

**Fern Society of Victoria Inc.**

# **NEWSLETTER**



**Vol. 26, Number 4.  
JULY/AUGUST 2004**



# **FERN SOCIETY OF VICTORIA Inc.**

**POSTAL ADDRESS:** P.O. Box 45, Heidelberg West, Victoria, 3081  
**E-mail:** [http://gardenbed.com/clubs/clubs\\_vicferns.cfm](http://gardenbed.com/clubs/clubs_vicferns.cfm)

## **Our Society's Objectives.**

*The objectives of the Society are:*

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

## **OFFICE BEARERS:**

President:	Rex Gresham	Phone/Fax (03) 5796 2466
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Imm. Past President	Ian Broughton	
Vice-President	George Start	" 5962 5059
Secretary	Barry White	" 9740 2724
Treasurer	Don Fuller	" 9354 2656
Membership Secretary	Rex Gresham	" 5796 2466
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**COMMITTEE MEMBERS:** Jack Barrett 9375 3670, Gay Stagoll 9844 1558,  
 Norma Hodges 9878 9584. Brenda Girdlestone 9390 7073 and Mirini Lang 9886 6109.

## **SILVER ANNIVERSARY SUB-COMMITTEE MEMBERS:**

Norma Hodges 9878 9584, Mirini Lang 9886 6109, Keith Hutchinson 9457 2997,  
 and Bernadette Thomson 9399 1587. Brian Nicholls 9836 6507,

## **SUBSCRIPTIONS:**

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

**Subscriptions fall due on 1st July each year.**

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



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

## **TIMETABLE for EVENING GENERAL MEETINGS:**

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



# 2004 Calendar of Monthly Events

## THURSDAY 15TH JULY

A talk to be given by Don Fuller on Tree Ferns included with this talk will be some slides of Tree Ferns which were taken at Ian Broughton's old nursery in Launching Place.

Competition for this night will be "Tree Ferns"

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## THURSDAY 19th AUGUST

We will be mesmerised by the fascinating world of spore growing, by Barry White. All you need to know to get you started on this journey will be discussed on this night. A must attend for anyone about to embark on growing from spore, get the do 's and don 'ts from one of the experienced spore growers.

Competition for the night will be Platycerium

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## Thursday the 16th September, 2004 Annual General Meeting

This will be our twenty-fifth Annual General Meeting, we will be starting at 8.00pm.

For further information about our Annual General Meeting please refer to page 54 of this newsletter.

There will be a Fern discussion in some shape or form which will be advertised in the next newsletter.

### FRONT COVER:

The front cover of this issue was first seen on September, 1987, and was used till December, 1991.

John and Norma Hodges

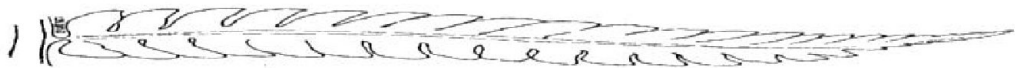


## **MEMBERSHIP RENEWALS**

### **FEES ARE NOW DUE!**

Your membership subscription for the year **2004/5 is now due** and **prompt payment** would be appreciated (our financial year commences 1st July). Within this issue you should receive a membership form, (if you miss out on this, please let Don Fuller know). Please use this when renewing your membership as it does help Don with his paperwork.

There are a number of members who for various reasons have already paid their membership for 2004/5 (this includes those who have only recently joined the society). These are identified by a yellow dot on the address label. if your newsletter label has one of these yellow dots please ignore any renewal form that may be included.



## **NOTICE OF ANNUAL GENERAL MEETING**

The Twenty fifth Annual General Meeting of the Fern Society of Victoria Inc. will be held on Thursday the 16th of September, 2004, at the Kevin Heinze Garden Centre, 39 Weatherby Road, Doncaster commencing at 8.00pm.

### **Business to be transacted will be :**

1. To receive and deal with the President's Report on behalf of the Committee of Management.
2. To receive and deal with the Treasurer's Report.
3. The election of Office Bearers and Committee Members of the committee of Management for 2004-5.
4. General Business.

### **Nominations for Committee of Management :**

Nominations are now called for the positions of Office Bearers and Committee Members for the year September 2004 to September 2005. Nominations should be in writing, be signed by the proposer and seconder, and include the written consent of the nominee. They must be received by the 9th of September (not less than seven days prior to the Annual General Meeting). Nominations may be called at the Annual General Meeting only if insufficient have been received previously to fill all vacancies.

### **General Business :**

Items to be discussed and voted on under General Business at the Annual General Meeting must be notified to the Secretary in writing not less than 21 days prior to the meeting.

*Rex Grsham*  
President



## FERN SHOW 2004

The Combined Fern and Vireya Rhododendron Show for 2004 was held on the 17th - 18th April at the Mt Waverley Community Centre and it proved to be very successful. The weather over the weekend was OK for the Show being cloudy with occasional showers on the Saturday. Despite concern regarding the effects of the drought over recent years, and the current water restrictions we achieved the best attendance figures since we began the joint show some 7 years ago. Fern sales were good but not quite as high as the very high figure for 2003.

Our display was again very good and received favourable comment. Our two specialist displays were provided by Chris & Lorraine Goudey of Austral Ferns and Eddie & Robyn Sabljack of Fern Acres Nursery and were again of a high standard. Our feature display was "Ferns Of New Zealand" and we had a good representation of these ferns.

We again held a Fern Competition. It was well supported by members but the total numbers of entries was down on last year perhaps reflecting the difficult season. Our thanks go to George Start who provided an interesting display of items of wood turning from tree fern material.

The Fern Sales Area was again very well stocked with a great variety of ferns. Business was very brisk on Saturday but quieter on Sunday.

The ability of a small society like ours to put on a great show is only possible with the full support of our active members. The committee wishes to thank all those members who rose to the challenge of the show and provided great ferns for the competition, display and for fern sales. It was an excellent response. Our thanks also go to those who assisted with the running of the show, helped with the setting up, and with the packing and cleaning up, after the show. It was greatly appreciated.

Thanks also to Mary Frost who again judged the Fern Competition. We value her support and helpful comments to encourage us to better display our ferns. Thanks also to Multicrop (Aust) who again sponsored our fern competition. We value their support of our society.

Your committee has decided to go ahead with a show in 2005, and following discussions with the Australian Rhododendron Society, the agreed date is the 16th - 17th April 2005. We again face a challenge with only a small active membership who are getting older. We urgently need the active assistance and participation of some younger members.

Don Fuller- Chairperson Fern Show Committee:uller



## **TIPS AND HINTS FROM THE FERN SHOW**

The following is compiled from replies received by the members who won a prize for their Ferns which were entered into the competition category.

Ever wondered what the winning growers do to their ferns to be successful at competition level? Well I am going to try to give you some insight into what is required to produce a winning fern.

**Don Fuller** won prizes in the following categories:-

1st - Victorian fern, and Polypodiaceae

1st and 2nd any other fern

2nd Asplenium.

Don has been growing ferns for about 15 years, and has entered the show competitions each year he has been a member, for the encouragement to keep growing the best ferns he can.

Don's ferns that won are between 6 and 10 years old, they are grown in a variety of locations, shade houses with shade cloth, under a porch beneath fibreglass roofing, and some in a glasshouse. Overhead watering seems to be what Don finds the best for his growing conditions, with a mixture of slow release, maxicrop and dynamic lifter fertilisers depending on the requirements of each fern.

Don selects his ferns for competition around January, but some are as late as 6 weeks prior to the show, he then gives them a tidy up and fertilisers at this stage.

Don will be back with ferns next year. Don Fuller won the Best Fern of the Show with *Pyrosia lungua* cv. *Serrata* (as pictured)



### **BEST FERN OF SHOW**

*Pyrosia lungua* cv. *serrata*

**John Hodges** won in the following categories:-

1st Adiantum

2nd fern in 150mm container

John has been growing ferns for 20 years and has entered the show competition 4 times previously on these other occasions he has received a reward for his ferns. His 1st fern is 10 years old and been in the current pot for 4 years, 2nd approx 4 years old and been in pot for 2 years. They are both grown in sheltered positions and he fertilises on a 3 weekly basis. John enters the show competition for the satisfaction of growing a fern which has been considered good enough to win a prize.

The fern that John won a first prize with he selected 3 months prior to the show, however the second place fern was selected the week prior to the show.

John will be competing again next year.

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**Jack Barrett** won prizes in the following categories :-  
1st and 2nd in Davalliaceae

Jack has been growing ferns for 20 years, and has entered the show competition 10 to 12 times before and has previously won prizes for his ferns. Both of Jack's ferns are 5 - 6 year old plants and they have been in their present baskets for 5 years. Both of these ferns are grown in a fern house with fibre glass roofing and are fertilised once or twice yearly.

Jack enters the show competition to contribute to the success of the show and winning a prize gave him a feeling of elation he picked out both of these ferns 2 weeks prior.

Jack will be entering more ferns next year.

**Fran Harrison** won a 1st placing in the category of:-  
Asplenium

Fran has been growing ferns for 20 years she has entered the show competition on 4 previous occasions and has received places on those other occasions. The fern that Fran entered is about 10 years old and has been in the current pot for the last 6 years it is grown under shade cloth and is fertilised every 6 months.

Fran entered the show competition to support the society and winning the prize gives her more confidence to keep growing ferns. This fern was picked out a few weeks before the show as she thought it was growing well.

Fran is already planning to enter again next year.

**Brenda Girdlestone** won 1st in the following category:-  
Fern in 150mm container

I have been growing ferns for about 10 years and have entered the show competition since joining the society three years ago, this is my first prize at the show. The fern is quite a few years old but I had divided and repotted it last November, then rotated it on a regular basis. It was fertilised with slow release fertiliser when it was repotted. It lives in a unheated glass house with daily watering and misting during the warmer months.

I entered the show competition to be part of the success so as not to rely on the other members for the show success. This was my first win and I was ecstatic as it shows that I have been paying attention at the meetings, putting this knowledge into practice, it truly has paid off.

I will be entering the show competition again next year as I don't want to be the one to sit back and leave it all for the other members to do. As our society ages so do our members, with many getting into their twilight years, it becomes more important for the newer members to start to take some of the responsibility, without this happening our society will not survive.

**Keith Hutchison** won prizes in the following categories:-  
2nd in Adiantum  
2nd in Polypodiaceae

Keith has been growing ferns for 35 years and has entered the show competition most years since joining the society when it first started up. The Adiantum was divided about 3 years ago and the  
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Polypodium was divided about 2 years ago. Both of these ferns have been in the same pots since these times. They are both grown outside in sheltered positions 1 is grown under a Beech Tree, they are both treated to doses of Osmocote every 6 and 8 weeks.

Keith entered the show to help make it the success that it is and believes it's important to add interest, winning a prize is not important to Keith but is always pleased to be recognised as an accomplished grower. One fern was originally picked out for the show about 6 years ago, while the other fern is one of Keith's favourites.

Keith will most definitely be back next year with his ferns

**Diana Mayne** won 2nd in the category of:-  
New Zealand fern

She has been growing ferns for 15 years and has contributed to the show display since joining the society in 1990, last year was the first year that Diana had entered the show competition where she won a prize for a fern that she had no idea was good enough to be entered little alone win.

This fern was brought in a 4 inch pot about 5 - 6 years ago to replace a fern which had died, it has been in the current pot for about 11 months it has been repotted 4 times since Diana has had it. The fern is fertilised once a year and was potted with some compost. This fern is grown outside on a veranda facing south east, protected from strong winds, with no sun at all, and watering is as need basis.

Again this year Diana entered the show competition with a little help and encouragement from other members, to receive a second placing which she was thrilled to receive, boasting to her family about it as they think her fern hobby is a bit of a joke! None of her family are good gardeners, this fern was selected 2 days prior to the show.

Diana will be back with ferns if there is any that come up to her standard.

So now you can see there is no hidden to the success of showing your ferns so do think about preparing and entering next year

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Fern talk - 2004  
**The ATHYRACEAE Family**  
 Lady ferns and their friends  
 Barry White

We are going to cover not only the Lady ferns themselves, but all their friends, which will be the family that the Lady Fern belongs to. They are named after the *Athyrium* genus, which is the Athyraceae Family. This family is closely related to the spleenworts.

The family is closely related to the *Asplenium* family, differentiated by conducting vessels and the scales:-  
*Asplenaceae*: Clathrate scales (like latticework), X shaped vessels in upper stipe  
*Athyraceae*: Non-clathrate scales, U shaped vessels in upper stipe

We have two types of Lady ferns, the English Lady Ferns, and the Australian one the Austral Lady Fern  
 The English one belongs to the *Athyrium* genus

### **CHARACTERISTICS OF THE ATHYRACEAE FAMILY**

- They are all ground Terrestrial ferns none are epiphytic. Rhizomes short, creeping or erect forming short stalk.
- Fronds mostly membranous, some are quite delicate, especially the *Athyrium* themselves.
- Stems are mostly grooved on upper surface, grooves vary in shape they are mostly U shaped but the Lady ferns proper they are V shaped the veins except *Callipteris proliferata* are free and don't form a net work at all.
- Veins usually free
- Sori usually elongated along veins, sometimes round, sometimes paired, Indusium are linear, J or U shaped or round.

### **GROWN IN AUSTRALIA**

Members of the family that are commonly grown in Australia are:-  
*Athyrium*, *Diplazium*, *Deparia*, *Cystopteris* and *Callipteris*

***Athyrium*** (Variable- probably referring to the sorus rather than to the variable nature of ladies): Rachis groove V shaped, (other members of the family have a U shaped groove) sori variable, more or less linear, J, U or round shaped, veins free. Supposedly all are deciduous.  
 No species currently recognised in Australia.

*Athyrium filix-femina* (Lady Fern probably so-called because of its delicate fronds which are easily damaged. It has no relationship to *Dryopteris filix-mas*, the male fern, which is a much harsher fern. (Neither name is any reflection on the gender of the plant). Soft feathery fronds, thin textured, deciduous, rhizome short and erect. Wide-spread in the northern hemisphere, probably the most variable fern in the world with over 300 named forms.

The form "*Victoriae*" is a most attractive fern with criss-crossing of the pinnules and also the pinnae. As with many of the forms specimens grown from spore tend to be different to a greater or lesser degree from the parent.

*Athyrium niponicum* '*Pictum*' (Japanese painted fern)

***Diplazium*** (Double): about 400 species, mostly tropical, 10 species native to Australia. 1 native to Victoria, the Austral Lady fern.

Groves of primary and secondary rachises are continuous, veins mostly free, stipe tuberculate or spiny,

The sori tend to be double towards the base of the pinnae along the veins and tend to be back to back at the base of the frond



Fern talk—March 2004

## PTERIS OR BRAKE FERNS

Don Fuller

Pteris or Brake Ferns are a large genus of approximately 250 species (one reference 280) mostly from sub-tropical and tropical regions. They belong to the family of Pteridaceae and the only other genus in this family found in Australia is Acrotichum - the mangrove fern.

The name Pteris comes from the Greek "Pteris" a fern or feather like. The common name Brake Ferns is derived from Bracken which several members of this genus resemble.

The main features of most of the species found in this genus are:-

- The rhizome is erect or short creeping and covered with scales
- The vascular strand in the stripe is usually U shaped in cross section
- Rachis are grooved on the upper surfaces and this is continuous with the grooved of the secondary rachis
- The lamina can be divided 1—4 TIMES
- Sori are linear very close to the pinnule margins and there is no indusium

However the sori are protected by reflexed pinnule margins.

Of the 250 species world wide only 8 are found in Australia all are found in Queensland but only 4 in Victoria. These are -

*Pteris comans* Netted Brake Fern

This fern is only found in a few spots in Victoria. We saw it near Timboon on our trip to see the lime fern. It has dark green frond. Paler underneath. Its common name comes from the interconnecting veins which form enclosed areas near the mid vein

*Pteris tremula* Tender Brake Fern

A very common fern found throughout most fern areas of Victoria. It has light to Yellow-green fronds and is found in a wide variety of habitats and conditions. It produces large quantities of spore thus forms large colonies. It is very hardy and easily grown from spore.

The rhizome crown can sometimes rise above the soil thus exposing the feeding roost and making the plant unstable

*Pteris umbrosa* Jungle Brake Fern

This fern I confined to East Gippsland in Victoria but is plentiful up the East coast to Queensland. It has dark green fronds and it is found in the damp low areas of forests.

In cultivation it is a hardy and very useful fern as it will grow in low light positions (eg. Heavy shade) and indoors. It must not be allowed to dry out, I find it takes time to re-establish after being divided.

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*Pteris vittata* Chinese Brake Fern

This fern is rare in Victoria having been found only in Least Gippsland. It grows in exposed limestone areas. A feature of this fern is that the basal pinnae are very much shorter than the upper pinnae.

Other Australian *Pteris* Ferns are:-

*Pteris ensiformis* Slender Brake Fern

This fern is found in Queensland. The lamina is light green and roughly triangular in shape. It resents disturbance. There is a naturally occurring form and a cultivar of this fern which are very attractive and sought after.

*Pteris endiformis* cv. Evergreeniensis

*Pteris ensiformis* var. *Victoriae*

Both of these forms are variegated

*Pteris orientalis*

This is a medium sized fern with glossy green fronds and polished brown stripe is found in NE Queensland. It resents disturbance.

*Pteris tripartite* Lacy/Giant Brake Fern

A very large fern with fronds up to 3m. It is found in NE Queensland and is tropical and very frost tender.

OTHER FAMILIAR *PTERIS* FERNS ARE:-

*Pteris microptera* a broad, pale green frond lowland fern from Ihi

*Pteris macilent* a and attractive soft pale green fern from the open forest areas of New Zealand

*Pteris wallichiana* an very large topical fern from Asia (China/Japan PNG)

*Pteris dentata* Toothed Brake Fern

a large pale green frond fern from Africa it inhabits cool dark shaded rain forests

*Pteris faurie* a common fern in cultivation origin unknown

*Pteris henderonii* an attractive common fern in cultivation origin unknown a characteristic of this fern is its odour

*Pteris multifida* Spider Brake Fern

a wickedly cultivated species from the area of China/Japan the segments are long and narrow there are a number of cultivars the most common being cv. *Critata*

*Pteris cretica* Cretan Brake Fern

this fern which occurs in a large number of tropical and subtropical areas is better known for the large number of cultivars it has give rise to some of these are:-

- . *Cv.albo-lineata* attractive fern with a variegated creamy white stripe up the centre of each segment
- . *Cv. Riveroniana* and unusual fern with long pointed irregular lobes on each pinnule
- . *Cv.wimsetta* similar to cv.rvertoniana but more attractive
- . *Cv. Wilsonii* and attractive fern with broad fan shaped crested segments
- . *Cv.parkeri* frond are dark grey-green and stiff

*Pteris argyraea* Silver Brake Fern

this is a very attractive fern from India it is a large fern with silver white band down the centre of each pinnule needs protection in temperate areas sometimes referred to as a cultivar of *p.quadriaurita*

*Pteris quadriaurita* a variable fern form Asia

*Pteris titoror* and small tractive fern from Malacca the new growth has re coloration

Cultivation the local *pteris* fern are easy to grow in a garden situation the others require greater protection need to be kept moist and not let dry out I find the worst pest problem to be brown scale.



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Are closely related to the *Athyrium* but are quite large ferns with fleshy fronds and are sometimes eaten in places like PNG and the Philippines the fleshy type fronds stew up well.

The people who classify ferns look at in this family are the grooves up the main stalk and branches run into each other they are continuous

*Diplazium australe* also known as the Austral Lady Fern

**Deparia** (Dish or saucer in reference to the sometimes dish like appearance of the sori): there are about 28 species, one in Australia.

Swollen stipe, winged, often brittle, groove on primary rachis not continuous with groove on secondary rachis; rachis and main veins having both scales and hairs.

*Deparia petersenii* ssp. *congrua* occurs in Eastern Australia, Norfolk Island and elsewhere. A very variable species

Rhizome long creeping, lamina pinnate to pinnatifid main rachis with numerous septate hairs, lower surface scaly, sori often paired back to back.

**Cystopteris** (bladder fern) 20 species, world wide, one in Australia.

Small delicate ferns, slender stipe, sori rounded, indusium attached only at the inflated base.

Not many people grow this fern it is rather a small fragile fronds and the spore is not typical of the family. Spore is rounded in shape the rest of the family tend to be linear in shape they are located on veins and the indusium is attached by a small base which is some what swollen which is where it gets its name bladder fern.

*Cystopteris tasmanica* occurs in Eastern Australia and in New Zealand

Has been known as *C. filix-fragilis* or *C. fragilis* but *C. tasmanica* can be distinguished by its more sparsely divided fronds, and pinnae with obtuse apices.

**Callipteris** (Beautiful fern): three species, one in Australia.

Large fronds, many plantlets along the frond, veins anastomosing regularly, sori numerous, often in U shaped pairs.

*Callipteris prolifer* occurs in N.E. Queensland and in tropical areas. It does not like the climate in Victoria.

Article reprinted with thanks to the Fern Society of Southern Africa

## **VARIATION**

**Definition:** Variegation is irregular variation in colour of a plant organ, eg. leaves due to the suppression of normal pigment development.

Although variegated ferns are not prominent in nature, ferns are not just green. *Pteris argyrea*, (from India and Sri Lanka) and *Athyrium niponicum* var. *pictum* (from China, Korea and Japan), are striking examples of naturally variegated ferns. In ferns, variegated sports tend to be selected and propagated by enthusiasts. These variations may occur naturally or appear spontaneously in cultivated populations. Variegation is very prominent in certain plant families, such as Bromeliads.

The causes of variegation have been debated for many years and despite advances in modern scientific research, little is known of the causes.

There are a few theories though.

Viruses abound in the plant and animal world and have long been held responsible for many crippling and destructive diseases. Their role in nature is largely seen as the quality controllers of living organisms. These micropathogens or virioids have +the ability to alter the genetic programming of plant cells by molecular insertion and extraction of chromosomal pieces. Micropathogens are known to gain entry through lesions in leaves, roots or rhizomes brought on by mechanical injury. Not all viruses are infectious or deadly, but more than 200 different viruses are transmitted by vectors (carriers) such as animals, insects (400 species), mites, aphids, nematodes and other soil-inhabiting organisms such as fungi.

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## COLLECTORS CORNER:

Up date of back issues of Newsletters In the last issue we put out a call for any member who had old newsletters that they no longer needed, the response has been good and I thank all those members who gave or were willing to give missing copies to the society. Due to the response we now have two full sets of newsletters.

The second stage of this process now is to get the copies bound in some shape or form, so that one copy can be put into the library to be lent out as required. The question now is how do we get them bound and in what format, if you have any ideas or suggestions on how this could be accomplished please let me know. We have had a cost done by getting them done professionally but the cost made this impractical, maybe you or you know someone who is a hobbyist who would be willing to undertake this task for us again please let me know, we are open to all suggestions.

### **May competition winner:**

Don Fuller

### **Raffle winners:**

Barry White  
 Fran Harrison  
 Mavis Potter x 2  
 Jack Barrett  
 Lauren Radley x 2

#### Continued from page 62 **VARIEGATION**

For variegation to arise by seed, it is believed that the mature plant in flower must be infected before the ovules are fertilised or possibly by the pollen being virus-infected if cross-pollination occurs. In ferns it is believed that the plant must be infected before the sporangia are developed. Viruses are often no longer present in a host once the symptoms are evident.

Environmental factors are frequently cited as probable causes of variegation but conclusive proof has not yet been established. Some scientists propose that one biological effect of natural radiation is gene mutation, as plant foliage absorbs radioactive substances. In laboratory experiments with gamma and x-rays, after irradiation there occurs a reduction in the number of cells per meristem. This reduction varies directly with the proportion of cells showing chromosome damage. DNA content and chromosomal size are considered important contributing factors. Chemical mutagens are capable of producing plant variegation too.

Correlating factors in micro-climates (temperature, moisture, light, etc.) are often advanced as influential forces in creating variegations.

Where occurring in a native habitat, some theorists hold that this exemplifies evolution in progress. Abiotic stress, where a plant suffers prolonged dehydration or malnutrition, is said to trigger variegation. Ecological disturbances by fire, floods, frosts, hurricanes, drought or predatory fauna where the plant is severely damaged, are also claimed as determining causes. Some botanists believe plants in poor health are more prone to virus attack, effecting variegation. Fundamentally, leading authorities acknowledge that gene mutations cause at least some variegations, viruses are singularly responsible for others, but both causes may interrelate elsewhere.

A number of naturally variegated species and cultivars breed true from spore ( eg. *Athyrium niponicum* var. *pictum*, *Adiantum raddianum* *Variegatum*', *Pteris cretica* 'Albo-lineata' and *Pteris ensiformis* *Victoriae*'), which greatly confuses our concept of 'normal' and 'abnormal' plants.

#### References:

1. Jones, D.L. 1998. *Encyclopaedia of Ferns*. Timber Press, Portland.
2. USHER, G. 1966. *The Wordsworth Dictionary of Botany*. Wordsworth Reference, London.
3. Williams. B.E. 1990. *Growing Bromeliads*. Kangaroo Press, Kenthurst.



# HOT OFF THE PRESS

## TREE FERNS

By Mark F. Large and John E. Braggins

CSIRO Publishing has just released a new book on Tree Ferns.

It has been written by Mark F. Large and John E. Braggins both of these authors are from New Zealand both are renowned authorities of ferns.

It is a very comprehensive book relating to Tree Ferns. It covers the families, genera and species. Providing detailed descriptions as well as coverage from tree fern use to conservation.

The authors provide cultivation information, including propagation, diseases and pests.

This is a hard cover book and is retailing for \$59.00, the society has purchased 10 books at a discount rate and are selling these to members for \$55.00.

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