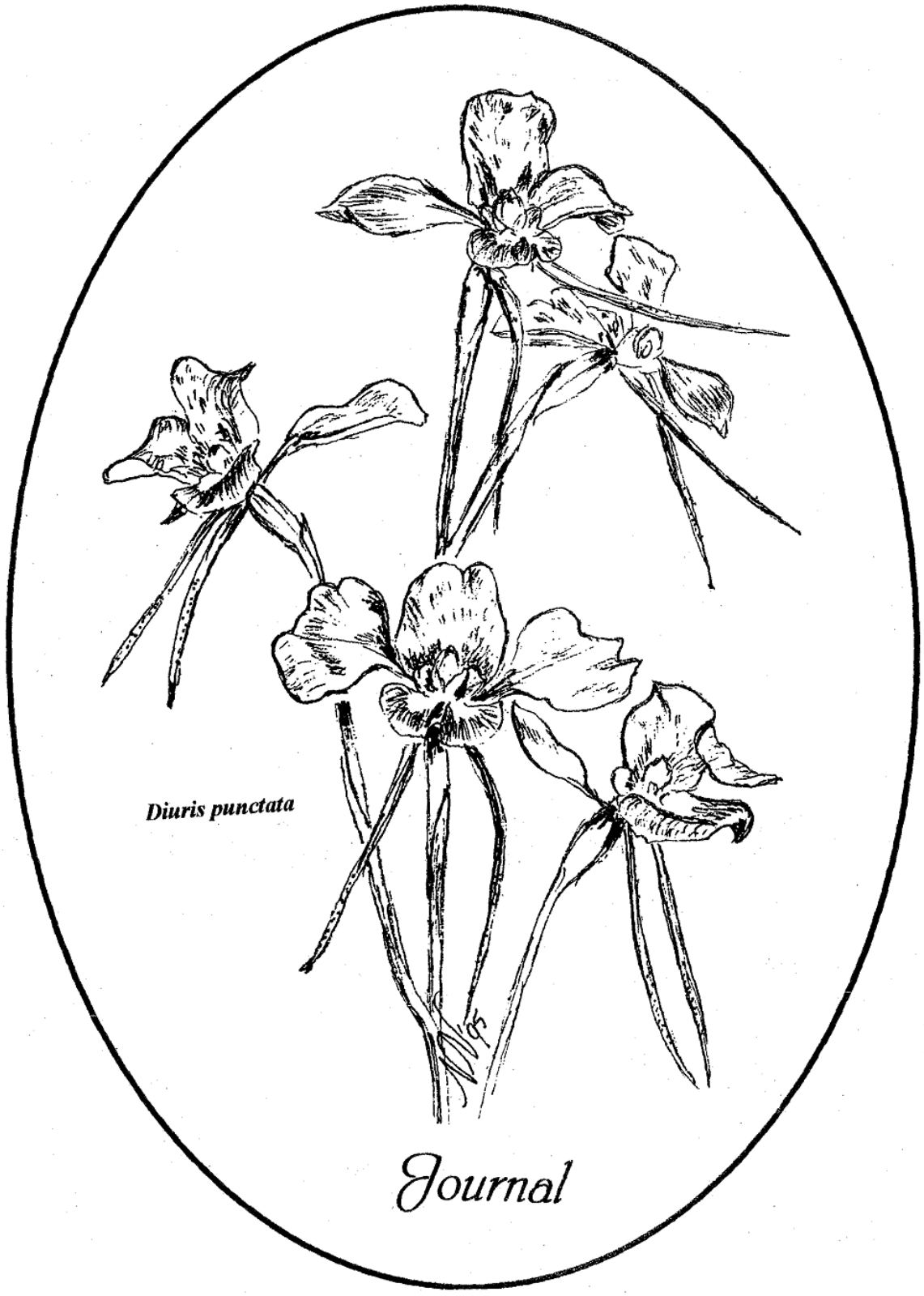
Native Orchid Society of South Australia Inc.



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VOLUME 19 NO. 1
FEBRUARY 1995

NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA INC.

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

FEBRUARY 1995 VOL. 19. NO. 1 JOURNAL

MARCH MEETING

Tuesday, 28th February 8.00 pm: at St Matthews Hall, Bridge Street, Kensington. Noel Oliver will speak on Australian Epiphytic orchids. Doors to the hall will be open at 7.15 pm for those wishing to borrow books from the library or take in items for the trading table.

DIARY DATES

Feb 28 First meeting 1995.
Mar 5 Open Day, George Nieuwenhoven's
Mar 28 1995 AGM. All positions will be declared open.
May 12 Annual Dinner at the Walkers Arms Hotel.

JOURNAL COVER ILLUSTRATION:
The illustration of the Purple Double tails *Diuris punctata* is by Nancy Nieuwenhoven. (See article by Nancy's husband, George in this issue.)

COMMITTEE MEETING
To be held at 7.30 pm Friday March th at the home of Les Nesbitt,
18 Cambridge Avenue, Vale Park.

COMING FIELD TRIPS

Saturday March 11th 10 am
`Late Summer Orchids'
Meet at the Myponga turn off from the Willunga - Mt Compass road.
We will visit Higgs Swamp to look for *Pterostylis `aphylla*' and the undescribed `Summer Swamp *Eriochilus'*
On the return to Adelaide we will stop at Jupiter Creek to search for an un-named *Genoplesium* similar to *G. rufum*.

April 8th Trip to Tooperang for Autumn orchids.

OPEN DAY:
At the home of George and Nancy Nieuwenhoven, 15 Robin Terrace, Hope Valley. Sunday March 5th. 1995.

1996 NATIVE ORCHID CONFERENCE & SHOW, ADELAIDE - BILLETING.

It's now only nineteen months until the big event.
Are any of our members interested in billeting interstate/country registrants for the four or five nights of the 1996 ANOS conference and show?
It's a tremendous chance to show off South Australian hospitality while at the same time making what could become long term friendships. And the situation could be reciprocated.
Please contact Gerry Carne (3327730) for further information if you are interested.

FIELD TRIP REPORT by GARY GUIDE

Dipodium special, January 14th 1995. After a record dry 12 months and a week of 30°C plus temperatures (and 100 bushfires throughout SA) we met in the mist at Bridgewater with umbrellas at the ready.

We proceeded to Rudd Road opposite Arbury Park and were shown around the garden of Mrs Patty Pearson. Patty has been restoring the garden to native bush, removing birch and ash trees and keeping *Eucalyptus* and *Acacia melanoxylon*.

There were several fine specimens of *Dipodium roseum* in both the front and back gardens but the one which had the shutter bugs running back to their cars for cameras had ghostly white flowers covered with fine drops of water from the mist. With either the pale sky or deep green Blackwood tree for a backdrop the photographers were in raptures. I hope their results can capture the beauty of this orchid. Most of the *Dipodium* had large seed pods, fully open flowers and still a few buds but one plant was obviously not ready to start flowering for a few weeks yet.

From the Pearson garden we walked down a narrow bush track to the Bridgewater creek. We saw only one further *Dipodium* but there were spectacular examples of blue *Lobelia gibbosa* (often mistaken for an orchid) and the summer lilies *Arthropodium fimbriatum*.

Just around the corner from the Pearson's is the garden of St Githa's, open to the public 7 days a week and very popular for weddings. There was actually a wedding on the day of our visit. St Githa's is well worth seeing (I'd recommend December as the best month) for the large variety of herbaceous perennials which you will see nowhere else in SA. There were a number of orchid-like plants present but no true orchids. In fact this was one of very few NOSSA excursions where only one orchid species was seen in flower! (we did of course see seed pods of *Thelymitra* and *Microtis* species)

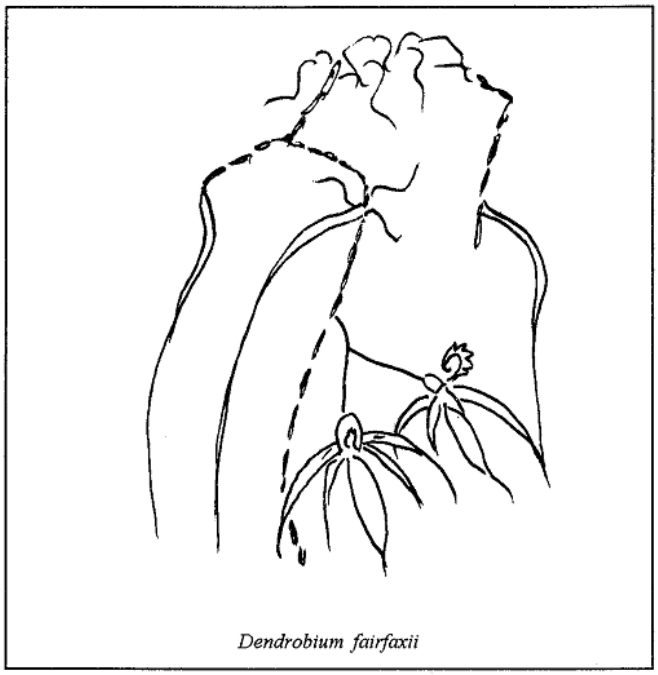
Altogether quite a pleasant hours walk and an example of the variety of excursions NOSSA now offers ie from 3 days in the wild to an hour-long early morning ramble.

WANTED

People to write articles for your journal. In particular on cultivation, conservation and collection building.

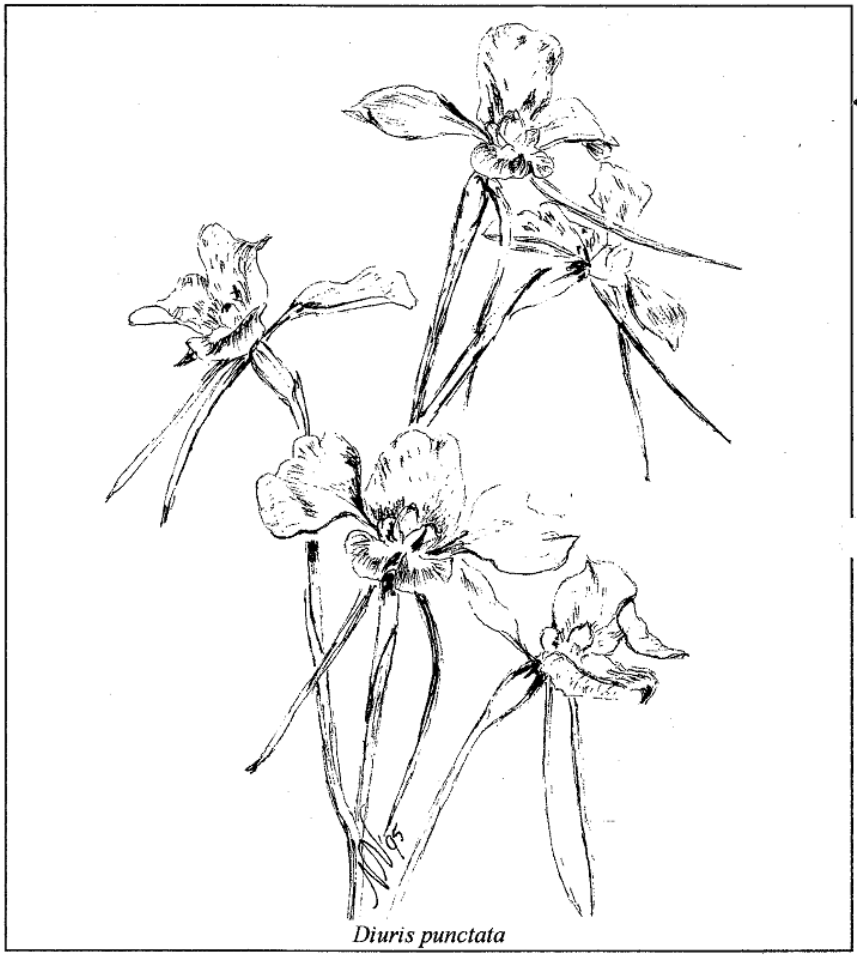
AUSTRALIAN DENDROBIUMS NO. 8 by SANDY PHILIPS

Dendrobium fairfaxii F. Muell. and Fitzg. (Large Pencil Orchid) named after D. Fairfax, an early botanical collector. This species has at times been treated as a form of the common *Dendrobium teretifolium* but can be distinguished by its straight stems, numerous aerial roots and short racemes of large white flowers having striped sepals. Occurs on trees and rock faces from the Macpherson Range in Queensland through to the Blue Mountains near Sydney, generally in rainforests in shaded places such as gorges and deep gullies in the ranges. In Adelaide grows well on tree fern slabs in a cool shadehouse but must be kept moist in summer. Usually flowers before our Spring Show in August - September.



Dendrobium fairfaxii

DIURIS PUNCTATA by GEORGE NIEUWENHOVEN


Diuris punctata

And now for something completely different. For a few years I have been growing the exotic *Disa* hybrids and species. You may be aware these plants thrive in pure live sphagnum moss, watered with rainwater. Shadehouse conditions with good light seem to be the ideal housing conditions.

The thought had struck me that other orchids may grow as well in this medium. It has long been known that sick plants or those that have lost their roots often recover very well when given a spell in sphagnum moss. My choice fell upon *Diuris punctata*, present in many collections and commercially available.

I decided first to test the pH of the soil where these plants occur. A sandy winter damp site in Victoria. The test kit used was a Manutec soil pH Test Kit manufactured in South Australia. Following the directions supplied the reading according to the colour chart was pH 5. This is getting into the acid range of the scale. Sphagnum moss used and bought at my local garden centre had a reading of pH 4. While this was a whole degree more acidic I felt it was close enough. Five tubers were placed into the damp sphagnum moss in February 1994 and *Diuris punctata* kept slightly moist. At the same time three tubers were placed into a soil mix consisting of two portions of very coarse sand, this material contains a good portion of 3 to 4 mm stone. Further one portion of buzzer chips (softwood) and one portion of chopped dried Eucalyptus leaves (a good way of chopping these is by placing them into a whipper snipper), And finally one portion of bush loam (not sandy). These two pots were then placed in my shade house where they receive most light. Once the plants appeared above ground they were regularly watered, the sphagnum moss was not allowed to dry out. Rainwater was used.

Initially the plants in the soil mix grew faster but after 3 to 4 months the ones in the sphagnum moss started to overtake them. One plant in each pot flowered in October. The one in the soil mix produced three flowers. The one in sphagnum moss produced six flowers, a good flower count for *Diuris punctata*.

I then waited anxiously for the plants to finish their growing cycle as I was most interested to see what size the tubers would turn out to be. The pot containing soil mix produced palmate tubers larger than planted, about 50mm in length, while the pot with sphagnum moss produced very large tubers 75mm in length and more robust in width, very clean and healthy looking. The latter tubers have now been placed in dry sand and will be replanted in February, again in sphagnum moss. The ones in soil mix have been replanted and placed in the shadehouse.

In conclusion I was pleased with the result and look forward to the 1995 season, however caution needs to be exercised, several seasons of growing in this media need to be experienced before we can place a lot more plants into this material with confidence. I have also grown *Pterostylis furcata* and *Spiranthes sinensis* in sphagnum moss and both have grown and flowered well with *P. furcata* producing more tubers in sphagnum moss than in the above mentioned soil mix.

If you intent to try this method please try a small number of species first under your conditions to test it's suitability, I imagine plants naturally occurring in neutral or alkaline soils would not perform as well. Consideration needs to be given to the plant's natural dormant period also.

CONSERVATION NEWS by SANDY PHILIPS

Addition to Sandy Creek Conservation Park:
A large section of Peppermint gum, Grey box woodland about 1km south of the park has been added. This area, designated the Sir Ken Wilson Section after the previous owner will make an interesting study as it was heavily grazed and all orchids lost from the lower two thirds. However since sheep were removed last year regeneration has been heavy with young native pines and Eucalyptus throughout. The orchids have not spread far yet probably due to the drought.

It is intended to re-introduce *Diuris behrii* into the new section and NOSSA members are invited to adopt the site, hand pollinating and weeding to ensure the orchids spread. Any offers should be made to management. (*D. behrii* was common in the area over 20 years ago).

There are still large areas of native vegetation adjacent to the park and it is imperative that they be added in the future. At present some of it is being heavily grazed and part of it subdivided for housing (it is unbelievable that most people building in the area are planting deciduous trees among the native pines - why do they buy bushland just to plant non-Australian plants?).

ADOPT AN ENDANGERED SPECIES REPORT

New Adoptees include:
Karen & Hugh Possingham, working with *Pterostylis cucullata* populations at Belair.
Thelma O'Neill, looking after *Caladenia behrii* at Roachdale. We need volunteers to adopt *Caladenia colorata* and *Caladenia stellata* near Monarto and the Duck Orchids at Knott Hill.

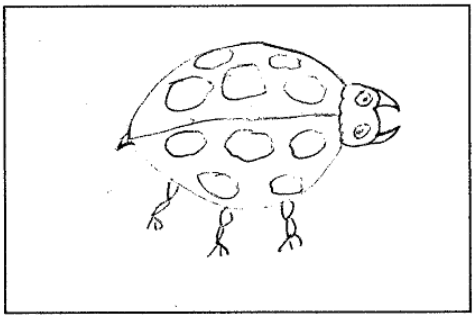
BOOK REVIEW by R. BATES

Flora of Victoria, Volume 2, (1994) (Inkata Press).
This volume, edited by N.G. Walsh and T. Entwisle (of the Melbourne Herbarium) deals with Ferns, Grasses, Rushes, Lilies and last of all the Orchids. Altogether over 900 pages.

Like most flora treatments this is not what one would call popular reading and I suspect that many people would be disappointed. Only a handful of species are illustrated in colour and only four of these are orchids (and I'm not sure that a half dead *Genoplesium archeri* is worth a colour plate!). There is almost no information on ecology and biology of the species, just a detailed description and discussion of the species distribution. There are distribution maps for each species - perhaps the most valuable aspect of the book. I was fascinated by the fact that some 100 species occur as far west as the Victoria - SA border but have never been collected in SA (including 10 orchids). Much is made of the difficulty in separating some orchid species and this illustrates the need for a good book illustrating all the Victorian species in colour (with luck Jeff Jeanes book, due out in June will cover this problem). Over 260 different orchids are treated which shows clearly that even though Victoria is a much smaller state than SA it has considerably more genera and species of orchids. There were actually three South Australians contributing to this volume.

Costing over $100 I feel it would be unlikely that any of our members will buy this book but useful to know of its existence. (Copies available for reading at the State Library and Adelaide Botanic Gardens Library.)

BONESEED: BIOLOGICAL CONTROL by MARK PHILIPS



Boneseed, one of the scourges of Adelaide Hills bushland is being tackled by a small but hungry predator - a tiny beetle *Chrysolina picturata*. Scientists from the Victorian Department of Conservation and the SA Animal and Plant Control Commission have been breeding this ladybird sized yellow and black vegetarian and testing it to see what it will eat. It eats only Boneseed! The first trial release was done in 1992 near Belair but all beetles ended up food for other bush creatures. Since then releases have been done under mesh nets and the beetles have bred in the wild. Some 20 000 have been released so far.

The Boneseed beetles, like boneseed itself, come from South Africa. Boneseed is a serious threat to the Adelaide Hills orchids so we are hopeful that *Chrysolina* will save NOSSA members from hours of hard pulling. The beetles eat the young boneseed leaves and can completely defoliate the plants but will not eat native plants.

HOW MANY DIFFERENT ORCHIDS IN SOUTH AUSTRALIA? by R. BATES
Cultivated? Wild? Endangered? Extinct?

Recently I began the project of trying to work out how many plant species were actually growing in South Australia and set out to categorise them.

Introduced Plants: I came up with 8 categories.

Category 1. Plants in artificial environments ie glasshouses, aquaria, conservatories. This is a very large category in terms of species and perhaps 3000 different taxa including about 300 orchids many of them represented as single plants in single collections, mostly in glasshouses.

Category 2. Plants in semi artificial environments ie gardens or shadehouses requiring watering, special soils etc. This is the largest group of all - there are more species in gardens than there are in the wild in SA. Perhaps 5000 different taxa excluding cultivars and perhaps 400 different orchids. Subcategories include:

2a plants which no longer resemble the wild plants from which they were bred ie hybrids and cultivars.
2b species plants which do not produce seed naturally as pollinators are not present.
2c species producing seed but not spreading in a garden setting.

Category 3 Horticultural species which persist on natural rainfall without management ie they are planted but do not spread. About a 1000 species, mostly shrubs and trees ie street trees. Doubtfully any orchids. Subcategories include:

3a Australian natives (WA etc).
3b Overseas species.

Category 4. Self sown `weeds ' of gardens and crops (not surviving away from cultivation). About 200 species, includes a few orchids ie *Spiranthes* in orchid houses.

Category 5. Garden escapes. About 200 species, most not persisting beyond a few years; doubtfully any orchids.

Category 6. Seed-spill plants. About 50 species, no orchids. Subcategories include:
6a crop and stock feed plants such as sunflowers, oats etc common along roadsides.
6b fruits and vegetables ie apricots.

Category 7. Weeds of cultivated land, roadsides and wasteland. A large category of about 1000 species and including the orchid *Monadenia*.

Category 8. Weeds invading bushland and noncultivated areas. These are the nasties like Bridal creeper, Gorse, Broom and Blackberries. About 200 species, some would include *Monadenia* here.

Each year this decade seed or other propagation material of about 500 species not already in SA is brought in. This is balanced by about 300 species dying out for a net yearly gain of about 200 species. Twenty years ago the net gain would have been about 50 species so we are in a time of rapid increase.

Native Plants: I came up with 5 major categories.

Category 1. Occurring in SA at the time of settlement but now extinct. Probably about 100 species mostly from category la and including about 50 orchids. Subcategories include:
1a Extinct without ever being collected.
1b Totally extinct.
1c Extinct in SA but surviving elsewhere.

Category 2. Endemic to SA (not occurring in other states). About 200 species, estimated 50 orchid species. Subcategories include:
2a Threatened species
2b Species never recorded outside SA.
2c Almost totally SA species.

Category 3 Endemic to Australia. About 2000 species, estimated 180 orchid species (includes unnamed orchids). Subcategories include:
3a Purely Australian family.
3b Purely Australian genus.
3c Purely Australian species.

Category 4. Cosmopolitan or at least naturally occurring both in Australia and outside Australia. About 200 species including 10 orchids.

Category 5. Occasional visitor to SA only ie species spread by water birds or wind transported seed or spores. Unknown number of species, includes a few orchid possibles ie *Chiloglottis trapeziformis* and other border hoppers.

Total orchid species from all categories is about 1000 species of about a total 12 000 - 15 000 plant species ie about 5 - 10% of all plants in SA are orchids. If 15 000 plant species in SA seems an exaggeration consider that over 1000 plant species are supposed to grow in the Mt Lofty Botanic Gardens alone - an area less than 100 hectares.

I would like to hear from anyone with further ideas on categorising plants in SA or with different estimates of species numbers in any category.

SCIENTISTS SOUND ALARM AS 60 ORCHID SPECIES FACE EXTINCTION

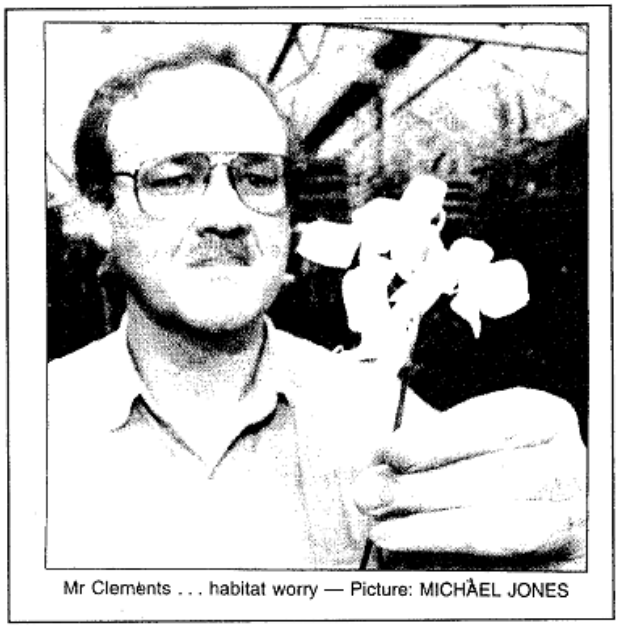
Extracted from The Australian 23/1/95, 6y JOHN-ELLICOTT

They often flower in difficult locations but the world has closed in on Australia's native orchid population, with 60 species in danger of extinction in the next 20 years. Australia's little-appreciated orchid flora is one of the most diverse in the world and recent research has indicated they might be an excellent barometer of the greenhouse effect. But clearing of land, bushfires, rabbits and over-zealous collectors have put the rock, bark and ground-hugging species at risk. Eight species are known to have become extinct since white settlement.

Some of the endangered species have only 20 plants left in the wild, with their locations including such places as a single creek in Cape York and a slab of bush at a council sporting complex in the Illawarra, south of Sydney. According to recent research by the CSIRO division of plant industry, orchids make up almost a fifth of all the endangered flora species in Australia. The endangered classification means they are likely to disappear from the wild within one or two decades if present threats continue. Another 85 species of orchids are defined as vulnerable, 94 known as rare and 80 categorised as poorly known.

Despite this, new species have continued to be found throughout Australia and six new species were discovered recently in Tasmania.

An Australian Nature Conservation Agency research scientist, Mr Mark Clements, has been studying orchids for the past 20 years with his Canberra colleague, Mr David Jones. Mr Clements said his team's research had shown a much wider biodiversity of orchids than previously believed. The Sydney rock lily (*Dendrobium speciosum*), thought to be one species, was actually five different species along the coast. He said his team had identified 1400 orchid species in Australia - compared with just 580 recognised in 1982. "We will almost certainly lose some species. The only real security for orchids is the long-term survival of their habitat," he said.



Mr Clements . . . habitat worry — Picture: MICHÀEL JONES

Mr Clements said preliminary research had shown that the greenhouse effect could affect the flowering of orchids. Recent hot summers had interfered with the flowering of orchids in the Kosciusko National Park, he said. Orchids turn up in unlikely places. "We quite often find species in cemeteries, mainly because this is the last bit of native bush left near a country town. We sometimes have to urge the council mower man to be a bit careful." Many orchids are also found in the home paddocks on farms, but the drought has put pressure on terrestrial (ground) orchids because stock has moved into these paddocks and previously ungrazed areas. Bushfire management was also critical to the survival of some orchids. While many did not flower until after a fire - sometimes waiting 20 years for their seeds to germinate, others risked dying out if fires occurred in winter or spring. Dapto orchid enthusiast Mr Brian Whitehead rediscovered an orchid called *Pterostylis gibbosa* 20 years ago in the Illawarra after it disappeared from the Sydney region in the early days of white settlement. There are only three sites for the *gibbosa*, one of them in bushland at a sporting complex run by Shellharbour Council. "By far the greatest danger to orchids is the clearing of coastal land and development of housing," he said. Mr Whitehead said there were also over-zealous collectors who put orchid populations at risk.

BOTANISTS OF THE ORCHIDS NO. 25 by SANDY PHILIPS

F.F.R. (Rudolf) Schlechter (1872 - 1925)

Schlechter was born in Berlin in 1872 and died in the same city 54 years later. A.B. Rendle who wrote his obituary said "Young Schlechter had a great capacity for work, a remarkable manner, great ambition and considerable self confidence". At one stage he set himself the task of describing one new species a day. Not an impossible job in those days of great exploration with collectors world wide sending him plants. Schlechter's job of travelling through the German colonies in Africa, New Guinea and New Caledonia (working on cash crops) certainly helped him to get into poorly botanised areas.

He had a particular interest in orchids and wrote the monumental 1 100 page `Die Orchideen von Deutsch New Guinea' where he described over 1 100 new species (just 90 species were known from German New Guinea before 1906).

In 1912 he was made curator of the Berlin Museum from which he made many visits to Kew and the British Museum eventually to name some 2 000 orchid species - more than anyone else. Australian species named by Schlechter include *Cadetia maideniana* and *C. wariana*. An orchid honouring Schlechter is the New Guinea species *Dendrobium schlechterianum*. Schlechter corresponded with South Australian Dr R. S. Rogers for over 20 years.

DESERT *MICROTIS* IN WESTERN AUSTRALIA by R.BATES

During trips to Western Australia in 1984 and 1990 I managed to spend a few days in the vast outback from Mt Magnet across to Laverton and south to Balladonia and Southern Cross an area of half a million square kilometres.

1984 and 1990 were wet years and I was delighted to find that wherever water collected ie around salt lakes and rock outcrops there were Microtis. In 1984 I noted the similarity of most of them to eastern states *Microtis* and sadly made very few collections. By 1990 I realised my mistake but had less time (and less money for petrol) to traverse vast spaces. Nevertheless the collections I did get showed clearly that there were at least three different species often growing together and that none of them matched the species to which they had been previously attributed.

The commonest of these resembled the high rainfall country *Microtis parviflora* of the eastern states but biologically these desert plants of Western Australia were likely to be different in fact the Western Australian plants did not even extend to the wetter country in that state. Under the microscope a number of differences could be seen in the structure of the tiny flowers and I decided therefore to describe them as a new species.

Almost as common was a plant which in 1984 I thought was just a form of *Microtis unifolia*. However in 1990 it became obvious that these desert plants were actually closer to *Microtis media* as they had the same distinctive comma-shaped labellum calli and granular excrescences of that species. In most years none of the plants flower in fact it is difficult to find any plants at all on the saltbush flats around salt lakes but after winter floods huge populations appear hundreds of kilometres inland. *Microtis* have such tiny flowers with such simple leaf and flower structure that differences are only obvious under high magnification. This inland *Microtis media* I have written up as a new subspecies.

Less common but very widespread on the more expansive rock outcrops (of which there are thousands in the arid lands and wheatbelt of Western Australia) was a larger flowered species with square labellum calli and no granular excrescences. This was clearly a new species and is likely to be named `*Microtis graniticola*' after the granite rocks it loves to grow on.

Orchid freaks who have gone even further inland than I did report that in good years with rain in winter and spring *Microtis* occur north of Mt Magnet and west of Laverton and that these are different again. I believe that there could be as many as six arid land *Microtis* in Western Australia. In 1990 I found *Microtis alba* for example east of Ryden about 200km out of its previously known range.

Three undescribed arid-land *Microtis* from Western Australia (left to right) *Microtis* aff. *media*, *M.* aff. *parviflora* and '*M. graniticola'* all near Mt Jackson.

AUSTRALIAN NATIVE ORCHID HYBRID REGISTRATIONS
(New registrations form lists in The Orchid Review, January/February and March/April, 1994):-

NAME	PARENTAGE	REGISTERED BY
Dendrobium		
Angellene	Aussie Angel X Ellen	N. Roper
Bolero	Ku-Ring-Gai X *fleckeri*	R. & D. Sheen
Cheryl Patricia	Joy Wray X *speciosum*	J. Andrews
Double-A	Amber X *adae*	D. & M. Crawford
Double Grace	X *gracillimum* X Double Two	D. Carr
Elegant Falcon	Elegant Heart X *falcorostrum*	W.T. Upton
Eungella	*speciosum* X Karen Nair	A. Blewitt
Jeenga	Ellen X Omega	N. Roper
Megan's Charm	*johannis* X *bigibbum*	Hoosier (O/U)
Memoria Bill Jefferies	Colonial Surprise X Hilda Poxon	Florafest (I. Klein)
Native Falcon	Native Gold X *falcorostrum*	So. Cross (Australia)
Native king	Native Gold X *speciosum*	So. Cross (Australia)
Pauline Maria	*canaliculatum* X *bairdianum*	R. Currell
Rex's Delight	David Bayer X *speciosum*	G. Rex
Rowena	Star of Riverdene X Hastings	R. & D. Sheen
Star White	Duke X *speciosum*	W.T. Upton
Toto Aiba	X *superbiens* X *nindii*	W. Bandisch
White Mist	Jombock X Harold Hirsh	W.T. Upton
Yondi Sunshine	Eureka X Lynette Banks	S. Batchelor
Parachilus		
Selmann	*Prcls*. Selwyn X Sarco. hartmannii	W.T. Upton
Sarochilus		
Anglesea	*fitzgeraldii* X Cherry Derham	Florafest (L. Fagg)
Bernice Klein	Heartlight X *fitzgeraldii*	Florafest (I. Klein)
Bon Bon	*hartmannii* X Verolica	Florafest (C. Wuth)
Cherry Derham	Mavis X Lois	Florafest (M. Derham)
Cream Puff	Memba X *weinthalii*	Florafest
Dorrigo	*falcatus* X Melba	Florafest (L. Fagg)
Ivory	Wandjina X Melba	Florafest (L. Fagg)
Judy's Wine	Judith X *weinthalii*	Florafest
Lorraine Fagg	Verolica X *fitzgerladii*	Florafest
Memiria Leney Smith	Fitzhart X	Mavis Simpson Orchids
Millie	Mavis X *hillii*	W.T. Uptom
Otways Star	Arcadia X *australis*	Florafest (L. Fagg)
Otways Sunset	Fitzhart X *australis*	Florafest (L. Fagg)
Tiffany	*falcatus* X Elizabeth	Simpson Orchids