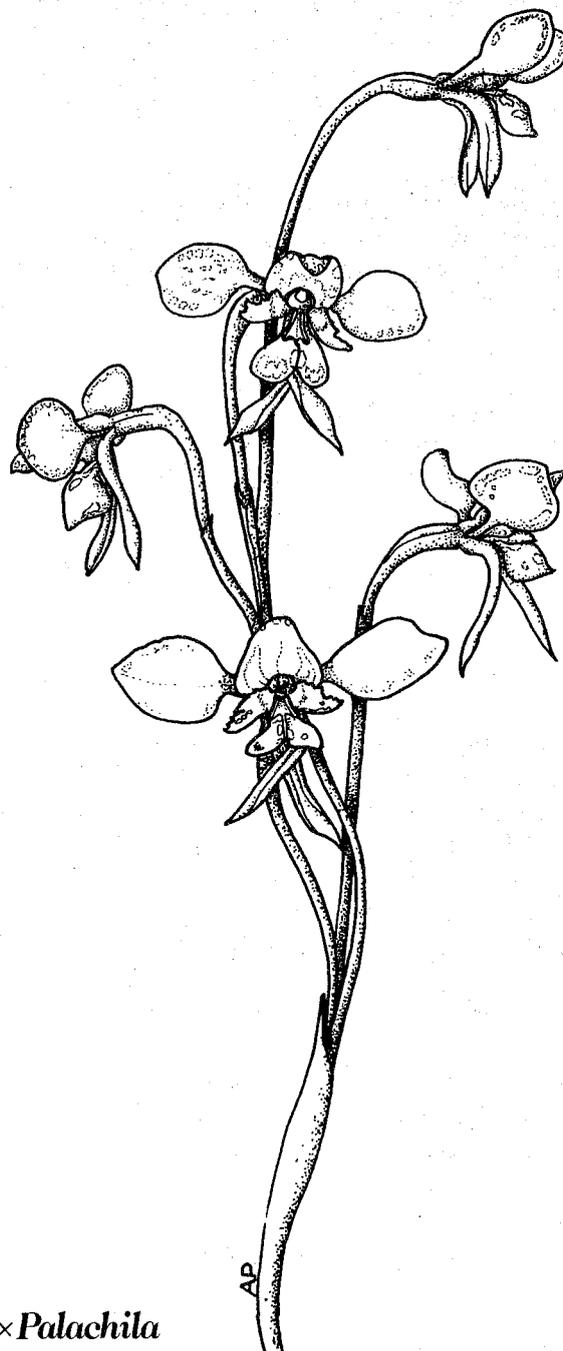


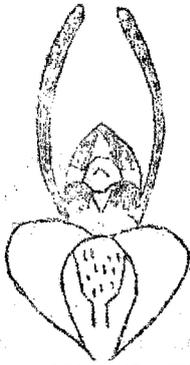
NATIVE ORCHID SOCIETY
of
SOUTH AUSTRALIA
JOURNAL



Diuris x Palachila

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NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA

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Mr L. Harris
Mr P. Barnes
Mr J. Jacobs

NEXT MEETING

When: Tuesday, 27 September, 8.00 p.m.

Where: St Matthews Hall, Bridge Street,
Kensington.

Subject: Mr Adrian Walter will speak on car-
nivorous plants. The horticulture of
these beauties is taking off like the proverbial
rocket and I'm sure some of us will be persuaded
to join the growing band of enthusiasts.

FIELD TRIPS

MT BOOTHBY CONSERVATION PARK AND SURROUNDS

September 22, 23, 24 and 25.

This is a survey trip to make a checklist of
all orchids in the area. Meet Mt Binnie Con-
servation Park (Meningie Coonalpyn Road),
10.00 a.m. Saturday.

AVENUE RANGE (SOUTH EAST)

Saturday October 8 and Monday October 10.

Permission has been received from the Depart-
ment of Environment and Planning and the
owners to remove orchids from a property at
Avenue Range. Meet at crossroads approxi-
mately 20 kilometres from Reedy Creek on the
Lucindale Road at noon on Saturday, 8 October.
Please advise the Secretary if you wish to
participate.

KUITPO/KYEEMA

Sunday, October 16.

To compare burnt and unburnt areas. Meet at
the Meadows Hotel, 11.00 a.m.

DONATION OF EARLY ORCHID COLLECTION

The Society has been fortunate to receive a collection of pressed orchids which were collected near Millicent during the years 1910-1912. The collection was donated by Mr C.L. Green of Salisbury. It was put together by his mother and his cousin Miss L.P. Major.

The collection is valuable because the Millicent Flats have long since been cleared. Although the orchids were collected so long ago they include several not represented at the State Herbarium for this area.

Of interest are Pterostylis foliata, Pt. rufa, Pt. furcata, Pt. tenuissima and Thelymitra macmillanii.

NOSSA VISIT TO TINTINARA

The arrival of Roy Hargreaves, Don and Bub Wells and Bert and Joan Hocking at Tintinara on 9th August heralded two days of learning some of the fascinating facets of growing native orchids of Australia for members of the Tintinara and Districts Group of the Society for Growing Australian Plants, and an address by Don Wells.

A good attendance of interested people from Keith, Tintinara, Coonalpyn and Parrakie were present at the meeting, capably handled by Don who displayed various epiphytic and terrestrial orchids, then discussed the problems and joys of growing them.

This was followed by a selection of slides showing native orchids of Australia, arousing great interest and generating a number of questions.

On Wednesday morning the party inspected an area of bushland to be cleared for an elderly citizens home, to ascertain if there were any orchids present which could be relocated in an adjacent school reserve. During the morning we were joined by Margaret and Oliver Fuller and Basil and Claire Shields.

Unfortunately, because of the prevalence of weeds in the area concerned, no orchids were located on the building site. However, in the area to the rear of the homes site, several species of orchids were discovered. A lone Acianthus reniformis was in flower, hidden under a Casuarina muellerana. Nearby were leaves of Eriochilus cucullatus, Microtis sp., Glossodia major and one tall slender leaf of a Prasophyllum, possibly P. elatum. Further search revealed several small communities of Thelymitra sp. which were just forming flower heads.

Native plant genera occurring nearby were Casuarina, Melaleuca and Xanthorrea, which makes one wonder if they have any symbiotic relationship with the orchid genera which were sighted.

While the visit by NOSSA members may have seemed futile, it has created a new interest in Australian native orchids for S.G.A.P. members and a concern for the few isolated communities of orchids close to Tintinara township. Many thanks to you all for your willing assistance.

Janice Fuss
President
Tintinara S.G.A.P.

HISTORY OF SOUTH WESTERN AUSTRALIA'S TERRESTRIAL ORCHIDACEAE R. Heberle

ROBERT BROWN, 1773 - 1858

Surgeon and Botanist - Flinders Expedition 1801

Under the patronage of Sir Joseph Banks, Robert Brown was appointed surgeon and botanist. During the months stay at King Georges Sound, Brown, assisted by Peter Goode (gardener from Kew Gardens) and Ferdinand Bauer (botanical artist), collected 500 specimens of flora in December. These were mainly new to Botanic science.

Robert Brown stayed in Australia for 3½ years and added a further 1500 new species to his collections. These were published in his epic work "The Fore-runner to the Flora of New Holland and the Island of Van Diemen" in 1810. Thirteen terrestrials were collected in King Georges Sound and from his Australian collection another seventeen proved to be represented in Western Australia.

We can thank Sir Joseph Banks for Robert Brown's contributions, as he provided £10,000 to finance the Flinders Expedition.

Diuris pauciflora, D. emarginata, D. setacea
Epiblema grandiflorum
Cryptostylis ovata
Microtis alba, M. media, M. pulchella
Prasophyllum gibbosum, P. macrostachyum
Thelymitra canaliculata, T. tigrina, T. fuscolutea

Reichenbach honoured Brown in 1871 naming from his King George Sound collection:

Microtis brownii syn rara
Prasophyllum brownii

Endlicher similarly:

Caladenia brunonis (Endl) Reich 1871 Glossodia brunonis (Endl)
 1839 Elythranthera brunonis (Endl) A.S. George 1963 x Huegel
 K.G. Sound and Swan River Colony.

LAST MEETING

Harold Goldsack gave us a most interesting talk and slide show on mostly native ferns. They ranged from Queensland to South Australia with many of the best ones coming from the eastern states. Harold first showed us ferns in their native habitat and later in cultivation at home. It is obvious he is quite expert at growing them but only after a lot of hard work did he get his fernery established and thriving. Harold feels many ferns do better in the ground than in pots and while they need shade they also need good light to prosper. I think most of us came away from the meeting a lot better equipped to grow some of these beautiful plants.

Thankyou Harold for entertaining us so well.

ON THE BENCH

The most impressive overall feature of the plants on display was the variety of terrestrials, over fifty different taxa being benched. These included a pot of Caladenia patersonii almost a metre tall: these seemed to be of the local Adelaide Hills form "perfumed pink", but the flowers (two per stem) were 20 cm across when the sepals were spread out. The common Pterostylis pedunculata could not be described as an "outstanding plant" but who could fail to be impressed by a pot containing 100 plants, all in flower, and some of these were double-headers. Another plant with a rare double-header was Pterostylis barbata from Western Australia - how distinct it was from our local Pt. plumosa also displayed. The record went, however, to a triple-flowered Pt. curta in a pot containing numerous twin-flowered plants.

Popular Vote:

Epiphytes - Dendrobium atro-violaceum - Reg Shooter.
Terrestrials - Caladenia patersonii - George Nieuwenhoven.

Commentaries:

P. Barnes (epiphytes); R. Bates and G. Nieuwenhoven (terrestrials).

Plant List: (Species asterisked were displayed for the first time.)

Dendrobium aemulum (2)	D. x "Hastings"	D. striolatum
D. atro-violaceum	D. x "Peewee" x D.	*D. striolatum x D.
D. x "Aussie Bonanza"	tetragonum	teretifolium
D. canaliculatum	D. rigidum	D. teretifolium
D. falcorostrum	*D. x "Star of River-	Sarcochilus falcatus
D. x "Golden Fleck" (2)	dene"	
Caladenia alba	D. x palachila	
C. barbarossae (bud)	D. palustris	
*C. cairnsiana	D. pedunculata	
C. catenata	D. pedunculata x D. longifolia	
C. deformis	*D. pedunculata x D. x palachila	
C. discoidea	D. x "Pioneer" (2)	
*C. filamentosa var denticulata	Pterostylis alpina	
C. filamentosa var tentaculata (3)	Pt. baptistii	
C. gladiolata x C. patersonii	*Pt. barbata	
*C. hirta	Pt. boormanii (bud)	
*C. huegelii	Pt. curta (5)	
C. latifolia	Pt. curta x Pt. x ingens	
C. longiclavata var magniclavata	Pt. curta x Pt. nutans	
C. patersonii	Pt. curta x Pt. pedunculata	
C. patersonii var suaveolens	Pt. "Cutie"	
C. pollida	Pt. cynocephala	
C. praecox	Pt. falcata (bud)	
C. rigida	Pt. x ingens	
*C. sericea	Pt. mutica (2)	
C. sigmoidea	Pt. nana	
C. toxochila	Pt. nutans	
Chiloglottis trapesiformis	*Pt. affin. obtusa (Qld) x ?	
*Diuris citrina	Pt. pedunculata	
D. laxiflora	Pt. plumosa (2)	
D. longifolia (one yellow and brown: one purple, white and yellow)	Pt. recurva (2)	
D. maculata (3)	Pt. "rufa group"	
D. maculata x D. palustris	*Thelymitra spiralis	

AUSTRALIAN NATIVE HYBRID No. 4

Reg Shooter

Dendrobium Peewee

One of the most spectacular of our native orchids is the well known species Dendrobium bigibbum, the Cooktown orchid, a species which everyone admires and would like to grow and flower. Unfortunately it requires some protection from the cold and damp South Australian winters to be able to flower with certainty, so unless a heated glasshouse is available we have to content ourselves by looking at them at meetings or Shows.

D. bigibbum belongs to the phalaenanthe section of the Dendrobium genus. The only other species in this section native to Australia is D. dicuphum. Both are tropical species from the north of the continent.

D. bigibbum has been used many times by the hybridists to produce crosses, and the progeny, while almost always producing desirable hybrids, invariably require heated conditions to flower owing to the fact that the other species used as a parent is of tropical origin.

However a breakthrough occurred in 1979 when W. and G. Cannons registered a cross between D. tetragonum and D. bigibbum naming the hybrid D. Peewee. D. tetragonum belongs to the Dendrocoryne section and is much more cold tolerant than D. bigibbum. This tolerance has been passed on to D. Peewee and, while not completely hardy, can be grown and flowered without heat, provided some protection is given from the worst of our winter weather.

The influence of D. tetragonum has had the effect of dwarfing the plant size of the hybrid making it a much more manageable proposition than the somewhat lanky D. bigibbum. The flowers are large, about 2½-3 inches across, spidery, and of a colour slightly deeper than bigibbum - a rich, overall lilac purple. D. tetragonum appears to have had no influence whatsoever on the colour. The only shortcoming of the cross in my opinion is the loss of flower numbers per spike: a well grown D. bigibbum will carry 20 flowers or more per spike whereas D. Peewee only manages on average to produce 2-5 flowers.

The registration of D. Peewee has created a little confusion because in 1965 a hybrid D. Suzanne was registered in Sanders List of Hybrids as being a cross between D. tetragonum and D. phalaenopsis. The originator stated he collected the D. phalaenopsis from the bush near Cooktown so it must be accepted as an Australian native hybrid, however, D. phalaenopsis has subsequently been reduced to a synonym of D. bigibbum so in effect we have two hybrids with the same parentage but with different names.

SOCIETY FOR GROWING AUSTRALIAN PLANTS SHOW

NOSSA is again displaying at the
S.G.A.P. Show
to be held at the
Walter Duncan Hall, Wayville
on 23 and 24 September.

We will be setting up on Friday 23
from 5.30 p.m. and dismantling at
6.00 p.m. on Sunday.

Plants are required for display as
well as donations for the trading
table. Helpers will also be re-
quired to man the trading table.

CALADENIA PATERSONII IN SOUTH AUSTRALIA

R. Bates

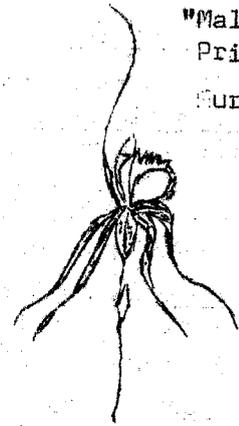
In the early days of settlement in South Australia Caladenia patersonii was known as the common spider orchid. It was a plant of fertile soils in well-watered open forest or grassland. Such areas are now mainly cleared and C. patersonii is no longer common and many of the most beautiful forms are gone forever.

Early collections included very large, bright red-flowered specimens from the Adelaide Hills. These plants were at one stage named "var concolor" but as they generally occurred mixed with the more typical white-flowered specimens the name has no taxonomic value. There are, however, several distinct forms of C. patersonii in South Australia.

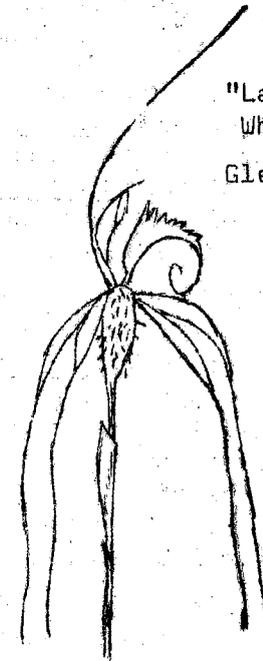
The most plentiful form is the "common cream". This race is still fairly common in the upper South East, on Yorke and Eyre Peninsula and in the southern Flinders Ranges. The flowers open yellowish in colour and fade to creamy white. They are of average size but vary a lot with the seasons, flowering when only 10 cm tall in drought years but reaching to 50 cm in good years. They are not perfumed, their colour is not clear and have proved difficult in cultivation.

A closely related race is the "large white", a form which was once common in the grassland and open forest from Peterborough in the north throughout the Mt Lofty Ranges and into the South East. Although the previous form flowers in August-September the "large white" blooms in October-November in the wild. It is not always white and both pure red and pink-flowered plants have been collected in the past. The sepals and petals have heavy glandular tips which cause them to hang almost vertically, quite often to 10 cm long. Similar to the previous form the "fringing" on the labellum is short and there is no perfume. Flower size remains constant, plants do not flower in drought years. This form, with its sturdy stems and clear colours, does well in cultivation and seedlings come up freely.

The form most familiar to visitors in the Adelaide Hills is the "perfumed pink". This tall slender form consistently has flowers which are white or greenish-white with a candy pink or crimson labellum. The long slender glandular sepals give off a pleasant musky fragrance. Although it is sometimes found growing with the previous one it flowers a month earlier and the two do not interbreed. It does well in cultivation but the slender stems are easily blown over.



"Mallee Princess"
Murray Bridge



"Large White"
Glencoe



"Perfumed Pink"
Williamstown

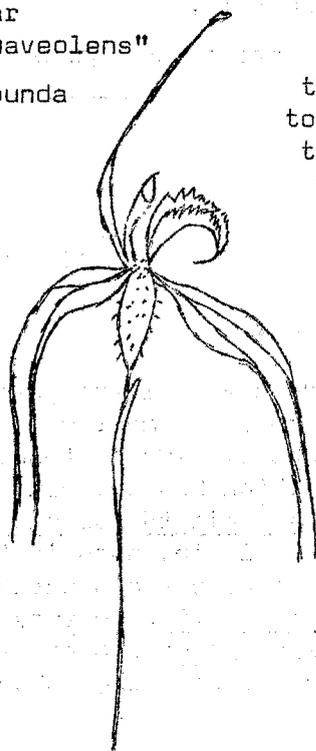
Caladenia patersonii in South Australia (contd)

From coastal limestone areas and on stable dunes comes the "scented green". Although flowers open greenish in colour they turn yellow with age. The glandular sepals are thick and heavy and perfume varies from musk to lemon; both leaves and flowers are thick textured and in good seasons flowers can be enormous, the sepals up to 12 cm long. It appears to cover the "var suaveolens". I have not been able to flower it consistently in cultivation.

In dry areas such as the Murray Mallee and the northern Barossa there is a race with small, brightly coloured flowers. It can be a pure glistening red, yellow and red, pink and green, or brownish, but never white. It flowers in September and the small flower size allows it to hybridise with C. cardiochila to produce C. x variabilis.

"var
suaveolens"

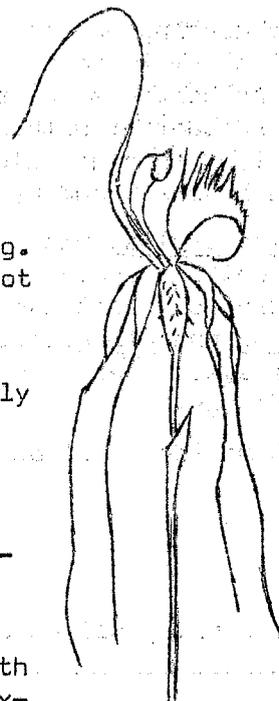
Kapunda



A rare form collected in the early days from Brinkworth to Nuriootpa and now nearly extinct in South Australia is the "var longicauda" with large white flowers, with sepals up to 20 cm long and deeply fringed labellum margins.

"var longicauda"

Kapunda



The only thing it lacks is perfume. An excellent form for cultivation.

In the South East and on Kangaroo Island there is quite a mix of forms, some of which approximate to C. pallida, C. hostata and C. audasii, but grading back into C. patersonii.

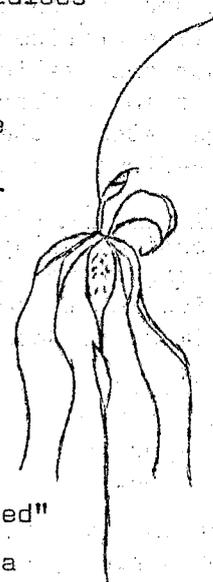
C. patersonii commonly hybridises with other species, i.e. C. dilatata, C. cardiochila, C. gladiolata, C. latifolia and C. toxochila to produce a whole range of interesting forms. I doubt that it would ever be possible to sort out useful varietal names for all these plants. The

main difficulty for the taxonomist nowadays is that surviving populations are so isolated from each other that it is not always possible to work out their relationships.

(Illustrations show some forms of Caladenia patersonii in South Australia - about $\frac{1}{2}$ size.)

"unfringed"

Wirrabara



TERRESTRIAL STUDY GROUP REPORT

Last meeting we concentrated on Diuris, particularly on various aspects of the cultivation of this easy-to-grow genus. It appears that there are no barriers to crossing species with any other in the genus. It was noted that within many species there were some outstanding forms and that these should be the basis of future breeding programmes both line breeding and hybridising.

D. longifolia, with slides shown of deep reds, vivid yellows and purple and whites, as well as pansy-shaped flowers, emerged as a definite contender for "most useful breeding species". Slides of Leporella, Lyperanthus and all species of Microtis were shown (probably for the first time ever). Pots on display included one of D. palustris with numerous seedlings.

Next meeting will be at the home of Les Nesbitt,
 18 Cambridge Terrace,
 Vale Park,
 at 7.30 p.m.
 on Tuesday, October 11.

Please bring slides of Pterostylis, as well as plants of any genus.

METHODS AND MADNESS OF AN ORCHIDOLOGIST

R.C. Nash

(Continued from NOSSA Journal, Vol. 7, No. 7, page 69.)

From the east we now look toward the west where I do have a little experience with the species found there. From my experience the most widespread species is D. longifolia which has been discussed above. The next most prevalent species, in my experience, is D. emarginata which has one named variety which is D. emarginata var pauciflora. D. emarginata var emarginata does show variation in the districts that I have seen it in, both in form and time of flowering. Those plants observed in late August and early September and smaller flowered and not unlike our D. brevifolia. Plants in flower in October to early November were seen to have larger flowers and longer stems, these flowers were also a different shade of yellow than the early-flowering specimens.

D. emarginata var pauciflora is a plant that I have only seen in my own collection, being sent to me from Western Australia by Miss Alison Ashby from one of her expeditions. To me the plant could be classed almost as a species in its own right, however, this is hardly justified from just one specimen, it does have its own character.

In this species, as with all the West Australian species, I personally know of no instant where any have hybridised naturally. I have tried hybridising this species with eastern species but no plants have been grown from such crossings.

After the two above species I have found D. laxiflora to be very common in limited areas, mostly damp ground. The flowers of this plant are yellow with brown markings, usually much smaller than the abovementioned species, in fact it has the smallest flowers of all the Western Australian Diuris.

Methods and Madness of an Orchidologist (contd)

I do not think this species will prove interesting in hybridisation work until it has been developed into a larger form. I have tried hybridising this plant with other species but no plants have developed from this work. This failure with the West Australian plants in this type of work does not mean that hybrids cannot be made, just that the seed to my knowledge was not set down to germination.

A plant that I find most fascinating is D. purdiei which I have only seen in one area. This was on the site of a new golf course south of Perth where quite a number occurred. This plant has flowers which are yellow with brown red markings to the tepals, the dorsal sepal is small when compared with the normal in the genus. In truth it almost looks as though it did not exist. The illustration in Nicholls "Orchids of Australia", does not depict this species but could be a form of D. emarginata. What do the Western Australian readers say?

There is another Diuris in Western Australia that has a diminutive dorsal sepal and like all the above occurs in damp or swampy land and this is the yellow-flowered D. laevis. This plant too could be of great value in plant breeding because it has many desired qualities.

The final plant from the west which I will mention is D. setacea, another yellow-flowered member of the genus and which I have only found growing in dry forest land. This plant has affinities with our D. brevifolia and like D. emarginata could be a close relative. Again I think this species would be worth using in the breeding programme of any person interested.

To make one final comment on the species before I go into the hybrids and this is: if you are interested in breeding members of this genus then please consider how important it is to preserve all species, varieties and forms in the wild. Make any excuse you like in an attempt to have land reserved where these plants are to be found, for it will eventually be in your own interest in the long run, especially if you make good progress in your work. Once a variant of a species is lost, then nothing man can do will ever bring it back and that variant may produce something of great value for those who adore beautiful flowers.

Diuris Hybrids

In the previous notes I have not discussed D. palachila, mainly because this plant has long been considered to be a hybrid, which it undoubtedly is. The early orchid students used to call it D. interdedia and it was Dr. Rogers who described it giving it the name "palachila". The plant is supposed to be a natural hybrid between D. maculata and D. pedunculata — is it?

One of my hybrids made by applying the pollen from D. longifolia to the stigma of D. pedunculata (RN338) produced a plant that is identical with D. palachila. The seed was germinated by Dr. J. Warcup who later passed tubers to me. There may have been a mix up of seed, it could be claimed. To check against this I have checked and double-checked through my records and cannot find any possible error occurring by this means.

Now the results of this cross may be correct, but until I again repeat this work or someone else repeats it I think it should remain at the present as a possibility.

(to be continued)

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R.C. Nash

Dendrobium gracilicaule

D. gracilicaule is found from Kiama in eastern New South Wales to the Bloomfield River in the south east of Cape York Peninsula in Queensland. It has one of the widest ranges of habitat of any of our epiphytic orchids, growing in the light coastal scrubs, the dense rainforests and, in the tropical areas, on the tablelands.

With such a variation in altitude (from near sea-level to about 1200 metres) it follows that there is a wide variety of hosts, even occasionally growing as a lithophyte on rocks.

The stems are long, thin and cylindrical, $\frac{1}{2}$ to 1 cm thick, and from 20 to 60 cm in length with 3 to 6 ovate to lanceolate, terminal leaves, 5 to 13 cm long and of rather thin, leathery texture.

The racemes are short (5 to 12 cm) and bear 5 to 14 small, cup-shaped flowers of a dull or light yellow colour having the outer sepals lightly to heavily blotched or spotted with a brown or red-brown. Occasionally they are found a brighter yellow and without blotching. The flowering season is from July to September.

D. gracilicaule must surely be one of the hardiest and easily cultivated of our Australian epiphytic orchid species as it is adaptable to almost any conditions. I have it growing and flowering on hardwood slabs, paperbark limbs and in a pot, but I think it is better if mounted. It receives 50%-60% shade and occasional foliar fertiliser. I protect it from frost but the cold does not affect it.

It does not flower from first year stems but will flower from mature stems for several years, even after they are leafless. Although most racemes are terminal or near, I have had racemes occurring from nodes halfway along a leafless cane.

There are two natural hybrids, i.e.

D. x suffusum and D. x gracillimum.

D. x gracillimum is a natural hybrid

between D. gracilicaule and D. speciosum in which the features of D. gracilicaule are dominant in the flower

while in D. x suffusum, the natural hybrid

between D. gracilicaule and D. kingianum, D. kingianum is the dominant parent.

D. gracilicaule has not attracted professional hybridists, probably because the flowers are not as outstanding as many of our other epiphytes, only two crosses appear to be registered: D. Susan (D. gracilicaule x D. falcocostrum) and D. Shan Leaney (D. gracilicaule x D. gracillimum).

