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

## Newsletter Number 108

A. S. G. A. P. **ISSN 0811–5311** **DATE: July 2005**



LEADER: Peter Bostock, PO Box 402, KENMORE, Qld 4069. Tel. a/h 07 32026983, mobile 0421 113955;
email: pbostock@ozemail.com.au

TREASURER: Dan Johnston, 14 Bank Rd, GRACEVILLE, Qld 4075.
NEWSLETTER EDITORS: Peter & Pat Bostock, contact as above.
SPORE BANK: Barry White, 34 Noble Way, SUNBURY, Vic. 3429


## From the incoming Leader...

Firstly, I must thank the outgoing executive, Peter and Ron, for their sterling efforts. I am very grateful to both of them for their assistance over the past few months. I must also apologise for the bumpy start to my leadership. It will no doubt be a steep learning curve.

Barry White is continuing as Spore Bank manager, and his current list of available spore is included in this newsletter. I appeal to members to contribute spore whenever they can.

Current subscriptions for the 2005 calendar year are now due. The transfer of accounts from Ron Wilkins to Dan Johnston would normally take place in December this year, but I plan to switch the Fern Study Group finances to a Financial Year cycle to fit in with ASGAP in general. As there have been fewer newsletters than usual recently, and the finances are therefore relatively healthy, I propose that the Study Group absorbs the extra six months of membership. This would make 1 July 2006 the next payment deadline.

Dan Johnston will be away for most of July, so if you are planning to pay in the next couple of months, you can send your subs. to me at the above post-office box.

Contributions to the newsletter will be gratefully received, by email or posted to my PO Box address above.

**BAD NEWS FOR BLUE TASSEL FERNS**: Some of you will know that the blue tassel fern (*Huperzia dalhousieana*) is extremely rare in Australia – in fact until recently, there have not been any sightings for about 20 years. This changed recently when James Cook University Ph.D. student Ashley Field began studying the species. After a long search he eventually located a grand total of **seven** plants in north Queensland! Last week he reported that one of these has been stolen – the plant was excised from its substrate with a knife and completely removed. It's unlikely that the plant will be offered for sale – survival rate in cultivation is known to be extremely poor – but please let me know if you do hear any rumours of a blue tassel fern for sale.

*Peter Bostock*

## PROGRAM FOR THE SYDNEY REGION

Saturday 16 July. 11 am at the home of Ron and Paula Wilkins, 188b Beecroft Road, Cheltenham. Beecroft Road is extremely busy, Ron suggests to park in Cheltenham Road and walk in. The fern plantings should be looking much more "established" than on earlier visits. Phone 98761948.

Saturday 20 August. 10 am at Lawson. Meet near the Soldiers Memorial (just off the Great Western Highway, turn left at the shopping centre), for a 10:30 am start (we drive to the start of the track), of a short walk to Adelina Falls and possibly to Federal Falls a little further down the same track. Bring lunch and water, to eat when we get back to the cars, perhaps carry a snack if you wish. This is one of the best of the more accessible ferny areas in the Blue Mountains. Expect to find around 30 different species including *Blechnum gregsonii*. Enquiries to Peter, 96258705.

September. There will be no meeting this month, due to members being involved in the many spring shows taking place.

## PROGRAM FOR THE SOUTH-EAST QUEENSLAND REGION

Sunday 3 July. Excursion to Booloumba and Little Yabba Creek area, Conondale State Forest. Meet 9:30 am at Little Yabba Ck picnic ground, just south of Kenilworth on the Maleny–Conondale–Kenilworth Road.

Sunday 7 August. Meet 9:30 am at Ian Inglis' house, 59 Elizabeth St, Nambour, to study *Lastreopsis*.

September 3rd and 4th: No formal meeting. The Fern Study Group S.E. Qld members will be setting up and monitoring a fern display at The Spring Flower Show at Mt Coot-tha Botanical Gardens auditorium. Setup Friday afternoon (2nd).

# QUEENSLAND FERN STUDY GROUP REPORTS

### Outing to Goomburra State Forest

*Claire Shackel*

On Sunday 7th November, 2004, the sky was overcast when we departed Brisbane. As we drove towards Cunningham's Gap, patches of heavy rain were encountered. On arrival at the meeting place at Gladfield, the weather looked more promising. The convoy of cars headed north-west for approx. 7 km to Goomburra township and then east for 28 km to Goomburra State Forest, which is some 15km north of Cunningham's Gap on the Main Range.

Heavy rain on Saturday night prevented the party from reaching the desired destination. However a very pleasant walk was had along Dalrymple Creek, which flowed by the camping area. There was only a narrow strip beside the creek which contained rainforest trees, isolated palms and ferns. Those seen were *Adiantum atroviride*, *A. formosum*, *A. hispidulum*, *Arachniodes aristata*, *Arthropteris tenella*, *Asplenium australasicum*, *Christella dentata*, *Cyathea cooperi*, *Davallia pyxidata*, *Dennstaedtia davallioides*, *Deparia petersenii*, *Dicksonia antarctica*, *Dictymia brownii*, *Diplazium australe*, *Doodia aspera*, *Hypolepis glandulifera*, *Lastreopsis decomposita*, *Microsorum scandens*, *Pellaea nana*, *Platycerium bifurcatum*, *Polystichum* (whether *fallax* or *formosum* could not be decided), *Pteridium esculentum*, *Pteris tremula*, *P. umbrosa*, *Pyrrosia confluens* and *P. rupestris.*

Above the creek on the return track was open Eucalyptus forest where a very small *Cheilanthes sieberi* was seen. As the group returned to the camping area for lunch, the rain arrived. Dan and Wendy Johnston kindly erected their tarpaulin and lunch was enjoyed in relative dryness. Brisbane had a very wet day with local flooding but the Fern Study Group members had a very enjoyable day.

---

### Mapleton State Forest outing

*Claire Shackel*

On the 6th March, 2005, eleven members met at the Lily ponds in Mapleton before travelling to the old Mapleton Forest Station for morning tea. The majority of the party walked along the Gheerulla Trail Bike track, through open forest country and the common ferns were *Pteridium esculentum*, *Calochlaena dubia* and *Blechnum cartilagineum*. A detour into a moister gully area yielded *Cyathea australis*, *C. leichhardtiana*, *Platycerium bifurcatum*, *Sticherus lobatus*, *Nephrolepis cordifolia*, *Adiantum hispidulum* var. *hypoglaucum*, *Pyrrosia confluens*, *P. rupestris* and surrounding a tree fern trunk, *Cephalomanes caudatum*. An adventurous member went further down the gully and found *Adiantum silvaticum* and *Blechnum camfieldii*.

After lunch the car convoy continued north along Mapleton Forest Drive. Where the road crossed East Cedar Creek a very different array of ferns were observed. In the creek bed was a patch of *Blechnum indicum* with *Lygodium microphyllum* and *Cyclosorus interruptus* on the edge. On a rocky outcrop below the bridge, *Gleichenia dicarpa*, *Sticherus flabellatus* and *Lycopodiella cernua* were growing in moist crevices. *Doodia heterophylla*, *Calochlaena dubia*, *Cheilanthes sieberi*, *Blechnum cartilagineum*, *Lindsaea microphylla* and *Hypolepis muelleri* grew on the creek bank where conditions were drier.

The last stop was at the Piccabeen Palm Grove walking track. The walk started in wet sclerophyll forest where *Adiantum formosum*, *A. hispidulum* var. *hispidulum*, *Doodia aspera* and *D. heterophylla* were plentiful and a cross between the last two was noted. As the track descended, rainforest species became dominant and the

following ferns were seen: *Arachniodes aristata*, *Asplenium australasicum*, *Blechnum cartilagineum*, *Calochlaena dubia*, *Christella dentata*, *C. parasitica*, *Davallia pyxidata*, *Drynaria rigidula*, *Lastreopsis marginans*, *L. microsora*, *Platycerium bifurcatum* and *P. superbum.* Growing on a large tree buttress was a shrivelled dark green moss-like plant of *Crepidomanes saxifragoides*, a filmy fern. In among the palms on the gully floor were *Adiantum silvaticum*, *Arthropteris tenella*, *Cyathea leichhardtiana*, *Microsorum scandens* and *Pteris tremula*. Protruding from the roots of two separate Piccabeen palms were fronds of *Ophioglossum pendulum* and *Psilotum nudum.*

## Aussie ferns in Britain

*Ron Wilkins*

I've been looking at the Royal Horticultural Society Wisley Handbook on Ferns to see how our Australian ferns are faring in The United Kingdom. Most of the ferns in horticultural use there are of northern hemisphere origin. North American, European and Asian ferns are all well represented, however there are some southern hemisphere ferns including a few choice native Australian ferns. The range of genera is small, but what is lacking in genera is balanced by the profusion of cultivars. I suppose this is the way our fern horticulture will go in the future. And they can be costly! One cultivar of the Lady Fern, *Athyrium filix-femina* 'Clarissimum' sells for £350, and another 'Victoriae' for about £250. There must be some serious, and well-heeled fern collectors in Britain!

Although some common Australian ferns are doing well in British gardens, it is evident many are having a hard time there. Looking at the hardiness table it's clear that in most of the country winter frosts can be very severe, however some of our temperate ferns have adapted to these conditions. For example *Blechnum fluviatile* and *B. penna-marina* seem to do well even in hardiness zones 5 or 6 (average annual minimum temperature -29 to -18 $^{o}$C. On the other hand it is noted *B. nudum* does best in a conservatory over winter. Surprising that other Blechnums like *B. wattsii* and *B. minus* that flourish in Tasmania do not get a mention.

The British have long had a love affair with our tree ferns and Britain is a major destination for *Dicksonia* trunk exports. *Cyathea australis*, *C. cooperi*, *C. brownii* (Norfolk Is.) as well as the New Zealand *C. dealbata*, *C. medullaris* and *C. smithii* are all in cultivation, but only in the warmer zones, in sheltered London gardens for example. *Dicksonia antarctica* and surprisingly *D. youngiae* get a mention, as do the New Zealand *D. fibrosa* and *D. squarrosa*. There are fascinating notes on the winter care of these tree ferns. It is recommended that crowns are protected by a 6 inch layer of straw covered by plastic or a metal plate, and the top 45 cm of the trunk wrapped in hessian. Watering the crown is to be avoided, except in mid-summer, for fear of rotting. Some other ferns are planted under a stone slab for winter protection.

There is such a profusion of listed *Polystichum* and *Dryopteris* species and cultivars that Australian species get drowned out. Only *P. proliferum* gets a brief mention. The only other Australian fern to get accolades is *Todea barbara*. One glasshouse plant on the Isle of Bute, Scotland, more than 100 years old has a massive trunk 1m high and 70 cm diameter. It's a pity more Australian ferns are not utilised in British gardens as a lot of them could do well in the more temperate regions in the south of the country.

**Reference**: Rickard, M. *2003 Ferns.* RHS Wisley Handbooks. Cassell Illustrated. London.

**Ferns recorded during the Qld Region excursion to the Granite country of N.S.W. and Qld in early May 2005 (Qld Labour Day long-weekend).**

| Species | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| *Adiantum aethiopicum* | x | | | | | x | x | x | | x |
| *Adiantum hispidulum* var. *hispidulum* | | | | x | | | x | | | |
| *Asplenium australasicum* | | | | x | x | | | | | x |
| *Asplenium flabellifolium* | | | | x | x | | x | | | x |
| *Asplenium polyodon* | | | | | | | | | | x |
| *Azolla* | | | x | | | | | | | |
| *Blechnum cartilagineum* | | | | x | x | | | | | x |
| *Blechnum minus* | x | | | x | | | | x | x | |
| *Blechnum indicum* | | | x | | | | | | | |
| *Blechnum nudum* | | | | | | | | | x | x |
| *Calochlaena dubia* | | | x | x | x | x | x | | x | x |
| *Cheilanthes distans* | | | x | | | | | x | | |
| *Cheilanthes sieberi* | x | x | x | x | | x | x | x | x | |
| *Cyathea australis* | | | | x | | | | | | |
| *Davallia pyxidata* | | | | x | x | | x | x | x | x |
| *Dictymia brownii* | | | | x | | | | | | |
| *Doodia aspera* | | | | | | | | | | x |
| *Doodia caudata* | x | | | x | | | x | | | |
| *Gleichenia dicarpa* | x | x | | | | x | x | x | x | |
| *Hymenophyllum cupressiforme* | | | | | | | | | | x |
| *Hypolepis glandulifera* | | | | x | x | | | | | |
| *Lindsaea linearis* | | x | | | | | x | | | x |
| *Lindsaea microphylla* | | | x | | | | | | | |
| *Lycopodiella lateralis* | x | x | | | | | | | | |
| *Psilotum nudum* | | | | | | | x | x | | |
| *Pteridium esculentum* | x | x | x | x | x | x | x | x | x | x |
| *Pyrrosia rupestris* | | | x | x | x | | x | x | | x |
| *Schizaea bifida* | | x | | | | x | | | x | |
| *Selaginella uliginosa* | | x | x | | | x | | x | | |
| *Sticherus flabellatus* | x | | | | | | x | | x | |
| *Todea barbara* | | | | | | | | | x | x |

| | |
|---|---|
| A | Basket Swamp Falls, Basket Swamp Natl Park, NSW |
| B | Basket Swamp, Basket Swamp Natl Park, NSW |
| C | Boonoo Boonoo Falls, Boonoo Boonoo Natl Park, NSW |
| D | World War II Tank Trap, Tenterfield–Woodenbong Rd, NSW |
| E | Thunderbolt Hide Out, Tenterfield–Woodenbong Rd, NSW |
| F | Dr Roberts Waterhole, Girraween Natl Park, Qld |
| G | Underground Creek, Girraween Natl Park, Qld |
| H | The Junction track, Girraween Natl Park, Qld |
| I | Morgan's Gully and nearby creek system, Boonoo Boonoo Natl Park, NSW |
| J | Bald Rock–Bungoona Walk, Bald Rock Natl Park, NSW |

## RECENT FERN LITERATURE

*Peter Bostock*

**Leon Perrie, L.D.Shepherd & P.J.Brownsey**[1] have published a new name for the plant commonly cultivated as *Asplenium bulbiferum*. This plant has been found to be a hybrid and has been named by them *Asplenium* ×*lucrosum*.

From their abstract: "Evidence from chloroplast DNA sequences and morphology is presented for the origin of *A.* ×*lucrosum*, probably in cultivation, as a hybrid between the New Zealand endemic *Asplenium bulbiferum* and the Norfolk Island endemic *A. dimorphum*. The confusion of *A. bulbiferum* with *A.* ×*lucrosum* has led to the latter being used inadvertently in revegetation projects in New Zealand where it is has become a 'casual' adventive through its vegetative bulbil propagation."

*Asplenium* ×*lucrosum* can be distinguished from the wild *A. bulbiferum* (including the subspecies which occurs in Australia, *A. bulbiferum* subsp. *gracillimum*) by the dimorphism between sterile and fertile fronds (sterile pinnae are broader than fertile ones), even on parts of the same frond. The hybrid is apparently sterile, exhibiting shrivelled spores, but has inherited the ability to produce bulbils from *A. bulbiferum*.

**Atsushi Ebihara, Sabine Hennequin, Kunio Iwatsuki, Peter D. Bostock, Sadamu Matsumoto, Razali Jaman, Jean-Yves Dubuisson & Motomi Ito**[2] have undertaken genetic work on the filmy fern species formerly assigned to *Microtrichomanes* (now mostly included in *Crepidomanes* with some in *Sphaerocionium*, following Iwatsuki's work).

Their results indicate that the species possessing well-formed roots are better placed in *Hymenophyllum*. As a result, the original name *Hymenophyllum lyallii* Hook.f. has been resurrected for *Sphaerocionium lyallii* (Hook.f.) Copel. of Australia, New Zealand & New Caledonia, and the combination *Hymenophyllum digitatum* (Sw.) Fosberg is resurrected for *Trichomanes digitatum* Sw. (other names include *Microtrichomanes digitatum* (Sw.) Copel. & *Crepidomanes digitatum* (Sw.) K.Iwats.). *H. digitatum* occurs from Africa throughout Asia, north east Queensland, and the Pacific Islands. A number of other non-Australian species of *Microtrichomanes* have also been transferred to *Hymenophyllum*. All of these have more or less glabrous rhizomes and bear well-formed roots.

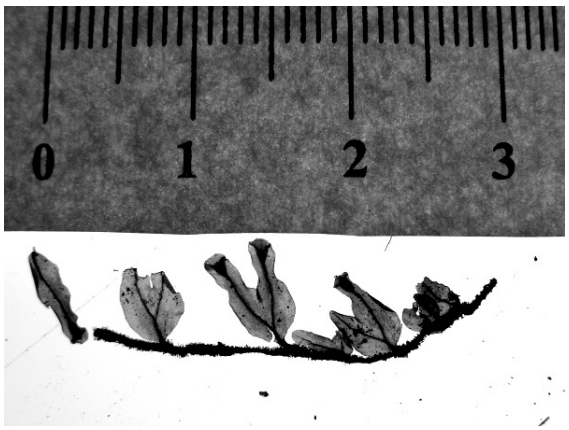
*Crepidomanes vitiense* (Baker) Bostock (*Microtrichomanes vitiense* (Baker) Copel.), which has an essentially rootless rhizome encrusted with short blackish hairs, retains its place in the *Trichomanes* side of the filmy ferns.

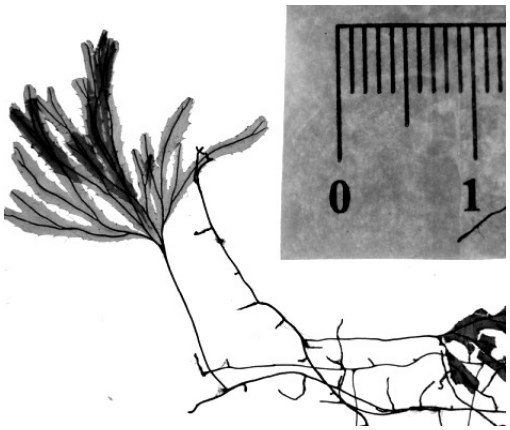
I can supply copies of the filmy fern paper if anyone would like it.

[1] *Plant Systematics and Evolution*, volume 250, parts 3–4, pages 243–257, published Jan 31, 2005.

[2] *Taxon*, volume 53, part 4, pages 935–948, published Nov. 2004.

Photographs: *Crepidomanes vitiense* (left), *Hymenophyllum digitatum* (right).



## SPORE BANK

*Barry White*

All types of spores are welcome including fresher samples of ones already on the list. There is no necessity to separate the sporangia from the spores. The whole, or part, frond may also be sent in, all is acceptable. Please include date of collection and, if collected from the bush, the area. In the list, the month and year of collection is shown. The area of collection is available on request. Order spore from Barry at the address shown on page 1 of the newsletter.

**Current spore list:**

*Acrostichum* sp. 6/04
*Adiantum formosum* 6/05
*Adiantum hispidulum* var. *whitei* 6/05
*Amphineuron opulentum* 2/05
*Arachniodes aristata* 6/05
*Asplenium aethiopicum* 6/05
*Blechnum chambersii* 4/05
*Blechnum minus* 5/05
*Blechnum patersonii* 6/04
*Blechnum wattsii* 4/05
*Christella dentata* 1/05
*Cyathea australis* 4/05
*Cyathea brownii* 2/04
*Cyathea cooperi* 1/04
*Cyathea cooperi* 'Cinnamon' 2/05
*Cyathea leichhardtiana* 6/04
*Dennstaedtia davallioides* 2/04
*Deparia petersenii* 12/04
*Dicksonia antarctica* 2/04
*Diplazium assimile* 12/04
*Diplazium melanochlamys* 12/04
*Doodia australis* 12/04
*Doodia dissecta* 6/05
*Hypolepis glandulifera* 1/05
*Lastreopsis acuminata* 11/04
*Platycerium bifurcatum* 3/03
*Platycerium superbum* 8/04
*Polystichum australiense* 12/04
*Polystichum proliferum* 4/05
*Pteris tremula* 1/05
*Pteris umbrosa* 3/04
*Pteris vittata* 6/05
*Rumohra adiantiformis* (Native) 4/05

Thanks to the following spore donors: Keith Ross, Keith Hutchison, Crosby Chase and Ron Wilkins.

---

**Deadline for copy for the next newsletter (send to Peter Bostock by email or post): September 15th, 2005**

**Note that subscriptions became due in January 2005. They remain at $5.00, and will cover members until June 30, 2006, unless circumstances change drastically.**