

## OFFICE-BEARERS

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## PRESIDENT'S MESSAGE

One of the most ambitious ventures of the Show Sub-Committee was undertaken last month .... a ten day display of ferns on behalf of the Society, at the Royal Show.

The organisation necessary involved many dedicated members and included supervisory service for both day and evening sessions. The sincere thanks of all is accorded to those who have given their time so unselfishly.

For those of us who grow a few ferns in pots, wire baskets and other containers, the task of repotting is inevitable. At our place, we try to accomplish this in the Spring. We have found that at this time of the year, the harshest part of the Winter has passed and the plants are beginning to show an interest in producing new growth. Now is that time.

Potting mixtures are very important and should contain ingredients which will provide nutrition, good drainage, moisture holding properties and freedom from unhealthy sourness.

In our attempt to achieve the foregoing, we are using a mixture containing, by measure: leaf mould (4), (river) propagating sand (2), peat moss (1), minced tree fern fibre (1), fowl or cow manure (1), and charcoal (1). In addition, we persist with the use of drainage crocks. These usually consist of broken pieces of old terra cotta pots, broken up pieces of old cement mortar, charcoal, coarse pieces of tree fern fibre, etc. We shake these materals through a half inch sieve which produces crocks up to the size of a hazelnut.

Just enough crocks to cover the drainage holes of the pots is used to ensure proper escape of surplus water.

In my choice of ingredients for a potting mixture there are many alternative materials that can also be used. Some of these are: Peanut shells, minced spaghnum, vermiculite, rice hulls, blood and bone,hoof and horn, pine bark, scoria,, etc. The important consideration is to try to achieve the requirements set out earlier.

We frequently do not pot plants on into larger pots. Larger pots are only used when plants have made development which is obviously excessive.

In the case of potting up sporelings, we use the smallest of tubes we can get. When small plants are placed in pots which are too large, there is much more soil in the pot than the roots can possibly use. Unused soil which is constantly moist can become so sour that the tiny plant has a poor chance of survival.

# SPEAKER CHANGE FOR OCTOBER

THERE HAS BEEN A CHANGE OF SPEAKER FOR OCTOBER.

THE TALK WILL BE GIVEN BY BETTY DUNCAN, AND HER SUBJECT WILL BE "WATER FERNS & SPLEEN WORTS".

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PRESIDENT'S MESSAGE (Cont'd. from page 1)

We have found also that complete resolling of ferns growing in baskets is not necessary. Working old soil away from the edges and top of the baskets and replacing with fresh mixture has proved to be all that is needed.

Here is a sequence of steps that could be used in repotting:-

1. Make sure that the ferns to be repotted are watered the day before planned repotting.

Make sure pots are clean.

3. Knock fern out of existing pot and remove all spent soil from roots.

4. Add crocks to pots.

5. Add a little potting mix to cover the crocks.

6. Place fern in pot and fill in the voids with fresh potting mix. Do not press mix in heavily; a few taps on the bench with the base of the pot held flat is all that is needed. See that the growing crown of the fern is set just above the soil surface.  Trim off with garden scissors any frondage which has become tatty, old or distorted.
Give the fern a drink of liquid fertilizer to help activate the root system.

9. Indicate date of repotting on the back of the name tag and replace it.

10. Return plant to fern house or to a protected place having ample filtered light, no draughts and no direct sunlight.

The foregoing would apply to adiantums and many terrestrials.

With kind regards,

DOUG THOMAS PRESIDENT

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## THANKS FROM ROD HILL .....

Rod has asked that the members who brought in Tree Ferns for display to highlight his talk last month be thanked via the newsletter.

The number of Tree Ferns provided was very impressive. Quite a number of the very large audience was seen to walk up and down the display with pen and paper in hand, noting details.

# LARGE SEPTEMBER MEETING HEARS ABOUT TREE FERNS

The Society's September speaker was Rod Hill, who spoke about tree ferns. Rod proved that he is not only knowledgeable about the Spore Bank but is an expert on tree ferns. Highlights of his talk follow .....

One of the most prominent features of fern gullies in Victoria is the abundance of tree ferns. Two species, the Soft Tree Fern and the Rough Tree Fern are particularly common.

The following features serve to identify these:-

Soft Tree Fern:

Trunk ... soft, thickened with matted fibrous rootlets, often forming massive buttresses and supporting numerous epiphytes. Crown & croziers ... covered with soft, tan hairs. Fronds ... narrow, stiff & bristly, lowest pinnae greatly reduced.

Sori ... marginal, enclosed by two valves, spore yellow



Soft Tree Fern (Fertile tertiary segments x 2)

Habitat ... very wet, sheltered gullies Distribution ... Tasmania through eastern Australia to Southern Queensland

Rough Tree Fern:

Trunk ... straight, uniform diameter of about 25 cm. (except where thickened at base), covered with a regular pattern of prickly frond bases, not favoured by most epiphytes. Crown & croziers ... covered with coarse, tan scales. Fronds ... broad, arching, fairly soft.

Sori ... not marginal, round not protected, spore tan



Rough Tree Fern (Fertile tertiary segments x 2)

Habitat ... upper creek banks & forest slopes Distribution ... Tasmania through eastern Australia to southern Queensland.

The soft tree fern is know by several other common names and to avoid confusion, the botanical name <u>Dicksonia antarctica</u> is used. The genus <u>Dicksonia</u>, named after Scottish botanist James Dickson, includes about 25 different species, distributed from Malaysia, Australia and the South Pacific to southern & central America. The species name "<u>antarctica</u>" means southern.

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The Rough tree fern is known botanically as <u>cyathea australis</u>. The genus name <u>cyathea</u> is derived from the Greek "kyathos", meaning a cup, and refers to the cup-shaped scale beneath the sori of some (but not this) species. This genus includes some 600 species throughout the tropics and southern hemisphere. Eleven species occur in eastern Australia. The specific name "australis" is Latin for southern.

Two other tree ferns found in Victoria are:-

<u>Cyathea cunninghamii</u> (named after botanist Allan Cunningham), the Slender Tree Fern, has a thin trunk (to about 15 cm. diameter) covered in shiny, black, papery frond butts, pale scales on croziers and relatively small, funnel-shaped crown of fronds. This species has distinctive cup-shaped scales beneath the sori.

<u>Cyathea marcescens</u> ("marcescent" means withering but not falling off), the Skirted Tree Fern, is probably a sterile hybrid between <u>C.australis</u> and <u>C.cunninghamii</u>, with its trunk similar to <u>C.cunninghamii</u> (but usually thicker) and fronds similar to <u>C.australis</u>. This tree fern is often found with a "skirt" of old withered fronds covering the full length of the trunk (and giving rise to both specific and common names.)

All four tree ferns may be seen in a number of places in the Otways (Melba Gully, Turton's Track) along Sassafras Creek in the Dandenongs, at Tarra Valley & Bulga Park and also in east Gippsland. <u>C.cunninghamii</u> also occurs in New Zealand and is rare in Tasmania. <u>C.marcescens</u> is restricted to Victoria.

<u>C.Leichhardtiana</u>, the Prickly Tree Fern, occurs in East Gippsland but is more commonly encountered in fern gullies from central eastern N.S.W. to south eastern Queensland. The trunk of this tree fern is very slender and is covered in papery sharply-prickly fron butts. The crown is covered in pale chaffy scales & the dark-brown, velvety croziers expand in a most distinctive and attractive manner to give dark-green, shiny fronds. This fern grows in deep shade along rainforest creek banks.

<u>C.cooperi</u> is found from central eastern N.S.W. to north-eastern Queensland. This species generally has a fairly slender, coin-spotted trunk, pale chaffy scales on the crown, rusty-red scales on the croziers and large, lush, lightgreen fronds although the species is extremely variable and many forms are encountered in the wild. This species is especially hardy in cultivation in Victoria, and providing the roots are kept moist, the crown will tolerate full sun.

Some botanists divide members of the genus <u>Cyathea</u> into a number of smaller genera, the Australian species falling into 2 of these groups.

The genus <u>sphaeropteris</u> (literally "sphere-fern", the protective indusium forms a complete sphere around the sori of some species) is characterised by scales on the crown and croziers with their cells arranged in a very regular pattern and with small, dark pointed bristles visible along the margins if viewed under a microscope.

<u>C.cooperi</u> and <u>C.leichhardtiana</u> are included in this genus as <u>S.cooperi</u> and <u>S.australis</u> respectively.

Altogether, <u>Sphaeropteris</u> includes about 120 species, mainly in Malaysia, the Pacific and South America.

(Continued on page 8)



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#### MICROSORIUM PUNCTATUM

#### by Chris Goudey

<u>Microsorium punctatum</u> is a common lowland to medium altitude rainforest fern of the tropics; it occurs from Africa through Malaysia to South China and the Pacific Islands as far east as Tahiti.

In Australia, this fern is usually found growing on dead trees, large rocks and boulders, on the margins of rainforest, and is seen at its best completely covering the top of a boulder almost as large as a house.

At first appearance this fern is often mistakenly identified as a Birds Nest Fern <u>Asplenium australasicum</u> or <u>A. nidus</u>). Its fronds are quite similar, except that they occur along a medium creeping rhizome, rather than forming a tufted rosette such as the true Birds Nest ferns.

<u>Microsorium punctatum</u> is often referred to as the climbing Birds Nest fern. Several cultivars are commonly grown among fern lovers in the Northern States - they include cv. Grandiceps, cv. Serratum, cv. Lobatum and several others. They are often used as ground cover plants in dry gardens such as under the eaves of a house or among trees. In the tropics this fern will tolerate full sun for most of the day.

In the Southern States, it needs the protection of a glasshouse and prefers a minimum temperature of 10 C (50 F); however, it will tolerate lower temperatures if the plant is kept almost dry throughout the winter months. It does well in a pot, but prefers to grow in a basket, with a coarse welldrained epiphytic mixture.

# Further Reading

Australian Ferns and Fern Allies by D. L. Jones and S. C. Clemesha, 1976, 1981

Flora of Malaya, Volume 2 by R. E. Holttum, 966

The Pteridophyte Flora of Fiji by G. Brownlie, 1977

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## URGENT! .... HAVE YOU RENEWED YOUR SUBSCRIPTION?

A number of members have not yet renewed their subscription for the 1982/83 financial year. This will be the last newsletter sent to them until the subscription is renewed.

If you find a letter from our Treasurer inside this newsletter, unfortunately this means that you are now unfinancial. We look forward to receiving your remittance by return so that your name may be returned to the membership register. (Continued from page 5)

The genus <u>Alsophila</u> (literally "grove-loving") includes the first three species of Cyathea dealt with as <u>Alsophila australis</u>, <u>A.cunninghamii</u> and <u>A.marcescens</u>. The scales of this genus have cells arranged irregularly near the base and margins, do not have bristles along their edges and have a prominent spine at the tip.

About 230 species are included in <u>Alsophila</u>, with the greatest concentration of species in Africa, islands of the Indian Ocean and Malaysia.

Other genera in this classification, mainly Cyathea, Nephelea, Trichipteris and Cnemidaria, are restricted to south and central America, Mexico and the Caribbean.

In deep rainforest gullies in north-eastern N.S.W. and south-eastern Queensland, the Bristly Tree Fern, <u>Dicksonia youngiae</u> may be occasionally sighted by the alert "fern-spotter". Its trunk is usually fairly slender (about 15 cm. diameter( and not thickened as in the soft tree fern. Also the maroon hairs of the crown are much stiffer and the sori much larger than the soft tree fern.

<u>Dicksonia youngiae</u> can be seen at Springbrook (Warrie National Park) and Coomera Crevice (Lamington N.P.) in S.E. Queensland and also in N.E. Queensland where it is also rare.

In north-eastern Queensland, <u>Cyathea cooperi</u> is fairly common. Here, too, the following species of tree fern may be encountered.

<u>Cyathea rebeccae</u> (<u>Alsophila rebeccae</u>)has a thin trunk, often growing in clumps and distinctive dark-green, shiny, bipinnate fronds with simple pinnules. It occures extensively in dense rainforest.

<u>Cyathea robertsiana</u> (<u>Alsophila robertsiana</u>) is a most attractive species with an extremely thin trunk (3-5 cm. in diameter), fleshy green crown, round scales & soft, pale-green fronds.

<u>Cyathea weollsiana</u> (<u>Alsophila woollsiana</u>) is somewhat similar to <u>C.australis</u>. It has yellowy-green fronds with opposite pinnae and the frond butt is usually a distinctive bright green beneath the brown scales.

<u>Cyathea celebica</u> (sphaeropteris celebica) (also found on the island of Celebes) has many features similar to C.Leichhardtiana, but is more massive in its trunk and fronds and the underside of the fronds are pale and downy.

Seldom seen, but also growing in north Queensland are <u>Cyathea baileyana</u> <u>(Alsophila baileyana)</u>(Wig tree fern) and <u>Cyathea felina</u> (<u>sphaeropteris</u> <u>concinna</u>) as well, of course, as <u>Dicksonia youngiae</u> mentioned earlier.

With the exception of <u>C.felina</u>, the other native tree ferns are all known to some extent in cultivation. Apart from C.robertsiana which seems to require some heat, all other native tree ferns are hardy outdoors in Victoria, although the more northern species tend to be somewhat slow. The following exotic tree ferns are also occasionally cultivated in Victoria:

<u>Cyathea brownii</u> (Sphaeropteris excelsa) from Norfolk Island is very similar to C.cooperi, but is more massive and has pale scales on the croziers.

<u>Cyathea dealbata</u> (Alsophila tricolor), the silver Tree Fern from New Zealand is readily identified by the pure white undersides of the fronds (except in young plants).

<u>Cyathea medullaris</u> (Sphaeropteris medullaris), the Black Tree Fern from New Zealand is a truly magnificent tree fern with purple-black stipes and dark brown scales.

Dicksonia squarrosa is a slender New Zealand species with dark-brown, bristly hairs on the crown and croziers. New plants develop from buds on the trunk, often resulting in clusters of trunks.

Other New Zealand tree ferns include:

Cyathea smithii (Alsophila smithii) somewhat similar to C.cunninghamii.

C.colensoi (A.colensoi) a small prostrate species.

Dicksonia fibrosa, very similar to D.antarctica

D.lanata, another prostrate species, with large sori.

A group of tree ferns which has become popular in the U.S.A. recently are species of the genus <u>Cibotium</u>. This genus belongs to the family <u>Dicksoniaceae</u> (which includes <u>Dicksonia</u>) and is somewhat similar to <u>Dicksonia</u> in the bi-valved structure of the marginal sori. In <u>Cibotium</u>, the sori are longer and resemble a small chest or box (hence the name from the Greek "kibotas", a box). These ferns usually feature limp, pale hairs on crown and croziers, triangular light-green fronds, often pale to whitish on the underside, and very long stipes.

Species of this genus occur in Hawaii, Mexico and Central America and a few prostrate species in Malaysia.

To see exotic and native tree ferns in cultivation, Melbourne Botanic Gardens, Ripponlea and Ballarat Fernery are all worth a visit.



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#### CONGRATULATIONS

Congratulations to Bill Taylor, Albert Jenkins, and Chris Goudey for their splendid effort at the Royal Melbourne Show.

They won a Blue Ribbon, and 1st Prize of a motor mower for our Society. Well done!

## A VISIT FROM WESTERN AUSTRALIA FERN SOCIETY MEMBERS

Rita and Harold Olney of Ringwood had an enjoyable afternoon when Western Australian Fern Society members, Jan and Doug Hollingsworth and two sons called in to see their ferns and have a chat.

Harold was so pleased to find someone, like himself, so keen on Adiantums.

He was also able to help them a little, by showing them his spore growing methods.

# SPORE LIST....OCTOBER

Spore samples may be purchased at monthly meetings, or by sending a list of your requirements with 20 cents for each species requested <u>plus</u> 40 cents for packaging and postage, to Mr. R. Hill, 41 Kareela Road, Frankston, 3199.

Payment for orders may be made by postage stamp (27 cent stamps preferred where possible) or by cheque (payable to "Fern Society of Victoria").

Many species are still available from the list published in the September newsletter, but if ordering from this list, please include a supplementary list in case supplies of some species are depleted.

Instructions on propagation from spore are also still available for an extra 5 cents.

Please note, I have deleted from the list, spore which is more than 2 years old. Many of these will still be on hand at meetings if members wish to try their luck with older spore.

# REGULAR SPORE LIST - OCTOBER

ACROSTICHUM AUREUM (7-82) SPECIOSUM (10-80) ADIANTUM CAPILLUS-VENERIS (8-82) FORMOSUM (5-82) RADDIANUM 'GRACILLIMUM' (3-82) SP. (S.E. QLD) (8-82) AMPHINEURON TERMINANS (2-82) ARACHNIODES STANDISHII (12-81) ASPLENIUM BULBIFERUM (NATIVE) (12-80) FLABELLIFOLIUM (11.80) NIDUS (10-80) ATHYRIUM FILIX-FEMINA 'CRISTATA' (8-81) THELYPTEROIDES (7-81) BELVISIA REVOLUTA (7-81) BLECHNUM ARTICULATUM (11-80) CARTILAGINEUM (1-82) FLUVIATILE (9-82) GIBBUM (4-81) NUDUM (3-82) PENNA-MARINA (1-81) BULCANICUM (4-82) WATTSII (5-82) CHEILANTHES DISTANS (1-81) SP. (S.E.QLD) (1-81) CHRISTELLA ARIDA (3-82) DENTATA (3-82) CYATHEA AUSTRALIS (3-82) BROWNII (2-82) CELEBICA (8-81) COOPERI (1-82) LEICHHARDTIANA (9-82) REBECCAE (8-81) SMITHII ('80) SP. (NEW GUINEA) (1-82) CYRTOMIUM FALCATUM (4-81) CYSTOPTERIS BULBIFERA (8-81) FILIX-FRAGILIS (10-80) DENNSTAEDTIA DAVALLIOIDES (12-81) DICKSONIA ANTARCTICA (3-82) FIBROSA (6-81) LANATA (3-82) YOUNGIAE (N.QLD. FORM) (8-81) YOUNGIAE (S.QLD. FORM) (8-81)



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DIPLAZIUM ASTRALE (2-82) DOODIA ASPERA (3-82) MEDIA (3-82) DRYOPTERIS CARTHUSIANA (7-82) MARGINALIS (7-81) SP. (BLACK KOREAN CROWN-FERN) (3-82) GLEICHENIA DICARPA (9-82) MICROPHYLLA (3-82) RUPESTRIS (8-81) LASTREOPSIS ACUMINATA (12-80) HISPIDA (10-81) WALLERI (8-81) SP. (RUFESCENS?) (8-81) SP. (TENERA?) (8-81) LINDSAEA MICROPHYLLA (1-82) LUNATHYRIUM JAPONICUM (5-82) LYGODIUM CIRCINNATUM (3-81) MICROLEFIA SP. (N.QLD.) (8-81) ONOCLEA SENSIBILIS (8-81) OSMUNDA CLAYTONIANA (24-5-82) PELLAEA FALCATA (3-82) FALCATA ANA (12-81) PARADOXA (12-81) PITYROGRAMMA CALOMELANOS (8-81) PLATYCERIUM SUPERBUM (6-81) WANDAE ('80) PNEUMATOPTERIS SOGERENSIS (12-80) POLYSTICHUM ACROSTICHOIDES (7-81) FORMOSUM (5-82) LENTUM (3-82) PROLIFERUM (1-82) VESTITUM (10-80) PSILOTUM NUDUM (7-82) PTERIS CRETICA (3-82) PACIFICA (8-81) TREMULA (1-82) UMBROSA (1-82) VITTATA (1-82) RUMOHRA ADIANTIFORMIS (CAPE FORM) (2-82) ADIANTIFORMIS (NATIVE) (3-82) SPHAEROSTEPHANOS HETEROCARPUS (8-81) STICHERUS TENER (1-81) THELYPTERIS SP. (CANADA) (8-812) TODEA BARBARA (1-82)





	SPEAKER PROGRAMME
OCTOBER 9TH	BETTY DUNCAN: "WATER FERNS & SPLEEN WORTS"
NOVEMBER 11TH	HARRY JACKSON: "INDOOR PLANTS"
DECEMBER 9TH	CHRISTMAS MEETING & FERN FORUM

NOTE: In the event of a power strike on the evening of any meeting, we regret that the meeting must be cancelled.

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VENUE OF MEETINGS:

Burnley Horticultural School Hall, Burnley

TIME OF MEETINGS:

8 p.m.

PREPARED AND PRINTED FOR THE FERN SOCIETY OF VICTORIA BY



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