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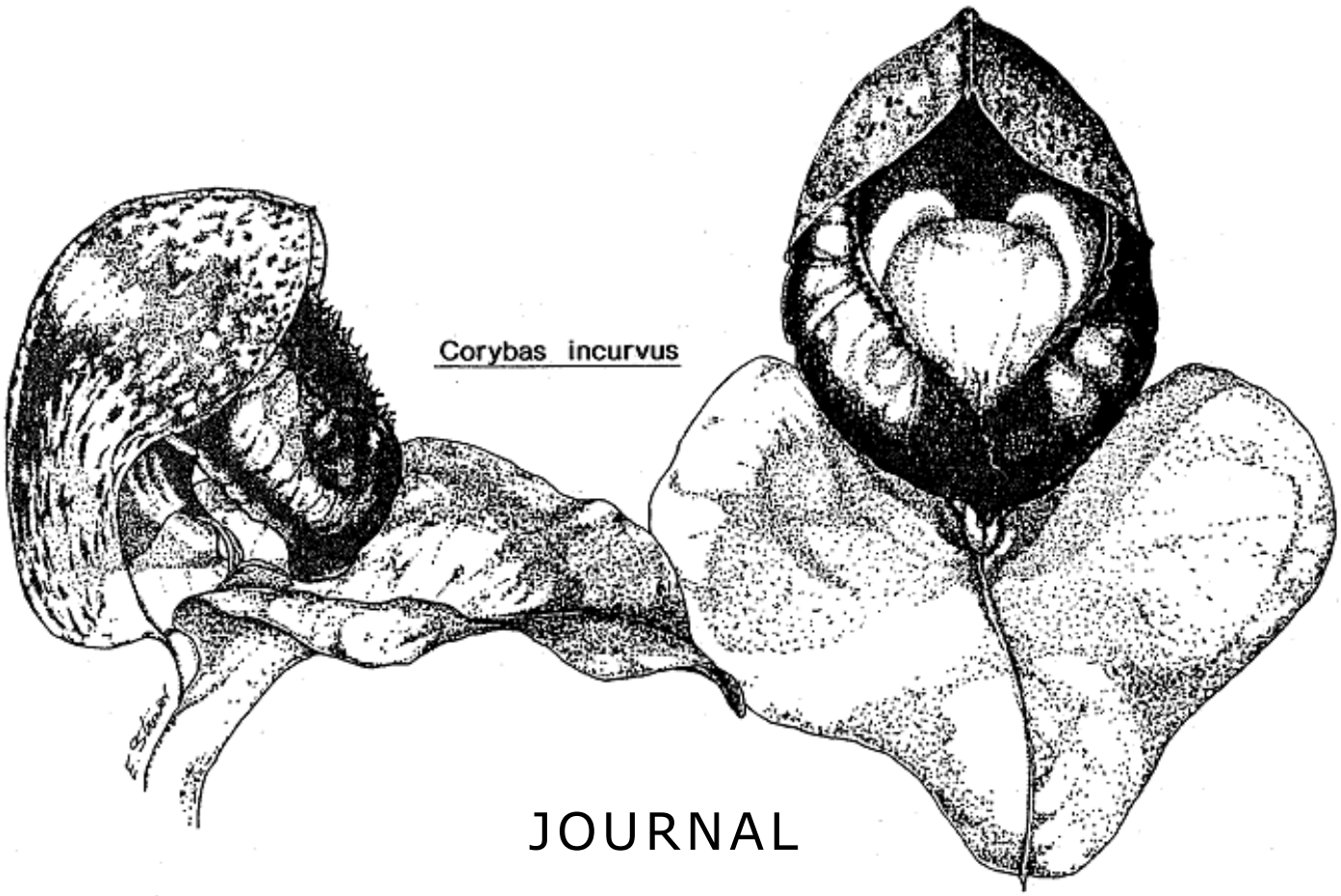

JOURNAL

NATIVE ORCHID SOCIETY

of

SOUTH AUSTRALIA INC.

NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA INC.

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 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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NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA INC.

JOURNAL

April 1990 Vol. 14 No. 3

NEXT MEETING

Where: St Matthews Hall, Bridge Street, Kensington.

When: Tuesday, 24 April, 1990, 8.00 p.m.

Why: Don Wells will take us on a "Walk Through the Bush".

LAST MEETING

Long-time NOSSA member Edda Viskic (assisted by Russell Job) gave an illustrated account of an expedition to the top of 3,000+ metre Mt Kinabalu in Borneo, south-east Asia's tallest peak. Kinabalu has an estimated 1200 species of orchids (about one-fifth of them undescribed) - not bad for a single mountain - indeed this one mountain has as many species as the whole of Australia!

Edda began her account at the base of the mountain and worked her way up. The higher we went the more exciting the scenery and plants became - jungle, rainforest, cloud-forest, "cold" forest and finally alpine meadow and rock-face. Jewel orchids, terrestrials, lithophytes and epiphytic orchids in abundance with Rhododendrons of amazing variety were shown.

Edda's party was fortunate to have a botanical guide present to identify the species seen - at least whenever these were named species! This must have been the trip of a life-time and we thank Edda and Russell for sharing it with us

MARCH MEETING - DETAILS

ON THE BENCH:

Terrestrials - *Genoplesium rufum* (S.A.), *Pterostylis* aff. *baptistii* (Qld), *P. pulchella* (N.S.W.), *P. cocinna*.

Epiphytes - *Dendrobium atroviolaceum x tetragonum giganteum, D. cucumerinum* (2 forms), *D. bigibbum* var. *compactum*, *D. tetragonum* x Debbie McFarlane.

PLANT COMMENTARY (and culture notes):

Terrestrials - Bob Bates

Epiphytes - Russell Job

POPULAR VOTE:

Terrestrials - *Pterostylis pulchella*, grown by Don Wells.

Epiphytes - *D. bigibbum* var. *compactum*, grown by Charles Edwards.

RESULTS OF JUDGING:

Terrestrial Species - *Pterostylis pulchella*, grown by Don Wells.
Terrestrial Hybrid -
Epiphyte Species -
Epiphyte Hybrid - *D. bigibbum* var. *compactum*, grown by Charles Edwards.

CULTURE NOTES

Of the terrestrials: *Genoplesium rufum* is a species which comes up and flowers without being watered. The exhibited potful was bone dry. In contrast the three *Pterostylis* had all been kept cool and damp since Christmas to match their eastern mountain habitats.

TRADING TABLE

The Trading Table, noticeably absent from our last few meetings, will return in April.

We invite members to make maximum use of this service. Please feel free to sell suitable items, i.e. anything to do with native orchids: epiphytes, keikis, potted terrestrials, pots, mounting materials, ferns or similar foliage plants which complement orchids, orchid books, artwork. Whatever you bring for sale should be labelled and listed on a sheet of paper with the sale price. NOSSA will retain 25% of the total.

Our new Trading Table Convener is John Peace.

Forms are available for this service, telephone 294 3183.

PTEROSTYLIS LONGICURVA Rupp

Until about 1980 *P. longicurva* was a little known species thought to be endemic to the western tablelands of northern New South Wales. With the sudden resurgence of interest in native orchids in the early 1980s field workers began to locate colonies throughout western New South Wales from the Riverina, north to the Warrumbungles, across to Mt Kaputar and into southern Queensland.

P longicurva is an autumn-flowering, cauline species with a distinctive medium-size, dumpy flower with a contrasting, long, narrow curved labellum. Somehow plants from at least five different areas found their way to Adelaide where they proved to be as easy to grow as our own P. robusta, multiplying at a rate of 3-7 times per year.

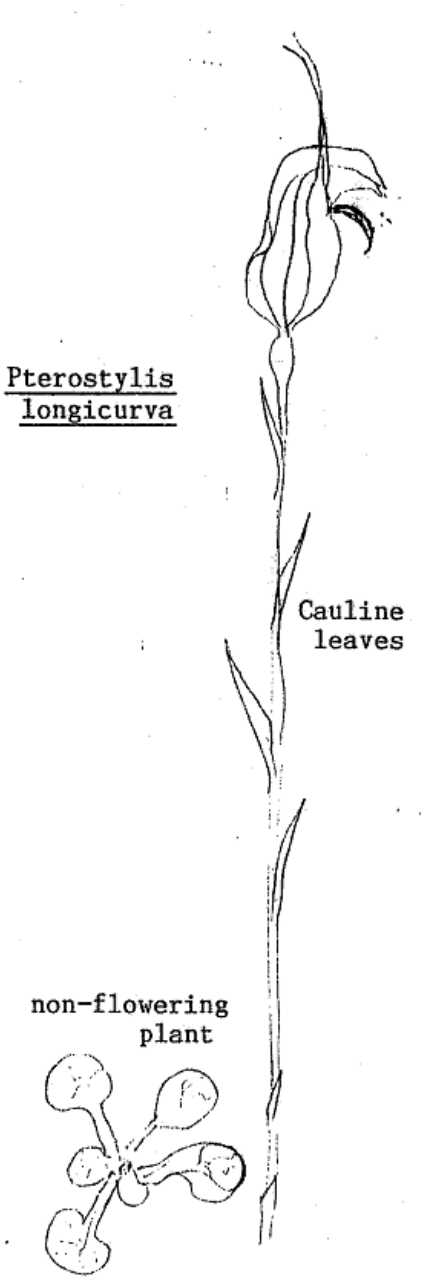
The main difficulty seems to be in getting them to flower. Plants seem to prefer a friable loam with very little sand - too much sand means lots of small new tubers and no flowers.

Plants from the type area (Kaputar-Nandewar) are tall with a red labellum. This is the choicest form. Plants from Queensland are small with a green labellum and plants from further south have a shorter brown labellum - possibly these represent different subspecies.

Tubers will be available from the Tuber Bank next summer.

I recommend this species to both beginners and experts.

Sandy Phillips



NEXT FIELD TRIP

Combined Field Naturalists/ NOSSA excursion to Morialta Conservation Park.

Meet by the kiosk, 10.00 a.m. Sunday, June 17.

Followed by:

Winter Survey - Lincoln Conservation Park June 31/ July 1 (first weekend of the school holidays).

INSECTS AND ORCHIDS

In the belief that it is worth reporting insect visits to orchids, I offer the following notes:

24.9.89 - At Mount Gawler, near Kersbrook, a small reddish-coloured native bee was observed visiting *Caladenia rigida*. Bob Bates described the pollination process in the "South Australian Naturalist" of June, 1981.

25.9.89 - At Charleston Conservation Park, on a showery but warm afternoon, black-coloured native bees were seen resting, heads hiding, tails outermost, on the labella of flowers of *Diuris*. The bees almost seemed to be sheltering from the showers under the "verandah" provided by the overhanging dorsal sepals. One large flower actually had three quiescent bees nestled together on the same labellum. This population of *Diuris* includes many hybrids. The flower morphology and colouring is very variable. *D. lanceolata, D. maculata, D.* x *palachila* and back-crosses, are represented here in a swampy area.

29.9.89 - At Callitris Reserve, Tea Tree Gully, a black-coloured wasp was seen to "attack" the osmophores on the lateral sepals of *Caladenia reticulata*, grasping and shaking them in a highly agitated fashion before rapidly flying away. The wasp did not land on the labellum.

23.10.89 - Two "forms" of *Caladenia dilatata* grow in the Anglesea River Valley, near Anglesea, Victoria. One is a tall plant bearing sepals with glandular hairy tips, probably the true species (I find it hard to keep up with the correct names these days). The other is a shorter plant with proportionately smaller flowers, the sepals of which end in small but quite thick yellow clubs. Clearly, these are two distinct species. A large black-coloured wasp was seen to visit a flower of the large form and carry off pollinia on its thorax. A hybrid between the large white *C. patersonii* and *C. dilatata* was seen nearby. The size of this wasp suggests that it could well have been the pollen vector between the two parent species.

3.11.86 - At the National Trust of South Australia property of "Roachdale " near Kersbrook, on a hot sunny day of 32°C, native bees were observed visiting *Thelymitra pauciflora*. With head uppermost and legs grasping either side of the column, one bee was seen to deliberately scratch at the yellow post-anther lobe. Since this activity did not seem to offer any reward to the insect, the purpose of this behaviour is a mystery to me. The bee did not appear to be carrying any pollen.

4.11.86 - In the late afternoon of a hot day (31°C) along a firebreak in Kuitpo Forest near Peter Creek, a reddish-coloured insect carrying pollen was seen visiting *Thelymitra mucida*. Very possibly this was the native bee which also visits *C. rigida*. A group of hybrids, supposed to have *T. mucida* and *T. antennifera* in their parentage, were growing nearby. Could this insect be the indiscriminate pollinator responsible for this and other hybrids observed in the area?

R.J. Markwick

THE INVASION BY *MONADENIA BRACTEATA*

Bob Bates, in his interesting report on the NOSSA 1989 survey of Scott Creek Conservation Park (at 27 February NOSSA meeting), showed many beautiful slides of indigenous orchids in the Park. He also reported that the South African weedy orchid, *Monadenia bracteata*, is established in one portion of the Park.

Monadenia bracteata – weedy orchid from South Africa – a plant out of place in our bushland.

This is disturbing news.

The first record of this weedy orchid from the wild in South Australia was by Bob Bates (see NOSSA Journal 12(7):68), when he found a fruiting specimen in April 1988 in Scott Creek. A review of localities where *Monadenia bracteata* has been found in South Australia since then shows that it also occurs at Echunga, Mt. Bold, Coromandel Valley, Belair, Chandlers Hill, Blackwood, Eden Hills, and two localities north of Adelaide, viz. One Tree Hill and Mt. Gawler. The spread is alarmingly rapid.

In South Africa, where it is native, and in Western Australia, where it was inadvertently introduced in the 1940s, *M. bracteata* is reported to grow in disturbed sites. It is now also growing in disturbed sites in the Mount Lofty Ranges. However it is also very agressive and it is invading our woodland. Our native woodland plants are already under great pressure from colonising weed invaders from other countries. Some weedy invaders were brought here by accident but others were consciously introduced as pasture or garden plants and have since escaped.

The open grasslands and eucalypt woodlands of the Mount Lofty Ranges were cleared early in South Australia's history to provide grazing for stock and room for cropping. It is only very recently that the importance of native understorey species has been generally recognised. Native grasses, herbs, lilies and legumes are integral parts of the natural open grassland and woodland ecosystems. In some of these areas, now that grazing has ceased, natural regeneration of indigenous species is being encouraged and strengthened by re-vegetation programmes. *Monadenia bracteata* is just one more weedy species to occupy microhabitats and special niches that belong to the small locally indigenous Australian plants. *M. bracteata* is not (at present) a threat to our sclerophyll scrub ecosystem but it is a very real threat to our open grasslands and woodlands.

If you cultivate *M. bracteata* in your collection at home observe what a prolific seeder this self-pollinated orchid is. Please be very careful that you do not have its seeds on your clothing or shoes when you go orchid hunting in the bush. With most exotic orchids this would be no problem as the seeds are unlikely to establish successfully. But not so *Monadenia bracteata* which has

The Invasion by *Monadenia bracteata* (contd.)

already demonstrated a tolerance of a wide range of habitats. Especial precautions are imperative as the probability of new infestations are high. Each plant produces thousands of tiny wind-borne seeds.

It is for all the little native understorey plants, not only orchids, but also native lilies, sundews, herbs and grasses, that I plead with NOSSA members to make a combined effort in Spring 1990. PLEASE REMOVE BEFORE SEEDING all plants of *Monadenia bracteata* found in the wild.

Enid L. Robertson, 20 March, 1990.

SEASON 1989 IN SOUTH AUSTRALIA

It is indeed intriguing to study the effect of the weather on orchids each year.

The winter of 1988 was only 1°C warmer than average but this ensured that orchids flowered, on average, one week earlier than usual.

By contrast, the winter of 1989 was 0.5°C below average and orchids flowered later than usual - in fact often as much as two weeks later than they did in 1988. This late flowering was influenced not only by the cooler winter temperatures but also by the late start to the autumn rains in southern parts which meant that plants came up later than usual.

In the north the autumn was very wet but orchids did not come up much earlier than usual as germination is dependant on temperature and daylight length as much as soil moisture and because the winter temperatures were low throughout the state flowering in dry areas was not early. Due to the wet conditions the proportion of flowering plants was higher than average, however as conditions quickly dried out in August-September plant size was no larger than usual.

In the Adelaide Hills rainfall was below average but, as the area receives more rain than most orchid species require any way, this did not effect flowering. In fact, in the dry areas nearby, rainfall figures were misleading: rainfall was down over the whole year but evenly spread during the May-September growing season so that flowering was better than average on less rain than average. Clearly it is the timing of the rains - not the amount - that is important.

For example, 100 mm in February and 10 mm in August would not be as useful as no rain in February and only 30 mm in August.

The NOSSA Survey of Scott Conservation Park showed this clearly: 1989 flowering was far superior to that of 1988 on less rain because:

1. rainfall in 1989 was evenly spaced throughout the winter and spring,.
2. frosts were light,
3. there were few very hot or windy days.

Orchids are very resilient - even in the worst conditions some plants will flower for most species in any given area.

In summary, 1989 was a good year for orchids throughout South Australia.

Mark Phillips

WAXING YOUR ORCHID SEEDLINGS

(From ANOS Victorian Group Bulletin, March 1990 - ref. ANOS Sydney Group, December 1989/January 1990.)

About six months ago a commercial orchid establishment came to my society and gave a talk on tissue culture and seedling raising. The talk was a quite interesting one and, towards the end, the speaker said something that rang bells for myself and an analytical chemist mate. She said that they had examined most orchid seedlings and meristems and found that these flask-grown plants did not, or could not, close their stomata cells. Stomata cells are there to allow the plants to, for want of an easier definition, perspire.

When these plants are taken out of flask they can't stop giving off moisture and, in fact, dehydrate themselves through the open cells. This goes on until new leaves are grown. These new leaves do close and open the cells like other growing plants.

Because of this condition the small plants out of flasks go through quite a lot of stress losing moisture. Some species are more prone than others. This causes quite a number of plants to die.

After research it was found that, by immersing the deflasked plants in a solution of water-soluble wax, the wax filled the stomata cells, thus stopping them from giving off water vapour. Presto, plants now come through the shock of deflasking, etc., much improved.

Procedure:

1. Take plants out of flask: wash all agar off roots and immerse in a solution containing a weak fertiliser for about five minutes. If fungus is present in the plants removed add a fungicide. It is thought better to do this before waxing, maybe allowing some to enter cells on the leaf surfaces before sealing.

2. Place plants into a water soluble wax solution. I used a car wax (water soluble), one without abrasive cutting compounds. If you have means of pH testing, i.e. paper, meters, etc., adjust water wax mix to give a 5.5 to 6.00 pH (acid or alkaline added). Concentration of wax solution will have to be done by trial and error. (Commercial flasking and tissue labs can obtain the wax through their networks.)

Immerse in wax solution approximately five minutes. Remove plants and place them on paper towels to dry excess moisture. Proceed to plant out as you normally do.

Before using this system I had a lot of trouble trying to keep plants from drying out. I used fish tanks and plastic drink bottles. These things helped but there was always the trouble of too much moisture inside bottles, tanks, etc., thus allowing pathogens to take over plants, turning them into jelly, then dying. This does not happen now. In most cases using wax you can put pots out and keep compost moist. This treatment has been used by two or three friends of mine and all have had a much higher rate of success.

This wax treatment isn't the total answer, but seems to do more good than harm.

R.V. Toombs

(Editorial comment: Members are advised that some attempts to adopt these procedures have realised unsatisfactory results. Further details will be published when available.)

ORCHIDS IN FLOWER IN THE ADELAIDE HILLS IN MAY

May-flowering orchids are very dependent on rainfall. Assuming good rains fall in late March-early April there is usually much to be seen.

In sandy soils such as at Knotts Hill (Kuitpo), Bullock Creek Conservation Park and Scott Conservation Park, the little Hare Orchids (*Leporella*) will still be in flower, although not at their best.

Eriochilus of at least one species can be found in open places in most soil types, although you will see more seed pods than flowers as May gets under way. Para Wirra and Scott Creek are good places for *Eriochilus*.

Some late forms of *Genoplesium* are still in bloom especially in Hale Conservation Park in rocky places.

The greenhoods are beginning too. *Pterostylis obtusa* (or in reality an unnamed subspecies of *P. alveata*) will be at its best in the scrubs behind Hindmarsh Valley Reservoir. Towards the end of May the beautiful *Pterostylis sanguinea* (sanguine = blood red) will begin flowering. In sheltered gullies of Warren Conservation Park the deep coloured, few flowered form occurs and in the Lobethal Recreation Park the multi-flowered, strongly striped form can be found.

The Mosquito Orchids, *Acianthus exsertus*, begin blooming at the end of May too, but only at certain spots such as Hindmarsh Falls, where it grows with *Pterostylis obtusa*.

Other species sometimes flower in May but only after heavy March rains: these include *Pterostylis robusta, P. alata* and *Cyrtostylis robusta*.

Sandy Phillips

BOTANISTS OP THE ORCHIDS No. 5

JOHN L. BOORMAN (1864-1938)

Boorman was born in England and trained as a gardener at Kew Gardens. On his arrival in Australia in 1887 he was appointed to the staff of the Sydney Botanic Gardens. His botanical aptitude impressed the Director, J.H. Maiden, and after several collecting trips together Maiden appointed Boorman as Chief Collector.

During his time as collector Boorman travelled extensively through New South Wales completing some 100+ trips and went as far as Norfolk Island. The successful nature of his work can be seen from the many thousands of his collections at the State Herbarium (New South Wales). He was hardworking and popular, seeking nothing more than the pleasures of tramping in the bush (and getting paid for it).

An orchid named after him is *Pterostylis boormanii* - a widespread species in South Australia.

Sandy Phillips

SUGGESTED NAME CHANGES WITHIN THE GENUS *DENDROBIUM*

(From Journal of the Native Orchid Society of Toowoomba Inc., April 1990.)

Mark Clements has reviewed the status of Australia's native orchids and has suggested a number of changes to the names of many well known species. Here is a listing of the changes suggested by Mark Clements within the genus *Dendrobium*.

Old Name	New Name
D. bairdianum	D. fellowsii
D. beckleri	D. schoeninum
D. bigibbum var bigibbum	D. bigibbum
D. bigibbum var georgei	D. x lavarackianum
D. bigibbum var phalaenopsis	D. phalaenopsis
D. bigibbum var superbum	D. phalaenopsis
D. bigibbum subvar. compactum	D. lithocola
D. bigibbum forma compactum	D. lithocola
D. bigibbum var venosum	D. x lavarackianum
D. canaliculatum var foelschei	D. foelschei
D. canaliculatum var nigrescens	D. canaliculatum var canaliculatum
D. canaliculatum var tattonianum	D. tattonianum
D. gracilicaule var howeanum	D. comptonii
D. dicuphum	D. affine
D. x gracilosum	D. x gracillimum
D. johannis var semifuscum	D. trilamellatum
D. lichensastrum var lichenastrum	D. lichenastrum
D. lichenastrum var prenticei	D, prenticei
D. linguiforme var huntianum	D. linguiforme
D. linguiforme var nugentii	D. nugentii
D. ruppianum	D. jonesii subsp. jonesii
D. ruppianum var blackburnii	D. jonesii subsp. blackburnii
D. rupianum forma magnificum	D. ruppianum subsp. bancroftianum
D. semifuscum	D. trilamellatum
D. speciosum var album	D. x delicatum
D. speciosum var bancroftianum	D. jonesii subsp. bancroftianum
D. speciosum var capricornicum	D. curvicaule
D, speciosum var curvicaule	D. curvicaule
D. speciosum var delicatum	D. x delicatum
D. speciosum var fragrans	D. curvicaule
D. speciosum var fusiforme	D. jonesii subsp. jonesii
D. speciosum var gracillimum	D. x gracillimum
D. speciosum var grandiflorum	D. rex
D. speciosum var hillii	D. tarberi
D. speciosum var nitidum	D. x nitidum
D. speciosum var pedunculatum	D. pedunculatum
D. speciosum var speciosum	D. speciosum
D. tenuissimum	D. mortii
D. teretifolium var teretifolium	D. teretifolium
D. teretifolium var album	D. dolichophyllum
D. teretifolium var aureum	D. dolichophyllum
D teretifolium var fairfaxii	D, fairfaxii
D. teretifolium var fasciculatum	D. calamiforme
D. tetragonum var tetragonum	D. tetragonum (N.E. NSW and S.E. Qid).
D. tetragonum var giganteum	D. capitisyork (N.E. Qld)
D. tetragonum var hayesianum	D. cacatua (N.E. Old)
D. tetragonum	D. melaleucaphilum (central E. and N.E. NSW)
D. wilkianum	D. mirbelianum

Suggested Name Changes Within the Genus Dendrobium (contd.)

NOTE:

1. The plant we have known as *D. mortii* must now be labelled *D. bowmanii*.

2. *D. x delicatum* is considered to be a natural hybrid between *D. tarberi* and *D. gracilicaule*, so *D. x kestevenii* has been resurrected as a legal name for the natural hybrid between *D. speciosum* and *D. gracilicaule*.

3. *D. phalaenopsis* is now considered to be a native of Australia only and does not occur in Papua New Guinea or the Indonesian Islands. The species on the Indonesian Islands has been named *D. striaenopsis*. *D. bigibbum* occurs in both Australia and PNG. *D. lithocola* occurs in Australia only.

Members who still wish to purchase a copy of Mark Clement's book should contact The Australian Orchid Foundation, 107 Roberts Street, Essendon, Vic. 3040.

RECENTLY REGISTERED AUSTRALASIAN NATIVE ORCHID HYBRIDS

NAME	Parentage	Registered by
CYMBIDIUM		
James Webek	*suave* x *canaliculatum*	E. Webeck
DENDROBIUM		
Amy Moloney	Gloucester Sands x *johannis*	J. Jarvis
Aussie Ruby	Aussie Ira x Hilda Poxon	P. Spence's
Aussie Victory	Ellen x Sunglow	P. Spence's
Aussie Wow	Sunglow x Wonga	P. Spence's
Betty Conroy	Ella Victoria Leaney x Kingrose	K. Conroy (0/U)
Bicentennial Blush	Gillian Leaney x Kim	D. Mitten
Bicentennial Rose	*kingianum* x Gillian Leaney	D. Mitten
Castle	Specio-*kingianum* x Gillian Leaney	W. Skillicorn
Dainty Gem	Jombock x *kingianum*	W. Upton
Delicate Gold	gracilicaule x X *delicatum*	D. Cannon
Delicate King	King Falcon x X *delicatum*	D. Cannon
Elegant Queen	Suzanne x *speciosum*	W. Upton
Falcon Star	Allyn Star x *falcorostrum*	D. Cannon
Gillieston	Ku-Ring-Gai x Gillian Leaney	W. Skillicorn
Golden Dorn	Eureka x Nunkumbil	W. Skillicorn
Golden Nuggett	Eureka x X *gracillimum*	D. Cannon
Golden Thel	Alan Printer x *tetragonum*	N. Eldridge

ANNUAL DINNER REMINDER

Deposits for the Annual Dinner to be held at the Walkers Arms Hotel to be paid at the April meeting.

COMPETITION PLANTS

Thirty *Sarcochilus* hybrids will be available at $5 each at the April meeting.