum</i>	many	scattered	scattered	not found	
<i>Pterostylis foliata</i>	X	scattered	← numbers constant		→
<i>Pterostylis longifolia</i>	X	10 flowers	← numbers constant		→
<i>Pterostylis robusta</i>	10 flowers	common	4 flowers	X	X
<i>Pterostylis sanguine</i>	X		← numbers constant		→
<i>Thelymitra antennifera</i>	common	↓	↓	>1993	common
<i>Thelymitra pauciflora</i>	widespread		← numbers constant		→
<i>Thelymitra rubra</i>	widespread	↓	↓	widespread	widespread

Widespread - numerous throughout the area

Common - numerous at particular sites

X - not recorded for this year

Flower spike numbers for specific orchid populations 1992-6

Orchid	1992	1993	1994	1995	1996
<i>Corybas dilatatus</i>	X	50	50	100	75
<i>Pyrorchis nigricans</i> a	5	10	25	2	6
b	20	5	12	27	12
<i>Thelymitra benthamiana</i>	X	16	20	15	13
<i>Thelymitra grandiflora</i>	X	6	X	14 plants	3
<i>Thelymitra juncifolia</i>	8	↑	spreading	crossed path	22

1992 populations to become widespread in the area.

The 1996 season has seen their best flowering, with one *Prasophyllum fitzgeraldii* flowering again at a site where it has not been seen since 1992. This may be related to the spring rainfall which occurred in both 1992 and 1996. *Prasophyllum pruinosum* which was observed as scattered plants for a few years has not been found in 1995 or 6. This may be due to incomplete checking. In 1996 *Prasophyllum goldsackii* 'aenigmum' was found for the first time in the Adelaide Hills with a colony of about 10 plants, and others scattered along the track running parallel to Chapel Hill Road. *Thelymitra antennifera*, although declining to extinction in one population, has in all other populations increased both in numbers and spread.

Specific orchid populations 1992-6

Corybas dilatatus populations are poor seed producers and this population of about 200 plants has only produced two seedpods in the past four years. There has been an increase in size in this time which is therefore by multiplying tubers. About 50-100 large flowers are produced each year in the moist, protected location, where humidity remains high.

Pyrorchis nigricans. The two populations observed both grow in the stony rise at the back of the old Quarry. They are somewhat unusual in that they flower annually without fire stimulation.. Plant numbers have not been counted, but numbers of flowering spikes remain fairly constant despite fluctuations in numbers between the two colonies. 1994 and 1995 were the best years for numbers of flowering spikes, but until 1996 five flowers per spike had not been recorded, yet were common this year, possibly due to two consecutive years with good winter rainfall. A few flowering spikes were found elsewhere in Hardy's Scrub in 1993,5 and 6.

The *Thelymitra benthamiana* population on a gravelly east-facing slope has remained constant in numbers. In the last two years it has begun to spread further up the hillside and now numbers 27 plants. This year a third of the plants have rust on their leaves and some plants appear to have been lost due to this seemingly increasing problem, which was only encountered for the first time in 1995 on a couple of plants. This might be related to heavy winter rainfall and will continue to be monitored.

The *Thelymitra grandiflora* population has only three flower spikes this year. The specimen which has grown so successfully on the edge of the track since 1992 was broken by strong winds just as it began flowering.



Diuris corymbosa

Thelymitra grandiflora sets little seed (average of one pod per ten flowers) although the enormous number of seeds per pod is probably quite adequate for survival. The tuber is long lasting, some of the flowering plants are the same as those found in 1993 and vegetative reproduction is very slow. Disappointing is the decline in numbers of both plants and flowering spikes in 1996. This could be due possibly to spraying in nearby vineyards with chemical drift falling on to the large and long-lasting leaves of this orchid, or possibly older tubers are susceptible to rotting off in wet winters.

Thelymitra juncifolia on the other hand must have short-lived tubers and rely on seed dispersal. Between 1992 and 1996 the population we have been monitoring has increased in numbers, spread 50 metres along the track and crossed to the other side of the track. This year there were only two plants at the original site. Populations of this orchid have become quite numerous throughout the area over the past five years. We have also found a variation of *Thelymitra juncifolia*. This is a short stemmed plant usually with only one flower which grows predominantly at the base of blue gums in the bark and leaf litter. Despite

growing in the shade the flowers open freely on warm days but are only half the size of other *T. juncifolia* flowers. They may just be weak plants due to their location, but will be considered in more detail during the next five years.

Creating a new track in the bush causes soil disturbance and by breaking the canopy allows more light to enter the area. This encourages many orchids to flower whilst there is an opportunity, facilitating the finding of new species eg. *Prasophyllum goldsackii* 'aenigmum'. Correspondingly, closing a track has resulted in very slow regeneration.

The many freesias along the track are gradually becoming smaller as the amount of light they receive reduces, but

unfortunately flowering of orchids has already reduced significantly. Although many more people are now visiting Hardy's Scrub we have not found orchid plants removed. A few orchids have been picked, but fortunately no serious vandalism has occurred. Boneseed invasion is under reasonable control, but bridal creeper and more particularly dodder (*Cassytha*), the increase of which has been noted in many parks, are becoming more dominant. We have not yet encountered *Monadenia bracteata* in Hardy's Scrub. The additional land included in the park, together with cleared firebreaks and new tracks should provide some interesting orchid searching for the future.

Orchids recorded by us from 1992 - 6 in Hardy's Scrub

Acianthus caudatus, *A. pusillus*; *Cyrtostylis reniformis*; *Caladenia carnea*, *C. prolata*, *C. fuscata*, *C. pusilla*, *C. tentaculata*, *C. leptochila*, *C. latifolia*, *C. reticulata*; *Corybas dilatatas*, *C. despectans*; *Cyanicula deformis*; *Diuris corymbosa*, *D. pardina*; *Eriochilus cucullatus*; *Genoplesium rufum*; *Glossodia major*, *Microtis arenaria*, *M. frutetorum*; *Prasophyllum fitzgeraldii*, *P. pallidum*, *P. pruinatum*, *P. goldsackii 'aenigmum'*; *Pterostylis foliata*, *P. longifolia*, *P. nana*, *P. nutans*, *P. pedunculata*, *P. robusta*, *P. sanguinea*, *Pyrorchis nigricans*; *Thelymitra antennifera*, *T. benthamiana*, *T. grandiflora*, *T. 'bracteata'*, *T. juncifolia*, *T. luteocilium*, *T. rubra*, *T. nuda*, *T. pauciflora*, *T. carnea*, *T. aff. pauciflora*.

Editors note: Other orchids recorded for Hardy's Scrub include *Diuris brevifolia* (Bob Edge), *Thelymitra luteocilium* (NOSSA Survey 1990) and *Thelymitra x macmillanii* (Editors 1996) as well as both *Leporella* and *Leptoceras* (NOSSA survey 1990)

AUSTRALIAN NATIVE ORCHID HYBRID REGISTRATIONS

(New registrations from lists in *The Orchid Review*, January/April 96) as shown in the *Orchadian*

Name	Parentage	Registered by
Dendrobium		
Bellinger River	Hilda Poxon x Aussie Victory	N. Mitchell
Ellen Glow	Yellow Glow x Ellen	N. Finch
Gillieston' s Pepper Pot	Limestone x <i>teretifolium</i>	Florafest (W. Skillicorn)
Gordon Young	Margaret Paxton x <i>speciosum</i>	H.G. Young
Hilda Hill	Aussie Ira x Ellen	S.G. Hill
Lovely Nature	Lowana Nioka x <i>antennatum</i>	Michel Vacherot
Sandy Canal	Gloucester Sands x <i>canaliculatum</i>	G. Freeman
Walter Upton	<i>mirbelianum</i> x <i>nindii</i>	G. Freeman (W.T. Upton)
Diuris		
Frogmouth	<i>drummondii</i> x <i>venosa</i>	G. Nieuwenhoven
Mule	<i>drummondii</i> x <i>sulphurea</i>	Nesbitts
Pterostylis		
Jumbuck	<i>biseta</i> x <i>woollsii</i>	Nesbitts
Ruckman	<i>procera</i> x <i>X ingens</i>	Nesbitts
Thelymitra		
Cinderella	<i>rubra</i> x <i>variegata</i>	H. Beyrle
Goldfingers	<i>nuda</i> x <i>antennifera</i>	Nesbitts
Queen Adelaide	<i>antennifera</i> x <i>aristata</i>	H. Beyrle
Spring Delight	<i>nuda</i> x <i>rubra</i>	Nesbitts

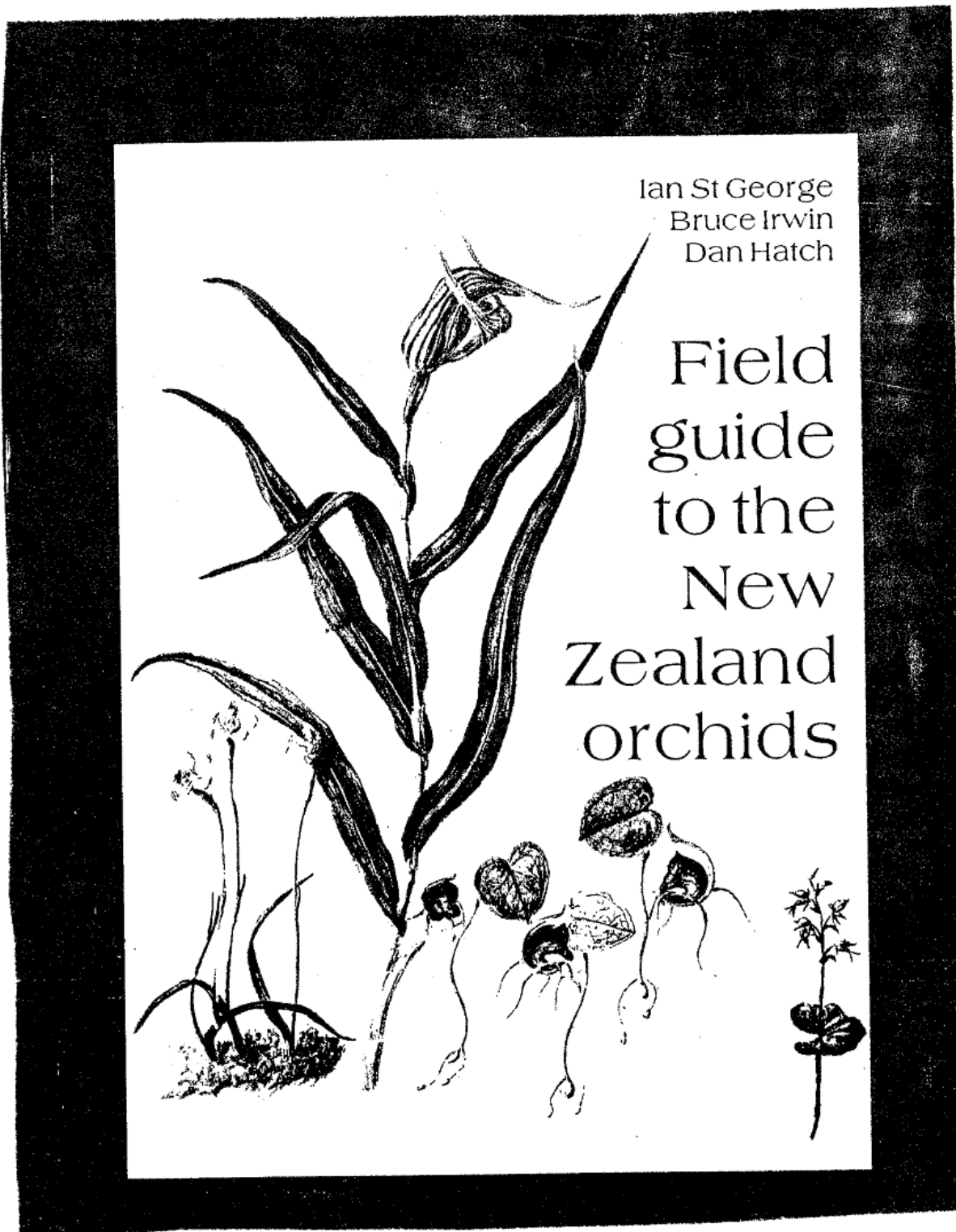
NEW ORCHID BOOK

Field Guide to New Zealand Orchids by Ian St George, Bruce Irwin, Don Hatch.

Published 1996, NZ Nat. Orch Group

Three of the top names in New Zealand orchid study have joined forces to produce this neat little guide. Every known New Zealand species is illustrated and its distribution mapped on glossy paper. The format is excellent: one species per page - altogether over 100 species. The main advantage of this book is its 'up to date' nature. We are introduced to all sorts of undescribed species. Because its basically a black and white book its cost has been kept down. Well worth the \$10 asking price! If enough people are interested orders may be taken through NOSSA.

(The first named author visited us in September and your editor managed to show Ian and wife, Kristy, just how many species could be found at just three sites in the Adelaide Hills.)



The FireOrchid - *Pyrorchis nigricans*



Drawing by Erika Stonor

ERIKA E. STONOR

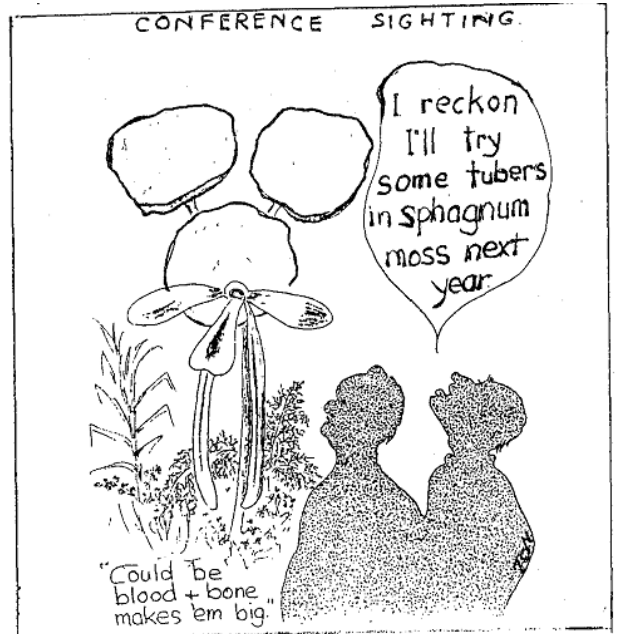
Pyrorchis nigricans

1996/97 TUBER BANK ORDER FORM

CLOSING DATE FOR ORDERS IS THE LAST MAIL 17th January 97.
 Tubers will be posted 20th January 97.
 POST ORDER TO: T & T O'Neill, 19 Parana St., FLINDERS PARK, 5025.

Circle each lot number 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.

1. *Arthrochilus* sp.
2. *Chiloglottis trapeziformis*
3. *Corybas diemenicus*
4. *Corybas incurvus*
5. *Corybas hispidus*
6. *Cyrtostylis reniformis* (Lucindale)
7. *Diuris corymbosa*
8. *Diuris sulphurea*
9. *Microtis unifolia*
10. *Pterostylis alata*
11. *Pterostylis angusta*
12. *Pterostylis coccinea*
13. *Pterostylis concinna*
14. *Pterostylis curta*
15. *Pterostylis curta* (Flinders Ranges)
16. *Pterostylis dolichochila* (Lucindale)
17. *Pterostylis Dusky Duke*
18. *Pterostylis erecta* (Toowoomba)
19. *Pterostylis fischii*
20. *Pterostylis x furcillata*
21. *Pterostylis hildae*
22. *Pterostylis Hoodwink*
23. *Pterostylis x ingens*
24. *Pterostylis Joseph Arthur*
25. *Pterostylis laxa*
26. *Pterostylis lingua*
27. *Pterostylis longicurva*
28. *Pterostylis nana*
29. *Pterostylis Nodding Grace*
30. *Pterostylis nutans*
31. *Pterostylis ophioglossa*
32. *Pterostylis pedunculata*
33. *Pterostylis revoluta*
34. *Pterostylis robusta*
35. *Pterostylis russellii*
36. *Pterostylis stricta*
37. *Pterostylis x toveyana*
38. *Pterostylis truncata*
39. *Thelymitra antennifera*
40. *Thelymitra x Macmillanii*
41. *Thelymitra* sp.



42. *Pterostylis grandiflora*

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

\$ _____ for _____ lots.

[] I will be away and wish posting to be delayed.

Please post after date

NAME
ADDRESS
. P/C

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