

**THE
FERN SOCIETY
OF
VICTORIA**

Inc.

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NEWSLETTER

VOLUME 14 Number 7, August 1992

FERN SOCIETY OF VICTORIA Inc.

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(8 Susan Court, East Keilor, Vic., 3033)

SUBSCRIPTIONS:

Single	-	\$15.00	(Pensioner/Student - \$11.00)
Family	-	\$18.00	(Pensioners - \$13.00)
Overseas	-	A\$30.00	(by Airmail)

Subscriptions fall due on 1st July each year.

PRESIDENT'S MESSAGE:

The Annual General Meeting is with us and I appeal to members to give consideration to joining the Committee. We have had some resignations from the Committee and there are vacancies for ordinary Committee members as well as Secretary and Treasurer. The Society urgently needs fresh blood on the Committee; experience in growing ferns is not a requirement, all that is necessary is a willingness to assist in running the Society. In addition to the vacancies above, a replacement will be needed for the Book Sales Officer, Derek Griffiths, who is also resigning that position after a number of years of service. If anyone feels that they may be able to help in filling any of these positions, please let me know.

The August General Meeting after the A.G.M. will be featuring a guest speaker, Rob Hall, who will be talking about establishing a suburban rainforest. Rob is a lecturer at the Holmesglen College of TAFE, and was responsible for the design and planting of the Native Rainforest area at the Oakleigh campus, and is now trying to shift this rainforest to the Waverley campus (ex- Victorian Schools' Nursery). His talk will concentrate on appropriate plants for use in establishing your own rainforest.

August Fern Competition. At this coming meeting the *Blechnum* genus has been selected for the competition. Again I would emphasise that the competition aspect is a minor one; what is more important is that we get a good number and range of ferns for members to appreciate. Bring along as many *Blechnums* as possible, never mind if they have suffered a bit during the winter.

Spring Garden Festival. As mentioned in an earlier Newsletter, the Fern Society will be participating in the Spring Garden Festival to be held at the ex- Victorian Schools' Nursery, 585 Waverley Rd, Glen Waverley on the 4th, 5th and 6th (Friday to Sunday) of September. The

(continued page 76)

NEXT MEETING

DATE: Thursday, 20th August, 1992.

TIME: Commencing at 7.30 p.m.

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

BUSINESS: (a) 13TH ANNUAL GENERAL MEETING
(b) August General Meeting

GUEST SPEAKER: Mr Rob Hall, Holmesglen College of TAFE

TOPIC: Creating a Suburban Rainforest

MEETING TIMETABLE

7.30 p.m. Pre-Meeting Activities:- Sales of Ferns, Spore, Books
and Special Effort Tickets ; Library Loans.

8.00 p.m. ANNUAL GENERAL MEETING

Agenda: (i) Minutes of 1991 A.G.M.
(ii) President's Report
(iii) Treasurer's Report
(iv) General Business (see page 77)

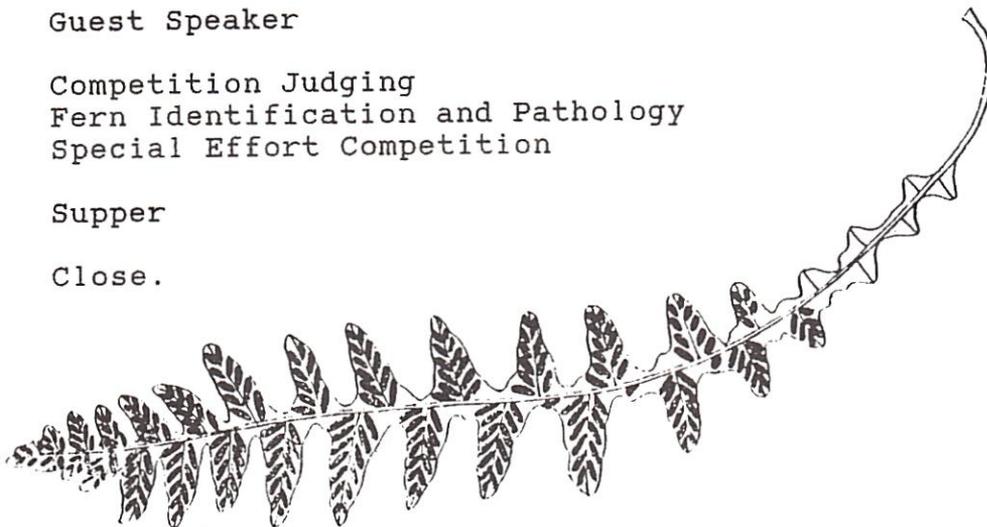
8.30 p.m. August General Meeting

8.45 p.m. Guest Speaker

9.45 p.m. Competition Judging
Fern Identification and Pathology
Special Effort Competition

10.00 p.m. Supper

10.15 p.m. Close.

MEMBERSHIP SUBSCRIPTION RENEWALS

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

PRESIDENT'S MESSAGE: (continued from p. 74)

Festival is being organised by the Holmesglen College of TAFE and by the Royal Horticultural Society of Victoria. It is expected that there will be at least 50 exhibitors and crowds of 15,000 upwards. Entrance will be free, and a range of special attractions will be featured. It will be an excellent opportunity to promote ferns and the Fern Society, but there will be plenty of competing attractions. We will therefore need to have a eye-catching and well-manned display in order to make the most of the opportunity. Please let me know if you are able to assist either in the provision of ferns or in the manning of the display. The Festival will be open from 9.00 a.m. to 4.00 p.m. each day. We will divide the manning into two sessions each day, from 9.00 a.m. till 12.30 p.m. and from 12.30 p.m. till 4.00 p.m. Let me know what day and session suits you best.

September Excursion. The Herbarium hall will not be available for our meeting in September. Therefore, instead of the meeting at the Herbarium we will have an excursion to Badger Creek on the afternoon of Sunday, 20th September. It is anticipated that the weather will be excellent and therefore we propose that members gather for a picnic lunch at about 12.30 p.m. and commence a fern walkabout at about 1.30 p.m. Instead of bringing ferns to the meeting, this time we go to the ferns.

Open Afternoon. On the afternoon of Sunday, 11th October, I am inviting members to visit my place for a cup of coffee, an opportunity to view my attempts to grow ferns, and to look a little more closely at some native maidenhairs. It will not be a highly organised affair, but rather an opportunity for a casual get together to absorb a little more about ferns and to allow a modicum of social intercourse. We will see how it pans out; if it proves successful it we will look to repeat it on an occasional basis at other members' gardens.

LAIIFS Visit. Keep in mind the visit by the Los Angeles International Fern Society in October and the opportunity to accompany them on their visit to the Otways on Friday, 16th October. Also Chris Goudey has indicated that he will be inviting members to his place some time in November. More details later.

Barry White

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Speaker Report for July General Meeting

PTERIS FERNS by Terry Turney

Members responded well to the request for plants to illustrate the topic of the evening and Terry gave his talk surrounded by a sea of beautiful *Pteris* and related ferns. As with previous talks by Terry, this one was obviously the result of comprehensive research in its preparation and it was extensively illustrated by transparencies on the overhead projector. The result was a most informative and enjoyable evening.

However, your Editor departed on holidays a few days after the meeting and did not have time to prepare a report that did justice to the talk. It will be reported at a later date.

ANNUAL GENERAL MEETINGGENERAL BUSINESS

The following items will be moved for approval under General Business at the Annual General Meeting of the Society on 20th August, 1992.

(A) OBJECTIVES OF THE SOCIETY

It is proposed that Clause 1.(2) of the Rules of the Fern Society of Victoria be replaced by the following:

"The objectives of the Society shall be 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."

The present statement of the objectives of the Society, which has remained unchanged since its formation in 1979, makes no specific reference to the role that the Society plays in developing public awareness of ferns and through it the advancement of fern horticulture, nor does it cover the important subject of conservation of ferns in nature. The Committee considers that inclusion of these factors is important and recommends the statement above for approval.

(B) DISSOLUTION CLAUSE

It is proposed that the following be added to the Rules of the Fern Society of Victoria as Rule 28:-

"If upon the winding-up of the Society there remains after satisfaction of all debts and liabilities any property whatsoever, it shall not be paid out to or distributed amongst the members of the Society but shall be given or transferred to some other association having similar objectives, which likewise prohibits the distribution of its income and its property amongst its members. Such association is to be determined by the members of the Society before the time of dissolution or, in default thereof, by an appropriate Judge of the Supreme Court of Victoria."

There has been much confusion as to what action should be taken by societies such as our own following the introduction by the Government of the regulation that banks and other financial institutions must deduct tax from interest and other income where Tax File Numbers are not provided. Initial advice was that as a non-profit horticultural society we would be automatically exempt from income tax under Section 23 (h) of the Income Tax Assessment Act. However, this was later varied and several specific requirements spelled out. Most are satisfied by our status as an incorporated association and our role in advancing fern horticulture.

However, action is needed on one of the requirements which concerns the disposal of the assets of the Society in the event of winding up. The dissolution clause in the Model Rules for an Incorporated Association, which we have adopted as the base for our own Rules, is not acceptable to the Australian Taxation Office. The clause proposed above is based on an acceptable example provided by the A.T.O.

Bernadette Thomson
Secretary

POTTING MIXES AND FERNSby Kevin Handreck

(Conclusion of Speaker Report from June General Meeting)

Practical Applications: (cont'd)

All purchased potting mixes made to the Australian standard will contain plenty of calcium and magnesium initially. That situation will gradually change, as most fertilisers likely to be used for ongoing treatment have little calcium, so the base amount will decrease as well as the mix getting more acid.

Most of the components used by people making their own potting mix will probably be fairly acid, e.g., aged pine bark is around pH 5 - 5.5, depending on how it has been treated during composting, and peat is typically at pH 4.5. Leaf mould will probably be close to neutral. A good way to correct pH and get a balance between calcium and magnesium is to add a mixture of limestone and dolomite in the ratio range 1:1 to 4:1 by weight (the amount of magnesium in dolomite varies from different sources). Gypsum (calcium sulphate) is a good source of calcium which does not affect pH and also provides sulphur. A suitable limestone/gypsum/dolomite mixture would be in the ratio range 1:1:1 to 1:1:2. The addition of limestone/dolomite mix required to achieve a mixture pH of 6.5 would probably not be more than one kilogram per cubic metre of potting mix. However, this will vary with the actual components used, so it is best to add a small amount, rest for a couple of weeks, test the pH and then adjust as required.

In reply to a question Kevin said that Zeolite would be of little benefit in a potting mix as a source of calcium and magnesium. However, it did have the advantage that it held ammonium nitrogen in the mix and released it slowly. Nitrogen in this form is normally leached from a medium rather quickly through watering. Zeolite is added to Dynamic Lifter because of this property of holding ammonium nitrogen and is also present in some commercial mixes.

pH Testing:

It is very worthwhile to make an occasional check (say every six months) on the pH of media in pots, especially where plants are left in the one pot for a long period. The direction of pH drift gives a good guide to what is happening and may allow problems to be corrected before they develop too far.

Kevin made it clear that he regarded portable pH meters of the type employing a metal probe pushed into the soil as worse than useless, because of the inaccurate and misleading readings they give. Typically, one of these might read 5 in a mix with a pH of 3.5 and 6 at pH 7.5.

Accurate measurement of pH requires the use of a glass electrode pH meter, which is expensive and requires care in use. Useful results (within about 0.5 of a pH unit) are obtainable by the colorimetric method. This uses dyes which change colour with pH. A solution of the dye is mixed with the growing medium and the colour compared with a chart. There are several testing kits on the market. One which is recommended is the "Inoculo", manufactured in the Melbourne suburb of Box Hill. This is sold by many nurseries and retail price is about \$20. (See Note opposite.)

Miscellaneous:

A question was asked about the suitability of mushroom compost as a component of potting mix. This can be used but with great caution, as it contains a lot of soluble salts and is very alkaline (pH up to 12) because of a high concentration of lime. One Begonia grower in South Australia lost his whole crop one year through excessive use of this material.

The proportions of the various fertiliser elements required for different plants vary considerably with the plants and the conditions. However, Kevin suggested that for non-flowering plants such as ferns the ratio of nitrogen:phosphorus:potassium (N:P:K ratio) should be 1: 0.15-0.2: 0.6-0.8. For a typical feeding frequency of every two to four weeks, plants would use about 200-400 ppm of nitrogen. The amounts of nitrogen contained by the popular liquid fertilisers when made up at the recommended concentrations vary widely. For example, Aquasol contains 370 ppm, Phostrogen 50 ppm, Thrive around 600 ppm and Maxicrop about 140 ppm.

For flowering plants, the potassium:nitrogen ratio required is about 1.2:1. In spite of the claims made for one product on the market that it boosts flower production because of its high phosphorus content, flowering plants do not need extra phosphorus when flowering. Experimental work has shown that the phosphorus content of the buds reaches a plateau and does not rise with increased application of this element. Increased potassium addition does aid flower production.

Water-retaining crystals are of limited use in potting mixes because of a relatively short life before they begin to break down. Their capacity to hold water is reduced when fertiliser is present in the mix and decreases as the concentration of fertiliser rises.

Soil-wetting agents, however, are very useful if problems are experienced in re-wetting a mix that has dried out. There are two good products on the market, "Wetta Soil" and "Aquasoil Wetter", both made in Western Australia. They are non-toxic even at ten times the recommended rate of application, which is 0.4 ml of the concentrate per litre of medium; this gives about a year of protection.

For pots already planted, make up a solution of the agent at 1.5 ml per litre of water and pour sufficient into the top of the pot to give the concentrate application rate of 0.4 ml/litre of the mix. Alternatively, dip the pot into the solution. It is possible to treat a mix effectively before use if it is thought likely that it will eventually develop re-wetting problems. Use the same rate as above, e.g. 12 ml for a 30 litre bag, dilute to about a litre and mix in evenly.

* * * *

Editor's Note: If unable to find a supplier for the "Inoculo" pH kit, contact Inoculo Laboratories, 45a Strathbane Avenue, Box Hill North, Vic 3129 (phone 03 - 898 3446) for a source. They advise that each kit is good for 50 pH tests. It is not necessary to buy a complete new kit when one runs out; the various components can be purchased separately.

The Society has offered pH testing by the glass electrode method as a service for some time. A sample of about a cupful is required and should be collected from different parts of the mix to make it as representative as possible. Bring the sample to a monthly meeting or ring Terry Turney on (03) 807 4886 to make special arrangements.

SCYPHULARIAS IN CULTIVATIONby Barbara Joe Hoshizaki

(This article is taken from the March, 1992 edition of the Bulletin of the South Florida Fern Society.)

The fern circulating among hobbyists called *Scyphularia pentaphylla* has been confused by botanist and horticulturalist. Some of the plants by this name have turned out to be another species. Two species are in cultivation, and possibly three. True *S. pentaphylla* (Blume) Fee comes from Java and is recognised by the generally unforked lower pinnae (Fig. 1) and the sori borne on the teeth of the margin. *S. pycnocarpa* (Brackenridge) Copeland is native to Fiji, has the lower pinnae forked, the fronds smaller, the pinnae narrower (Fig. 2) and the sori also borne on the teeth of the margin. (The picture in my book the Fern Growers Manual, page 230, should be corrected to *S. pycnocarpa*). There is a species from New Guinea, *S. sinusora* (Copeland) that looks very much like the Javan plant, *S. pentaphylla*. This New Guinea plant differs by having the sori borne between the teeth of the margin rather than on the teeth.

My plant of *S. pentaphylla* has not produced fertile fronds, so I am anxiously waiting for the appearance of sori to be certain that the sori will appear on the teeth instead of between the teeth. If anyone has a *Scyphularia* that looks like Fig. 1, but with the sori located between the teeth, they probably have *S. sinusora*. I would be interested in seeing such a frond. A small piece of the rhizome bearing rhizome scales sent along with such a frond will be helpful in identification.

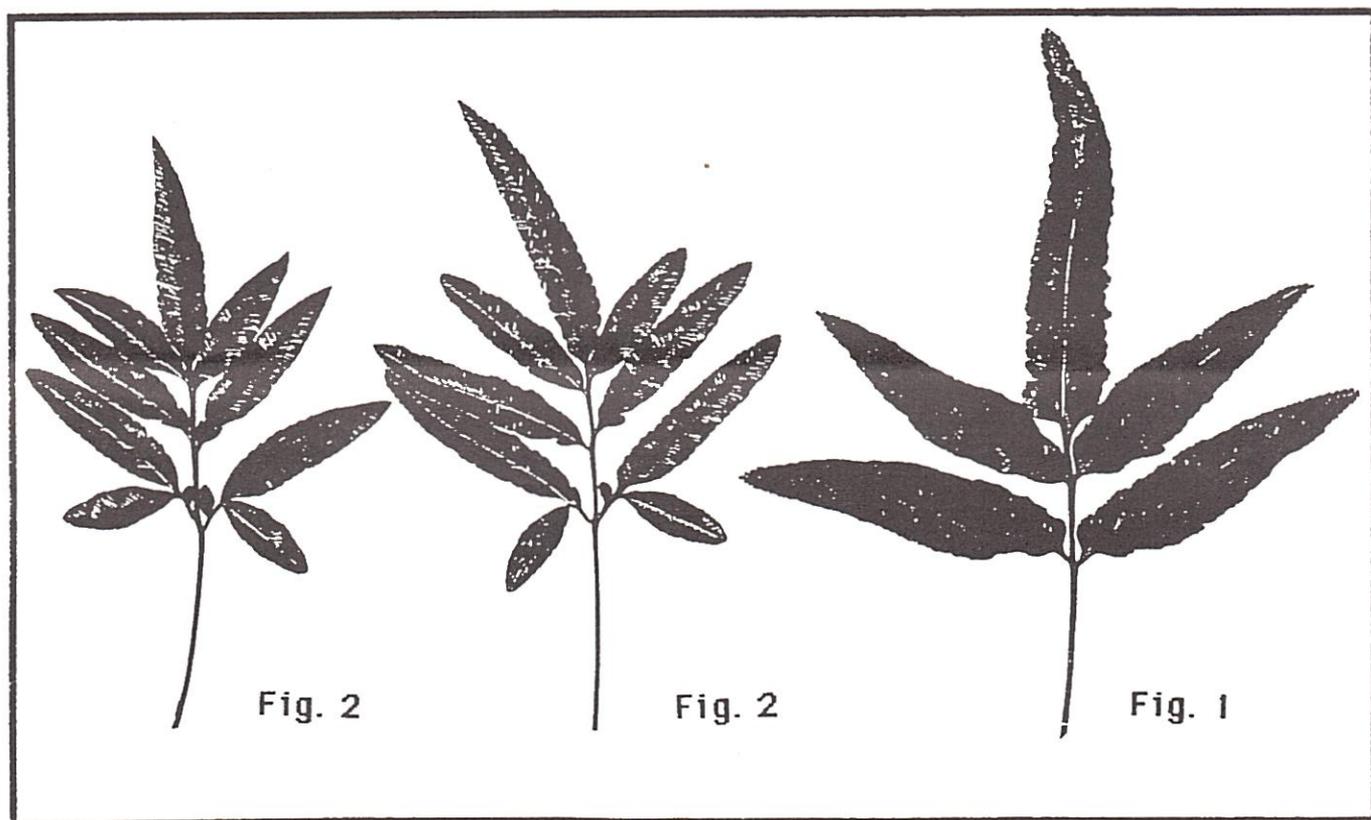
S. pentaphylla and *S. pycnocarpa* grow easily for me but require greenhouse protection during our California winter. I presume they may be grown outdoors most of the year in southern Florida. My plants are in moss-lined baskets or pots with a well-drained planting mix.

Fern botanists have recently united the genus *Scyphularia* with *Davallia*. In the future these species may be found under *Davallia*. For those wishing to read in more detail about the circumstances surrounding the mix-up in getting names on plants see the following notes.

Notes:

The confusion surrounding this group started in the 1800's. The name *Scyphularia pentaphylla*** was used for two different plants. In 1828 Blume, who specialised in Javan plants and worked as director of a Batavian botanic garden, used the name *S. pentaphylla* for a Javan plant ('pentaphylla' means five leaves, alluding to the frond's five leaflets). In 1840 the United States sent an exploring expedition to Fiji and Brackenridge, one of the botanists aboard, thought that of the two *Scyphularia* species found in Fiji one of them was the same as Blume's plant. So he called one of the Fijian plants *S. pentaphylla*** and named the other one *S. pycnocarpa*** ('pycnocarpa' means thick fruit, alluding to the thick sorus). Later, other botanists decided that the two Fijian species named by Brackenridge were variations of one species, a species that was not the same as the Javan plant named by Blume. The *S. pycnocarpa* was then kept for

the Fijian species and Brackenridge's *S. pentaphylla* name was disregarded (technically placed into synonymy as *S. pentaphylla* Brackenridge, not Blume). The name *S. pentaphylla* as used by Blume continues to be used for the Javan plant today.



In 1927 Copeland, a botanist who worked in the Philippines and later at the University of California, Berkeley, recognised a new *Scyphularia* species from Papua New Guinea that he called *S. sinusora*. The name 'sinusora' describes the sori as being in the sinus. Copeland said this plant was confused with Blume's *S. pentaphylla* and differed from it by having shorter sori, the sori located between the teeth of the margin (i.e., in the sinus) rather than on the teeth, and rhizome scales that are more ciliate and contracted above the base than the other species. I brought back a *Scyphularia* from New Guinea in 1981 for the Hunting Botanical Garden, but that plant has since been lost. There is a possibility *S. sinusora* may still turn up in someone's collection. Hurry up and look before another name change comes along!

** [These plants were first described as *Davallia* (a name honoring a Swiss plant collector), but the botanists Fee and Copeland later moved them to *Scyphularia* (a name indicating the cup-like resemblance of the indusia). Fee thought the dark bristly rhizome scales were a significant difference to separate such plants from the rest of the *Davallia* species. Recent botanists want to move all the *Scyphularia* species back to *Davallia* on the premise that they are not different enough to warrant separation.]

GROWING AND CARE OF PLATYCERIUMS

(The following article is reproduced, with thanks, from the Newsletter of the Fern Society of South Australia Inc.)

COMMON NAMES: Staghorns, Elkhorns, Silver Elkhorns.

GROWING HABITAT: Platyceriums are generally epiphytic - from 'phyton' = plant and 'epi' = on - a plant growing on a host such as a tree. Sometimes they are lithophytic, which means growing on rocks. They grow in brightly lit, humid conditions from dense rainforests to open vegetation. They naturally grow on trees with non-shedding bark.

DISTRIBUTION: There are approximately 20 naturally occurring species distributed through South America, Africa, Madagascar, Indonesia, South-East Asia, Philippines, P.N.G. and Australia.

CULTIVATION: Some Platyceriums are easy to grow given suitable conditions. Many are hardy and long lived. Platyceriums are not usually grown in soil. In cultivation, they are grown on boards or mounts fixed to walls or trees or fixed directly on to trees which don't shed their bark. A pad of Sphagnum Moss between the plant and the mount ensures moisture and aids attachment. Platyceriums require high filtered light but need protection from excessive direct sunlight. Hardy species will tolerate cold weather conditions. Many tropical species are sensitive to cold weather and require the protection of a warm glasshouse. Platyceriums need plenty of water during the warm growing season but less in winter. They need to be well watered but shouldn't be kept wet. Platyceriums can be successfully grown in shadehouses (70% shade cloth), on shady trees, on walls under verandahs and eaves of houses.

MOUNTINGS: Platyceriums can be attached to weathered hardboard, tree-fern slabs, logs with non-shedding bark, directly on to trees. Do not use treated pine as it contains toxins.

CONTAINERS: Platyceriums can be grown in containers so long as the potting mix is coarse, well drained and well aerated. A potting mix containing weathered pine bark, tree-fern fibre, charcoal and peanut shells is an ideal medium.

FERTILISATION: A slow-release fertiliser can be added to the sphagnum moss when mounting. During the growing period, half-strength liquid fertiliser can be used on a regular basis and will supply sufficient nitrogen. Never use banana skins as they can cause shield frond rot and kill the plant.

EASE OF GROWING:

Level 1. Easy to grow - Hardy

<i>Platycerium alcicorne</i>	<i>Platycerium willinckii</i>
" <i>bifurcatum</i>	" <i>superbum</i>
" <i>hillii</i>	" <i>grande</i>
" <i>veitchii</i>	" <i>wandae</i>

Level 2. Easy but somewhat difficult to grow - Semi-tender

<i>Platycerium andinum</i>	<i>Platycerium stemmaria</i>
" <i>elephantotis</i>	" <i>ellisii</i>
" <i>holttumii</i>	

Level 3. Difficult to grow - Tender

Platycterium coronarium
 " *madagascariense*
 " *quadridichotomum*

Platycterium ridleyi
 " *wallichii*

Further information can be obtained from "The Platycterium Hobbyist's Handbook" by Roy Vail. This contains a wealth of information and data about their cultivation and propagation.

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FERN COMPETITION

The ferns brought in to illustrate Terry Turney's talk on *Pteris* were judged by Chris Goudey with the following results:

First:	Ian Broughton	for a	<i>Pteris umbrosa</i>
Second:	Dorothy Forte	" "	<i>Pteris "Childsii"</i>
Third:	Terry Turney	" "	<i>Pteris wallichiana</i>

Congratulations to the winners who will receive certificates at the next meeting. The genus for next month's competition will be *Blechnum* (see President's Message).

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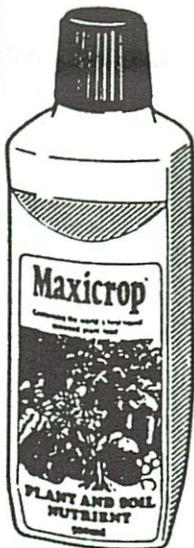
JULY SPECIAL EFFORT

Winners this month were Bernadette Thomson, John Hodges, Edna Fuhrmeister, Simon Hardin, Derek Griffiths, Ivan Traverso and John Hooper. Many thanks to George Start for the donation of two large tree-fern pots as prizes.

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Polystichum acrostichoides



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Opinions expressed in articles in this Newsletter are the personal views of the author and are not necessarily endorsed by the Society.

BUYERS' GUIDE TO NURSERIES

VICTORIA:

Andrew's Fern Nursery - Wholesale and Retail.
Melbourne Road, Arcadia, 3613. Ph: (058) 26 7285.
Large range of ferns for beginners and collectors.
Open daily 10 am - 5 pm except Christmas Day.

Austral Ferns - Wholesale Propagators. Ph: (052) 82 3084.
Specialising in supplying retail nurseries with a wide range of hardy ferns; no tubes.

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.

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.

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

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.