



Newsletter Number 92

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SPORE BANK: Barry White, 24 Ruby Street, West Essendon. Vic. 3040

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE CALENDAR YEAR 2000

RECEIPTS

	Year 2000	1999
Members' subscriptions	\$420.00	\$515.00
(includes some in advance)		
Donations: S.G.A.P. Regions	90.00	135.00
Members	30.00	15.00
Sydney raffles	30.00	54.00
Sale of book	45.00	45.00
Interest received from bank	2.27	2.54
	-----	-----
Total Receipts	\$617.27	\$766.54

PAYMENTS

Newsletter expenses	\$494.40	\$474.05
Paper and printing	222.45	232.90
Postage	3.25	13.65
Stationery	10.00	
Money Orders	11.00	16.46
Bank Charges for withdrawals	0.27	
F.I.D.	5.10	19.20
Correspondence	-----	-----
Total Payments	\$741.47	\$756.26

SUMMARY

Cash at bank December 1999	\$2198.32
Deficit for year	129.20
Cash at bank December 2000	\$2069.12

Treasurer's Comments February 2001

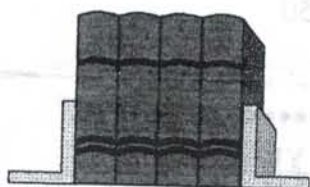
This statement is fairly depressing: the bank is now charging \$3 per withdrawal (I make four withdrawals a year) while paying something like 0.011% interest on the account! I dared not ask at what amount they now begin charging "account keeping fees".

Treasurer's Comments (continued)

THANKS TO THE GREAT GENEROSITY OF DR. CALDER CHAFFEY, the Group is now \$1466.58 richer! Peter Hind received a cheque to the Group early last month from the Publishing Committee of N.S.W. Region S.G.A.P. and a letter explaining that this was the Group's share of the royalties on Dr. Chaffey's book "Australian Ferns: Growing Them Successfully". Phone calls confirmed that Dr. Chaffey had arranged this with Moreen Woollett when she was Secretary and Editor. It is extraordinarily kind of him, and I am sure all members will join with us in expressing our grateful thanks to him, not only for the money but also for writing the book.

**Chaffey, Calder H., Australian Ferns: Growing Them Successfully (1999)
Kangaroo Press East Roseville. NSW.**

For those of you who have not yet seen or purchased the above book, the following Forward, by Peter Bostock may encourage you to add this interesting, and quite unique, book to your collection. The book is available from **FLORILEGIUM, PO Box 6445, Rozelle. NSW 2039**. By mentioning that you are a Fern Study member, postage and handling is covered in the cost of the book.



FOREWORD

Australian native ferns have been cultivated at home and abroad since the early nineteenth century. Their popularity in Australian gardens has varied from near obsession to relative indifference. Nonetheless, the presence of at least one native fern in the average Australian garden is almost a certainty, even if it is only the weedy fishbone fern, a small clump of maidenhair under the back steps or a large staghorn tied to a tree.

In the past century, various Floras and popular accounts have dealt with the identification and description of Australian native ferns. Some have supplied information on recommended growing conditions and suitability of species for cultivation but none have comprehensively targeted Australian natives with the attention to detail of the present book. In addition, this book is unique among Australian gardening guides in that the choice of species and the appropriate climatic zones for successful growth have been determined to a degree by the responses to questionnaires completed by members of the Society for Growing Australian Plants, Australian Plants Society, Australian Plants Society (SGAP Victoria Inc.) and the Wildflower Society of Western Australia. This book is not intended to replace State and National Floras. It is, rather, a welcome supplement to those books, providing the basis for successful cultivation, supplemented by standardised, relatively non-technical descriptions containing a minimum of botanical jargon.

Calder Chaffey is a meticulous researcher who combines a love of ferns with a critical Appraisal of all information which comes his way. He has travelled Australia photographing ferns in gardens and in their natural habitat, and his recipes for growing native ferns are as much based on experience as on the expert advice of other growers. I am sure the reader will appreciate the copious photographs, the inventive use of a bookmark as an aid to determining suitable growing conditions and the explanations of the origin and meaning of botanical terms.

Calder will no doubt remember my wish at times, when I was asked to check a photograph or slide for accuracy, that the image could be reversed to see the 'other side of the frond'. I was impressed by his willingness to seek an alternative photograph, often at some considerable effort on his part when the identity of the subject fern could not be satisfactorily proven. As a taxonomist and fern-grower who, rightly or wrongly, has had some influence on the choice of species covered and taxonomic decisions as

to 'correct' names of genera or species, I can state categorically that it has been a pleasure to be involved with the production of this book.

Peter D. Bostock, SENIOR BOTANIST
Department of Environment and Heritage,
Queensland

These next reports are from Steve Clemesha which we received late last year and we decided to print these so members could understand the areas visited.

**SOUTH EAST QUEENSLAND AND THE MID NORTH COAST GROUP'S
 OUTINGS 29TH, 30TH APRIL & 1ST MAY 2000**

For this combined group outing, 12 members came down from the S.E. Queensland group but the Mid North Coast group only managed Phil and Julie for part of the time and myself. It was a pleasant weekend and it was nice getting to know the Queensland group better.

Our first outing was to **Woolgoolga Flora Reserve**. This has the highest degree of protection under State Forests and does not allow logging. The area mostly rainforest. Some parts are former Eucalypt plantation. One could be excused for thinking they are Lantana plantations as this pest grows luxuriantly and prevents all ferns and smaller plants from growing. A good range of ferns grows in the area. Epiphytes included both NSW *Platyserium*, *Asplenium australasicum*, *A. Polyodon* and *Dictymia brownii*

A patch of *Adiantum diaphanum* grows under a shady tree near an open grass area. It is an unusual habitat for this species. *Lastreopsis marginans* is scattered through the area especially beside the walking track. *Nephrolepis cordifolia* grows on rocks and trees and, as with most populations of this species, it was impossible to tell if it is native or a garden escapee.

Our next outing was to **Bruxner Park- Flora Reserve**. This is also a rainforest area but it is more elevated and is in hilly country. *Cyathea leichardtiana* with the filmy *Macroglena caudata* are common in this area. On a southern slope under a mainly coachwood forest *Sticherus lobatus* and *Blechnum watsii* grow. I have noticed these two often grow together.

Our next stop was **Bongil Bongil National Park**. The park contains littoral rainforests and the walk we did was through one of these. The soil is very sandy and this limits the number of fern species that grow here. *Platyserium bifurcatum* and *P. Superbum* grow on trees near the ground in open forest before the rainforest area. As shade increased they were found higher in the trees. *Ophioglossum Pendulum* hangs from one of them. In the most extraordinary fern ally occurrence there are patches of *Tmesipteris truncata* growing in the ground among tree roots. There are 20 or more patches and all are growing, very well.

Our last outing was to **Middle Creek** which is a few km east of **Glenreagh** in sandstone country. It is a beautiful area. The form of *Blechnum camfieldii* that grows beside streams away from the coast was present. This form never produces auricles at the base of the pinnules as the "coastal" form often does. This latter form grows about 2 km west of the creek. Most of its habitats are in low swampy areas close to the sea but it has a few habitats away from the coast. *Todea barbara* is common along the creek. *Psilotum nudum* is plentiful -in one place in rock crevices. The ferns of most interest, in the area are *Blechnum ambiguum* and *Schizaea rupestris*. Both are sandstone species. The nearest populations to the south are at Somersby Falls on the Central Coast. The *Blechnum* also grows on sandstone at the Blackdown Tableland in Central Queensland.

MID NORTH COAST GROUP'S OUTING TO THE COMBOYNE AREA
July 22nd and 23rd 2000

By Steve Clemesha

For our outing on July 22 and 23, we first visited **Killabakh Nature Reserve**. This has become a Nature Reserve as a result of the 1998 Forest decision. It is at the southern end of the Comboyne Plateau. Lucy and Ian live near the reserve. They are members of the Port Macquarie branch of the Australian Plant Society. They met us and took us through this beautiful Nature Reserve. Forty three different species of ferns were seen. *Tmesipteris truncata* grew out of *Cyathea australis* trunks. The reserve is a mixture of rainforest and wet sclerophyll. *Lastreopsis decomposita* favours the Eucalypt forest while *L. microsora* favoured rainforest. *L. acuminata* was found in wet habitats near creeks as is usual for it. At one spot you can look out to the sea. *Asplenium flabellifolium* grew on rocks near there.

The next day we visited **Sita Parson's property at Byabara**. This property is a declared wildlife refuge. On the property we were impressed with the way lantana and other weed areas were gradually being replaced with pure native forest. We saw 27 species of ferns. More had been recorded by people who spent more time on the property. Visible from the property is Mt Comboyne. A steep slope up through Eucalypt forest led to its top.

The stream that flowed through the property was beautiful and provided habitats for *Diplazium* and *Blechnum patersonii*.

FERN OUTING SATURDAY 22ND & SUNDAY 23RD JULY 2000

K; Killabakh nature reserve

B. Sita Parson's property

		K B		K B	
<i>Adiantum diaphanum</i>	x		<i>Grammitis billardieri</i>		
<i>Adiantum formosum</i>		x	<i>Histiopteris incisa</i>	x	
<i>Adiantum hispidulum</i>		x	<i>Hymenophyllum cupressiforme</i>	x	
<i>Adiantum silvaticum</i>	x	x	<i>Hypolepis glandulifera</i>	x	x
<i>Arachniodes aristata</i>		X	<i>Hypolepis muelleri</i>		x
<i>Arthropteris beckleri</i>	x		<i>Lastreopsis acuminata</i>	x	
<i>Arthropteris tenella</i>	x		<i>Lastreopsis decomposita</i>	x	x
<i>Asplenium australasicum</i>	x	x	<i>Lastreopsis microsora</i>	x	x
<i>Asplenium flabellifolium</i>	x		<i>Lastreopsis munita</i>		x
<i>Asplenium polyodon</i>	x		<i>Lindsaea microphylla</i>	x	
<i>Blechnum cartilagineum</i>	x	x	<i>Lunathyrium petersenii</i>	x	
<i>Blechnum nudum</i>	x		<i>Lycopodium sp. Linearis</i>	x	
<i>Blechnum patersonii</i>	x	x	<i>Macroglena caudata</i>	x	
<i>Blechnum wattsii</i>	x		<i>Microsorium scandens</i>	x	
<i>Calochlaena dubia (Culcita)</i>	x	x	<i>Pellaea falcata</i>	x	x
<i>Christella dentata</i>	x	x	<i>Pellaea falcata var. nana</i>	x	
<i>Cyathea australis</i>	x	x	<i>Pellaea paradoxa</i>		x
<i>Cyathea cooperi</i>		x	<i>Platynerium bifurcatum</i>	x	x
<i>Cyathea leichhardtiana</i>	x		<i>Pteridium esculentum</i>		x
<i>Davallia pyxidata</i>	x	x	<i>Pteris tremula</i>		x
<i>Dennstaedtia davallioides</i>	x		<i>Pteris umbrosa</i>		x
<i>Dictymia brownii</i>	x		<i>Pyrosia confluens</i>	x	x
<i>Diplazium australe</i>	x	x	<i>Pyrosia rupestris</i>	x	x
<i>Doodia aspera</i>	x	x	<i>Sticherus flabellatus</i>	x	
<i>Gleichenia dicarpa</i>	x		<i>Sticherus lobatus</i>	x	
			<i>Tmesipteris sp. Truncata</i>	x	
			<i>Todea barbara</i>	x	

EDITORS COMMENT. As editor I am privileged to receive newsletters from other fern groups around the world. Some of these have in the past resulted in items being published in our newsletter for the interest of our members. It is with this in mind that I wish to inform our group of the demise of the South Florida fern society, due to a lack of members being able to undertake positions of responsibility .the remaining office bearers felt they were left with only one option. I.e. disband the group. I personally am sorry that any fern group has to fold for any reason. South Florida fern society disbanded on Monday January 1st 2001.

TASMANIAN FERNS AND NEWSLETTER ARTICLE

I received an E-mail from Andrew Woolford, one of our Tasmanian members, who is keen to have contact with other Tasmanian members, and interstate members visiting Tasmania. The E-mail reads:

My name is Andrew Woolford and I am a very keen fern grower and admirer. I live in Hobart on the foothills of Mt Wellington. The ferns grow naturally all around our property with many fern based walks and waterfalls close by. I have established an extensive fern garden around my house by using only Tasmanian ferns. The ferns that are doing well are Todea barbara, Cyathea australis, Dicksonia antarctica and many of the Tasmanian Blechnums.

I am interested to know if there are any other fern study group members within Tasmania and if so, where. I would be interested to meet any of the interstate members if they ever travel to Hobart to show them our Tasmanian ferns. I would also be interested in doing the same as I travel to Melbourne, Sydney and Brisbane often. Looking forward to hearing from anyone.

Andrew Woolford.

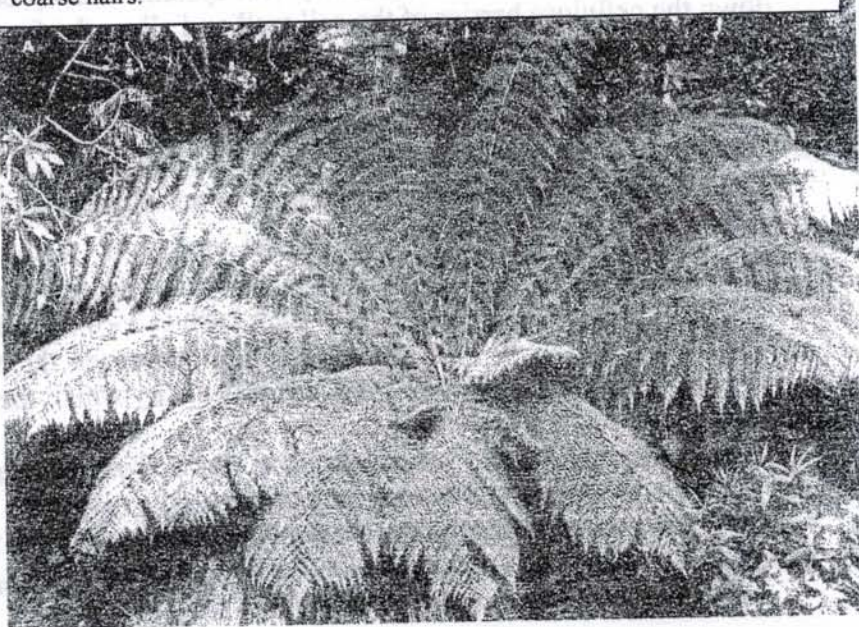
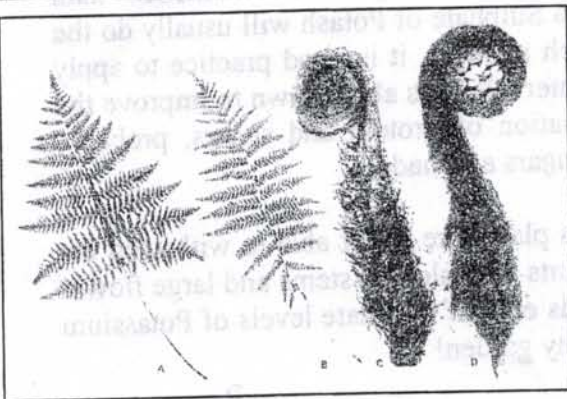
E-mail: AWoolford@kingborough.tas.gov.au

608 Huon Road
 South Hobart 7004
 Ph/fax 62391121



Below: The crown of *Dicksonia antarctica*, soft tree fern, viewed from above – fronds taper towards the base where pinnae become markedly shorter. Left: Transverse section of young *Dicksonia*. Toward centre V shaped vascular strands (v) each with woody supporting tissue (s), the ring of frond bases (f) in the ground tissue lies within outer layer covered with coarse hairs.

Below Young fronds of *Cyathea australis*(A) & *D. antarctica* (B)
 Crozier of *Cyathea* bears shiny scale; *Dicksonia* is covered with coarse brittle hairs



Photograph, line drawings etc. from Betty B. Duncan & Golda Isaac, FERNS & ALLIED PLANTS OF VICTORIA, TASMANIA & STH. AUSTRALIA (1986) MELBOURNE UNIVERSITY PRESS. CARLTON.



ARE YOUR PLANTS DYING FOR ATTENTION? GIVE THEM A POTASH TREAT!

**Article taken from the Fern Society of Victoria Inc. Newsletter. Page 8 Vol.23, Number 1
January/February 2001**

Over recent years we've seen an increasing interest in the use of organic fertilisers for both vegetable and ornamental gardens. Although this is to be commended, it must be recognised that there can be a downside to the practice. It is well known that Australian soils are low in Phosphorus but what is not so well known is that many of our soils are low in Potassium, which means that the animal manures that we use on our garden are also low in Potassium. This has led to an increase in the incidence of plant diseases. Although potash could never be described as a fungicide, its correct use can certainly minimize disease.

Consistent use of low Potassium organic fertilisers has meant that more and more plants are vulnerable to disease. While it is incorrect to assume that the use of Potassium alone will prevent plant diseases, it is a fact that adequate levels of this nutrient in plants will help to minimize the impact of disease organisms. Scientists have shown that Potassium has a multiplicity of roles in a plant, some of which are obvious whilst others remain somewhat of a mystery. Plant material is composed of cells and Potassium helps to build cellulose, a component of the cell wall. It doesn't form organic compounds as do the nutrients of Nitrogen and Phosphorus, but it does aid more than forty enzyme actions which help control many plant functions. The general health of a plant will affect the amount of damage caused by disease.

Another role of this plant nutrient gives us a clue as to why Potassium is so important in the management of all plant diseases. If conditions are suitable, a spore, shortly after landing on a host plant, will germinate and form a tiny root system. This produces an organic chemical designed to break down the cellulose barrier of the cell wall and allow the fungi to reach the sap stream on which the fungi then feed. If the cell wall is thin, this is achieved with relative ease and the fungi flourishes while the host plant suffers. If the cell wall is thick the fungal spore is unable to penetrate the cell wall and it eventually dies before it can reach the life-giving sap of the host plant.

When using organic Fertilisers look at the analysis on the back of the bag. If it contains less than 3% Potassium, you would be wise to add some to it. About 10% Sulphate of Potash will usually do the trick. For plants that are particularly susceptible to disease, such as roses, it is good practice to apply about 150g, of Sulphate of Potash to each bush at 3 - 4 monthly intervals. It is also known to improve the quality and colour of flowers. Potash also enhances the formation of protein and sugars, probably because it enhances photosynthesis, the process by which these sugars are made.

Another advantage that Potassium has is that in frost prone areas plants are better able to withstand the frost because of the higher cellulose content of the cell walls. Plants with slender stems and large flower heads, such as iceland poppies and Gerberas, will hold their heads erect if adequate levels of Potassium are used. So there it is; the plant nutrient for a colourful and healthy garden!

Editors Note. Would Australian ferns which one would assume have adjusted over time without potassium benefit or even be adversely affected. Maybe a member has some knowledge or experience they could share?



BLECHNUM WATTSHII & STICHERUS LOBATA¹ AS SEEN BY MID NORTH COAST & QUEENSLAND GROUPS
STEVE CLEMESHA SAYS HE OFTEN SEES THESE TWO PLANTS GROWING TOGETHER

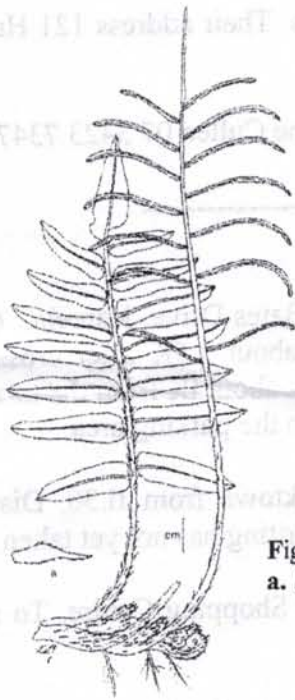


Fig. 100 Blechnum Wattshii
a. Scale

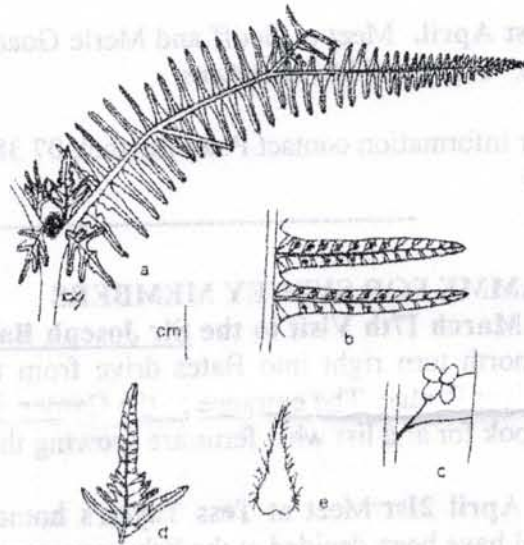


Fig 283 Sticherus Lobatus

A) Section of frond x 0.25; B) Pinnae x 1; Sorus x 10
 D) Branched pinna from rhachis junction x 1;
 E) Scale from dormant apex x 10

CURRENT SPORE LIST

Contributed by Barry White

Acrostichum speciosum 4/00	Cyathea robusta 2/98	Platycterium bifurc. var.venosa
Adiantum whitei 1/99	Cyclosorus interruptus 3/99	"Mt.Lewis" /99
Arachniodes aristata 5/00	Deparia petersenii 6/00	Platycterium bifurc.cv Willinckii
Asplenium australasicum 5/98	Dicksonia antarctica 9/00	Scofield /99
Asplenium milnei 5/00	Dicksonia youngiae 1/99	Platycterium hillii /99
Blechnum camfieldii 5/00	Diplazium australe 6/00	Platycterium superbum 6/98
Blechnum chambersii 2/99	Doodia australis 12/99	Platycterium superbum (Cairns) /99
Blechnum fluviatile 2/00	Lastreopsis acuminata 9/98	Platycterium veitchii 8/99
Blechnum minus 6/99	Lastreopsis hispida 2/00	Polystichum australiense 12/99
Blechnum patersonii 8/99	Macrothelypteris torresiana 6/00	Polystichum formosum 6/99
Cyathea australis 9/00	Microlepis speluncae 5/98	Pronephrium asperum 3/99
Cyathea celebica 3/99	Ophioglossum pendulum 2/00	Psilotum nudum 8/99
Cyathea cooperi 9/00	Platycterium bifurc. cv. Hilo /99	Pteris comans 10/00
Cyathea cooperi 'Brentwood' 98	Platycterium bifurc. cv. Hula Hands	Pteris umbrosa 12/99
Cyathea cooperi var. cinnamonia	/99	Sticherus flabellatus 8/99
99	Platycterium bifurc. cv.Roberts /99	Sticherus urceolatus 3/99
Cyathea leichhardtiana 1/00		Tectaria confluens 6/00

More spore donors wanted, please. No special qualifications required, if you are uncertain about the material please send it and I can sort it out. Mixtures of spore and sporangia are quite acceptable, as are portions of fertile fronds.

ORDERING SPORE

Spore is available free of charge from Barry White, 24 Ruby St, West Essendon. Vic. 3040. Ph: (03) 9337 9793
 When ordering please include a stamped addressed envelope. The area of collection is available on request.

¹ Line drawings from DL Jones & SC Clemesha Australian Ferns & Fern Allies (1980) Reed French's Forest

FORTHCOMING EVENTS FOR SOUTH EAST QUEENSLAND

Sunday 4th March. Excursion to Bryces Rd. Mt. Glorious. Meet at Maijala National Park - lower entrance at 9.30 a.m.

Sunday 1st April. Meet at Geoff and Merle Goadby's home at 9.30 a.m. Their address 121 Haven Rd Pullenvale. Topic will be *Adiantums*.

For further information contact Peter Bostock 07 3896 9505 (work) or Irene Cullen 07 3423 7347 Fax 07 3423 7393

PROGRAMME FOR SYDNEY MEMBERS

Saturday March 17th Visit to the Sir Joseph Banks Native Garden, Bates Drive, Kareela. Coming from the north turn right into Bates drive from the Princes Highway about 3.5K after crossing the Georges River Bridge. The entrance to the Garden is on the left, on the rise about 1K from the turn off. We shall look for and list what ferns are growing there. Meet at 11.30am in the parking area.

Saturday April 21st Meet at Tess Taylor's home, 4 Prospect St. Blacktown from 11.30. Discussion subject will have been decided at the February meeting which at time of writing has not yet taken place.

Saturday May 19th. Adelina Falls Lawson. Turn off Western Hwy. At Shopping Centre. To meet at Cenotaph at 10am. We leave for Falls at 10:30am.

CONTRIBUTIONS SOUGHT –I would once again like to appeal to individuals or groups to send articles, questions on their favourite plant, an interesting spot they may have visited, a tip on how to grow, or propagate plants, or something you've discovered about watering, light, mixtures, fertilisers etc. Questions have generated a deal of interest in the past. It is your newsletter, help us make it work better for you. It may be something as simple as an unusual sighting ,e.g Did you know that a rotunda in the Royal Botanic Gardens Melbourne uses staghorn ferns as the decoration at the top of it's columns rather than the traditional Greek Ionic or Doric friezes?. Or you may have a technical question you want answered.

DEADLINE FOR COPY – Closing date for material to be included in the MARCH, 2001 Newsletter is FEBRUARY 15th, 2001. Your contributions are valuable – whether as a group or individual. I strongly urge groups from the various States to send articles.

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BALLARAT. Vic. 3350

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