



ASSOCIATION of

S.G.A.P. Fern Study Group

Newsletter *Number* 83

ISSN 0811-5311

DATE - DECEMBER 1998

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VALE ERIC RYMER

We extend our deepest sympathy to Betty, his wife and constant companion, and to the Rymer family. Eric Rymer passed away on 30 September after some months battle with a disease that caused him great pain. Eric was 74 and until recent meetings was a regular participant at Fern Study functions. For many years floral displays at SGAP Exhibitions benefited from the formula that Eric devised to extend the vase life of flowers and ferns. We greatly miss Eric's cheerful manner, wit and the wisdom contained in his quiet, philosophical comments about life.

PROGRESS TOWARDS COMPLETING "THE BOOK"

The saga continues! "Our Book" on Australian native ferns has had an extraordinarily long gestation. If we had succeeded in our earlier attempts to have it published, it would now be dated!. However, we are confident that readers will realize that, most importantly, the delay resulted in an excellent, authoritative book - "Australian Native Ferns - Growing Them Successfully". At the time of finalising this Newsletter we were not able to obtain the scheduled time of the books printing and release. But the memorandum of agreement has been signed with the publisher and the final editing and foreword completed.

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. 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.

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.milne 9/97 B, Blechnum camfieldii 10/97, B.chambersii 5/97 B, B.howeana 9/97 B, B.minus 4/98 B, B.nudum **, B.patersonii 3/98 B, B.wattsii 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, Platynerium 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 **.

GROWING FERNS FROM SPORE

Contributed by Rose Bach

In my method of growing spore, use is made of clear plastic take-away food containers.

- The plastic containers are soaked in bleach overnight.
- I mix equal parts of sand and peat moistened with water. Place this mixture in a strong plastic bag, seal and then place the bag on an ice cream container for support. Sterilise in a microwave oven on full power for half an hour. Allow to cool.
- Soak three or four water crystals in sterilised water until swollen.
- Drain the plastic containers well and in them place the three or four water crystals. Cover with peat mixture so that it fills about one third of the depth of the container. Spray with sterilised water until moist.
- Place a very small amount of spore on the tip of a sterilised knife and carefully tap until the spore is evenly spread over the mixture. Spray again with sterilised water and place the lid on tightly so that it is sealed.
- Label the container. In the past I have found that many methods of labelling wore off or quickly faded. I now write the name of the fern and the date on white electrical tape attached to the container.
- The containers are stacked three or four high in an enclosed area of my fernhouse and left for as long as it takes for the spore to germinate. I have plants in one container

starting to grow after about five years, some others after two or three years. They generally start to grow after three or four months.

- The sporelings are left in the containers until tall enough to place as clumps in trays. The trays are covered with clear cling wrap until the plants are strong enough to be thinned out and planted in small pots.

SPORE GROWING "Keith's Way"

Contributed by Keith Rogers

Generally spore propagation is easy, the following is a simple version of how to grow practically all species of ferns from spore in the home. The more technical botanist method is a very useful guide in addition to the following.

The Mix: I use a 50 - 50 mixture of fine cut peat moss and gritty washed sand as the base mix. The addition of charcoal up to 1 / 4" (6 mm) is beneficial. To two litres of dry mix in a larger container, pour one litre of boiling water over the mix and cover with a plastic wrap. Then sterilize the mix using a 700w microwave for 12 min.

Open the windows and hope no visitors arrive, it smells a bit!

Containers: I use 500 g margarine containers, washed in hot soapy water and then soaked in 10% chlorine bleach and dried. Label the containers and fill with a level 10 mm of mix. I use a flattish spoon type ladle from the kitchen. Allow the mix to cool a bit and only use fresh mix.

Add the spore: The easy way to gain an even spread of the spore is to add the spore to a small amount of water in a small plastic spray bottle, shake and spray on to the mix, although this may add too much water to the container. Another is to use a knife, picking up the spore and by tapping the knife so as to evenly spread the spore. I then cover with two layers of plastic wrap and hold in place with a rubber band.

Where to grow it: Place the container in a dry warm, well lit position out of direct sunlight. Check for drying out, about monthly in summer and two monthly in spring and autumn. Add small amounts of boiled water if they are drying out, by spraying gently with a fine mist.

What you are trying to do: "The spore will grow into a small green prothallus. On the prothallus, but unseen, will grow an archigonium (female) and an antheridium (male). If the humidity and temperatures are correct, the sperm in the antheridium will swim through the moist areas of the prothallus and fertilize the female egg in the archigonium".

How long?: It may take from weeks to months for the green prothallus to appear. Sporelings may take six weeks to six months to develop or even longer.

Patience is a virtue!

Pricking out: When sporelings are from 1/4 to 2" (6 - 50 mm) high, these are then gently removed, either by using a sharp knife (to tease apart the roots) or tweezers, and placed into their next growing medium.

Mix: I prepare the same two litres of mix using as before and adding 1/2 litre container of perlite and 1/4 litre of 6 mm (1/4") diameter charcoal. I use 1/4" tube trays, but not larger than 1/2" (50 mm) diameter.

Growing on: Still keep them under controlled conditions, i.e., under glass or plastic. This is the time I fertilize them with a high nitrogen fertilizer, say, N.P.K. of 20-14-18.

Hardening off: After the sporelings have grown on, you can harden them off slowly by opening the container a bit at a time and letting in the outside atmospheres. This I find is safer in the Spring or early Autumn away from the extremes of the heat and cold. They can be repotted into 70 - 100 mm pots when they are approximately 50 - 80 mm high or have roots growing out of the bottom of tubes.

Problems: The main things to consider are the light factors, too much and moss and liverwort will grow quicker than the ferns. It is better to have too little light and take a bit longer. Another thing is hardening off. Do not be too impatient; allow them to get used to the outside environment slowly.

Happy ferning.

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. Please advise any supplementary data or corrections if relevant

QUEENSLAND

Nielsen's Native Nursery, 49-51 Beenleigh Redland Bay Road, Loganholme, 4129. Phone (07) 3806 1414. Fax (07) 3806 1706. Australian native ferns include *Angiopteris evecta*, *Todea barbara*, *Cyathea cooperi* and *Blechnum indicum* to name a few.

Member, Rod Pattison, 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.

Rathie's Rare Plants, Lot 5 Salston Road, Greenbank, 4124. Phone (07) 3200 0268. Email: krathie@powerup.com.au. Member Kerry Rathie sells virtually all native ferns including mutant forms of some species. No mail orders but if unable to collect, contact Kerry regarding possible visit to your area.

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

NEW SOUTH WALES

Kanerley Farm Exhibition & Nursery, 204 Hinton Road, Osterley, via Raymond Terrace, 2324. Phone (0249) 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**1.**

Contributed by Rod Pattison

Geoff Simmons drew attention in Newsletter No. 82 to the white louse scale which attacks Platyceriums and birdsnest ferns. The pest attacks Aspleniums generally and sometimes other ferns.

The recommended insecticide to combat this pest is Lime Sulphur. However, care must be taken not to use it during high temperatures as it will burn young fronds. Spray twice during the winter months, ten days between sprays.

A better method of combating white louse scale is to use Rupracide. This insecticide does not burn young fronds and can be used throughout the year. My programme of spraying is :

Staghorns: Prune infected antlers late winter and spray paying particular attention to the older brown nest fronds from which the scale emerges to attack new growth.

Elkhorns: Prune infected fertile fronds only when new season growth appears and spray.

Birdsnest Ferns: When the new growth appears, prune all the old fronds and spray the base heavily ensuring all the nooks and crannies are drenched thoroughly.

Other Asplenium Ferns: Prune all old infected fronds when new growth appears and spray paying particular attention to the tufted section of the rhizome where scale may remain.

The programme can be repeated again in 10 days.

2.

Contributed by Kerry Rathie

Diseases. Re comments on scale, pages 3 and 4 last issue. I use Rogor on all my ferns, have no scale and never suffered ill effect on any fern or orchid. Do not advise white oil, particularly in warm / hot climates. Pest oil (Ampol's DC Iron) would probably help and is much safer in warm climates. It seems to repel cockroaches, dendrobium beetles and many other pests (unlike white oil). It must taste or smell vile from their point of view.

PLATYCERIUMS AND WATERING

In the March 1998 Newsletter, members with experience in caring for Platycerium superbum, were invited to share their views on watering. Responses from some members were published in the June & September Newsletters. Keith Rogers, Mannum, S.A. has written as follows:

I have been growing Platycerium for some years now. I was somewhat amused at some comments made in this article. It apparently is common practice for the U.S. nurseries to reverse the common names of Stags and Elks to what we use in Australia. In the U.S. item, the clumping species P.bifurcatum is referred to as "Staghorns".

Southern Florida is a Sub Tropical area and possibly similar to Sydney. I was initially confused at the item's comments with P.superbum as being semi tender. It appears their common method of placing large amounts of sphagnum and peat moss behind the fern before mounting, leaves them prone to be overwet in the cold.

I grow all the Australian species P.superbum, P.bifurcatum, P.hillii, P.veitchii and the Mt. Lewis variety as well. The only one requiring the protection of a cold glasshouse in winter is P.hillii. All the others are happily growing under 70% shadecloth, but kept very dry in winter.

Mannum, is on the River Murray, at the edge of the arid zone some 100 km north of the southern ocean. The minimum and maximum temperatures are -5C to 48C. with 250 mm rainfall. Fortunately the extremes only last for short periods of time, far shorter perhaps than Southern Victoria. With an average in the 10C. to 38C. range, these unbelievable epiphytes thrive with added moisture.

Those members who live in the Southern States can grow them easily, providing they have covering from the rain during the winter cold. Alternatively it will be more beneficial if there is full protection.

Kerry Rathie of Greenbank in Queensland, has provided this further comment:

"I water all species all year, but less in winter, may be once a fortnight. Have had mature stags and Elks on trees defoliated by severe frosts, but not killed; -8 degrees or so. Elks in a bushhouse get watered every two days, summer and winter and I have never seen any ill effects. But our cold nights are followed by warm days, even in winter. Have no frost damage to elks or stags that are in either my bushhouses, or in my rain forest area."

SUGAR AND TREE FERNS (& LIME IN POTTING MIX)

In our previous Newsletter, Geoff Simmons mentioned hearing an ABC Garden Presenter say that an application of a teaspoon of sugar to a treefern was beneficial for growth.

Our Leader said he was aware that some growers apply sugar around the roots of orchids to promote growth. Peter was not aware of anyone doing so with ferns. He wondered whether sugar would attract ants. If applied in a liquid solution, Peter suggested that the sugar would need to be dissolved in plenty of water. In theory, use of a concentrated sugar solution could cause problems. As the sugar (and starches) are broken down they would be turned into nitrogen. Plants use nitrogen to build foliage. Cells in the foliage expand and make the fern appear lush. Too much nitrogen causes weak stems and sensitivity to changes in temperature. Peter suggested that it would probably be preferable to simply use one of the many nitrogen based liquid fertilizers.

Bern Dempsey of Glen Waverley in Victoria, has written as follows:

"Regarding Geoff Simmons reference to the sugar on ferns, we have used it for some years on a Cyathea. I put a spoonful of brown sugar on the croziers as they were emerging in September and now (13 November) the fronds measure about 4'9" (150 cm). There are about 14 fronds. This is no proof that the sugar is beneficial but it does no harm. I would emphasise that we use brown sugar and not white purified sugar.

Whilst on broadcasters; I saw Burke's Backyard in about June and the recipe for fern potting mix included lime. I was not able to record the measurements of the mixture as I was visiting friends. Did any member make a note of the quantities? I have been experimenting with lime but have no definite conclusions, although nothing has died, so far."

Can anyone help Bern. Any informed comments regarding the use of lime in potting mix would be welcomed.

SOME FERNS OF MOUNT DROMEDARY

Contributed by Allan Woollett

Sutherland SGAP Group visited Mount Dromedary several years ago. Led by Gwen Harden, the rainforest trees, shrubs and vines were the main focus of attention. Unfortunately Moreen and I missed that trip. The Group returned with tales of the countless ferns and tormented Moreen and me with "You should have been there" statements. So, although it took many years we finally got around to climbing Mt Dromedary on 11 November 1998 - a day to remember with relish, appropriately, Remembrance Day.

The 806 m high Mt. Dromedary lies 13 km southwest of Narooma. The mountain is an isolated volcano core towering over the historic village of Tilba Tilba. Viewed from the sea the mountain resembles a camel. Captain Cook wrote in his journal for 21 April 1770 "We are abreast of a pretty high mountain laying near the shore which on account of its figure I named Mt. Dromedary".

We left our car at Tilba Tilba. The brochure told us the walk "takes about five hours". We took six - we walked quickly but evidently stopped more frequently than most walkers! Altogether a wonderful place. The ancient rainforest near the summit was dominated by large *Eucryphia moorei* and *Doryphora sassafras* covered with long green moss and lichen. The actual summit was clear of rainforest and filled by *Prostanthera* sp. with mauve flowers. But despite those attractions, the many ferns are the stand out feature. We recommend the walk to all reasonably fit members. The following ferns were identified without having to leave the path:

Adiantum aethiopicum, *A. formosum*, *Asplenium flabellifolium*, *A. flaccidum*, *Blechnum ambiguum*, *B. cartilagineum*, *B. nudum*, *B. patersonii*, *Blechnum watsii*, *Calochlaena dubia*, *Christella dentata*, *Cyathea australis*, *Dennstaedtia davallioides*, *Dicksonia antarctica*, *Doodia aspera*, *Grammitis billardieri*, *Histiotesis incisa*, *Hymenophyllum cupressiforme*, *Hypolepis glandulifera*, *Lastreopsis acuminata*, *L. decomposita*, *L. microsora*, *Microsorium diversifolium*, *M. scandens*, *Pellaea falcata* var. *falcata*, *Pellaea falcata* var. *nana*, *Polystichum proliferum*, *Polyphlebium venosum*, *Pteridium esculentum*, *Pteris comans*, *P. tremula*, *Pyrrosi rupestris*, *Sticherus lobatus*, *Tmesipteris parva*, *Todea barbara*.

SOUTH EASTERN QUEENSLAND REPORT

Contributed by Merle Gynther

Report on Outing to 'Glen Witheren', Canungra, 4 October 1998

We had a beautiful, warm Spring day for our outing and the silky oaks (*Grevillea robusta*) along Canungra Creek were bursting into flower. Canungra Creek rises in Lamington National Park. The property, 'Glen Witheren' has been in the same family since 1902. Although it is an active grazing property, the lowland rainforest is a valued area in which the native flora and fauna are protected.

This was a long awaited outing as several scheduled visits have had to be cancelled because of the long succession of dry periods over the last 10 years or so. This year, regular periods of light rain have maintained the ferns. We sighted most of the ferns on the list from 1986 and added one new species. Lush banks of Asplenium attenuatum leading down to the creek were an interesting feature.

Other ferns seen included: Adiantum atroviride, A. formosum, A. hispidulum, Arthropteris tenella, Asplenium australasicum, Caloclaena dubia, Cheilanthes distans, Davallia pyxidata, Doodia aspera, D. caudata, Lastreopsis decomposita, L. munita, Pellaea falcata var. nana, P. paradoxa, P. ?, Platynerium bifurcatum, P. superbum, Pteridium esculentum, Pteris tremula, Pyrrosia confluens, and P. rupestris.

Report on Outing to Mt. Warning Area, 31 October / 1 November 1998

Fifteen members and guests, including five members from New South Wales, met near Mt. Warning on Saturday, after some incipient confusion about when it might be 1 pm.! Weather remained fine, and a good weekend was had by all.

We were encouraged by the number of ferns found in the rainforest on the 200 m 'Lyrebird Track' and between the last section of road and the nearby creek. On Sunday we examined fern habitats near the Clarrie Hall Dam, and in the afternoon, some of us started to explore the road through Nullum State Forest.

At the end of road to the foot of Mt. Warning, there was much discussion on the identification of the epiphytes, high up on tree trunks. One member thought there was a Schellolepis species up there, but in the absence of a bird's eye view its identity must remain a mystery. Some members found the Doodia species to be of great interest. We noted both D. aspera and D. caudata with tails on the initial pinnae. At Clarrie Hall Dam, several forms of D. media were noted. As a bonus, a Richmond River Birdwing Butterfly delighted us at Mt. Warning.

An interesting weekend, and clearly there are many other fern areas for us to explore in Far Northern New South Wales. Ferns listed are shown below.

Mt Warning: Adiantum diaphanum, A. formosum, A. hispidulum, Arachniodes aristata, Arthropteris beckleri, A. tenella, Asplenium australasicum, A. polyodon, Blechnum patersonii, Christella dentata, C. hispidula, Cyathea cooperi, C. leichhardtiana, Davallia pyxidata, Dennstaedtia davallioides, Diplazium assimile, D. australe, Doodia aspera, D. caudata, Drynaria rigidula, Hypolepis glandulifera, Lastreopsis decomposita, L. marginans, L. microsora, L. munita, Microsorium scandens, Nephrolepis cordifolia, Ophioglossum pendulum, Pellaea falcata var. falcata, Pellaea falcata var. nana, Platynerium bifurcatum, P. superbum, Polyphlebium venosum, Pteridium esculentum, Pteris tremula, P. umbrosa, Pyrrosia confluens, P. rupestris.

Clarrie Hall Dam: *Adiantum aethiopicum*, *A. formosum*, *A. hispidulum*, *A. silvaticum*, *Arachniodes aristata*, *Asplenium attenuatum*, *A. australasicum*, *Azolla filiculoides*, *Blechnum cartilagineum*, *Calochlaena dubia*, *Christella dentata*, *Cyathea australis*, *C. cooperi*, *C. leichhardtiana*, *Davallia pyxidata*, *Dennstaedtia davallioides*, *Doodia caudata*, *D. media*, *Lastreopsis decomposita*, *L. marginans*, *Nephrolepis cordifolia*, *Pellaea falcata* var. *falcata*, *Platynerium superbum*, *Psilotum nudum*, *Pteridium esculentum*, *Pyrrhosia rupestris*.

Nullum State Forest: *Adiantum hispidulum*, *Blechnum cartilagineum*, *Calochlaena dubia*, *Cheilanthes sieberi*, *C. tenuifolia*, *Cyathea australis*, *C. leichhardtiana*, *Doodia aspera*, *D. caudata*, *Gleichenia dicarpa*, *Hypolepis glandulifera*, *Lindsaea microphylla*, *Sticherus flabellatus*.

MID NORTH COAST REPORT

Contributed by Steve Clemesha

Report on Outing Along Cooperook Drive, 4 & 5 April 1998

Our Group first visited Bruce Lane's Nursery at Dunbogan. He specialises in grafting *Grevilleas* and flowering gums (*Corymbia* sp - the bloodwoods). After this we started on the forest drive.

We reached Cooperook Forest Park where originally we had intended to camp. As it was early afternoon and the mosquitoes were plentiful and fierce, we decided to visit some of the other sites and camp along the way. Our next stop was Vincents Lookout. This is 330 metres above sea level and there are spectacular views of the Manning Valley and surrounding forest. It also is the site of a Telecom radio repeater station. The only fern there we saw was bracken so we drove on to Newby's Creek walk. The road follows the Landsdown Escarpment and there is a 20 minute walking track along the creek. This was a better place for ferns with *Gleichenias* on the wet rocks and a number of ground ferns as well as a few epiphytes. *Doodia aspera* and *Lastreopsis microsora* were present as were some large *Cyathea australis*. Along this creek a *Hakea* sp. allied to *H. trineura* from Queensland grows. It has a narrow distribution between Wauchope and Taree and is only found in a few places. The plants appeared to have been burnt since we saw them about 5 years ago and they had regrown from the base. The most interesting fern was *Tmespteris truncata* which was growing on a *Cyathea australis*

Newby's Lookout was another lookout from the edge of the escarpment. Again an interesting view and no ferns. We drove on to Starr's Creek picnic area. This is a rainforest area and ferns are numerous beside the road and near the creek. *Cyathea leichhardtiana* grew along the roadside with *Calochlaena dubia*, *Lastreopsis microsora* and *Lunathyrium petersenii*. We saw *Platynerium bifurcatum* and birds nest ferns in the trees but we did not see *Selenodesmium elongatum*. This recently was recorded from this creek - a big jump from the the areas north of Lismore where we usually see it.

We then drove to Big Nellie Mountain. This is a large volcanic plug that rises to 560 metres above sea level. We read that there are panoramic views of the Comboyne Plateau, Hannan Vale and the Landsdown Valleys. The climb was supposed to take about 20 minutes. This is probably a misprint for two hours. We walked until the vegetation started to thin out and some of the climbs became a bit "hairy" and then turned back. Ferns were few. *Lindsaea microphylla* was there. Plants of *Westringia amabilis* and *Prostanthera caerulea* grew there and also a nice red bottlebrush.

It was late in the day by this time so we camped the night at the picnic spot. We were not sure if it is allowed there but we did anyway. There were no mosquitoes or other nasties and next morning we found a few ferns beside the road but nothing rare.

Flat Rock Lookout was another scenic fernless lookout. Waitui Falls was our last stop. This had a range of ferns as waterfalls usually do. *Todea* and *Sticherus* grew near to the creek as did *Blechnum nudum*. We then left the area and drove to near Bird Tree on Middle Brother Mountain where we had lunch. Ferns are present in the area but there is not a good range of species.

The only disappointing part of the weekend was that only four of our members were present, those being Bea and Roy Duncan, Charlie Charters and myself. We hope for more next time.

SYDNEY REGION REPORT

Report on Outing to Katandra, 19 September 1998

Seven members and two visitors were on hand for a series of walks very kindly guided by three members of the SGAP-Central Coast Group. From the parking area, the track down the ridge passed through open forest to the rainforest bounding the moist gully. At that point we reached Seymour Pond. This man-made pond is filled by a natural water course and given the recent heavy rain was overflowing into Erina Creek. The morning walk commenced at Seymour Pond and passed through temperate rainforest. Apart from the ferns, there was considerable interest in the strangler figs and the numerous orchids. Our Leader once more amazed us by firstly spotting orchids invisible to others in the party and then providing instant identification, initially, often from a considerable distance. These orchids included the terrestrial *Pterostylis baptistii*. Oddly, two of the most frequently sighted ferns were *Adiantum silvaticum* and *Cyathea leichhardtiana*. These are by no means common on most of our other walks. Other ferns identified were *Adiantum aethiopicum*, *Asplenium attenuatum*, *A. australasicum*, *Blechnum cartilagineum*, *B. camfieldi*, *B. nudum*, *B. wattsi*, *Calochlaena dubia*, *Doodia aspera*, *Hypolepis muelleri*, *Lastreopsis acuminata*, *L. decomposita*, *L. microsora*, *Microsorium scandens*, *Pellaea falcata*, *Pellaea falcata* var. *nana*, *Platynerium bifurcatum*, *Pteridium esculentum*, and *Pyrrosia rupestris*.

The after lunch walk found two ferns not seen earlier, *Christella dentata*, and *Pteris tremula*. Our thanks is extended to the Central Coast members who gave up their day to show us the patch of bush and the regeneration work they have been performing

Report on Meeting at Como, 18 October 1998

Fourteen members attended on a hot day. After concluding a short business session. Peter led the study of *Blechnum*, a genus distinguished by having its spore arranged on each side of and against the midrib. On this occasion, the key shown in 'Flora of N.S.W.' was used to separate the 12 species native to NSW. This was supplemented by reference to several potted specimens that Peter brought to the meeting.

The first division separated species with sterile and fertile fronds similar. There are four species in this group and of those, *B.cartilagineum*, the species with sterile segments attached by broad bases, was the first to be identified. Of the other three, *B.indicum*, a species often found in salt marsh conditions, was separated on the basis of its erect fronds rising from an erect rhizome. The fronds on the other two ferns, *B.gregsonii* and *B.ambiguum*, are usually pendent and rise from a creeping rhizome. The fertile pinnae differ, on *B.gregsonii* the fertile pinnae are more than half as broad as the sterile pinnae. On *B.ambiguum*, the fertile pinnae are less than half as broad as the sterile ones. Peter reminded the meeting of the variability of the width of fertile fronds on *B.ambiguum* and said that this fern was presently under study.

Of the species with distinctly different fertile and sterile fronds, only one, *B.patersonii*, has fronds that are simple or one pinnatifid. Four species have sterile segments attached to the rachis by their broad bases. One of these, *B.fluviatile*, has sterile segments free from one and another for most of the length of the frond. Of the three species with sterile segments with decurrent bases one, *B.penna-marina*, has a long creeping rhizome. The specimen at the meeting, from the Coxs' garden, was a tasselled form, and it had a fertile frond. One of the two species with short creeping rhizomes, *B.nudum*, the much larger fern - lamina 35 to 120 cm long, has very rigid lamina and sterile segments with entire margins. Peter pointed out a feature of *B.nudum*, namely its pale midrib. The lower portion of the rachis - the stipe, was dark coloured and glossy. The other, *B.chambersii*, has a flaccid lamina (in NSW the lamina is mostly not more than 20 cm long), and with crenate margins on sterile segments. The rachis is usually straw coloured and not glossy.

Remaining are four species with sterile segments stalked at least in the lower half of the lamina. Two have basal pinnae only slightly smaller than the middle pinnae and they were separated according to features of the rhizome scales and width of fertile pinnae. On *B.wattsii* the rhizome scales are dark brown to black with a pale border and the fertile pinnae are only 2 to 3 mm wide. Those scales on *B.ambiguum* are brown to reddish brown and the fertile pinnae are 3 to 10 mm wide.

The basal pinnae are much reduced in size on *B.minus* and *B.camfieldii*. On the former, the lower most sterile pinnae are 5 to 15 mm long and circular. This feature was hardly discernible on the specimen at the meeting but another feature, widely spaced lower

pinnae, was quite evident. The lowermost sterile pinnae on *B. camfieldii* are mostly over 20 mm long and are ovate to lanceolate. A trunk usually forms in older plants.

The meeting concluded with discussion about the identification of *Christella dentata* and *C. hispidula* using the sometimes conflicting information contained in 'Australian Ferns and Fern Allies' by Jones & Clemesha and 'Ferns of Queensland' by Andrews.

Report on Outing to Pierces Pass, 14 November 1998

The day was fine although overcast with eight members in attendance. Our Leader was absent and while we waited and reorganised our command structure, the parking area filled with the cars of guests, and of the bride and groom, preparing for the hike to the wedding service being held at the, not so nearby, Mt Rigby.

Adjacent to the car parking area seven ferns were identified - *Asplenium flabellifolium*, *Blechnum ambiguum*, *Gleichenia microphylla*, *G. rupestris*, *Pteridium esculentum*, *Sticherus lobatus* and *Todea barbara*, before we made the fairly steep descent to the gorge and creek. At the bottom we were delighted by a myriad of ferns including three different small, filmy species and countless beautiful *Leptopteris fraseri*. Thriving in the moist, sheltered deep gorges and rock crevices, unfortunately, this lovely fern does not tolerate most garden situations. In the absence of Peter, we failed to find all 25 different species listed on our 1992 visit, but we did add one extra, *Lycopodium laterale*.

Apart from the ferns, the day was memorable for the time spent close to the parking area enjoying a host of Spring-flowering plants and the stunning mountain scenery.

FORTHCOMING EVENTS : IN SOUTH EAST QUEENSLAND

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.

Sunday 7 February 1999 . Meeting at McGregor

Meet 9.30 am at Pat Shaw's home, 12 Whitehall Street, McGregor.

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

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.

Sunday 21 February 1999 Meeting at Yagoona

At the Taylor's home, 16 Elizabeth Crescent, Yagoona. Arrive from 11 am. Business and study session starts at 1 pm. Study will be suspended if Fred Johnston has the new Fern audio visual ready for previewing. Alternatively, 'Thelypteridaceae' is to be studied with text taken from Andrew's 'Ferns of Queensland'. Bring your copy if you have one. Kyrill will present "A Favourite Fern". Bring lunch and plate for afternoon tea. Enquiries to Kyrill (02) 9644 5531.

Saturday 20 March 1999, Outing to Somersby Falls

Meet in car park nearest the Falls at 9.30 am for 10 o'clock start. The walk covers only a short distance but is (at least it was on our last visit in 1990), full of ferns. A late lunch at cars should enable us to be ahead of most traffic returning to Sydney. If weather doubtful or for other enquiries contact Peter (02) 9625 8705.

DEADLINE FOR COPY

Contributions to the Newsletter are more than welcome - the success of the Newsletter depends upon them. Even a short comment adds interest. Our thanks to those who provided articles this edition. Copy for the next issue should be forwarded to reach the Secretary by no later than 15 February 1999.

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