# THE FERN SOCIETY

OFVICTORIA

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# NEWSLETTER

VOLUME 10, NUMBER 7, AUGUST, 1988.

#### FERN SOCIETY OF VICTORIA INC.

Postal Address: P.O. Box 45,

Heidelberg West, Victoria, Australia, 3084

#### OFFICE BEARERS:

President: Keith Hutchinson - Ph. 45 2997

Vice-President: John Oliver - 879 1976

Treasurer: Albert Ward - 459 4392

Secretary: Derek Griffiths - 336 3157

Book Sales and Spore Bank Manager:

Barry White - 337 3157

Membership Secretary:

Jean Trudgeon - 459 4859

Editor: Terry Turney - 211 8169

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#### VICE-PRESIDENT'S REPORT:

(Our President was absent from the July meeting. Keith and his wife are taking a well deserved holiday in Queensland. - Editor.)

At the meeting on July 14, 1988, we were all well entertained and informed by Mr. Phillip Hicks, formally from the Department of Agriculture Plant Advisory Services. His first class talk on "Insect Pests" included advice on the use of chemical insecticides and their possible hazards. Phillip emphasized the need for a correct identification of the "bug", so that the appropriate spray is used.

The next meeting will include the Annual General Meeting to be followed by three guest speakers, Doug Thomas, Albert Jenkins and our President, or at the time of his talk, our immediate past President, Keith Hutchinson, speaking on various aspects of "Landscaping with Ferns".

#### \* IMPORTANT NOTICE \*

A Fern Swap Night will be held at the August Meeting in addition to our normal Fern Sales.

This is the ideal time to exchange those surplus plants cluttering up your fernery.

Each member may bring up to one fruit box full of ferns to swap with other members of the Society.

NEXT MEETING

THURSDAY, AUGUST 11

at the

WELSH PRESBYTERIAN CHURCH HALL

320 LATROBE STREET

MELBOURNE

#### PROGRAMME:

7.30 p.m.

FERN EXCHANGE NIGHT Fern and Book Sales

Spore Bank, Library Loans Special Effort Ticket Sales

8.00 p.m.

ANNUAL GENERAL MEETING

#### Agenda:

i) Minutes of 1987 A.G.M.

ii) Report of the Committee's activities for 1987/88.

iii) Treasurer's financial report.

iv) Election of office bearers for 1988/89.

v) General Business

8.45 p.m.

August General Meeting

"Landscaping with Ferns" with

Doug Thomas, Albert Jenkins

and Keith Hutchinson

PLUS A "FERN SWAP NIGHT"

9.30 p.m. Fern Pathology and Identification Table.

Special Effort.

9.45 p.m. Supper.

10.00 p.m. Close

#### \* Annual General Meeting:

A reminder that nominations for office bearers generally needed to be received in writing at least 14 days before the A.G.M. However, if insufficient nominations have been received to fill all the vacancies, it is possible to accept further nominations at the A.G.M.

#### \* JULY SPEAKER'S REPORT

"Pest and Fungus Control" by

Mr. Phillip Hicks (Horticulturist, Entomologist and Pest Control Consultant)

Phillip began his talk by stating that most gardeners and plant growers were too quick to reach for poison sprays when insect pests were noticed. He maintained that the first discipline should be to study insects sufficiently to be able to identify the species accurately. When the species is positively identified then the correct spray or treatment cane be chosen. By use of colour slides Phillip was able to illustrate just how easy t is to make a mistake in identification and to dispose of the wrong insect. Two examples of this were described: Ladybird beetles in the caterpillar stage were mistaken for mealy bugs and baby earthworms mistaken for nematodes.

# Types of Spray:

Systemic sprays are those which are applied to are taken into the sap system of the plant after being applied to the leaf surfaces. This in turn poisons those insects which feed on sap or leaf tissue. Rogor and Folimat are two common systemic sprays.

Contact sprays are those which are applied directly to the insect, to the leaf of the plant or to any surface which the insect frequents. Malathion, Carbryl and Baygon are all useful contact insecticides.

Phillip also explained with the application of most sprays, best results are obtained when the plant is left dripping wet. If using a chemical spray for the first time, try it out on only one or two plants and check the results ("phytotoxicity") before applying to the whole collection. It is also important to reduce the strength of the spray if there is a risk of the spray burning tender fern fronds.

#### <u>Biological</u> <u>Control:</u>

Many chemicals formally used in the pest control industry are now banned. Dieldrin and Chlordane are two such examples. Phillip felt that the future alternative would be biological control. Thus, in order to control an insect, we would simply release a predator which would dispose of the pest by natural means. For example, a box of ladybird beetles would be purchased for release into the garden to despatch aphids. If ladybird numbers diminished, a further release would ensure continued pressure on the would-be pests.

#### <u>Current Insect Pests and Their Control:</u>

- 1. <u>Scale Insects:</u> tiny, black or brown, sap-sucking insects. Phillip recommended Folimat as an effective spray and felt that thorough saturation of plant leaves and stems was essential.
- 2. <u>Passion Vine Leaf Hoppers:</u> It has two growth stages, both the juvenile and the adult forms suck sap from plants, particularly tree ferns. Malathion and Folimat sprays are probably the most useful,

but to be fully effective they need the addition of a wetting agent, such as Clensel. Leaf hoppers will immediately jump from the plant when touched by the spray to take refuge on the ground at the base of the fern. Hence, it is also necessary to spray the ground around the plants.

- 3. Thrip: sap-suckers which cause foliage of ferns, saxifrage and azaleas to turn a silvery colour. Rogor or Folimat is effective.
- 4. Aphids: sap-suckers, easily identified by having a bulbous body and two "cornicules" standing up on the rear part of their back. The treatment is the same as for thrips.
- 5. <u>Elkhorn Caterpillar:</u> Feeds on the developing sori of Platycerium and tend to burrow into the leaf tissue causing considerable damage. Use Folimat or Rogor.
- 6. Red Spider or Two-Spotted Mite: The two common names of this pest arise because this spider moults to red colour in Winter, whilst for thee remainder of the year it is a paler colour, highlighted by the presence of two dark spots on its back. The presence of webbing between the leaves of the plants indicated a heavy infestation of red spider. This pest is resistant to most chemicals, but the ingredient in Mortein House and Garden, is thought to be effective. Commercial control is not by chemical sprays but by use of a predatory mite.
- 7. <u>Painted Apple Moth Caterpillar:</u> This has a wingless female which can lay its eggs on one plant only. Dermatitis can result from touching this hairy caterpillar. Control is by Carbryl.
- 8. <u>Earwigs:</u> A Carbryl spray applied to benches and surfaces which earwigs frequent will keep them under control.
- 9. <u>Fungus Gnat:</u> This arises in clouds from damp grasses and lawns in the Spring. In their caterpillar stage they feed on moist, decaying vegetation. Apart from an annoyance factor, they do little damage. A household fly spray is effective.
- 10. <u>Snails and Slugs:</u> Blue Baysol pellets, although a little expensive, contain a lethal poison for snails, "garlic snails" and slugs, and are recommended for control of these pests. A Baysol spry is also available. The use of "beer traps" was also humorously described.
- 11. <u>European Wasps:</u> Use Baygon puffer pack dust on the nest at night. To find the nest simply watch an individual for awhile and it should return quite regularly to the nest. They do not appear to wander more than 50 metres from their nest. Use protective clothing when applying the Baygon puffer, and make a hasty retreat once the dust has been applied.

Our Vice-President, John Oliver, thanked Phillip for his talk, praising him for the thoroughness of his preparation and the excellence of his presentation. Members all supported John by their acclamation.

We acknowledge the Forestry Commission of N.S.W. for the following article on the life-cycle of the fern and also native fern descriptions continuing in further newsletters.

## Ferns in the Forest

Of all the plants that do not produce seeds the ferns, or Pteridophytes, are the most highly developed. Ferns are mostly moisture and shade-loving plants that colonise the floor and occasionally the tree stems of the forest. Each year new fronds are sent up from a stem or rhyzome.

The fern you normally see is the nonsexual generation. For sexual reproduct-Ion to take place a new generation needs to be produced. The brownish dots, patches, or lines on the back of the fronds are spore containers. These spores lead to the production of a new generation. The spores are produced in enormous quantities because only a small proportion find the necessary conditions to survive. The spores develop in spore containers on the underside of the leaflet (1). When the containers reach a certain degree of dryness they explode throwing the spores into the air (2). The spores, being very light, can travel long distances on the wind (3). Only If the spore falls on wet ground (wet tree trunk or wet rock) will it start to grow. Moisture is essential in this process. When the spore reaches a wet surface, water is absorbed and a new plant begins to grow (prothallus) (4). This tiny plant is the sexual generation of the fern and contains male and female organs. It has small roots which supply moisture and chloroplasts which allow it to manufacture food.

The sperm are released from the male organs and "swim" to the female organs completing fertilisation (5, 6). Once fertilised the egg cell grows in place drawing nourishment from the prothallus until it develops its own roots and becomes self-supporting (7).

Section through female sex organ

Egg

The sperm swim down the 'neck'

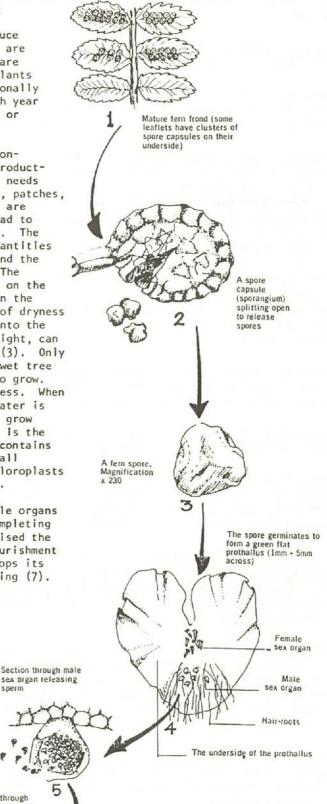
sex organ and fertilize the egg.

First leaves of young fern plant

The young fern plant grows from the fertilized egg on the underside of the prothallus

Top-side of prothallus

Roots of young fern plant



The life-cycle of the fern

# ground ferns

#### Maiden Hair Ferns (Adiantaceae)

The maiden hairs are a group of delicate looking ferns growing in moist areas. Despite their delicate appearance most are quite hardy and some even tolerate drought. These plants send up new fronds from a rhizome when the older ones are damaged or die. As a group they are very popular in cultivation.

The genus contains about 200 species, mostly from tropical regions, with about 8 endemic species.

#### Common Maiden Hair (Adiantum aethiopicum)

A widespread species with a slender reddish brown stipe (stem) arising from a longcreeping rhizome; the pinnules (leaflets) are delicate and wegge-shaped.

#### Rough Maiden Hair (Adiantum hispidulum)

A species with fronds branched in a fingerlike manner; the pinnules are numerous and rough. A widespread fern that withstands the hot dry summers by curling its fronds.

#### Giant Maiden Hair (Adiantum formosum)

A very handsome vigorous species that grows in large colonies usually in deep rich soil. The fronds are many-branched and the stipe is black slender and wiry.



Sickle Fishbone Fern (Pellaea falcata)

A genus that extends beyond Australia, there are two local species which are terrestrial creeping ferns growing in rainforests and moist gullies. The erect fishbone fronds have shiny dark-green pinnules.



SICKLE FISHBONE FERN Pelloca falcota

#### SOCIETY NEWS:

#### \* 1989 Fern Show:

The Society expects to hold its 1989 Fern Show on the April 8-9, at the Nunawading Horticultural Centre. Our Shows have been highly successful in previous years, in publicizing the Society and providing an opportunity for members to display and sell their ferns. Bob Lee remains chairman of the Show Committee. Try to keep that weekend free - it should prove to be the highlight of next year's calendar.

#### \* Tapes of Speakers:

If it is not possible to attend meetings, then a tapes of any month's speaker will be available to members, starting from the July talk by Phillip Hicks. The taped talks will cost \$5.00 each. This covers the price of the cassette, plus postage and packing.

# \* Excursion to Wilson's Promontory

The Society is organizing a weekend trip to Wilson's Prom National Park, for sometime in Autumn (March to May) next year. It is hoped to stay at the lodges at Tidal River, arriving on a Friday night and departing on a Sunday afternoon. The lodges provide good but basic accommodation, with all bedding except sheets and pillowcases supplied. There are three lodges, sleeping 12, 24 or 30 persons, and are very popular indeed. As bookings must be made many months ahead, we would like to obtain an indication of members' interest as soon as possible. If you would like to join the trip, please jot down your name and any preference of dates on a piece of paper for the August meeting. If you are interested in going but can't attend that meeting, please contact Albert Ward (Ph. 459 4392)

#### \* Spore Bank:

Just a reminder to members that the spore bank has a very wide range of spore, with the list on page 10 being only a selection of the total available. However, we are in urgent need of this season's spore - even of the common Victorian species. It only takes a few minutes to collect spore. If you have never tried it, any of the Committee members will be pleased to explain how its done at the monthly meetings. Alternatively, we can post out simple directions to members who can not regularly attend those meetings. Please play your part in maintaining this important asset of your Society.

# \* Transport Needed to Meetings.

On occasion, the Society is approached by members who are unable to attend our monthly meetings because real difficulties in arranging transportation. For example, Mrs M. Kennedy of Beaumaris (Ph. 589 3007) would be most keen to hear from anyone nearby who could offer her a lift to the meetings. Are there any other members out there who are having similar problems? Please contact John Oliver (Ph. 879 1976).

#### \* Additions to the Library:

The following new arrivals to the library are now available for monthly loan at each meeting:

- \* Fern Society of South Australia Newsletter, No.88, June,
- \* Los Angeles International Fern Society Journal, vol.15, Nos.1-5, 1987/88.
- \* "A Guide to the Ferns of Singapore", by W.Y. Chin, 1987. This gives a general look at the ferns found in the various habitats in Singapore. Excellent colour plates enhance the quality of a most readable little book.
- \* "Ferns of Florida", by O. Lakela and R.W. Long, 1976. This is a detailed study of the 135 fern species native to Florida. Numerous plates and line drawings assist the diagnostic keys in making this an authoritative text on the identification and classification of ferns.

#### \* New Members:

A warm welcome is extended to the following members who have recently joined the ranks of the Fern Society of Victoria.

Keith Roberts, Heywood, Vic. Halyna Kuheana, Hawaii, USA. Stephen and Jenny of Moran's Nursery, Woombye, Qld. Stephen and Ann Locarnini, Balaclava, Vic. Jenny Dawson, East Doncaster, Vic. Barry Gesthuizen, The Basin, Vic. Freidrich Ostenrath, Duisburg, West Germany.

# \* From the July Meeting:

A selection of the more interesting ferns offered for sale at that meeting were: Asplenium daucifolium, Asplenium flaccidum, Angiopteris evecta, Campylneuron angustifolium cv "lentam", Blechnum spicant cv "cristatum", Dicksonia lanata, Leucostegia immersa, Microsorium fortunei, Niphidium crassifolium, Pellaea falcata cv "nana", Polypodium formosanum cv "cristatum", Pseudodrynaria coronans, Pyrossia lingua cv "kasaki" and "nokogriba" Selaginella spp (several), Sphenomeris chinensis and Sticherus lobatus.

#### \* Prothalli Swap:

The July Meeting was the first occasion that we organized a swap of prothalli. Although only a few members participated, it was judged to be successful with an interesting range of prothalli and sporelings being exchanged. Included were: sp, Dicksonia antarctica, Dryopteris polydactylis, Microlepia hirta, Microlepia speluncae, Polypodium nipponicum and Woodsia scopulina.

Another swap night will be organized for later this year, so start sowing your spore now!

#### SPORE LIST

Ordering: The following spore is free to those who make donations of spore. Alternatively, members - 20 cents each, non-members - 50 cents. Available at meetings or by mail (please add \$1.00 for p.and p.). There is no charge to overseas members, but to defray postage, 3 International Reply Coupons would be appreciated.

Adiantum caudatum	3/87	Cystopteris dickieana	7/86
Adiantum peruvianum	6/87	Dicksonia antarctica	3/87
Adiantum raddianum cultiv		Dicksonia fibrosa	3/86
"crested majus"	3/87		
"delicatulum"		Dicksonia lanata	-/86
	3/86	Dicksonia squarrosa	3/86
"gracillium"	3/87	Diplazium australe	3/87
"grandiceps"	3/87	Doryopteris pedata	2/87
"grossum"	3/87	Drynaria rigidula	4/86
"lady supreme"	3/86	Dryopteris affinis	
"mathewsii"	3/87	var "polydactyla"	-/87
"pacific maid"	3/86	D. carthusiana, "crested"	3/86
"victoria's elegance"	3/87	D. dilatata, "lepidota"	2/87
"weiganii"	3/87	D. felix-mas, "christata"	3/86
Aglaomorpha heraclea	6/87	D. felix-mas, "grandiceps"	3/86
Anemia phyllitidis	-/86		
Asplenium adiantum-nigrum	-/86	Dryopteris inequalis	4/87
		Dryopteris sp. (Korea)	3/86
Asplenium australasicum	8/86	Hypolepis rugulosa	3/87
Asplenium bulbiferum	1/87	Hypolepis punctata	3/86
Asplenium onopteris	-/86	Lastreopsis calantha	3/86
Asplenium trichomanes	1/86	Lunathryium japonicum	4/87
A. trichomanes, "incisum"	-/87	Microlepia speluncae	3/86
Asplenium viride	-/87	Microlepia strigosa	2/87
Asplenium vittaeformis	3/87	Onoclea sensibilis	-
Asplenium sp.		Paesia scaberula	7/86
(nidus? West Irian)	-/87	Pellaea rotundifolia	2/87
Athyrium felix-femina	,	Pellaea viridis	-/86
var. "cristata"	-/86		-/87
Athyrium schimperi	3/87	Phyllitis scolopendrium	3/86
Belvisia mucronata	3/86	Pityrogramma chrysophylla	
Belvisia platyrynches.	6/87	Platycerum bifurcatum	3/87
		Platycerum hillii	4/86
Blechnum capense	-/86	P. willinkii, "Payton"	
Blechnum discolor	-/86	Platycerum sp. (Timor)	-/87
Blechnum fluviatile	3/87	Polypodium formosanum	9/86
Blechnum giganteum	3/86	Polypodium vulgare	4/86
Blechnum minus	3/86	Polystichum echinatum	2/87
Blechnum spicant	3/86	Polystichum formosum	3/87
Blechnum tabulare	4/87	P. retroso-paleacum	3/86
Cibotium glaucum	8/86	Polystichum setiferum	1
Cibotium schiedei	11/86	var. "falcatum Dyce"	3/86
Culcita dubia	4/86	Pteris biaurita	3/86
Cyathea brownii	2/86	Pteris cretica, "parkerii"	
Cyathea cooperi	3/87		
C. cooperi(black scales)	2/86	P.quadriaurita, "argyraea"	
		Pteris tremula	3/87
C. cooperi(glaucous form)		Pteris tricolor	3/87
Cyathea dealbata	3/87	Pteris vittata	3/87
Cyathea medullaris	3/87	var. "Cape form"	3/87
Cyathea sp. (New Guinea)	2/86	Thelypteris patens	
Cyathea sp. (Vanuatu)	6/86	var. "lepida"	3/87
Cyrtomium falcatum	3/87	Woodwardia fimbriata	-/86
C. falcatum x caryotideum	-/86	Unknown sp. (China)	-/87



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# ANNUAL SUBSCRIPTION

\$13.00 Single:

Family: \$16.00

\$9.00 Single:

(Pensioner)

Family: \$11.00

(Pensioners)

Student: \$9.00

(Full-time)

A\$25.00 Overseas:

(Airmail)

To: Membership Secretary, P.O. Box 45 Heidelberg West, Victoria, 3084.

The Financial Year of the Society shall commence on the first day of July in each year when all the subscriptions shall become due. A Member joining the Society after the September meeting shall pay a pro-rata subscription calculated at 10% of the annual subscription for each remaining month or part month of the Financial Year.

# 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.

# BUYERS' GUIDE TO FERN NURSERIES.

#### NEW SOUTH WALES.

#### JIM & BERYL GEEKIE FERN NURSERY

Wholesale - Retail 6 Nelson Street Thornleigh 2120 Phone: (02)484 2684 By Appointment

#### MARLEY'S FERNS.

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

# QUEENSLAND.

# MORANS HIGHWAY NURSERY

Box 467, Woombye, 4559 1 km north of Big Pineapple Turn right into Kell Road, Woombye Wholesale & Retail Phone: (071) 42 1613

# DIARY DATES.

WELSH PRESBYTERIAN CHURCH HALL	September	8
	October	13
320 LATROBE STREET	November	10
MELBOURNE	December	8

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

# BUYERS' GUIDE TO FERN NURSERIES.

#### VICTORIA.

#### "FERN GLEN"

Garfield North, Victoria Ferns - Wholesale & Retail Visitors welcome Phone: (056) 29 2375

# BEASLEY'S NURSERY.

195 Warrandyte Road, Doncaster East Phone: (03) 844 3335

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#### VICTORIA.

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#### RIDGE ROAD FERNERY.

WEEAPROINAH. 3237

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