



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

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From the Leader...

I volunteer as a Research Associate at my former workplace, the Queensland Herbarium. In mid 2017, a project commenced to modernise the biological databases and associated business systems across the Science Division of the Qld Department of Environment and Heritage. As a result of this project, and because of my roles at the Herbarium before I retired, I am serving on a board overseeing the project, as well as advising on database matters and image management.

One of the interesting and relatively immediate outcomes of the modernisation activity is a pilot project which it is hoped will lead to the 'capture' of a digital image for each of the 500,000+ specimens of Queensland vascular plants in the herbarium collection. Initially, threatened and near threatened species are being photographed; this includes some 70 species of ferns.

Each image, photographed with an 80 megapixel digital sensor, is about 100 megabytes in size, providing a resolution of 600 dots/inch when viewed or printed life-size. This is equivalent to viewing the specimen with a $\times 6$ hand lens. Ultimately, images will be available via the web, and will be linked to a digital record of each herbarium specimen. I believe this will be a very valuable resource to aid professionals and amateurs alike in identifying the target species.

On another topic: while many of the recent Fern Study newsletter articles have been penned by just a few contributors, I welcome and invite contributions from any member. I don't mind checking botanical spelling, so don't worry about that aspect of the process. Anything of interest to a member is likely to be of interest to many so please feel free to contribute.

Program for South-east Queensland Region

Peter Bostock

Sunday, 4th March, 2018. Box Forest Track, Cunninghams Gap SW of Brisbane. Meet at West Gap Creek picnic area 2 km down the range on the Warwick side.

Wednesday, 11th April, 2018. Fort Bushland Reserve, Corinda. Meet at end of Eddystone Road, off Blackheath Road.

See reports for the two excursions above in this newsletter.

Sunday, 6th May, 2018. Meet at 9:30am at Claire & Don Shackel's residence,

for a discussion on *Lastreopsis* and another look at Claire's fern propagation efforts. This is the May long weekend, but we decided to go for it anyway!

Sunday, 3rd June, 2018. Cascades Walk, Upper Currumbin Creek, in the Gold Coast hinterland.

Depart M1 motorway at exit 95, keeping to the right-hand lane, turning right onto Stewart Road, then veer left onto Currumbin Creek Rd. The road ends at the National Park car park, about 21 km from the motorway. Meet as usual at 9:30am at the car park. It is probably worth car-pooling as much as possible as parking is limited.

Sunday, 1st July, 2018. Meet at 9:30am at Helen Jeremy's residence,

with

a fall-back alternative to visit the Mt Coot-tha Botanic Gardens if Helen is unable to host the meeting due to other commitments. Topic to be advised, but to include planning for Sept to February events.

Note that Helen's property has a shared entrance, recognisable by the combined letterboxes & house numbers. The Jeremy residence is first on the right on the common access road.

Sunday, 5th August, 2018. Mary Cairncross Park, via Maleny, Blackall Range, usual time of 9:30am (chance to see *Romnalda strobilacea*, a rare relative of *Lomandra*, and my favourite filmy fern *Crepidomanes vitiense*).

Program for the Sydney Region

Peter Hind

Saturday, 21 April, 2018. Meet about 10.30 am at the home of Ian Cox, Enjoy the opportunity to explore this excellent fern garden and extensive plantings of other attractive natives that do so well on this sandstone bush block. [Microsorium was studied in lieu of Aquatic ferns due to absence of Kylie who has been growing some of them.] Enquiries to Ian -

Saturday, 19th May, 2018. Meet from about 10.30 am for 11 am start at Steve Lamont's residence at

Study subject is "What's that Fern". Steve would like us to help verify the names on many of his ferns and perhaps identify some of those that haven't got one yet. If lost or need further directions or info phone Steve

Saturday, 16th June, 2018. Meet from about 10.30 am at Stoney Range Botanic Garden (Flora Reserve) at 810 Pittwater Road, Dee Why. (It's the same side as the shops). Bring a packed lunch. Short walking trails in a small mostly planted Bushy Reserve. Planted Rainforestry area is close to parking area (the ferniest part) and entrance. Leader: Peter Hind phone 9625 8705.

Saturday 21st July 2018. Meet from about 11 am at the home of Natalie & John

We will attempt to study aquatic ferns e.g. Marsilea, Isoetes, Ceratopteris, perhaps also emergent semi aquatics such as Acrostichum. Enquiries to Natalie & John

Expressions of interest, several days before any of the bushwalks should be given to whoever is leading the walk, by phone, email etc. If no positive indications are received, at least two days, where possible, before the event by the walk leader, the event will be cancelled.

Of course if the weather is bad or there is any possibility of danger, such as bushfire please do not turn up. If personal events change your plans, please let the leader know or send apologies via someone who is planning to go, so that we don't wait for you.

All outings are subject to weather conditions being favourable.

Excursion and General Reports

Excursion to Cunninghams Gap, March 2018

Claire Shackel & Peter Bostock



Pyrrosia confluens enjoying the bright conditions near the Summit car park

Peter: This was a relatively well attended excursion, with Jeff Lynne (Port Macquarie) attending in addition to 9 local members. Apart from some confusion about car 'shuffling' (due to the non-return walk), which resulted in two members having to walk 2 km up the highway in addition to subsequently walking down the Box Forest track (sorry, Peter W. & Ray – we'll do better next time!), the walk went smoothly.

Claire: Sunday 4th March outing of the Fern Study Group was to Cunninghams Gap in the Main Range National Park. This was a rainforest area and after the recent rain was very lush and green, with plenty of leeches.

Morning tea was eaten in the West Gap Creek picnic area and then a car shuffle was organised to take the party to the Summit carpark. As we waited for everyone to arrive, the following ferns, *Adiantum formosum*, *Arthropteris tenella*, *Asplenium australasicum*, *A. polyodon*, *Dictymia brownii*, *Doodia aspera*, *Hypolepis glandulifera*, *Lastreopsis marginans*, *L. microsora*, *Platynerium superbum*, *Pyrrosia confluens* and *P. rupestris* were seen around the car park. The area around the Summit carpark at Cunninghams Gap is moist rainforest and the gap in the canopy made by

the road allowed for a diverse range of habitats. On entering the track, *Microsorium scandens* was seen climbing the trees and *Lastreopsis decomposita* grew among the *L. microsora*.

We started walking slowly downhill through a carpet of *Lastreopsis microsora* gradually giving way to *Blechnum cartilagineum* and back to *L. microsora*. As we descended further the vegetation changed to Box Forest with a more open canopy and *Doodia aspera* became the dominant groundcover while *Adiantum atroviride*, *Arachniodes aristata* and *Pellaea nana* were also seen. *Asplenium australasicum* was common throughout the area. The staghorn fern, *Platycterium superbum*, was seen at the summit and at isolated spots during the walk but elkhorns, *P. bifurcatum*, were not seen until the Box Forest was reached. Where a *Platycterium* base had fallen to the ground, a *Davallia pyxidata* had found a home.

Lovely little specimens of *Adiantum diaphanum* frequented the track edge with occasional small form of *Doodia caudata* and *A. hispidulum*. At a small break in the canopy *Pteris tremula*, a pioneer species, made use of the extra light. As the track wound in and out of gullies, *Diplazium assimile* grew in the very wet areas and as we descended conditions suited the bigger *D. australe* and *Lastreopsis munita*. *Cyathea cooperi* also grew in one of these gullies. There were lots of moss covered tree trunks that required inspection by Peter [Bostock] but he did not find the expected *Crepidomanes vitiense* till the Box Forest was reached.



Adiantum diaphanum, with its distinctive black hairs

In all a tally of 29 ferns were seen on this walk and after a pleasant lunch under the watchful eye of female bowerbirds, we departed for home.

Excursion to the Fort Bushland Reserve, Corinda (Brisbane), 11th April, 2018

Peter Bostock

Due to the first Sunday in April being Easter Sunday, we decided to make a mid-week visit to the Fort Bushland Reserve. This Brisbane City Council owned reserve, purchased in 2005, has an interesting history and has been the subject of bush regeneration efforts for over a decade, lead by John Lahey, who lives nearby. See <https://fortbushlandreserve.wordpress.com/> for further details of its history and links to the newsletters and other materials including plant lists.

We had a good turnout on this occasion, with some Native Plants Qld visitors as well as the study group members.

John took us on a circuit of the main (upland) part of the reserve (it also has a tongue of steep hillside that drops down to the Brisbane River to the north), and we meandered along for a little more than two hours. The 'official' list of ferns from the Reserve totals about 25 species (although I'm hesitant to accept the listed *Doodia media* without seeing it) with a further two naturalised ones being weeded out by John as soon as we confirmed their identity (these were *Lygodium japonicum* and *Pellaea viridis*). During our walk, we saw 14 species, including some very robust stands of *Hypolepis muelleri* and some *H. glandulifera*, and very healthy clumps of *Christella dentata* and *Pteris tremula*. Here is the full list supplied by John, with a tick against those we saw on the day.

<i>Adiantum atroviride</i>	✓	Maidenhair fern, Common maidenhair
<i>Adiantum hispidulum</i>	✓	Rough maidenhair fern
<i>Asplenium australasicum</i>	-	Bird's nest fern, Crow's nest fern
<i>Blechnum cartilagineum</i>	✓	Gristle fern
<i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>	✓	Poison Rock Fern, Mulga Fern
<i>Christella dentata</i>	✓	Binung
<i>Cyathea cooperi</i>	✓	Scaly tree fern, Coin-spot tree fern, Straw tree fern

<i>Davallia pyxidata</i>	-	Hare's foot fern
<i>Doodia aspera</i>	✓	Prickly rasp fern
<i>Doodia caudata</i>	✓	Small rasp fern
<i>Doodia media</i>	-	Common rasp fern [possibly <i>D. australis</i> or a form of <i>D. caudata</i>].
<i>Histiopteris incisa</i>	-	Bat's Wing Fern, Oak Fern
<i>Hypolepis glandulifera</i>	✓	Downy Ground Fern
<i>Hypolepis muelleri</i>	✓	Harsh Ground Fern
<i>Macrothelypteris torresiana</i>	-	Sword fern
<i>Nephrolepis cordifolia</i>	✓	Sword fern, Fishbone fern
<i>Ophioglossum lusitanicum</i>	-	Adder's tongue
<i>Pellaea paradoxa</i>	-	Sickle fern
<i>Platynerium bifurcatum</i>	✓	Elkhorn fern
<i>Platynerium superbum</i>	✓	Staghorn fern
<i>Pteridium esculentum</i>	-	Bracken fern
<i>Pteris tremula</i>	✓	Tender brake
<i>Pteris umbrosa</i>	-	Jungle brake, Forest brake
<i>Pteris vittata</i>	-	Arsenic Fern, Chinese Brake, Ladder Brake
<i>Pyrrosia rupestris</i>	-	Rock Felt Fern

A note from Port Macquarie member, Jeff Lynne

I am a Fern Study Group member who has recently moved to sunny Port Macquarie. With a bit of time on my hands, I'd like to know if there are any other members in the area from, say, Forster in the south up to Coffs Harbour in the north. If there are any members in this area then maybe it would be possible to organise a fern hunt to a favourite area or even a 'I'll show you mine if you show me yours' get together. If you're interested then contact me on jeffjl@optusnet.com.au

And now for something completely different... as we were leaving the SEQ Xmas meeting [Claire Shackel's residence in Brisbane] I said we would look at any nurseries in Qld on our way home including the ubiquitous Bunnings. Which we did. Conclusion: rubbish. Nothing at all. However we drove back home via Murwillumbah and by chance found Burringbar Rainforest Nursery in, funnily enough, Burringbar. Now that's much more like it. An enormous range of plants which included quite a few ferns. Quality good and reasonably priced (although I was so excited to actually *find* some ferns that I would have paid most anything). Didn't necessarily agree with all the name tags but was happy to buy what I bought. Worth a visit.

I thought for my first fern audit I'd use North Brother Mountain in Dooragan National Park near Laurieton, just south of Port Macquarie. Apart from stunning views up the coast there's a short rainforest walk. Altitude is about 480 metres. Here's a list of what I saw.

Arthropteris tenella
Asplenium australasicum
Asplenium flabellifolium
Asplenium polyodon
Blechnum cartilagineum
Cyathea cooperi
Cyathea leichhardtiana

Davallia pyxidata
Doodia aspera

Microsorium scandens
Pellaea falcata
Pellaea nana
Pellaea paradoxa

Platynerium bifurcatum
Pteris umbrosa

Pyrrosia confluens
Pyrrosia rupestris

A small list with nothing outstanding but a nice area nonetheless. There are a few plants in the *Lastreopsis/Hypolepis* group that I'll have to narrow down, not at all confident in identifying these ones. Also heard that *Ophioglossum* is here somewhere so I'll be back!

The dry fern garden

Ron Wilkins

Joan Moore used to have a patch of the resurrection fern *Cheilanthes sieberi* in her Sydney front garden, and she marvelled at the way the desiccated plants sprang to life after rain. For the last four months of 2016 there was no significant rainfall on my Sydney garden. During January–February 2017 there was very heavy rain, enough to thoroughly soak the soil. This resulted in a late summer and autumn flush of growth. But since then, more than 10 months, rainfall has been insufficient to soak the soil, which is shaly and water-shedding in summer. The garden is large – two to three times the usual size of a suburban block; actually a small residual turpentine forest.

As I have previously reported, I have a huge brush turkey problem. They roost high in the trees at night and ravage the garden before I get up and 'gently' move them on with rocks and sticks. They have an uncanny ability to sniff out any areas of watering, into which they dig bucket-sized holes so that the garden looks as if it has been gophered. Any ferns in the way get ripped out. I have tried to preserve delicate ferns by surrounding them with rocks, patio tiles or four close stakes but these strategies are ineffective as well as unsightly. Ferns in clumps are safe – but that is where the turkey chicks hide. This morning I saw three of them. So I have the classic catch-22 situation. If I water, the turkeys will probably claim the fern; if I don't water, the fern will probably die.

During the 'big dry', when I dared not water, waiting for rain, the ferns died off one after the other. I lost three *Dicksonia antarctica* and two *Cyathea cooperi*. I managed to keep alive by long and deep watering my one *Cyathea australis* in an area protected by clumped ground ferns. The great survivors as you might expect were *Calochlaena dubia*, *Nephrolepis cordifolia*, the florist variety of *Rumohra adiantiformis*, *Microsorium pustulatum*, *M. scandens*, *Colysis sayeri* (thanks Margaret), *Pellaea falcata* and *P. paradoxa* (thanks Dot), *Doodia* spp., *Arachniodes aristata*, *Lastreopsis decomposita* and *L. microsora*, *Polystichum australiense* (though the patch has recently gone into decline), *Blechnum cartilagineum*, *Asplenium bulbiferum*, *Adiantum* spp. and *Pteris* spp. *Lastreopsis acuminata*, *L. marginans*, *L. tenera* and *L. munita* hang on, too, but they are all threatened. Two of the bird's nest ferns were de-rooted by the turkeys; six survive. Of three patches of *Microlepia speluncae*, only one survives. *Platynerium bifurcatum* goes from strength to strength but I lost my only *P. hillii*. Fern tips everywhere have been burnt by the 40 degree heat.

The rest can be divided into two groups, the dodo dead and the 'pretending' dead. Apart from the tree ferns, my *Histiopteris incisa*, *Blechnum watsii*, *Pronephrium asperum*, several *Blechnum* Silver Lady, *B. braziliense* and *Polystichum proliferum* appear to be dodo dead. I have hope that the formerly abundant *Dennstaedtia davallioides* and *Hypolepis muelleri* are resting and eager to appear when conditions are right. Overall what remains is a much diminished and unattractive fern collection.

Truly a scene of devastation. But not all bad. The cockatoos and the possums show no interest in the ferns, being content to feast on lemons, grapefruit, passionfruit and our neighbours oranges and mangoes. The fronds of *Lastreopsis decomposita* and *L. microsora* singe to a pleasing orange-brown, quite beautiful, really, if you can only push to the back of your mind the fact that the plant is dying. What we need is regular soaking rain – but will it ever come?