

Fern Society of Victoria Inc.

NEWSLETTER

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ABN 85 086 216 704

**Vol. 24, Number 5
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NOV/DEC 2004**

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FERN SOCIETY OF VICTORIA Inc.

POSTAL ADDRESS:

P.O. Box 45, Heidelberg West, Victoria, 3081

E-mail: http://gardenbed.com/clubs/clubs_vicferns.cfm

Our Society's Objectives.

The objectives of the Society are:

- *to bring together persons interested in ferns and allied plants*
- *to promote the gathering and dissemination of information about ferns*
- *to stimulate public interest in ferns and*
- *to promote the conservation of ferns and their habitats.*

OFFICE BEARERS:

President:	Barry Staggoll	Phone/Fax
Imm. Past President	Rex Gresham	
Vice-President	George Start	" 5962 5059
Secretary	Barry White	" 9740 2724
Treasurer	Don Fuller	" 9354 2656
Membership Secretary	Rex Gresham	" 5796 2466
Spore Bank Manager	Barry White	" 9337 9793
Librarian	Mirini Lang	" 9886 6109
Book Sales	Ivan Traverso	" 9836 4658
Editor	Brenda Girdlestone	9390 7073

Email: macstone@hotmail.net.au

COMMITTEE MEMBERS: Jack Barrett 9375 3670, Gay Staggoll 9844 1558,
Norma Hodges 9878 9584. Brenda Girdlestone 9390 7073 and Mirini Lang 9886 6109.

SUBSCRIPTIONS:

- ° Single..... \$15.00 ° Pensioner/student\$12.00 ° Family\$17.00
- ° Pensioner Family...\$14.00 ° Organisation.....\$17.00
- ° Overseas \$22.00 (Payment by international bank cheque in \$A please. Sent by Airmail.)

Subscriptions fall due on 1st July each year.

MEETING VENUES: The Kevin Heinze Garden Centre at 39 Wetherby Road, Doncaster (Melway 47; H1).
Other meetings at members' gardens or as advertised on the following page.



Opinions expressed in this newsletter are the personal views of the authors and are not necessarily endorsed by the Society, nor does mention of a product constitute its endorsement.

TIMETABLE for EVENING GENERAL MEETINGS:

- 7.30 Pre-meeting activities - Sale of ferns, spore, books, merchandise and Special Effort tickets. Also library loans and lots of conversation.
- 8.00 General Meeting.
- 8.15 workshops and demonstrations.
- 9.15 Fern identification and pathology, Special Effort draw.
- 9.45 Supper and another good yarn.
- 10.00 Close.

2004 Calendar of Monthly Events

MEETING NOVEMBER

THURSDAY 18TH, 8.00PM at THE KEVIN HEINZE CENTRE

Our special guest speaker is Mr Bruce Fuhrer who will be talking on mosses and liverworts.

Bruce has co authored a book on this subject and is one of the leading experts in this field.

It would be good if our members could attend this meeting as we don't want to be embarrassed by only having a handful of members for Bruce to talk to.

DECEMBER MEETING

SUNDAY THE 5TH, DECEMBER, 2004

AT THE KEVIN HEINZE GARDEN CENTRE

39 WETHERBY ROAD, DONCASTER, (mel; 47 HI)

Christmas break up more information on page 86

There is no meeting in January.

**THURSDAY THE
17th FEBRUARY 2005.**

This will be our first meeting for 2005, at the Kevin Heinze Garden Centre starting at 8.00pm

FRONT COVER:

The front cover of this issue was first used on Sept/Oct, 1999 and has continued to be as the front cover till the present time. This brings us through the first 25 years of front covers used in our newsletters.

PRESIDENTIAL PERORATION

I'm penning this first Newsletter piece as President mindful of the fine efforts of previous Presidents, together with past and present Committee members, in directing and nurturing our Society. As a member since the Society's inception, I decided it was about time that I participated on the Committee, having adjusted my workload on other fronts. And it was only fair to give Rex Gresham the opportunity to retire, given that he had so generously offered to serve in an interim capacity after Ian Broughton's departure from Victoria. Rex performed the duties enthusiastically, and certainly earned the thanks conveyed to him at the AGM on behalf of all members. He even admits to having learned more than a bit about ferns from the experience.

Despite my long acquaintance with ferns, and my appreciation of them, it is not overly modest of me to admit that I'm no "expert". However, I am very interested in seeing the Society's traditions and its service to members - not to mention ferns - continued into the future.

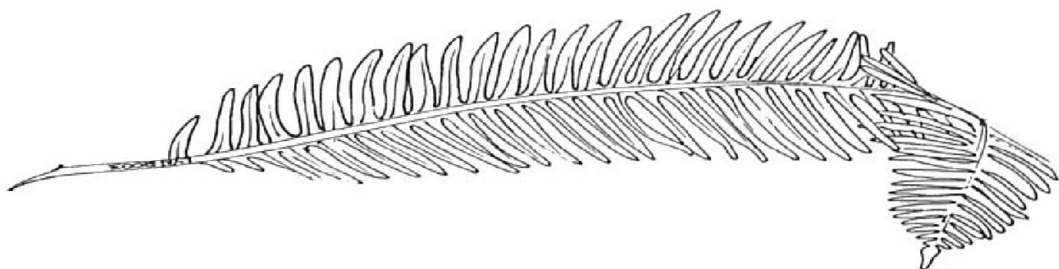
Unfortunately, Gay & I had to cancel attendance at the visit to Chris and Lorraine Goudey's property at Lara on Sunday 24th October, because of difficulties we encountered at home. But the reports we have had indicated that this event was very successful. There were visitors from much further afield than is normal for the Doncaster meetings, and clearly an enjoyable time was had by all. We are indebted to Chris and Lorraine for their hospitality once again, and the video starring Chris will be a lasting asset for the Society.

Keith Hutchinson has come forward with a proposal for a Society-organised tour to Tasmania in autumn 2005, and has been kind enough to do some investigation of preferred locations to include for visits (with local input from Michael Garratt), as well as logistic considerations and possible costs. Unlike the West Coast focus of the last Tasmanian tour, Keith's suggestion is that it might be rewarding to concentrate on interesting locations further east. If members who may have potential interest in joining such a tour would like to make this known (say by phoning Keith on 9457 2997) this could certainly help to get the proposal moving.

The last Newsletter included (on page 70) a discussion of ways in which members can help participate in the planning and running of various Society activities, including an invitation to nominate for some specific duties. Please do give thought to helping in one or other of the ways listed there. As from the current financial year we will also need to appoint a new auditor, a role which I filled for the June 2004 year but which it would be inappropriate for me to perform as a member of the Committee handling the Society funds! If you have accounting or bookkeeping expertise, or even if just a good eye for detail and a feel for what is involved in reconciliation of financial records, with a small amount of instruction and familiarisation you could provide valuable assistance to the Society (our Rules require that the account books and financial statements are audited, but don't require this to be done by a registered auditor). It's a once-a-year task which doesn't involve a lot of time, but if we have to again engage a professional to do it, this involves extra cost in running the Society.

I look forward to seeing lots of members at the November 18 meeting, and also at the Christmas gathering on December 5.

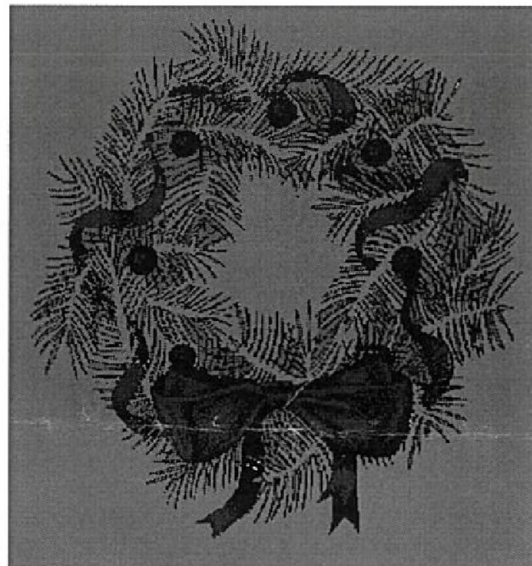
Barry Stagoll



DECEMBER DETAILS OF BREAK UP

This will be our CHRISTMAS BREAK UP, starting at 11.30am, where we will again be tempted by the catering proess of Norma Hodges, the food will be supplied, all you need to bring with you is plates, cutlery, and any drinks you require, (tea and coffee supplied). Also bring a plate with afternoon tea that can be shared.

This year we have decided to change our usual auction to a blind auction so we ask you to bring anything you would like to donate, all we ask is that you wrap it in paper (christmas) so that our very competent auctioner Rex, can auction all items, half the money raised on the day is shared with the Kevin Heinze Centre. Don't forget to bring some money so you can bid and maybe pick up a bargain or two. This is sure to bring some surprises. If the item you wish to donate has a specific value that you do not want to sell for less then please let Rex know at the start of the day so he knows that there is a reserve price on the item



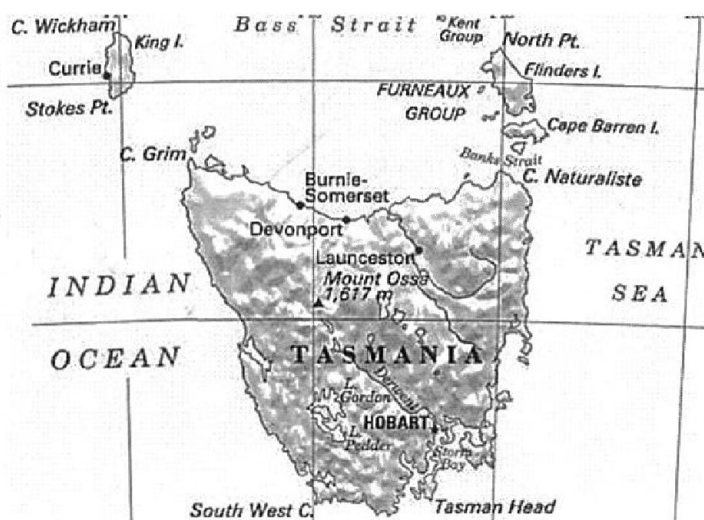
For catering purposes we do need to know if you are intending to come along, please let Norma know at the November meeting or phone her on 9878 9584

There is always the opportunity to have a browse around the gardens including the shade houses giving an appreciation of what the centre is about and has achieved.

PROPOSED TRIP TO TASSIE

At our last meeting Keith Hutchison mentioned that he had been asked by some of the members about continuing a trip to Tasmania. The last trip was around the West coast, this time it would concentrate around the East coast. The proposed time for the undertaking of this trip would be March/April 2005.

Keith has taken the time to do some initial costing and itinery work, if you are interested in taking part in this trip could you please let Keith know or one of the committee members so that he can take this information into consideration.



AUDIT REPORT TO THE MEMBERS OF THE FERN SOCIETY OF VICTORIA INC.

I have audited the financial statements of the Society for the year ended 31st June, 2004, comprising the Statement of Income and Expenditure for the General Account, the Statement of Income and Expenditure for the Fern Show, Summary Statement of Income and Expenditure, and Balance Sheet.

In the course of this audit I have examined evidence supporting the amounts and other disclosures in these statements, and satisfied myself concerning the accounting policies adopted in their preparation and accounting estimates, for the purpose of forming an opinion as to whether in all material respects the statements are presented fairly and in accordance with the appropriate accounting standards. In my opinion the financial statements present fairly, in accordance with the appropriate accounting standards and the Rules of the Society, the position of the Fern Society of Victoria Inc. as at 30th June 2004, and the results of its operations for the year ended 30th June 2004.

Barr y J. Stagoll, B.Comm, ASIA
15th August 2004

AUDITORS REPORT BALANCE SHEET AS AT 30th JUNE 2004.

2003 \$		2004 \$
	<u>MEMBERS FUNDS</u>	
18623.19	Brought forward from prev bal date	18583.94
-803.85	Deficit - General Account	-665.31
746.60	Surplus - Fern Show	607.86
<u>185833.94</u>	<u>TOTAL MEMBERS FUNDS</u>	<u>\$18526-49</u>
	<u>REPRESENTED BY</u>	
	<u>CURRENT ASSETS</u>	
	<u>CASH AT BANK</u>	
3873.19	General Account	2712.44
	<u>STOCK</u>	
109.25	Mugs	92.85
225.00	Misc' Goods	100.00
	<u>INVESTMENTS</u>	
14500.00	Term Deposits	15715.20
18707.44	<u>TOTAL ASSETS</u>	18620.49
	<u>CURRENT LIABILITIES</u>	
123.50	Prepaid Members subscription	94.00
<u>\$18583.94</u>	<u>TOTAL NET ASSETS</u>	<u>\$18526.49</u>

GENERAL ACCOUNT INCOME

2003		2004
	<u>SUBSCRIPTIONS</u>	
1112.50	Renewals	1168.50
217.00	New Members	285.00
	<u>SALES COMMISSIONS</u>	
32.60	Spore Bank Sales	48.30
247.65	Commissions on fern sales	40.35
379.60	Misc. Sales to Members	387.60
<u>335.96</u>	Less - Cost of Sales	<u>242.48</u>
30.00	Sales of Mugs	15.00
21.85	Less Cost of Sales	16.40
45.00	Books	-
<u>45.00</u>	Less - Cost of Sales	-
	<u>SPECIAL EFFORTS</u>	
139.45	General (Net)	139.50
	<u>OTHER INCOME</u>	
126.00	Advertising	126.00
324.50	Auction Receipts	322.05
55.00	Donation	-
2306.49	<u>OPERATING INCOME</u>	2273.42
	<u>ADD NON OPER'G INCOME</u>	
0.15	Bank Interest General Account	0.30
697.67	Interest on Term Deposits	566.45
<u>\$3004.31</u>	<u>TOTAL INCOME</u>	<u>\$2840.17</u>

GENERAL ACCOUNT EXPENDITURE

	NEWSLETTERS		
1072.09	Printing		1039.17
387.52	Postage	419.91	1459.03
	<u>ADMINISTRATION</u>		
150.00	Honorariums		150.00
48.00	Regist'ns/Subs'ns		35.00
175.31	Admin./Sect'l		19.80
264.95	Entertainment (incl Christmas Event)		281.00
400.00	Meeting venue hire		295.00
16.39	Guest Speaker Exp.		-
400.00	Audit fee	400.00	
27.00	Bank Account Debits Tax	27.60	
80.00	Presentation	-	
52.00	P.O.Box Rental	55.00	
212.00	Donation	160.00	
228.80	Insurance	260.00	
151.21	Library Books		
52.89	Posters/Labels		
90.00	Write Off Book Balance		
-	25 th Anniversary Celebration	363.00	2046.40
\$3808.16	TOTAL EXPENDITURE		<u>\$3505.43</u>

SUMMARY

3004.31	Income - General Account	2840.17	
3808.16	Less - Expenditure	3505.48	
-803.85	Operating Deficit	-665.31	
	<u>Less</u>		
764.60	Fern Show Surplus	607.86	
-\$39.25	<u>TOTAL DEFICIT</u>	-\$57.45	

FERN SHOW

(Held jointly with Australian Rhododendron Society)

JOINT RECEIPTS/EXPENDITURE

1595.40	Receipts		1829.50
1180.16	Expenditure	1261.27	
415.24	JOINT SURPLUS	568.23	
207.62	FERN SOCIETY SHARE 50%		\$284.12

INCOME - FERN SOCIETY

6269.25	Fern Sales	5321.00	
-5590.67	Less - Cost of Sales	-4830.15	
75.00	Donation/Sale Fixtures	50.00	540.85

EXPENDITURE - FERN SOCIETY

56.60	Display Expenses	69.10	
140.00	Travel & trailer hire expenses	148.00	217.10

SURPLUS OF FERN SOCIETY

556.80	INCOME LESS EXPENDITURE	323.75	
207.62	PLUS - SHARE OF JOINT SURPLUS	<u>284.12</u>	
762.60	FERN SOCIETY SURPLUS	607.86	

SCALE INSECTS

Reprinted with permission and many thanks, from the internet web site of the Royal Botanical Gardens, Sydney.

http://www.rbgsyd.gov.au/information-about_plants/pests_diseases/fact-sheets/scale-insects

Plant Disease Diagnostic Unit Botanic Gardens Trust Mrs
Macquaries Rd Sydney NSW 2000 Telephone: (02) 9231
8186 Facsimile: (02) 9241 1135 Email:
pddu@rbgsyd.nsw.gov.au



Scale insects - fact sheet

Scale insects are typically small, averaging about 2 - 3 mm in length. They are mainly pests of indoor plants and of orchards. They feed by sucking sap from plant tissue, thus weakening the host plant by removing its food supply and other valuable nutrients.

Scale insects (like mealy bugs, to which they are related) produce large quantities of honeydew. The honey dew - besides being a problem in itself because it is a sticky substance - provides a food source for sooty moulds.

Sooty, moulds produce a black coating that reduces the photosynthetic capacity and the aesthetic appeal of the plant.

Severe infestations of scale insects can result in defoliation and retardation of the plants growth, and even in the death of the plant.

Types of scale

The term 'scale' refers to the typical scaly cover that the insect produces to protect itself. There are two categories of scales soft and armoured and they can take various shapes.

Oyster Scale (with oyster-like covers) and Citrus Red Scale are examples of armoured scales, and Pink Wax Scale (pink waxy domes) is an example of a soft scale.

Of the scale insects considered to be pests, Citrus Red Scale is probably the most economically important. Damage by this scale insect can result in severe downgrading of fruit quality and hence drastically lower the prices for affected fruit. Damage is due to marking of the fruit by the scales themselves and/or to marking of the fruit by sooty mould growing on scale insect honeydew excreta.

Large infestations of Citrus Red Scale can result in severe weakening of citrus trees, with resulting loss in yield. In particularly bad cases, the citrus trees can die.

Scale insects attack an extremely wide range of host plants, throughout the world, including ferns, conifers and flowering plants. Different host plants have different effects on scale insects - so much so that it can be hard to tell when scale insects on different hosts belong to a single species. This has resulted in some scale insects with extreme variation in morphology (body shape) being mistakenly described as more than one species.

Scale Insect Life Cycle

Soft scales:

Some scale insects hatch from eggs, while others are born live. They disperse to favorable sites on the leaf, settle down and start feeding.

This dispersal stage is known as a crawler. The juveniles then become sedentary, and start building their protective scale covers.

Both male and female scale insects live under scale covers. The females of most species remain under the covers for their entire life, while the male insects live under the covers until ma-

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turity, when they emerge as winged adults.

Males mate with the (larger) females through the female's scale covers. Females are generally headless, legless and wingless, and when mature they produce eggs then die.

Fertilisation is not necessary in some species of soft scale insects, the female reproducing parthenogenetically (i.e. not needing to mate to produce young). In some of these species males have not been recorded at all.

Most species of scale insects lay their eggs externally beneath the scale, although some species form a cyst with their egg mass within their bodies.

A female scale insect can lay more than 150 eggs in its reproductive phase. Scale insects such as the Cottony Cushion Scale (which is actually mobile when adult) produce a number of large fluffy egg masses.

Males pass through up to six juvenile stages before becoming winged adults. At their fifth juvenile stage both the male scale insects and their scale covers start to elongate along their longitudinal axes.

Female scale insects pass through up to seven juvenile stages before becoming sedentary adults.

Armoured scales:

Different species of armoured scale insects use different overwintering strategies: some overwinter as eggs, others as adult females, yet others as nymphal stages.

Control

Cultural:

For a domestic situation, removal and disposal of infected plant material may be effective, although for some large-scale commercial operations other means of control will be necessary.

In some cases the only realistic option may be to destroy readily replaceable plants that are severely infested. At least this will prevent spread of scale insects to neighboring unaffected plants.

For minor infestations of plants that are sufficiently small and have large leaves, scale insects can be rubbed off using a damp cloth, with or without insecticidal soap and/or spray oil.

Another useful method for small numbers of scale insects is dabbing at the scales with a cotton bud soaked thoroughly in methylated spirits.

Biological:

The parasitic wasps *Aphytis melinus*, *Aphytis lignanensis*, and *Comperiella* spp. are used in Australia in many Integrated Pest Management (IPM) programs to control armoured scale insects in citrus orchards and many other places.

These wasps control scale insects by laying

a single egg through the scale cover into the body of a young juvenile. The wasp larva hatches and feeds on the host as it grows. The wasp kills the scale host once it reaches its pupal stage.

The Scale Eating Ladybird (*Rhyzobius lophanthae*) is also used to control scales, especially Citrus Red Scale.

Waxy scale insects are much harder to control than armoured scale insects with either biological or chemical agents.

Chemical:

Surface applied chemical pesticides such as synthetic parathyroid are most effectively applied on scale insects at egg hatch.

If this is to work it requires precise timing followed by persistent repeated application of the spray. Spraying needs to be done weekly for at least four weeks.

The use of systemic pesticides (applied to roots or foliage) may give more latitude in terms of timing but has two main disadvantages: these chemicals are toxic to humans and highly toxic to beneficial insects (especially bees); and there is usually a lengthy withholding period for fruit and other food crops treated with these chemicals.

There are also problems with pesticide residues when using such chemicals. Another disadvantage of the systemic pesticides is their low effectiveness against scale insects.

Resistance to heavy duty chemical pesticides by scale insects will build up rapidly if these pesticides are over applied in frequency and/or dose.

Spray oils:

These paraffinic compounds are considered as benign especially when compared with the systemics or the synthetic parathyroid and represent a major component of scale control.

In fact, spray oils have become an essential component of many Integrated Pest Management (IPM) systems, and are often referred to as soft pesticides.

Spray oils have no known deleterious side effects on humans, and tend to be less
continued over page

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Ferns -trays to advanced.



destructive to populations of natural enemies than, for example, synthetic parathyroid.

The spray oil should be applied in spring, preferably before eggs hatch. The oil acts by suffocating the scale insect embryos within their eggs.

Some plants may suffer leaf burn from spray oils, and it is always recommended that the label be read to determine any possible side effects on the plant (or plants) to be treated.

Soap sprays:

Insecticidal soaps have been used with success on scale insects. Along with spray oils, they are largely used on domestic house plants, where the use of a enign spray is essential. Soap sprays also have application in the indoor office plant industry - conditions in offices, like those in houses, favour the rapid outbreak of plant pests

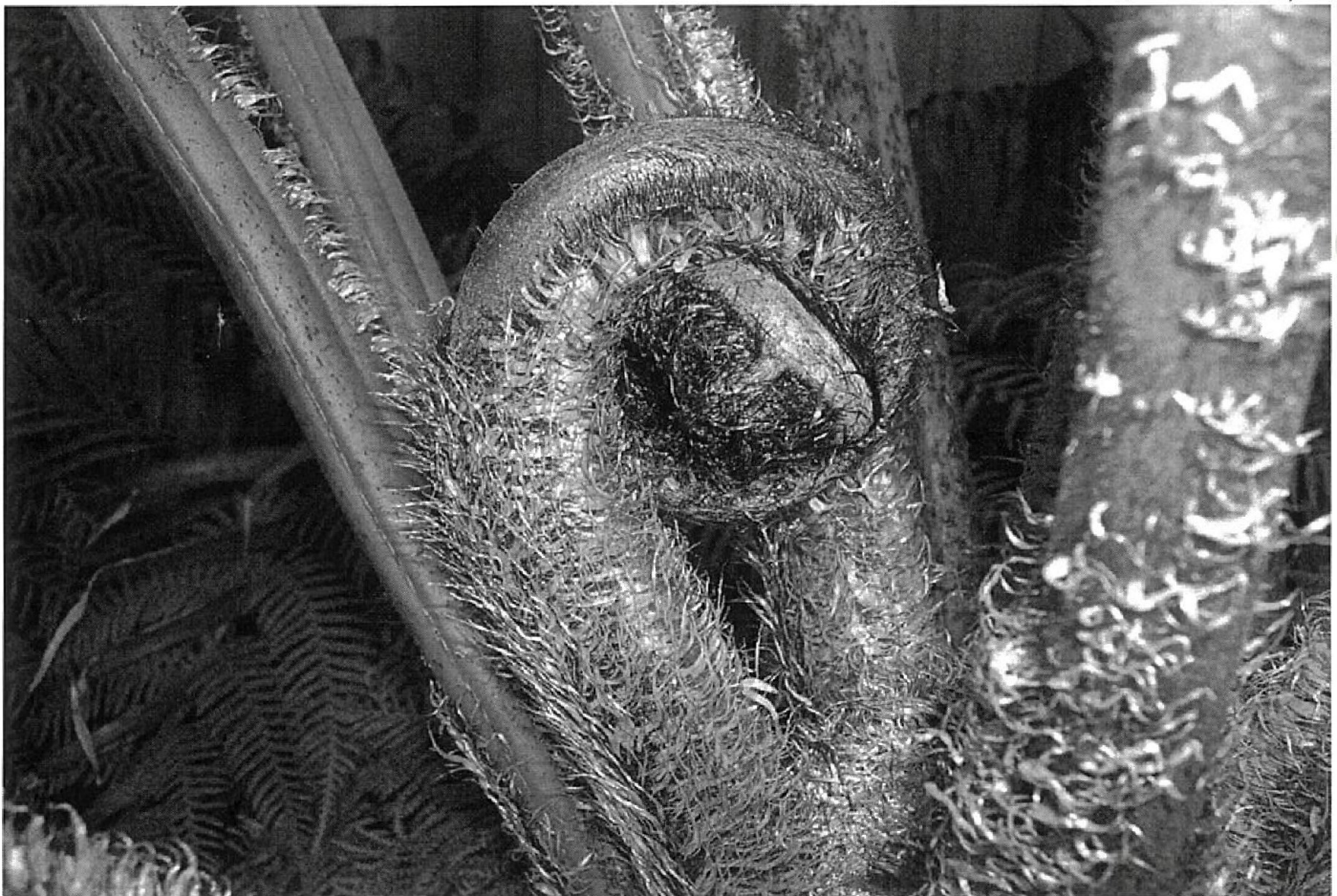
TAGGING OF TREE FERNS

The following advice dated 27th September 2004 has been received from the Department of Sustainability and Environment relating to provisions of the Flora and Fauna Guarantee Act 1988.

Regulated tree ferns in Victoria include *Todea barbara*; *Dicksonia antarctica*; *Cyathea australis*, *cunninghamii*, *leichhardtiana* and *X marcescens*.

The Act requires that regulated tree ferns be tagged but excludes ferns which have not been truncated, and have spent their entire life cycle in a pot or artificial container. Ferns without a living crown are also excluded.

Tagged tree ferns with valid tags issued by the appropriate authorities in Tasmania or Queensland no longer need to be tagged with Victorian tags.



GROWING FERNS FROM SPORE

Besides being beautiful to behold ferns also have a fascinating life cycle. Growing ferns from spore is an interesting challenge requiring little but patience and persistence.

Collecting spore is simple but it is necessary to get the timing right. Towards this end a hand lens (10x magnification) is very useful although with experience it is often not necessary. Difficulty may be due to immature spore which may not shed properly, or more commonly all the spore may have been already shed in which case only dust from the spore cases may be collected. Regular examination of a fertile frond over a period of time is useful education. Sometimes immature spore, ripe spore and empty cases may be found on the one frond.

To collect spore simply place the fertile frond on a sheet of paper. In most cases, if the spores are ripe they will be shed overnight, but leathery fronds may take longer to dry out. A small section of the frond may be used as a test to see if the spores are ready to be shed.

Separation of the spore from the spore cases is not necessary if sending material into the spore bank. Gentle tapping on sloping paper causes the spore cases to move down the paper at a faster rate than the spore.

The collected material should be identified with the name of the species and the collection date, and wrapped in paper in such a way that the spore is not able to escape. The folded paper packets as presently used by the spore bank is one way to achieve this. Ordinary envelopes may be used but the corners need to be turned over and taped, otherwise the spore tends to puff out through the corners.

Green spore (e.g. *Todea barbara*) survives for only a few days and should be sown straight away. Spore from some other species (e.g. *Blechnum*) may not store well. However if stored in a cool dry spot most spore will survive for a couple of years, and some much longer.

Preparing a Suitable Medium. Any fairly coarse, porous material seems to be suitable. Old shredded soft treefern fibre gives excellent results if available. Peatmoss, crushed terra-cotta pots, charcoal or Elkhorn fibre (or a combination of these) have also been used successfully. Pots 5 or 6 cm square are quite sufficient to grow a large number of ferns, enabling a few different species to be raised in a relatively small space. The pots may be filled with the chosen medium or a 2-3 cm layer may be added on top of your normal potting mix. The mixture may be sterilised by carefully pouring hot water through the mix and then standing the pots in hot water, up to the rim, in a closed container for an

hour. Alternatively the mix can be microwaved to give about 10 minutes of steam treatment.

Sowing the Spore Open the paper envelope containing the spore carefully. The envelope should contain enough spore to sow at least one container but may have enough for 3 or 4. If the spore are sown too heavily the resultant prothalli may have to be pricked out early to avoid overcrowding problems. To sow the spore, hold the open envelope about 6-7 cm above the pot and give it a gentle tap to allow the spore to float down onto the top of the mixture. This must be done in a perfectly still room, completely free from any draughts or breezes.

Conditions for Germination. Spore may be sown at any time of the year, but germination will be faster in the warmer months of the year. For successful germination spore must be kept moist at all times. This is simply achieved by placing the sown pots in a closed container (e.g. plastic ice-cream container, food crisper, glass aquarium covered with a sheet of glass, or just placed in a plastic bag. Provided the container is reasonably well sealed the pot should remain moist almost indefinitely. If it becomes necessary to add water, stand the pot in cool boiled water, watering from above may wash spores away. The pot should be placed in a well lit position but not in direct sunlight. In a warm well lit position germination usually occurs in about 4-6 weeks and appears a very small green

continued next page

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continued previous page
specks which gradually grow into flat heart structures (prothalli) about 1/2 to 1cm in diameter. The initial growth may be mistaken for moss. Germination may take several months if conditions are not good. The prothalli, which are the intermediate stage of the life cycle of the fern, each have a male and a female portion, the male portion releases sperm which swim across to fertilise the egg. The fertilised egg then starts to grow and produces the fern proper. The first appearance of fronds may vary from 2-3 months in very rapid species to years.

Most problems result from overcrowding of the prothalli (from too heavy sowing) or from contamination due to poor hygiene. Fungi, mosses, algae may overgrow or damage the prothalli. Overcrowded prothalli may be pricked out into another container as soon as the problem is noticed. Fungi may be controlled by spraying with half strength Benlate provided the prothalli are a reasonable size.

Mosses and algae are best avoided by careful hygiene - proper sterilisation of the mix and only using water which has been boiled. An open loose mix helps to avoid algal growth.

Pricking out and Potting on The thickness of the growth of the prothalli will often determine when to prick out. If the surface of the mix is heavily covered with prothalli pricking out should be done at this stage, pricking out small clumps of prothalli into a mix prepared and sterilised as for the original sowing. Usually pricking out is done when the sporeling has one or two fronds although it may be done at any

stage. The young ferns may be transplanted into standard propagating mix, or into a mixture of about 2 parts peat moss, 2 parts washed river sand and 1 part mountain soil.

It should be possible to lift the little fern off the pot with its prothallus still attached. At this stage true roots will usually not be well developed, and the prothallus can be gently pushed down onto the surface of the new pot or tray to support the tiny fern plant. This should be done fairly quickly and in a cool, draught-free location as the delicate young ferns will not survive for long out of the humid atmosphere they are used to. As soon as possible, transplanted sporelings should be very gently watered and placed under glass again. Treatment with a product such as 'Maxicrop' or 'Plant Starter' will assist establishment of the new plant.

If the sporelings are allowed to grow too large and crowded before they are picked out, they may be scooped put in clumps with a spoon, placed in a saucer of water, and then gently separated and planted into tubes or trays. Again they should be replaced under glass without delay.

The newly transplanted sporelings should be allowed to develop under glass until their fronds are about 5-10 cm high. At this stage they may be very gradually acclimatised by slowly raising the glass cover, a few millimetres at a time, over a period of about two weeks.

Using the techniques outlined above, it is not unusual to grow one or two hundred ferns from each 5-6 cm pot sown with spore.

COMPETITION WINNERS:

SEPTEMBER: John Hodges

1st *microlepia firmma*
Don Fuller

2nd *microlepia strigose*
Don Fuller

3rd *sennsredtia davallioides*
John Hodges

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LIBRARY BOOKS

Following is a list of books that are available for the purpose of borrowing by any members who wish to catch up on some reading. Feel free to come to a meeting and borrow a book, all we ask is you return it when finished with it as others maybe waiting to borrow it.

Title

A Guide To Hardy Ferns
 A Book of Ferns
 A Guide to the Ferns of Singapore
 A Handbook of Ferns for Australia and NZ
 A Key to Genera of NZ ferns and allied plants
 Australian Fern Journal - Vol 1 No 1
 Australian Ferns - Growing Them Successfully
 Australian Ferns and Allied Plants
 Australian Ferns and Allied Plants
 Australian Ferns and Fern Allies
 British Pteridological Soc Bulletin
 Carnivorous Plants
 Common Ferns and Fern Allies
 Common Ferns and Fern Allies
 Conspectus Florae Angilensis- Vol. Pteridophyta
 Encyclopedia of Ferns
 Exotic Ferns in Australia
 Feasting on Fiddleheads
 Fern Books
 Fern Collectors Guide
 Fern Gazette
 Fern growers Manual
 Fern Lessons
 Fern Study Group S.C.A.P- Selection of Items from Newsletters - July 1984
 Ferns
 Ferns a Handbook
 Ferns and Allied Plants of Victoria, SA and Tasmania
 Ferns and Club Mosses
 Ferns and Fern Allies of NZ
 Ferns and Fern-Allies of the United States and Canada
 Ferns for Ferneries
 Ferns for Garden and Greenhouse
 Ferns for Modern Living
 Ferns for the Home and Garden
 Ferns from Mother nature
 Ferns in Australia
 Ferns Mosses and Lichens of Britain and Northern and Central Europe
 Ferns of Burma
 Ferns of Florida
 Ferns of Jamaica
 Ferns of Puerto Rico and Virgin Islands

Author

Richard Bush
 Greta Stevenson
 Wee Yeow Chin
 Christopher J Goudey
 PJ Brownesey, TNK Galloway
 Ed. David Jones, The Fern Soc of Victoria
 Calder H Chaffery

 Jones, DL and Clemsha
 Jones, DL and Clemsha
 D L Jones and S C Clemesha
 British Pteridological Soc
 Gordon Cheers
 E. Heath & RJ Chinnock
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 E.A.C.L.E Schelpe

 David Jones
 D L Jones & C Goudey
 The American Fern Soc.
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 WN Chute
 British Pteridological Soc
 Barbara Joe Hoshizaki
 Los Angeles International Fern Society
 S.C.A.P Fern Study Group

 Roger Grounds
 Brookland Botanic Gardens
 Duncan and Isaac

 Edit. Shirley Roohe, T Stead
 E. Heath & RJ Chinnock
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 R W Martin
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 Merchants Pub. Co.
 Gillean Dunk
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 Hans Martin Jahns

 FG Dickson
 O Lakela & R W Long
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 George R Proctor

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- Ferns of Queensland
Ferns of the Home and Garden
Ferns of Victoria and Tasmania
Ferns – Peterson Field Guides
Ferns to Know and Grow
Flora of Australia- Vol 48, Ferns , Gymnosperms and Allied Groups
Flora of Chiapis, Part 3, Pteridophytes
Flora of Malaya, Vol. 2, Ferns
Flora of Malesiana - Series II -Pteridophyta
Flora of Thailand - Pteridophytes - Parts 1, 2 & 3
Flora Zambesiaca - Peridophyta
Gardening with NZ ferns
Growing Ferns
Growing Media
Hardy Ferns
Heinemann guide to Common Epiphytic
Ferns of Malaysia and Singapore
Home Gardeners Book of Ferns
Ideas for Private Pardens
Irish Ferns
Maidenhair Ferns in Cultivation
NZ Ferns and Allied Plants
NZ Ferns in Your Garden
Platycerium Fern Facts
Platycerium Hobbyists Handbook
Pteridophyte Flora of Oaxaca, Mexico
Revision Del Genera Platycerium
Revision of Davallia and Related Genera
Students Flora of North Eastern NSW- Part 1- Pteridophytes
The Fern and Allied Plants of New England
The Fern Dictionary
The Fern World
The Ferns of Britain and Ireland
The Ferns Of Tasmania - Their Ecology And Distribution
The Genus Adiantum in Cultivation - Part 1 (from Bailey 17 (3) 1970)
The Genus Adiantum in Cultivation - Part 2
The Genus Davallia in Cultivation -(from Bailey 21 (1) 1981)
The Genus Polypodium in Cultivation - Part 1 (from Bailey 22 (1) 1982)
The Genus Polypodium in Cultivation - Part 2 (from Bailey 22 (2) 1982)
The Genus Pyrrosia in Cultivation - (from Bailey 21 (1) 1981)
The Genus Selaginellia, Tropical South America
The Observers Book of Ferns
Welsh ferns
What Fossil Plant is That?
What Pest is That?
- S B Andrews
Gilleen Dunk
N A Wakefield
Boughton Cobb
F. Gordon Foster
Ed. Anthony E Orchard, CSIRO
Alan R Smith
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- M Tagawa & K I Wasaki
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MERRY CHRISTMAS AND A HAPPY NEW YEAR

The President and Committee Members of the Fern Society of Victoria would like to take this opportunity to thank all our members for their support throughout 2004. We look forward to serving the members with a bigger and brighter 2005.

We wish all our members and their families a happy and prosperous Christmas and New Year, we look forward to seeing many of you through out the year.



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