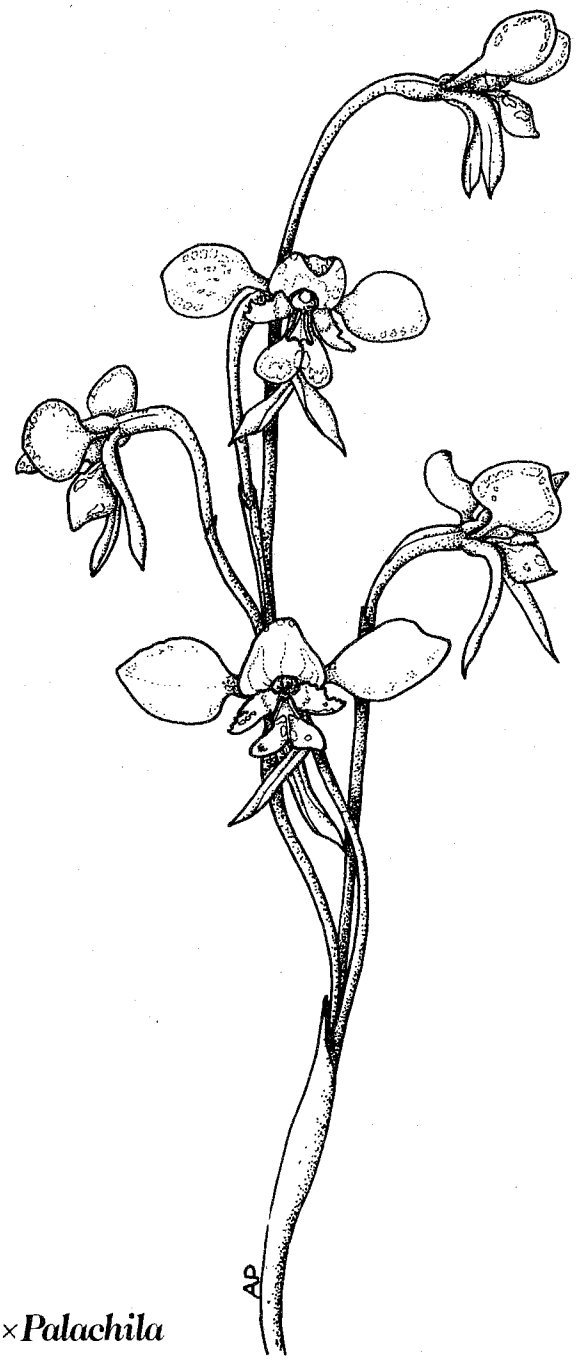
NATIVE ORCHID SOCIETY

of

SOUTH AUSTRALIA

JOURNAL



Diuris×Palachila

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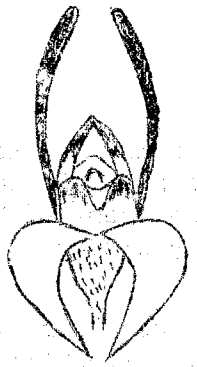


NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA

J O U R N A L

Volume 7, No. 6

July 1983

Registered by Australian Post Pub.No.SBH 1344 (50¢)

NEXT MEETING

When: Tuesday, 26 July, 8.00 p.m.

Where: St Matthews Hall, Bridge Street, Kensington.

Subject: Mr Ron Heberle from Albany, W.A., who is visiting South Australia and the eastern states, will speak on the History of Western Australian Orchidaceae 1791-1861. Ron is very knowledgeable on Western Australian orchids in particular, and does a lot of field studies around Albany. If you cannot go to Western Australia yourself don't miss this meeting.

NEW MEMBERS

We extend a warm welcome to the following new members:

Mr R. Bright
Mrs D.A. Cooper
Mrs C.A. Harmer
Mick Ryan Orchids

BOTANIC GARDENS

A visit to the Botanic Gardens Terrestrial Orchid Shadehouse has been arranged for

Sunday,
31 July,
2 - 4 p.m.

The shadehouse is situated north of the herbarium in the area normally closed to the public. Please do not park inside the gardens at the Herbarium. Parking is available in North Terrace or in Botanic Park.

LAST MEETING

Bob Bates spoke on the pollination of orchids - not just Australian terrestrial orchids, but a variety of worldwide species, just to illustrate some of the wierd and wonderful contrivances and contraptions used by the different species to lure unsuspecting insects into becoming carriers of pollen and effectively pollinating the next flower visited (thus ensuring the continuation of the species).

This is no haphazard business as we soon realised. Native bees, wasps, gnats (even ants), visit specific species of orchids - one of the ways of ensuring the world is not overrun with hybrids. The reasons these insects visit certain species were explained by Bob to be quite varied, some orchids use colour, i.e. Thelymitra, and some use scent or pheromones - the insect may then be rewarded with nectar for its trouble or in some species pseudo-copulation (a well known example is Cryptostylis subulata being visited by the lisopimpla semi-punctata wasp). These orchids mimic the scent of the female wasp and thereby attract the male.

Some species of orchid have labellum that look like insects, attracting pollinators that way (often these labellums are hinged to throw the insect into the flower to collect pollen while getting out). Other species use hinged traps (i.e. Pterostylis species) and the insect has to crawl through a tunnel to get out and collect pollen on its way before visiting the next flower and start the process all over again but leaving the first lot of pollen on the stigma and new seed is in the making.

It was a fascinating evening and a subject that one can study for years and never become bored. Our thanks to Bob for a well-researched and interesting night.

THE NOSSA TRADING TABLE

Support for the NOSSA Trading Table — your trading table — is not always as strong as it might be, either in the number of plants supplied for sale by members or in buyer interest.

It is appreciated that many members are assembling their own collections of native orchids and do not, as yet, have any surplus plants for sale, however, the club occasionally purchases plants (mainly from interstate); but it should be realised that we have to pay the usual purchase costs, freight and insurance, and then make a small profit. Profit made by the trading table helps to keep annual subscription fees down to a reasonable level, and the trading table is one of the few fund-raising activities of the club.

Members are reminded that all plants placed on the trading table for sale are to be native orchids, with a maximum of 10 per member. The club retains 25% on successful sales. Donations of plants are, of course, very much appreciated.

P.T. Barnes,
Trading Table Convenor

SOUTH AUSTRALIA'S RAREST ORCHIDS No. 21

R. Bates

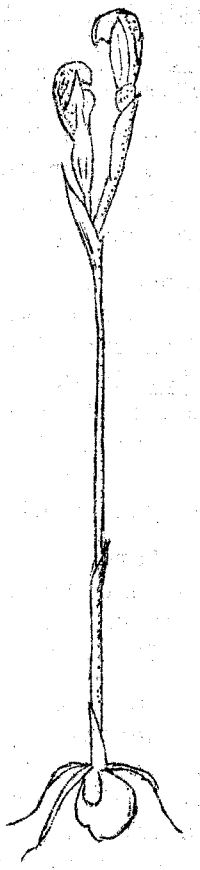
Pterostylis aphylla Lindl. is the rarest of our named greenhoods. It occurs in Tasmania and Victoria but in South Australia is known from only three small swamps near Mt. Compass.

As the name implies flowering specimens have no leaves but non-flowering plants do produce a small rosette. The plants flower in late summer (a rather unusual season for any orchid to flower in our state). From 1-5 (rarely more) tiny green flowers are produced. These have the quaint habit of facing each other, often actually touching, as though kissing.

The species is very similar to Pterostylis parviflora but, unlike that species, P. aphylla is generally self-pollinating (quite unusual for the genus). P. aphylla is often listed as P. parviflora var aphylla, but I don't believe the combination has ever been validly made.

When I investigated the three known populations in February this year I was unable to locate any plants at the first locality as the swamp was overgrown after application of chemical fertilisers; the second location was overgrazed by cattle but at the third I found just two plants flowering.

P. aphylla is really not a suitable plant for cultivation.



P. aphylla (x 1½)

TERRESTRIAL STUDY GROUP REPORT

At the last meeting slides were shown of orchids from Acianthus to Glossodia. These included green forms of A. caudatus, A. reniformis and A. exsertus and all Australian species of Cryptostylis. A special feature was the coverage of the life cycles of several species. Flowers of Corybas hispidus in a pot were the first any of us had seen of this eastern Australian species. We strayed well beyond botany, with geology and aboriginal culture illustrating the catholic interests of those present.

The next meeting will be held at the home of

Bob Markwick,
79 Elizabeth Street,
Banksia Park,

at 7.30 p.m.

on August 9.

We will concentrate on the genus Diuris, the donkey orchids. Please bring slides, plants and a plate of supper. New members are welcome but please ring R. Bates on 251 3450.

AUSTRALIAN NATIVE HYBRIDS No. 3 R. Shooter

Dendrobium x delicatum (F.M. Bail)

Dendrobium x delicatum is a naturally occurring hybrid having as parents D. speciosum and D. kingianum.

The plant has an interesting history. It was first described by F.M. Bailey (Queensland Government Botanist) in 1884 as D. speciosum var delicatum from a plant collected at Spring Bluff near Toowoomba in Southern Queensland. It was found growing on rocks among plants of D. speciosum and D. kingianum.

As mentioned, Bailey first thought the species was a variety of D. speciosum however, after flowering the plant for a number of years and noting the differences in the flowers he raised it to specific rank in 1902, naming it D. x delicatum in deference to the delicate nature of the flowers. It was an ideal choice of name as the white to cream flowers are both delicate and fragrant. Some time after Bailey had named the species, F.A. Weinthal collected a similar plant from the same area near Toowoomba which he identified with the type species as D. x delicatum.

In 1930 a farmer found a dendrobium on Alum Mountain at Bulahdelah (northern New South Wales) which he had not seen before. He took it to a Dr. Kesteven who in turn gave it to the Rev H.M.R. Rupp who, in 1931, described the species and named it D. kestevenii in honour of his friend the doctor.

The two names led to confusion, Weinthal maintaining the species were one and the same whereas Rupp argued that they were different. The basis for his argument being that no specimens had been found between Spring Bluff and Alum Mountain, a distance of about 350 miles. I believe Rupp did come to realise they were one and the same species but, either through pride or obstinacy, did nothing to correct the error. Unfortunately this led to the two friends breaking their friendship.

In 1908 a Mr Spyers crossed D. speciosum with D. kingianum which agreed perfectly with D. x delicatum and, although it was not registered, the cross was recorded in the March 1908 Orchid Review by Rolf. This hybrid was given the name D. specio-kingianum. Today it is still possible to see plants labelled with any one of the three names. However, since 1960 the only accepted name has been D. x delicatum. But as Shakespeare said "Whats in a name? that which we call a rose by any other name would smell as sweet".

D. x delicatum is not quite as robust a plant in appearance as D. speciosum but more so than D. kingianum, sometimes having long thin pseudobulbs, sometimes short squat ones - depending upon the parents used and cultivation conditions. It grows quite happily under 50% shade in South Australia, preferably in a pot - although if attention is given to watering during the summer months can be grown mounted. If you do decide to grow it mounted make sure a fairly large sturdy mount is used as the plant can get quite large when fully mature. If grown in a pot an open, porous bark and charcoal compost seems to suit. Water and fertilise in the spring and summer when in full growth, tailing off towards the autumn (particularly with the nitrogen-based fertilisers) and keep fairly dry during the winter months.

The flowers are quite variable on D. x delicatum, ranging from white to yellow and pink in colour and in shape from D. speciosum to the D. kingianum type. Some clones have short scapes with only a few flowers, some have long scapes with up to 20 flowers. The flowering season is August to October. In my opinion, this is a very good native orchid to begin a collection with as it is a regular and reliable flowerer and quickly grows into a specimen-sized plant, which is when it shows itself to its best advantage.

EFFECTS OF THE 1982 DROUGHT ON NATIVE ORCHIDS

R. Bates

For many districts of New South Wales, Victoria and South Australia the year 1982 was the driest on record. In some areas known to support wild orchids, no rainfall was recorded during the growing seasons. In other areas record frosts or bushfires further devastated the native orchids.

In some areas I visited orchids could be located only by the dried flower spikes of the previous year. Digging down to the tubers below showed that tubers had sprouted but leaves had not reached the surface. With Pterostylis of the "rufa group" new tubers were being formed anyway but this was not the case with other orchids which almost certainly succumbed.

The effect of a serious drought such as that of 1982 is cumulative. Seed produced in 1981 may have germinated in the light rains of May 1982 but the seedlings would have perished. In seriously affected areas no flowering occurred in 1982 therefore no seed was produced for 1983. Badly affected plants would be too weak to flower in 1983 also. Because of the drought farmers in many cases moved stock into private conservation areas and in some cases public conservation parks and orchids were trampled and eaten. In some areas the shrubs which provide shelter for the orchids have also died so that orchids which survived 1982 may perish from lack of shelter in 1983. Thus the drought must have a long term deleterious effect on orchids.

In less seriously affected coastal areas most species did flower in 1982, although it was only those plants in the most sheltered locations which produced normal sized flowers. Otherwise flower spikes were dwarfed, many flowers aborted and others which did open were soon dessicated and produced no seed. Generally we could expect normal sized tubers to be produced at the expense of flowers and quite often the year after a drought sees a better than average flowering (if conditions are reasonable).

Populations of predators tend to fall after droughts so that less flowers are eaten off the following year.

District Reports

Lower South East Mt Lofty Ranges Southern Eyre Peninsula Yorke Peninsula	No seedlings observed but flowering only s ightly reduced as rainfall, although very light, was evenly distributed throughout the growing season.
Lower Flinders Ranges Kangaroo Island Mid Eyre Peninsula Yorke Peninsula Upper South East	Flowers only in most sheltered spots, dwarfed stems, aborted flowers, very little seed produced.
Flinders Ranges Upper Eyre Peninsula Murray Mallee	Leaves produced but flowering was extremely rare.
Northern Flinders Ranges Far West Eastern Districts	Leaves usually did not reach the surface.

ON THE BENCH — JUNE 1983

Epiphytes: These were dominated by Dendrobium x Hilda Poxon of several clones, spotted and unspotted, greens and yellows, upright spikes and droopy ones.

Terrestrials: Those magnificent Pterostylis dominated again. The highlight of the display was probably a pot of 30 cm tall Pterostylis robusta with almost all plants in flower, the blooms 5 cm tall. There was a specimen pot of Pt. longifolia which had been grown from seed and were now 50-60 cm tall and a single Pt. x "Cutie" 60 cm tall with a flower 6 cm across.

Popula Vote: Epiphytes - D. x "Hilda Poxon" - Mr and Mrs R. Rankin.
Terrestrials - Pt. longifolia - Mr Bates.

Display: Dendrobium x "Ellen" x D. tetragonum, D. x "Hilda Poxon" (8), D. x "Blushing Star" x D. "Hilda Poxon", Acianthus exsertus (green form as well as maroon), A. reniformis (green), Caladenia alba, C. deformis, Diuris abbreviata (Qld), Pterostylis augustata, Pt. concinna (2), Pt. curta, Pt. curta x Pt. nutans, Pt. cycnocephala, Pt. grandiflora (2), Pt. longifolia, Pt. nana, Pt. nutans, Pt. ophioglossa, Pt. ophioglossa ssp. fusca (Atherton), Pt. robusta, Pt. vittata (green), Pt. vittata (purple), Pt. vittata var subdifformis, Pt. affin. obtusa, Pt. x "Cutie" (baptistii x cucullata).

NOSSA LIBRARY

Publications held by NOSSA Library

American Orchid Society	Orchid Pests and Diseases
A.O.F. Laverack	Orchids of McIlwraith Range 1980
A.O.F. Laverack	Project to Study Orchids of Cape York
Bedford, Roger	Guide to Native Aust. Orchids
Black, J.M.	Flora of S.A.
Black, J.M.	Flora of S.A. Part I (1978)
Blue Mountains O.S.	Aust. Native Orchid Seminar 1981
Cadye and Rotherham	Australian Native Orchids in Colour
Carr, G.W.	Mellblooms Spider Orchid
Cooper, Dorothy	New Zealand Native Orchids
Dockrill, A.W.	Australian Indigenous Orchids
Dockrill, A.W	Australian Sarcanthinae
Dressler, Robert	The Orchids, Natural History and Classification
Elliot, Roger	Grampians Flora
Erickson, Rica	Orchids of the West
Fiveash, Rosa	Australian Orchids

NOSSA Library (contd.)

Gentry and Foreman	Native Orchids of S.A.
George, A. and Foote, H.	Orchids of W.A.
Gray, C.E.	Victorian Native Orchids, Vole. 2
Hobart	Proceedings 6th Aust. Orchid Conference
Jackson, I.	Kangaroo Island Orchids
Millar, Andree	Orchids of Papua and New Guinea
Moore and Edgar	Flora of New Zealand
Mullins and Martin	Australian Orchids
N.E.D.O.S.	Cultivation of S.A. Native Orchids
O.C.S.A.	Book for Orchid Lovers
Perth	Proceedings 5th Aust. Orchid Conference
Rupp, H.M.R.	Orchids of N.S.W.
S.G.A.P.	Aust. Plants Volume 5
S.G.A.P.	Aust. Plants Volume 6
S.G.A.P.	Aust. Plants Volume 7
S.G.A.P.	Aust. Plants Volume 8
S.G.A.P.	Horticultural Guide to Aust. Plants (1)
S.G.A.P.	Horticultural Guide to Aust. Plants (2)
Sharp, Watson	Aust. Native Orchids
Simon, Hilda	Private Lives of Orchids
Willis, J.H.	Plants of Victoria

Reference Library Books

A.N.O.S.	Checklist of Aust. Native Orchid Hybrids
A.O.F.	S.A. Orchid Workshop
A.O.F.	Victorian Orchid Workshop 1979
Barrett, Charles	Gems of the Bush
BASF	Foliar Fertilisers
Clements, M.A.	Preliminary Checklist of Australian Orchidaceae
Dept. of Agric., W.A.	Bulletin of W.A. Herbarium
Dept. of Environment	Directory of Non-government Groups in S.A.
Dockrill, A.	Checklist of North Queensland Orchids
Foote, H.	Orchids of Western Australia
Godley, E.J.	Flower Biology of N.Z.
Gray, C.E.	Victorian Native Orchids, Vol. 1
Gray, C.E.	Victorian Native Orchids, Vol. 2
Holttum, R.E.	Flora of Malaya, Orchids of Malaya, Vol. 1
Jackson, I.	Kangaroo Island Orchids
Main Road Dept. W.A.	Western Roads
Markwick and Bates	Phytogeography of S.A. Orchidaceae
Monkhouse, S.	Orchids For All
N.C.S. of S.A.	Carappee Hill Conservation Park
Nicholls, W.H.	Orchids of Australia
N.O.S.S.A.	NOSSA Journals, Vol. 1-2, 1977-78
N.O.S.S.A.	NOSSA Journals, Vol. 3-4, 1979-80
Photostat Copy	Photostat of Johannes Tepper Family records
Rogers, R.S.	South Australian Orchids 1911, 2nd Edition
Rogers, R.S.	South Australian Orchids 1911, 2nd Edition
Schlechter, R.	Orchidaceae of German New Guinea
Tonelly, Peter	Orchid Species of N.West Tasmania and Hunter Is.
Warcup, J.H.	Mycorrhizal Relationship of Aust. Orchids

METHODS AND MADNESS OF AN ORCHIDOLOGIST — R.C. Nash

(Continued from NOSSA Journal, Vol. 7, No. 5, page 49.)

If we travel to eastern Australia an even greater variation in size, shape and colour is to be seen. In areas south of Sydney I have seen a very small flowered plant that at a glance one can be forgiven for mistaking it as a new species. At Queenbean, east of Canberra, a magnificent form named as D. semilunulata occurs. This has very large side lobes to the labellum and is a robust plant. About Canberra a very prominent yellow form of this species is the normal plant, while at the coast near Ulladulla another mostly yellow form is common.

These are but a very few of the eastern variations to be found, but all are beautiful plants and in the selective breeding or hybridising of Diuris are needed as base material. The only problem is in obtaining such forms for many are becoming rare as their habitats are destroyed by progress.

During the years that I have cultivated this species I have noticed the colour of any individual plant's flowers are not the same in any consecutive year. One plant that grew from seed had its flowers photographed each year and as it became apparent that there could be a colour change I made an attempt to standardise my photographic technique to rule out the camera as the source of colour variation. This could prove a problem to the breeder and for show purposes.

This species too has many probable wild hybrids and only one is truly identified: this is the cross with D. longifolia which Les Nesbitt has produced. In the Mount Lofty Ranges this hybrid was often found growing as an isolated plant but several may occur in the one area. This natural hybrid has also been observed on Eyre Peninsula. Other probable hybrids have been observed with the likely parents being D. pedunculata, D. palustris, D. palachila.

Although I have attempted hybridising with this species no plants have resulted.

For a species that makes quite an impression on new admirers of our native orchids, none other than Diuris longifolia scores. The true home of this species is Western Australia where this "Wall Flowered Orchid" comes into its own for variety of shape and colour. In the west I have seen the tallest, shortest, largest flowered as well as the smallest flowered plants. Here too the colour variation is very impressive from the normal red-flowered plants to yellow orange forms, some robust plants will often have purple tips to the segments while in other areas these tips are white. In some areas north of Perth there are forms that remind one of D. maculata, even to the crossed lateral sepals, so diverse is this plant in the west.

One form I have growing that came to me many years ago from near Katanning, in Western Australia, has a tendancy for the petals to be curled not unlike some of the north Queensland Dendrobiums.

Here in South Australia we have forms of this plant that equal those in Western Australia but we do not have the range of variation as the west. On southern Eyre Peninsula there is supposed to exist colonies of a pure yellow form, however, the normal form over there is more yellow generally than those found in the Mount Lofty Ranges but darker forms are common.

As one travels to the east then the prevalence of this plant diminishes the further one goes, it is considered to be rare in New South Wales, being

Methods and Madness of an Orchidologist (contd.)

recorded from the south only. I have no experience of this plant in New South Wales or Victoria.

Similar to all Diuris, D. longifolia hybridises freely in the wild state, however, I personally have no record of it hybridising in Western Australia. In South Australia it has crossed with D. maculata, has probably crossed with D. pedunculata and D. brevifolia.

I have made only one hybrid with this species and another which has grown to flower and this was with D. pedunculata which I will discuss later.

In the species that I will discuss now we have an extremely beautiful little plant but it does not compete in size with the general members of the genus. This plant is D. palustris, which was once very common on Yorke Peninsula and the Mallee lands to the south west of Murray Bridge. It is found throughout the damper Mallee lands, the Flinders Ranges and odd plants in the Mount Lofty Ranges and the southern Eyre Peninsula.

For the plant breeder and hybridiser this plant has a feature that is a must to be captured. This quality is its perfume, a tantalising nutmeg spicey scent. If this could be married to the weaker perfume of D. pedunculata and then strengthened, then we could have a plant that would more than catch the eye at exhibitions.

Besides the perfume, D. palustris offers other qualities such as the longer lateral sepals - these can be passed on in hybrid work I have discovered. The colour too could be useful.

Just on the species development this plant has good prospects for, besides the normal yellow background with darker markings, an almost pure yellow form has been found south of Monarto South which was a taller plant with larger flowers than the typical member. Just imagine the thrill of owning a plant which was the size of the present larger flowered Diuris. Yes — I am issuing a challenge to the would be breeder.

In the wild state this species has probably hybridised with D. maculata and D. pedunculata. In my hybrid attempts I have been successful with crossing this plant with D. pedunculata (more on this later).

Diuris sulphurea is a species which occurs in South Australia only in the lower south east but is to be found from north Queensland right down the coast to our south east and across to Tasmania. In all this distance the species remains very constant in form when compared to others with a lesser range. There is some marked differences between the northern plants and those found in the south, namely the northern plant is more slender, has one leaf and smaller flowers.

(to be continued.)

A.N.O.S.

A new Australian Native Orchid Society group has been formed in Tasmania, called "Bass Group". More details as they come to hand.

GROWING EPIPHYTIC ORCHIDS IN SOUTH AUSTRALIA — R.T.R.

Dendrobium tetragonum (Tree Spider Orchid)

A variable epiphytic species growing mainly in rainforest areas from Illawarra in New South Wales to the Endeavour River in Queensland. A favourite haunt is on trees overhanging water, often in deep shade. It has a variety of hosts (including Myrtles, Eugenias, Water Gums and occasionally Melaleuca) on which it grows into small clumps. Altitude is of little concern as it is found from near sea level to approximately 1000 metres.

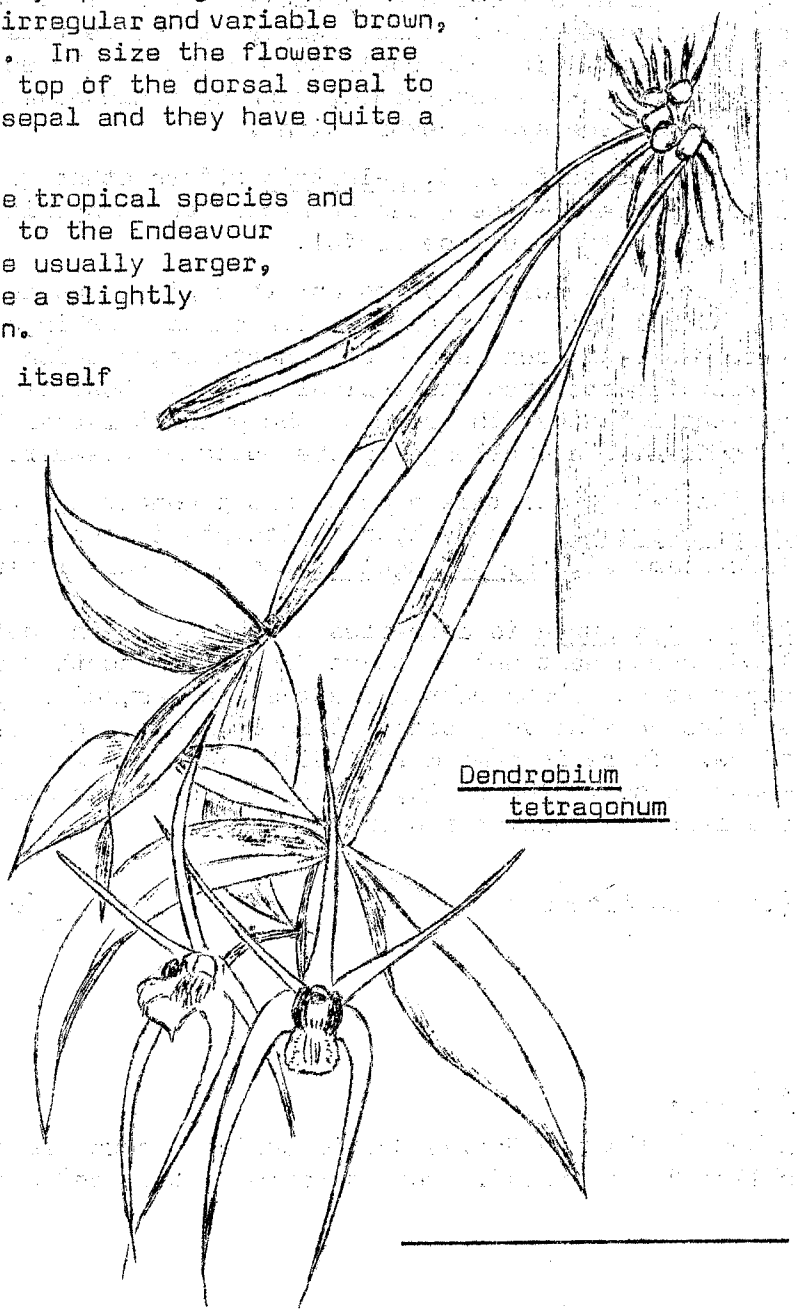
The stems, which are semi-pendulous and from 6 to 45 cm long, arise from a prostrate and branching rhizome. They are round, thin and wiry at the base but thickening to become rectangular (hence the name tetragonum — derived from the Greek "tetra" meaning "four-sided"), then tapering slightly before the leaves. There are from 2 to 5 leaves up to 8 cm long at the end of the stems. They are deep green in colour and often with crinkled or wavy margins.

The racemes appear from between the leaves but are short and have from 1 to 5 flowers which are widely spreading and spidery in appearance. The colour is greenish/yellow with irregular and variable brown, red and purple markings. In size the flowers are from 4 to 9 cm from the top of the dorsal sepal to the tip of the lateral sepal and they have quite a pronounced fragrance.

The var giganteum is the tropical species and ranges from the Fitzroy to the Endeavour Rivers. The flowers are usually larger, but not always, and have a slightly different colour pattern.

The plant does not lend itself readily to pot culture and should be mounted. I have it growing on Melaleuca and cork slabs, but best results have been with one mounted on a hardwood slab.

I find that it needs a little more than 50% shade plus humidity and, of course, plenty of air movement. Protect from frosts. Fertilise in the growing period with foliar fertiliser at half recommended strength. A number of interesting hybrids have been produced using D. tetragonum as one of the parents. They mostly flower well and have reasonably large flowers.



Dendrobium tetragonum