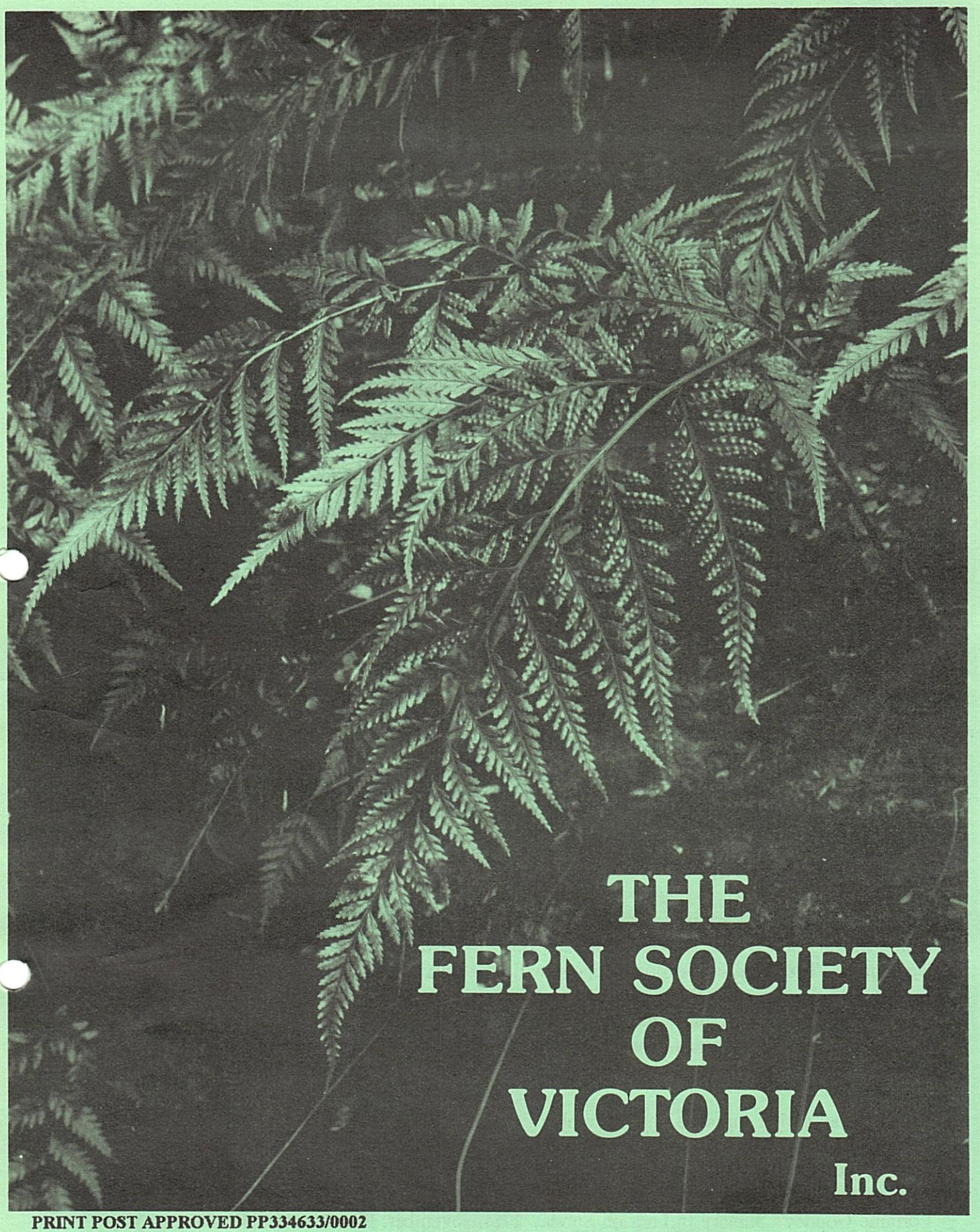

THE FERN SOCIETY OF VICTORIA Inc.

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NEWSLETTER

VOLUME 16, Number 7, August, 1994

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-President:	Terry Turney	" 807 4886
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)	

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Overseas - A$30.00 (by Airmail)
Subscriptions fall due on 1st July each year.

PRESIDENT'S MESSAGE:

I thought the meeting last month on spore culture was very successful with four of our members contributing ideas. It was good to have some new faces up front. I am sure that amongst our membership there is a lot of useful information from which other members could benefit. Both the meetings and the Newsletter can and should be used for sharing this information. One does have to be an expert in order to contribute some useful ideas on fern growing.

August meeting. As I advised last month the speaker at our August meeting will be Gillean Dunk author of the book "Ferns for the Home and Garden", and her topic will be "Growing Ferns in Containers". The fern competition category will be a fern and container. The appropriateness of the container to the fern, and the role of the container in better displaying the features of the fern will be considered in the judging. I am sure there is a variety of containers in use out there - hanging baskets to show off rhizomes or weeping fronds , ceramic containers, terrariums, tree fern pots or slabs; and there is certain to be many other containers including novelty ones.

Repeating an earlier message, the September meeting will be the last one at the Herbarium this year as the Herbarium will be unavailable for the last three months of the year. In place of the meetings two excursions have been scheduled. The first one is on Sunday 16th October to the nursery of Andrew Francis in Arcadia (details elsewhere in this Newsletter), and the second is to Chris and Lorraine Goudey's nursery in Lara on Sunday 27th November. Please note these dates in your diary. These events are good social occasions as well as an opportunity to see a variety of ferns and different approaches to fern husbandry.

Regards
Barry White

NEXT MEETING

DATE: Thursday, 18th August, 1994.

TIME: Commencing at 7.30 p.m.

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

BUSINESS: (a) 15TH ANNUAL GENERAL MEETING
(b) August General Meeting

TOPIC: **GROWING FERNS IN CONTAINERS**

SPEAKER: **Gillean Dunk**

MEETING TIMETABLE

7.30 p.m.	Pre-Meeting Activities:- Sales of Ferns, Spore, Books and Special Effort Tickets ; Library Loans.	
8.00 p.m.	ANNUAL GENERAL MEETING	
	Agenda:	(i) Minutes of 1993 A.G.M.
		(ii) President's Report
		(iii) Treasurer's Report
		(iv) General Business
8.30 p.m.	August General Meeting	
8.45 p.m.	Topic of the Evening	
9.45 p.m.	Competition Judging	
	Fern Identification and Pathology	
	Special Effort Competition	
10.00 p.m.	Supper	
10.15 p.m.	Close.	

FERN COMPETITION: The category for this month is a "Fern and Container", with the appearance of the container and its appropriateness to the fern being considered in the judging.

MEMBERSHIP SUBSCRIPTION RENEWALS

Membership subscriptions became due for renewal on 1st July. If you intend to continue your membership and have not already paid your subscription, please make sure to do so by the end of August, as payments made after this lead to considerable extra administrative work. Delivery of Newsletters will cease for memberships not renewed by the end of August.

SPEAKER REPORT - GENERAL MEETING - 16th JUNE, 1994.Speakers: Joel Macher, Fran Harrison, Eddie Pittaway and Terry Turney.

Topic: GROWING FERNS FROM SPORE - DIFFERENT TECHNIQUES.

(Ed. The following report was written by Lyn Gresham. Many thanks for an expert job, Lyn)

The Society was privileged indeed to hear four very interesting and informative speakers share their experiences in all aspects of propagating from spore. The talks were further enhanced by many live specimens, brought in by the speakers and other members. An attempt is made here to sort the information into subjects.

Suitable Types of Spore

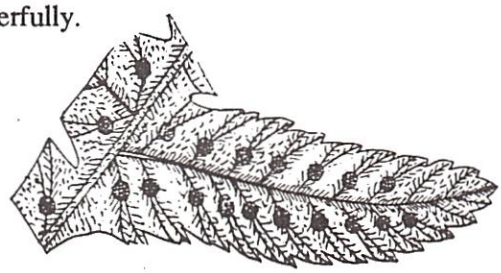
JM Having the spore very fresh and collecting it yourself has great advantages. The time it will take from sowing to when it comes up will be about a quarter of the length of time it has been in storage. For example, two year old spore can take six months to emerge, during which time all sorts of contaminants can invade it and the whole culture can be lost. If the spore is very fresh, it usually comes up in about six weeks.

Leather Fern *(Rumohra adiantiformis)* is a good starting fern for a novice to grow - it has very prominent sori, each with a very obvious indusium (cover); you can easily see when the green indusium has been shed, with the ripe sporangia a bright, shiny black. The old sori are fluffy brown after release of the spore. If you first started collecting spore from something like a *Davallia sp.* (Hare's Foot Fern) you would probably find it very difficult. In fact, the commercial growers have great difficulty in getting spore from some *Davallia.* The sori are not particularly obvious on the edge of the pinnae and they don't shed spore all at once, so if you put the frond down and expect a great shed of spore it won't happen.

Another difficult one is *Microsorum parksii.* You will find large, prominent sori, obviously ripe, on the back of the frond. However, when you put the frond down on paper you get mainly rubbish, with hardly any of the bright yellow spore at all. I think that instead of shedding all their spore at once, like many other ferns, they spin it out over a long period. That makes the spore very hard to collect. I think a lot of people would have tried to collect spore from it, because it's so common and so obvious and been disheartened because they haven't been successful.

Cyathea sp. (tree ferns) are also good ones to try. They shed large quantities of spore, are easy to work with once you learn how to separate it, and are fairly widely available in most people's gardens - *Cyathea cooperi,* for example.

FH I had a very good strike of *Dicksonia antarctica* and now I've got D. antarctica everywhere! I found that the spore kept producing those small ferns for years from the one sowing. I also have the Lacy Ground Fern, *Dennstaedtia davallioides.* It's a WEED! I've only got one pot of it in the fernery and it appears all over the garden. In fact, I've had a neighbour complaining about them coming up in his garden across the road, implying that I should keep my spore under control! I really must admit that my best successes have been with adventitious ferns that have come up naturally. I had a lovely crop of assorted ferns in a discarded water well full of used potting mix which had sat in the glasshouse for about eighteen months. They were all strong plants which transplanted well into other pots and did wonderfully.



TT As far as green (chlorophyllous) spore is concerned, I have not had any success with *Todea barbara* (King Fern) but have been able to grow *Grammitis billiardii* (a Finger Fern which we see in dense, temperate rainforest here). These green spores have to be sown very soon, preferably within 24 hours or even less of collection. I have actually released the spore directly by placing the fertile frond over the mix and have at least grown the spore through to prothalli stage (but not past that point yet). There are some other plants that are reported to grow from collected spore very easily - e.g. *Selaginella sp.* (Clubmosses), but I don't know anyone locally who has done so.

Collecting Spore

JM Choose a frond that you feel is ripe by looking at the sori and seeing that they're shiny, place it in an envelope or between a few pieces of paper and put it somewhere COOL and DRY.

TT My method of collection and storage of fern spore is similar to Joel's. I collect the fronds on folded A4 or if necessary, A3 paper and then put that between the folded pages of a newspaper - half the newspaper each side - to take out the moisture as quickly and thoroughly as possible.

Sources of spore

TT I collect most myself. I also exchange spore with other fern societies - The British Pteridological Society and the American Fern Society have outstanding annual spore lists with over 700 different ferns listed in each of them. Its important (and courteous!) that if you use such spore banks, that you contribute spore of local species in return.

Separating the spore from the husk

JM This is not only desirable but essential when sending spore back from overseas without sending the frond, which would contravene quarantine regulations. A lot of people in spore banks around the world don't recognise this and do send fronds regularly, which really should be destroyed carefully to protect our ferns from introduced pests and diseases.

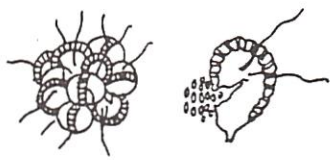
To separate the material take a sheet of paper - any paper will do as long as it's not really shiny - fold it down the middle so you've got a crease, place your frond inside, leave it to dry, take out the frond and a whole heap of rubbish will be left on the paper. Hold it crease down, give it a couple of sharp taps on a table, and all the spore will go down into the crease. Then turn the paper over and jiggle just about everything off. All you'll be left with on the paper is the spore. Again, tap the crease onto the table a few times and you'll have a very fine line of spore in the crease. Tip this into your envelope or whatever, give the paper a few flicks to dislodge the remaining spore, LABEL and store it. There will still be some husk in it; that doesn't matter. You will only sow a tiny amount of the collected spore so just avoid the husky bits. The only danger is that the more rubbish and bigger particles you have in it, the more likely there is to be some aberrant spore or spore of fungi or algae which would contaminate your spore mix. So that's why we make an effort to have pure spore.

EP I remembered that there had been an article on spore growing in the South Florida Newsletter by Debbie Lamb (Vol. **15(3),** April 1993, pg 33-) in which she separated her prothalli by putting a piece of fertile frond about the size of a thumbnail in water, blended it in a mixer and transplanted the small bits. So I put some boiled water in a saucer, added the cases and the spore and stirred it. Under the microscope I could see an abundance of spore floating around in the water.

TT I separate the spore from the casings by folding the paper as described, remove the casings, leaving a very fine line of spore. There are special cases. Nearly all the *Polypodium sp.* seem to want to hang onto their spore. Rather than wait for them to release it I sometimes use a razor blade or a needle and scrape the sporangia off the frond, then rub the casings which are on the paper to release the spore. This is usually successful. Sometimes you can receive the tiniest amount of a rare fern's spore from overseas spore banks, maybe just one sori containing very few fertile spore, and you have to be able to collect all that spore to be successful. This method works well.

Labelling Spore

TT Make sure that immediately after separating thew spore you label them. Seems obvious, but it's easy to put them aside to label later and either forget what they were or mix them up with others. You will probably want to note where and when you collected it and its habitat.



Storing Spore

JM I suspect that many fern enthusiasts have a sock drawer with a good supply of envelopes, capsules and such! Or another good place is the bottom of a filing cabinet. If you leave it on the kitchen windowsill, in the glasshouse, fernery, hothouse or wherever, it gets hosed, lost, or the label falls off. My socks' drawer wins!

When to Sow

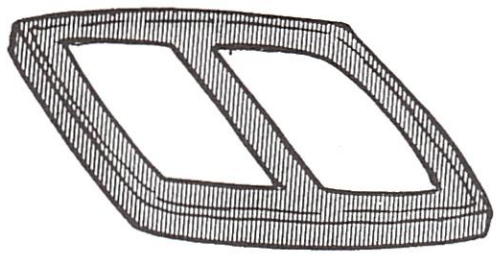
JM One of the common questions is, "What time of year's best?" The answer is probably springtime. In fact, the best time to prick your sporelings out is springtime, the best time to grow them on is springtime, the best time to pot them on from that is springtime, so if you ever find a year with four springs in it, you're going to do really well! Because you're not going to find a year like that, the best time to sow the spore is when you get it. You might as well sow it there and then and get it over and done with; it'll never grow any quicker in the socks drawer! The quicker you do it, the fresher the spore, the better it is.

TT I don't aim to sow at all in winter. There will be no fern development in the cold months and there is a greater chance of getting fungal attack over those inactive months. I start to sow in about October and continue into February or March.

Containers

JM I use either a 2 or 3 litre icecream container. Because the spore is so small and fine, you take a little bit but think that there's hardly anything there so add some more. You've probable sown on about ten times as much as is necessary. And a lot of that is going to hit the wall of the pot and end up around the edges. So that's where you find it grows the thickest. A lot of the prothalli are going to actually grow on the wall because some will be stuck there, grow poorly or even die and contaminate the nearby prothalli. If you've got a small container, even the ones in the middle are not far from the edge - and not far from going rotten. If you use a bigger container, the contamination will probably only come in the same distance from the edge and most of your culture will be in the middle, safe and sound. So this is a good size to use. Commercial growers will use small pots and a very thick culture. Along the way they'll thin that out so from the one culture they'll produce twenty sub-cultures before they go on to growing those out. You won't want that many and every time you handle it you're going to contaminate it so you're better off to start with a very, very thin sowing in a large container. That way you're much more likely to have success.

There are two problems with using the icecream container lid as it is. The inevitable label excludes light, so must be removed, and also it tends to come loose during the six months or more that you need it, and water from the fernery irrigation system seeps in and ruins your culture so I modify it as shown in the diagram and put it all in a white plastic bag.



TT I use 500 ml round take-away food containers. I buy them from a distributor at a cost of about $45 for 500. They come in sealed plastic bags of fifteen in a larger cardboard carton. The smaller packs are essentially sterile, so I try to use all fifteen in one session and relegate any unused containers to the kitchen to avoid unwanted contamination by fungal spore.

Propagating Mix

JM I started off using fern fibre. I've used commercial peat moss very successfully. With some ferns the prothalli were growing quite well and the tiny frond was coming up but then it wasn't really doing much. I tested the pH of the water and found that it was very acid (3.5-4.0). I feel that some ferns, particularly *Adiantum sp.*, probably don't like that at all; so to some mixes I add crushed brick. to crush a brick you give your kids a brick and a hammer and say "I want the brick crushed"! You go back later on and there's brick everywhere. I use about 10% and that works well. It seems to balance the pH a bit with the peat moss and the fern fibre, which is also very acid. It gives another structure to hold water and it's fairly sterile (There's not a lot of fungus and bacteria living inside a brick!) so it works well.

EM For Staghorns I've tried all sorts of mixtures; rotted leaves, sand, peat moss in different mixtures. I've had moderate success and I get them up to a stage where they have two small nest leaves, less than 2" across.

TT For many years I used the African Violet Mix from Idaho Nurseries in East Malvern. I have recently converted to Debco's African Violet and Gloxinia mix. It's good; very sandy and fine with next to no pine bark. I get about 60 sowings from a $4 bag.

Sterilising

JM I started off sterilising in the oven, 200°C for 30 minutes works well. I now quite often use the microwave prepared material, potted up ready to sow the spore. I put it in for about ten minutes and it certainly steamed up well. On most occasions that worked, but it wasn't as good as sterilising the mix in the oven. I wondered why this was. Then I put the mix in a tall, slim container to be microwaved. I used a very little water and about 15cm depth of mix. That works a lot better, because steam is hotter than water. (Liquid water will never go over 100°C - steam forms when it does.) The steam rises through the light, airy mix, penetrating it thoroughly due to the shape of the container, and sterilises it in ten minutes. If the mix is too wet, it's not so successful.

I use very well boiled water. I boil it thoroughly three or four times, and it must do more than just come to the boil and turn off so I boil it in a saucepan on the stove. How much water to add? It should be damp but not wet, with condensation on the sides and inside the cover, but with no water visible on the surface of the mix. If you add too much water, the fern spore will rot. If too little, nothing will happen at all.

FH I haven't worried a great deal about sterilising - the first ones on brick weren't sterilised at all and they were probably the best lot that I've had. Other than that I've just poured boiling water over them, put the spore on, put them away and forgotten about them until it's time to see what I've got.

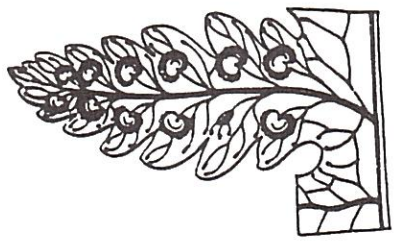
TT: I use a large pyrex casserole dish in the microwave, and do about 5 litres of mix at a time. I first pour at least 1 litre boiling water in. After it has soaked in, I drain off all the excess water so that I'm generating steam during sterilising (full power for 20-30 minutes. The microwaves will only penetrate about 5 cm into the mix, so the centre must be sterilised using steam. With the above method of sterilising and using the take-away food containers, in the last year I have not had even one case of fungal attack in the approximately fifty different types of spore I've put out.

Sowing and growing the spore

JM Using the blade of a knife to sow the spore is excellent; you can see the spore on the shiny surface, it doesn't stick, you know how much you're sowing so you can dispense it evenly and there's virtually no wasted spore. Put about half a match-head of spore on the knife to sow a 2-3 litre icecream container. Jiggle it to spread down the knife a bit and gently tap the knife over the container, spreading spore as evenly as you can. The lid goes back on to the container and that then goes in a white plastic bag, which lets through a medium light, it is sealed and placed somewhere where ferns grow nicely - the glasshouse, a certain spot in the fernery or anywhere with a reasonable light level. If too dark, it's going to be really slow. The professionals who are sowing a larger quantity mix the spore with water and using a hand-held spray bottle, squirt it onto the culture; this sows very evenly but is a lot of trouble for the quantity we'll probably want.

One of our local orchid growers was propagating orchids in flasks of agar. He wanted to try some Bird's Nests in agar and the last I heard, he had them to the sporelings stage. I don't know how he went unflasking them. He just rinses the orchids under the tap to remove the agar and they go fine. So I grew some *Dicksonia antarctica* in agar and they have tended to grow upwards instead of growing flat.

FH For my first try I just spread them over the brick chips. Obviously I spread them far too thickly. I put plastic (Glad wrap) over the top and left them for about eighteen months. When I eventually had a look, I found what I took to be thick weeds. They turned out to be a whole patch of tiny Birds Nests, and the *Polystichum sp.* were there too. Lately I use small margarine containers and pure copra peat, trying carefully not to use too much spore.



EP I've got some spores growing in peat. I've prepared these in a different way. I've collected the spores but I couldn't easily separate the spore from the casings with an envelope. So I prepared a margarine container of Yates' potting mix, sprinkled the water with the spore into it and covered it with clear glass. They were very successful. Next Summer they will be transplanted into separate containers in the hope that they will thrive.

TT I fill my take-away food containers about 1/3rd full with the spore raising mix. I must emphasise that sowing lightly is really important. A really heavy growth of prothalli produces only males. They will look good and be healthy but to get the female part of the prothalli to develop, and thus produce true fronds, you need to sow thinly. I keep my spore cultures outside in a plastic igloo. The temperature can change by as much as 20 degrees in a day, and with temperature change the air inside the containers is alternately expanding and contracting. The containers may not completely airtight, so I also put my container into a zip lock plastic bag containing some air and seal it. The bag contracts and expands with the air. As air escapes from the container it is only being exchanged with that in the bag which makes a much cleaner system. It also forms a mini-glasshouse which regulates the temperature. I always put them out in as bright indirect light as I can get - but never in the direct sun. To develop into fern sporelings, the prothalli need to be quite moist but not wet. As the container experiences temperature changes, condensation alternately collects on the lid and runs down the sides of the container, forming an irrigation system around the edges and making them damper than the centre. To counter this I regularly give the lid a hard flick with my finger to release the water from the lid straight onto the prothalli. Doing this has made a big difference in the time it takes for the prothalli to develop and sporelings grow much more quickly.

Germination Time

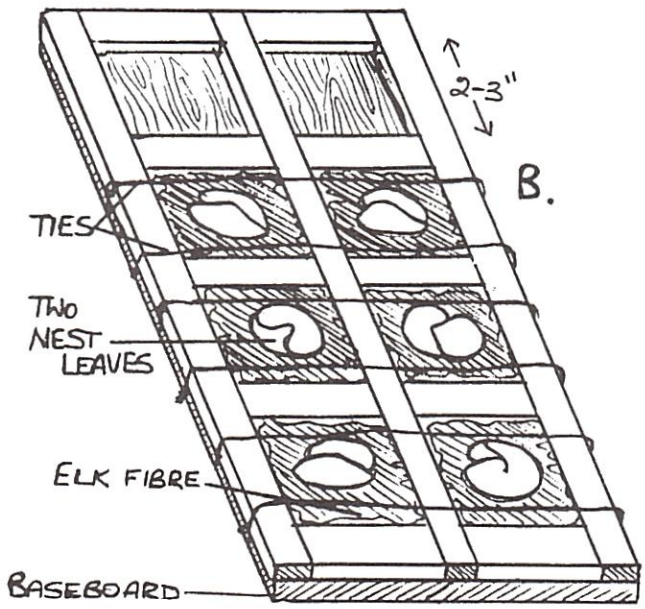
JM Some people say they have had spore come up in a fortnight, but I don't bother looking at it for less than two months. Usually in that time I've got just the beginnings (or nothing) and in a further month I've got nice little prothalli. Never throw the sowing away. If nothing comes up, what have you lost? But some of what you have sown (or something else) can, and usually does, appear up to twelve months later. Sometimes very interesting and unique cultivars come up in these `late crops' of old, stale, neglected prothalli - sometimes discovered up to 4 or 5 years later. These are often contorted by that very neglect and make interesting cultivars.

TT The sporelings can take from ten days (my best effort) to...well, years afterwards. I'm still waiting!

Pricking out

JM When the undisturbed sporelings reach about 2cm in the container, I prick them out into a foam fruit box, covered with kitchen wrap and with a sheet of glass on top. This makes a mini-glasshouse. The box is filled with tubes and the mix just poured into and around the tubes and watered. The mix doesn't fill the area between the tubes, but leaves the tubes sitting to about half their depth in soil. When I filled the tubes individually and put them in the box, the ferns didn't do nearly as well. I conclude that the extra soil insulates the tubes against great temperature changes - the large volume regulates the normal daily fluctuations.

EP I've planted out my Staghorns in pots but they haven't survived. But they've come on very well when grown on onto elk fern fibre at this stage on a board as shown below. When they are a bit bigger, I'll take them, still on the Elk fibre, and put each on a bigger board (25 X 10 cm) for about two years, after which I'll take them off (in Summer) and put them on bigger boards again, with sphagnum moss packed behind them. Sphagnum moss is very good because it holds a lot of moisture.



FH At first I didn't get many to grow. I'd made the same mistake as Joel and when I put them out into tubes lost most of them. Lately, when I've found little ones growing I've put them into a Water Well pot, where they seem to look after themselves quite well. I've done this with a variety of ferns.

TT I prick the ferns out when they start touching the lid of my food container, no matter what season it is. It's worth keeping the sporelings coming on for at least a full season. I'm getting my third crop from one of the containers I brought along tonight.

Potting mixes

JM At one time, after good successes, I began to suffer great losses. Originally I was making my own potting mix but by then I was using the ordinary, commercial mix. I don't think my own was any better, but it was finer. I now sieve the commercial one to remove the fine tan bark which it contains and add a bit of fine gravel, which probably does nothing, and the sporelings are doing well in that medium. When the prothallus has just produced the very tiniest of fronds, I now take it out of the bag, remove the lid, put a bit of glass over the top (but it's nowhere as sealed as it was) and begin overhead watering. At this stage it needs drainage, so I cut some holes with a Stanley knife or can opener. This early watering means that when I prick them out at about 2 cm, they're already used to overhead watering and so have gained some strength in their fronds. The shock at pricking out is much reduced. A foam box holds 44 tubes and I usually get 40 growing successfully.

FH I have grown them in the black Coca Cola bottle bases, in which I used the African Violet mix.

TT When I prick out the sporelings I put them into my normal potting mix immediately, in 4 " pots. To make things a bit easier for them, I give them each a little glasshouse by upending a clear plastic 1.25 litre PET drink bottle cut off at the shoulder, which fits really tightly onto a 4" plastic pot. A cut-off 2 litre soft drink bottle fits the next size pot, too. the enclosed pot will stay put for at least 6 months. It doesn't need watering because the little water it loses will be replaced by the small amount that will leak in around the join when you're watering the other plants. The potting mix I use at present consists of 50% Debco Hanging Basket Mix and 50% fine pine bark. I don't know how good it is yet; I think it may be a bit too water retentive so I may get some damping off.

Labelling pots

JM Even indelible pens will fade after 6 months in bright light so Joel showed us his labelling method. He scratches the writing, number or whatever on the outside of the container with a can opener and when he wants to read it, rubs soil onto it, making it visible.

OCTOBER EXCURSION

Barry White

On Sunday 16th of October an excursion has been arranged to the fern nursery of Andrew Francis in Arcadia. As well as his commercial fern nursery Andrew also runs Castle Creek Orchids. The nursery is located on the east side of the Goulburn Valley Highway 20 k south of Shepparton. Transport will be by private car; if any member requires assistance with transport please let me know and transport will be arranged.

We will meet at Andrew's nursery at 11 am. Andrew will be providing morning tea and a sausage sizzle BBQ lunch, the only item members may need to provide is a folding chair. Andrew will also give a short talk on his Davallias and their care and maintenance, and also on his orchids which will be flowering at the time. After lunch and purchase of any ferns and orchids, we will move down the highway to Avenel and visit the ferneries of two of our members - Dot Miniken and Lyn Gresham. Afternoon tea will be provided after which members may wend their way home.

To assist with the catering it will be necessary to have an approximate idea of the number attending. We will be taking names at the monthly meetings, alternatively please phone me on 337 9793 or Don Fuller on 306 5570.

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 for 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 concinnum 6/94
ADIANTUM raddianum 'Bronze Glory' 6/94
ADIANTUM raddianum 'Legrand Morgan' 6/94
ANEMIA mexicana 7/94
ARACHNOIDES miguelliana 6/93
ASPLENIUM bulbiferum ssp.gracillimum 2/94
ASPLENIUM milnei 7/94
ASPLENIUM oblongifolium 7/94
ASPLENIUM obtusatum 7/94
ASPLENIUM scleroprium 1/94
ASPLENIUM scolopendrium 1/94
ASPLENIUM varians 7/94
ATHYRIUM niponicum var.pictum 4/94
BLECHNUM fluviatile 6/94
BLECHNUM watsii 5/94
CAMPYLONEURON angustifolium 1/94
CHEILANTHES austrotenuifolia 11/93
CHEILANTHES farinosa 10/93
CONIOGRAMME intermedia 1/94
CYATHEA australis 5/94
CYATHEA brownii 4/94
CYATHEA cooperi, blue form 7/93
CYATHEA cooperi 1/94
CYATHEA dealbata 10/93
CYATHEA intermedia (New Caledonia) 6/93
CYATHEA medullaris 11/93
CYATHEA princeps 9/93
CYATHEA sp.(P.N.G.) 6/93
CYATHEA woolsiana 6/93
DICKSONIA antarctica 5/94
DICKSONIA fibrosa 10/93
DOODIA aspera 1/94
DOODIA maxima 1/94
DRYOPTERIS affinis 'cristata' 1/94
DRYOPTERIS atrata 1/94
DRYOPTERIS erythrosora 1/94
DRYOPTERIS filix-mas 'Barnesii' 7/94
DRYOPTERIS sieboldii 1/94
DRYOPTERIS wallichiana 1/94
ELAPHOGLOSSUM muelleri 7/93
GYMNOCARPIUM oyense 7/94
HUMATA griffithiana 11/93
LLAVEA cordifolia 4/94
MICROSORUM diversifolium 7/94
MICROSORUM parksii 7/94
PELLAEA cordifolia (Texas) 4/94
PELLAEA falcata 9/93
PELLAEA quadripinnata 4/94
PELLAEA rotundifolia 7/93
PELLAEA sagitata 7/93
PLATYCERIUM superbum 11/93
POLYSTICHUM lentum 4/94
POLYSTICHUM tsus-simense 4/94
PTERIS biaurita 5/94
PTERIS cretica 'Parkeri' 1/94
PTERIS dentata 11/93
PTERIS macilenta 7/94
PTERIS sp. (Nepal) 3/94
PTERIS tremula 1/94
PTERIS umbrosa 4/94
PTERIS vittata 1/94
RUMOHRA adiantiformis 7/93
SELLIGUEA feei 8/93
THELYPTERIS navarrensis 4/94

SPORE DONORS

Thanks to the following members who have contributed to the spore bank: Don Fuller and Lorraine Deppeler. Donations of fresh spore are always welcome.

STORAGE OF SPORES

Following on the article in the June Newsletter on the storage of spore I have started a trial comparing storage of dry spore in paper packets with wet spore in foil packets, and comparing storage at room temperature, fridge temp. and freezer temp. It will be a while before results are available, in the meantime all spore is being stored dry in paper packets in the fridge (as from 1/7/94).

DISCOUNT SUPPLIES TO MEMBERS

As a special service to members attending our meetings, the Fern Society has recently purchased in bulk, several items for sale at prices considerably lower than normal retail prices.

Commencing from the August Meeting, the following will be available:

* Plant labels (90 mm, 3½") in packets

* Labelling pens (black, ultra-fine)

* Maxicrop Plant and Soil Nutrient
  (Please bring along your own 500ml, 1 or 2 litre liquid container)

* Wire hanging baskets and liners (various sizes)

Members who are unable to attend our regular monthly meetings may contact Don Fuller [Ph: (03) 306 5570] for further details, from early September.

JULY FERN COMPETITION

The category for the fern competition for the July meeting was an Asplenium species.
Congratulations to the following winners:

First:	Fran Harrison	*Asplenium thunbergii*
Second:	Don Fuller	*Asplenium falcatum*
Third:	Don Fuller	*Asplenium lividum*

The draw for the exhibitors' fern prize was won by Dot Miniken

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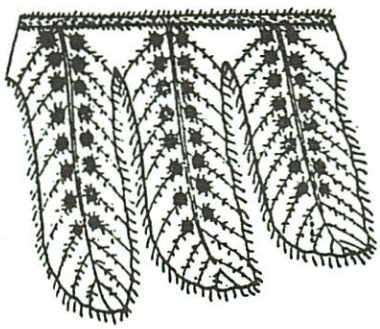
SPECIAL EFFORT WINNERS

July General Meeting

Joy Horman
Margaret Radley
John Hodges
Fran Harrison
Dick Kissane



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

BUYERS' GUIDE TO NURSERIES

VICTORIA:

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

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

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

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

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

The Bush-House Nursery - Wholesale and Retail. Ph: (055) 66 2331
Cobden Road, Naringal (35 km east of Warrnambool). Ferns - trays to advanced. Visitors welcome.

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

NEW SOUTH WALES:

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

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

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

QUEENSLAND:

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