A.N.P.S.A. Fern Study Group
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Program for South-east Queensland Region *Dan Johnston / Peter Bostock*

Thursday, 1st May, 2014 to Sunday 4th May, 2014. Excursion based in Kyogle in northern NSW. We intend to investigate fern areas in the Richmond Range, Tweed Range, and possibly Nightcap Range. Details will be worked out at the time, but likely spots to be visited include the Murray Scrub in the Richmond Range and Brindle Creek in the Tweed Range.

Sunday, 1st June, 2014. Meet at 9:30am at Claire Shackel's place,
Subject: Fern Propagation (tentative).

Sunday, 6th July, 2014. Meet at the home of Wendy and Dan Johnston Subject: to be advised. In the Sunshine Coast section of the Brisbane UBD Street Directory

Sunday, 6th August, 2014. Excursion to Mt Tamborine (details to be determined).

Program for the Sydney Region *Peter Hind*

Saturday 26 April. NOTE This the 4th Saturday as Easter falls on the previous one. Meet about 10 am at the cafe in the main street of Robertson more or less opposite the "Big (rusty) Potato". We plan to visit the "Robertson Rainforest Reserve" a short drive from town and then to the Fitzroy Falls area. Steve Lamont will lead us to ferny areas here. If lost, phone Steve
Bring Picnic lunch and water. No really long walks are planned, but wear suitable walking shoes, sunscreen, hat etc. If the weather is bad consider it cancelled.

Saturday 24 May. NOTE This is also the 4th Saturday. Meet from 10.30 am at the home of Steve Lamont, For our study we will look at Australian *Blechnum* spp. and hybrids cultivated in the Sydney District. If lost Phone Steve

Saturday 21 June. (Winter Solstice) Meet from 10 am at Foxground (near Kiama). Private walking trails in good examples of Illawarra rainforest and wet sclerophyll tall Eucalypt forest. Bring packed lunch etc. Please bring a plate to share for morning tea.
See Map of how to get there on next page.

Saturday 19 July. Meet from about 11 am at the home of Natalie and John
Study to be decided. Enquires to Natalie & John

All outings are subject to weather conditions being favourable.

Sydney Area Meeting Reports

November 2013 Meeting

Margaret Olde

The November 2013 meeting was held at Margaret and Peter Olde's property Margaret has created a new area for the hardier ferns, where many of the ferns which have become too big for the fernhouse are being relocated – *Blechnum nudum*, *Todea barbara*, *Angiopteris evecta* are now around the new pond, and a number of *Cyathea cooperi, Asplenium bulbiferum, Polystichum proliferum, Doodia aspera,* and *Pteris umbrosa* now inhabit the surrounding area. It is a work in progress with plenty of space for new acquisitions!

We didn't have a formal study at that meeting. Our plan had been to look at ferns in the morning, chat over lunch,

then have a garden tour of the property in the afternoon. Unfortunately the weather was not conducive to this plan – very heavy and continuous rain meant there was more chat than garden wandering! However it was a great chance to talk about what others are growing, discuss members' successes and losses and to swap hints. It was an informative and very pleasant conclusion to the year's meetings.

Sydney Botanic Gardens, March 2014

Dot Camp

Nine members and four visitors enjoyed a visit to the fernery at Sydney Botanic Gardens on Saturday 15th March, 2014. Peter was absent, recovering from recent surgery and we all wish him well for a speedy recovery. Thank you to Kylie and Steve for guiding the group through the fernery and answering the tricky questions!!

The ferns in the garden, with its generous cover of leaf mulch, displayed great vigour and the gardens staff are to be congratulated. However, some *Aspleniums* in the garden area and many ferns in the adjoining glass house were infected with coconut scale. The Tropical Centre (Pyramid glass house) is not expected to re-open until 2016.

I enjoyed seeing the impressive size of the plants of *Angiopteris evecta* and *Marattia* and the curious *Cyathea baileyana* with its abundance of 'wig'.

Sydney Fern Group February 2014 *Asplenium* Study

Peter Hind

There are about 20 species of *Asplenium* occurring in temperate Australia, including Norfolk and Lord Howe Islands. The easiest of all these to grow in the Sydney district are the "Birdsnest Ferns", *Asplenium australasicum, A. goudeyi* and *A. harmanii*; also reasonably easy are *A. dimorphum* and its hybrid *with A. bulbiferum*, *A. × lucrosum*. Most plants in the trade as *A. bulbiferum* are this hybrid. Others include *Asplenium milnei, A. surrogatum* and the hybrid of the latter with *A. bulbiferum* 'Island Beauty', introduced to the nursery trade by Chris Goudey in c. 1991 using a New Zealand-sourced *A. bulbiferum,* since the *A. bulbiferum* of the trade in Australia is generally sterile [that's because it is mostly *A. × lucrosum*]. *Asplenium dimorphum × A. difforme* has been recorded on Norfolk Island – the cultivar Austral Gem is reputed to be this same hybrid produced in cultivation by Chris Goudey. Several other hybrids occur with *A. bulbiferum*, some as natural hybrids and some in cultivation. Among these are *A. bulbiferum × A. oblongifolium* (NZ) and *A. bulbiferum × A. flaccidum* - frequent in the wild in NZ. In our own newsletter, Issue no. 20 March 1983, *A. bulbiferum × A. obtusatum* subsp. *northlandicum* is recorded for Tasmania by Reg Williams (*Ed.*: article reproduced below). *Asplenium polyodon* and *A. aethiopicum* are also reasonably easy but slow and can easily die off if drainage is poor or allowed to dry out for too long; both of these have limited resurrection capabilities, freshly shrivelled fronds reinflate when watered or rained upon. *Asplenium attenuatum, A. flaccidum, A. paleaceum* and surprisingly *A. flabellifolium* seem to be harder to maintain in cultivation in Sydney.

The rest either have special requirements, such as *A. trichomanes* needing limestone, or are more or less unavailable in cultivation.

One of the most intriguing *Aspleniums* now found only in cultivation is *A. australasicum* forma *robinsonii*. This is the only proliferous, though rarely so, *Asplenium* on either Norfolk or Lord Howe Island. Most proliferous hybrids seem to involve *A. bulbiferum*, which is not present. *A. bulbiferum* hybrids are usually sterile. Spore from *A. australasicum* forma *robinsonii* is recorded as being fertile in Flora of Australia vol. 49 "When grown from spores, most sporelings develop into typical *A. australasicum*" [I guess the rest are *robinsonii*?]. This indicates it is unlikely to be an early hybrid from a cultivated plant of *A. bulbiferum* on Norfolk Island pre 1884. This form was also recorded once from the slopes of Mt Gower on Lord Howe Island c. 1898. So if you do have one in cultivation, give it a go from spore as the plantlets are rarely produced. The form of *A. australasicum* in cultivation with multilobed tips behaves this way as well from spore, only some of them coming true.

The 20 taxa of *Asplenium* occurring in sub-tropical to temperate Australia are: *A. aethiopicum*, *A. appendiculatum* subsp. *appendiculatum*, *A. attenuatum*, *A. australasicum*, *A. bulbiferum* subsp. *gracillimum*, *A. carnarvonense*, *A. difforme*, *A. dimorphum*, *A. flabellifolium*, *A. flaccidum subsp. flaccidum*, *A. goudeyi*, *A. harmanii*, *A. hookerianum*, *A. milnei*, *A. obtusatum* subsp. *northlandicum*, *A. paleaceum*, *A. polyodon*, *A. pteridoides*, *A. surrogatum* and *A. trichomanes.*

A HYBRID ASPLENIUM

Reg Williams

In late 1974 I was a member of a climbing party called upon to extricate a walker from a coastal cliff face near South-East Cape in the far south of Tasmania. A companion of the man in trouble had spent a day walking out to get help and, early on the following morning, four of us were landed by helicopter on a rocky shore about an hours rough walking away from the scene. The rescue was effected without incident. The victim was in good shape despite having spent some seventeen hours perched on a small ledge.

On the way back through forest to the helicopter pick-up point, I noticed some large terrestrial ferns, obviously Asplenium, but not consistent with any species known to occur in the State. Detailed botanising was out of the question; however, I collected a frond for later examination.

The fronds were approximately one metre in length. Their shape resembled that of A. bulbiferum. The pinnules, however, were more like those of A. obtusatum, except that the margins were much more deeply toothed.

A few weeks later I managed to persuade some friends to accompany me on a return visit, on foot this time, to camp in the area, collect more material and to examine the surroundings. The walk in, around the rocky coastline took several hours.

A number of plants were found, growing under a tree canopy in the company of A. bulbiferum, this too having fronds one metre or so in length. Present also was A. obtusatum, both on the nearby shoreline and, in a more luxuriant form, in the forest.

I returned home with a complete plant which I later divided, sending one piece to Sydney for examination by Dr. Tindale who determined it to be a hybrid of A. bulbiferum and A. obtusatum. I potted two more pieces. They both grew and survive still, though somewhat diminished in size. The plants still produce spores in reasonable quantity, and while it is doubtful if these would be viable, it could be of interest to attempt to propagate them. I am forwarding some material in case someone would care to try the experiment.

Top Underside

A. bulbiferum x obtusatum
fertile pinna actual size

---oooooooo---

South-East Queensland Meeting Reports

Christmas Creek, March, 2014

Claire Shackel

Christmas Creek was last visited by the South East Queensland group in October, 2007. As a number of members were not present for that excursion, it was decided to revisit the area. On leaving the Mt. Lindsay highway at Laravale the road followed up the Christmas Creek valley. At first there was a considerable flood plain but the valley narrowed down as the road climbed into the hills. Scattered farm houses and the presence of the power line, told us we were not out of civilisation. Eventually coming to a car park with a gate saying it was private property, but walkers were welcome, and the Lamington National Park was across the creek 150m upstream.

After the usual morning tea and check of the ferns at the car park, the party walked to the creek crossing and along a well defined track on the other side. Driving in there were impressive flooded gums along the side of the road, but at the car park and further up the valley, rainforest trees dominated. The track went along the edge of the creek but well above it. The ferns were not at their best, due to the drought and the fungi were not obvious, a feature of last visit.

Doodia aspera, Lastreopsis marginans and *L. microsora* dominated much of the ground cover. Very large *Asplenium australasicum* and *Platycerium superbum* clung to the trees. After much discussion Peter concluded that some birdnest *Asplenium* plants were probably *A. harmanii* as they had the typical untidy crown, long narrow stipe, and were growing on rocks (typical habitat) at the mouth of a narrow gully. Another interesting feature was *Asplenium polyodon* and *Vittaria ensiformis* growing on fallen logs instead of the tops of trees where identification was difficult.

Other ferns seen were *Adiantum atroviride, A. formosum, A. hispidulum var. hispidulum, Arthropteris tenella, Christella dentata, Cyathea cooperi, Davallia pyxidata, Dennstaedtia davallioides, Dictymia brownii, Doodia caudata, Hypolepis glandulifera, Lastreopsis decomposita, L. munita, Pellaea nana, Platycerium bifurcatum, Pteridium esculentum, Pteris tremula, P. umbrosa, Pyrrosia confluens* and *P. rupestris.* Not seen on this trip was *Arachniodes aristata*.

Bunya Mountains, October 14-18th, 2014

Peter Bostock

For this excursion, the Study Group members booked a chalet in the vicinity of Dandabah, the main settlement on the mountain. We had a few cancellations, so it was a fairly small and select group that eventually arrived at the chalet on Monday. The chalets are set in rolling grassy lawns with large Bunya pines scattered around and we all enjoyed the wildlife in close proximity, including the Satin Bowerbird that gate-crashed our kitchen and caused a little bit of a mess. Perhaps in response to our surroundings, we also enjoyed a fairly laid-back approach to the various bush-walks. Generally we walked a longer distance each morning (Tuesday to Thursday), returned to the chalet for lunch and an after-lunch nap, and then had a shorter walk each afternoon. The weather was fine - the only rain fell on the last night - and was generally quite warm.

We last visited the Bunyas in May 2003 and I remember wondering at the time why we did not see any staghorn or elkhorn (*Platycerium*) ferns. Well, this time, we did – but only one staghorn, *Platycerium superbum*. This plant was well hidden above a jumble of vines on the walking track between Festoon Falls and Pine Gorge Lookout on the Scenic Circuit, not far from Dandabah,. That was the only plant we saw. And I believe that *Platycerium superbum* was the only new fern seen, when comparing this trip to the earlier one. The trip in 2003 was notable for discovering (beside a walking track) a rather large plant of *Lastreopsis smithiana*, not previously noticed by anyone! This time, we didn't locate that plant, but did see some others elsewhere along the same track system.

We also located a second clump of *Asplenium flaccidum* var. *flaccidum* in the Mt Kiangarow area, again on the trunk of a grass-tree (*Xanthorrhoea* sp.), growing in association with *Asplenium australasicum*, *Pyrrosia rupestris* and *Microsorum pustulatum*.

Generally, in spite of lower rainfall during the latter part of 2013, the ferns at the Bunyas were doing reasonably well. The overwhelming impression is of carpets of *Lastreopsis microsora*, intermixed with large expanses of *Doodia aspera*. *Adiantum formosum* was recorded at all areas too. Coming in a close second were the *Pyrrosia* species, *P. confluens* and *P. rupestris*. Other ferns are more scattered, mostly limited to small pockets of suitable habitat.

A Scenic Circuit, Dandabah;
B Russell Park Picnic Area;
C Cherry Plain area (west of road);
D Mt Kiangarow track;
E Paradise to Little Falls (and on to Dandabah);
F Westcott camping area and track to south (west of Bunya road).

	A	B	C	D	E	F
Adiantum atroviride	x			x	x	x
Adiantum diaphanum	x				x	
Adiantum formosum	x	x	x	x	x	x
Adiantum hispidulum						
var. *hispidulum*					x	
var. *hypoglaucum*	x				x	
Arthropteris tenella	x		x		x	
Asplenium attenuatum	x					
Asplenium australasicum	x	x	x	x	x	x
Asplenium flabellifolium	x					
Asplenium flaccidum			x			
Asplenium polyodon	x		x		x	x
Cheilanthes distans					x	
Cyathea australis	x					
Cyathea cooperi	x				x	
Davallia pyxidata	x		x		x	x
Dicksonia antarctica	x				x	
Dictymia brownii	x	x	x	x	x	x
Diplazium australe	x				x	
Doodia aspera	x	x	x	x	x	x
Doodia caudata	x					
Hypolepis glandulifera	x	x			x	
Lastreopsis decomposita	x				x	
Lastreopsis microsora	x	x	x	x	x	x
Lastreopsis smithiana	x					
Microsorum pustulatum			x			
Microsorum scandens	x				x	
Pellaea nana	x					
Pellaea paradoxa	x					
Platycerium superbum	x					
Pteridium esculentum	x		x			
Pteris tremula	x					
Pteris umbrosa	x				x	
Pyrrosia confluens	x	x	x	x	x	x
Pyrrosia rupestris	x		x	x		x

Asplenium flaccidum near Mt Kiangarow, Bunya Mtns

Platycerium superbum (staghorn) hidden in the canopy on the Scenic Circuit, Dandabah, Bunya Mtns

Other Articles

White Louse Scale

Dot Camp

Thank you Tony for your advice in the last Fern Study Newsletter regarding controlling coconut scale. This scale mainly appears on my Aspleniums. My usual treatment for scale is to use Ecco oil, but I find it burns this group of ferns. I have been using Confidor tablets & this seems to be fending off the scale with, so far, the new fronds remaining 'clean'.

Coomera Circuit Walk

Dan Johnston

On Thursday, 30th January, Wendy and I walked Coomera Circuit in Lamington National Park with a group of bushwalking friends and I was so impressed with the ferns along the route that I have decided to provide a report for Fern Study Group members. Lamington National Park is situated in ranges on the Queensland side of the Queensland-New South Wales border. Geologically, this area is a product of the Tweed volcano in

northern New South Wales which was active about 23 million years ago. In this area it has basalt overlaying rhyolite, both from that volcano. It has a high rainfall because of its height, proximity to the coast, and exposure to the south-east trades coming in off the sea. As a result the relatively fertile basalt soils host subtropical rainforest. The area is largely surrounded by cliffs in the rhyolite, which protected the area from logging long enough for its special nature to be recognised and protected in one of Queensland's first national parks (1915).


Coomera Falls

Our walk started at Binna Burra, one of 2 resorts on the northern boundary of the National Park. Because of the distance from our home, Wendy and I decided to camp the nights before and after in the resort campground. The campsites are in clearings in the rainforest and there are several species of ferns around. In particular, the wooden shingle roof of the campground kitchen was supporting both *Pyrrosia confluens* and *Pyrrosia rupestris* (a few of the shingles had rotted away so the kitchen would not have been very comfortable in rain but the rain stayed away for our 2 nights there.) The walk heads south towards the N.S.W. border on the western side of a ridge and returns on the eastern side of the ridge. Initially there is the deep valley of the Coomera River to the west. This narrows to a gorge and a constructed lookout provides spectacular views into the gorge. It is in the km or two before the lookout that there is some wet sclerophyll forest on poorer rhyolite soils with different ferns – including *Cyathea australis* with *Tmesipteris* on their trunks, *Blechnum cartilagineum*, and *Sticherus* species. The Coomera Falls are at the head of the gorge and the track continues south following the headwaters of the river up above the falls, crossing about 12 times. Massive rocks have been strategically placed (by Tasmanian contractors, I believe) to make these crossings quite convenient. This area is particularly moist. There were numerous, mostly rather small, *Todea barbara* in this area. Perhaps larger ones had been washed away in our major rain events of the last couple of years. *Diplazium dilatatum* were also quite spectacular in this area.


Diplazium dilatatum

At the most southerly point of the walk, there is a track continuing a couple of km further south to the NSW border with cliffs and views out into northern NSW. This track then continues west along the border and then north to O'Reilly's, the other major resort in Lamington National Park. However, we turned east at the track junction to return north on the other side of the ridge.

We had lunch near the last of the crossings before this turn and while having lunch we observed large blue and white lobsters in the adjacent rock pool. Occasional ones were also seen on the track. My (somewhat limited) observations of the similar lobsters on the NSW side in their Border Ranges National Park is that they are reddish, maroon, in colour so clearly they have got their Rugby League colours back to front! Other fauna seen on the walk included a land mullet (large skink) and paddymelons.

Ferns seen commonly on the rainforest sections of the walk included the filmy fern *Hymenophyllum australe, Arthropteris tenella, A. beckleri, Asplenium australasicum, Cyathea leichhardtiana, Platycerium bifurcatum, Lastreopsis acuminata, Blechnum wattsii, B. patersonii*, and *Pellaea* species. Relatively unusual sightings for me included *Grammitis billardierei* and *Vittaria ensiformis*. I'm sure there would have been several species that I missed.

The track is easy walking with gentle grades and the party made good time (being bushwalkers, not fernies, but all over 65, I think). We left from the car park a bit before 9am and the bulk of the party was back in the tea house at the car park after the 17km walk at about 2:30pm. I was considerably delayed, trying to photograph each fern species as I saw it and only caught the rest of the party when they stopped for a break.

I just made it back to the car park before the nearby Lamington Tea House closed at 3pm. At our February meeting, Peter Bostock helped identify some of the ferns from my rather poor quality photos. He thought that one of the photos may have shown an *Arthropteris beckleri, A. tenella* hybrid, also known from Bar Mountain, in Border Ranges National Park.

I would strongly recommend this walk to reasonably fit fern lovers. The options relating to the "Border Track" route between Binna Burra and O'Reilly's are also worth considering (21km). The main problem is that while the two ends of the track are 6km apart as the crow flies and 21km by walking track, they are an hour and a half apart by car, making a car shuffle rather tedious. An interesting possibility would be to go one way, stay overnight in the resort at the other end, and return. While some of the route (perhaps half) would have to be the same in both directions, there is room for considerable variation, using Tooloona Gorge as well as the 2 arms of the Coomera Circuit.

Ferns seen included: *Adiantum hispidulum*, *A. silvaticum*, *Arthropteris beckleri*, *Arthropteris tenella*, *Asplenium polyodon*, *Blechnum cartilagineum*, *B. patersonii*, *B. wattsii*, *Cyathea australis*, *C. leichhardtiana*, *Davallia pyxidata*, *Dictymia brownii*, *Diplazium dilatatum*, *Doodia aspera*, *D. caudata*, *Platycerium bifurcatum*, *Grammitis billardierei*, *Histiopteris incisor*, *Lastreopsis marginans*, *Lastreopsis acuminata*, *Lindsaea microphylla*, *Microsorum scandens*, *Pellaea falcata*, *Pellaea nana*, *Pteris umbrosa*, *Pyrrosia confluens*, *P. rupestris*, *Sticherus flabellatus*, *S. lobatus*, *Todea barbara*, *Tmesipteris ovata* and *Vittaria ensiformis.*

Spore List – February, 2014

Barry White

Adiantum formosum 1/12
Adiantum hispidulum 6/12
Amphineuron opulentum 8/13
Amphineuron queenslandicum 4/12
Amphineuron terminans 8/13
Arachniodes aristata 8/13
Asplenium aethiopicum 10/12
Asplenium milnei 10/10
Asplenium pellucidum 3/11
Blechnum chambersii 4/12
Blechnum fluviatile 9/11
Blechnum minus 3/12
Blechnum patersonii 4/11
Blechnum wattsii 3/13
Blechnum wurunuran 7/13
Bolbitis quoyana 5/13
Chingia australis 11/12
Christella dentata 3/12
Christella parasitica 5/11
Christella subpubescens 4/12
Cyathea australis 1/12
Cyathea baileyana 11/12
Cyathea brownii 10/12
Cyathea cooperi 7/13
Cyathea cooperi (Blue Stipe) *1/11*
Cyathea cooperi 'Cinnamon' *2/13*
Cyathea exilis 12/12
Cyathea leichhardtiana 8/12
Cyathea macarthurii 10/10
Cyathea rebeccae crested *8/13*
Dicksonia antarctica 12/13
Diplazium australe 6/13
Diplazium assimile 7/12
Diplazium dameriae 8/13
Diplazium dilatatum 12/10
Diplazium dilatatum × *Deparia petersenii* var. *congrua 3/11*
Doodia australis 6/13
Doodia media 6/13
Dryopteris sparsa 8/13
Dryopteris wattsii 8/13
Histiopteris incisa 12/11
Hypolepis glandulifera 2/13
Hypolepis muelleri 3/12
Lastreopsis acuminata 10/12
Lastreopsis decomposita 1/12
Lastreopsis marginans 3/12
Lastreopsis microsora 8/13
Lastreopsis nephrodioides 4/12
Lastreopsis rufescens 3/11
Lastreopsis tenera 6/13
Lastreopsis × *Coveniella 5/13*
Macrothelypteris torresiana 3/13
Pellaea falcata 1/11
Plesioneuron tuberculatum 5/13
Platycerium superbum 8/13
Pneumatopteris sogerensis 8/13
Pneumatopteris costata 6/11
Polystichum australiense 6/13
Polystichum formosum 6/13
Polystichum proliferum 12/10
Pronephrium asperum 8/13
Psilotum nudum 6/13
Pteris tremula 11/10
Pteris umbrosa 8/12
Rumohra adiantiformis 4/12
Sphaerostephanos heterocarpus 7/11