A.N.P.S.A. Fern Study Group

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SPORE BANK: Barry White,

From the Editor

This newsletter has a very practical emphasis. Firstly, we have Dot's presentation of advice from the Sydney region members. We also have Steve Lamont's advice on sowing spore and dealing with some pests. Lorraine provides an answer to my question in newsletter 121 regarding the use of bore water. Thanks also to Claire for her report on our Springbrook excursion, ferns encountered on her travels in North Queensland, and her experience with *Marsilea* species. Peter Bostock has contributed an item on recent taxonomy changes for filmy ferns, an account of the Queensland group's excursion to O'Reilly's and most of the photos in this newsletter. Noreen Baxter has provided the list of ferns seen on the O'Reilly's excursion.

Information relating to membership renewals is on the back page.

Program for South-east Queensland Region

Dan Johnston

Sunday, 7th August, 2011: Excursion in the Python Rock, West Cliffs area of Green Mountains, Lamington National Park (O'Reilly's). Meet at the start of the Python Rock track at 9:30am. The start of the track is about 700m before the main carpark, or 1km before the guest house on the road to O'Reilly's. The Moran's Falls track starts nearby. The Python Rock track is a relatively short (between 1 and 2 km one way) and is classified as wheelchair accessible. It is a further 1 km or so to West Cliff and this track is believed to be of a lower standard.

Friday, 16th September to Sunday, 18th September, 2011: Participation in the Spring Flower Show and Plant Market at the Auditorium at the Mt Coot-tha Botanic Gardens. Theme of our display: *Epiphytes are not Parasites.* The display will be set up on Friday for the show on Saturday and Sunday.

Tuesday, 18th October to Thursday, 20th October, 2011: Excursion to Girraween National Park. The intention is to stay in a motel in Tenterfield and from there explore Girraween.

Sunday, 4th December, 2011: Christmas meeting and plant swap, Rod Pattison's residence
Meet at 9:30am.

Sunday, 5th February, 2012: Meet at 9:30am at Peter Bostock's home
Topic: *Polypodiaceae* other than *Microsorum* and *Drynaria*.

Program for the Sydney Region

Dot Camp, Peter Hind

Saturday, 13th August, 2011: *Please note that this date is a week earlier than our usual monthly Saturday meeting*. Meet at 11am at the home of Dot Camp,

We will explore the Cabbage Tree walk at nearby Strickland State Forest.

September, 2011: No meeting for September. Enjoy the Spring flower shows.

Saturday, 15th October, 2011: Meet about 11am at the home of Tamara and Ian Cox.

Enjoy the opportunity to explore Tamara and Ian's lovely garden. Their excellent fern garden is well worth exploring along with their extensive plantings of other attractive natives that do so well on this sandstone bush block. Enquiries to Ian or Tamara,
Our topic for study will be growing Blechnum species.

Saturday, 19th November, 2011: Meet from 11am at the home of Kylie and Dwayne Stocks at Verdigris Nursery,
This will be our end of year meeting. We will meet at midday on Saturday for lunch, then look around the nursery and gardens, followed by a BBQ in the evening (BYO everything). On Sunday we will explore the local flora and visit some favourite spots of Kylie and Dwayne's.

Kylie and Dwayne – Phone 02 4478 1311

December, 2011 and January, 2012: No Meetings. *Merry Christmas & Happy New Year.*

Saturday, 18 February, 2012: Meet from about 11am at the home of Peter and Margret Hind,

Study to be decided. Any ideas or suggestions welcome.

All outings are subject to weather conditions being favourable.

South-East Queensland Trip Reports

Springbrook, March 2011

Claire Shackel

Only a small group braved the inclement weather to visit Springbrook on the 6th March including a visitor Marco Stringhi from Brazil. Peter Bostock was anxious to revisit the *Hymenophyllum marginatum* as this species had not been recorded in the area prior to our visit last year and it was such a large area on a rock face beside the track.

The fern list had a few additions from last year namely *Lindsaea linearis*, *Platycerium superbum* and the filmy fern, *Cephalomanes caudatum*, now called *Abrodictyum caudatum*. There was a good array of ferns around the picnic area and as the list from the last year was in the order seen it was easy to track down each species. The track down to the Twin Falls Circuit was through moist rainforest with large patches of *Blechnum wattsii* and *Sticherus flabellatus* and changed to *S. lobatus* as the environment changed to open forest.

Grammitis stenophylla
Photo: Peter Bostock

On crossing over the top of Twin Falls to the eastern side of the ravine the vegetation became open eucalyptus with a heath understory. *Lindsaea linearis* and *L. microphylla* grew on the edge of the track.

As the track zigzagged down the cliff the environment became much wetter and huge boulders had broken from the cliff edge to make tunnels through which the track passed. This area was where the *Hymenophyllum marginatum* was growing in profusion amongst a mass of mosses and liverworts, as reported on our previous visit. Low down on the wall there were large patches of *H. marginatum* but to some extent the area had been taken over by *Grammitis billardierei*.

This year, patches of ferns and mosses 30–50 cm in diameter had been dislodged from the rock face [effects of drought or too much rain?], whereas the previous year there was a complete covering of filmy ferns and moss. After Peter took some measurements of the area covered by *H. marginatum* [8 metres of cliff face laterally and up to 5 metres high], the party continued down the eastern side of the gorge to Rainbow (Talangagong) Falls.

This was the only time all day that raincoats were necessary and this was to walk under the falls. In this very wet area *Deparia petersenii* subsp. *congrua* and *Blechnum patersonii* thrived. Also noted here was a small patch of the invasive fern, *Selaginella kraussiana*. As the environment became more open forest again and the likelihood of any different ferns diminished, the group returned to the picnic area for lunch.

Selaginella kraussiana
Photo: Peter Bostock

After lunch it was decided to take our visitor to the Best of All Lookout. It is one place in southeast Queensland where *Microsorum pustulatum* and *M. scandens* grow together on one tree (in the car park!) and shows the difference in rhizome characteristics: *M. scandens* has a flattish rhizome that adheres to the substrate whereas *M. pustulatum* has a round rhizome that stands up from the surface, and the rhizome scales of *M. scandens* are narrow with up-turned apices, while those of *M. pustulatum* are rounded and flattened against the rhizome.

Although haze spoilt the view from the lookout, it was possible to see Mt Warning and beyond and we know why it is called the Best of All Lookout. At the lookout there was an area of *Lastreopsis silvestris,* a fern that only grows at high altitude in SE Qld. This is the highest point on Springbrook.

Ferns seen in Tallanbana area: *Abrodictyum caudatum, Adiantum hispidulum* var. *hispidulum, Adiantum silvaticum, Arthropteris tenella, Asplenium australasicum, Asplenium polyodon, Blechnum*

cartilagineum, Blechnum patersonii, Blechnum wattsii, Calochlaena dubia, Christella dentata, Cyathea australis, Cyathea leichhardtiana, Davallia solida var. *pyxidata, Deparia petersenii* subsp. *congrua, Dictymia brownii, Diplazium australe, Doodia australe, Doodia caudata, Gleichenia dicarpa, Grammitis billardierei, Hymenophyllum cupressiforme, Hymenophyllum marginatum, Hypolepis Muelleri, Lastreopsis marginans, Lastreopsis munita, Lindsaea linearis, Lindsaea microphylla, Microsorum scandens, Pellaea nana, Platycerium bifurcatum, Platycerium superbum, Pyrrosia confluens, Pyrrosia rupestris, Sticherus flabellatus* var. *flabellatus, Sticherus lobatus, Tmesipteris ovata, Todea barbara, Vittaria* sp.

Ferns seen in Best of All Lookout area: *Arthropteris beckleri, Arthropteris tenella, Asplenium australasicum, Blechnum patersonii, Diplazium australe, Hypolepis muelleri, Lastreopsis microsora, Lastreopsis silvestris, Lastreopsis smithiana, Microsorum pustulatum, Microsorum scandens, Pellaea nana, Platycerium bifurcatum, Pyrrosia rupestris*.

Green Mountains, Lamington National Park (O'Reilly's) June 2011

Peter Bostock & Noreen Baxter

Peter: The Lamington excursion attracted only 5 people, and at first it seemed that we might regret the trip. But after a chilly and somewhat cloudy morning, the day brightened and warmed considerably, and in fact the track system at O'Reilly's was as busy as any summer weekend. The small group meant that we could keep together while finding ferns, and the good conditions meant that photo opportunities were easy to find. Filmy ferns were outstanding on this occasion, no doubt due to the wet summer. We came across a couple of unusual prickly treeferns (*Cyathea leichhardtiana*) during this walk. One fairly tall fern had a second fern growing out at right angle for some distance before the 'parasitic' fern turned upwards. The other fern seemed to be truly dichotomously divided, but on examining the photographs, may have been two ferns growing in very very close proximity, essentially with fused trunks. All agreed this was a very enjoyable excursion, not marred in any way by being able to buy a cappuccino at the end of the walk!

Cyathea leichhardtiana featuring: structures, *Microsorum scandens*, *Abrodictyum caudatum*

Noreen: On this excursion to Picnic Rock, the following ferns were seen: *Abrodictyum caudatum* (syn. *Cephalomanes caudatum, Macroglena caudatum*), *Adiantum formosum, Adiantum hispidulum* var. *hispidulum, Adiantum silvaticum, Arthropteris beckleri, Arthropteris tenella, Asplenium australasicum, Asplenium polyodon, Blechnum cartilagineum, Blechnum patersonii, Blechnum wattsii, Christella dentata, Cyathea australis, Cyathea cooperi, Cyathea leichhardtiana, Davallia pyxidata, Dictymia brownii, Diplazium assimile, Doodia aspera, Grammitis stenophylla, Histiopteris incisa, Hymenophyllum cupressiforme, Hypolepis glandulifera, Lastreopsis decomposita, Lastreopsis marginans, Lastreopsis microsora, Lastreopsis munita, Lastreopsis smithiana, Microsorum scandens, Pellaea nana, Platycerium bifurcatum, Pneumatopteris sogerensis, Pteris umbrosa, Pyrrosia confluens, Pyrrosia rupestris, Sticherus flabellatus var. flabellatus, Todea barbara, Vittaria ensiformis*.

Tips for Growing Ferns

Dot Camp

(Notes from the Fern Study Meeting held at Steve Lamont's, 9th April, 2011)

The Basics of Care

Generally-

- Ferns like
    - good light but not direct sun;
    - like a humid atmosphere with shelter from strong wind - planting dense communities can raise humidity;
    - moisture around their roots but not water logged;
    - organic matter added to the soil or as mulch.
- Fertilise during the growing season
- When planting, take care not to cover the crown.
- In pots, use a coarse mix for epiphytes & a free draining mix for terrestrials
- Ferns grown under cover are more likely to suffer red spider mite attack.
- Use Eco oil to help control aphids, mealy bug & scale.
- Plants in the ground are easier to care for than plants in pots.

The Basics of Selection

- Select a fern that will grow in your area.
- Take care not to select a 'feral' that will over-run your garden e.g. *Nephrolepis cordifolia, Hypolepis muelleri*.
- Observe where the fern grows naturally; for example: shade, sun, on rocks; and try to replicate these conditions.
- Be aware of the mature size of a fern; for example: an *Angiopteris* will need a lot space.
- My number one growing tip is if a fern in a pot is not doing well- tip it out and check if there are any earthworms or curl grubs in the pot. Earthworms will cause the soil to 'glug' and plant roots to disappear. Elevate the pot from soil contact or use fine netting in the base of the pot.

Tips from our group

Kyrill- For your potting mix, add crushed peanut shells that will help keep the mixture open and then feed the plant as it breaks down.
Steve - When transplanting, place a ziplock plastic bag around the whole above-ground section of the fern before planting, sealing it as far as possible on each side. After about three weeks (or when the plant is somewhat established) gradually unseal the bag over a week or so & then remove.
Marg - Use araldite to attach epiphytes.
Ron - If a fern is not doing well, it is worth trying it in a new position in the garden.
Steve - Try growing filmy ferns in a tub of spagnum moss. Also, grow *Stenochlaena* in spagnum moss. (I'm sure such encouragement is not needed for Queenslanders!!)
Marg - Place your plant in a terracotta pot & then into another pot surrounded by spagnum moss to retain moisture.
Horst- Uses tillandsia in the pot gap.
Steve - Grow your own spagnum moss, selecting spagnum sold in a clear plastic bag & already green. Keep bag sealed, watered and in a shady place & reap a handful or two every few months.
Ron - Suggests placing your spore pots in a position where they receive some morning sun.
Marg - *Lycopodium* is ready to propagate when the tips turn up.
Horst- recommends using a Lyra Plast-O-Mark 6363 made in Germany, for marking the names of your plants.
Marg - Adds a small amount of orchid bark to the bottom of her pots to prevent the soil mix washing out the bottom when she 'dunks' her pots.

Spore Sowing – A Quick, Easy Method

Steve Lamont

You will need:

- some Glad 285 ml microwave-safe containers. (These have blue lids and can be obtained from Franklins in packets of five – they are cheap but long-lasting);
- some Debco propagation mix (this comes in small, easy-to-carry bags);
- an atomiser filled with pre-boiled water;
- a microwave oven; and
- a dessert spoon.

1. Place about three heaped dessert spoons of propagating mix into each container, rest the lid on the top and heat in the microwave oven for four minutes (on the highest setting). (Three containers usually fit into our microwave at a time.)
2. Once the mix is cooked, remove the lid and spray enough pre-boiled water from the atomiser onto the mix to flatten the mix down a bit. Carefully pour off any excess water (being cautious not to tip the mix down the drain). This step saves waiting around for the mix to cool.
3. Depending how much water you've used, the mix might still feel hotter than your hand (when felt through the bottom of the container) and you might need to wait a few minutes before the next step.
4. When the mix feels comfortably warm, sow the spore onto the mix (relevant texts will tell you to avoid sowing too thickly). I usually give a couple of further light squirts of pre-boiled water over the spores at this point.
5. Then seal the container firmly being careful not to trap too much air. Too much air might cause the lid to bulge and this can make the containers hard to stack. (Otherwise they stack quite neatly.)
6. Then place the container in a light position away from direct sunlight or rain.
7. Check containers about every three months. Sometimes, they will need topping up with pre-boiled water.

Slugs, Snails, Caterpillars and Grasshoppers – Some Observations

Steve Lamont

Lantern

I used to wander about on damp nights with a torch finding and squashing snails and slugs. In the beginning (a couple of years ago), I was amazed and found hundreds of them (usually in the same places). (And I had been using snail pellets for years.) After a while, I found that batteries didn't last long and the torch light was not good in some places. I bought an Arlec heavy duty work-light from Bunnings for about $20 and now it is easier and quicker to find offending bugs.

Dead Snails

Interestingly, I've found that slugs (especially) tend to be cannibals (at least the species around our place). If I leave squashed slugs or snails lying around, I usually find they attract slugs the following night and that saves me looking for those slugs.

Mangoes

Dead snails attract some slugs; mangoes attract all slugs and snails for many metres around. If I leave mango skins or seeds out in the afternoon, by about an hour after dark, most of the snails and slugs in the vicinity will be hanging around or heading toward the mango pieces. Interestingly, I get an impression that slugs are a bit territorial and, if a big slug stakes out a mango seed, I might need to remove him or her before the others will come closer.

Mulch

Snails and slugs find it difficult to travel over some mulches. We've got lots of *Eucalyptus nicholii* around our place, so I use leaves from them as mulch and it seems to work well. This is especially useful near and under boundary fences.

Frogs and Lizards

After we made an old tub into a pond (it was already there and was too hard to move), we found an increased number of mosquitoes resulted. After a while, the increased mozzie population led to an increase in the number of frogs and lizards in the garden and this resulted in a smaller number of snails (and fewer mozzies).

Returning to the Scene of the Crime

It seems to me that most snails, slugs and caterpillars return to the same place each night until the subject frond is completely eaten. This means that looking out for damage during the day can tell you where to start looking at night. This seems to work pretty reliably. Once things are a bit under control, checking trouble spots identified during the day is probably all you need to do.

Favourite Plants

In our garden, I find that slugs and snails are most attracted to *Asplenium obtusatum*, *Colysis ampla*, *Microsorum grossum*, *M. pustulatum* (but they leave *M. scandens* alone) and around these plants are the places I look first and closest.

General

Looking for shiny snail-trails can help in finding slugs and snails.

Some websites suggest that snails and slugs won't cross copper and advise the use of copper barriers around favourite plants. Other sites suggest iron, crushed eggshells, volcanic rock crumbs or diatomaceous earth work well as barriers.

Some sites suggest that providing snail-homes in the form of upturned pots can make finding snails easier. Other sites suggest beer-traps, coffee grounds (which apparently cause heart-attacks), citrus peel or lettuce (but I have doubts about the last one).

Grasshoppers

These can be really annoying. They tend to bite the stipes of emerging crosiers. They don't eat anything; they're just vandals. If you see crosiers damaged in this way with no evidence of having been eaten, look out for antennae at night. Grasshoppers can sometimes be hard to catch and to hold and they bite.

More on the Use of Bore Water for Ferns *Lorraine Deppeler, Dan Johnston*

In newsletter 121 (November last year) I mentioned concerns that ferns in the Fern Glade at the Maroochy Region Bushland Botanic Gardens at Tanawah on the Sunshine Coast had not been performing as well as had been hoped and the idea that bore water may have been a factor had been advanced. Peter Bostock supported the view that bore water could be a problem, and I sought practical experience in this matter.

In response, Lorraine Deppeler has given us the benefit of her experience as follows:

> I have been propagating and growing ferns commercially for many years now. Initially I was using bore water to irrigate the nursery with overhead sprinklers. The bore water tested high in calcium, iron, and other salts. I quickly realised that it was causing the demise of the young sporelings. Also the mature ferns were showing signs of severe burning of the frond tips as well as causing an unsightly brown coating on the fronds from the high iron content. I changed the irrigation system to a capillary matting system, so that all water was taken up by the plants

roots from damp mats that the pots were placed on. This improved the appearance of the ferns (i.e. no more build up of iron deposits on the fronds) but there was still some burning and browning of the frond tips. My next step was to install rain water tanks and collect water from the roof of the nursery for irrigation via the capillary matting. This saw a dramatic improvement in the growth rates and general appearance of all stages of growth from sporelings to mature ferns.

Thanks Lorraine, for confirming our suspicions and adding additional detail. At the Maroochy Gardens, we are going to install a new watering system for the Fern Glade using dam water rather than bore water. In fact, we haven't had to water at all this year as mother nature has been doing the job for us rather well and the general opinion is that the glade is improving in general appearance, but whether that is due to the absence of bore water or other factors, such as the wonderful weather for ferns, is not clear.

Cairns to Cape York and Thursday Island

Claire Shackel

On a recent coach trip with Outback Spirit from Cairns to the tip of Cape York and over to Thursday Island, the following ferns were noted. As this was a tourist trip, plant identification was done on the run.

Driving in from Cairns Airport, the mangrove fern *Acrostichum* was growing alongside the road. A visit to Cairns Botanic Garden followed in the afternoon. There was a wonderful array of tropical plants but the fern house contained few native ferns, in fact few ferns. There was a fine specimen of *Angiopteris evecta* in the grounds and there were other ferns scattered among the garden beds. The trees near the entrance were covered with *Pyrrosia longifolia, Asplenium nidus* and *Platycerium hillii.*

The trip travelled along the coast to Mossman, Port Douglas and on to the Daintree River ferry. The afternoon was spent walking around the Cooper Creek Rainforest Park at Cape Tribulation with a very enthusiastic guide. This was the first chance to observe the tropical ferns closely. On the two hour walk the following ferns were seen on the trees adjacent to the forest: *Asplenium nidus, Drynaria rigidula, Pyrrosia longifolia* and *Platycerium hillii.* With the help of the plant list for the area the following species were seen – *Blechnum cartilagineum* (trunked form*), Selaginella longipinna, Microsorum membranifolium, Colysis ampla, Huperzia phlegmaria, Lygodium flexuosum*, *Schizaea dichotoma, Lomariopsis kingii* and *Cephalomanes atrovirens.* In some areas of the walk there was a wonderful canopy of fan palms, *Licuala ramsayi.*

The night was spent at Ferntree Lodge where there were many ferns in the gardens and in the adjacent forest. *Asplenium nidus, Christella dentata, Arthropteris palisotii, Adiantum silvaticum, Pyrrosia longifolia, Drynaria rigidula, Blechnum cartilagineum* and *Platycerium hillii* were noted and *Lygodium* scrambled up the trees. On departing Ferntree Lodge there was a short drive to view Cape Tribulation and *Lindsaea ensifolia*, *Psilotum* and *Vittaria* were seen on the sandy foreshore.

As the coach headed north along the Bloomfield track there were slender treeferns with shiny fronds possibly *Cyathea rebeccae* and a thick trunked dull one possibly *Cyathea celebica*. Blechnum cartilagineum, Pyrrosia longifolia, Drynaria rigidula* and *Lygodium* were recognisable as we traversed the rocky road. Morning tea was held at Woobadda Creek and *Drynaria sparsisora, Doodia caudata, Asplenium nidus, Adiantum atroviride* and a dark green spreading fern, possibly *Taenitis pinnata*, were seen.

We then entered drier more open eucalyptus forest that was not as friendly for ferns. In the dry hills around Laura, while visiting the aboriginal rock art at Split Rock, a shrivelled specimen of *Cheilanthes* was seen. The night was spent at Lotus Bird Lodge and the margin of the water lily-filled lagoon contained *Marsilea mutica* and *Ceratopteris thalictroides*. In this vicinity, there were big areas covered with a fine carpet of a yellow bladderwort, *Utricularia chrysantha,* and patches of the rainbow plant, *Byblis liniflora*.

Under the ant hills in the mowed grass at Branwell there was a small *Selaginella* possibly *S. pygmaea.*

The next area where the vegetation was very different was Fruit Bat Falls. Here the pitcher plant *Nepenthes* grows and the ferns seen were *Lycopodiella cernua, Lindsaea ensifolia, Dicranopteris linearis* and *Gleichenia dicarpa*. Bladderworts, rainbow plants and sundews and the tall reed like orchid *Bromheadia pulchra* made this a very interesting area botanically.

There appeared to be a complete lack of ground ferns on the drive from Bamaga to the tip of Cape York in spite of passing through rainforest as well as open forest. The wet weather may have drowned out the understory or it may have been due to the activity of the scrub turkeys. The canopy did support colonies of *Asplenium nidus, Drynaria sparsisora* and *Pyrrosia longifolia*. In the dry open forest around a World War Two plane crash site, *Cheilanthes* possibly *C. tenuifolia* was seen.

On a walk around the headlands on Thursday Island to the Lions lookout, a small *Cheilanthes* with very few hairs and a dark rachis was seen – possibly *C. praetermissa*.

At various times on the trip there were large vigorous ground ferns some of which probably belonged to the family *Thelypteridaceae*, and others were possibly *Diplazium dietrichianum*.

**C. celebica* has not been recorded north of Black Mountain, Kuranda, so these will be *C. woollsiana* and/or *C. cooperi* [Peter Bostock].

Marsilea

Claire Shackel

When I joined the Fern Study Group, one of the ferns I was keen to obtain was *Marsilea.* Jan Glazebrook gave me a plant from a seepage area in her garden. It did not survive probably due to lack of light which was not surprising considering where they grow naturally on the edge of, or in, still water.

Over the years I have collected or been given several *Marsilea* mostly *M. drummondii*. With the story of Burke and Wills, it has always surprised me that *Marsilea* could produce enough sporocarps to be able to be used as a food source. Having visited Longreach and walked the flood plain of the Thomson River, it was easy to understand their collection. *M. drummondii* appears to produce sporocarps readily whereas the others I have grown need to be put under stress without killing the plant and even then do not produce many sporocarps. Without sporocarps it is very difficult to distinguish between *M. drummondii* and *M. hirsuta* and some given to me as *M. hirsuta* have turned out to be *M. drummondii.*

Marsilea hirsuta sporocarp

These days being a regular visitor to Central Queensland, *Marsilea* has been observed on the lake in Roma township. A small, very weak *Marsilea* collected from a dam near Sapphire proved to be *M. hirsuta*. When planted in a frog pond, it grew vigorously and when attempts were made to contain the fern, it died out. *M. drummondii* was found on the edge of Tygum Lagoon at Waterford south of Brisbane. A fine leaved water plant purchased from Bunnings has produced sporocarps and was also found to be *M. hirsuta.*

Marsilea mutica
Photo: M Hassler

After all the rain, on recent trips to central Queensland, I observed *Marsilea* at different times in the road drains. On stops at two different swampy areas next to the road, a small bright green *Marsilea* was collected at each. There were no sporocarps visible so identification will have to wait. I really want to have something different.

Recent taxonomic publications

Peter Bostock

A second and final paper on the taxonomy of the Hymenophyllaceae (filmy ferns) of the Pacific region was published recently by Atsushi Ebihara and others. In this paper (part 1 was published in 2007) the authors make a new combination in *Hymenophyllum* for the Australian species formerly included in the genus *Apteropteris* or *Sphaerocionium* i.e. *Hymenophyllum applanata* (A.M.Gray & R.G. Williams) Ebihara & K.Iwats. formerly *Apteropteris applanata* A.M.Gray & R.G.Williams or *Sphaerocionium applanatum* (A.M.Gray & R.G.Williams) K.Iwats., endemic to Tasmania. They have also reinstated the original name *Hymenophyllum lyallii* Hook.f. for *Sphaerocionium lyallii* (Hook.f.) Copel. This latter species occurs in New Caledonia, New Zealand and New South Wales (chiefly in the Blue Mountains).

In addition, the authors have decided to drop the name *Hymenophyllum samoense*, by including this taxon in the synonymy of *H. javanicum*. I am very much in favour of this, as distinguishing the two 'species' was always problematic. Furthermore, the authors have dropped varieties in *Hymenophyllum polyanthon*, but note that material from the Pacific region is not the same as that from the type locality (in Jamaica!) and will almost certainly be renamed in the future.

A. Ebihara & K. Iwatsuki (2007). The Hymenophyllaceae of the Pacific Area. 1. *Hymenophyllum* subgenus *Hymenophyllum*. Bulletin of the National Museum of Nature and Science, Series B, volume 33, pages 55–68.

A. Ebihara, J. Nitta & K. Iwatsuki (2010). The Hymenophyllaceae of the Pacific Area. 2. *Hymenophyllum* (excl. subgenus *Hymenophyllum*). Bulletin of the National Museum of Nature and Science, Series B, volume 36, part 2, pages 43–59.

Spore List July 2011

Barry White

Acrostichum speciosum 4/09
Amphineuron opulentum 4/10
Angiopteris evecta 11/09
Arachniodes aristata 11/10
Asplenium athertonense 5/11
Asplenium milnei 10/10
Asplenium nidus 5/08
Asplenium nidus cv.5/08
Asplenium pellucidum 3/11
Blechnum ambiguum 1/08
Blechnum chambersii 9/10
Blechnum patersonii 4/11
Blechnum wattsii 12/08
Blechnum wurunuran 7/11
Chingia australis 6/11
Christella hispidula /09
Christella parasitica 5/11
Christella subpubescens12/08
Cyathea australis 9/10
Cyathea baileyana 3/11
Cyathea cooperi 1/09
Cyathea cooperi (*Blue Stipe*) *1/11*
Cyathea cooperi '*Brentwood*' *3/08*
Cyathea cooperi '*Cinnamon*' *4/11*
Cyathea exilis 6/11
Cyathea felina 10/08
Cyathea howeana 10/10
Cyathea macarthuri 10/10
Cyathea robusta 9/10
Cyathea rebeccae (crested) 9/10
Dicksonia antarctica 12/10
Diplazium australe 5/10
Diplazium assimile 6/09
Diplazium dilatatum 12/10
Diplazium dilatatum × *Deparia petersenii* subsp. *congrua 3/11*
Doodia australis 4/11
Dryopteris sparsa 5/11
Hypolepis glandulifera 2/11
Lastreopsis acuminata 4/11
Lastreopsis decomposita 6/09
Lastreopsis marginans 5/11
Lastreopsis microsora 6/10
Lastreopsis nephrodioides 10/10
Lastreopsis rufescens 3/11
Lastreopsis tenera 3/11
Macrothelypteris torresiana 6/10
Microsorum punctatum 1/09
Ophioglossum pendulum 7/08
Pellaea falcata 1/11
Platycerium superbum 4/08

Thank you to the following spore donors: Nada Sankowsky, Kylie Stocks, Neville Crawford, Wendy Johnston, Claire Shackel, Dot Camp, and Crosby Chase.

Fern Study Group Financial Statement, July 1, 2010 to June 30, 2011

Dan Johnston, treasurer

ANPSA Fern Study Group Fees for 2011-2012

Dan Johnston, treasurer

The annual subscription to the Fern Study Group is $5 for a single person or more than one person receiving a single copy of the Fern Group Newsletter.

If you get your newsletter by mail, the address label and an enclosed note will show your current paid-to date:

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  Dan Johnston,

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