



**THE
FERN SOCIETY**

**OF
VICTORIA**

Inc.

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NEWSLETTER

VOLUME 13, Number 11, December 1991

FERN SOCIETY OF VICTORIA Inc.

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SUBSCRIPTIONS:

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Subscriptions fall due on 1st July each year.

PRESIDENT'S MESSAGE:

Christmas is coming and the human geese will be getting fat. In the meantime we will be having our December meeting on Sunday 15th. It is hoped members will roll up in force for this our final meeting of the year and enjoy the an opportunity for a little extra socialising.

In late October the Society put on a display at the Prahran Council's "Spring into Gardening" Festival. The Festival was well attended (encouraged by the Council handing out free punnets of seedlings), and the fern display attracted good interest. Thanks go to Jack Barrett and Don Fuller for their support in manning the display.

As reported elsewhere in this Newsletter, the Otways trip was successful despite earlier misgivings about the lack of support. Those members who went on the trip all had a most enjoyable time.

On a less happy note the October bushfires in Sydney completely burnt out Ray Best's fern gully in Kenthurst. Ray has been a member of this Society for many years; he accompanied us on our trips to Tasmania and Wilsons Promontory and has been a regular contributor to the Newsletter and Spore Bank. His book "Growing Ferns" is probably on the bookshelf of most members. Ray's fern gully was at the back of his house and contained many beautiful ferns. Fortunately, neither Ray nor his wife Marie was hurt in the fires, and their home was not burnt. I have written to Ray expressing the Society's concern and with an offer of possible assistance.

Finally, to those members who will not be able to attend the December meeting I take this opportunity to wish them the compliments of the Christmas season and best wishes for the New Year. I trust next year will be a good one for members personally and also for the Fern Society.

Barry White.

NEXT MEETING

DATE: SUNDAY, 15th December, 1991.
TIME: Commencing at 2.00 p.m.
VENUE: The National Herbarium, Royal Botanic Gardens,
 Birdwood Avenue, South Yarra.
 (Melway Directory Ref. 2L A1)

MEETING TIMETABLE:

2.00 p.m. Pre-Meeting Activities:- Sales of Ferns, Spore, Books
 and Special Effort Tickets ; Library Loans.
 2.20 p.m. December General Meeting.
 2.45 p.m. Tour of the Fern Gully in the Botanic Gardens.
 3.50 p.m. Draw of Door Prize and Special Effort Competition.
 4.00 p.m. Afternoon Tea.
 4.30 p.m. Close.

Please Note:

- (1) There will be a display of photographs taken at various Society activities during the year; please bring along some of your own.
- (2) Free tickets for the Door Prize will be given out at the entrance to the hall.
- (3) Please bring a plate of party fare for the Afternoon Tea table and also your contribution to the Special Effort hampers if you were unable to bring the latter to the November meeting.

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TAGGING OF TREE-FERNS

At the December meeting, Tim Harding from the Department of Conservation and Environment will give a short talk on the tagging of tree-ferns to control illegal harvesting. The tagging system is under review and the D.C.E. is seeking comment from our Society before amending the existing controls.

Among the questions being considered are: tag design, monitoring systems, cost recovery and possible controls over wholesalers, retailers, tree-fern products, propagated ferns and interstate ferns.

The basic question is how to introduce a simple reliable system which will effectively control the harvesting of ferns from the bush without it becoming an administrative nightmare or prohibitively expensive.

Please give the matter some thought and be prepared to contribute your ideas. If you are unable to attend the meeting but wish to contribute, please phone your thoughts to Barry White.

DISCUSSION REPORT - GENERAL MEETING - 21st NOVEMBER, 1991

Discussion Leader: Keith Hutchinson, Honorary Life Member and former President of the Fern Society.

Topic: PROBLEM FERNS

Discussion at the meeting covered possible solutions to a wide variety of problems illustrated by the plants and samples brought along by the members present.

Unfortunately, this report on the proceedings is incomplete as the tape recording of the discussion was unintelligibly slurred. It seems that the "gremlins" which produced various whistles and other noises through the loudspeaker system during the evening extended their influence to the built-in tape recorder!

Some of the points covered in the discussion were:

- (1) The clean-cut holes up to approx. 8mm across in the fronds of an otherwise very healthy Staghorn were considered to be probably caused by slaters. Carbaryl is the usual treatment for these but Derris Dust was also said to be very effective.
- (2) Delayed production of fertile fronds by a Staghorn could have been the result of growing under too-favourable conditions. These ferns appear to grow best when kept on the dry side.
- (3) Thrip damage was seen on several samples. Rogor used at about half strength and with proper safety precautions is the preferred treatment. Lannate is used professionally but is not available to the amateur. Spraying should always be done in the evening to avoid burning of fronds.
- (4) Cut-worms were suggested as the possible cause of persistent damage to a Cyathea brownii where no predator had been sighted. These pests reside in the soil by day and cause damage at night. Carbaryl is an effective treatment.
- (5) Browning of the edges of a Cyathea brevipinna (from Lord Howe Island) was thought to be probably due to an iron deficiency, which is a frequent cause of marginal leaf scorch in other plants. Treatment with Iron Chelates at the rate of a heaped tablespoon for a 20cm pot was suggested as a cure.
- (6) Blackened areas in the fronds of some plants were probably caused by leaf nematodes (affected areas can also be brown, but less commonly). Microscopic examination is required to confirm the presence of these pests and will be done by the Garden Advisory Service at Burnley College of Horticulture. The nematodes are transferred between plants by splashes during watering and are difficult to control. The only effective chemical treatment available is to add "Nemacur" granules (extremely poisonous) to the surface of the potting medium and water in.
- (7) A plant of a Microsorium species (probably parksii) in a pot was growing slowly and producing progressively smaller fronds as it aged.

Transfer to the ground was suggested as this species is not well suited to pot culture but is remarkably hardy in the ground.

(8) The blackening seen in a sample of rhizome from a Polypodium formosanum 'Cristatum' was caused by a fungus and is a very common problem with this fern. One member had applied the systemic fungicide "Benlate" both by spraying and soaking without effecting a permanent cure.

(9) The yellowing fronds with brown edges on a plant of Adiantum peruvianum (Silver Dollar) were considered to be the result of low humidity. This is a tropical fern. It was suggested also that it should be repotted into a smaller pot and given minimum water to avoid waterlogging of the roots. The plant was in a squat pot which would have compounded any problem with poor drainage. Tall pots give better drainage and aeration as the wet layer at the bottom of the medium is further from the plant roots.

(10) A plant of Onychium japonicum (Carrot Fern) showed an intermittent browning of many of the fronds which was thought to have been the result of exposure to winter rains. This is a tropical fern, even though from relatively cold areas, and requires protection during winter.

(11) Thelypteris patens also does not like to be too wet through winter.

(12) A problem was reported with the fronds of a White Grub Fern in a water-well pot persistently breaking off about 20cm from the base. It was definitely not dry and physical damage was ruled out. The fronds tended to droop and a suggested possible cause of this problem was shortage of potash. Plants that are too wet are less able to take up potash. Aquasol is one fertiliser relatively high in potash.

But there are always complications! A later question asked whether it was possible to have too much potash and the answer was a definite affirmative. Excess potash prevents plants taking up other elements and they die of malnutrition. Mixed fertilisers present no real problem, but care has to be taken when applying potash alone as it has a very high availability of active potassium per unit weight.

(13) One member who grows his plants in igloos finds it necessary to cut back on the watering of Blechnum spicant during winter. This year he found that all Blechnums survived the winter better with reduced watering.

(14) No cause could be suggested for a light browning of the pinnae in the upper parts of an Adiantum : sun scorch was definitely ruled out because of the growing conditions. Several members reported this problem.

The President complimented Keith on his able leading of the discussion and members endorsed his vote of thanks with acclamation.

REPORT ON OTWAYS EXCURSIONby Barry White

The response to the Otways trip was somewhat disappointing, but twelve enthusiastic members set off by minibus on Saturday, 9th November for one of the premier fern areas of the State. The weather looked threatening and the forecast was doubtful, but a bit of damp weather does not deter a fernie.

Turning off Princes Highway near Winchelsea the group travelled through Barwon Downs and Forrest and, on the top of the Otways ranges, turned right into Turton's Track. This narrow road curves and winds through a spectacular fern forest. A notable sight was the copper and bronze new foliage on the banks of Blechnum watsii (Hard Water-fern) on the road cuttings. About five kilometres along the road we paused for morning tea before heading down over the edge of the road into the fern gullies. A brief shower of rain was ignored as we slid down the slope into the forest of tree-ferns, filmy ferns, various Blechnums and other ferns, mosses and leeches.

Continuing along Turton's Track the curves lessened and the ferns were replaced firstly by open forest country and then by pine plantations. At Beech Forest we turned right, heading for the picnic area at Beauchamp Falls. There we were greeted by members Lorraine Hansford from Seymour, her sister Joan Ballagh from Colac, and Les Vulcz from 'Mr Fern' nursery in Weeaprounah. After lunch we strolled down through the relatively sterile pine plantation towards the falls below. Although the walk is allegedly only 20 minutes each way, typically, the group took about an hour and a half to complete the excursion. The falls were in full flow, due no doubt to good recent rain (75mm in the past week), and the ferns were again in profusion. It is a spot well worth the walk.

The next stop was at the 'Ridge Road' fern nursery in Weeaprounah (the wettest area in the State) run by Jean and Cliff Tann and their son Peter. They had a good range of local and other ferns which were well priced and, despite the lack of spare space in the minibus, most members succumbed to temptation.

A further stop was then made at Les and Rosemary Vulcz's nursery in Amiets Track. They operate a wholesale nursery and, although they had just completed a very good selling season, still had an impressive range and quantity of ferns in their various fern houses. There was a further capitulation to temptation as members purchased ferns and converted the bus into a mobile fernery.

The next stop was to have been Glasgow Falls, an area described by Geoff Beilby in his talk on Otway ferns (October Newsletter) as 'a must'. Unfortunately, the heavy rain over the past week made the track in from Lavers Hill unsuitable for the minibus. The next trip may need to be in the autumn, when the ferns will not have the beautiful spring flush of fronds but access can be had to some special areas along dry weather tracks.

The final stop for the day was at Melba Gully State Park, one of the jewels of the Otways. This is a typical Myrtle Beech (Nothofagus cunninghamii) and Blackwood (Acacia melanoxylon) forest with a fern and moss understorey. Originally the site of two sawmills, the

property was purchased by a Mrs Fry in the 1920s. She named it after Dame Nellie Melba and converted it into a popular picnic spot with tea rooms on the site of the present picnic area. The property was donated to the Government in 1975 by the then owners Mr. and Mrs. Axel Madsen. Despite the lateness of the day the walk by the group around Madsen's track proceeded at a typical slow pace through a variety of vegetation types. A highlight was a number of Skirted Tree-ferns (Cyathea x marcescens)

The overnight stop was at Kangarooobie Lodge near Princetown. The Lodge caters mainly for school groups with accommodation for 120. It is well situated overlooking river flats with some ocean cliffs in the background. The hosts Bill and Jenny Bowker were able to fully satisfy the hungry appetites, which says a lot for the catering. Diana Mayne attempted to provide entertainment on the piano but it was obviously suffering from over-enthusiastic use by some of the school groups. A similar comment was made by Jack Barrett about the showers. Dinner, bed, breakfast and a cut lunch were provided for the reasonable cost of \$40 a head. (It would have been \$30 if we had managed to get a full complement for the trip).

On the next day the first stop was at Beauty Spot, which is about three kilometres from Lavers Hill on the road to Apollo Bay. It is well sign-posted and is located on a section of the old road. The name is very appropriate, although some members suggested that the name be changed to Marijuana Spot. Jack Barrett first spotted a plant of this in a plastic pot just to the side of the track ('pot in a pot'), and subsequently other members noted a happy soul openly loading his car with pots gathered from his hiding spot in the bush. Bidding 'cheerio' he drove off, but not before his number plate was noted. The area provides easy access to an excellent variety of ferns. The filmy ferns were in particular abundance, with five different ones being noted.

The next intended stopping point was Maits Rest, but we drove past and on to Apollo Bay without observing it. Inquiries in Apollo Bay revealed that the Conservation Department had taken down the signs and closed off the area. Board walks are being installed and the area will be re-opened by the end of the year. This area is notable for the occurrence of Lastreopsis hispida (Bristly Shield-fern).

As a substitute we visited the Barham Paradise picnic reserve behind Apollo Bay. Although it is a very scenic spot, we were not able to note any fern areas of particular interest and quickly retreated.

Continuing along the coast on the Great Ocean Road, all except our driver Terry Thomson enjoyed the spectacular views of steep cliffs and breaking waves as the road cut its way around the headlands and bays. A group of seals at Cape Patton provided a diversion from the ferns.

The final stop was about five kilometres in along the Grey River Road which turns off the Great Ocean Road at Kennett River. Along the road we passed some beautiful specimens of the Balm Mint-bush (Prostanthera melissifolia) in full bloom with masses of deep mauve flowers. The sweet smell of its foliage is an added bonus. We pulled up where the road crosses the Grey River and headed upstream. There was the familiar profusion of ferns with the highlight being a Slender Tree-fern (Cyathea cunninghamii) which was about 40 feet high. There was also a goodly number of small Slender Tree-ferns which may be a magnificent sight one day, God and man willing.

Counting some Azolla spotted from the bus near Skenes Creek, a total of 32 different ferns were observed over the weekend. The names of the ferns and their locations are listed below.

Despite the inauspicious start the weather treated the group kindly over the weekend; wet gear was only essential on the first morning. The quantity, quality and variety of ferns was well up to expectation. And altogether the pleasant company, the ferns, weather and accommodation added up to a first-class weekend.

The group is very grateful to Terry Thomson for his very capable driving over the weekend and his patience while the group dawdled amongst the ferns.

Ferns Observed in The Otways:

Locations: 1. Turtons Track 2. Beauchamp Falls 3. Melba Gully
4. Beauty Spot 5. Grey River

<u>Ferns</u>		<u>Location</u>
<u>Asplenium bulbiferum</u>	Mother Spleenwort	1, 2, 3, 4, 5
" <u>flabellifolium</u>	Necklace Fern	5
" <u>flaccidum</u>	Weeping Spleenwort	2, 3, 4, 5
<u>Azolla filiculoides</u>	Pacific Azolla	Skenes Creek
<u>Blechnum chambersii</u>	Lance Water-fern	1, 2, 3, 4, 5
" <u>fluviatile</u>	Ray Water-fern	1, 2, 3, 4, 5
" <u>minus</u>	Soft Water-fern	2, 3, 4
" <u>nudum</u>	Fishbone Water-fern	2, 5
" <u>wattsii</u>	Hard Water-fern	1, 2, 3, 4
<u>Ctenopteris heterophylla</u>	Gipsy Fern	1, 2, 3, 4, 5
<u>Cyathea australis</u>	Rough Tree-fern	1, 3, 4, 5
" <u>cunninghamii</u>	Slender Tree-fern	1, 2, 3, 5
<u>Cyathea x marcescens</u>	Skirted Tree-fern	3
<u>Dicksonia antarctica</u>	Soft Tree-fern	1, 2, 3, 4, 5
<u>Grammitis billardieri</u>	Finger-fern	1, 2, 3, 4, 5
<u>Histiopteris incisa</u>	Bat's-wing Fern	1, 2, 3, 4, 5
<u>Hymenophyllum australe</u>	Austral Filmy-fern	1, 2, 3, 4, 5
" <u>cupressiforme</u>	Common Filmy-fern	1, 2, 3, 4, 5
" <u>flabellatum</u>	Shiny Filmy-fern	1, 4
" <u>rarum</u>	Narrow Filmy-fern	4
<u>Hypolepis punctata</u>	Downy Ground-fern	4
" <u>rugosula</u>	Ruddy Ground-fern	2
<u>Lastreopsis acuminata</u>	Shiny Shield-fern	1, 2, 3, 4, 5
" <u>hispida</u>	Bristly Shield-fern	3
<u>Microsorium diversifolium</u>	Kangaroo Fern	1, 2, 3, 4, 5
<u>Polyphlebium venosum</u>	Veined Bristle-fern	1, 3, 4, 5
<u>Polystichum proliferum</u>	Mother Shield-fern	1, 2, 3, 4, 5
<u>Pteridium esculentum</u>	Bracken	1, 2, 3, 4, 5
<u>Pteris tremula</u>	Tender Brake	3
<u>Rumohra adiantiformis</u>	Leathery Shield-fern	1, 2, 3, 4, 5
<u>Sticherus lobatus</u>	Spreading Fan-fern	2, 3
" <u>tener</u>	Silky Fan-fern	3, 4

FERN SPORES WANTED

As your fern fronds mature this summer and bear spore, keep in mind the Spore Bank. Don't be deterred if spore of any particular species is already in the Spore Bank; fresh spore is always welcome. The freshness of spore is, I believe, one of the most important factors in successful spore culture.

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 will 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 spore 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 spore are ready to be shed.

The Soft Tree-fern (Dicksonia antarctica) is a good fern to try initially. Copious amounts of ripe spore persist on the frond for a long time, and the bright yellow of the spore from this species contrasts with the pale grey-brown spore cases which may be shed at the same time.

Separation of the spore from the spore cases is not necessary if sending material into the Spore Bank. But again the Soft Tree-fern is excellent material if you wish to practise separation. 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.

Anyone contributing spore to the Bank may also obtain spore from the Bank free of charge, and in addition receive a copy of the Society's booklet on growing ferns from spore.

As stated above, any fresh spore is welcome. However, I have had requests for spore of the following species and contributions from them would be particularly welcome:

<u>Pteris comans</u>	<u>Adiantum philippense</u>	<u>Adiantum pedatum</u>
<u>Cyathea baileyana</u>	<u>Cyathea celebica</u>	<u>Cyathea rebecca</u>
<u>Cyathea brevipinna.</u>		

Fern spore should be mailed to Barry White,
24 Ruby St,
West Essendon, Vic. 3040

1992 ANNUAL FERN SHOW

Our Annual Fern Show for 1992 will be held at the Nunawading Horticultural Centre, Forest Hill on Saturday, 4th April and Sunday, 5th April. Setting up will be done on Friday, 3rd April.

Further details will be given in the February Newsletter. In the meantime please note these dates in your diary and try to keep some of your weekend free to join in the Show activities. Participation is particularly recommended to newer members as an excellent way of learning about ferns and getting to know your fellow members better.

Suggestions for improving the Show will be most welcome.

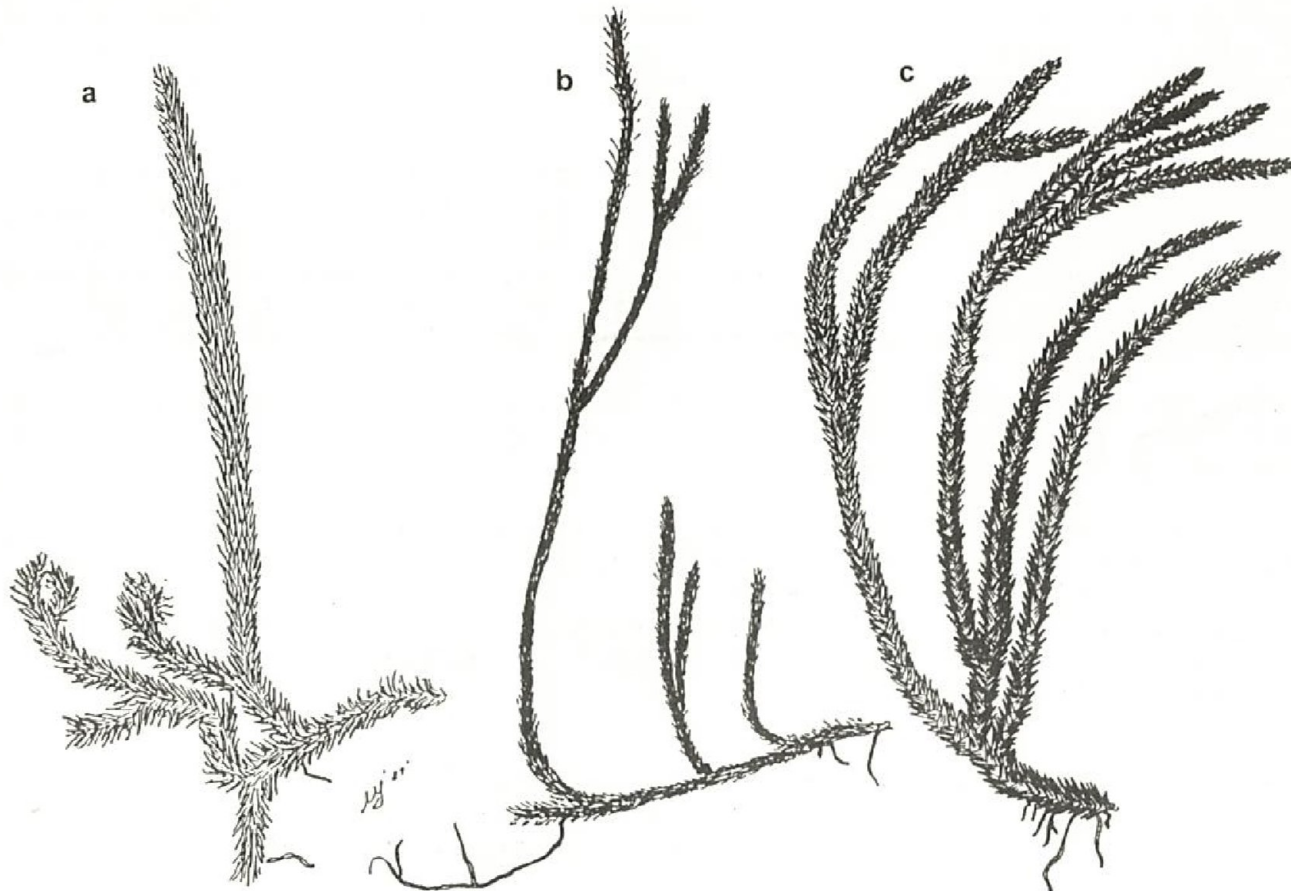
Bob Lee
Chairman - Fern Show Committee

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SUBDIVISION OF LYCOPODIUM GENUS

The speaker at our June meeting, Dr Tim Entwisle, mentioned that the genus *Lycopodium* had been subdivided into three separate genera on the basis of anatomical and other differences amongst the species in it. These genera are *Lycopodiella*, *Lycopodium* and *Huperzia*.

The differences in growth forms are shown in the illustration below, which is reproduced from "The Fern Gazette" published by the British Pteridological Society.



(a) Lycopodiella

(b) Lycopodium

(c) Huperzia

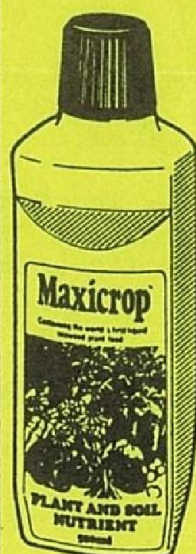
FORTHCOMING GENERAL MEETING

Date: Thursday, 20th February, 1992.
Time: Commencing at 7.30 p.m.
Venue: The National Herbarium, South Yarra.
Guest Speaker: Chris Goudey.
Topic: Fern Propagation Methods Other Than From Spore.

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Osmunda javanicaSPECIAL EFFORT WINNERSNovember General Meeting

Fran Harrison
 John Hodges
 John Hooper
 Simon Hardin
 Edna Fuhrmeister
 Allison Whytcross

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BUYERS' GUIDE TO NURSERIES**VICTORIA:**

Allans Flat Plant Farm - Retail.

Tomkins Lane, Allans Flat, 3691. Ph: (060) 27 1375.

(25 km south of Wodonga on the Yackandandah Road).

Specialising in ferns and indoor plants. Open daily (except Wednesdays) and all public holidays.

Andrew's Fern Nursery - Retail.

Cosgrove Road, Invergordon, 3636. Ph: (058) 65 5369.

Large range of ferns for beginners and collectors.

Open Sundays only; other days by appointment.

Austral Ferns - Wholesale Propagators. Ph: (052) 82 3084.

Specialising in supplying retail nurseries with a wide range of hardy ferns; no tubes.

Dingley Fern Market - Wholesale and Retail. Ph: (03) 551 1868.

233 Centre Dandenong Road, Dingley, 3172.

Specialising in Ferns, Palms, Indoor Plants, Orchids and Carnivorous Plants. Open daily except Christmas Day.

Fern Acres Nursery - Retail.

Kinglake West, 3757. Ph: (057) 86 5481.

(On main road, opposite Kinglake West Primary School).

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.

Mt. Evelyn Fern Centre - Retail. Mail Orders welcome.

63 York Road, Mt. Evelyn, 3796. Ph: (03) 736 1729.

Ridge Road Fernery - Wholesale and Retail.

Weeaprounah, 3237. Ph: (052) 35 9383.

Specialising in Otway native ferns.

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.

Marley's Ferns - Retail.

5 Seaview Street, Mt. Kuring-gai, 2080. Ph: (02) 457 9168.

QUEENSLAND:

Moran's Highway Nursery - Wholesale and Retail.

Bruce Highway, Woombye (1 km north of Big Pineapple; turn right into Kiel Mountain Road). P.O. Box 47, Woombye, 4559. Ph: (074) 42 1613.