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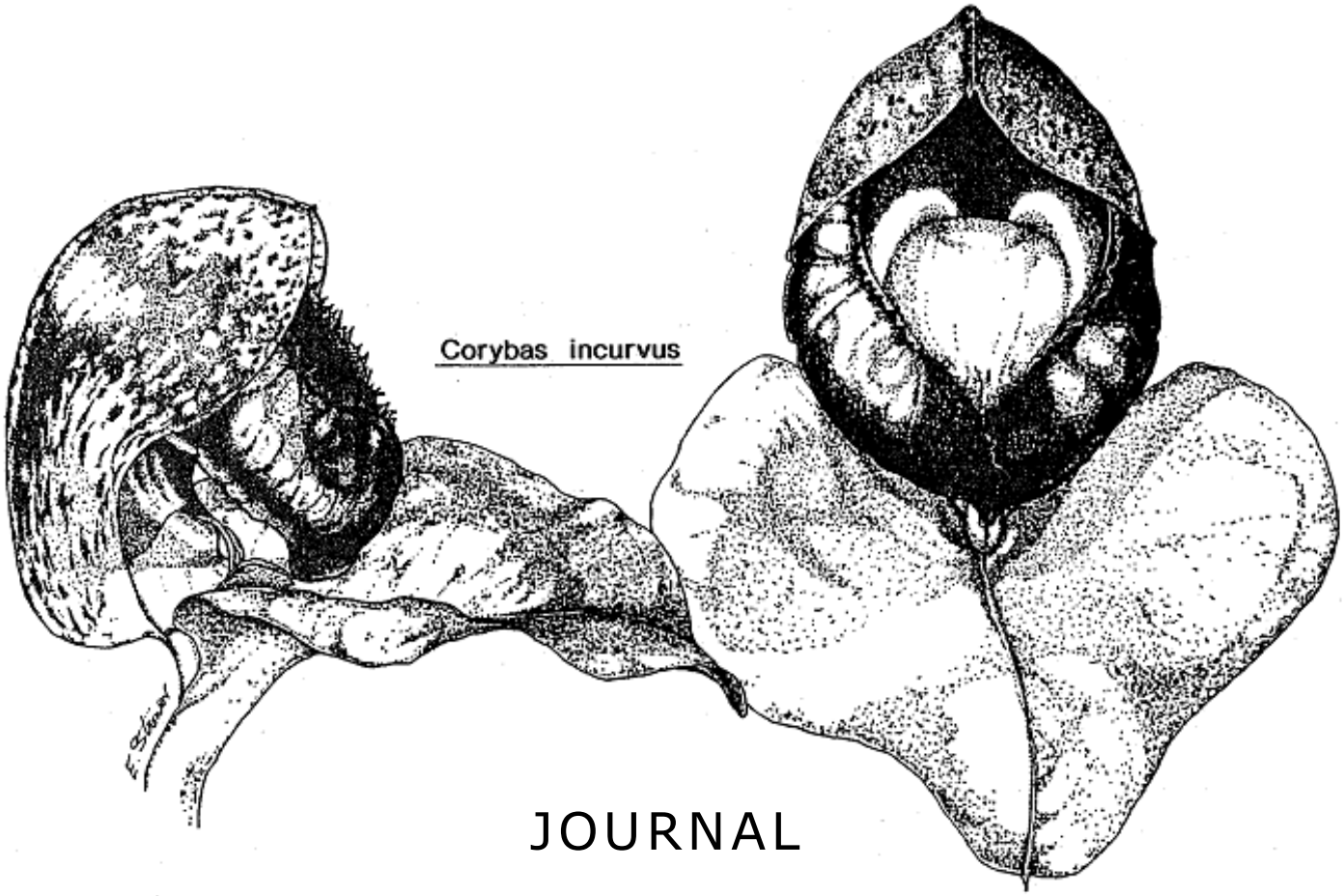

JOURNAL

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

February 1990 Vol. 14 No. 1

NEXT MEETING

Tuesday, 27 February, 1990, 8.00 p.m.
St Matthews Hall, Bridge Street, Kensington.
Visitors always welcome.

The meeting topic for February will be "A Picnic at Scott Creek" -a report on the 1988 NOSSA Survey of Scott Creek Conservation Park by members who participated.

MANAGEMENT COMMITTEE VACANCIES

A number of committee vacancies will become available at the next Annual General Meeting.

Now is your chance to assist with the Management of your Society. If you can help please nominate for one of these positions. The work is not onerous and it can be rewarding.

D. Butler, Secretary.

NEXT FIELD TRIP

Mt Lofty Botanic Gardens, Saturday, 24 February (this weekend).

Meet in the lower car park (off Piccadilly Road) at 10.00 a.m.
If it not a hot day, bring a picnic lunch.

Next month: *Genoplesium nigricans* Special

DEEP LEAD FLORA AND FAUNA RESERVE

It has been brought to the attention of the Society that, despite previous commitments from the Victorian State Parliament, The Western Mining Corporation may be granted access to the Deep Lead Flora and Fauna Reserve near Stawell.

Access to this area for mineral exploration and mining must inevitably place at risk the survival of colonies of native orchids including such rare and endangered species such as *Thelymitra mackibbinii*.

N.O.S.S.A. will add its protest to that of the concerned people of Stawell by forwarding the following protest letter to the Victorian Minister for Conservation:

> The Minister for Conservation
> Ministry for Conservation, Forests and Lands
> 240 Victoria Parade
> EAST MELBOURNE VIC 3002
>
> Dear Mrs Setches
>
> In November 1987 Mrs Kirner made the firm and clear commitment that to "ensure that rare orchids and sugargliders, and those major vegetation types representative of the region are protected" she would not permit mineral exploration or mining in the
>
> Deep Lead Flora and Fauna Reserve.
>
> I am disturbed to learn that Western Mining Corporation has recently reapplied for access to the Flora and Fauna Reserve.
>
> Please ensure that the area, declared by the LCC as being of the "utmost conservation significance" is permanently protected and is not compromised just to extend WMC Stawell operations for a few years.
>
> Yours sincerely

Individual members may also wish to voice their concern over this issue by sending a similar response. A petition along similar lines will also be circulated at the February meeting.

SPRING SHOW DATES

15-16 September, 1990.

SOCIETY DINNER

To be held at the Walkers Arms Hotel, Collinswood, May 9.

FIELD TRIP SCHEDULE FOR 1990,

MAJOR SURVEY: Onkaparinga Recreation Park - visits July, October.

WANTED !

Persons to organise other excursions in 1990.

Suggestions:

-A long weekend trip to the Grampians and Deep Lead areas of Victoria in early October, staying in motels and caravan parks.
- Weekends hosted by country members.

-Weekday afternoon excursions to local areas to suit retired members.

Question:

Who has permission to organise Field Trips?

Answer:

Every member!

All that is needed is a notice sent to the Editor of our Journal with the meeting place and time and a host or leader to be there. It's a good chance to meet new members: to chat and socialise: to get some fresh air and exercise: and to enjoy a picnic - oh! and we mustn't forget the orchids to be seen!

FIELD TRIP REPORT: DUCK ORCHID SPECIAL

On the Society's last "Duck Orchid Special" to Dodds Road near Myponga about ten years ago the temperature reached 30°C; our visit to Peter Creek on December 9, 1989, we did one better - the temperature reached 39°C. The forecast did not deter the eight enthusiasts who attended but did ensure that, once we had found the "ducks", we headed for cooler places.

The "little ducks", *Paracaleana minor*, were found first - a neat little group of 30-40 flowering plants on a sandy bank. These were just beginning to bloom and had 1-5 flowers. The "big ducks" (*Caleana major*) were much harder to find but another patch of four were under bracken about 50 metres from the *P. minor* with another six plants on the fire break nearby. The *Caleana* were almost finished. The white loose sand here is actually a line of old foreshore dunes now hundreds of metres above sea level due to uplift of the Mt. Lofty Ranges in the last few million years.

We hoped to find also the freak form of *P. minor* "*Caleana sullivanii*" but these eluded us. We did, however, see the "asparagus spears" of developing *Dipodium* and on the way out some of us saw a very tall *Diuris brevifolia* and the best examples of *Microtis parviflora* ever seen. These had over 100 flowers crowded on a conical spike.

Besides being our hottest ever field trip this one was also the shortest as we were on our way home within 40 minutes of starting. Who said "cold, wet weather is best for duck hunting"?

Garry Guide

FIELD TRIP REPORT: DIPODIUM SPECIAL

On a cool breezy morning at 8.30 on January 14 we gathered in the Hills just out of Adelaide to walk along Boundary Road, Carey Gully. Before starting we had a look at a pot of *Eriochilus* in bud. This was a reminder that these little orchids will be in flower now in Yundi Swamp.

The *Dipodium* seen were in top condition, in all shades of pink, some spotted, some not, some green-stemmed, some black, some in early bud, some with large seed pods. Some plants were particularly unusual in having white or cream coloured flower pedicels which added to their beauty.

Because *Dipodium punctatum* is a mycotrophic semi-achlorophyte (meaning that it is basically a leafless species with little chlorophyll and therefore dependant on soil fungi for its food) it spends most of its life cycle underground. For this reason it is able to grow in such interesting sites as under roads or footpaths. Several flower spikes seen today were actually on the road itself (Boundary Road sees little traffic). The pink flower spikes coming straight out of the ground are reminiscent of hyacinths, hence the common name "Hyacinth Orchid". Hyacinths, of course, differ by flowering in the late winter and developing leaves in the spring.

There are several species of *Dipodium* in Australia - most of them leafless. Only two species occur in South Australia, one of them (still without a name) only occurs in the South East on leached sands. In the Adelaide Hills Hyacinth Orchids (or Christmas Orchids, as they are sometimes called) usually grow in well-drained, hard soils and are usually associated with stringy bark gums (but not invariably so, as they have been found with manna gums or even in pine forest distant from living gum trees.

An orchid-like plant seen in profusion was the fascinating *Lobelia gibbosa* with its sky-blue flowers. It too, appears leafless but this is not really so as it does not flower until after the leaves have shrivelled and the plant is quite dead at the base - all food and moisture is stored in the Lobelia's fleshy upper scape. The Lobelia is a semi-mycotrophic semi-archlorophyte!

To complete the display the white-flowering Christmas Bush (*Bursaria spinosa*) was in full flower.

Orchids seen:
Dipodium punctatum (F)
Caladenia tentaculata (S)
Diuris maculata (S)
D. corymbosa (S)
various *Thelymitra* (S)
Eriochilus sp. (B) (in pot)

Garry Guide

LOST SOUTH AUSTRALIAN ORCHIDS: No. 2

Lake Alexandrina Area

Before settlement this area had a large number of habitats which were not only unique to the district but which have long since been totally cleared! The few remaining remnants of natural vegetation have some unusual orchids still present, yet are largely of habitats repeated elsewhere in the state. At least three orchids collected between 20 and 100 years ago are now extinct, i.e. *Prasophyllum constrictum* R. Rogers, known only from the type collection made near Tailem Bend (1908); *Prasophyllum gracile* R. Rogers (1912), known only from clay flats near Sandergrove and an un-named *Caladenia* collected near Finnis (again on clay flats) (1969).

Lost South Australian Orchids: No. 2 (contd.)

In 1969 I was the head teacher at Finnis School (now closed). While there I continued the tradition of taking regular nature walks along the railway line - a tradition begun by my predecessor that indefatigable botanical collector, Miss Doreen Hunt. In those days there were plenty of orchids, many of which I have never seen elsewhere. It is unfortunate that the only collection I made was of the *Caladenia* mentioned above, for all those orchids are now gone, the Finnis Scrub cleared and the railway enclosure overgrown with weeds.

How many species must have been lost without ever having been brought to the attention of Science! We can get some idea from looking at the habitats which are how lost. Firstly there were the extensive reedbeds which fringed the lake. Even in 1969 some of the more common species remained: *Spiranthes*, *Cryptostylis*, *Prasophyllum frenchii*, *Microtis orbicularis* - but these are all species tolerant of disturbance. Almost certainly there would have been one or two species endemic to this extensive habitat now totally changed since the construction of the barrages, clearing of land and introduction of sheep grazing.

It is, however, the clay flats which must have been the most orchid-rich habitat. These flats were covered in light woodland, with patches of open grassland, the whole dotted with seasonal lagoons. Being near the sea, rainfall was reliable and conditions mild. The hundreds of square kilometres of this habitat are now gone and nowhere in South Australia does this habitat remain. It is likely that as many as five orchid species grew nowhere else.

On the edge of this habitat was another unusual one - the grass-covered clay banks which sloped down to the reedbeds. We already know of the rare *Pterostylis arenicola* restricted to sand dunes about the lake but this is a habitat which still (much reduced) survives. If there was another rufa group *Pterostylis* which had grown only on these hard clay banks we will never know.

Toward Langhorne Creek, the flood plain of the Bremer River is now fertile farmland, with vines, lucern and wheat. 150 years ago it was an open River Red Gum forest, with billabongs, rich black soil and further back tracts of sandy loam covered with native pine forest and mallee-broombush scrubs and occasional sand dunes. Each of these habitats would have had a different suite of orchid species. In 1989 we visited the last scrub to survive (Eckert's Scrub - see Field Trip Report in November 1989 Journal) and although this is just the usual sand dune mallee-broombush the orchid flora was very rich.

From Milang to Point Sturt is an area of sand flat with open woodland - the whole area grazed but there is still an undescribed Spider orchid (*Caladenia* aff. *patersonii*) present.

To the north one enters limestone country where the incredibly rich orchid flora can still be seen at Wundersitz Scrub some 18 kilometres north of the lake.

I could go on to mention the orange sand hills from Wellington to Meningie, islands in the lake, Black Swamp and so on. Altogether a dozen different habitats, not repeated elsewhere have been destroyed (this is an estimate only); perhaps as many as ten endemic orchid taxa have become extinct, most without ever being collected or named. It is a great loss.

R. Bates.

ORCHID RAMBLES IN VICTORIA

(Continued from December Journal.)

Thelymitra are the main attraction at Cribb Point. Many plants of *T. aristata* grow here, some carrying up to 27 flowers. *T. ixioides* without spots and others with' pink hair tufts on the column were not uncommon. *T. flexuosa*, *Calochilus campestris* and *Caladenia clavigera* were flowering. There were many plants of *C. subulata*. A number of *Thelymitra* hybrids including *T. x irregularis* are known from this area but were not seen on the day. What a pity that this wonderful orchid habitat will disappear under houses. It lies on sub-divided land.

The Brisbane Ranges National Park (11) lies some 50 kilometres north-west of Geelong. Most of the soils are quite infertile. This is fortunate, because, combined with the steep slopes, it meant that the land was unsuitable for farming and was left uncleared. More than one-third of Victoria's total flora is to be found here. Many species are either rare or remote from their normal localities. The ranges are renowned for their greenhoods which include the rare *Pterostylis truncata* and *P. x toveyana*. In autumn, *P. revoluta* grows in large numbers. Along Switch Road, *Caladenia gracilis* flowered in their hundreds.

On the way back to Halls Gap I visited the Fells Gully area of Clunes State Forest (12), and (some 30 kilometres by road to the north-east) a Forest Reserve between Campbelltown and Newstead (13). At the first stop, a magnificent group of some thirty-plus very pale pink *T. x macmillanii* caused the pulse-rate to quicken. At the second stop, a plant resembling *T. x chasmogama* (in this case *T. nuda x T. rubra*) was found among many *T. nuda*.

At the three Jacks Reserve near Stawell (14) several plants of *Prasophyllum lindleyanum* were found but the flowers would have been more photogenic if they had been seen a week earlier.

At Lake Fyans (15), I was delighted to see that the single plant of *T. antennifera* x *T. rubra* (first seen in 1987) had increased to four. Better than that, nearby another group of the same hybrid with plants growing twice as tall and carrying up to four flowers was found. In the same area, a bright red *Thelymitra* hybrid with yellow column cilia was of unusual interest. Its parentage is not obvious and at this time remains a mystery to me. *T. x macmillanii* and a dark pink *Caladenia* with affinities to the other *C. patersonii* varieties growing in the vicinity were flowering. The labellum of this *Caladenia* is smaller than typical and the calli were different.

Along Quarry Road near Halls Gap (16), *Gastrodia sesamoides* was in young bud.

The weather forecast for the last day was "warm to hot, and windy". Since it sounded like a good day for Thelymitras, I set off for Kanagulk Streamside Reserve some 60 kilometres due east of Halls Gap (17). The trip is about 110 kilometres by road. The Reserve lies on the banks of the Glenelg River about 10 kilometres north of Balmoral and consists largely of lightly-wooded grassy flats. *T. rubra* grows here in the thousands and *T. ixioides* is common, so it came as no great surprise when I discovered a plant of *T. x irregularis* (indeed I was looking for it). Several plants of *T. nuda x T. rubra* similar to the plant seen near Campbelltown were also discovered.

This was a memorable trip, on many occasions made the more so by the company of other orchid enthusiasts, particularly Everett and Margaret Foster to whom I owe a large vote of thanks for their unstinting hospitality.

Orchid Rambles in Victoria (contd.)

To conclude, I am amazed at the number of floristically valuable Reserves and National Parks in central and southern Victoria and at the sheer diversity and density of orchids growing in them. Furthermore, at Government level, I am convinced that the Victorians have a more sensitive attitude toward their natural environment and have a greater caring knowledge of where things grow than their South Australian counterparts.

A list of orchids seen at the seventeen locations follows:

Flowers	
9	*Caladenia audasii*
1	*C. caerulea*
7	*C. cardiochila*
1,2,4,5,7,8,9,11,14,15,16	*C. carnea*
7,10,11	*C. clavigera*
1,4,12,13,15	*C. cucullata*
1,15	*C. deformis*
1,4,5,7,8,10,11,15	*C. dilatata*
4,15	*C. dilatata* (albino form)
15	*C. dilatata* (small yellow clubs)
7	*C. dilatata* (thick yellow clubs)
4,11	*C. gracilis*
1,7	*C. patersonii*
1,5,15	*C.* aff. *patersonii*
1	*C.* aff. *patersonii* (albino form)
15	*C.* aff. *patersonii* (dark pink form)
7	*C. patersonii x C. dilatata*
9	*C. praecox*
4,11	*C. pusilla*
7	*C. reticulata*
9	*C.* "rhodochila"
8	*C. vallida*
10	*Calochilus campestris*
4,7	*C. robertsonii*
7	*Chiloglottis gunnii*
1,11	*Cyrtostylis reniformis*
4,15	*Diuris brevissima*
1,7,8,11	*D. corymbosa*
8	*D. corymbosa* (sulphur yellow form)
1,4,5,6	*D. lanceolata*
1,4,14,15	*D. maculata*
5	*D. sulphurea*
4	*D. x palachila*
4	*D. x palachila x D. lanceolata*
1,2,4,5,7,8,9,11,12,13,14	*Glossodia major*
7	*Lyperanthus nigricans*
9	*L. suaveolens*
3	*Leporella fimbriata*
10	*Microtis parviflora*
4,5,7,8,10,11	*M. unifolia*
14	*Prasophyllum lindleyanum*
4,11	*Pterostylis curta*
1	*P. cycnocephala*
7	*P. longifolia*
1,2,4,5,6	*P. nana*
2,4,5,7,8,9,11	*P. nutans*
5,8,11	*P. pedunculata*
7	*P. plumosa*

Orchid Rambles in Victoria (contd.)

2	*P. scabrida*
1,4,5,6,10,,11,12,14,15	*Thelymitra antennifera*
4	*T. antennifera x T. ixioides*
415	*T. antennifera x T. rubra*
10	*T. aristata*
6,7,10	*T. flexuosa*
1,4,6,7,10,15,17	*T. ixioides*
1,5,14,15	*T. luteocilium*
1	*T. mackibbinii*
1,12,13,14,15,17	*T. nuda*
13,17	*T. nuda x T. rubra*
1	*T. pauciflora*
1,4,5,6,7,11,15	*T. rubra*
1	*T. x chasmogama*
17	*T. x irregularis*
1,5,12,15	*T. x macmillanii*
11	*T. x macmillanii* (pale pink form)

Buds

7	*Calochilus paludosus*
9,10	*Cryptostylis subulata*
15	*Diuris punctata*
7,16	*Gastrodia sesamoides*
7	*Prasophyllum elatum*
7	*Thelymitra aristata*
5	*T. ixioides*
3	*T. matthewsii*
5,7	*T. nuda*
4,5,6,7,9,10,11,15,17	*T. pauciflora*
9	*T. rubra*
4	*T. x irregularis*

Leaves

4,5,7	*Caladenia menziesii*
9	*Cryptostylis leptochila*
5	*Prasophyllum* sp.

Seeded

8,9,11	*Acianthus caudatus*
11	*Caladenia caerulea*
5,11	*Corybas incurvus*
10	*Prasophyllum elatum*
9	*Pterostylis longifolia*
11	*P. nana*
15	*P. nutans*

Past flowering

15	*Caladenia patersonii* x *C. clavigera*
7	*Chiloglottis reflexa*
4	*Corybas diemenicus*
2,4	*C. incurvus*
5,7	*Cyrtostylis reniformis*
4,11	*Pterostylis alata*
7,11	*P. concinna*
11	*P. parviflora*
7,11	*P. vittata*
10	*Thelymitra rubra*

CONSERVATION - WHAT IS IT AND WHY IS IT IMPORTANT?

(from ANOS Victorian Group Bulletin - June 1989)

What is conservation and why is it important? Conservation, simply put is preservation - preservation of natural habitats and the species which occur there. It is difficult, at times, to preserve areas as the pressures of economic development, e.g. mining, farming, industrial areas and housing are often too great. In these situations the value of the habitat, the species and their vulnerability to extinction, must be weighed carefully and with full knowledge against the pressures of economic development. If the two sides of the argument are not weighed and assessed properly, then hasty and uninformed decisions will be made. These decisions can then result in the extinction of species which are vulnerable.

The Orchidaceae, which is the largest family of flowering plants, is also most likely to be the plant family that is threatened most.

So what makes orchids especially vulnerable?

1. The seeds of orchids are very small and contain no endo sperm (endo sperm is a food source - a germinating seed needs an inbuilt food source to survive until the plant can photosynthesise and produce its own food) - if the seeds are distributed to an area where there is no appropriate mycorrhiza present, the seed will not have the energy to produce its first leaf and to survive. Hence, from a large number of seeds produced, few seedlings develop.

2. Mature plants are generally small in relation to the surrounding vegetation
   - epiphytic orchids are destroyed when the forests are cleared, so every time we hear of forests cleared, orchids are being destroyed.
   - terrestrial orchids can easily be overgrown by weeds invading the area. They often become the food of herbivores. With the number of feral rabbits again on the increase it does not look good for these plants!

3. The specific pollinator association that a lot of orchids have has the consequence that, if the pollinator becomes extinct, so will that orchid. Or, if the pollinator is restricted from the orchid due to habitat destruction, or the orchid being restricted to a reserve that is too small, then the orchid will also become extremely vulnerable, if not extinct.

4. Due to the striking beauty or the intriguing strangeness of some flowers, a number of orchids have been placed under great horticultural demand. The collecting of orchids from the wild by commercial concerns, by enthusiasts, or by people who find the orchids aesthetically please, place these orchids under pressure.

In the 1800s, orchids were especially in vogue with the wealthy houses of the British Empire, and collectors were sent from orchid nurseries to the tropical forests, specifically for the purpose of obtaining these exotic and beautiful flowers.

Frederick Sanders, from the orchid nursery at St Albans, had, at one time, 39 collectors in the tropics. In their quest they would often collect thousands of plants of desirable species and destroy large tracts of forests. Sometimes these forests were destroyed to ensure the failure of a rival firm. Unfortunately, all too often, orchids collected failed to survive the journey to Europe. Shipwrecks, earthquakes and the natural demise of unestablished plants caused the loss of tens of thousands of plants.

Although the days of the professional orchid collector ceased at World War I, collecting is still prevalent in many tropical areas, Again, unfortunately,

Conservation - What Is It and Why Is It Important? (contd.)

supply from these areas is seldom from seed or propagated from stock plants. The main source is from wild collected plants which are seldom established prior to sale - the consequent loss of plants is high.

In Australia, there are a number of threats to orchids - grazing, agriculture, forestry, roadworks, urbanisation and industrial development, horticultural collecting, competition and low numbers, were all listed by Leigh, Broder and Briggs in 1981 as factors threatening orchids. In their survey they found 17 orchids to be endangered and three to now be extinct.

Why protect orchids?

A number of answers can be given to this question, ranging from the fact that they are a part of the genetic diversity and we should attempt to protect this heritage for future generations; the emotional argument that a lot of orchids have very aesthetically pleasing flowers; a number of orchids have interesting pollination mechanisms; and Australian orchids are botanically significant.

Orchids can be protected in two ways - preservation of individuals in collections and botanic gardens, and preservation of habitats.

The conservation of habitat is probably the single most important consideration in orchid conservation. If this is achieved the orchid is totally safe, the pollinator association is safe and, for epiphytes, the host plants are safe. To protect the habitat of orchids, reserves must be constructed and managed correctly.

What can be done to protect orchids?

The international trade of any orchid is subject to strict regulations to prevent their over-exploitation.

To protect orchids nationally and locally, laws have been set up prohibiting their collection from the wild. National Parks, State Parks, flora and fauna reserves have been set up. The most dangerous threat to national and local protection of wildlife areas arises through the ignorance of laws by the local people who have access to the endangered species.

On a local basis, the indiscriminate collection from the wild must cease. Organised groups can collect data on orchids in the field, which will help determine the status of an orchid. As a result, management plans can then be implicated based on the relevant data. Initiate rescue operations of plants which are in immediate threat for re-establishment in a nearby reserve.

Orchid Clubs can play their part by determining and improving horticultural techniques for all orchids, especially those already in cultivation that are threatened in the wild. They can distribute rare species throughout the club by bulbs, tuberoids and seeds; publish a species wanted list so that if anyone wants a particular species it can be obtained by communication and not wild collection; and they can collect data on orchids from every field trip.

Individuals are urged not to buy any orchids collected from the wild (except by licence); to buy only plants grown from seed; not to collect plants for which you cannot provide the correct conditions; not to collect more plants than you can manage; label all plants correctly so that they can be traced (genus and species, site locality, date); and place your collection of plants in your will for donation to people/clubs, for auction, or for the re-establishment of plants into flora reserves.

In conclusion, we should not just think about how beautiful and diverse our orchids are, but we must realise that they are threatened. We are lucky to have the diversity we have today, but if something is not done, in ten, five or even one year's time, they may be lost forever.