

NATIVE ORCHID
SOCIETY
of
SOUTH AUSTRALIA



*Thelymitra
antenniferia*



NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA
JOURNAL

Volume 4, No. 3,
April, 1980

Registered for posting as a publication Category B. Price 40c

PATRON: Mr T.R.N. Lothian

PRESIDENT: Dr P.E. Hornsby
8 Kinross Avenue
LOWER MITCHAM SA 5062

SECRETARY: Mr E.R. Hargreaves
1 Halmon Avenue
EVERARD PARK SA 5035
Telephone 293 2471
297 3724

VICE-PRESIDENT: Mr J.R. Simmons

COMMITTEE: Mrs A.M. Howe
Mr K.W. Western
Mr R. Shooter
Mr G. Nieuwenhoven

TREASURER: Mr R.T. Robjohns

EDITOR: Mr L.T. Nesbitt

NEXT MEETING

When: Tuesday, 22 April, 1980, at 6,00 p.m.

Where St. Matthews Hall, Bridge Street, Kensington.

Why: Slide programme from Phil Collin and Lloyd Bradford of the Australian
Native Orchid Society in New South Wales.

Plant display and commentaries, library, raffle and trading table.

LAST MEETING

Attendance 55

Five members brought along slides for us to view. The highlights were orchids
flowering in the Yundi swamps and the rare *Thelymitras* seen in flower last
season.

Raffle prizes were *Pterostylis nutans* and a bottle of Nitrophoska

Ron Robjohns commented on the epiphytes on display and Les Nesbitt spoke on the
terrestrials.

Plants seen

Sarcochilus ceciliae (3F)
Dendrobium bigibbum
Den. dicuphum
Den. cucumerinum
Liparis reflexa
Bulbophyllum exiguum
Eriochilus cucullatus (in bud)

Prasophyllum rufum (2)
P. nigricans
Pterostylis baptistii (in bud)
Pt. curta (leaves only)
Pt. revoluta
Pt. obtusa (in bud)

POPULAR VOTE

Terrestrials:	First -	<i>Pterostylis revoluta</i>	Alwin Clements
	Second -	<i>Pterostylis revoluta</i>	Ray Hasse
Epiphytes:	First -	<i>Liparis reflexa</i>	Ray Haese
	equal -	<i>Sarcophilus ceciliae</i>	P. Hornsby
	second -	<i>Dendrobium dicuphum</i>	H. and T. Tormet

TRADING TABLE

The motion passed at the Special General Meeting: viz

"Each family shall be permitted to sell 10 plants on the trading table, but there shall be no limit to the number of plants able to be donated. Plants in this context shall be native orchids of Australasia and/or their hybrids."

has been ratified by the Committee.

Native orchids offered for the trading table shall be of an acceptable quality and standard as judged by the manager of the trading table.

COMMITTEE FOR 1980/81

PRESIDENT	Dr Peter Hornsby
VICE PRESIDENT	Mr Din Simmons
SECRETARY	Mr Roy Hargreaves
TREASURER	Mr Ron Robjohns
COMMITTEE	Mr George Nieuwenhoven
	Mr Reg Shooter
	Mrs Audrey Howe
	Mr Kevin Western
AUDITOR	Mr Keith Yates

The following appointment was made at the Management Committee Meeting

EDITOR	Mr Les Nesbitt
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NEW MEMBERS

Pr J. Parise, Modbury North
 Mr and Mrs R. Morris, Enfield
 Mr C.J. Clark, Gurneracha
 Mr V.C. Little, Allenby Gardens

The conservation of orchids in their natural habitat is one of the fundamental aims of NOSSA. However, what this so frequently means is not so much doing anything positive ourselves, but more a question of advocating somebody else making the real effort and sacrifice. In fact, one of the more satisfying episodes in 1979 came from the MOP Group visits to Tintinara, as a result of which the Candy's have extended the area they were going to retain as natural scrub in order to accommodate some of the better patches of orchids.

Much closer to home are the properties of Brian and May Warner, and their next door neighbours Mr and Mrs Herman Priem, at Yundi. The waterlogged patch that straddles their boundary is exceedingly rich in swamp orchids, not to mention other rare non-orchidaceous species. As a result of NOSSA interest in the area, the Warners have considered fencing off part of the swamp. This of course was very gratifying, but once more the onus was on the owners. However, we saw our opportunity in the announcement (The Advertiser, Wednesday, 27.2.80, page 6) that the South Australian government has launched a \$150,000 per annum scheme to "provide incentives to landholders to try to retain significant areas of native vegetation on private land". It means that if we do find important orchid areas on private land, instead of trying to persuade the owners to do something to conserve the area completely on their own initiative, we can now suggest they consider setting aside the area in accordance with this new scheme.

This is what we hope will happen at Yundi. A small delegation, comprising Bob Bates as the plant expert and Roy Hargreaves, plus my assistant and I visited the properties on March 23. We were able to give the owners an impressively long list of significant species to be found there, though the only orchid we found in flower was *Eriochilus cucullatus* - numbers of small plants, several of which had two, and sometimes three flowers. Other than that, an inspection of the properties just now would mean a real exercise of faith by the Government representatives.

All we can do now is to hope the efforts are successful. If they are, it will be a step in the right direction by the Society, and something of which we can feel justifiably proud. Hopefully, this new scheme will effectively benefit some of the more important orchid localities in South Australia that are presently vulnerable.

FIELD TRIP
COX'S SCRUB
Saturday, 3 May

There will be a field trip to Cox's Scrub on Saturday, 3 May. Meet at the crossroads in Ashbourne (just past the Oval on the left-hand side) at 2.00 p.m.

CULTURE NOTES

C. Nieuwenhoven

(Continued from March Journal)

Early May is the time to take out the orchid seeds you have collected from your plants when they became ripe. Take each pot one at a time off the bench and sprinkle the seeds across the top of the pot and water in and replace the pot. Do not put the seeds on your pots while they are standing on the bench. The reason for this is that as the seeds are so fine and dustlike, they will be easily carried by the wind into the next pot and they will germinate where you do not want them, resulting eventually in pots of mixed orchids. Although you may be quite happy to have your plants growing this way, they are not much use if you wish to show them at club meetings, etc. Besides, a pot full of one species looks much more attractive.

The seeds take a while to germinate and seedlings start appearing during springtime. From this moment they should be kept moist and growing for as long as possible. This ensures the formation of a small tuber and the bigger the first year tuber, the better the survival rate becomes for them. *Caladenia*, *Diuris* and *Thelymitras* seem to germinate best for me although I have had success with some *Pterostylis* species, *Corybas*, *Glossodia* and *Cryptostylis*.

FIELD TRIP TO BELAIR RECREATION PARK 5.1.80

Peter Hornsby

We ushered in the new decade with a gentle trip, in unusually mild weather to Belair Recreation Park. Our main object was to see the Hyacinth orchid, *Dipodium punctatum*. This must be a good year because at the top end of the Park we found plenty of them. They ranged in colour from pale cream to one that had quite deep pink flowers. The most floriferous was a "slight", rather pale, specimen with 25 flowers open and four still in bud, while the tallest was just over 90 cm high. We also found one growing in the midst of a patch of native cherry trees, *Exocarpus cupressiformis*, with the nearest stringybark tree at least 4 metres away

In the same vicinity we also saw the last of this season's flowers on the blue flax-lily, *Dianella revoluta*, and one of the 'Trigger' plants, *Stylidium* sp.

Having admired the Hyacinth orchids at length, we adjourned to the Pines oval. A search of the area up the hill from the oval revealed our first Society find of the Horned orchid, *Orthoceras strictum*. With so many keen searchers, it was not surprising that they started popping up all over the place. All the ones we found were of the pale green variety, and all were at an advanced stage, many with fat seed-pods. We also spotted several small clumps of the pretty blue-flowered *Lobelia gibbosa*, and an occasional dash of pink form *Crevillea lavandulacea*.

In addition to this, we saw frequent examples of dried stems and seed pods of various *Thelymitra* species, *Microtis* and *Prasophyllum* species, as well as one *Calochilus robertsonii*, not long past the end of its flowering season. Pride of place though must go to one Hyacinth orchid, recognisable this year from the chewed-off stump that was all that remained, but alongside was last year's dried-up stem and seedpods as well as the stem from the year before that

Orchids seen in flower: *Dipodium punctatum*, *Orthoceras strictum*.

Orchids past flowering: *Calochilus robertsonii*

Introduction

When one considers the remarkable evolution of species on remote oceanic islands such as the Galapagos it at first comes as a surprise to discover that the widely separate sub-antarctic islands have no endemic flora of their own but rather possess an extension of the flora of the nearest large land mass. This is because periods of adverse climate cause almost total extinction of plants that have reached these bleak islands, necessitating introduction and re-introduction of species from further north during warmer periods. Evolutionary development of species is halted.

Although winds and ocean currents are circumpolar in a westerly direction, there is very little transfer other than of grasses, in that direction. The reason for this is that transfer of species is affected mainly by migratory birds which annually move north-south, flying rapidly from island to island carrying mud and seeds on their feet. Because of these facts the orchids of the Falkland and South Georgia Islands are the same species of *Habenaria* as found in southern America. The orchids of the Australian and New Zealand sub-antarctic islands are the same species, indeed because they are probably recent introductions (the islands presently in a warm period) they are part of the same populations as the species on the "mainland" of New Zealand and Australia.

Due to the paucity of insects on the sub-antarctic islands the orchids are cleistogamous (self-pollinated), and because flowering may only occur in milder years vegetative reproduction will be more important than seeds – thus they are all colony formers.

The species

The most widespread genus is *Corybas*, the New Zealand species with long filamentous sepals and petals giving them the name of "spider orchids". The widest ranging species is *Corybas macranthus* found on Campbell and Auckland Islands and extending to Macquarie Island, politically part of Australia but possessing the flora of southern New Zealand. *Corybas trilobus*, *C. oblongus* and *C. rivularis* also occur on Campbell and Auckland Islands. Whereas the Australian *Corybas* complete their life-cycles in the winter months, the subantarctic *Corybas* grow only in the summer months.

The most typical of the sub-antarctic orchids is *Lyperanthus antarcticus*, originally described from Auckland Island and, despite its name, not occurring in Antarctica proper.

Surprisingly three South Australian orchids do reach the sub-Antarctic. Campbell Island (5206) is in fact the type locality of *Chiloglottis cornuta* where it is found in sphagnum bogs – the same type of environment it occurs in near Nangwarry and Mt. McIntyre in our South-East.

The *Thelymitra venosa* from Auckland Island area are apparently of the same form as plants of that species from the Nt. Lofty Ranges. *Thelymitra longifolia* from the sub-antarctic is, however, somewhat different from the local form.

Another orchid common in the islands is *Aporostylis bifolia*, a plant midway between *Lyperanthus* and *Chiloglottis* and one orchid which does appear to have evolved in the sub-antarctic.

To complete the list we find *Townsonia viridis* (a species also found in subalpine Tasmania), *Prasophyllum colensoi* (a plant similar to *P. alpinum* of Australia), and *Caladenia lyallii*.

Orchids of the Australian end
New Zealand Sub-antarctic Islands (contd.)

It will be noted that all of the sub-antarctic species are terrestrial. However no less than five epiphytes occur on Steward Island, south of New Zealand's South Island (considerably further south than Tasmania). The moderating effect of a "warm" ocean current and the maritime environment probably accounts for this.

OCCASIONAL NOTES

Peter Hornsby

A recent issue of South Australian Parks and Conservation (Vol II, Part I; March, 1979) is devoted primarily to a resume of the Cleland Conservation Park. The section by Kevin Thiele, dealing with the natural history of the Park, contains the following

"On the ground, the stringybark forests support 25 recorded species of orchids, including the rare and beautiful tiger orchid (*Thelymitra fuscolutea*), four species of winter-flowering greenhoods *Pterostylis*, the bearded orchid (*Calochilus robertsonii*) and the unusual spotted orchid *Dipodium punctatum*. The leaves of this species are reduced to virtually dysfunctional small, bract-like scales. Probably the major part of the plants nutritional requirements are supplied through an association with a saprophytic rhizobial fungus. The fungus lives in the orchid's large underground tubers, and supplies it with essential nutrients derived from the breakdown of surrounding decomposing organic material, the orchid in turn supplying the fungus with certain compounds which it cannot independently synthesize. The orchid at least is completely dependent on the fungus and cannot live without it.

Many of the orchids in the Park flower most profusely the season after a mild fire, as the ash from the fire provides a readily accessible source of mineral nutrients. In fact the black orchid *Lyperanthus nigricans* rarely flowers at all unless stimulated by a fire."

This is an area we have yet to visit, so it looks as though we should put it on the list for next year.

PESTS DISEASES AND PROPAGATION

G. Nieuwenhoven

Terrestrial orchids are relatively free from pests, but a few beasties, such as aphids and thrips, seem to enjoy our orchids. These can be sprayed with a reasonably safe insecticide like pyrethrum, which has a short life and is therefore less harmful to natural predators.

One of our greatest nuisances are small green caterpillars, you probably know the kind, that wriggle vigorously when disturbed. These are best picked off or squeezed out of their hiding place, a rolled up leaf! They chew away new growth tips or flower buds, so a sharp eye should be kept out for them, especially in springtime. Frequent inspections of your plants will quickly control them. Slugs can be particularly troublesome especially if your pots are placed on the ground, every effort should therefore be made to keep the floor clear of all pots by placing them on benches.

Pests, Diseases and Propagation (contd.)

The best time to look for slugs is with a torch on rainy nights. It is amazing how many one will collect over 12 months. Another method is to place a couple of bricks on the ground in one corner and keep this spot damp. Lift the bricks every couple of days and remove any slugs gathered there. I collect about three dozen large specimens in as many weeks this way.

A few diseases affect some of our plants, mainly organisms which attack the leaves of some *Pterostylis* species, *Thelymitras* and *Diuris*. It is not necessarily the same disease which attacks these genera. Not a great deal is known yet about how to combat them and some experimenting by all growers should be carried out as to what may combat these diseases. The ones I have had experience with are the following:

Pterostylis rot. This often destroys the whole plant affected and is commonly contracted by plants which stay too damp or are standing under a drip. Plants take on a slimy appearance and just gradually die. Pots affected should be separated from the main collection, be kept out of the rain and be hand-watered by standing in a saucer or tray until the soil is damp, then removed from it again. You could try spraying with fungicide, but I have not had much success with these preparations. One which may be worth trying is Natriphene – one of our members had some success in keeping the black leaf disease off *Calanthe triplicata* with it.

Black leaf tip disease. Some *Diuris* are affected by a black leaf tip disease which gradually works its way down the whole leaf and is quite contagious. Again the plants must be separated from the main collection. The affected part may be cut off and usually the plant will keep growing. Badly affected plants will form only a small tuber and plants contracting this disease two seasons in a row can be wiped out. No real cure has been found yet. I have tried the fungicide Benlate to no avail.

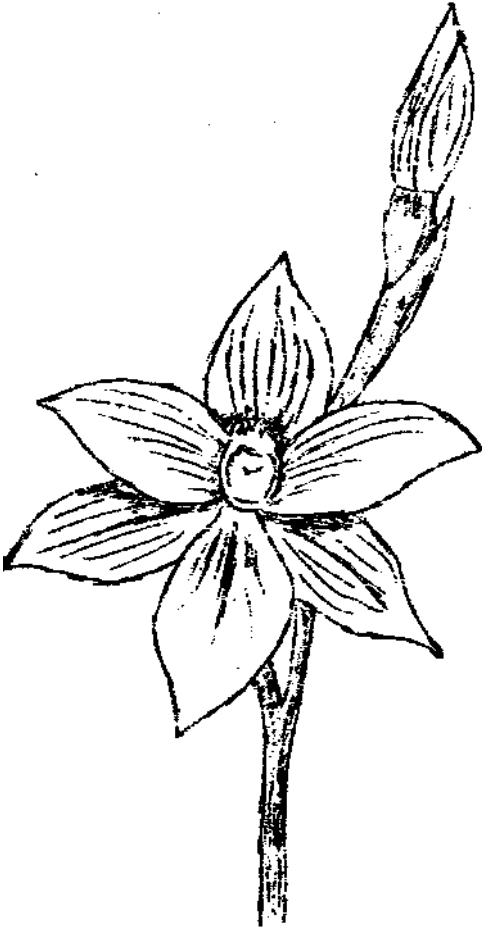
Thelymitra rot, *Thelymitra* rot creeps up unseen. Affected plants look healthy at first but suddenly stop growing and look limp. If given a gentle pull it will come out of the soil where upon it can be observed to have rotted away just below ground level. No cure is known.

Propagation

If after these unhappy experiences you still have some healthy plants left, you may like to try and increase a few of your plants by the following methods. Those plants which produce only one new tuber each season, such as *Pterostylis biseta*, *Pt. plumosa*, *Pt. vittata*, or *Pt. longifolia*, can be increased by lifting the plant from the soil, pulling the new tuber off the plant, then replacing the plant in the pot. Usually it will grow a second tuber. The timing must be right for this: generally it is done just before or during the flowering period. Another method which has been tried with some success by different people, is to cut the new tuber, when dormant, exactly in half through the growing point, then let the two cut surfaces dry off and plant the two halves. This should produce two plants. It does require steady nerves if you are cutting your most precious tuber – it is not recommended for the squeamish.

A simpler method is to cut the flower spike off a plant before it has time to develop too far. This helps the plant to produce at least a larger tuber that season and often stimulates it to produce a second one. I have not tried this on all my plants yet, but it does work on *Thelymitra* and *Diuris*.

This lovely orchid use to be quite common in New Zealand, but extensive drainage of swamps and land reclamation has reduced its range.



Thelymitra venosa

Vegetatively it is very similar to most of our other Thelymitras except it never produces the broad-ribbed leaves of *T. longifolia*. It produces one dark green leaf that can reach as high as 50 cms, but is usually much less.

The underground part consists of a carrot-shaped tuber, but even this can vary and may be almost round or like tiny cigars. Very thick roots spring from above the tuber and travel some distance from the parent plant if conditions are favourable. New tubers arise from the end of these roots and care should be taken in lifting to not break or cut through them. Each plant often makes several new tubers and this accounts for *T. venosa* being found in quite extensive clumps.

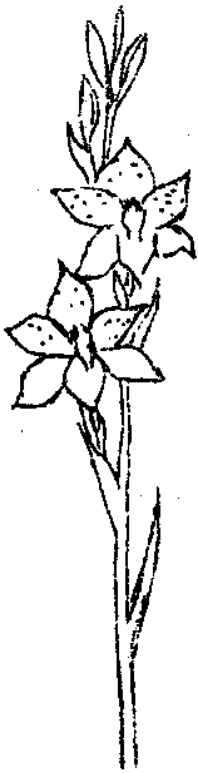
Flowering commences in November in Te Puke, but plants can be found in flower as late as February in the far south. Each flower is about 20-25 mm, occasionally larger. Colour ranges from dark blue to light blue, but a percentage are pink and a few even white. Dark veins make the flowers easily identifiable. Juvenile plants have one flower and the average is 6 to 8. I have found up to 16 on very large mature plants.

One advantage of this species is that the flowers open at quite low temperatures

and will often remain open on dull days and in the evenings. A large patch of *T. venosa* in flower is a sight never to be forgotten.

Where do they grow? Today they are limited to wetlands reserves and the more isolated places in the mountains. Until recently they could be found in large numbers in the swamps of Southland. Here could be found with them great quantities of *Aporostylis bifolia*, *Chiloglottis cornuta* and *Lyperanthus antarcticus*. The plants grew in peat, in old tussocks, but the best specimens I have ever seen grew in the mounds of sphagnum along the banks of drainage ditches, presumably because it allowed great root development.

I grow *T. venosa* under a variety of methods. Quite good results have been obtained in pots of sphagnum moss but usually I just use a sand, peat mix much as is used for other species. One year I tried some tubers in the garden with the rest of the bulbs and to my surprise they have grown and thrived for several years. How it will stand up to high temperatures I do not know as ours never go above 30°C, but they occur naturally in the cooler parts of the country or at high altitudes so I suspect they might not be too happy.



T. ixioides x
pauciflora



T. ixioides x
mucida

(Columns)

Thelymitra decora



T. ixioides x
longifolia

Thelymitra decora Cheeseman was based on New Zealand material and named in 1909. *T. truncata* Rogers was described from South Australian material and named in 1917. Nicholls, in 1943, reduced it *T. ixioides* var. *truncata*. Material from South Australia, including a type of *T. truncata*, was compared with *T. decora* and found to exhibit the same morphological variation. Weber and Bates (1978) treat them as the same species under the earliest name, *T. decora*.

The attractive blue spotted flowers (two to eight) open in warm weather in October or November. The plants are widespread in the southern Lofties but seldom encountered. They have also been reported from the South-East,

T. decora is considered to be of hybrid origin and as it is always found in the same areas as *T. ixioides*, it is likely that *T. ixioides* is a parent.

There are three slightly different forms in South Australia. A large-flowered insect-pollinated form with a long tubular column mid-lobe is encountered where *T. longifolia* and *T. ixioides* occur together and is a putative hybrid of the two. It is the most suitable form for cultivation. The form with typical short truncate mid lobe, as in the type of *T. truncata*, is considered to be a putative hybrid - *T. ixioides* x *pauciflora*. This form is cleistogamous and seldom opens. A third, very brightly coloured form (seen on the NOSSA Field Trip to Peter Creek in November 1979), is a putative hybrid of *T. ixioides* and *T. mucida*. *T. decora*, like *T. ixioides* sometimes occurs without spots.

Thelymitra decora also occurs in New South Wales, Victoria, and Tasmania as well as New Zealand.

Pterostylis obtusa

This is one of our rarer orchids found in the southern Mt. Lofty Ranges. One of the reasons it grows there is probably due to the fact that this area receives a slightly higher rainfall than elsewhere.

It is one of our earliest autumn flowering *Pterostylis* species which does not produce a rosette of leaves when in flower. It flowers from April to May, produces one flower, green in colour, with a blunt-tipped labellum (wherefrom it receives its name) according to Black's Flora Vol. I, the lobes of the lateral sepals are separated by a broad bulging sinus, with a notch protruding forwards. This unmistakably identifies the species and describes it accurately. In cultivation it is a rewarding plant to grow, for it seems to produce a good crop of flowers each season, i.e., out of 15 tubers I planted in one pot, 10 plants are producing flowers. Other members seem to get equal or better results.

They seem to like a well-drained and open soil and easily reproduce three times the number of tubers planted at the start of the season. My plants start receiving some hand-watering from the end of February. They come up about the middle of March and grow fairly rapidly from then on. In my collection they go dormant quite late in the season, particularly if kept damp, and this may account for the prolific production of tubers.

P.S. It seems last month's plant (*Eriochilus cucullatus*) was a month too early as only one pot in bud was brought in, so please bring this species in this month also.

SEEDLING COMPETITION

Would all members who have seedlings of *Dendrobium* Ellen x *Den. falcorostrum* purchased at the November 1978 meeting please bring them along to the April meeting so that progress may be assessed.

FIELD TRIP?

Details on page 3.