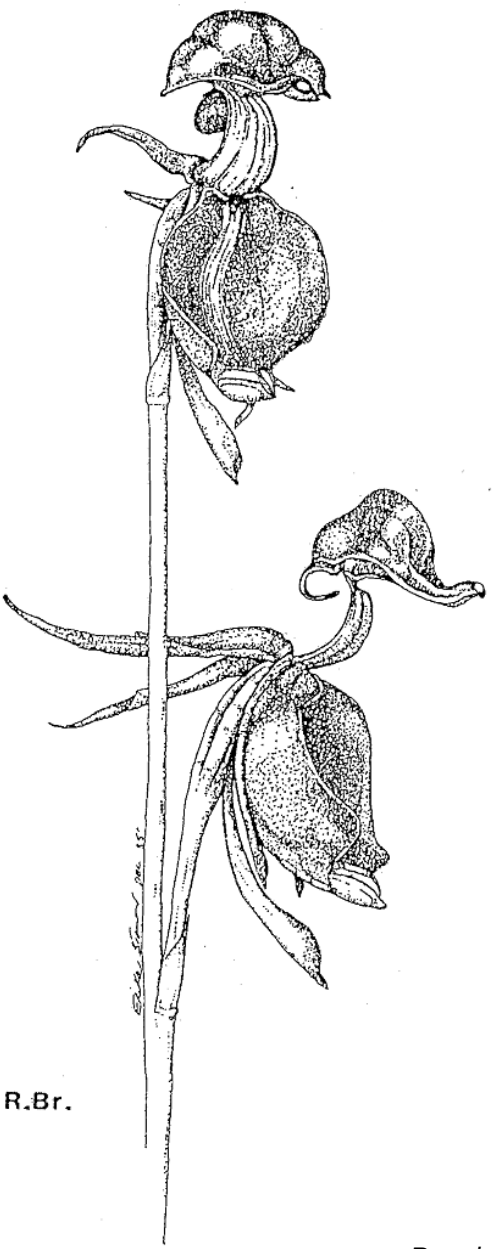
NATIVE ORCHID SOCIETY

of

SOUTH AUSTRALIA INC.

JOURNAL



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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.

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Postal Address

NOSSA INC.,
P.O. Box 565,
UNLEY. S.A. 5061

Price 60 cents

PATRON: Mr T.R.N. Lothian

PRESIDENT:
Mr K Western
Telephone 270 1331

SECRETARY:
Mr J Jacobs
Telephone 272 9245

VICE-PRESIDENT:
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Mr RT Robjohns
Mr J Simmons
Mr L Nesbitt

TUBER BANK CONVENOR
Mr W Walloscheck,
R.M.B. 777,
via BLACKWOOD, S.A. 5157
Telephone 388 2397

EDITOR:
Mr G Nieuwenhoven,
15 Robin Terrace,
HOPE VALLEY, S.A. 5090
Telephone 264 5825

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NEXT MEETING
TUESDAY 25 August, 1987 at 8.00 p.m.
St Matthews Hall, Bridge Street, Kensington.

SPEAKER
Our Guest speaker for the evening will be Mr Colin Jennings who will tell us something of the orchids of New Guinea as seen during his recent return visit to the region.

LAST MEETING
John Hunwick, a specialist in environmental education gave a most interesting presentation, illustrated by slides, covering aspects of preservation, conservation and use (or mis-use) of our bushland.

Importantly John differentiated between preservation - defined as "left untouched and unmodified for the sake of assuring a permanent habitat solely for the flora and fauna"; conservation - defined as "the wise use of our bushland"(does not imply preservation); use - implies dramatic modification of the bushland generally rendering it foreign or hostile to most or all native flora and fauna.

John particularly used our National Parks as examples, giving an interesting overview of their history from settlement to now.

In 1888 local Field Naturalists, concerned with widespread reduction in native flora and fauna, put pressure on the Government to:- (1) set the Government Farm at Belair aside for the protection of wildlife. (2) Protect virgin remnants of the Mt Lofty Ranges. Accordingly in 1891 South Australia's first National Park was formed from what had been a Government farm at Belair. It was Australia's second and the World's tenth such park. It was set up as a Recreation Park with legislation to prohibit its sale. However it was deviously transferred to the Woods and Forests Department in 1896. Accordingly pines, *Eucalyptus cladocalyx* and a maze were planted in the park and tennis courts and ovals were constructed to provide revenue, money being more important than protection. Much later, Flinders Chase National Park was established in response to the Field Naturalists who were unhappy with the failure of Belair National Park.

From 1962 to 1972, in response to increasing general awareness of the need to preserve our remaining flora and fauna, the number

of such parks increased from 19 to 99 and encompassed some 3 million hectares. In 1972 however, Belair National Park was converted to a Recreation Park. The golf course which was originally built in 1933, had a section within the course known as 'Houlihans scrub' effectively enclosed by fencing it off. In 1972, without any form of public consultation, that area of conserved scrub was bulldozed to extend the golf course, thus eliminating an area rich in local native orchids and other plants. All this was done to increase revenue. Money was still more important than protection of flora and fauna.

John pointed out that while clearance was the greatest threat to wildlife, Government was undoubtedly the second most significant threat. To illustrate this point John described how originally the consent of both Houses of Parliament was required to permit mining in parks but more recently, in response to pressure from mining companies, legislation has been formed whereby the Minister alone may authorise mining within parks. Again revenue is more important than protection. John expressed the opinion that with the vast majority of this state in particular, and Australia in general, cleared or open to mining that any remaining bushland should be able to be permanently set aside to assure the right of life to our remaining flora and fauna.

HELP TABLE

A pot of *Pterostylis*, thought by their owner to resemble *P. nana*, were displayed for identification. The plants were deemed to resemble nana and should continue to be labelled as such despite the fact that this species is currently under revision and may eventually be split into several species.

PLANTS ON DISPLAY / JULY MEETING

TERRESTRIALS

Chiloglottis formicifera, Cyrtostylis fornicatus, C. reniformis, Diuris labelled as Pioneer but thought be *maculata, D.pallens, Glossodia major, Phaius tancarvilliae, Pterostylis baptistii, P.scabra* var. *robusta, P.robusta, P. grandiflora, P.* Nodding Grace, *P. concinna, P. cycnocephala, P. concinna x P. grandiflora, P. alata.*

EPIPHYTES

Dendrobium Hilda Poxon, *D. teretifolium*, *D*. Star of Gold, *D*. Ellen, *D*. Gwen Slade, *D*. X *grimesii*, *D*. Kathryn Banks, *D*. 'New Guinea' (*atroviolaceum x macrophyllum*), *D. tetragonum, D. tetragonum* var. *hayesianum, D. tetragonum* var. *giganteum.*

PLANT COMMENTARY

Commentary on terrestrials was provided by Les Nesbitt who noted that the two forms of *Diuris* were in early flower and that *D. pallens* was not often seen in the dwarf form.
Commentary on epiphytes was given by Reg Shooter,

NOSSA at the ROYAL SHOW

NOSSA has been provided with a 3m X 3m area in the South East corner of the Keith Angus/Lancelot Stirling Hall. Entries in the NOSSA area are free. Plants must be staged by 10.00 p.m. Wednesday

September 2nd. Nomination forms will be available at the site. Members are encouraged to be involved in the display. Arrangements are being made whereby plants which deteriorate in appearance during the show may be replaced. For details see Roy Hargreaves. Judging categories include:-
Champion Australian native orchid - O.C.S.A. silver medal.
Best Australian native species epiphyte
Best Australian native species terrestrial
Best Australian native hybrid epiphyte
Best Australian native hybrid terrestrial
Best Australian native seedling Best Australian native species
Several other categories including Championship classes are available to Australian native orchids.
More information regarding available classes for entry of Australian native orchid species and hybrids will be announced at the August NOSSA meeting.

OBITUARY JAMES T SIMMONS by Reg Shooter

Mr Jim Simmons, a Founder member and a past President of the Native Orchid Society of S.A. passed away after a long illness on Tuesday 28th July 1987.

Jim was a devoted worker for the Society from the very early days, serving on the original committee. He was responsible for starting the library, taking on the duties of librarian for a number of years, only relinquishing that post to become President.

It is significant that his first duty was librarian as it revealed the true interest that he had in orchids, which was not so much as a grower (although he did at one time have a large collection of Australasian species), but as an historian very much interested in the early botanists and their writings. He showed a flair for tracking down manuscripts and documents and in fact travelled the world to do so. He then found that they were rarely in the English language and then had to have them translated. Once again his tenacious character came to the fore, as he was able to trace and then persuade able people to do the translations.

It is fair to say that the translations of Schlecter's great work on the Orchids of German New Guinea along with many others would not have come to fruition but for Jim's persistence and many hours of hard work.

Jim was a long time member of the Australian Orchid Foundation and as such was at one time an Honorary Associate Editor of the Orchadian and Chairman of the A.O.F. Publication committee. He was well regarded by many Botanic Gardens around the world who respected his dedication and integrity and was recently honoured by Kew Gardens for his services to orchid literature.

Above all Jim will be remembered as a warm and generous human being ready to give advice or practical assistance to fellow orchid enthusiasts. A visitor to his home would rarely leave without some tangible evidence of that visit be it an orchid, some pots, mounting material or more likely the loan of one of his precious books.

The orchid world is a poorer place with the passing of Jim Simmons, yet richer for his many contributions.

STURT GORGE FIELD TRIP REPORT 26th July 1987 by P. Reece

Five hardy souls met at Darlington to brave a cold, wet morning

of orchid hunting in one of Adelaide's newest Parks - the eastern section of Sturt Gorge Recreation Park administered by the National Parks and Wildlife Service. 7 species of orchid were seen in flower.

The first stop was near the Sturt River Flood Control Dam at the intersection of Catherina St. and Broadmeadow Drive, Flagstaff Hill. A short walk into the eucalypt woodland soon revealed 4 species of orchid in flower and the group soon forgot the cold and damp conditions. The rubber boots and umbrellas used by 2 members at least kept the users warm and dry. Adelaide's maximum temperature for the day was 10.8 degrees C at 1 pm.

Of note in this first area were many colonies of *Pterostylis robusta* seen in flower growing on the ridge-top and eastern slopes. Similarly an early form of *Cyrtostylis reniformis* was abundant and in flower.

The second area visited was off of Black's Road at a sign-posted entrance to the Park, a short distance east of Flagstaff Hill Primary School. A longer walk of about 1 km along a level ridge-top towards the Sturt River was required this time. The roar of the river, swollen with flood waters, could be heard long before it came into sight.

Most orchids were found on the river end of the ridge, and of note was a huge colony of *Pterostylis robusta* in flower. The colony was oval in shape and approximately 2 x 3 metres in size. The flowers, on average were about 6 cms apart, so on a rough estimate there would have been about 1000!

The Golden Wattle, (*Acacia pycnantha*) was coming out into flower as was the Native Wisteria, (*Hardenbergia violacea*).

More *Cyrtostylis reniformis* was eventually found in flower and by chance a small colony of *Corybas diemenicus* (formerly *Corybas dilatatus*) was located on the wet eastern-facing slope of the main ridge.

We then returned to our cars from where the author and Bob Bates continued on to Peter Creek Road near Kuitpo, here we located a large habitat containing *Corybas unguiculatus* and *Corybas incurvus* both in flower. Few flowers of the former were seen and it appears that in the Adelaide Hills its flowering period begins in late May. The area searched started from the top of Knott Hill and descended into a gully facing south-east. The soil was of light sand with a tall eucalypt forest overhead. June 1988 may be the next time these rare orchids come into flower.

However inclement the conditions may have been, the list of orchids seen was substantial. The group expressed their enjoyment of the day's hunt.

Areas visited: (1) Sturt Gorge RP, south of the Flood Control Dam.
(2) Sturt Gorge RP, long ridge NE of the Flagstaff Hill Primary School
(3) Knott Hill, Kuitpo Forest

ORCHIDS SEEN

IN FLOWER :	*Pterostylis nana*	(1) (2)
	P.vitata	(1)
	P. robusta	(1) (2)
	Cyrtostylis reniformis	(1) (2)
	Corybas diemenicus	(2)
	C. incurvus	(3)
	C. unguiculatus	(3)

IN LEAF	*Thelymitra nuda*	(1) (2)
	T. pauciflora	(1) (2)
	T. luteocilium	(2)
	Pterostylis pedunculata	(1)
	P. biseta	(1)
	Cyrtostylis affin. *reniformis*	(1)
	Glossodia major	(1) (2) (3)
	Caladenia menziesii	(1) (2)
	Cal. dilatata	(2)
	Leporella fimbriata	(3)
IN SEED	*Acianthus exsertus*	(1) (2) (3)

TOTAL : 18 species, 7 of those in flower.

NEXT FIELD TRIP Sunday 30th August

(*Pterostylis cucullata* Special)

Meet at the Belair Railway Station at 9.30am.
This is a whole day trip , during which we will visit several known populations of *P. cucullata* as well as search for new locations. We hope to see both the tall forest form as well as the dwarf sandhill form.

CAN YOU HELP?

You may have heard that a book illustrating all the South Australian orchids is being prepared. This was originally a S.A. Jubilee project but is now an Australian Bicentenary one.

We have reasonable slides of all species but we are not satisfied with the quality of even some of the common ones.

Do you have good slides of

(1) *Acianthus candatus* (whole plant of flower spike)
(2) *Acianthus* exsertus (good close-up of flower spike)
(3) *Cryptostylis subulata* (single flower)
(4) *Eriochilus* (clump of plants in flower)
(5) *Pterostylis tenuissima* (flower)
(6) *Thelymitra chasmogama* (flower spike)

If you can help please contact Bob Bates (231 3450) or
Joe Weber (Adelaide Botanic Gardens).

NOSSA SPRING SHOW 1987 - COMPETITIVE SECTIONS by Les Nesbitt

To be staged on trestles in the hall, separated from the rest of the orchid exhibits.
(1) All plants are to be benched by 10.30 am on Saturday, 19th September
(2) Plants in the displays are also eligible but must be marked with a ribbon (which will be available on the set-up day).
(3) A label must be attached to each exhibit clearly showing the correct name of the plant and the exhibitor's number (available from the Registrar).
(4) Plants must have been grown by the exhibitor for at least 6 months before the Show.
(5) Hybrids include natural hybrids.
The judging will take place between 10.30 am and 12 noon Saturday,

19th September.
The A.O.C. judging standards will be used.
NOSSA By-laws will also apply.
Any applications for NOSSA awards will be judged by the Committee.
No prize money will be awarded, but Class winners will be acknowledged in the Journal. Champions will receive a card.
The Society will accept no responsibility for any loss, damage or infection suffered by any plant exhibited at the Show. All possible precautions against these happenings are taken. Stewards may remove any plants suspected of carrying a disease from the hall.
All orchids will remain on display to the public on Saturday 19th September and Sunday the 20th September.
Plants are to be removed at 5.00 pm on Sunday 20th September.

SCHEDULE

Champion Native Orchid of the Show - ANDS silver medal.
The Roy Hargreaves Trophy (Best terrestrial species or hybrid)
Ira Butler Award (Best hybrid)
Champion Terrestrial Species (from classes 1-5,8)
Champion Terrestrial Hybrid (from classes 6-8)
Champion Epiphytic Species (from classes 9-12,16)
Champion Epiphytic Hybrid (from classes 13-16)

CLASS	DESCRIPTION (1st and 2nd prizes in each class)
1	*Caladenia* or *Glossodia* species
2	*Diuris* species
3	*Pterostylis* species
4	*Acianthus* or *Chiloglottis* species
5	Terrestrial species other than classes 1 - 4
6	*Pterostylis* hybrid
7	Terrestrial hybrid other than in class 6
8	Specimen terrestrial - species or hybrid
9	*Dendrobium kingianum*
10	*Dendrobium speciosum*
11	*Dendrobium* species other than 9 or 10
12	Epiphytic species other than *Dendrobium*
13	Epiphytic hybrid - cream or yellow
14	Epiphytic hybrid - pink or red
15	Epiphytic hybrid - any other colour including white
16	Specimen epiphyte. - species or hybrid

Les Nesbitt - Registrar

CULTIVATION - *Phaius tancarvilliae* by Les Nesbitt

I have grown my plant in a heated glasshouse kept at a minimum temperature of 15 degrees C. Under these conditions the flower spike develops rapidly and the blooms open in mid winter. Under these conditions die-back on the ends of the leaves is minimal. I pot in a bark-based cymbidium mix.

Some years ago I grew this plant in a 50% shadehouse, all year round. The plant survived although leaf die-back was severe in winter. Flower spikes were initiated at the usual time in autumn but development was retarded in winter and the plant flowered in October. In 1982 the very severe frosts cut the plant back to pot

level, killing all the leaves. It took 2 years to recover from this setback.

P. tancarvilliae is called the Australian Swamp orchid because it is often found growing in swamps in Queensland. This species does not like its roots to become dry so keep it continually moist. It's tall flower spike (over 1 metre tall) and large colourful flowers are very attractive.

CULTIVATION AND PRESERVATION OF SOUTH AUSTRALIAN NATIVE ORCHIDS by R. Bates

In a recent article (J. N.O.S.S.A. July 1987) I suggested that in a broad sense, cultivation was hardly an alternative to the preservation of the environment in the conservation of native orchids. Nevertheless cultivation can and does play an important part in the preservation of plants in both the positive and the negative sense.

Take the maiden-hair tree, (*Gingko biloba*) for example. This beautiful plant, the last surviving member of an ancient plant family, owes its existence today only to the fact that it was placed in cultivation in China before the last of the wild populations was destroyed. It is now in gardens all over the world.

Closer to home, I recently planted out a dozen shrubs of the emu bush, (*Eremophila denticulata*), grown from cuttings. This just may be more than the number of plants remaining in the wild.

As far as South Australian orchids are concerned we have similar examples. The sandhill form of *Pterostylis cucullata* was recently re-introduced back into the wild in South Australia from plants rescued from an area near Fairview Park some 20 years ago. I have in cultivation at least twenty orchids which no longer grow within 10 km of where they were collected, and I know of twice that number of interesting forms which were not put into cultivation and have now been wiped out by habitat destruction.

Pterostylis erythroconcha is known from the South-east of South Australia only from plants collected on a NOSSA rescue dig. Such examples are numerous and I am in favour of placing in cultivation not only all the species but indeed all of the various forms of our native orchids (excepting those which are known to be difficult to cultivate). This would be a backup against loss of those forms in the wild.

Even in Conservation Parks there is no guarantee of survival. There are several cases where the only known population of an orchid within a park was destroyed through widening of fire-breaks, road construction, by fire and in one case due to a build-up in the numbers of kangaroos, not to mention the construction of golf courses!

Cultivation can therefore ensure preservation of a wide 'gene pool' of many orchid forms.

Obviously at the opposite extreme, indiscriminate collection of orchids from the wild (for cultivation) can have a detrimental effect. It is one thing to take a single tuber of a colony-forming species from a roadside and build it up into a pot-full of the species, but quite unacceptable to dig up dozens of a 'non-colony forming' species from the centre of a Conservation Park. Fortunately I have not seen evidence of this latter approach. In fact, despite having led NOSSA members to numerous colonies of rare and beautiful orchids during field trips, I have never seen

evidence of plants being removed. Therefore let the society continue to have 'rescue digs' but let us not lose sight of the fact that the most effective work we can do for preservation and conservation is through education and legislation.

Dendrobium teretifolium var. *teretifolium* by Gordon Brooks

This is the variety which is known as the bridal veil orchid. The plant tends to be moderately compact in growth, each new stem producing 2 or 3 racemes each bearing up to 7 flowers. The flowers are cream to white and their profusion produces a cloud of blossoms.

It prefers *Casuarina* spp. as a host, occurring at low altitudes in situations where it receives a fair amount of light. Its natural range extends from the Clyde River in south-eastern New South Wales to the Fitzroy River in Queensland.

The plant shown at the July meeting came from near Huskison where it was growing in a grove of *Casuarina* spp. Because the original branch was badly rotted, the plant was secured to a large slab of natural cork bark.

Until it flowered last year the plant resided in a shadehouse (50% shade in winter boosted to 75% shade in summer) the plant facing to the south to minimise the exposure of the new roots to strong sunlight. Over the last 12 months the plant has hung in a permanently ventilated cold glasshouse, the only apparent difference is a more vigorous root system.

In summer the plant is watered daily while in winter under shadehouse conditions it receives water every 2 or 3 days if there has been no rain. During winter in the cold glasshouse, watering is carried out every 2 to 3 days.

The plant receives a drenching with foliar fertiliser at least once a week during summer, while in winter it is less frequent but the plant is still drenched.

I have found that a thorough watering is better than a light misting as the salt build up on the plant and mount is practically eliminated. If there is an excess of moss growing on the mount I use a strong jet of water to clean it off as the roots prefer to dry fairly quickly, especially during winter.

WONDERS OF WERRIKIMBE by E. Viskic

Werrikimbe National Park is located on the eastern escarpment of the Great Dividing Range about 450 km north of Sydney. It is listed on the World List Heritage Register and preserves some rainforest communities in the upper and lower catchments of the Forbes and Hastings rivers. It comprises 34,753 hectares and is one of the largest national parks in north eastern NSW.

The altitudinal sequence of vegetation types occurs between the Plateau of Beech's cool temperate rainforest, through mountain heaths and snowgum woodlands to the warmer drier terrain of lower altitudes where warmer temperate and subtropical rainforest communities live. The transitional vegetative communities of these various forests hide such wonders as terrestrial and epiphytic orchids which have found suitable habitats within these communities.

At 1500 to 2000 mm per year rainfall level live the cold tolerant Eucalypts, inhabiting the plateau surface and high spurs above 1200 m. These include *Eucalyptus radiata* below which was discovered the lovely green flowers of a colony of the nodding greenhood orchid (*Pterostylis nutans*). It had spread in the leaf litter of this peppermint gum and was flowering in April. In the boggy areas amid the grasses of tussocky snow grass, (*Poa sieberana*), the grounsels, (*Senecio* spp.) and bright yellow paper daisies, (*Helichrysum* spp.) were found the tell-tale seedpods of the Ladies Tresses orchid (*Spiranthes sinensis*). This is the most globally widespread terrestrial orchid with flowers pink or white spiralling along the stem.

The transitional communities of Tallow wood, (*Euc. microcorys*) and New England Blackbutt, (*Euc. andrewsii* subspecies *companulata*) are common on the tops of ridges and spurs below 1200 m.

Beneath the Sydney Blue gum, (*Euc. saligna*) and on the edge of the heath is found the tall rough tree fern (*Cyathea australis*); here grows another terrestrial orchid, *Eriochilus cucullatis* with white 'Parsons Bands' flowers in autumn.

In the leaf litter of the Messmate, (*Euc. obliqua*) grows the saprophytic orchid, *Dipodium punctatum*. In summer it produces pink flowers on purple stems and when pollinated by solicitous ants or bees seeking the plentiful nectar, it forms fat purple seed pods. Only above 1200 metres, the tall Antarctic Beech, (*Nothofagus moorei*) is the dominant giant of the cool temperate rainforest. Its ancient branches are covered in hanging moss (*Papillaria*) and are the hosts of the wonderful Beech orchid, (*Dendrobium falcorostrum*) that flowers in October. This orchid was observed to be growing in full sunlight in the forks of high limbs. [It should be noted though ,that full sunlight in this region is not as intense or burning in summer as full sunlight in South Australia. Ed.]

The secondary layer trees including Sassafras, (*Doryphora sassafras*): Possumwood, (*Quintinia sieberi*) and the Mountain Laurel, (*Crytocarva* spp.) are host to other *Dendrobium* orchid wonders. The Dagger orchid (*D. pugioniforme*), with its pointy leaves, wraps itself around twigs and branches that are covered with lichens and ferns, using both its stems and roots.

The orange-blossum orchid, (*Sarcochilus falcatus*) likes the moist cool limbs of the Mountain Bluberry, (*Elaeocarpus holopetalus*) that grow amongst the Soft Tree Ferns, (*Dicksonia antarctica*).

The main plant communities of the lower, warmer areas of the Park are the home of a profusion of species related to New Guinea and Indo-Malay flora. These include the Booyong (*Argyrrodendron actinophylla*), which was coating the treetops with white fragrant blossom during my visit in April.

The yellow carabeen, (*Sloanea woollsii*); Hoop Pine, (*Araucaria cunninghamii*); Coachwood, (*Ceratopetalum apetalum*), form the array of canopy trees above the mixed wealth of the rainforest. These are the hosts to a variety of *Dendrobium* species which include *D.speciosum, D. tetragonum, D. gracilicaule, D.* x *gracillimum*, *D. tenuissimum* and other cool forest overlapping growers *D. pugioniforme* and *S. falcatus.*

These are just some of the wondrous jewels in the crown of the evolution of the Australian rainforest. They were a joy to discover and observe in their unspoilt native glory.

AUTUMN FLOWERED BIRD ORCHIDS By Bob Bates

(*Chiloglottis reflexa, Chiloglottis diphylla, Chiloglottis dockrilli, Chiloglottis trilabra* and the like):
Variation and Pollination

According to Clements (1982) there is only one autumn flowered bird orchid ie. *Chiloglottis reflexa.*

Its distribution is given as: Tas., Vic., N.S.W. and Qld. According to various references the habitat of the 'species' ranges from coastal sand-hills, through open forests, swamp margins, fern-tree gullies, mountain tops, rainforest and even jungle and dense forest: quite a variation!

About a year ago, someone suggested to me that *C. reflexa* was really a complex of species, so I took out my slides (a total of 3) and checked. Sure enough the 3 slides were of vastly different flowers.

I had never seen *C. reflexa* in the wild, all my photos were of cultivated plants. Now I had to admit that here was a complex of species I knew nothing about. The literature showed that the original *C. reflexa* came from Tasmania and was first known as *Epipactis reflexa.* I located a drawing of this which showed the labellum to have a glandular ridge on the labellum apex. None of the mainland plants seemed to have this ridge.

Next I checked on the given synonyms of *C. reflexa*, namely *C. diphylla* from coastal N.S.W., *C. trilabra* also N.S.W. and *C. dockrilli* from the Barrington Tops. None of these really seemed to be the same. A quick check in Nicholl's 'Orchids of Australia' showed two more forms that were distinct from those of which I had photos. The plot was really beginning to become complex.

I began to ask a few questions, and was told that *C. reflexa* was already known to consist of "thirteen different taxa!"

The next orchid bulletin I picked up contained a manuscript named *C. sylvestris.* Yes! The action was really beginning to hot up.

It really did seem obvious that *C. reflexa* from Tasmania was not the same species as '*C. reflexa*' from the cloud forests of Northern Queensland. What about all that variation in between? Thirteen different '*C. reflexa*'. Was this just the beginning? Some botanist was really going to have fun revising *Chiloglottis.*

In May this year I saw my first wild *C. reflexa* on a visit to South-West Victoria. Colin and Dorothy Woolcock showed me two large populations which exhibited the 'typically' shy flowering nature of the autumn bird orchids: there were about 500 plants to each one flower! The plants grew along 'fire-breaks' in fairly dense forest.

Pollination: About noon a single *C. reflexa* flower was picked and placed in an open sunny spot 20 metres from the main population. Within 30 seconds a black and white wasp zoomed in and 'zapped' the flower, circled once and landed on the labellum. It grasped the insect-like mass of dark colli and whirred its wings vigorously. The labellum lifted and 'thud', the wasp was jammed between the labellum and column. At this point the wasp was captured. Further wasps visited, but it took several of these visits before any actual pollinia was removed.

There is little doubt that the attraction was a sexual one as suggested by Stoutamire (19). The captured wasp was identified by Graham Brown (who is currently revising the thynnid wasps) as a male *Neozeleboria* aff. *proxima*

[This article to be continued, Ed.]