



**THE
FERN SOCIETY**

**OF
VICTORIA**

Inc.

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NEWSLETTER

VOLUME 10, NUMBER 5, JUNE, 1988.

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PRESIDENTS REPORT:

With our hall overflowing Dr. Willis proved his outstanding ability as a speaker with his delightful presentation of 'Ferns of Our National Parks'. Slides of some very rare ferns will long be remembered.

Our June meeting will take the form of a Forum with panel members Betty Duncan, Albert Jenkins, Chris Goudey, Joel Macher and Doug Thomas as moderator. Please come prepared with your questions in writing to be handed in prior to commencement.

As this is our half yearly meeting be sure to bring along a fern for display and be eligible for a door prize.

Our committee have decided on a small increase in subscriptions this year to cover extra costs. Just \$1.00 per category, as our overseas members receive their newsletter by airmail now, we have had to make overseas subscriptions \$25.00 as this just covers the cost.

We are endeavouring to keep costs at a minimum and our society would benefit greatly if we could acquire the services of an accredited auditor.

We have only 12 of our 3rd edition society glasses left now but hope we can sell these before ordering the 4th edition.

Special Effort Winners:

- | | | |
|------------------|----------------------|--------------------|
| 1. Iris Russell | 2. Ray Harrison | 3. Derek Griffiths |
| 4. Moira Gascard | 5. Sandra Miles | 6. Bob Lee |
| 7. Jack Barrett | Congratulations All. | |

We remember Albert Jenkin's wife who has been unwell and are happy to hear she is improving.

Kind Regards
Keith Hutchinson

..Thursday June 9 ..

Welsh Presbyterian

Church Hall

320 Latrobe st

Melbourne

FERN FORUM - MODERATOR D. THOMAS

Panel members B. Duncan
C. Goudey, A. Jenkins and J. Macher

PROGRAMME - 7.30 - 8 p.m. FERN SALES

- 8 p.m. MEETING COMMENCES

- 9.30 p.m. PATHOLOGY TABLE & SPECIAL EFFORT

- 9.45 p.m. SUPPER

- 10 p.m. CLOSE

SPEAKER REPORT: GENERAL MEETING - 11th MAY, 1988.

Speaker: Dr. J. H. Willis. Subject: "Ferns of the National Parks of Australia".

Dr. Willis's talk was illustrated throughout by a screening of excellent colour slide photographs. These photographs had been taken in seventeen of Australia's National Parks beginning with our own, close at hand Sherbrooke Forest. A feature of Dr. Willis's presentation was the inclusion of photographs describing the land forms and habitat areas of the fern communities in each of the National Parks visited. He highlighted the majestic rough treefern-*Cyathea Australis* for the Sherbrooke area and explained that this tree fern grows a new crown of fronds each year. This routine together with the habit of retaining spent frond butts on the trunk make it possible to ascertain the age of the tree fern by counting each ring of frond butts vertically. One such ring represents one year. Dr. Willis said that the specimens seen in the photographs were eighty to over one hundred years old.

Continued over

In the Grampians Mountains in Western Victoria we were treated to some photographs of breathtaking scenery. One outstanding photograph showed us the complete layout of the two best known ranges in the Grampians - the Serra and the Victoria ranges. Mount Arapiles was also shown and it was there that Dr. Willis had photographed skeleton fork fern - *Psilotum nudum*. He described these plants as being unfernlike ferns which occurred in the Grampians as an isolated collection. Apart from the Grampians, *Psilotum nudum*'s only other occurrence in Victoria is in far eastern Gippsland.

At Wilsons Promontory - Victoria's southern most land mass, we viewed magnificent slender tree ferns which had been photographed at the head of Chinaman's Creek. Other interesting ferns shown were, the scented or fragrant fern - *Microsorium scandens*, the oval wedge fern - *Lindsaea Trichomanoides* and the shore spleenwort - *Asplenium obtusatum*.

On then to the Buchan area where Dr. Willis had found the brittle bladder fern - *Cystopteris Fragilis*, a perfectly healthy collection of necklace fern - *Asplenium flabellifolium* and in East Gippsland, the rare for Victoria, rock felt fern - *Pyrrosia rupestris*.

Photographs of the delightful Dove Lake and the interesting and rare fern ally - *Lycopodium serpentinum* came from Tasmania. Dr. Willis said that this *Lycopodium* is very brittle and that it's stems will snap very easily.

Lord Howe Island came next and two distinguishing mountain peaks - Lidgbird and Gower were featured. Fern species highlighted for the island were birds nest fern - *Asplenium australasicum* and elk-horn fern - *Platynerium bifurcatum* not only for their beauty, but for the fact they were growing quite happily over boulders and rocks on the hillsides.

The arid lands of Australia were also visited. Dr. Willis had found ferns at Ayers Rock and other areas in the north west corner of the continent. From these areas photographs were obtained of fern species and fern allies that very few people could ever expect to see in their lifetimes. He explained that most of these plants were specially equipped to exist in the hot arid places. Most were covered in thick hairs which insulated against water loss. The genus *Cheilanthes* is typical. We saw slides of Woolly cloak fern - *C. lasiophylla* and bristly cloak fern *C. distans*. Other unusual species shown were the climbing snake fern - *Lygodium microphyllum* and the nardoo - *Marsilea Drummondii*. Dr. Willis referred to the sporocarps of the *Marsilea* and to the fact that outback Australian aborigines collected huge amounts of these then ground them into a flour which when mixed with water, formed an edible paste. He said that explorer King of the tragic Burke and Wills expedition of 1860, was kept alive by aboriginals who provided him with the nardoo paste.

Dr. Willis also explained that from the sporocarps the *Marsilea* produces separate male and female prothalli and that this is very special in living ferns.

We were treated to remarkable slides of little known fern ally species. Some of these were:

Rock quillwort - Isoetes drummondii, an annual plant which can only arise and grow in water after rain has filled shallow ground pans. In hot dry periods it survives only as spores.

Ferny azolla - Azolla pinnata. A free floating aquatic fern which multiplies rapidly by division and will develop to cover large areas of water.

Adders tongue - Ophioglossum lusitanium

Moonwort - Botrychium species.

The photographs of dry, eroding inland mountains, deep gorges, waterfalls - after rain, on Ayer's Rock and lake size pools at the bottom of deep ravines made spectacular viewing.

President Keith Hutchinson moved a vote of thanks to Dr. Willis on behalf of Members. Keith expressed appreciation of Dr. Willis's superb diction, his amazing memory for places and fern nomenclature, and for the excellence of the total presentation. Keith presented Dr. Willis with a pair of the Society's engraved drinking glasses as a token of our appreciation.

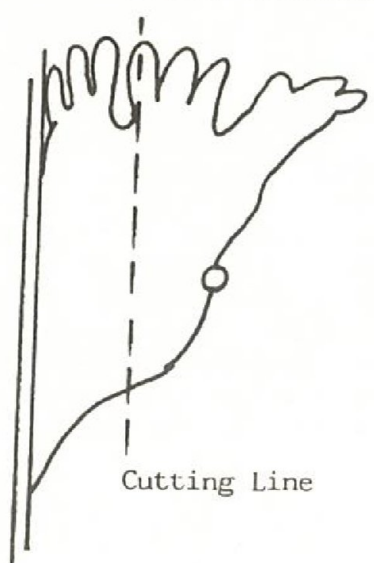
Members supported Keiths remarks enthusiastically.

WE thank the S.A.Fern Society for allowing us reprint the following article.

NEW LIFE for an old PLATYCERIUM SUPERBUM. Betty Weaver.

You may notice your old Superbum is sending out new fertile fronds, but each year they are becoming shorter, and the sheild fronds fail to grow large enough to cover the old sheilds. When this happens it needs remounting.

As the bud ages the rhizome grows farther from the mounting, it may become less vigorous and die or at least,fall from its' mounting.



Recently Les and I remounted a Superbum for a relative, it was at least 70 years old, that we know of and had never been cut back. The bud of the rhizome was 2 feet from the mounting. As a result it had fallen from its mounting.

Using a bow saw we cut more than 18" from the back and remounted it onto a new board, placing some spaghnum moss and cow manure behind it. It has now sent out a new sheild and is looking great.

P.S. Do not discard the section you remove, chop it up and use it in your mix for epiphytes. It is magic material.

* * * * *

THE FERN SOCIETY OF VICTORIA Inc.

" GROWING FERNS IN A GARDEN PLOT "

by DOUG THOMAS

Any garden can be made lovelier by the inclusion of a fern spot. Ferns have a cool grace and charm that is both exquisite and unique - they provide a wide variety of frond shapes through the many species and make exceedingly interesting subjects for plant culture and study. Not all ferns grow in the soil, many are epiphytes which prefer to grow on the trunks of trees or tree-ferns and these too can be included in a fern garden spot.

In nature ferns flourish where the soil is moist but not soggy, well laced with fallen leaves, twigs, small branches, mosses and lichen. Collectively these decompose to become nourishing leaf mould.

It will be seen also that in fern gullies and rain forests the ferns are protected from strong winds, full sun and frosts by either large trees, vines and creepers or they are established in deep gorges, gullies or ravines which provide the same protection. Keep in mind however that ferns will not thrive in a totally dark situation, they need light and will tolerate and benefit from some early morning sunshine.

To prepare a fern garden plot it is always helpful then to consider Mother Nature and to try to simulate her time-tested and successful elements. To transfer these elements into our own garden plot is not difficult at all - no more difficult than preparing for flowers or vegetables.

The following is a sequence of steps which have proved successful in establishing fern gardens plots in many Melbourne gardens.

Soil Preparation.

The chosen plot must be raised up so that good drainage and filtration are obtained. To do this dig out a systems of trenches where rubble, small branches, fallen leaves, animal manure or blood and bone fertilizer can be buried. When you have raked the surface evenly, spread some loam and light river gravel over the area then cover all of this with a thick layer of leaf mould - about half rotted. Do not work the leaf mould into the soil. Add honeycomb rocks - scattered randomly over the surface, partially sinking some into the soil. Water the plot sufficiently to make it uniformly moist and leave it to stand while you consider the next step.

Protection.

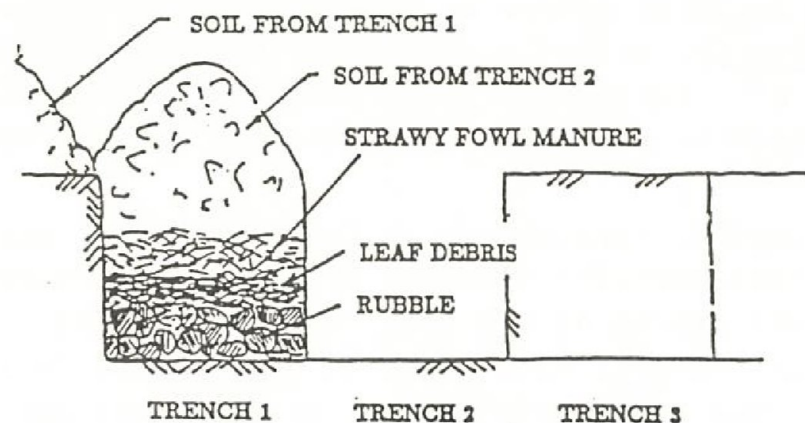
Take stock of your situation and check as to whether you have adequate protection from the north and west, that is by trees shrubs and other plants or by artificial barriers such as paling fences, out-buildings or house walls. If this protection is not readily available artificial barriers and canopies will need to be made by tacking 70% shade mesh on light timber frames. Fix these in position as vertical screens and overhead canopies.

Planting

By this time the plot should be in good condition for receiving the fern plants. Choose hardy species to begin with - you can always add harder to grow species as your experience develops. A tree fern or two should be included. When planting your ferns, insert the roots through the mulch and arrange them so that they are fairly close together. This allows for an attractive congestion later on when the plants develop.

Maintenance

Maintaining your fern plot is not an awesome task. Watering sufficiently to keep the soil moist - not soggy and a top dressing of leaf mould once or twice a year is all that is needed. Add some blood and bone fertilizer to your leaf mould. Spread the leaf mould liberally on the surface around the ferns - always leaving it unworked. Recommended reading on the basic care of ferns is the Fern Society's inexpensive booklet "What to do About Ferns". It is available from Fern Society Officers at the Fern Society exhibition stand.



FERN GARDEN TRENCHING SYSTEM

The greater majority of ferns vary in shades of green, from a deep blue-green through to a pale yellow or whitish-green. The green colour in all plants is due to the presence of a colouring matter called Chlorophyll. Chlorophyll is made up of two different pigments, a yellow colouring matter and a bluish-green colouring matter.

Species such as Polystichum richardii, from New Zealand and P. tsus-simense from Japan, are a deep bluish-green, whereas others such as the many cultivars of Athyrium felix-femina, are a pale lime green, or a yellow green such as Nephrolepis exaltata cv. Aurea.

Many species display a wide range of colours, these range from orange to reds and browns, and from white to silver and gold.

The colouration in plants is caused by the presence of compounds within the cells of the plant, these compounds are not visible to the naked eye, they occur mostly as colourless pigments within the sap of cells. These compounds are called flavonoides.

Quite a number of families display colouration in their new growth, this is known as juvenile pigmentation, which can range in colours from orange to reds and bronze to browns. The most colourful ferns are the species of Blechnums, however, many other families are most attractively coloured in their new growth, these include Doodia, Adiantum, Osmunda, Pteris and Dryopteris species. Flavonoid compounds are also responsible for the white to silver and yellow to gold colouration on the lower surface of the fronds Pityrogramma, Cheilanthes, Notholaena and some species of Adiantum, Cyathea, Cibotium, and Angiopteris christii.

The coloured deposits on the back of the fronds are known as 'farina' or farinose deposits, which are composed of flavonoid compounds secreted by glands within the fronds. These deposits can be rubbed off quite easily.

Variegation is quite common in some families of ferns, particularly in Adiantum and Pteris, and to a lesser extent Athyrium. Quite a number of the cultivars of Adiantum raddianum are attractively flecked with white, this variegation is caused by an absence of chlorophyll in the cells of the segment.

During the initial development of the plant, the immature cells are colourless, they multiply directly by division. Chlorophyll is absorbed during the growth of the cell, however, due to a pathological condition which is genetic, some cells in the tissues fail to absorb any chlorophyll. The fronds continue to develop, but all the cells that develop from the affected cell will be colourless, thus causing a white or variegated fleck in the segment. The white or silver band that is present in several species of Pteris is again caused by the presence of flavonoid compounds within the plant. Pteris argyraea and several cultivars of P. cretica, are most attractively variegated.

BLECHNUM CARTILAGINEUM BIFURCATUM

ROD PATTISON



This remarkable form of BLECHNUM CARTILAGINEUM was found during one of my bushwalking sojourns in the Mt. Glorious area in S.E. Q'ld. The fronds can be quite variable with **the young ones** having divided apexs ranging from bifid to quadfid.

Moran's Highway Nursery, Bruce Highway, WOOMBIE, QLD. has **sown** spore and plants could be available in the near future.

Victorian Fern Society

B O O K S A L E S

Author	Title	Price non- members	Price members	P.& P code
BEST, RAY	GROWING FERNS (first edit.)	3.95	3.60	C
BEST, RAY	GROWING FERNS (second edit.)	5.95	4.60	C
BROOKLYN BOT. GARDEN	HANDBOOK ON FERNS (U.S.A.)	5.95	4.80	B
BROWNSEY & GALLOWAY	A KEY TO THE GENERA OF N.Z. FERNS & ALLIED PLANTS	6.00	5.50	B
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JONES, DAVID	FERNS IN COLOUR	9.95	7.80	C
JONES, DAVID	ENCYCLOPAEDIA OF FERNS	100.00	75.00	D
KYTE L	PLANTS FROM TEST TUBES	39.95	32.00	D
MARTIN R W	FERNS FOR FERNERIES (N.Z.)	13.00	12.00	B
RUSH	A GUIDE TO HARDY FERNS (U.K.)	5.50	5.00	B
S.G.A.P.	FERN STUDY GROUP BOOKLET	2.50	2.00	A
SCHAUMANN, M et al.	AUSTRALIAN DAISIES	20.00	16.00	C
SIMMONS M	ACACIAS OF AUSTRALIA	29.95	24.00	D
THOMAS, DOUG	WHAT TO DO ABOUT FERNS	2.00	1.50	A
V.F.S.	AUSTRALIAN FERN JOURNAL	2.00	1.50	A
WRIGLEY & FAGG	AUSTRALIAN NATIVE PLANTS	44.95	36.00	D

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EDITOR

Members' services include:

- ★ Monthly newsletter posted as part of member's subscription.
- ★ A Spore Bank for members with spore posted at nominal cost.
- ★ An extensive reference library.
- ★ Stocks of books held for sale and distribution to members.
- ★ Regular field excursions.
- ★ Annual Fern Show.
- ★ Guest Speakers available for garden clubs.
- ★ Table for species identification and advice on plants in poor condition.

A large selection of ferns, grown by members, is also available for sale at each meeting.

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		SEPTEMBER	8
		OCTOBER	13
JUNE	9	NOVEMBER	10
JULY	14	DECEMBER	8
AUGUST	11		

NOTE: In the event of a power strike on the evening of any meeting, we regret that the meeting must be cancelled.

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