

ASSOCIATION OF

S.G.A.P. Fern Study Group

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The "book"- *Growing Australian Ferns*

Last Newsletter there was mention that our member, Calder Chaffey, had agreed to take on the task of writing the long-awaited book on Australian Ferns. Progress continues and details relating to the proposal were discussed at a recent meeting Calder had with Gordon Brooks (Chair of the SGAP Publishing Committee) and David Rosenberg of Kangaroo Press. Kangaroo Press have expressed their pleasure at the quality of the material that they have seen and confirmed that they are keen to publish the book. It seems that "commercial considerations" mean that there has to be some restriction on the quantity of text. However, Calder believes that it will still be possible to cover the major ferns for growing (approximately 200 different species) with a brief description of the rest. It may be necessary to leave out the fern allies altogether.

Still to be decided are questions such as the font and print size and most importantly, the size and number of coloured plates. Another Far Northern N.S.W. SGAP member, Lesley Cordery, is to do the pen line illustrations.

Calder has been holidaying and in the past few months visited Christmas Island, Lord Howe Island and Western Australia. He left for Africa recently and will be away until mid December. Calder has advised that he has not done much writing during the past three months - and we are not surprised! However, Calder says that he has been thinking about the project and has ironed out a lot of problems. Also he has collected useful information in Western Australia. Calder says that after he returns from his present trip, it will be nose to the grindstone to get the book finished. We certainly wish Calder luck with the very large task what he is undertaking and we hope members able to help with information, comments and slides, will do so. He has made arrangements to visit the South Eastern Queensland Group and also hopes to get to North Queensland next year to find ferns, meet members in the Cairns area and collect photographs.

Calder has provided a list of the ferns to be covered in detail in the book. He will need a photograph of each and any special observations on cultivation and propagation any member may have. The list of ferns is included on pages 2 and 3 of this Newsletter. Please let Calder have any information that you think may be useful. Calder's address is: "Red Fox", 13 Acacia Street, Wollongbar, 2477. Alternatively, information may be provided to our Leader for collation and forwarding on to Calder.

FAMILY	GENUS	SPECIES	FAMILY	GENUS	SPECIES
Adiantaceae	Adiantum	aethiopicum	Blechnaceae	Blechnum	minus
Adiantaceae	Adiantum	capillus-veneris	Blechnaceae	Blechnum	nudum
Adiantaceae	Adiantum	diaphanum	Blechnaceae	Blechnum	orientale
Adiantaceae	Adiantum	formosum	Blechnaceae	Blechnum	patersonii
Adiantaceae	Adiantum	hispidulum	Blechnaceae	Blechnum	penna-marina
Adiantaceae	Adiantum	philippense	Blechnaceae	Blechnum	sp. (King Island)
Adiantaceae	Adiantum	silvaticum	Blechnaceae	Blechnum	watsii
Adiantaceae	Adiantum	whitei	Blechnaceae	Blechnum *	whelanii
Angiopteridaceae	Angiopteris	evecta	Blechnaceae	Blechnum	occidentale
Aspidiaceae	Dryopteris	poecilophlebia	Blechnaceae	Doodia	aspera
Aspidiaceae	Dryopteris	sparsa	Blechnaceae	Doodia	caudata
Aspidiaceae	Tectaria	brachiata	Blechnaceae	Doodia	heterophylla
Aspidiaceae	Tectaria	devexa	Blechnaceae	Doodia	maxima
Aspidiaceae	Tectaria	muelleri	Blechnaceae	Doodia	media
Aspidiaceae	Tectaria	siifolia	Blechnaceae	Doodia	squarrosa
Aspleniaceae	Asplenium	attenuatum var indivisum	Blechnaceae	Stenochlaena	palustris
Aspleniaceae	Asplenium	australasicum	Cyatheaceae	Cyathea	australis
Aspleniaceae	Asplenium	bulbiferum	Cyatheaceae	Cyathea	baileyana
Aspleniaceae	Asplenium	excisum	Cyatheaceae	Cyathea	brevipinna
Aspleniaceae	Asplenium	flabellifolium	Cyatheaceae	Cyathea	celebica
Aspleniaceae	Asplenium	flaccidum	Cyatheaceae	Cyathea	cooperi
Aspleniaceae	Asplenium	laserpitiifolium	Cyatheaceae	Cyathea	cunninghamii
Aspleniaceae	Asplenium	nidus	Cyatheaceae	Cyathea	howeana
Aspleniaceae	Asplenium	paleaceum	Cyatheaceae	Cyathea	leichhardtiana
Aspleniaceae	Asplenium	pellucidum	Cyatheaceae	Cyathea	macarthurii
Aspleniaceae	Asplenium	polyodon (formerly falc)	Cyatheaceae	Cyathea	rebecca
Aspleniaceae	Asplenium	simplicifrons	Cyatheaceae	Cyathea	robertsiana
Aspleniaceae	Asplenium	wildii	Cyatheaceae	Cyathea	robusta
Aspleniaceae	Asplenium	australasicum f austral	Cyatheaceae	Cyathea	woolsiana
Aspleniaceae	Asplenium	milnei	Davalliaceae	Arthropteris	beckleri
Aspleniaceae	Asplenium	pteridoides	Davalliaceae	Davallia	denticulata
Aspleniaceae	Asplenium	surrugatum	Davalliaceae	Davallia	pyxidata
Aspleniaceae	Pleurosorus	rutifolius	Davalliaceae	Davallia	solida
Athyriaceae	Callipteris	prolifera	Davalliaceae	Nephrolepis	biserrata
Athyriaceae	Diplazium	assimile	Davalliaceae	Nephrolepis	cordifolia
Athyriaceae	Diplazium	australe	Davalliaceae	Nephrolepis	hirsutula
Athyriaceae	Diplazium	cordifolium	Davalliaceae	Nephrolepis	obliterata
Athyriaceae	Diplazium	deitrichianum	Davalliaceae	Rumohra	adiantiformis
Athyriaceae	Diplazium	dilatatum	Dennstaedtiaceae	Dennstaedtea	davallioides
Athyriaceae	Diplazium	pallidum	Dennstaedtiaceae	Dennstaedtea	incisa
Athyriaceae	Diplazium	queenslandicum	Dennstaedtiaceae	Histiopteris	australis (amau)
Athyriaceae	Diplazium	sp. (Atherton)	Dennstaedtiaceae	Hypolepis	distans (?elegant)
Athyriaceae	Diplazium	sylvaticum	Dennstaedtiaceae	Hypolepis	glandulifera
Athyriaceae	Lunathyrium	petersenii	Dennstaedtiaceae	Hypolepis	muelleri
Azollaceae	Azolla	filiculoides	Dennstaedtiaceae	Hypolepis	rugosula
Blechnaceae	Blechnum	articulatum	Dennstaedtiaceae	Hypolepis	tenuifolia
Blechnaceae	Blechnum	camfieldii	Dicksoniaceae	Calochlaena	dubia
Blechnaceae	Blechnum	cartilagineum	Dicksoniaceae	Dicksonia	antarctica
Blechnaceae	Blechnum	chambersii	Dicksoniaceae	Dicksonia	herbertii
Blechnaceae	Blechnum	contiguum	Dicksoniaceae	Dicksonia	youngiae
Blechnaceae	Blechnum	fluviatile	Dryopteridaceae	Arachniodes	aristata
Blechnaceae	Blechnum	fullageri	Dryopteridaceae	Arachniodes	hasseltii
Blechnaceae	Blechnum	howeanum	Dryopteridaceae	Lastreopsis	acuminata
Blechnaceae	Blechnum	indicum	Dryopteridaceae	Lastreopsis	decomposita
Blechnaceae	Blechnum	indicum	Dryopteridaceae	Lastreopsis	marginans

Dryopteridaceae	Lastreopsis	microsora	Polypodiaceae	Schellolepis	percuta
Dryopteridaceae	Lastreopsis	munita	Polypodiaceae	Schellolepis	subauriculata
Dryopteridaceae	Lastreopsis	rufescens	Psilotaceae	Psilotum	nudum
Dryopteridaceae	Lastreopsis	smithiana	Pteridaceae	Pteris	ensiformis
Dryopteridaceae	Lastreopsis	tenera	Pteridaceae	Pteris	orientalis
Dryopteridaceae	Polystichum	whiteleggei	Pteridaceae	Pteris	tremula
Dryopteridaceae	Polystichum	australiense	Pteridaceae	Pteris	tripartita
Dryopteridaceae	Polystichum	fallax	Pteridaceae	Pteris	umbrosa
Dryopteridaceae	Polystichum	formosum	Pteridaceae	Pteris	vittata
Dryopteridaceae	Polystichum	proliferum	Schizaeaceae	Lygodium	flexuosum
Gleicheniaceae	Sticherus	flabellatus	Schizaeaceae	Lygodium	japonicum
Lomariopsidaceae	Bolbitis	quoyana	Schizaeaceae	Lygodium	microphyllum
Lomariopsidaceae	Bolbitis	taylorii	Schizaeaceae	Lygodium	reticulatum
Lomariopsidaceae	Elaphoglossum	callifolium	Selaginellaceae	Selaginella	brisbanensis
Lycopodiaceae	Huperzia	myrtifolium	Sinopteridaceae	Cheilanthes	austrotenuifolia
Lycopodiaceae	Lycopodium	carinatum	Sinopteridaceae	Cheilanthes	sieberi
Lycopodiaceae	Lycopodium	dalhousianum	Sinopteridaceae	Pellaea	falcata v falcata
Lycopodiaceae	Lycopodium	deuterodensum	Sinopteridaceae	Pellaea	paradoxa
Lycopodiaceae	Lycopodium	fastigiatum	Sinopteridaceae	Doryopteris	concolor
Lycopodiaceae	Lycopodium	phlegmaria	Thelypteridaceae	Ampelopteris	prolifera
Lycopodiaceae	Lycopodium	phlegmarioides	Thelypteridaceae	Amphineuron	immersum
Lycopodiaceae	Lycopodium	polytrichoides	Thelypteridaceae	Amphineuron	opulentum
Lycopodiaceae	Lycopodium	proliferum	Thelypteridaceae	Amphineuron	terminans
Lycopodiaceae	Lycopodium	serpentinum	Thelypteridaceae	Christella	arida
Lycopodiaceae	Lycopodium	squarrosus	Thelypteridaceae	Christella	dentata
Marattiaceae	Marattia	oreades	Thelypteridaceae	Christella	hispidula
Marsiliaceae	Marsilea	drummondii	Thelypteridaceae	Christella	parasitica
Marsiliaceae	Pilularia	novae-hollandiae	Thelypteridaceae	Christella	subpubescens
Oleandraceae	Oleandra	neriiformis	Thelypteridaceae	Cyclosorus	interruptus
Ophioglossaceae	Botrychium	australe	Thelypteridaceae	Macrothelypteris	polypodioides
Ophioglossaceae	Ophioglossum	pendulum	Thelypteridaceae	Macrothelypteris	torresiana
Ophioglossaceae	Ophioglossum	petiolatum	Thelypteridaceae	Plesioneuron	tuberculatum
Osmundaceae	Leptopteris	fraseri	Thelypteridaceae	Pneumatopteris	costata
Osmundaceae	Todea	barbara	Thelypteridaceae	Pneumatopteris	pennigera
Parkeriaceae	Ceratopteris	comuta	Thelypteridaceae	Pneumatopteris	sogerensis
Parkeriaceae	Ceratopteris	thalictroides	Thelypteridaceae	Pronephrium	asperum
Polypodiaceae	Crypsinus	simplicissimus	Thelypteridaceae	Pronephrium	triphylum
Polypodiaceae	Belvisia	micronata	Thelypteridaceae	Sphaerostephanos	heterocarpus
Polypodiaceae	Dictymania	brownii	Thelypteridaceae	Sphaerostephanos	invisus
Polypodiaceae	Drynaria	quercifolia	Thelypteridaceae	Sphaerostephanos	unitus
Polypodiaceae	Drynaria	rigidula	Thelypteridaceae	Thelypteris	confluens
Polypodiaceae	Drynaria	sparsisora	Vittariaceae	Vittaria	elongata
Polypodiaceae	Phymatosorus	diversifolium			
Polypodiaceae	Phymatosorus	membranifolium			
Polypodiaceae	Phymatosorus	punctatum			
Polypodiaceae	Phymatosorus	pustulatus subsp howensis			
Polypodiaceae	Phymatosorus	scandens			
Polypodiaceae	Platynerium	bifurcatum			
Polypodiaceae	Platynerium	hillii			
Polypodiaceae	Platynerium	superbum			
Polypodiaceae	Platynerium	veitchii			
Polypodiaceae	Pyrrosia	confluens			
Polypodiaceae	Pyrrosia	dielsii			
Polypodiaceae	Pyrrosia	lanceolata			
Polypodiaceae	Pyrrosia	longifolia			
Polypodiaceae	Pyrrosia	rupestris			

NOTE.

These ferns to be covered in detail.

This list covers Australia and Lord Howe Island

If you think any should be added or deleted please let me know.

Shade For Ferns

Contributed by Geoff Simmons

Some ferns will withstand full sun - in my area bracken and *Cheilanthes* are endemic and growing without the benefit of shade. Also the tree fern *Cyathea cooperi* that I have planted thrived without cover. However to create a fernery with a variety of ferns some or total shade is essential.

What can be used to create shade? There are several choices. These fall into two categories - a cover of man made materials such as shade cloth or natural shade from trees or other appropriate living vegetation.

The following remarks concern natural shade. My first attempt to create an area for ferns was based on clearing the ground below well established natural vegetation consisting mainly of eucalypts, wattles and other trees such as *Alstonia stricta*. A rather dense growth of lantana about 2-3 metres high, was used to give protection from wind. When all was ready with tanbark mulch, a watering system and a path, the lot was destroyed by a severe bushfire. All that was left was a path and a few blackened stumps of *Alstonia* trees.

A second attempt is now underway with a windbreak of vertically installed shade cloth. 1800mm high taking the place of lantana. Within the area, a few of the *Alstonia* trees sent up suckers and these have been tip pruned to form part of the shade canopy. A pipe structure on which climbs *Pandorea pandorana* covers part of the area a tunnel of shade. However it becomes obvious that several more trees had to be planted to give the desired shade in the future. Some of the criteria used in this regard were decorative effect, extent of shade and speed of growth. Two species have been used. The first chosen was *Sterculia quadrifida* - large existing trees in another part of the garden has shown that this species is partly deciduous in my area, has good foliage in summer when needed, has decorative seed pods and seeds germinated readily to produce plants with reasonable growth rate. The other tree planted is an unknown quantity as I have never seen a full grown specimen. *Allosyncarpia ternata* is described as a smallish tree but I will have to wait until it has grown to see whether it will form a suitable canopy for ferns. At this stage all I know is that it seems to be to the liking of local wallabies.

Other members may care to comment on the way they have used natural vegetation whether self sown or planted, to create an environment for ferns.

An Opportunity to Learn About Tissue Culture

Member Norman Wake has drawn attention to a technical college course that may be of interest to members in the Sydney area. Ryde T.A.F.E. propose to offer a course in Plant Tissue Culture in the first semester (February to June) of 1997, provided sufficient students offer for enrolment. Cost of the course will be \$85. No pre-requisite studies are necessary. Those interested should contact Mr Adrian Salter, Head Teacher to the Horticulture College, on (02) 9808 8382.

SUBSCRIPTIONS DUE ... AND AT A HIGHER RATE!

As they say in the business world, due to increased costs, reluctantly we are obliged to increase prices. More to the point, we have increased our annual subscription to \$5 effective from the 1997 year. Our problem is that we have had to change arrangements for photo copying the Newsletter. Labour costs are unchanged. As usual, subscriptions are due and payable at the beginning of the year.

Full membership of the Study Group only applies to persons who are financial members of the Society for Growing Australian Plants. Otherwise payment of the subscription gives an entitlement to the Newsletter only. Please remit direct to our Treasurer, Joan Moore - address shown at the head of the Newsletter. Payment by no later than the end of February would make Joan's task easier. For those early birds who have already paid their 1997 subscription at the old rate, please do not bother to make a separate payment for the amount of the increase. Any adjustment could be added to the subscription for 1998.

SOUTH QUEENSLAND REPORT

Contributed by Irene Cullen

Outing to Mapleton Forest Drive, 20 October 1996

Twelve members and one visitor enjoyed the very pleasant Forest Drive. Our party stopped at various spots along the Drive to walk down Forestry Roads leading to many gullies. Approximately 18 fern species were recorded including a possible cross between a *Blechnum* and *Doodia*. Not an impossibility we were assured. Adding to the enjoyment of the outing were the number of health plants still in flower. It was great to have our long-time member, Ross Scott of Kenilworth with us,

***The Ferns of Tasmania* by Michael Garrett**

We have received word that a high quality book *The Ferns of Tasmania*, has just been released. It consists of 220 A4 size pages and contains 150 high quality colour photographs. It is expected to become the definitive book on Tasmania's fern species for many years. Two versions of the book are being printed, a soft cover edition and 100 only numbered copies of a hard cover edition, signed by the author. This latter edition will never be reprinted. Both copies will be perfect bound and also sewn to increase their durability. The book contains an identification key.

The standard retail price for the soft cover copy is \$49.95 plus postage. However our Group has been offered a special price of \$45 with free delivery for orders of 10 or more copies. The hard back version of the book is priced at \$75, freight free if included with an order for 10 soft cover book, otherwise plus freight if ordered separately. If you would like to buy a copy as part of the special offer made to the Study Group, please contact Moreen (02) 9528 4881, as soon as possible and by no later than 15 January 1997.

FORTHCOMING EVENTS : IN THE SYDNEY REGION

Sunday 1 December 1996, Meeting at Kenthurst

A final reminder! Meet from 11 am for our end of year get-together at the home of Tamara & Ian Cox, 5 Ivy Place, Kenthurst. If you haven't contacted Tamara to advise what you will bring for the pooled lunch please do so now!. Bring own crockery and cutlery and in keeping with the festive season, a gift (limit \$5) or several according to the number in your party. Enquires to Tamara 9654 2533.

Saturday 15 February 1997, Meeting at Morisset

Meet from 9.30 am at the home of Bea and Roy Duncan, 167 Freeman's Road, Morisset. If travelling from Sydney leave the Expressway at the Morisset exit, turn right towards Morisset then left at the first roundabout into Freeman's Road, cross bridge and No. 167 is the second driveway on the left. Park inside the property. The business and study subject "Doodia" to commence at 11 am to allow time to see the Duncan's huge and diverse collection of ferns. The meeting's cameo spot, "A Member's Fern" will be a double presentation by Roy Duncan, Psilotum complanatum and Ophioglossum pendulum. Enquires to the Duncan's on (049) 771 482..

Saturday 15 March 1997, Outing to Picnic Point

A visit to Sylvan Grove Native Plant Reserve at 7 Sylvan Grove, Picnic Point. The Reserve holds an outstanding range of ferns growing amid what Curator, Robert Miller, has referred to as an Australian bush garden setting. Meet from around 10 for a 10.30 start on the tour of inspection. Enquires to Peter (02) 9625 8705.

Sunday 20 April 1997, Meeting at Mt Druitt

Arrive from 11 o'clock at our hosts' Margaret and Peter Hind's home for meeting and study commencing at 11.30. Subject to be Nephrolepis species.

FORTHCOMING EVENTS : IN THE MID NORTH COAST, NSW.

Week End (A long one!) 5, 6 & 7 December 1996, Outing to New England National Park End of January 1997, Outing to Mount Wilson / Katoomba Area

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

FORTHCOMING EVENTS : IN SOUTH EAST QUEENSLAND

Sunday 1 December 1996, Breakup Function

A final reminder! Meet at Graham Nosworthy's home, 69 Grandview Road, Pullenvale. Bring fern or suitable gift for exchange and ideas for next year's meetings and excursions.

For information of February and March 1997 meetings, please contact Peter Bostock phone (07) 3202 6983 or Irene Cullen on (07) 3273 1055.

FERNS IN GARDEN DESIGN

Continuing on from the September 1996 Newsletter, the following are further ferns considered valuable in garden design.

Dictymia brownii

This is a hardy and rewarding fern if given its basic requirements of a coarse open mixture in a protected position and kept away from frosty areas. In nature usually found growing among leaf litter on rocks or trees. The fronds are simple, narrow and leathery. It is native to Queensland and NSW.

Form: Upright or slightly pendant slowly creeping to form sizeable clumps. The fronds are stiff and mostly dark green.

Size: 50 cm tall.

Soil Type: Requires a very open acid mixture or else site on rock or log in leaf litter.

Aspect: Keep protected from strong sun and winds.

Watering: Is reasonably hardy and seldom needs watering when grown in protected humid position.

Doodia aspera

An easily grown tough textured fern, its bright pink new fronds often making it an outstanding feature when used in landscaping. Because of its attractive appearance and tolerance of root competition it is a popular choice for growing beneath most trees and shrubs. Found in NSW, Queensland and Victoria.

Form: Erect stiff and rough textured spreads slowly by underground rhizomes to form quite large colonies.

Size: Up to 50 cm tall.

Soil Type: Will grow in almost any well drained soil.

Aspect: Suitable to a variety of positions from dappled sun to full shade.

Watering: Once established requires only a good soaking in the driest of times.

Doodia caudata

A very widespread fern found thriving in a variety of conditions in the four Eastern Australian States and also South Australia.

Form: Erect, narrow, dimorphic fronds bright green in colour. Not harsh. Spreads slowly to form small clumps. A variable Doodia, with many distinctly different forms.

Size: Up to 40 cm tall.

Soil Type: Adaptable to most well drained soils. Suitable to growing in pots or baskets.

Aspect: Grow in shade or dappled sun. Is often seen to best advantage when grown in a rockery or among rocks.

Watering: Hardy, seldom needs watering if mulched and grown in a protected position.

Doodia media

An attractive though harsh textured fern that spreads slowly to form an excellent ground cover. The new fronds are a deep red. Doodia media occurs in the four Eastern States.

Form: Fronds erect, forms slowly spreading clumps.

Size: Up to 75 cm tall.

Soil Type: Adapts to most well drained soils.

Aspect: Likes a semi-shaded position but will withstand more sun if watered regularly.

Watering: In shaded well mulched positions watering seldom necessary.

Drynaria rigidula

A large, popular fern for basket culture. The long pendant fronds are in striking contrast to the short and deeply lobed nest leaves. Away from cold areas, this fern grows readily on rocks or over tree stumps covered by leaves and composting material. Found in Queensland and NSW. A very hardy fern once established will spread and form extensive clumps if not disturbed.

Form: A distinctive fern with fronds of two types, long pendant fertile fronds and short sterile nest leaves which form clumps.

Size: Fertile fronds up to 1.5 m and occasionally longer, the sterile nest leaves to 40 cm.

Soil Type: Requires coarse open mixture or grow among leaf litter and debris forming humus on rocks or along fallen tree trunk.

Aspect: Very hardy away from cold areas. Prefers semi open position.

Water: In suitable open area only requires watering in the driest of periods.

Some "Mexicans" See Sunny Queensland!

Six lucky Sydney members of the Study Group attended the Queensland SGAP State Conference held in Rockhampton at the end of September this year. Altogether there were ten Sydney SGAP members at the Conference, all of us voted it an outstanding success. On the journey north, four of us visited these special places:

The Bunya Mountains What a magnificent place! It was cool during our stay but that was expected. The Mountains rise to above 1,100 m. As the brochure says, tall rainforest and unspoilt native bush. Five walks that allowed us see vastly different aspect of the Mountains. Here we met an hospitable group of SGAPers from Samford Branch including Study Group member Bob Backhouse who helped us with identification of the local flora. There were numerous ferns along the paths especially through the lush rainforest but one of our lasting memories is of the Bunya Nut Carrot Cake. Sadly, we were not impressed but we since heard that they have sacked the cook. So, maybe we will have another try of the famed Bunya Nut cuisine when, as we undoubtedly will, return sometime.

The Sunshine Coast We didn't get really close to the Wallum. We ran out of time trying to take in the tourist-type delights. While there we enjoyed perfect balmy weather and can understand why so many people come to stay. One fern thrill for us was seeing large patches of Acrostichum speciosum near our caravan park in Tewantin. This is an interesting large fern about 1.5 m tall with leathery pinnae that resemble gum leaves while part of the upper pinnae is devoted to spore bearing, quite odd to our Southern eyes.

Fraser Island (and the Kingfisher Bay Resort) A fabulous place, except for all that sand. It was drought time and we found it difficult to go far on the dry tracks, even by 4-wheel drive - but that is a story in itself. Along the hard sand on the beach was fine and on one walk, from the Resort to Mackenzie's Jetty, we found some interesting ferns. Most of these were growing out of the side of the moist, sandy hillside abutting the beach. The hillside was crumbling and sliding down on the beach. Among ferns here were Lygodium microphyllum, Dicranopteris linearis and a fern with a very long name, Pityrogramma calomelanos var. austroamericana. This is a native of America and the West Indies, a very distinctive fern the fronds are about 50 cm long and remarkable for the gold coloured powder on the underneath part. How did it come to be naturalised on Fraser Island?

Gladstone A big surprise. An earlier visit some years past hadn't impressed us. We found Gladstone is now a very attractive city. A feature for us was the brilliant Tondoon Botanic Gardens! The gardens are traversed by walking trails each showing different vegetation features, including three types of rainforest. There are many ferns, two that we don't often see in Sydney were Ampelopteris prolifera, a scrambler of a fern if ever there was one - we found it hard to tell where the fronds started and finished, and Stenochlaena palustris an extremely vigorous climber obviously enjoying the Gladstone warmth.

Then it was off to Rockhampton for the Conference, five days of visits to nearby attractions and five nights of entertaining speakers mostly whetting our appetites about those attractions. We were extremely impressed by the efficiency with which the Conference was conducted and how hospitably every one treated us "Mexicans". We were surprised at being called "Mexicans" having thought that they lived in Victoria!

Just a few more memories of the Conference. A highlight was seeing the Byfield Fern growing in its natural habitat in a rainforest near Yeppoon. Of course this beautiful fern-like plant, Bowenia serrulata, is not a fern but from the Zamiaceae Family. However, on the edge of this same rainforest, Irene pointed out another fern new to the Sydneysiders, Lindsaea ensifolia subsp. ensifolia. As one said "But it doesn't look like a Lindsaea." It is certainly plain compared with Lindsaea microphylla and L. linearis with which we are very familiar in the Sydney area.

The 600 m high Mount Archer situated just to the north of Rockhampton gave us spectacular views in all directions. We had lunch there on one perfect sunny day and we had a complaint, we weren't there long enough. The scenery is very attractive and there is a surprising number of ferns including two Drynaria species. But we only managed a short distance along one of the trails before running out of time.

Finally, three days camping on the Blackdown Tablelands nearly 200 km south east of Rockhampton. A fascinating area with an astounding diversity of flora. For example, there are more than 50 different Acacia species! We loved our walk to Rainbow Falls with still a good flow of water despite the long drought. We will be back.

Cheilanthes nudiuscula (R.Br.) T.Moore

The fern shown as a silhouette on the right hand side of this page is Cheilanthes nudiuscula and was collected by Irene Cullen. This occurred on 26/9/96 during the SGAP State Conference visit to the Canoona district just to the north of Rockhampton.

The Canoona area is Serpentine country and home to several interesting, some quite rare, plants. One of these is Hakea trineura, arguably one of the most attractive of the Eastern Australian Hakeas and also notable because of its distribution. Apart from Central Queensland, the only other location is the Mid North Coast of NSW and nowhere in between or elsewhere. Apparently some botanists have just decided that the Hakeas in the two locations might be two distinct species.

But I digress. Sufficient to say that the Canoona area is interesting botanically. It looked to be very rocky, rugged country and with the sun beating down and no ferns shown on our plant list, ferns were far from our thoughts. So we were surprised when Irene returned to our bus with a Cheilanthes which she told us "looked a bit different."

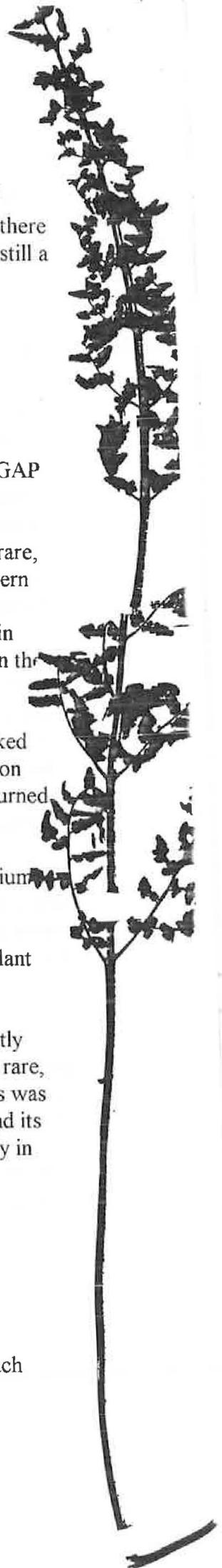
On returning to Sydney, we referred the fern to Gwen Harden at the National Herbarium. Back came the advice that the fern was Cheilanthes nudiuscula. A hasty check of S.B. Andrews book "Ferns of Queensland" showed the distribution of Cheilanthes nudiuscula as being, "North Queensland. Quirk *et al* (1983) regarded this as a rare plant known only from the type and from one other collection from Herberton"

The news was quickly conveyed to Irene and also to Lorna Murray in Brisbane. Shortly after, there was a phone call from Peter Bostock. He told us that our fern was not so rare, there had been a name change! Peter informed us that the fern listed by S.B. Andrews was in fact Cheilanthes hirsuta. So the fern collected by Irene is Cheilanthes nudiuscula and its distribution from S.B. Andrews should be, "Eastern and northern Queensland (mainly in the tropics), Northern Territory ; also south-east Asia to Polynesia."

Well after all, at least, Irene did find a fern to go on to the Canoona plant list.

Copy for Newsletter

Those much sought after articles for the next Newsletter should be forwarded to reach the Secretary by no later than 15 February 1997.



NOTES FROM THE SYDNEY AREA

Report of Outing to Wheeney Creek, 14 September 1996

Contributed by Kyrill Taylor

Out Leader, Peter Hind, was at his encyclopaedic-botanical best, pointing out and defining scores of rainforest and otherwise rare species. This scribe was unable (incapable!) of recording the mind-bending genera, species, synonym, uses, habitat, etc., information issuing from Peter.

Having clambered our way up Creek and crossed to the North (?) of the Creek via a conveniently placed fallen forest giant, we shed our shoes and sox and braving unknown hazards, waded through delightfully cool, clear water to return to our base. A delightful interlude! Eight members attended this outing enjoyed in mostly sunny, pleasant walking weather.

Fern varieties found were: Asplenium flabellifolium, Adiantum aethiopicum, A. hispidulum, A. formosum, Asplenium flabellatum, Blechnum cartilagineum, B. nudum, Culcita calochlaena, Dennstaedtia davallioides, Doodia aspera, D. media, Pellaea falcata and Sticherus flabellatus. Though Doodia caudata is known to be in the area, none was sighted on this occasion.

Report on Outing to Old Coach Road, Newnes, 19 October 1996

Twelve participated in the outing to this seldom visited part of the Newnes Plateau and Wollemi National Park. From the Car Parking area, the walk requires an initial steady descent through a stunning display of *Boronia*, *Hakea* and "you name its" which our Leader surely did! After 1.5 km, the road divides. A track of a further 1.5 km leads to the Glow Worm Tunnel, the route taken by us some years ago on our previous visit. We continued in the other direction down a more gradual descent a further 2.5 km along the valley floor until reaching a point where we looked into Wolgan Valley. Ferns were the dominant vegetation only in the last section of the walk, but there were only a few fern species. Most prominent were Blechnum cartilagineum, Culcita calochlaena, Cyathea australis, Todea barbara, and of course, Pteridium esculentum. Pyrossia rupestris, Gleichenia microphylla, G. rupestris and Lycopodium laterale were also sighted.

The most memorable features of the day's walk were the beauty of the flowers, the wonderful pagoda rock formations and the superb mountain vistas. The National Park brochure told us that the Glow Worm Tunnel area has a fascinating and important history. The development of Newnes in the Wolgan Valley centred around the Shale Oil Mining complex originally established in 1906. We wondered at the industry and workmanship of those who laboured around 90 years ago building the coach road with its supports of huge rock walls and still standing today. Incidentally, the present day road in from Clarence was full of pot holes and is an obvious deterrent to many more people discovering this attractive area.

Report of Meeting at Dural, 10 November 1996

Contributed by Joan Moore

There were eighteen members present at the meeting hosted by Pat Kenyon and Ted Newman. In lieu of the normal study session, Peter led discussion on aspects associated with the cultivation of ferns. Some of the many points made on the day were :

* With specimens collected or those needing repotting , the problem always is to chop off large fronds or not. Peter took something of a middle of the road view in the repotting he performed on the day. Large specimens were cut back, small specimens he left alone.

* Peter had about six pots all enveloped in plastic bags. He undid them in turn and commented on each one. He had a little epiphyte, an *Asplenium* species in a little pot. Peter explained that this fern was not doing well because it was growing in nothing but charcoal and needed some food. He repotted it into another little pot- do not put epiphytes in large pots and keep the mixes open. He added a little potting mix to the original charcoal. Peter said the cheap potting mixes were o.k. structurally but needed fertiliser to be added. Then he put the repotted plant back into a plastic bag and tied the top with a small wire tag.

* Peter had another pot with several ferns as often happens when a fern is potted others come up in the pot. These are usually weedy ones like *Deparia petersoni* and these must be taken out with the least disturbance to the main fern. Peter picked them off at the surface. But sometimes the uninvited fern are worth keeping. Then you must carefully separate from the original, repot and put all pots in plastic bags again.

* In Sydney and warmer areas, it is best to repot in winter.

* Potting mixes should let water run straight through. If it takes some time for the water to run through then don't use that mix.

* Peter puts most newly acquired ferns (but not *Asplenium australasicum* or *Platycterium* species) into plastic bags. Ferns should be hardened off gradually. Sometimes Peter takes the pot out of the bag and then puts the bag over only the top of the fern so that there is drainage. Sometimes he puts holes in the plastic bag. The final stage is to take the bag off for a short time gradually increasing the time the fern is not covered.

* Peter recommends using a plastic bag that is slightly stronger than the plastic bags commonly provided by the greengrocers.

Slides Needed for Audio Visual

Mention was made in our previous Newsletter of Fred Johnston's search for material to complete an audio visual for the Group based on the more common Australian ferns in cultivation. In addition to good slides ferns in garden settings, slides are required to illustrate species listed below. If you are able to help Fred's search for slides, please phone

Fred at (02) 9651 1144. Even if you don't have the slides, but have the ferns or know where they may be photographed please contact Fred as soon as possible.

The ferns sought are: Adiantum silvaticum, Arachniodes aristata, Calochlaena dubia, Christella dentata, Diplazium assimile, Histiopteris incisa, Hypolepis distans, Hypolepis glandulifera, Hypolepis muelleri, Lastreopsis acuminata, L.marginans, L.munita, Microsorium punctata, Nephrolepis biserrata, Polystichum australiense, Pteris longifolia, Pteris tremula and Schellolepis subauriculata.

Mid-North Coast Group Outing to Lower Creek, 14-16 September 1996

L: lower Petroi Trail, below the Hut (300-900m altitude)

H: vicinity of Lower Creek Forestry Hut (900m)

U: Arnhem Road, Oxley Road & upper Petroi Trail, above the hut (900-1100m)

	L	H	U
Adiantum diaphanum	X		
Adiantum formosum	X		X
Adiantum hispidulum	X	X	
Arthropteris beckleri	X		
Arthropteris tenella	X	X	
Asplenium australasicum	X	X	X
Asplenium flaccidum			X
Asplenium polyodon	X	X	X
Blechnum cartilagineum	X	X	X
Blechnum nudum	X		X
Blechnum patersonii	X		X
Blechnum wattsii	X		X
Calochlaena dubia (Culcita)	X	X	X
Cheilanthes distans	X		
Cheilanthes sieberi	X		
Christella dentata	X	X	
Cyathea australis	X	X	X
Cyathea leichhardtiana			X
Davallia pyxidata	X	X	
Dennstaedtia davallioides	X		X
Dicksonia antarctica		X	X
Dictymia brownii	X	X	X
Diplazium assimile	X		
Diplazium australe	X	X	X

	L	H	U
Doodia aspera	X		X
Doodia caudata	X		
Gleichenia dicarpa			X
Grammitis billardieri			X
Histiopteris incisa	X	X	X
Hypolepis glandulifera	X	X	X
Hypolepis muelleri		X	
Lastreopsis acuminata	X		X
Lastreopsis decomposita	X	X	X
Lastreopsis microsora	X	X	X
Lastreopsis munita	X		
Lindsaea microphylla			X
Lunathyrium petersenii	X		
Macroglena caudata			X
Microsorium scandens	X	X	X
Pellaea falcata	X	X	X
Platyterium bifurcatum	X	X	X
Pteridium esculentum	X	X	X
Pteris tremula	X		
Pteris umbrosa	X	X	
Pyrrosia confluens	X	X	X
Pyrrosia rupestris	X	X	X
Sticherus lobatus	X	X	X
Tmesipteris ovata			X
Todea barbara			X

Lots of ferns and a nice time. For our latest outing we were based at Lower Creek forestry hut, on the Petroi plateau west of Kempsey. We were pleased to welcome Fred and Norma Johnston from the Sydney group for what turned out to be a successful weekend, with 49 fern species identified.

At 900m altitude, in the ranges of the upper Macleay valley, south of New England N.P., the hut boasts spectacular forested mountain views to the east. Within a few hundred metres ferns aplenty are to be found in a secluded rainforest gully. The country generally however, is steep and often inaccessible. With no set walks developed in the area, most of our exploring for the weekend was confined to the roadsides of the network of forestry trails, with occasional 'bush-bashing' into promising gullies.

The vegetation of the plateau is dominated by Eucalypt forest, particularly New England blackbutt. Substantial areas of vine scrub and better developed subtropical rainforest occur, mostly on steep slopes and gullies at lower altitude. The higher plateau (up to 1100m) supports occasional temperate rainforest, including pockets of Antarctic beech. Botanical variety and interest for the weekend were added by the abundant Spring wildflowers, including a number of orchid species.

Tree ferns are an outstanding feature here. *Cyathea australis* is extremely common and widespread in the area, often growing to an impressive height. Less commonly, *Todea barbara* and *Dicksonia antarctica* are to be found in higher altitude gullies.

Epiphytic and climbing ferns are also very plentiful. Large bird nest ferns, *Asplenium australasicum*, are a common sight, often 'sprouting' clumps of *Asplenium polyodon*. In rainforest, the upper branches of the canopy are often thick with *Dictymia brownii*, *Pyrrosia ruprestris* and *Pyrrosia confluens*. The form of *Pyrrosia confluens* growing in the area was of particular interest. Compared to that which we normally encounter it is unusual: much longer, pendant and occasionally lobed. Closer to the ground, *Arthropteris teniella* and especially *Microsorium scandens* sometimes grow prolifically. In the high beech forest we came across the delicate epiphyte *Asplenium flaccidum* and, on *Cyathea australis* trunks, *Tmesipteris ovata*, in quite large numbers, as well as filmy *Macroglena caudata*.

Among the rainforest ground ferns in the area *Blechnum cartilagineum* is notable, being widespread and common, often extending into open forest. With *Lastreopsis decomposita* it forms the predominant ground cover in the higher altitude rainforest, accompanied by *Blechnum watsii* and *Blechnum nudum*. Lower down, *Lastreopsis microsora* joins *Blechnum cartilagineum* and *Lastreopsis decomposita* as the main ground ferns under the canopy. *Diplazium australe*, *Dennstaedtia davallioides* and *Sticherus lobatus* are less common but widespread components. At the rainforest margin *Hypolepis gladulifera*, *Calochlaena dubia* and *Histiopteris incisa* are all common, occasionally in association with *Sticherus lobatus*.

In the lower altitude gullies *Pteris umbrosa*, *Blechnum patersonii*, *Lastreopsis munita*, *Lastreopsis acuminata*, *Diplazium assimile* and *Adiantum formosum* are all at least locally abundant, providing a beautifully textured, dark green aspect to the scenery of these lovely gullies. In one gully *Arthropteris beckeri* occurred in masses on the rocky slopes, occasionally climbing onto the lower tree trunks. A series of stops to visit these gullies on the drive out down the mountain provided an exhilarating finale to an enjoyable, fern-filled weekend.

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