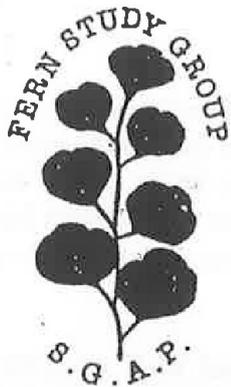


Liaison



ASSOCIATION of

# S.G.A.P. Fern Study Group

## Newsletter Number 88

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**REMINDER**  
**YEAR 2000 SUBSCRIPTIONS ARE NOW OVERDUE.**  
Thanks to all who have already forwarded their fees to Joan Moore.  
Could those who have not yet done so please forward your \$5 to  
Joan at the above address immediately

**'FERNS OF TASMANIA'** by Michael Garrett, Joan has one copy for sale. Anyone interested, please contact Joan Moore.

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### AUSTRALIAN PLANTS & VICTORIAN FERN GROWER CONTRIBUTE TO PRINCE CHARLE'S 50<sup>TH</sup> BIRTHDAY.

The following article from the British Pteridological Society Bulletin (Vol. 5 - Number 4 - 1999) illustrates The Prince of Wales love of ferns: The Society engaged Victorian Fern grower, Chris Goudey, to provide *Leptopteris superba* - a 'special' N.Z. fern to further personalise their gift for the occasion. Creative table decorations used at the Prince's birthday party may be of interest.

#### FERN GIFT FOR PRINCE OF WALES AT HIGHGROVE

by **Martin Rickard**

Members will remember that we circulated a request for ferns to be given to His Royal Highness The Prince of Wales on the occasion of his fiftieth birthday. The momentous birthday was in November 1998 but by the nature of organising a gift from quite a few members, the ferns were not gathered together until the spring of 1999, a good season for delivery. The collection included many rare and uncommon cultivars including: large trunked specimens of *Dicksonia antarctica*, *D. fibrosa* and *Cyathea australis*. Ground ferns included *Polypodium australe* 'Whilharris', *Polystichum setiferum* 'Mrs Goffey', 'Gracillimum', 'Hirondelle', 'Plumoso-divisilobum Bland', 'Cristatopinnulum', 'Plumosum Bevis', *Athyrium filix-femina* (Plumosum group), *Phegopteris hexagonoptera* and *Woodwardia martinezii*. The collection even included *Leptopteris superba*, The Prince of Wales feather, sent over especially from Australia by Chris Goudey! In total there were 51 different taxa in the gift with some plants supplied in duplicate.

I duly took the collection over on the 22nd of April and helped plant some of the treeferns; the ground ferns were potted up and held over for planting out in the autumn. While I was there, the Prince came out and chatted for what seemed a few minutes but was apparently nearer half an hour. He is an extremely busy man and I really appreciated the chance to chat. It's obvious that he really loves his ferns. I have subsequently heard that he remarks to David Howard, the Head Gardener, "I see there's a new frond on that one" etc.!

The garden at Highgrove is developing rapidly. In addition to the Stumpery and Wall of Gifts, mentioned in last year's *Bulletin*, the Prince is now installing a 'Fern Pyramid'. This is being designed by the same people and should be set up very shortly (autumn 1999). I cannot quite imagine what this will be like but if it is like the other fern-based features it will be wonderful. Our collection of ferns will almost certainly not be used in the pyramid, rather they will be used to supplement the other plantings and start a new fern area in what I believe is called the azalea garden. This garden is a long, narrow, walled area adjacent to the vegetable garden. It is shady and will benefit from a substantial fern planting - I look forward to seeing it when it is completed.

In the note I wrote last year I did not give details of the decorations in the Orchard Room at Highgrove at the Prince's private birthday party on the 14th of November. Apparently each table was decorated with a mini-stumpery, with a *Dicksonia antarctica* as the centre piece. Each tree-fern had a trunk from four to ten feet tall. I know, I hired the plants for the occasion! Included in each 'stumpery' were a lot of ground ferns, predominantly polypodiums as they were at their best in the autumn. Unfortunately, I did not see the end result but by all accounts it was a fantastic sight. The decorations were a surprise for the Prince planned by his friends and staff, his love of ferns is obviously well known in the royal household!

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## **NO TOUCH TECHNIQUE – Safer handling of insecticides, herbicides and other dangerous chemicals**

**Contributed by Calder Chaffey**

No Touch Technique (NTT) is a special procedure used by surgeons and other scientists to handle and manipulate biological tissues and instruments without contaminating them, or themselves, with infection or harmful substances. The surgeon does not want to introduce infection into his operative incision and certainly does not want to infect himself when incising an abscess or dealing with any other purulent lesion. The surgeon attaches a nasal mask, scrubs his hands for 10 minutes with a special soap and antiseptic, dons sterile gloves and a sterile gown without ever touching the outside of either gown or gloves even with his scrubbed hands. Gowns fasten at the back away from any frontal contamination which may occur during the operation. Similar techniques are used by other biologists dealing with tissues. Instruments used during operative procedures have been previously sterilised and are conveyed to the operative area, without touching. These are handled only with the sterilised, gloved hand.

All this seems fairly obvious to prevent infection of the operative site. But just as important is the protection of the operator. The surgeon is protected while handling purulent tissues and abscess pus by wearing gloves and gown. To remain safe he must also learn the other part of NTT. He must remove the first glove with the other gloved hand and the second glove by inserting a finger within the upper inside rim and easing it off. Then the gown is removed touching only the fastening at the uncontaminated back. It is vitally important never to touch the operative outside of gloves or gown.

## NO TOUCH TECHNIQUE (CONT.)

These must then be disposed of or cleaned and re-sterilised. In this way the operator remains uncontaminated. If the operators hands became contaminated the danger would not only be to himself but to people or tissues he touches. Instruments must also be collected, cleaned and re-sterilised without touching or allowing them to contact and infect other people, instruments or equipment.

What has all this got to do with growing ferns, gardening, reforestation or Landcare you may well ask?

People carrying on these activities use insecticides, herbicides and other deadly chemical sprays. We are not so worried about sterility here. The chief problem is to avoid self contamination, contamination of others, instruments or tools. Full length overalls or similar clothes with gloves, are just as necessary but they need only be clean rather than sterile. What is important is that they fully protect the wearer and that the gloves do not let the chemicals penetrate to the hands. A suitable filtering nasal mask is also essential when spraying. It is also essential to learn how to remove gloves and get out of the clothes without touching parts of them which may have been contaminated with chemicals or sprays. They must then be specially handled to clean and wash without contaminating humans or anything else in the process. The wearer must also wash or preferably shower immediately.

This is perhaps obvious and most users are probably somewhat, if not fully conscious of these things. However a more difficult problem is handling instruments and apparatus, sprays and tools. There are a lot of things not so obvious here. Thinking closely about what you do helps a lot.

The most common problem is the contamination of screw tops and outside necks of plastic containers of chemicals. Remember, the chemicals bought from suppliers are up to 200 to 1000 times or more concentrated than the eventual spray you dilute with water for use. Touching a trace of this may contaminate hands with a huge dose. The greatest care must be used handling the undiluted chemicals. Take care not to get contents within the screw threads of container lids or to let the fluid run down the outside neck of the bottle. If it dose, take off the lid and meticulously wash both lid and container. Don't spill the concentrated liquid around the opening of the spray tank, treat it like the top of the original container.

Tools and instruments used all have some contaminated part from which the fluid is sprayed or injected. Parts which are handled or contact the skin should be kept scrupulously clean. Any spillage on these parts must be washed thoroughly. The contaminated part should never be touched during use, before cleaning, or even after cleaning. Back sprays can be a real hazard. Make sure they have no spillage which could contact your back and that the filling top is thoroughly shut tight.

One of the commonest sources of contamination, I have observed, is from brush handles when painting herbicides on weeds. The excellent bottle holder invented by Keith King, which was illustrated in the *Big Scrub Landcare Newsletter*, is indeed a must to prevent spillage. However the brush used may be a problem. There seems to be no way to prevent the brush handle becoming contaminated right up to where it contacts the neck of the bottle. A very long handled brush should be used so that there is plenty of room to hold it well above the bottle height. Care should be taken to hold it only in the upper part and not allow the fluid to run to this part of the handle if using it to paint horizontally or upside down. All other tools should be used in a similar manner so as not to contaminate the handles.

Make a rule never to touch the business end of a tool. Always assume it may have not been cleaned thoroughly, or for that matter not cleaned at all. Maybe someone else contaminated it. I shall illustrate

this by observations I made a couple of weeks ago at a Camphor Laurel Control Field Day. One speaker talked about the Tordon Axe and the syringe method of introducing herbicide. As he talked about each tool he held it in his hands and absent-mindedly kept rubbing his finger across the business end. He assumed the instruments were empty, and clean and I hope he was right. I feel this is a bad habit and he may unknowingly do it to an unwashed tool, which indeed he did as I shall describe. A demonstration was given with a filled Tordon Axe and the fluid released into the wound. There followed a demonstration of drilling and injecting fluid. A little later one of the observers present picked up the drill to inspect it. For some unknown reason he started pushing it into the Tordon Axe wounds where fluid had been injected. He then put it down. A little later a question was asked about drilling. While answering, our habitual fiddler of the business end picked up the drill and to my horror he continually rubbed the contaminated bit.

I repeat never assume the business end is clean. Thoroughly clean all tools and instruments after use. Get used to using a No Touch Technique and use it all the time while handling insecticides, herbicides and other dangerous chemicals. Make a habit of not touching the business end.

Ken Dory made a telling statement. He said "it is remarkable what you see when you add red dye to your spray fluid". This very graphically demonstrates where your careful efforts may break down and where your careless methods show up.

## COLLECTION OF SPORE

Contributed by Barry White

Spore donations are essential in order to keep a well functioning spore bank. Fresh spore is always welcome, the freshness of spore is one of the most important factors in successful spore culture.

Collecting spore is simple, but it is necessary to get the timing right.

Fern spores develop on the backs of fronds in a special structure called a sorus (plural sori). The pattern of the sori on the back of the frond is a major factor in fern classification. The sori may be arranged in a line along the edge of the frond (e.g. *Pteris*, *Pellaea*), or along the midline (e.g. *Blechnum*), or as linear or round structures which may be arranged in patterns on the back of the frond. The sorus may be at least partly covered by a membrane called an indusium. Each sorus is made up of a cluster of spherical sporangia each of which is a sac containing (in most species) 64 spores.

It is important when collecting fern spore to be able to judge when the spore is ripe, and this may usually be done by careful observation. The sporangia are initially bright green and slowly ripen, often to a dark brown or black, (e.g. *Cyathea cooperi*, *Rumohra adiantiformis*) at which time they appear swollen and shiny. As the sporangia burst and release the ripe spore, the sorus takes on a rather tatty or furry appearance. A small hand lens (10x magnification) is most helpful in checking whether spore is ripe, or if it has already been shed. Sometimes you can see immature spore, ripe spore and empty sporangia on different sections of the one frond.

Some spores ripen to yellow (e.g. *Dicksonia*, *Gleichenia*, *Sticherus*, *Microsorium*). A few are still green when shed (e.g. *Todea barbara*, *Blechnum nudum*) and are viable for only a few days or weeks depending upon storage method.

The sections of fronds collected should be loosely arranged, with sori facing down, on sheets of clean glossy paper and covered with another sheet of paper. These should be kept in a warm dry spot, away from any draughts, and allowed to dry out for a day or two. If the spore is ripe, very fine powder should start to collect on the paper within a couple of hours. Alternatively if a number of fronds are collected they may be placed in a large paper envelope with the corners well sealed and again placed in a warm dry spot. If you are not sure whether spore is ripe or not, a very small piece of frond may be tried first.

When the fronds are dry, gentle tapping will dislodge any trapped spore. As well as the very fine spore, you may collect a quantity of the somewhat coarser sporangia cases. Some ferns may shed a greater quantity of empty sporangia, and in if the spore has been already shed the collected material may consist almost entirely of empty cases and be virtually useless. Again a 10x hand lens is very useful.

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

Separation of the spore from the spore cases is not necessary if sending material into the spore bank. Alternately the fertile frond may also be sent in. The *Dicksonia antarctica* is useful material if you wish to practise separation. Gentle tapping on sloping paper causes the spore cases to move down the paper at a faster rate than the spore.

Spores are quite waxy. As an interesting exercise sprinkle some spore onto a lighted candle but keep your head back or you may singe your eyebrows.

The collected material should be identified with the name of the species, the collection date, and the location site if collected in the bush. The spores should be wrapped in paper in such a way that the spore is not able to escape. The folded paper packets as presently used by the spore bank is one way to achieve this. Ordinary envelopes may be used but the corners need to be turned over and taped, otherwise the spore tends to puff out through the corners. Store in a cool dry spot. As a general rule the sooner the spores are sown the better. Green spore (e.g. *Todea barbara*) survives for only a few days and should be sown straight away. Spore from some other species (e.g. *Blechnum*) may not store well. However if stored in a cool dry spot most spore will survive for a couple of years, and some much longer.

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**'AUSTRALIAN FERNS: GROWING THEM SUCCESSFULLY' – by CALDER CHAFFEY**

**Contributed by Mike Healy**

A formal review of this newly released book, has not yet been received for publication. However, having recently purchased my own copy, my personal opinion, (an amateur's point of view as a fern enthusiast for over thirty years) is that this book is an excellent addition to a home gardener's library.

Descriptions of ferns are clear and precise; and photographs are also very clear.

The zone maps which have been used consistently are most helpful, providing information that can be used to assist in plant positioning. The other facet that is most helpful is the information re necessity of glasshouse, greenhouse, etc. All in all, I feel 'Australian Ferns: Growing Them Successfully', is a very valuable addition in a specialised field. I look forward many more hours of valuable reading and feel the book will be a helpful resource in the future.

**AMERICAN FERN JOURNAL - page 271 Vol.89 – Number 4, 1999 – BOOK REVIEW** written by ROBBIN C. MORAN, New York Botanical Garden, Bronx, NY 10458-5126, appears in the latest edition of The American Fern Society's Journal.

*Flora of Australia, Volume 48, Ferns, Gymnosperms, and Allied Groups*, by A. E. Orchard, Executive Editor, P. M. McCarthy, Volume Editor, and 21 contributors. 1998. CSIRO Publishing, P.O. Box 1139 (150 Oxford Street), Collingwood, Victoria 3066, Australia. xxi, 766 pp. Hardcover (ISBN 0 643 05971 7) \$US 94.95; softcover (ISBN 0 643 05972 5) \$59.95. May be ordered directly from <http://www.publish.csiro.au> or by e-mail: [sales@publish.csiro.au](mailto:sales@publish.csiro.au).

Although Australia has had many fine local and regional pteridophyte floras, this is the first comprehensive treatment for the entire continent. It treats 456 species of pteridophytes, these classified into 112 genera and 35 families. For each species there is given nomenclatural and type information for the accepted name and its common synonyms, a short description, geographic distribution (with maps provided at the back of the book), specimens examined, and comments. There are 157 figures of pteridophytes, many of them color photographs, and the rest line drawings. Particularly helpful to users will be the illustrations by P. J. Edwards showing the indument characteristics of tree ferns. All of the illustrations are of high quality.

The introductory matter includes a helpful review by Mary D. Tindale of fern morphology, terminology, cytology, biogeography, ecology, and history of Australian fern floristics. Andrew Drinnan provides a well-researched overview of the history of fern phylogeny and classification, and Robert S. Hill and Gregory J. Jordan summarize the fossil record for Australian pteridophytes. A key to families is provided by P. M. McCarthy, and in the text the families are arranged by a phylogenetic, not alphabetical, sequence. The keys are of the indented type, not bracketed. A glossary of specialized pteridophyte terms, compiled mostly by Mary D. Tindale, is given toward the back of the book.

It is immensely satisfying to see so much information brought together for the entire Australian pteridophyte flora. This book is a major contribution to pteridology, and anyone seriously interested in pteridophytes will want a copy. Congratulations to our pteridological mates down under for a job well done!

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### **SYDNEY STUDY GROUP REPORT**

#### **HOW TO IDENTIFY SPORES READY FOR COLLECTION**

**Submitted by Joan Moore**

For this discussion at the Sydney meeting in January several of us had brought numerous fertile fronds cut from our ferns, but Peter Hind told us straight away that these would be of no use in the discussion because once a fertile frond is cut it will immediately shed its spore, whether this is ripe or unripe. A few species may hold the unripe for a while, as did a *Dictymia brownii* present. He said that if the spore on the cut frond is almost ripe it may grow if sown straight away. Before cutting the frond it is better to be certain that the spore is about to be shed. This is the difficult part, Most spore cases - sporangia - are dark coloured, even black, when about to shed. Sporangia on Peter's *Diplazium queenslandicum*, conveniently growing nearby, (we, were sitting in the garden) looked very black; his *Polystichum fallax* seemed about to shed too. But ferns without a pronounced indusium are the hardest to judge, such as *Sticherus*. And anyway, when *sticherus* is about to shed the spore cases are light brown!

Todea barbara, another special case, has green spore and a definite fertile - non fertile cycle. Knowing when to gather this is particularly difficult. The colour of the sporangia goes abruptly from dark green to brown once the spore are discharged, so one must be very watchful. And sow this spore immediately it is gathered, as it is said to remain fertile only a few days. It may be possible to keep some in the refrigerator.

Some ferns spore only at certain times of the year: For instance, Dicksonia produces only sterile fronds in summer. Observation is necessary. Platyceriums offer another difficult case. If the fertile area looks all fluffy then the spores are shed (this is the case for other ferns too ) but even when not fluffy, platyceriums are still difficult to tell; as with others, look for the dark colour of the sporangia, which are unfortunately, obscured by quantities of hairs. And as it is probably not desirable in the case of this fern to out off a frond, or even a piece of one, the collector will have to devise ways of getting the spore without harming the plant.

Returning to our cut fronds, or pieces of fronds - put these between sheets of paper until they have shed. Remove the frond and tip the paper slightly; the larger spore cases should slide off to one side, the fine dust that is the spore remaining stuck. This will probably be yellow, or in some cases black.

In view of all this we could only agree with Peter's closing remark that successful spore collection is more of an art than a science!

P.S. We surely have some members who have successfully collected spore. Perhaps they could tell us of the methods they have adopted!

### EXIT LYGODIUM JAPONICUM

Those members who do not have access to a copy of the Flora of Australia, Volume 48 (published late 1998) may not know that this fern is no longer considered Australian. In the Ferns of Queensland (1990) Andrews states that he had not seen the reputed Queensland specimens but that this fern had been collected on Osborne Island off the northwest coast at Western Australia. R.J.Chinnock in his article in the 'Flora of Australia' makes no mention of any Queensland specimens and adds that an examination of the specimens collected from Osborne Island shows them to be forms of lygodium flexuosum!

This is good news for some members who have found this species particularly weedy. We can now pull it out!

Dr. Chinnock has also removed the genus Lygodium from family Schizaceae and put it in a family of its own: 'Lygodiaceae.'

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### Sydney Area: Programme for Coming Months

Saturday 18th March, 2000 - Meet at Kyrill Taylor's home, 16 Elizabeth Crescent., Yagoona at 11 a.m. We will admire Kyrill's ferns and discuss Sticherus and Gleichenia species.

Saturday 15th April - A visit to Horseshoe Falls on Hazelbrook Creek. Take the Great Western Highway to the mountains, pass the Hazelbrook railway station and shops and turn right into Oaklands Road. Follow this road to the entrance to Horseshoe Falls Reserve on the right hand side of the road. Meet at the picnic area at 9,30 a.m. Bring lunch. Leader is Rose Bach, Phone 9869 1692 for inquiries.

Saturday 20th May - Visit to Girracool Picnic Area in the Brisbane Water National Park. Coming from Sydney on the Freeway (F3) take the Gosford exit, then the next turn to the left. You will see signs to Old Sydney Town, follow them to the roundabout, and there take the left hand turn again onto the Pacific Highway. The entry to Girracool is on the left, almost opposite the entry to Old Sydney Town. Enquiries to Dot Camp Ph: (02) 4367 6368. Meet there at 10 a.m

Sunday 18th June Meet at the home of Ian and Tamara Cox from 11a.m. This is at 5 Ivy Place, Kenthurst. We will be studying the genus *Cyathea*. And, of course, looking around the lovely garden.

Saturday 15th July Peter will lead a visit to the Fernery in the Botanic Gardens. Meet at 10.30 a.m. in the Fernery entrance.

## The Mid North Coast Group

### Outing to the Wattagan Mountains

Contributed by Steve Clemesha

For our outing from 5th to 9th July, our group stayed at Bea & Roy Duncan's place at Holmesville near West Wallsend. We were fortunate with the weather as we had no rain except driving home, which this year was good luck.

We were pleased to see Rose Bach and Norma & Fred Johnson. They had not been with us for a while. We first went to Kannerly Fern Exhibition & Nursery west of Raymond Terrace. Its owner, Coral, has a beautiful and very interesting collection of both native and exotic ferns. They were growing very well. Some were in pots, others in large baskets and others were in the ground.

That afternoon we went to the Hunter Regional Botanic Gardens on the eastern side of the highway, south of Raymond Terrace. Most of the soil in this garden is sandy and a wide range of *Grevilleas* were growing. Also present were *Hakeas*, *Correas* and some *Boronia* sp. There also is a large display of succulents.

The fern area is in a shaded area near there. Many had been donated by Coral recently. The habitat was suitable for them and a nice display should form fairly quickly.

That evening Fred showed us the audio-visual. He played a major role in producing. It is very well done with good photos of a good range of ferns. A commentary goes with it and tells you about each photograph.

Next morning we set off for Gap Creek Reserve in the Wattagan Mountains. We found 40 1/2 species. The half is *Pellaea nana*. I think it is linked to *P. falcata* by intermediates and was better left as a variety of it. *Polystichum australiense* was present. It is plentiful in the Wattagans and on the Central Coast and I have seen it in a few places around Sydney but never on the mid or far north coast.

*Pyrrhosia confluens* was seen a few times. This population is the southern most one known. its distribution mostly is given as north of the Hunter River. A side-track leads to the bottom of Gap Falls. We found a few extra species there - *Cyathia cooperi*, *Diplazium australe*. *Todea barbara* on the cliff near the waterfall, *Christella dentata* and *Debaria petersonii*, subsp. *congrua*, which must be due for its next name change. (I first knew it as *Athyrium japonicum*, then *Lunathyrium aponicum*, then *Lunathyrium petersonii* and finally the current name.)

We then went to three lookouts from the top of the Wattagan Mountains. The views were spectacular.

Next was the Boarding House Dam. The moss wall was spectacular as it usually is with Vittoria elongata growing there at the southern-most point of its distribution. On a vertical high creek bank patches of Tmesipteris truncata grow and near them Hymeophyllum rarum.

Next day we first went to Sugarloaf Mountain Lookout. Like the day before's lookouts, it was spectacular. A short walking track took us to the top. We saw seven species form including an Adiantum which probably is atroviride.

We then drove to The Pines picnic area. This is a beautiful area with a small plantation of mature pine creeks. Large Todea barbara plants grow all along the creek. When we were at the area a few years ago we found Tmesipteris truncata on some of them. The area they were in was overgrown with long grass and sedges so we did not see it. If we had not found it the day before we probably would have tried harder. Lindsaea microphylla and L. linearis both grew in tall heathland. A lot of wildflowers grow in the area including waratahs. A Blechnum in the creek was a form of B. camfieldii. This form grows beside streams and we have seen it at Wilson River, Middle Creek, Glenreagh and Minyon Falls. The other form grows mostly in low swampy places near the sea. This form often has auricles at the base of the pinnales but the stream bank form never does.

## NOTES FROM SOUTH EAST QUEENSLAND

Contributed by Irene Cullen

### Meeting held on 6<sup>th</sup> February, 2000 at Graham Nosworthy's home

Fifteen members attended. Our programme for the year was discussed. Also Barry Whites request for feedback on the publishing of the Spore List. Our Group's suggestions are as follows - The full Spore List need only be published once each financial year. However any new spore received between newsletters, should be published - (as fresh spore appears to give better germination) Also perhaps specific spore being out of stock or which Barry may like to see replacing older spore in the bank

Fern identification by members followed. Twelve ferns were displayed and numbered. Members were asked to identify them. Some good scores resulted, however Adiantum capillus-veneris tricked most of us. After lunch, Graham's fernery was admired - and a wonderful pot of Platyzoma microphyllum was envied. Those who were able, stayed to wander around his beautiful large garden

## FORTHCOMING EVENTS IN S.E.QLD.

March - Sunday 5th. Excursion to Mary Cairncross Park Malany. Meet 9.a.m. at the Park Cairn.

April - Sunday 2nd. Meet at Peter and Pat Bostock's home at 9.30a.m. - 59 Limosa Street Bellbowrie. Topic Back to Basics with Fern Genera.

Weekend of April 29-30 & 1st May. Excursion to Woolgoolga - visiting Woolgoolga Flora Reserve Bruxna State Forest - Middle Creek and Bongil Bongil National Park. For further information contact Peter Bostock (07) 3202 6983.

## ASGAP FERN STUDY GROUP

### Statement of Receipts and Payments for the 1999 Calendar Year

<b>RECEIPTS</b>	<b><u>1999</u></b>	<b><u>Previous Year</u></b>
Members' Subscriptions (includes some in advance)		\$515
Donations 150		\$484
S.G.A.P. Regions 135		75
Members 15		
Raffles-Sydney Meetings		54
Sale of Book.45		65
Interest received		2.54
		5
<b>Total Receipts</b>		<b><u>766.54</u></b>
		<b><u>6297</u></b>

### **PAYMENTS**

Newsletter Expenses:		
Paper and Printing		474.05
Postage 232.90		565
		231
Stationery 13.65		24
Postage - Correspondence		19.20
Bank Charges, F.I.D. and Money orders		16.46
		20
Donation to Burrendong Arboretum		-
Photos for Fern Book		500
		14
<b>Total Payments</b>		<b><u>756.26</u></b>
		<b><u>1377</u></b>

<b><u>SURPLUS (DEFICIT) FOR YEAR</u></b>	<b><u>10.28</u></b>	<b><u>(748)</u></b>
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### **SUMMARY**

Cash at bank at beginning of year	\$2188.04
Surplus for year	\$10.28
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<b>Cash at bank at end of year</b>	<b>\$2198.32</b>
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**WEST AUSTRALIAN FERN SOCIETY**

**Report by John Banasiewicz, President taken from the Society's December Newsletter**

It has been an extremely busy time over the past few months, so some of us may be feeling a bit ferned-out. What? No, never!!

The visit to Boogaards Nursery was attended by a large number of members, and I am sure that all enjoyed the afternoon. Many picked up that "must-have" fern or plant; a few didn't know when to stop, and at least one got down to the last 50c in the wallet. Henry kindly put on some eats and drinks for members, a gesture for which we express our grateful thanks.

Our one-day individual classes competition went very well, with many plants on display. Congratulations to the class winners. Fern sales did a roaring trade, with most stock available virtually exhausted.

The State Championships, held at the Garden City Shopping Complex from 1st until 6th November, were extremely successful. Again, congratulations to the winners, and our thanks to all who participated. Special thanks go to our Show Secretary, Barbara Kerr, Chief Steward Helen Moorehead, and Secretary Jean Freind, without whose untiring efforts the event would not have happened.

The Fern House at Kings Park continues to look splendid, thanks to the efforts of those members who chip in each few months to maintain it. Well done, guys!

All up, it has been another successful and enjoyable year for the Society, and I would like to take this opportunity, on behalf of all Society Committee members, to wish you a Merry Christmas and a safe, happy and healthy New Year. We look forward to ferning around in 2000.

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**INTERNATIONAL SYMPOSIUM – FERN FLORA WORLDWIDE THREATS & RESPONSES.** This symposium is to be held 23 – 26 July, 2001. Copies of a pamphlet detailing this are attached. Please Note - anyone wanting the 2<sup>nd</sup> circular need to apply by the 31<sup>st</sup> March 2000.

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**DEADLINE FOR COPY** – Closing date for material to be included in the June Newsletter is May 15<sup>th</sup>, 2000. Your contributions are valuable – whether as a group or individual. I strongly urge groups from the various States to send articles.

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**SPORE LIST and ordering requirements follow on Page 14.**



British Pteridological Society

*with*

Species Survival Commission

Specialist Group for Pteridophytes

fern flora  
**worldwide**  
threats and  
responses

## INTRODUCTION

In recognition of the increasing pressures being placed on pteridophyte populations worldwide, the British Pteridological Society, in conjunction with the World Conservation Union (IUCN) Species Survival Commission Specialist Group for Pteridophytes, is organising this international symposium. Specialised habitat requirements are widespread across the fern flora, making pteridophytes particularly vulnerable to familiar threats such as alien plant invasions, the activities of man, and climatic change. It is expected that this symposium will be a significant contribution to pteridophyte conservation awareness and action.

## OUTLINE PROGRAMME

The following themes will be discussed:

1. The Status Report. What do we know; where are the fern hot spots; what are the main threats; the uses - medicinal and ornamental ferns.
2. Conservation Techniques. The role of the botanic gardens; micropropagation; cryo-preservation; spore banking; re-introductions; population genetics; molecular analysis.
3. Networking with Others. Who is doing what (NGO's, government and international agencies, local communities); national and international legislation; how effective are they.
4. Action Plans and Programmes. Case studies - how successful are they; what monitoring is needed.
5. Education. What can we learn from ferns that develops the conservation message; diversity; climate indicators.

## VENUE

The symposium will be held on the campus of the University of Surrey in Guildford. This university is relatively new, which is reflected in the pleasing layout of the spacious campus, and the wide range of facilities available. Situated in the beautiful Surrey countryside, Guildford is an old market town with riverside walks, gardens, and historic buildings. At the same time, it has the richness and amenities of a city, and is conveniently located close to, and equidistant from, both London Heathrow and London Gatwick airports.

## CALL FOR PAPERS

If you wish to contribute a paper or poster to a particular theme please contact:

Clive Jermy  
Co-ordinator of the Scientific Programme,  
C/o The Department of Botany  
The Natural History Museum, Cromwell Road,  
London SW7 5BD, England.

## PROCEEDINGS

The proceedings will be published in The Fern Gazette, the academic journal of the British Pteridological Society.

## SECOND CIRCULAR

If you would like to receive the second circular for this symposium, due in July 2000, please complete the form opposite, and send before 31 March 2000 to:

The British Pteridological Society  
Department of Botany  
Natural History Museum  
Cromwell Road  
London SW7 5BD

## REQUEST FOR SECOND CIRCULAR

- Yes I would like to receive the second circular for the International Symposium - Fern Flora Worldwide Threats and Responses - 23-26 July 2000.

TITLE (Mr, Dr, Mr, Mrs, Ms, Miss)

NAME:

ADDRESS:

TELEPHONE:

FAX:

E-MAIL:

SIGNED:

DATE:

# S.G.A.P. Fern Study Group

## SPORE LIST

Adiantum whitei	1/99	Microlepidia speluncae	5/98
Arachniodes aristata	8/98	Platycterium bifurc. cv. Hilo	/99
Asplenium australasicum	5/98	Platycterium bifurc. v. HulaHands	/99
Belvisia mucronata	12/98	Platycterium bifurc. cv. Roberts	/99
Blechnum chambersii	2/99 B	Platycterium bifurc. var. venosa	
Blechnum fluviatile	2/99 B	"Mt. Lewis"	/99
Blechnum minus	6/99	Platycterium bifurc. cv. Willinckii	
Blechnum patersonii	8/99 B	Scofield	/99
Cyathea australis	3/99	Platycterium hillii	/99
Cyathea celebica	3/99	Platycterium superbum (Cairns)	/99
Cyathea cooperi 'Brentwood'	/98	Platycterium superbum	09/99
Cyathea cooperi var. cinnamonia	/99	Platycterium veitchii	08/99
Cyathea cooperi	09/99	Polystichum australiense	12/99
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Dennstaedtia davallioides	2/98	Pteris umbrosa	6/99
Dicksonia youngiae	1/99	Sticherus flabellatus	8/99 B
Doodia australis	12/99	Sticherus urceolatus	3/99 B
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West Essendon. Vic. 3040. Ph (03) 9337 9793

When ordering please include a stamped addressed envelope

The letter "B" indicates spore collected in the bush. The area of collection is available on request.

Spore donations are always welcome, including fresher samples of ones already on the list.

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