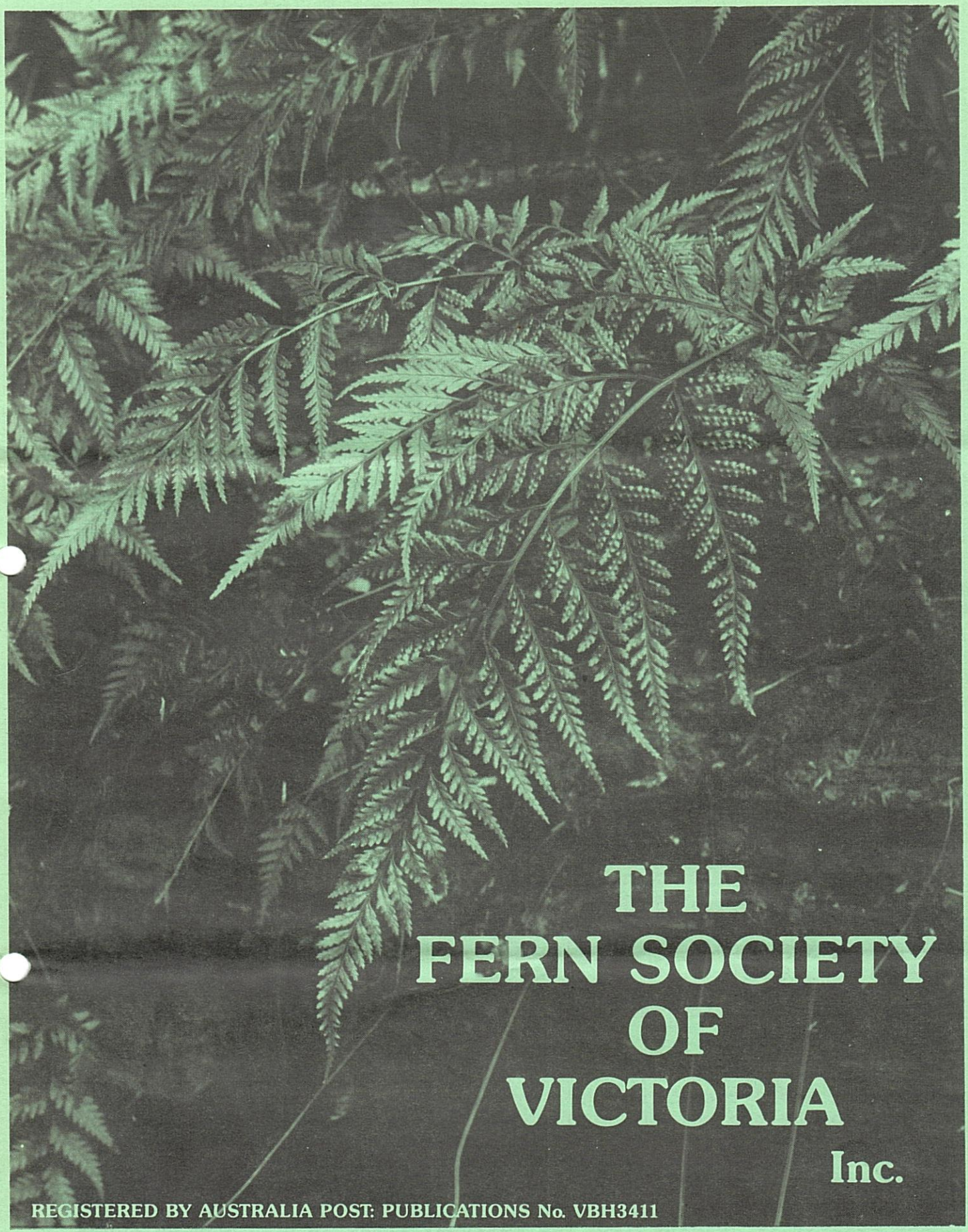

THE FERN SOCIETY OF VICTORIA Inc.

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NEWSLETTER

VOLUME 15, Number 9, October 1993

FERN SOCIETY OF VICTORIA Inc.

POSTAL ADDRESS: P.O. Box 45, Heidelberg West, Victoria, 3081.

OFFICE BEARERS:

President:	Barry White	Phone 337 9793
Imm. Past President:	Robert Lee	" 836 1528
Vice-Presidents:	Terry Turney	" 807 4886
	Henry Rossell	" 439 7073
Secretary:	John Hooper	" 434 1239
Treasurer:	Don Fuller	" 306 5570
Membership Secretary:	John Oliver	" 879 1976
Spore Bank Manager:	Barry White	" 337 9793
Editor:	Robert Lee	" 836 1528
Book Sales:	Stephen Ziguras	" 388 1771
	(25 Ewing Street, Brunswick, Vic., 3056)	

SUBSCRIPTIONS: Single - $15.00 (Pensioner/Student - $11.00)
Family - $18.00 (Pensioners - $13.00)
Overseas - A$30.00 (by Airmail)
Subscriptions fall due on 1st July each year.

PRESIDENT'S MESSAGE:

I missed the September meeting but I trust it went well. I had an opportunity to go to New Guinea for a few weeks, an opportunity too good to forego. My trip is mainly concerned with cattle but I hope to see a few ferns on my days off - and perhaps have the basis for a talk to the Society sometime.

My thanks go to Chris Goudey who stepped at the September meeting and relieved me of the short talk on Adiantums of Victoria, something I am sure Chris did very well.

The October meeting will feature Betty Duncan on "Filmy Ferns". Most members will be very familiar with the book by Betty Duncan and Golda Isaac on the ferns of Victoria. Betty will bring a lot experience and knowledge to her topic.

The fern competition category for the October meeting will be a *Pteris* fern.

At the November meeting, as well as a talk on the Cyatheas of Victoria by Sarah Keel, there will be a special fern sale night along similar lines to the one held in April of this year. This will give members a chance to dispose of some surplus ferns and to purchase a few, keeping in mind that Christmas will soon be at hand. If you are likely to have some ferns for sale, start preparing them now.

The Society is joining with the National Trust in a "Focus on the Fernery" weekend at 'Rippon Lea' on 23rd and 24th October. We will be giving conducted tours of the fernery, and providing information on ferns and on the Fern Society. The Army band will be there to provide an added attraction on the Sunday afternoon. tOur part in the weekend is being coordinated by Don Fuller who is looking for some assistance. Don can be contacted on 306 5570.

Regards, Barry White

NEXT MEETING

DATE: **Thursday, 21st October, 1993**

TIME: From 7.30 p.m.

VENUE: The National Herbarium, Royal Botanic Gardens, Birdwood Avenue, South Yarra. (Melway Directory Ref. 2L A1)

TOPIC: **FILMY FERNS**

SPEAKER: Betty Duncan

MEETING TIMETABLE

7.30 p.m.	Pre-Meeting Activities:- Sales of Ferns, Spore, Books and Special Effort Tickets ; Library Loans.
8.00 p.m.	October General Meeting
8.20 p.m.	Topic of the Evening
9.30 p.m.	Fern Competition Judging Fern Identification and Pathology Special Effort Draw
9.45 p.m.	Supper
10.00 p.m.	Close.

FERN COMPETITION: The category for this month is a *Pteris*.

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SEPTEMBER FERN COMPETITION

The category for the fern competition for the September meeting was an *Adiantum*. Congratulations to the following winners:

First:	John Hodges	*Adiantum formosum*
Second:	Ian Broughton	" *cunninghamii*
Third:	Dorothy Forte	" *diaphanum* (large form)

The draw for the exhibitors' fern prize was won by Don Fuller.

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NOVEMBER MEETING FERN SALE

The operation of the fern sale at the November meeting will be co-ordinated by Bernadette Thomson - phone (03) 399 1587. All members who plan to provide ferns for sale should advise Bernadette of their intention as soon as possible and she will supply a form for listing ferns to simplify booked in.

All plants should be individually labelled with their species or cultivar name. Price tags identifying the owner will be affixed at the time of booking in. Ferns offered for sale should, of course, be healthy and free of pests and disease.

SPEAKER REPORTS - GENERAL MEETING - 16TH SEPTEMBER, 1993

The programme for the evening consisted of talks by Terry Turney on Soil Testing and Chris Goudey on the Adiantums of Victoria, followed by a segment in which several of the members present demonstrated gadgets they used to help in their fern cultivation.

SOIL TESTING - pH and SALINITY

by Terry Turney

Two of the many characteristics of a soil or potting mix that are important for healthy plant growth are the levels of acidity and salinity. These can be measured, respectively, by the pH of the mix and its ability to conduct electricity. Terry demonstrated methods of measuring these properties.

pH Testing:

The pH of a mix is important because it governs the availability of the nutrients in the mix to plants. Most plants can tolerate mix pH levels in the range 4 to 8 approx. without being damaged, but they cannot grow well at the extremes of the range because some of the elements necessary for their growth are locked up at high or low pH. A diagram in 'Growing Media for Ornamental Plants and Turf' by K. Handreck and N. Black (NSW University Press) shows how the availability of various nutrient elements in an organic potting mix varies with pH. It can be seen from this that a pH range 5 to 6.5 provides optimum availability of most nutrients and most plants are happy in a potting mix of this pH range.

The acidity of a material is governed by the concentration of hydrogen ions (H^+) in a solution. Because unwieldy large numbers can be involved in stating the actual concentrations of the ions, the pH system of measurement expresses them in a logarithmic scale which gives small numbers that are much easier to use. In this system a change of one unit in pH represents a change of ten times in the concentration of H^+ ions and the acidity of the solution, e.g., something at pH5 is ten times more acid than something at pH6 and something at pH2 is 10,000 times more acid than that at pH6.

In water (chemical formula H_2O) one molecule in 100,000,000 breaks up naturally into hydrogen (H^+) and hydroxyl (OH^-) ions. The logarithm of 100,000,000 is 7, so water has a pH of 7. Water is chemically neutral, so 7 represents neutral on the pH scale. Numbers lower than 7 indicate acid conditions, e.g., at pH5 there is one H^+ to every 1,000,000 (logarithm = 5) molecules of water, and numbers greater than 7 represent alkaline conditions (lower H^+ concentration).

There are a number of ways of measuring pH. The most accurate is the glass electrode with associated electrical measuring equipment. Other methods involve the use of dyes that change colour as pH varies. The dyes can be in solutions or impregnated into paper strips. Terry demonstrated the use of these. One method that is not favoured is the use the probe-type meters that are pushed into the soil; they have proved inaccurate and unreliable.

It is only possible to make a pH reading if there is sufficient liquid present, so methods such as the glass electrode and paper strips require that the soil sample is mixed with water. A common standard

method is to mix 10 grams of soil with 50 millilitres of distilled water and shake for about 30 seconds before testing. Other dilutions can be used provided the right correction factor is used; a correction factor is needed for all dilutions. This is because the important pH is that which applies in the damp soil near the plant roots and adding water for the pH test varies the concentration of H^+ ions present. For example, if the soil is acidic, adding water will make the pH closer to neutral and the measured pH will be slightly too high. For the 50:10 dilution quoted it is necessary to subtract 0.4 pH units from the measured figure. It was pointed out that an accuracy of about 0.5 of a pH unit was adequate for checking garden soils and potting mixes.

One method demonstrated was the kit marketed by Inoculo Laboratories which was recommended by Kevin Handreck (see FSV Newsletter 14:7 79, 1992). The kit includes a bottle of indicator dye and one of white powder. A few drops of the dye are added to a pinch of soil and it is then dusted with the white powder so that the colour can be observed. When sufficient time was allowed for the colour to develop properly the method gave a result that compared well with the glass electrode method.

(It will be possible to buy 'Inoculo' pH testing kits at a favourable rate if the Society places a bulk order. Prices will be about $14 for a 20-test kit and $18 for one that will do 50 tests, though the latter is being phased out. Would members interested please contact Bob Lee on (03) 836 1528. It will be necessary to make your own arrangements for picking up the kits at a meeting or by some other method.)

Salinity:

Excessive salinity has a detrimental effect on plant growth, as evidenced by the well-publicised degradation of some of our inland areas and anecdotal evidence from our own members in recent years of problems thought to be associated with excessive salt content in potting mixes.

Salinity can be measured by diluting a sample of the soil with distilled water and testing with a conductivity meter. This has two electrodes through which a small current is passed to measure the resistance to the flow of electricity (higher salt content gives lower resistance which reads as higher conductivity). Various units of measurement can be used to express conductivity and, as for pH testing, a correction must be applied to allow for the degree of dilution used (e.g., for a 5:1 dilution the measured conductivity should be multiplied by five).

The meter Terry demonstrated gave results in milli-Siemens/metre (mS/m). On this scale Melbourne tap water is 4 mS/m, Sydney water is 10-30 and Adelaide water is 50-80. For a potting mix a reading of 75 or below should give no problems with plants of normal salt tolerance. Kevin Handreck's book has a good listing of the level of salt tolerance of various plants.

ADIANTUMS OF VICTORIA

by Chris Goudey

There are only five species of *Adiantum* growing in the wild in Victoria. Four of these are true natives; one is possibly an escape that has become naturalised.

Adiantum aethiopicum:

Called the Common Maidenhair, this occurs throughout the southern hemisphere and was formerly thought to occur in Ethiopia, whence its name is derived. It has since been realised that it does not occur in Ethiopia at all but is found in Africa only in the south-west tip. It occurs in every state of Australia, in New Zealand and in the northern tip of Lord Howe Island. *A. aethiopicum* was confused years ago with *A. poiretii*, which is widespread through the tropics of most continents.

A. aethiopicum occurs mostly in open forests on embankments, in damp open gullies and rock crevices. It is a very hardy fern but is very seasonal and dies down between flushes of growth. It has a prominent reniform indusium which is a characteristic identifying feature.

The fern has few cultivars. One strange form which was discovered near Beechworth by our member Mary Frost has deeply incised pinnae and is extremely variable with practically no two similar fronds on a plant.

Adiantum capillus-veneris:

This was once thought to occur in only two places in Australia - in Carnarvon Gorge in central Queensland and under a set of waterfalls in the Hamersley Ranges in Western Australia. However, it has since been found scattered all over Queensland, in South Australia near Renmark and in Victoria on the Mornington Peninsula. There is a suspicion that the Victorian finding might be an escape from cultivation. The fern occurs just about world-wide.

It was once suggested that *A. capillus-veneris* grew only on limestone but it has since been found in many sandstone areas. It does not grow in very acid soil. In keeping with its preference for slightly alkaline conditions, sporelings grow prolifically on scoria in many glasshouses.

The cultivated plant is quite different from the one found in the wild, especially in the sterile fronds. There are quite a number of cultivars. It has a long rectangular indusium.

Adiantum formosum:

The species name *formosum* means "beautiful". The common names for the plant are the Giant Maidenhair or the Black-stem Maidenhair.

It occurs in Australia and New Zealand only, all along the east coast of Australia but only just reaching into Victoria in East Gippsland. One site is near the Cann River, where huge areas were once found but these have been greatly reduced by cattle grazing.

There are no cultivars of this species. It is easy to grow but resents disturbance. A plant propagated by subdivision may not produce any new fronds for up to two years. It grows readily from spore but is troublesome as it is very prone to damping off.

Adiantum hispidulum:

The Rough Maidenhair is also found all up the east coast of Australia and confined in Victoria to East Gippsland. The species name means "hairy" and new growth comes up pink. It is a hardy fern of fairly dry places.

There are no known cultivars but it is extremely variable in form. There have been proposals that it should be split into two separate species, *A. hispidulum* and *A. pubescens*.

***Adiantum diaphanum*:**

The Filmy Maidenhair is rare in Victoria where it is found only in South Gippsland, but it occurs along the east coast of Australia, on Norfolk Island and in New Zealand and Malaya. It grows in very wet dark places.

The fern is stoloniferous and will grow out through the drainage holes of a pot if left long enough.

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BOOK SALES — NEW STOCKS

Stephen Ziguras has just received new stocks of the following books, which are available to members at the prices listed:

"Ferns for the Home and Garden" by Gillean Dunk	**$14.95**
"Ferns and Allied Plants of Victoria, Tasmania and South Australia" - A 'must' for Victorian Fern Lovers	**$35.00**
"Ferns for Modern Living" by Eileen Davenport	**$7.95**

Books can be purchased at the next meeting or direct from Stephen on (03) 388 1771.

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SPECIAL EFFORT WINNERS

September General Meeting

Joy Horman

Bernadette Thomson

Mavis Potter

Margaret Radley

Simon Hardin

Stephen Ziguras

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THE FERN SOCIETY OF VICTORIA INC.
BALANCE SHEET
AS AT 30th JUNE 1993

1992 $			1993 $
	MEMBERS' FUNDS		
22,635.04	As/1992 balance sheet		21,880.40
(754.64)	(Deficit)		(2,220.69)
21,880.40	Total		19,659.71
	Presented by		
	CURRENT ASSETS		
	CASH ON HAND		
534.30	Book Sales	-	-
100.00	Fern sales/stock	-	-
	CASH AT BANK		
982.95	Book Sales - (WBC)	-	
2,666.03	- (WBC)	-	
536.84	Show Committee - (NAB)	-	
819.34	General A/c - (NAB)	397.06	
14,956.81	Cash Management- (NAB)	7,714.67	
-	Book Sales (NAB New A/c)	439.40	8,551.13
647.13	STOCK - BOOKS		596.58
-	INVESTMENTS - TERM DEPOSIT		10,000.00
	FIXED ASSETS		
153.00	Library - Less depn.	119.00	
654.00	Plant & Equip. - less depn.	393.00	512.00
22,050.40	TOTAL ASSETS		19,659.71
	CURRENT LIABILITIES		
170.00	Accrued Expenses		-
21,880.40	NET ASSETS		19,659.71

THE FERN SOCIETY OF VICTORIA INC.
STATEMENT OF INCOME & EXPENDITURE
AS AT 30th JUNE 1993

SUMMARY

1992 $		1993 $
4,761.74	TOTAL INCOME	3,696.23
6,458.73	LESS TOTAL EXPENDITURE	5,871.43
(1,696.99)	OPERATING DEFICIT GENERAL A/c	(2,175.20)
-	ADD - DEFICIT SHOW A/c	(12.12)
(1,696.99)		(2,187.32)
	LESS SURPLUS	
704.59	Show Committee	-
237.76	Book Sales	148.08
(754.64)	OPERATING SURPLUS/(DEFICIT) FOR YEAR	(2,039.24)
	ADD ADJUSTMENTS	
-	1991/92 Accounts	81.45
-	W/off fern sales cash in hand	100.00 (181.45)
(754.64)	(Deficit) for year	(2,220.69)

THE FERN SOCIETY OF VICTORIA INC.
STATEMENT OF INCOME AND EXPENDITURE
AS AT 30th JUNE 1993

GENERAL ACCOUNT

1992 $	INCOME		1993 $
2,346.50	Subscriptions - Members		2,302.63
	SALES/COMMISSIONS		
31.50	S'pore Bank	52.40	
219.31	Commissions	271.90	
387.00	Wangaratta Show	-	324.30
	SPECIAL EFFORTS		
237.90	General - Monthly	199.60	
-	Less Expenses	76.45	
		123.15	
78.00	Plant Stand	-	123.15
	OTHER INCOME		
370.00	Advertising	332.00	
150.00	Returned Deposit	-	
14.80	Sundry Income	57.50	389.50
3,665.83			3,139.58
	ADD NON OPERATING INCOME		
	BANK INTEREST		
22.27	General A/c	26.05	
904.64	Cash Management	530.60	556.65
4,761.74	TOTAL INCOME		3,696.23

1992 $	EXPENDITURE		1993 $
	NEWSLETTERS		
2,385.00	Printing	2,002.00	
1,003.24	Postage	866.63	2,868.63
	ADMINISTRATION		
300.00	Honorariums	300.00	
140.67	Registrations/subscriptions	148.39	
230.00	Stationery	68.00	
27.48	Telephone	1.75	
136.00	Repairs/maintenance	-	
93.60	Advertising	261.90	
100.00	Entertainment	257.65	
92.45	Executive/Secretary	23.30	
784.00	Hall Hire	640.00	
410.00	Audit Fee	322.00	
32.61	Bank Charges	41.73	
480.00	Depreciation	295.00	
43.68	Sundries	60.00	
-	Library Books	205.58	
-	Excursion expenses	78.00	
-	Guest speaker expenses	205.45	
-	Postage	94.05	
200.00	Society Banner	-	3,002.80
6,458.73	TOTAL EXPENDITURE		5,871.43

THE FERN SOCIETY OF VICTORIA INC.
STATEMENT OF INCOME AND EXPENDITURE
AS AT 30th JUNE 1993

SHOW COMMITTEE

1992 $		1993 $
727.14	SURPLUS FROM SHOW	-
	ADD NON SHOW INCOME	
28.73	Bank Interest	20.84
755.87		20.84
	LESS NON SHOW EXPENSES	
51.28	Bank Charges	33.96
704.59	Surplus/(Deficit) for year	(12.12)

BOOK SALES

1992 $			1993 $
	OPERATING INCOME		
474.05	NET SALES	341.10	
311.55	Less cost of books sold	224.55	
162.50			116.55
	ADD NON OPERATING INCOME		
125.73	Bank Interest		55.43
288.23			171.98
	LESS EXPENSES		
50.47	Bank Charges		23.90
237.76	Surplus for year		148.08

AUDITOR'S REPORT

I have examined the books of account and associated records of the Fern Society of Victoria Inc. for the year ended 30th June 1993 and have been provided with all the information and explanations required.

I consider the Statements of Receipts and Payments and Balance Sheet reflects a true and proper view of the financial operations of the Society for the year, and reflects the state of affairs at 30th June 1993.

I wish to thank the officers of the Society for their co-operation and assistance.

.....

R.T. Angwin, FCPA

SPORE LIST

Ordering: The following spore is free to those who donate spore. Otherwise, members 20 cents each sample, non-members 50 cents, plus $1.00 to cover p. and p.. Available at meetings or by mail from Barry White, 24 Ruby St, West Essendon, Vic. 3040. - Ph. (03) 337 9793. There is no charge to overseas members, but to cover postage two International Reply Coupons would be appreciated.

A booklet on spore collection and cultivation is available for 40 cents or free to spore donors.

ADIANTUM aleuticum 6/92
ADIANTUM concinnum 3/92
ADIANTUM whitei 3/92
ANEMIA mexicana 8/93
ARACHNOIDES miguelliana 6/93
ARTHROPTERIS tenella 5/93
ASPLENIUM australasicum 8/93
ASPLENIUM milnei 7/93
ASPLENIUM scleroprium 7/93
ATHYRIUM felix femina 3/93
ATHYRIUM niponicum v. pictum 3/93
BELVISIA mucronata 4/93
BLECHNUM braziliense 3/93
BLECHNUM camfieldii 6/93
BLECHNUM chambersii 10/92
BLECHNUM discolor 5/93
BLECHNUM fluviatile 10/92
BLECHNUM minus 6/92
BLECHNUM nudum 5/93
BLECHNUM occidentale 5/93
BLECHNUM wattsii 10/92
BLECHNUM wattsii x minus 3/93
CHRISTELLA dentata 5/93
CIBOTIUM cumingii
CONIOGRAMME intermedia 6/93
CYATHEA australis 3/93
CYATHEA brownii 3/93
CYATHEA cooperi 10/92
CYATHEA cooperi 'Brentwood' 5/93
CYATHEA cooperi, blue form 7/93
CYATHEA howeana 10/92
CYATHEA intermedia (New Caledonia) 6/93
CYATHEA sp.(P.N.G.) 6/93
CYATHEA tomentosissima 5/92
CYATHEA woolsiana 6/93
CYRTOMIUM falcatum 3/92
DICKSONIA antarctica 3/93
DICKSONIA berteriana /
DICKSONIA herbertii 10/92
DICKSONIA sellowiana 10/92
DICKSONIA youngiae 2/93
DIPLAZIUM australe 5/93
DIPLAZIUM centripetale 2/92
DORYOPTERIS pedata 6/92
DRYOPTERIS atrata 3/93
DRYOPTERIS erythrosora 7/93
DRYOPTERIS hondoensis 11/92
DRYOPTERIS sieboldii 12/92
ELAPHOGLOSSUM alatum
GYMNOCARPUM oyense 12/92
HYPOLEPIS glandulifera (punctata) 11/92
LASTREOPSIS hispida 6/92
MACROTHELYPTERIS torresiana 1/92
NIPHIDIUM crassifolium 5/92
PELLAEA cordifolia 7/93
PELLAEA falcata nana 3/93
PELLAEA falcata 3/93
PELLAEA hastata 2/92
PELLAEA sagitata 7/93
PELLAEA viridis v. macrophylla 2/92
PITYROGRAMMA calomelanos v. aureoflava 7/92
PLATYCERUM superbum 5/92
PNEUMATOPTERIS penniger 3/92
POLYPODIUM californicum 2/93
POLYSTICHUM acrostichoides 4/92
POLYSTICHUM formosum 3/92
POLYSTICHUM lentum 3/93
POLYSTICHUM munitum 6/92
POLYSTICHUM proliferum 11/92
POLYSTICHUM retroso-paleaceum 10/92
PTERIS biaurita 6/93
PTERIS dentata 6/92
PTERIS fauriei 3/93
PTERIS hendersonii 3/93
PTERIS quadriaurita cv argyrae 10/92
PTERIS semipinnata 3/93
RUMOHRA adiantiformis (native) 5/93
RUMOHRA adiantiformis (S.Africa) 3/92
RUMOHRA adiantiformis 7/93
STICHERUS lobatus 6/92
WOODWARDIA unigemmata /92

SPORE DONATIONS

Thank you to the following who have contributed spore : Jean Trudgeon, Bob Halley and John and Judy Marley.

Barry White

BUYERS' GUIDE TO NURSERIES

VICTORIA:

Andrew's Fern Nursery / Castle Creek Orchids - Retail.
Goulburn Valley Highway, Arcadia, 3613. (20 km south of Shepparton).
Large range of ferns and orchids for beginners and collectors.
Open daily 10 am - 5 pm except Christmas Day. Ph: (058) 26 7285.

Austral Ferns - Wholesale Propagators. Ph: (052) 82 3084.
Specialising in supplying retail nurseries with a wide range of hardy ferns; no tubes.

Coach Road Ferns - Wholesale. Monbulk. Ph: 756 6676.
Retail each Saturday and Sunday at the Upper Ferntree Gully Market (railway station car park), Melway Ref. 74 F5. Wide selection of native and other ferns. Fern potting mix also for sale.

Fern Acres Nursery - Retail. Kinglake West, 3757. (On main road, opposite Kinglake West Primary School). Ph: (057) 86 5481.
Specialising in Stags, Elks and Bird's-nest Ferns.

Fern Glen - Wholesale and Retail. Visitors welcome.
D. & I. Forte, Garfield North, 3814. Ph: (056) 29 2375.

R. & M. Fletcher's Fern Nursery - Retail.
62 Walker Road, Seville, 3139. Ph: (059) 64 4680.
(Look for sign on Warburton Highway, 300m east of Seville shopping centre). Closed Tuesday, except on public holidays.

Kawarren Fernery - Wholesale and Retail.
Situated on the Colac - Gellibrand Road, Kawarren (20 km south of Colac). Ph: (052) 35 8444.

Viewhaven Nursery - Wholesale and Retail.
Avon Road, Avonsleigh (near Emerald), 3782. Ph: (059) 68 4282
Specialists in Stags, Elks, Bird's-nests and Native Orchids.

NEW SOUTH WALES:

Jim & Beryl Geekie Fern Nursery - Retail. By appointment.
6 Nelson Street, Thornleigh, 2120. Ph: (02) 484 2684.

Kanerley Fern Exhibition and Nursery - Wholesale and Retail.
204 Hinton Road, Nelsons Plains, via Raymond Terrace, 2324.
Ph: (049) 87 2781. Closed Thursdays and Saturdays.
Groups of more than 10 must book in advance, please.

Marley's Ferns - Wholesale.
5 Seaview Street, Mt. Kuring-Gai, 2080. Ph: (02) 457 9168.
All Fern Society members welcome. By appointment.

QUEENSLAND:

Moran's Highway Nursery - Wholesale and Retail.
Bruce Highway, Woombye (1 km north of Big Pineapple; turn right into Keil Mountain Road). P.O. Box 47, Woombye, 4559. Ph: (074) 42 1613.