



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

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LEADER: Phyll. Brown, 254 Edgar Street, Condell Park. 2200.  
SECRETARY: Moreen Woollett, 3 Currawang Place, Como West. 2226  
HON. TREASURER: Margaret Olde, 138 Fowler Road, Illawong. 2234.  
SPORE BANK: Sylvia Garlick, 3 Valleyview Cres., Engadine. 2233.

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Dear Members,

Time has passed all too quickly since the June newsletter in which I expressed my desire to step down as Leader, but it seems no member is interested in replacing me.

Viv and I had another trip to Cairns, our fourth, but always enjoyable. The worst was coming home to the terribly cold weather, and for the first time in twenty six years there was a light frost.

I was very pleased how well the North Queensland ferns, in our collection, survived the cold conditions, and only three native hoyas died, so I consider we are too protective of the North Queensland plants.

Again we missed meeting some of our Queensland members as it is very difficult to specify exactly what day we can be in a particular area. We greatly enjoyed a visit to Jo Edwards at Cairns, and Carol and Arthur Stroud at Deeral. Many thanks to Carol and Arthur for the large quantity of spore donated to replenish the spore bank.

Some members we wished to visit were involved with the Queensland State Conference and the post conference trip to Cooktown and Cape Flattery, and this coincided with our trip north.

All is in readiness for the 1986 Wildflower Spectacular to be held at Castle Hill Showground on 20th and 21st September. I hope many members will visit the show and meet other members involved. Remember there are four great prizes to be won in the raffle- 1st prize is a shade house, 2nd prize a mounted *Platycerium superbum* (staghorn fern), 3rd prize native plants, 4th prize copper work. The prizes will be delivered free in the Sydney Metropolitan area.

Tickets for the raffle will be on sale at the show, or may be purchased from Moreen Woollett or myself by sending a stamped self addressed envelope, the tickets are 50 cents each. The proceeds will be donated to Burrendong Arboretum.

Remember there will be a good selection of native ferns in the plant sales area, at reasonable prices.

Phyll. Brown.

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Invitation.

Elaine Boyd, a member from Western Australia, invites Western States visitors to call and inspect the wide range of the Fern-Nature Fernery at 2 Pitt Road, Martin (Gosell) which is open Thursdays, Fridays and Saturdays, 9.30am to 4.30pm. The Tonkin Highway runs almost directly past the nursery.

Key to Species of Drynaria. - Family Polypodiaceae.

Foliage leaves lobed:

Scales soft, narrowed gradually from base to apex,  
plants large, sori in two regular rows between adjacent  
main veins- *Drynaria quercifolia*

Scales stiff narrowed abruptly above the base, apical  
part soon falling, shorter, plants smaller, sori  
irregularly in two rows with others interspersed.

*Drynaria sparsisora*

Foliage leaves pinnate

*Drynaria rigidula.*

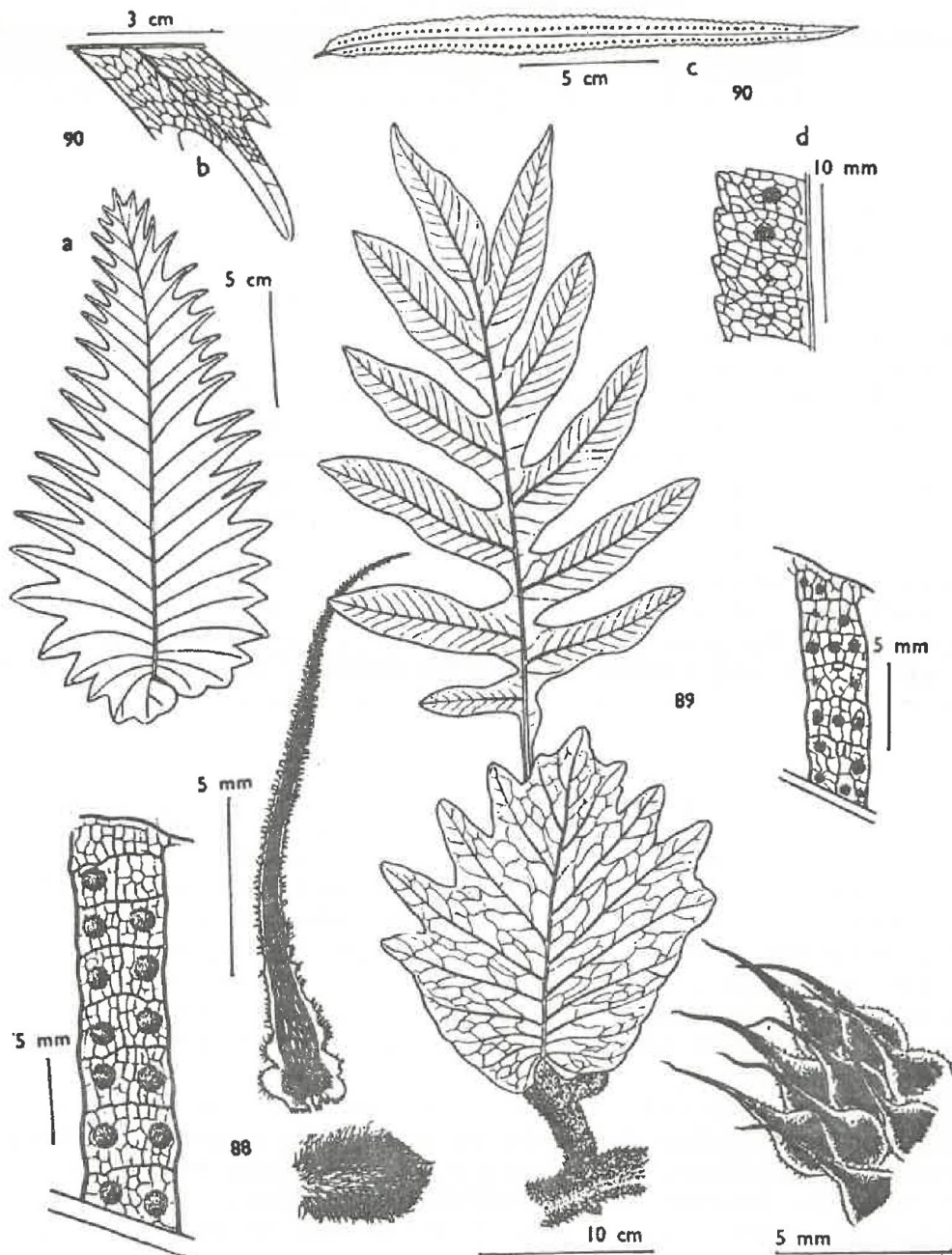


Fig. 88. *Drynaria quercifolia*. Rhizome, rhizome-scale and detail of venation and sori.

Fig. 89. *D. sparsisora*. Rhizome bearing nest-leaf and foliage leaf, rhizome scales (below on right), detail of venation and sori.

Fig. 90. *D. rigidula*. a, nest-leaf; b, venation of same; c, pinna of fertile frond; d, venation and sori of fertile pinna.

The above key and drawings were used at the meeting on 27/7/86 as the authority for identification of the various species of *Drynaria*. These were reproduced from the publication 'Revised Flora of Malaya Volume 2, Ferns of Malaya' by R. E. Holttum, published by Government Printing Office, Singapore.

Visit to Rainforest Area - Mt. Keira.

(Anonymous)

After a prolonged period of dry weather there was rain on the eve of our visit and showers during the day of the 15th June. Altogether it was weather more suited to the growing of ferns than inspecting them. The adverse weather and the absence on holidays of our leader Phyll Brown and number one supporter Viv resulted in only six members undertaking the trip to the rainforest area near the Scout Camp at Mt. Keira.

The area visited is a small patch of splendid temperate rainforest with closed canopy, lush vegetation and a large number of different species of ferns.

First noticed were *Dicksonia antarctica*, *Pyrrosia rupestris*, *Asplenium flabellifolium*, *Pellaea falcata* and *Doodia aspera*.

As we entered the closed canopy area we saw large stands of *Microsorium scandens* and *Arthropteris tenella*, in some cases competing for space on tree trunks and rocks. There were particularly attractive areas of *Sticherus flabellatus*, *Pteris umbrosa*, and *Adiantum formosum* all looking suitable for exhibition although there was no one to tend them or remove the dead fronds.

*Lastreopsis decomposita* and *L. microspora* were easily identified but one small specimen looked anything other than the archetype of either of these and was marked for later reference to our absent Leader.

Considerable interest was being taken in the wide variety of rainforest trees and climbers and perhaps this delayed the first sighting of *Arthropteris beckleri*. Once located the small fronds and wiry rhachis of this attractive fern were quite prominent on the lower part of the tree trunk on which it was entwined, but where was the main root system?

We returned to our cars and drove a short distance to the vicinity of Mt. Robertson Lookout where we ate our lunch.

There followed a short walk to the Lookout and breathtaking views of the picturesque coastline. A cold wind from the direction of the Antarctic was also breathtaking and although there were a number of impressive ferns inspected including *Todea barbara* and large clumps of *Gleichenia microphylla*, after a short time it was decided to terminate the walk.

Our thanks to Sylvia Garlick for guiding us on this outing to an interesting ferny area.

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Fern Group "Outing" 27.7.86.

By Kyrill Taylor.

Of course in 'searching up' ferns not only is our knowledge of pteridophyta in general expanded but so too is our grasp of geography - both immediate and further afield.

Our gathering on the 27/7/86 satisfied each of these features - it is not sufficient to know that such a fern species is to be found in such and such an area - we must actually see it in its habitat. Well, our meeting was to be at the home of our Treasurer, Margaret Olde and husband Peter - knowing they lived at Illawong was one thing - finding them in their 'habitat' was another matter altogether! Patient enquiring, reading and interpreting clues and terrain finally saw a goodly number of our members assemble at the "*Oldei* spp *Margareticum*" habitat.

Phyll and Vivian Brown, intrepid national travellers that they are, were in attendance (finding the Oldes was easy for them!) and told of their most recent trip to the Northern parts of Queensland.

Phyll and Vivian were able to point out the differences between the two *Drynaria* species, *sparsisora* and *quercifolia* - they brought large fronds from Queensland to demonstrate differences and confirmed the observations with authoritative text. Once again the scale from the rhizome and stipe was shown to be the dominant, doubt removing feature.



Sparsisora is aptly named - the sori is irregularly scattered on the pinnules - 'peppered' may be clearer description whereas Quercifolia has its sori more regularly placed - almost precisely in rows - the 'winged' stipe and lobed fronds are common features and so provide no help in identification. However our confusion is quickly cleared when the scale from the rhizome of each is compared.

The peltate scale from *D. sparsisora*, narrowing markedly from the base, has a most obvious 'attachment point' which is not present on scales from *D. quercifolia* thus putting the identification beyond doubt.

Frond size of locally nurtured *D. sparsisora* would be approximately 1/3 of that shown by Phyll and Viv ex their recent Queensland "search".

Phyll created considerable interest with a demonstration of the "transplanting" of recently developed prothallus of various ferns including *Cyathea leichhardtiana* - Some of the prothallus was in "text book" condition showing miniature frond growth and hair like roots all clearly seen under the microscope.

Attention should be paid to the medium to be used - peat moss being the preferred "mattress" on a light, sandy and generally porous bed. Sufficient water should be added, for when the new container is "lidded" with clear polythene or glass this moisture provides the re-circulating humidity in which the developing plantlet grows.

Of course water, peat and other growing mediums should be sterilized providing minimum growth of unwanted algae, liverworts and mosses all of which are "noxious weeds" when growing in competition with our preferred planting of fern prothalli.

Margaret Olde has developed a most pleasing environment for fern culture by way of shade house with watering system in place and representative samplings of various genera. Plans are afoot for further fern cultivation within a shaded cliff face which falls away to the quieter waters of the lower Georges River - appears to present many possibilities in coming months.

A note of regret was sounded at the meeting when Sylvia Garlick officially told of her intended move to Western Australia by years end. Sylvias efforts on behalf of the group have been unstinting, throwing herself wholeheartedly into the work involved in the Annual Wildflower Shows where the Fern Study Groups displays have been highly commended. Sylvia also will be much missed as she has competently managed our Spore Bank for some years.

By way of a plate depicting native flora Sylvia was 'Thanked' for her valued contribution and wished well for the future.

Beyond the Wildflower Show in September, trips to Minnamurra Falls area and to the Burrendong Arboretum have been scheduled.

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#### Trip to North Queensland - highlights.

During the month of June we travelled to North Queensland. The road from the Daintree River to Cape Tribulation and Bloomfield was impassable for other than four wheel drive vehicles, due to unseasonable wet conditions. To drive to Cooktown it was necessary to use the tablelands road through Mount Carbine and Lakeland.

The road is bitumen to about 27 kilometres north of Mount Carbine and for the next 180 kilometres is of gravel construction usually in good condition except during the 'wet' season. Despite a lot of adverse advice about the conditions of the road, we had no problems on this section.



The only fern seen on this part of the trip was *Drynaria quercifolia*. About 30 kilometres south of Cooktown, near the Black Mountain National Park, there is a very large colony of this fern, amongst huge boulders alongside the road. Ferns with fronds 98 cm long and 45 cm broad and rhizomes 5 cm in diameter were a common sight. This species is also plentiful beside the Captain Cook Highway between Smithfield and Port Douglas.

About 9 kilometres west of Mareeba is Granite Gorge which is one of the largest granite rock labyrinths in Australia. Beside this road is a large area of *Platyzoma microphyllum* (Braid fern). The ferns are growing in long grass, in an open sandy soil, amongst low growing eucalypt trees. The whole area is flat and would probably be very wet in the rainy season but dry at other times. This fern is also reported as growing in the Coen area of Cape York Peninsular.

The turnoff to Tinaroo Dam is from the Kennedy Highway at Tolga, between Atherton and Mareeba. The man made dam on the Barron River has a capacity of about 2/3 the volume of Sydney harbour. Some water is released for irrigation, mainly tobacco in the Mareeba Dimbulah areas and also for use at the Barron Gorge hydro electric underground power station.

Just before the dam is the Tinaroo Orchid Display. This is an extensive well presented collection of native and exotic orchids. There are orchids in flower all the year.

Twentyfour kilometres from Ravenshoe, (Atherton Tablelands) along a good dirt road is the top of the Tully Falls. Beside the road, growing on trees were *Asplenium superficiale* and *Belvisia mucronata*. The gorge, on this trip, was invisible due to heavy cloud and fog. The path to the falls lookout was very wet, muddy and slippery and inhabited by many small leeches. Under a canopy of low growing shrubs, in wet clay bank along the path were ferns some with fronds 89cm high and 25cm wide. The new fronds were dark bronze and the mature ones dark green. The spore on the fertile fronds indicated a *Blechnum* species. After a lot of speculation the fern was identified as *Pteridoblechnum neglectum*. On large wet rocks were *Elaphoglossum* species, *Ctenopteris gordonii* and *Crypsinus simplicissimus*.

*Teratophyllum brightiae* was seen growing on a wet bank under the spray from the Millaa Millaa Falls.

The turnoff to Josephine Falls is ten kilometres south of Babinda from the Bruce Highway. The parking area is a further 8 kilometres along a dirt road. There were fallen trees and wash-outs along the 10 minutes walk to the falls. This was the result of a cyclone which devastated the area earlier in the year. Down near the waters edge, growing in masses on some trees was *Arthropteris palisottii*.

A visit to the Barrier Reef Nursery on the Bruce Highway Deeral, is a must if this can be arranged. The huge display section setting out ferns in a plantscape is an unforgettable sight. This is a solarium attached to the residence constructed of large logs forming the sides and roof which in turn supports the glass top and glass sides. Large baskets of ferns hang from beams whilst the ground is landscaped and planted with numerous species of suitable ferns.

The Crystal Creek- Mount Spec National Park turnoff is 67 kilometres north of Townsville. Light rain was falling and the Mount Spec Range was covered with heavy cloud. There is a car parking area on the northern side of an arched bridge over Little Crystal Creek, which is 331 metres above sea level. The bridge was built in 1932 during the depression. In the thick undergrowth in deep shade, growing in dry clay were a lot of large specimens of *Taenitis pinnata*.

A large basket of *Drynaria sparsisora* was located at a nursery in Bundaberg. This ended a search which covered many years during which time many plants of *Drynaria* were purchased but none were of the species *sparsisora*. The fern purchased was fully keyed out and was found to be correctly labelled.

The ferns mentioned were not the only ones seen and identified, but were the ones it is thought would create the most interest.

At a morning tea break in a likely looking ferny location a large pod was found, attached to a thick vine, hanging from a tree branch. The pod is 50cm long, 10cm wide and divided into 7 segments each containing a round flat hard shelled seed. The climber is *Entada phaseoloides* (match box bean) so named because early settlers hollowed out the flat seeds and then used the hard shell to store matches.

Another seed pod for the collection!

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Notes from South East Queensland.

By Irene Cullen.

Despite one of the harshest seasons on record we are having some interesting studies - Firstly we must thank all who answered our plea re *Adiantum whitei*. Rod Hill's help was greatly appreciated - Peter Bostock will write in depth on *A. whitei*. Our studies on *Adiantums* made us aware of the diversity of many of the species. For example Cliff Ritchie's form of *A. diaphanum*, from the Townsville area, is a more robust plant than those we collect locally.

The study on *Lindsaea* also left us realising just how little we know of these delightful ferns, which are a delight to grow among our native shrubs. Our area is fortunate to have several species and hybrids of *Lindsaea*. During September we hope to take a selection to Burrendong Arboretum for planting. So look for these ferns on your next visit.

Cliff Ritchie is busy arranging the framework of our Fern Display at the S.G.A.P. Queensland Region Flower Show to be held at Kelvin Grove High School on September 6th and 7th. By the time the newsletter comes out we will have visited Barry and Robyn Simpsons' property at Beerwah. Once again I cannot give dates for forthcoming meetings. So visitors to our area or members who have been out of touch for a time - ring me on (07) 3414272.

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Report on *Adiantum* Studies by S.G.A.P. Fern Study Group and a Follow-up Report on *A. whitei*

By Peter Bostock.

The April '86 meeting of the Brisbane group was devoted to a study of Australian *Adiantum*'s, and a bewildering variety of these ferns were brought to the meeting by members. Cliff Ritchie (at whose house the meeting was held) grows *Adiantum*'s to perfection, and he had some very large specimens of the N. Qld. form of *A. diaphanum*, with almost glabrous fronds, and bi-pinnate or sometimes pedate fronds. Most of the other Australian species were represented including a number of forms of *A. whitei* (progeny of Rod Hill's original Mt Coonah collection, and specimens collected locally by Brisbane members).

I wish to thank Rod Hill and others who responded to the request for information on *A. whitei*. The 'species' has proved to be relatively common along the western rim of Brisbane, and it appears to extend further north, judging by the frond morphology of specimens from near Mt Spec N.Q. (Cliff Ritchie) and Dunk Is. (Rod Hill). As part of my M.Sc. studies, I researched the taxonomy and morphology of *A. whitei*, and have submitted a paper to 'Austrobaileya', the Qld. herbarium journal. Although this prevents me from making any definitive public statement regarding my proposed change of status of *A. whitei*, I will point out that *A. whitei* could have arisen as a mutation of *A. hispidulum* or as a hybrid between *A. hispidulum* and another species. The fact that *A. whitei* has fertile spores is not inconsistent with hybridity, because *A. hispidulum* is an apogamous (asexual) species, and in all researched instances of hybridisation between apogamous and sexual species, the offspring have also been apogamous and therefore produced fertile spores. Morphologically and anatomically, *A. whitei* is very nearly identical to *A. hispidulum*, and the proposed name change will reflect this.

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*Platyzome  
microphyllum*  
(Actual size)



PLATYZOMA microphyllum

## Braid Fern

This is a terrestrial fern with a short creeping rhizome. The fronds are erect, about 40cm long, rachis red, pinnate, pinnules about 2mm long, glabrous, bluish green on top, under-surface reflexed margins forming a pouch which contains a yellow powderish substance. There are two to four sporangia.

This is an endemic Australian species forming large colonies distributed through the Kimberly regions of Western Australia, the Northern Territory, Northern Queensland extending south to Northern New South Wales.

The fern reproduced in this newsletter was located near Mareeba on the Atherton Tablelands growing, in a large colony, in loose sandy soil, in long grass amongst small eucalypt trees. The location was flat and lowlying and would probably hold water during the wet season.

This fern resents disturbance and appears to be impossible to relocate.

References ; Australian Ferns and Fern Allies by D.L. Jones and S.C. Clemesha.

Ferns, Fern Allies and Conifers of Australia by H.J. Clifford and J. Constantine.

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My Experiences with the Lindsaea Group of Ferns. - Sylvia Peach.

We are well off for the Lindsaea group of ferns in South East Queensland, and several species can still be found in the suburbs of Brisbane. The discovery of species other than L. linearis has been a delight to me, as I came from Victoria, where that is the only one commonly found.

The first species that I came across was L. fraseri, on our property at Sunnybank Hills, and more recently I have found it at Burbank also. In both cases it was growing on creek banks in sandy loam and alluvial soil.

L. ensifolia agatii and L. incisa showed up at Sunnybank Hills after a bushfire, on sandy loam slopes which are wet at times. They have flourished in the increased amount of sunlight following the fire.

Since moving to Burbank, I have found L. linearis on sandy loam and more clayey loam in seasonally damp areas. L. microphylla is widespread though no plentiful in the Burbank area and some others, usually on hillsides above creeks, others in shale and clay loams. This species was also seen on the Carnarvon Gorge excursion last year, growing under a sandstone boulder well up on the track to Devil's signpost.

While exploring around Burbank, I discovered a large patch of an unidentified species or hybrid, on a stoney clay bank above a creek. I have this plant doing well in the bushhouse in pots of sandy loam and leafmould, a mixture very different from the soil of its original location. It also seems happy in the garden in semi shade, and is spreading.

In fact, I have found all of the above species amenable to cultivation in containers, and most seem even better in the garden where they can be given more sun with less risk of drying out, and loss of foliage. My garden is sandy loam on clay, but I am aware that others are growing Lindsaea species on heavier soils. In view of my experiences, I find it surprising that the Lindsaea group are considered difficult to grow.

My specimens of L. incisa, L. fraseri, L. linearis and L. ensifolia agatii in particular, have been subjected to the ruthless removal of unwanted material such as whiteroot, grasses and sedges from the original sods, yet they survived, even pieces that finished up bare rooted.

My original L. fraseri has been in pots for about twenty years, and L. ensifolia agatii for quite a number of years. The only pest that I have noticed has been the fern caterpillar. For fertiliser I use blood and bone mixtures sparingly, with a little wood ash.

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#### RED CARPET.

We wish to extend a warm welcome to the following new members;

##### Queensland

Mr. Grant Hawley, P. O. Box 1877 Townsville. 4810.

##### New South Wales

Mr. John Keats 9 Deas Place, Raymond Terrace. 2324

Mr. & Mrs. Don Simpson, East Coast Ferns, Pacific Highway, Tyndale.  
2460.

Mr. W. J. Stokes, P. O. Box 182, Mullumbimby. 2482.

##### Victoria

Mr. John Hodges, 15 Erica Crt., Blackburn North. 3130.

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#### Programme.

##### Saturday and Sunday 20th and 21st. September.

The annual Wildflower Exhibition at the Castle Hill Showground  
See you all at the show.

##### Sunday, 26th October.

##### Minnamurra Falls.

The Minnamurra Falls Reserve is about 130 km south of Sydney,  
13 km west of Kiama along a sealed road from Jamberoo.

Meet at the parking area at 10.00am.

##### Saturday and Sunday, 15th and 16th November.

##### Burrendong Arboretum.

Some members will travel to the Arboretum on Friday. A barbeque will be held on Saturday night. Saturday and Sunday will be spent cleaning up the shade area at the arboretum.

There are on-site vans and powered sites available. The vans must be booked. The powered sites are not reserved. You are requested to make your own arrangements regarding accommodation.

##### Sunday, 14th December.

This is the last meeting for the year and will be held at the home of Les and Tess Taylor, 4 Prospect Street, Blacktown.

Please bring your lunch and a 'plate' for afternoon tea. Members are requested to bring a gift and win a gift.

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A beautiful, bright, sunny day greeted us on August, 17th for our visit to the home of Ray and Marie Best. I was very pleased to see a good roll up of twentyone, with some members coming from Canberra and Newcastle.

All present enjoyed the usual cup of tea or coffee and then inspected the new shade house which has been constructed on the end of their residence. The large collection of ferns are well grown and did not show the effects of the cold weather. A lot of trouble has been taken to make name plates for the ferns. These plates listed the Botanical name of the fern as well as the author of the name, and any alternative name of the plant.

After lunch there was a tour of the lovely gulley with the well formed paths and beds with the ferns suitably named. Unfortunately the heavy frosts had played havoc with most of the ferns, particularly the large tree ferns.

Ray showed some of the members one of the differences between the genus Davallia and the genus Humata.

The indusium covering the sorus of the Humata is attached at the base only whereas with Davallia the indusium is attached at the base and the sides.

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I want to sincerely thank all those members who contributed material for publication in this newsletter, and to those members who made their homes available for the holding of meetings.

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For further information regarding the outings please contact Phyll Brown, telephone number (02) 7056413.

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*Phyll. Brown.*

(Mrs) Phyllis Brown,  
Leader,  
Fern Study Group.

