



ASSOCIATION of

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

*Newsletter*      *Number* 82

ISSN 0811-5311

DATE - SEPTEMBER 1998

\*\*\*\*\*

**LEADER** : Peter Hind, 41 Miller Street, Mount Druitt, 2770  
**SECRETARY** : Moreen Woollett, 3 Currawang Place, Como West, 2226  
**TREASURER** : Joan Moore, 2 Gannet Street, Gladesville, 2111  
**SPORE BANK**: Barry White, 24 Ruby Street, West Essendon, 3040

\*\*\*\*\*

## **PROGRESS TOWARDS COMPLETING "THE BOOK"**

That "Book" of course, is the long awaited Study Group book on ferns. Over the last several years, many members have provided various assistance. Finally, Calder Chaffey wrote the manuscript and gathered together photos for the book that is now proposed to be called "Australian Native Ferns - Growing Them Successfully". Just as we were finalising this Newsletter, Gordon Brooks, representing N.S.W. - SGAP Publishing Committee, and Calder had advice that the proposed publisher was pleased with the manuscript and proposals for its publication. Formal contractual arrangements are being completed. Look forward to more positive news next Newsletter.

## **SPORE BANK**

Spore orders may be sent to Barry White, 24 Ruby St., West Essendon, Vic., 3040. Phone (03) 9337 9793, e-mail [barry\\_white1@msn.com.au](mailto:barry_white1@msn.com.au). There is no charge but please include a stamped addressed envelope.

Spore donations are not only welcome, they are essential for the proper functioning of the spore bank. All types of spore are welcome including fresher samples of ones already on the list. There is no necessity to separate off the sporangia from the spore. The whole or part frond may also be sent in, all is acceptable. Please include the date of collection and, if collected in the bush, the area.

Thank you to the following spore donors: Lorraine Deppeler, Keith Rogers, and Allan Woollett.

In providing the following up-dated spore list, Barry advised that he had removed some spore from the list published in the June 1998 Newsletter. The spore are still around but not officially listed. Barry writes that he finds a drop off in viability after a couple of years and therefore generally delists the spore unless he can do a viability test.

In the list below, after each species, the month and year of collection is shown. The letter "B" indicates collected in the bush. The area of collection is available on request. Requests for spore should be accompanied by a stamped addressed business-size envelope.

*Asplenium australasicum* 5/98, *A. milnei* 9/97 B, *Blechnum camfieldii* 10/97, *B. chambersii* 5/97 B, *B. howeanum* 9/97 B, *B. minus* 4/98 B, *B. nudum* \*\*, *B. patersonii* 3/98 B, *B. wattsi* 5/97 B, *Calochlaena dubia* 5/97 B, *Christella hispidula* /98, *Cyathea australis* 5/97 B, *C. cooperi* 'Brentwood' /98, *C. cooperi* 'Cinnamon' 1/98, *C. cooperi* 12/97, *C. howeana* 9/97 B, *C. leichhardtiana* 2/98, *C. macarthuri* 9/97 B, *C. robusta* 2/98, *C. woollsiana* 3/97, *Dennstaedtia davallioides* 2/98, *Histiopteris incisa* 5/97 B, *Hypolepis elegans* 9/97 B, *Lastreopsis acuminata* 5/98, *L. microsora* 3/98 B, *L. nephrodioides* 9/97 B, *Microlepia speluncae* 5/98, *Microsorium pustulatum ssp. howensis* 9/97 B, *Pellaea falcata* 5/97, *Platycterium bifurcatum v. willincki* 2/98, *P. bifurcatum ssp. willincki (wide)* 1/98, *Polystichum australiense* 5/98, *P. formosum* 5/97, *Psilotum nudum* 9/97 B, *Rumohra adiantiformis* 5/97 B, *Sticherus urceolatus* 5/97 B, *Todea barbara* \*\*.

### **BURRENDONG OPEN DAY**

Saturday 26th and Sunday 27 th September 1998 - this is the Open Day Weekend at the Burrendong Arboretum near Wellington, NSW. As an innovation this year, a number of walks and talks are being arranged in various displays of cultivated native plants. Peter Hind has agreed to conduct the section on Ferns growing in the 1,300 square metre Shade Area. Given recent good rains this should be a splendid time to visit the Arboretum ..... and learn more about ferns from our knowledgeable Leader!

### **AUSTRALIAN FERNS FOR SALE AT THESE LOCATIONS**

The nurseries listed below are known to be selling Australian native ferns and are willing to supply members on a retail basis. We would like to add other outlets known to carry a reasonable range of Australian native ferns. So that a more comprehensive list may be published in a future Newsletter, would you please let the Secretary have the details of any other outlets of which you are aware. The following information should be supplied: name, address and phone / fax number of nursery, brief details of the range of ferns for sale, and any other pertinent matters, including whether ferns are supplied by mail order. Those members with nurseries are particularly encouraged to take advantage of this opportunity of advertising ferns for sale.

### **QUEENSLAND**

Member, Rod Pattinson, P.O. Box 567, Rochedale South, 4123. Rod has a very large native fern collection and a small nursery selling native ferns. Many of the ferns are rare. Ferns sent by mail if required.

Member, Ian Wood, P.O., Walkerston, 4751.

**NEW SOUTH WALES**

Kanerley Farm Exhibition & Nursery, 204 Hinton Road, Osterley, via Raymond Terrace, 2324. Phone (049) 87 2781. A large range including rarer ferns.

Native Fern Nursery, 6 Bardess Road, Farmborough Heights, 2526. Phone 0242 71 6565. Specialising in Stags, Elks & Tree Ferns.

Palm Land, 327 Mona Vale Road, Terrey Hills, 2084. Phone (02) 9450 1555. It is a large palm nursery but also contains a large area devoted to ferns, many Australian.

Sydney Wildflower Nursery, Veno Street, Heathcote, 2233. Phone (02) 9548 2818. A range of mainly local ferns.

**VICTORIA**

Bush-House Nursery, conducted by member, Lorraine Deppeler. It is situated at Cobden Road, Naringal, Victoria. (Postal Address: P.B. Allansford, 3277) Phone (03) 5566 2331. The Secretary has a current list of ferns carried. In a recent note, Lorraine advised that mail orders have been quite successful with feedback indicating ferns arriving in good condition. Cartons will fit either 18 x 4" ferns or 12 x 6" ferns. Packaging and freight is \$7 per carton of 4", or \$12 per carton of 6". Tube sized plants can also be sent barerooted, but availability may be more limited. Prices: \$3 per 4" pot, \$5 per 6" pot and \$1 per tube.

Ferntastic Ferns, 272 Humffrey Street, Ballarat. Phone (03) 5332 1275. Member, Michael Healy, runs this small fern nursery as a hobby business. A variety of native ferns always available. People visiting the area are more than welcome to call but please phone in advance.

The Refernery, Amey's Terrace, Foster North, 3960. Phone (056) 89 1309. Range includes some cultivars. Most supplied in either tube, 4" and 6" sizes, or trays. The Nursery is a member and the Secretary has a current list of ferns carried.

**WHITE SPOTS AND PALE AREAS**

Contributed by Geoff Simmons

Platycteriums and birdsnest ferns are frequently grown in shadehouses and gardens. Unfortunately these ferns are often seen infested with the scale (*Pinnaspis aspidistrae*). These insects show up as tiny elongated white spots on the lower surface of birdsnest fronds and small pale areas as viewed from above the frond. Heavy infestation may result in faded fronds and in extreme cases its death.

What do members use to treat this disease? A systemic insecticide would seem desirable especially as the insects are on the under surface of the fronds. The application of a contact agent is difficult to apply effectively.

(Ed: We would be pleased to hear from any members who have had experience with this troublesome scale. Geoff pointed out that in case any member has been lucky enough to have not seen this pest, three excellent photographs of the infestation on birdsnest fronds are on page 65 of F.D. Hockings book 'Friends and Foes of Australian Gardens'.

#### **PLATYCERIUMS AND WATERING**

In the March 1998 Newsletter, members with experience in caring for Platycerium superbum, were invited to share their views on watering. A number of responses from members were published in the June 1998 Newsletter. Lorraine Deppeler of Allansford, Victoria, has provided this further comment:

*"I am currently growing Elkhorns (Platycerium bifurcatum) from spore. This is a very slow process in southern Victoria. I have found them to be much more tolerant of our cold wet winters than Staghorns (Platycerium superbum). I have mature Elkhorns in the shade house and attached to trees that receive full winter rainfall and are exposed to frosts with no problems. They are protected to a degree by the tree canopy.*

*Staghorns are a different story. I find they survive winter better if placed under cover so they are protected from frost and rain. I only water them once every 2-4 weeks during winter. When the weather warms up, I hang them in the shadehouse and water more frequently."*

#### **STAGHORN FERNS FOR FLORIDA**

By G.Hennen and B.Tjia

*(Below is an extract from Fact Sheet ENH-36, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agriculture Sciences, University of Florida. The Fact Sheet appeared in "Fern World" February 1998, published by the San Diego Fern Society, from which this report was taken.)*

Staghorn ferns are members of the fern family, Polypodiaceae, and belong to the genus Platycerium. Eighteen species are presently recognized along with many varieties and hybrids.

Platycerium are tropical plants native to the Philippines, Southeast Asia, Indonesia, Australia, Madagascar, Africa and South America. In their native habitat they thrive as epiphytes, generally found growing on tree trunks, branches, or rock out-croppings.

This assumes a support system, air circulation, and bright subdued light while the tropical rains provide plenty of moisture during most of the year. Nutrients are provided by rain water washing the material off of the branches and transplanting it to the root area.

Staghorns are valued for their highly variable and unusual growth habits. The plant produces two distinctly different fronds, (a) basal and (b) foliar. Basal fronds, often called

“sterile fronds” are composed of rounded thickened fronds (foliage) growing in layers with the basal half clasping the substrate. Upper parts of basal fronds may be lobed or divided and stand erect, forming an efficient method for collection of water, fallen leaves, and other humus producing forest products. These products eventually breakdown, releasing nutrients necessary for growth of the fern. Foliar fronds, also called “fertile fronds” are either erect or pendent and may be divided into lobed or strap-shaped divisions. Foliar fronds have a reproductive function forming patches of rust colored sporangia on the underside of the fronds which contain the spores. Both basal and foliar fronds are covered to varying degrees, with small stellate (star-shaped) hairs giving them a silvery cast. These hairs provide some protection from insect pests but also function as well in moisture conservation.

### **Care and Culture**

Due to the staghorn ferns; epiphytic (non-parasitic) habit, they require an organic matter such as a loose, well-drained potting medium for proper cultivation. Spagnum moss alone or as a mixture with other materials (bagasse, tree fern fiber, leaf mold) make an excellent medium for staghorn ferns.

Because of their relatively large size, staghorn ferns are rarely grown in pots except when small specimens are produced. Utilizing their natural growth habit, staghorn ferns are well suited for mounting on cypress wood or tree fern fiber plaque or wire baskets. To mount a fern on a slab of wood, place a few handfuls of growing medium on the wood slightly below center, shaping it in a circular mound. Place the fern on the medium so the bud is slightly below center of the mount and basal fronds are in contact with the medium. Using wire (not copper) or plastic stripping, secure the fern tightly to its mount. This same method is also used for tree fern fiber plaques. Wire baskets can also be used when packed with medium and hung so the top of the basket is vertical. The fern is secured to the basket using wire or plastic stripping. Clay pots can also be used if hung sideways.

Remounting to larger containers will be needed periodically as the fern grows. How often these are remounted depends on the size of the original mount, rate of medium breakdown, and growth rate of the fern. When the basal fronds reach the side of the mount, its time to place the fern on a larger mount. If the staghorn becomes too large, it may become impractical to remove the fern from its mount. In this case, enlarging the original mount periodically is suggested.

### **Watering**

The greatest number of problems in growing staghorn ferns results from improper watering practices. Sufficient time must be allowed for the medium to dry out between waterings. Don't be misled. Outer layers of the medium may look dry while the spongy inner layers of the medium and basal fronds are still saturated with water. Many commercial growers allow the moss at the bottom of the mount to dry before watering, while others watch for signs of slight wilting. The frequency of watering is dependent on the size of the fern compared to its mount. Large overgrown ferns require frequent

watering. Generally, water thoroughly one to two times a week during warm weather and reduce the frequency of during cloudy or cool weather.

### **Fertilizers**

Water-soluble fertilizers with a 1:1:1 ratio (101010, 202020) produce excellent growth when used according to directions. Fertilize monthly during warm weather and every other month when growth slows down. Use of fish emulsion or blood meal is often recommended. However, today's commercial growers successfully use more convenient and economical water-soluble fertilizers. Some growers mix small amounts of dry fertilizer in their potting mix before mounting and then periodically supplement it with water-soluble fertilizers during the growing season.

### **Light**

Staghorn ferns thrive best under shade or partially shaded conditions. Light intensities of 1,000 to 2,000 fc (10.7 - 21.4 K lux) are ideal, but they will grow with a minimum of 600 fc (6.4 K lux). Very low light conditions produce slow growing ferns and are likely to encourage development of disease and insect problems.

### **Temperature**

Most staghorn ferns are considered tender or semi-tender and will not tolerate temperatures below 55 degrees F (12.8 degrees C). There are exceptions such as P.bifurcatum, which can withstand temperatures as low as 30 degrees F (1.1 degrees C). South Florida growers will have relatively few occasions when cold protection is needed and merely moving ferns inside a garage will be adequate for central and north Florida or south Florida growers with large ferns, greenhouse-like structures with some heat source is required.

### **Insects**

Staghorn ferns have few insect pests. However, a single infection can spread rapidly. The insect pests to watch for are mealy bugs, hard-brown and white scale. Insecticides are effective against these pests but may cause serious burns or deformities to the foliage. Generally non-oil based insecticides are safer on staghorn ferns than oil-based compounds. Other pests such as snails or slugs can be a problem but are easily controlled.

## **SUGAR AND TREE FERNS**

Contributed by Geoff Simmons

Recently an ABC Garden Session presenter, suggested that an application of a teaspoon of sugar to a treefern was beneficial for growth. Have any members used this technique and if so what were the results?

Three methods come to mind on how this may apply if it does.

1. Direct absorption through foliage.
2. Take up of sugar directly through root system.
3. Stimulation of fungi and other micro-organisms, resulting in breakdown of organic

matter causing the release of nutrients, or, alternatively changing the pH to a more favourable one for the fern.

As Dicksonia and Cyathea have different modes of growth, if growth enhancement does occur, how universal is it?

## SOUTH EASTERN QUEENSLAND REPORT

Contributed by Irene Cullen

### Report on Outing to the Bellthorpe Area, 5 July 1998

The private property we visited was delightfully named "Our Side of the Mountain". Our genial hosts were city folk enjoying their retirement there. As the name suggested the property was on a gentle slope on the mountain side with a creek running through. Scrub had been cleared on the slopes for cattle grazing. Our first walk was along the lower part of the creek, delighting us with the diverse species of fern found growing there. After lunch we drove back up the road and scrambled up a steep gully and more names were added to our list. Following is the list compiled by Lorna Murray.

Adiantum aethiopicum, A. formosum, A. hispidulum, A. hispidulum subsp. whitei, Arachniodes aristata, Asplenium australasicum, A. attenuatum, Blechnum cartilagineum, Calochlaena dubia, Cheilanthes distans, C. sieberi, Christella dentata, Christella parasitica, Cyathea cooperi, Davallia pyxidata, Deparia petersonii ssp. congrua, Doodia aspera, D. caudata, Drynaria rigidula, Hypolepis glandulifera, H. muelleri, Macrothelypteris torresiana, Ophioglossum pendulum, Platynerium bifurcatum, P. superbum, Psilotum nudum, Pteridium esculentum, Pteris tremula, Pyrrhosia confluens, P. rupestris, Pellaea paradoxa.

### Report on Outing to Bald Knob on 2 August 1998

Contributed by Merle Gynther

The six members who ventured out to the Simpson's property on a cloudy showery day, had a real treat to follow. Four explored the gully system while the other two investigated the slopes above. The varied flora of the area is influenced by its geology. The rich soils of the Mapleton - Maleny Plateau, Bald Knob, etc., are derived from basalt lava flows of about 25 million years ago. The rainforest on these rich soils was largely cleared for dairying etc. one hundred odd years ago, while the eucalypt forests on the relatively infertile soils of the ridges at lower altitudes remain uncleared. During the gradual erosion of the basalt cap over the last 25 million years, the gullies below have been cut down to the underlying Landsborough sandstones, formed approximately 200 million years ago. So we had the unusual experience, for southeastern Queensland, of finding ferns growing in some parts of the creek on moist sandstone cliffs, as well as in other parts of the creek.

Peter Bostock located all the expected filmy ferns, mostly in the higher, narrower and darker sections of the creek gully. These were Crepidomanes walleri, Gonocormus saxifragoides, Microgonium bimarginatum, and Microtrichomanes vitiense.

Other ferns seen included: *Adiantum diaphanum*, *A. silvaticum*, *Arachniodes aristata*, *Arthropteris beckleri*, *A. tenella*, *Asplenium attenuatum*, *A. australasicum*, *Blechnum cartilagineum*, *B. nudum*, *B. patersonii*, *Calochlaena dubia*, *Cheilanthes* sp., *Christella dentata*, *Cyathea cooperi*, *C. leichhardtiana*, *Diplazium australe*, *Doodia aspera*, *D. caudata*, *D. heterophylla*, *Hypolepis muelleri*, *Lastreopsis munita*, *L. marginans*, *L. smithiana*, *Deparia petersonii* ssp. *congrua*, *Microsorium scandens*, *Ophioglossum pendulum*, *Pellaea falcata* var. *nana*, *Platycterium bifurcatum*, *P. superbum*, *Psilotum nudum*, *Pteridium esculentum*, *Pyrrosia confluens*, *P. rupestris*, *Sticherus flabellatus*.

The excursion ended with the good company of our hosts, overlooking their panoramic view of Mount Mallum and the Glasshouse Mountains - a great outing.

## SYDNEY REGION REPORT

### Report on Meeting at Kenthurst, 21 June 1998

Based on notes provided by Joan Moore

The meeting was held as scheduled at the home of Betty and Eric Rymer. Eric's recent illness was of concern to his many friends. We were pleased to note his usual good spirit and dry humour as hopeful signs of progress towards recovery.

Peter led the study session on *Diplazium* species, indicating at the outset that 'Ferns of Queensland' by Bruce Andrews contained the best key. To that key, *Diplazium melanochlamys*, from Lord Howe Island, needed to be added. This is a Lord Howe endemic fern with 2 to 3 pinnate, tufted fronds. It grows to around 1.2 m. tall by about 2 m. wide and given a shaded position, adapts readily to most soils.

In N.S.W., we have *Diplazium assimile*, *D. australe* and *D. dilatatum*, all three have tufted rhizomes and broad, semi-erect, arching fronds. Each is well represented in cultivation. *Diplazium australe* likes wet conditions. So does *D. dilatatum*. Dry winds, hot or cold, damage all ferns, but especially these two. *D. dilatatum* somewhat resembles *D. esculentum* the spreading fern from the Asia and the Pacific Islands, but *D. dilatatum* does not spread so aggressively. Both *D. australe* and *D. assimile* have smaller lighter green ultimate segments than *D. dilatatum*. The secondary rachises are much darker at the junction with the main rachis in *D. assimile* than in *D. australe*, and its sori are only up to 1 mm. long.

Superficially *Diplazium assimile* is similar to *D. queenslandicum* from northeastern Queensland, but it has shiny rhizome scales (not dull dark scales) and inconspicuous sori (not conspicuous sori). Peter emphasised that keys are based on mature plants.

No one at the meeting is growing the *Diplazium* species with anastomosing veins, *D. cordifolium* and *D. dietrichianum*. The first of these, *D. cordifolium* from northeastern Queensland has a very restricted distribution in Australia, it is widespread in southeastern Asia, Malesia and Melanesia. A tufted fern it has usually simple, entire fronds and a

proliferous bud at the base of the lamina. Peter mentioned that there is plants of *D. dietrichianum* growing in the Pyramid Glasshouse in the Royal Botanic Gardens, Sydney. Its Australian distribution is confined to northeastern Queensland and Andrews states that it "could be regarded as a variety of *D. esculentum*." It does not spread aggressively and it forms more or less woody trunks, unlike the fleshy, mostly creeping *D. esculentum*.

*D. esculentum* was not recorded as a naturalised escape in the Flora of N.S.W. but according to Peter, it is spreading in the wild around Gosford. No doubt this started from someone throwing a piece away in bushland. Incidentally, it is resistant to Roundup/Zero.

Peter said he had not seen *D. pallidum* or *D. sylvaticum*, both recorded for northeastern Queensland, even in the wild.

The session concluded with discussion regarding the eating of ferns. In some countries, the new growth of *D. esculentum* is reportedly eaten raw in salads and as a cooked vegetable. Our leader warned that most if not all ferns are carcinogenic if not outright poisonous, even when cooked. He noted that animals generally do not eat ferns, when they do it often proves fatal.

#### **Report on Meeting at Gladesville, 16 August 1998**

Sixteen members braved heavy rain to attend the meeting kindly hosted by Joan Moore. In general business, Kyrill reported on a recent purchase of ferns from the Bush-House Nursery in Victoria. He described the conditions of ferns as excellent and praised the Australia Post delivery. After Joan reported on the Group's financial position, it was agreed that from the proceeds of raffles, \$500 be donated to the Burrendong Arboretum.

Peter led discussion on the genus *Colysis*. This was largely a reiteration of matters discussed at our previous look at *Colysis* at our March 1994 meeting. There are 30 species world-wide but only two species in Australia. Peter brought both of these, *Colysis ampla* and *C. sayeri* to the meeting. He briefly explained the obvious differences between the two ferns, *C. ampla* being much the larger and a far more glossy fern. Most difficulties in identification probably arise because of the superficial resemblance of *C. sayeri* and *Microsorium scandens*. However, the fertile fronds are quite different. On *Colysis* the sporangia in elongated sori is in a line along or at least very close to the veins. *Microsorium* species have large conspicuous rounded sori. A look at the stipes of the two ferns disclosed another apparent difference. Stipes on *Colysis* are always winged except for a very short space close to the rhizome. On the other hand, *Microsorium* have a longer bare section of stipe. Peter explained that in practice, identification was only a problem in cultivation when the source was not known. In nature the distribution of the two ferns does not overlap. *Microsorium scandens* is not present in North Queensland while neither *Colysis* extends to N.S.W. Although described as the "Fragrant Fern" the fragrance of *Microsorium scandens* is elusive to some noses. On the day, the wet fronds of the *Microsorium scandens* were hardly even faintly fragrant. However, the dried frond produced at the meeting by Kyrill, provided proof of fragrance and apt naming.



Silhouette of *Coveniella poecilophlebia* Hook (Tindale). The fern was collected in a rainforest area of the Conway Ranges, near Airlie Beach, Queensland. This fern is not often seen in Sydney and it puzzled the collectors. It was readily identified by our Leader. Incidentally, Robert Coveney, commemorated in the naming of "Coveniella", is one of Peter's work mates and a former Leader of our Group.

**FORTHCOMING EVENTS : IN SOUTH EAST QUEENSLAND**

Saturday & Sunday 12-13 September 1998, Exhibition

SGAP Annual Flower Show. Set up on Friday 11 September for our display.

Sunday 4 October 1998, Outing to Cunungra

Excursion to the Curtis Property. Meet 9.30 am at the Memorial Park in Cunungra.

Saturday 31 October & Sunday 1 November, Outing to Mt. Warning-Area

Weekend in the Mt. Warning area via Murwillumbah. Meet 1 pm at the Mt. Warning Caravan Park for first walk. Intending participants to make their own accommodation arrangements at a motel or camping ground for Saturday night. Please let either Peter Bostock (07) 3202 6983 or Geoff & Merle Goadby (07) 3374 1946 know if you are coming or need further information..

Sunday 6 December 1998, End of Year Get-together

Meet 9.30 am at Val Jimmieson's home, 55 Foxglove Street, Mt. Gravatt for our end of year break-up. We need lots of ideas for next year's programme. Also bring a suitable Fernie Gift for our end of year swap.

For information regarding South East Queensland Fern Study, please contact Peter Bostock phone (07) 3202 6983 or Irene Cullen on (07) 3273 1055.

**FORTHCOMING EVENTS : IN THE MID NORTH COAST, NSW.**

For details of the above events contact Charlie Charters, phone (065) 86 1088.

**FORTHCOMING EVENTS : IN THE SYDNEY REGION**

Saturday 19 September 1998 Outing to Mt. Katandra - Area

A day of short relatively easy walks. We will begin at Seymours Pond and meet there at the car park at the end of Katandra Road. From Sydney: leave the Freeway at Somersby. Proceed towards Gosford along the Pacific Highway, turn right and pass through East Gosford, take The Entrance Road, then left into Carlton Road, right into Milina Road, and shortly left into Wattle Tree Road and left into Katandra Road. From Newcastle: leave the Freeway at Ourimbah. Proceed towards Gosford along the Pacific Highway for 1.5 km, after crossing railway bridge turn left to McDonald Road, then right to The Ridgeway, right to Paroo Road, right to Wattle Tree Road and right to Katandra Road. Bring lunch and water if required. If weather doubtful or other enquiries contact Dot (02) 4367 6368.

Sunday 18 October 1998, Meeting at Como West

Meet at the Woollett's home 3 Currawang Place, Como West. Arrive from 11 am. Formal business and study session 'Blechnums Revisited' begins at 1 sharp. The cameo "A Favourite Fern" will be presented by Allan Woollett. Bring lunch and plate for afternoon tea. Enquiries to Moreen (02) 9528 4881.

Saturday 14 November 1998 Outing to Pierces Pass

Travelling from Sydney along the Bells Line of Road, turn left at sign to Pierces Pass and drive to the car park furthest from the highway. Meet near car park from 9.30 for 10 am start. Walk involves short but steep descent. Bring lunch and water if required. In case of doubtful weather or for other enquiries contact Peter (02) 9625 8705.

Sunday 6 December 1998 End-of-Year Function at Kenthurst

Tamara and Ian Cox have again kindly agreed to host our get-together at their home at 5 Ivy Place, Kenthurst. Please contact Tamara (02) 9654 2533 as early as possible before the day to advise what you will bring towards the pooled lunch. Bring own crockery and cutlery and the traditional festive season gift (limit \$5) or several according to the number in your party. Arrive from 11 o'clock.

**DEADLINE FOR COPY**

Contributions to the Newsletter are more than welcome - the success of the Newsletter (and its size) depends upon them. Our thanks to those who contributed articles to this edition. Copy for the December issue should be forwarded to reach the Secretary by no later than 15 November 1998.

\*\*\*\*\*

If undelivered return to:  
3 Currawang Place  
COMO WEST NSW 2226

Print Post Approved  
PP245358/00018

**SURFACE  
MAIL**

**POSTAGE  
PAID  
AUSTRALIA**

**Mr R & Mrs S Backhouse  
Old Mt Sampson Road  
Closeburn  
Queensland 4520**