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

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From the editor

As in newsletter 117, reports on the visit of the British Pteridological Society are the major part of this newsletter. Thanks to Nada and Peter for their major contributions. I found the number and variety of ferns reported in both areas very impressive.

Thanks also to Claire and Dot for their meeting reports and to Ron for his article in remembrance of Joan Moore.

Program for South-east Queensland Region

Dan Johnston

Sunday, 6th December, 2009.

Meeting at 9:30am at Rod Pattison's home for Christmas Party and Plant swap.

Sunday, February 7th, 2010.

Meeting at 9:30am at Peter Bostock's home at Topic to be decided.

Forthcoming Events in the Sydney Region

Peter Hind

Saturday 21st November

Meet at Margaret and Peter Olde's Country Residence

THERE WILL BE NO MEETINGS IN DECEMBER 2009 and JANUARY 2010

Saturday 20 February, Meet from about 11 am at the home of Peter and Margaret Hind.

We plan to study *Nephrolepis* species including how to distinguish between the exotic *N. exaltata* & our weedy native *N. cordifolia* & to discuss our future program. Phone (02) 96258705

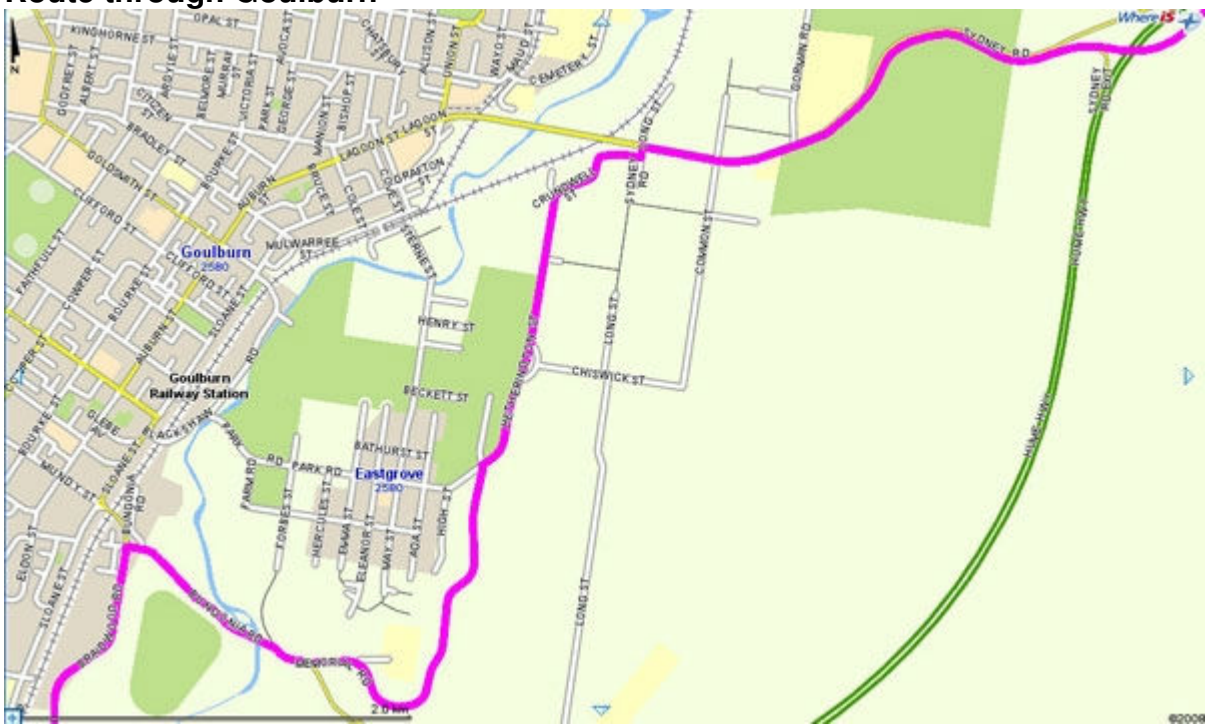
Saturday 20 & Sunday 21 March, at Verdigris Nursery, Currowan Creek, (02)4478131 email: verdigrisferns@gmail.com.

Kylie and Dwayne Stocks run a specialist fern nursery located at the foot of the Clyde Mountain Range about 25 km inland from Batemans Bay NSW. We will meet at midday on Saturday for lunch, then an inspection of the nursery, followed by a BBQ in the evening (BYO everything). On Sunday we will visit Penance Grove in nearby Monga National Park, meeting at 10am.

I suggest we plan to meet Penance Grove in Monga at around 10am, after a leisurely breakfast and pack up. If we leave here at around 9.30am that should give us plenty of time.

Directions are: Back up the Kings Highway, to the top of the Clyde. There is a turn off to the left called River Forest Road (about 18km from Braidwood), you then travel about 2km along this road through an interesting little settlement and into the park. It would probably be easier to meet at River Road, and go in convoy, as it is pretty easy to take a wrong turn, and the signage is limited. You would need to leave the caravan at the turnoff and travel with one of the other cars, as turning and parking in the National Park would be a nightmare.

Route through Goulburn



Saturday 18 April, Meet from about 11 am at Dot's place. We will be studying *Microsorum* species in Australia. If lost phone Dot on

Saturday 15 May. **Forest Island Track, Royal National Park**. Meet from about 9.30 am for a 10 am start. An easy walk on a well graded track with ferns along most of it. Parking available at side of Bertrand Stevens Drive, near the gate at the southern end of Lady Carrington Drive. Enter the park from the Waterfall entrance. There is an entry fee. Bring Picnic or packed lunch & water, sunscreen hat etc.

All outings are subject to weather conditions being favourable. **Check for bushfire danger before any Bushwalks. If fire danger is imminent consider it cancelled.** *Peter Hind 96258705*

BPS Visit Reports

North Queensland Segment

Nada Sankowsky

After reading the newsletter I thought that I should write a report about the British Fern Group's visit to North Queensland. I think I am the only member of the Fern Study Group in NQ - at least I do not know of any other members up here. A member of the Cairns SGAP (Robin Smith) is a keen fernie. He joined us for one day with the Brits.

You will perhaps know that the group arrived in Cairns about midday on the Tuesday. After getting their vehicles and parks' permits they headed up to the Tablelands for a garden visit at my place. My husband Garry and I provided them with afternoon tea (homemade scones and a variety of homemade jams from the fruits of our rainforest garden). After the eats I took them on a guided tour of my fern gardens and bush houses. I had previously made several lists of ferns which I had sent to Barry White so that he could give them to the members of the group before they left the south. One list was a progressive guide to the ferns on view during the drive up the Kuranda Range from Cairns to the Tableland. Another list showed the ferns to be seen in my collection. Armed with this latter list the group was able to record ferns seen in my garden, especially those that I knew they would not have the opportunity to see in the wild during their limited time in the North. Night was closing in before we had finished the round.

Remy, Annie and Michel were particularly interested to see *Coveniella* - one they had not heard about. Martin was delighted with the *Cyathea exilis* and other tree ferns - a particular interest of his. *Tectaria siifolia* was appreciated, with Jennifer taking photos of it. Another fern that they insisted on seeing was the Resurrection Fern, *Paraceterach muelleri*, that I was able to show them growing well in the garden. They are a well-informed group and had obviously prepared themselves well for the trip. Alan and I had an interesting discussion about *Ophioglossum* which he noticed growing unobtrusively among other ferns in the bush house fern bed. Time ran out before I could show them the large terrarium in which I grow some of the finicky ferns

e.g. *Aspleniums*, *Lindsaeas* and some filmy ferns. This was unfortunate as I learned later that Patrick would have enjoyed seeing more *Aspleniums*.

On the following day we arranged a meeting place and took them through the forests of Mt Edith, an area of mountainous country east of the Tinaroo Dam. This is a wonderful fern habitat and we were able to see a wide range of tropical North Queensland ferns including the Giant Scrambling Fern - a real giant. Everyone had a copy of the fern list which I had prepared for them. We spent some time along a creek where we saw *Grammitis wurunuran*, various filmy ferns and *Sticherus flabellatus compactus*. *Marattias* grow in profusion in this area, as do *Diplazium dilatatum* and *D. queenslandicum*, *Pneumatopteris sogerensis*, *Sphaerostephanos heterocarpa*, *Pteridoblechnum neglectum*, and *Tectaria confluens*. Extensive areas of large rocks completely covered with *Asplenium simplicifrons*, some *A. australasicum*, and *A. athertonense* are a feature of this forest.

On rocks in the gullies *Bolbitis taylorii* was observed along with *Pellaea nana* and *Adiantum diaphanum*. Climbing ferns such as *Arthropteris submarginalis* and *A. palisotii* and numerous specimens of *Colysis ampla* were seen. Tree ferns in this area include *Cyathea cooperi*, *C. robertsiana*, *C. rebeccae*, and *C. woollsiana*.

We paused for lunch at a pleasant eatery in Atherton before continuing on to the Mt Baldy forestry area west of Atherton. This area is home to seven of the NQ tree ferns - the previously mentioned ones plus *C. celebica*, *C. baileyana*, and *Dicksonia herbertii*. Two other NQ tree ferns occur only on Cape York Peninsula. Martin was really enthused about this area but suffered a disappointment when it was realised that there was not enough time for the walk necessary to see *C. baileyana*. In this vicinity we also admired stands of *Blechnum wurunuran*, one of numerous NQ endemics. Once again time ran out.

We met the group, as arranged, on the northern side of Mareeba at 8.00 a.m. the next day for the long trip to Mt Lewis - Mecca of plant lovers. Our first stop was in the lower section where many examples of *Thelypteridaceae* are to be found - as well as fearful specimens of the Stinging tree along with much Bramble, all encroaching onto the road. Fortunately, everyone took care not to brush into the Stingers. *Lindsaea brachypoda* was common on the vertical banks at the sides of the road. *Amphineuron opulentum* and *A. queenslandicum* were both seen in the area, as were several *Christellas*, *Macrothelypteris torresiana* and *Pronephrium asperum*. Large specimens of *Blechnum orientale* and *B. cartilagineum* intermingled with *Dicranopteris linearis* and *Cyathea rebeccae*. As we drove further along we were able to admire the fantastic display of *Cyathea rebeccae* as it clothes the banks with layers of its glossy dark green fronds. King Ferns raised their giant fronds from over the steep sides of the road and deserved another stop. *Cyathea woollsiana* also presented a lovely sight at this corner.

We spent some time at a very wet spot which was a fern wonderland with *Diplazium dilatatum* and *D. queenslandicum*, as well as *Marattia oreades* festooning the road verges, while a short climb up the bank revealed *Bolbitis taylorii* and *Teratophyllum brightiae* in profusion. The *Teratophyllum* was showing bathyphylls and dimorphic acrophylls [i.e. juvenile leaves (bathyphylls) and adult leaves (acrophylls)]. Epiphytes were common in this area: *Colysis ampla*, *Platycerium bifurcatum*. *Belvisia mucronata*, *Drynaria rigidula*, *Davallia pyxidata* and *Arthropteris palisotii*. At one of the many magical creeks of Mt Lewis we stopped to admire the numerous plants of *Blechnum nudum* and *B. articulatum* which are such an unforgettable sight on this particular stretch of water. *Sticherus flabellatus flabellatus* adds its beauty to the scene. Dainty little *Lindsaea obtusa* was seen along the banks of this creek.

We lunched at the "cafe" at the end of the road and afterwards took the group through the forest to a lookout for a spectacular view of the hills, and a chance to see many orchids although none was in flower at this time. One lone flower on the *Rhododendron lochiae* (Australia's only Rhododendron) did not impress!! However, the group seemed to enjoy the chance to examine a number of lithophytic ferns found at this site. Some of these were - *Scleroglossum wooroonooran*, *Prosaptia maidenii*, *Grammitis stenophylla* and *G. wurunuran*, *Elaphoglossum callifolium* and *E. queenslandicum*, *Calymmodon luerssenianus*, as well as several filmy ferns.

On the return journey I was reminded by Remy and Michel that I had promised to show them *Pteridoblechnum acuminatum* and *Taenitis pinnata*. They got their wish—finding *P. acuminatum* and *P. neglectum* growing together along a creek bank and seeing *Taenitis pinnata* at our last stop in the lower area of the road. After examining and photographing *T. pinnata* we had our last cup of tea together and said our goodbyes. The group went back to Cairns via the Rex Range Road whist we returned home through Mareeba.

We had had a wonderful two and a half days with very pleasant and interesting people and we thoroughly enjoyed the time; we believe the members of the group also had a great time.

Kuranda Range Ferns

Nada Sankowsky

Some easily seen ferns as you drive up the range from Cairns to the Atherton Tablelands**.**

On the lower slopes of the range there are not many ferns to be seen, but after rounding the hairpin bend which takes you to the upper part of the range the numbers and varieties increase.

Look to the right up in the trees just after the bend and you will see a few *Platycerium superbum* and then *P. hillii* and *P. bifurcatum* cutting in as you get further along. *P. superbum* has the very large single nest frond with very wide antlers, while *P. hillii* has round nest fronds and stiff, mainly upright fertile fronds. Compared to *P. hillii*, *P. bifurcatum* has floppy, mainly pendulous fertile fronds with the nest fronds being fluted at the top.

The long, pale strap-like fronds of the mainly epiphytic *Pyrrosia longifolia* can be sighted on rocky outcrops as well as on trees, while another epiphyte is *Drynaria rigidula* (Basket Fern) which can be seen all along the road, either as an epiphyte or growing on the rock walls.

On both sides of the road on the rocky outcrops you will see clumps of the pale green, simple fronds of *Microsorum punctatum* This is an extremely hardy fern.

Cyathea cooperi makes its appearance over the cliff side on the right as well as along the left with many small plants beginning to get a toehold in the left hand gutters. These will eventually be removed by road maintenance crews**.** *Cyathea rebeccae* makes sporadic appearances at first but becomes quite common further along the roadsides. This lovely fern has a very thin, black trunk and noticeably glossy fronds.

Clothing the cuttings on both sides of the road are large colonies of *Dicranopteris linearis* with the less prolific *Sticherus flabellatus* alongside some of the *D. linearis* stands or embedded within them.

Some way after the Lookout, on the right-hand cutting wall there is a delightful group of *Blechnum orientale*. This fern appears in various other sections of the road, but in smaller numbers than the aforementioned clump. Another blechnum to look for is *B. cartilagineum* with its gorgeous red new fronds. However, unless it is presenting its new growth this fern is not easy to pick up from a passing vehicle.

As the forest becomes wetter, look to the right and you should see the large fronds of *Angiopteris evecta* (King Fern) protruding above the edge of the road.

Other ferns which you will sight are various *Thelypteridaceae* spp. e.g. *Christella*, *Amphineuron***,** and *Macrothelypteris torresiana*. However, these are not easy to separate as one zooms past. *Doodia* spp. are there also but once again difficult to see zooming past. The common *Nephrolepis cordifolia* has been used in a number of places as a stabilizing agent. A number of other ferns are in this area but are either not along the road or are difficult to pick up as one motors past.

Ferns in Nada Sankowsky's collection *$_{endemic\ to\ Australia}$

Nada Sankowsky

*Adiantum atroviride**, *aethiopicum*, *capillus-veneris*, *diaphanum*, *formosum*, *hispidulum* – numerous forms, *silvaticum**, *philippense — Angiopteris evecta* (King Fern)
Arachniodes aristata — Coveniella poecilophlebia — Dryopteris hasseltii*, *sparsa*
Lastreopsis acuminata, *decomposita*, *grayi**, *marginans*, *microsora subsp. microsora*, *rufescens*, *tenera*, *walleri**, *wurunuran**, *L. species unnamed — Revwattsia fragile**
Tectaria brachiata, *confluens**, *siifolia*
*Asplenium athertonense**, *attenuatum*, *australasicum*, *baileyanum*, *cuneatum*, *excisum*, *laserpitiifolium*, *nidus*, *paleaceum*, *parvum*, *pellucidum*, *polyodon*, *simplicifrons*, *unilaterale*
Callipteris prolifera — Diplazium assimile, *dietrichianum*, *dilatatum*, *queenslandicum*, *dameriae — Deparia petersenii subsp. congrua — Azolla pinnata*
Blechnum ambiguum, *articulatum**, *cartilagineum*, *nudum*, *orientale*, *patersonii subsp. queenslandicum*, *whelanii**, *wurunuran* — Doodia aspera*, *caudata*, *linearis*, *media*, — Pteridoblechnum neglectum* — Stenochlaena palustris*
Cyathea [subg. *Cyathea*] *baileyana*, *exilis*, *rebeccae*, *robertsiana*, *woollsiana — Cyathea* [subg. *Sphaeropteris*] *celebica*, *cooperi*,
Davallia denticulata, *pyxidata*, *solida — Humata pectinata*, *repens*
Rumohra adiantiformis — Dennstaedtia davallioides — Histiopteris incisa
Hypolepis muelleri, *glandulifera*, *tenuifolia — Microlepia speluncae*
Oenotrichia pinnata — Calochlaena dubia — Dicksonia herbertii**
Dicranopteris linearis — Sticherus flabellatus

Paraceterach muelleri — Lindsaea obtusa — Lindsaea media*
Bolbitis taylorii, quoyana — Elaphoglossum callifolium, queenslandicum**
Lomariopsis kingii — Teratophyllum brightiae — Marattia oreades
Marsilea crenata — Todea barbara
Arthropteris beckleri, tenella — Nephrolepis acutifolia, cordifolia, hirsutula, obliterata
Oleandra neriiformis — Helminthostachys zeylanica — Ophioglossum pendulum
Belvisia mucronata — Colysis ampla, sayeri — Crypsinus simplicissimus
Dictymia brownie — Drynaria quercifolia, rigidula (and varieties), *sparsisora*
Microsorum grossum, punctatum, scandens, australiense
Platycerium bifurcatum, hillii, superbum — Pyrrosia lanceolata, longifolia, rupestris
Goniophlebium subauriculatum — Psilotum nudum — Acrostichum aureum
Pteris ensiformis, pacifica, tremula, tripartita, umbrosa, vittata — Selaginella spp.
Lygodium flexuosum, microphyllum, reticulatum — Doryopteris concolor — Cheilanthes brownii, distans, sieberi — Pellaea falcata, nana*, paradoxa*, Taenitis pinnata*
Ampelopteris prolifera — Amphineuron opulentum, queenslandicum, terminans — Christella dentata, hispidula, parasitica, subpubescens — Cyclosorus interruptus — Macrothelypteris torresiana — Plesioneuron tuberculatum — Pneumatopteris costata, sogerensis — Pronephrium asperum, triphyllum Sphaerostephanos heterocarpus, unitus — Vittaria elongata, ensiformis.

Ferns of Herberton Range (Mt Baldy)

Nada Sankowsky

Compiled from personal observations and Herbaria records.

Adiantum aethiopicum, A. diaphanum, A. hispidulum, A. silvaticum, Arachniodes aristata , Arthropteris beckleri, A. palisotii, A. tenella, Asplenium athertonense, A. australasicum, A. paleaceum, A. parvum, A. polyodon, A. simplicifrons, Belvisia mucronata, Blechnum cartilagineum, B. patersonii subsp. *Queenslandicum, B. wurunuran, Botrychium australe, Calochlaena dubia, Cephalomanes brassii, Christella hispidula, Colysis sayeri, Coveniella poecilophlebia, Crepidomanes vitiense, C. walleri, Crypsinus simplicissimus, Cyathea baileyana, C. celebica, C. cooperi, C. rebeccae, C. robertsiana, C. woollsiana, Davallia denticulata denticulate, D. pyxidata, Deparia petersenii* subsp. *congrua, Dicksonia herbertii, Dicranopteris linearis, Dictymia brownii, Diplazium dilatatum, Diplazium queenslandicum, Doodia aspera, D. caudata, D. linearis, Drynaria rigidula, Elaphoglossum queenslandicum, Grammitis wurunuran, Goniophlebium subauriculatum , Histiopteris incisa, Hypolepis glandulifera, Lastreopsis microsora* subsp. *microsora, L. rufescens, L. tenera, L. walleri, L. wurunuran, Lindsaea brachypoda, L. microphylla, Lygodium reticulatum, Marattia oreades, Nephrolepis cordifolia, Ophioglossum gramineum, Pellaea falcata, P. nana, P. paradoxa, Platycerium bifurcatum, P. superbum, Pneumatopteris sogerensis, Prosaptia fuscopilosa, Pteridium esculentum, P. revolutum, Pteridoblechnum neglectum, Pteris pacifica, P. tremula, Pyrrosia rupestris, Sticherus flabellatus, Teratophyllum brightiae, Todea barbara, Vittaria ensiformis.*

Ferns of Mt Edith

Nada Sankowsky

Compiled from personal observations and Herbaria records.

Adiantum aethiopicum, A. diaphanum, A. hispidulum, A. silvaticum, Angiopteris evecta, Antrophyum subfalcatum, Arachniodes aristata, Arthropteris beckleri, A. palisotii, A. submarginalis, Asplenium athertonense, A. australasicum, A. bicentenniale, A. parvum, A. polyodon, A. simplicifrons, Belvisia mucronata, Blechnum cartilagineum, B. nudum, B. patersonii subsp. queenslandicum, B. whelanii, Bolbitis taylorii, Christella dentata, C. parasitica, Colysis ampla, Crepidomanes johnstonense, Crypsinus simplicissimus, Cyathea baileyana, C. cooperi, C. rebeccae, C. robertsiana, C. woollsiana, Davallia denticulata, D. pyxidata, Dicksonia herbertii, Dicranopteris linearis, Dictymia brownii, Diplazium assimile, D. dilatatum, D. queenslandicum, Diplopterygium longissimum, Drynaria rigidula, Elaphoglossum queenslandicum, Goniophlebium subauriculatum, Grammitis queenslandica, G. stenophylla, G. wurunuran, Histiopteris incisa, Hymenophyllum baileyanum, H. walleri, Lastreopsis grayi, L. rufescens, L. wurunuran, Lindsaea brachypoda, L. obtusa, Lycopodiella cernua, Macrothelypteris torresiana, Marattia oreades, Microlepia speluncae, Microsorum australiense, Monogramma acrocarpa, Nephrolepis cordifolia, Oenotrichia tripinnata, Pellaea nana, Platycerium bifurcatum, P. superbum, Pneumatopteris sogerensis, Prosaptia contigua, P. fuscopilosa, P. maidenii, Pteridoblechnum neglectum, Pteris pacifica, P. umbrosa, Pyrrosia dielsii, Schizaea bifida,

Scleroglossum wooroonooran, *Sphaerostephanos heterocarpus*, *Sticherus flabellatus*, *S. flabellatus flabellatus*, *Tectaria confluens*, *Teratophyllum brightiae*, *Trichomanes bimarginatum*, *T. tahitense* and *Vittaria ensiformis.*

Ferns of Mt Lewis

*endemic

Nada Sankowsky

Adiantum diaphanum, *A. hispidulum*, *A. silvaticum**, *Amphineuron opulentum*, *A. queenslandicum**, *Angiopteris evecta*, *Arachniodes aristata*, *Arthropteris palisotii*, *A. submarginalis**, *Asplenium athertonense**, *A. australasicum*, *A. nidus*, *A. parvum*, *A. polyodon*, *A. simplicifrons**, *Belvisia mucronata*, *Blechnum articulatum**, *B. cartilagineum**, *B. nudum**, *B. orientale*, *B. patersonii* subsp. *queenslandicum*, *B. whelanii**, *Bolbitis taylorii**, *Calymmodon luerssenianus*, *Cephalomanes brassii**, *C. obscurum*, *Cheilanthes tenuifolia*, *Christella dentata*, *C. hispidula*, *C. parasitica*, *C. subpubescens*, *Colysis ampla**, *C. sayeri **, *Crepidomanes barnardianum subsp. barnardianum**, *C. bipunctatum*, *C. johnstonense*, *C. vitiense*, *C. walleri*, *Crypsinus simplicissimus**, *Ctenopteris walleri**, *Cyathea baileyana**, *C. cooperi**, *C. rebeccae*, *C. robertsiana**, *C. woollsiana**, *Davallia denticulata denticulata*, *D. pyxidata**, *Dicranopteris linearis linearis*, *Dictymia brownii**, *Diplazium dilatatum*, *D. queenslandicum**, *Diplopterygium longissimum*, *Drynaria rigidula*, *Dryopteris sparsa*, *Elaphoglossum callifolium*, *E. queenslandicum**, *Gleichenia dicarpa*, *Goniophlebium subauriculatum*, *Grammitis stenophylla**, *G. wurunuran**, *Histiopteris incisa*, *Humata repens*, *Huperzia lockyeri*, *H. marsupiiformis*, *H. tetrastichoides* (formerly called *H. prolifera* in Australia), *Hymenophyllum baileyanum**, *H. javanicum*, *H. polyanthon contiguum*, *H. samoense*, *H. subdimidiatum*, *H. walleri**, *Lastreopsis sp. nov.*, *L. rufescens*, *L. tinarooensis**, *L. wurunuran**, *Lindsaea brachypoda*, *Lycopodiella cernua*, *Macrothelypteris torresiana*, *Marattia oreades*, *Microlepia speluncae*, *Microsorum australiense**, *M. scandens*, *Nephrolepis cordifolia*, *Oenotrichia tripinnata*, *Oleandra neriiformis*, *Pellaea nana**, *Platycerium bifurcatum **, *Pronephrium asperum*, *Prosaptia maidenii*, *Pteridoblechnum acuminatum**, *P. neglectum**, *Pteris pacifica*, *Pyrrosia confluens dielsii**, *P. longiflora*, *P. rupestris*, *Revwattsia fragilis**, *Scleroglossum wooroonooran**, *Selaginella longipinna*, *Sticherus flabellatus flabellatus*, *S. flabellatus compactus*, *Taenitis pinnata*, *Tectaria confluens**, *Teratophyllum brightiae**, *Trichomanes bimarginatum* and *Vittaria ensiformis*.

Sydney and Blue Mountains Segment

Peter Hind

Friday 17 April: - Sydney Herbarium and Botanic Gardens.

The BPS group plus local ANPSA fern group members arrived at the Herbarium about 2 pm. The afternoon's programme was organised by Dr Elizabeth Brown, Botanist in charge of ferns. We where first treated to afternoon tea, whilst Professor John Thompson spoke about his work sorting out the relationships and taxonomy of *Pteridium* (Bracken) species worldwide, followed by Professor Carrick Chambers speaking about his research on the genus *Blechnum*.

The next stop within the Herbarium was the library, where the librarians had put on an impressive display of some of its older fern books. Some of them being albums of pressed fronds, unfortunately for scientific work without source data for the individual specimens, but very attractive and well preserved none the less.

Our last stop in the Herbarium was the specimen collection itself. The visitors found the specimens, mostly of Lord Howe Island ferns, that Kathy and I had picked out for display, quite interesting. They will not be visiting the island on this trip.

Sometime after 4 pm I led the group in the Tropical Centre glasshouses, followed by the Fernery. We left the Fernery on dusk, just as the ranger was locking it up for the night.

Saturday 18 April: - Hind's Fern collection and Pierces Pass.

Dot, Horst & Ellen, Steve, Kyrill and Ron helped Margret and myself in organising and supplying the BPS group with morning tea when they arrived about 9.30 am. It was a great opportunity for us to meet and chat informally with fellow fernies from overseas. Barry White found ferns such as *Amphineuron opulentum*, almost waist high in the front garden quite impressive. Those who saw *Blechnum articulatum* putting on a show of brilliant red new fronds in the bush-house where also impressed.

The visiting BPS group consisted of Jennifer Ide from England as Leader, Barry White from Victoria as co-leader, Patrick and Grace Acock from England, Michel and Agnes Boudrie from France but currently living in French Guiana, Remy and Annie Prelli also from France, Klaus Mehletreter from Germany but living in Mexico, Alan Ogden from England, Martin Rickard also from England and last but not least Robert Sykes, President of the BPS again from England.

After picking up freshly made sandwiches at the Mt Druitt shopping centre we drove in convoy to Pierces Pass on Bells Line Road. We made one stop at Kurrajong Heights to look at the view over the coastal plain; unfortunately there was a fair amount of smoke haze.

After lunch at the Pierces Pass picnic area and gathering together those that had been up a nearby small valley looking at *Todea barbara* and *Gleichenia*, we headed down the track to the Fairy Grotto. One of the first ferns sighted along the track apart from the ubiquitous *Pteridium esculentum* was *Lindsaea microphylla*. *Sticherus lobatus* and *Calochlaena dubia* being the most abundant ferns along the track through the semi moist Eucalypt woodland. As we came closer to the creek and the wetter rainforest area *Blechnum cartilagineum* on the slopes and *Blechnum ambiguum* on the rocks were noticed. Inside the moist rainforest area *Blechnum wattsii* dominated the floor.

Very large *Todea barbara* with caudices up to a metre high and some nearly a metre thick and topped by fronds often in excess of two metres long hugged the creek banks. These where interspersed with *Leptopteris fraseri* with much narrower trunks, up to about knee high. On the rocks we found *Pellaea nana*, *Lastreopsis acuminata* and several filmy ferns, the commonest being *Hymenophyllum cupressiforme* followed by *H. australe* and much rarer here, *H. lyallii* and *H. flabellatum*. *Grammitis stenophylla* was also reasonably common on these mossy sandstone rocks. One large flattish-topped rock on the other side of the creek had *Rumohra adiantiformis*, growing on it; *Rumohra* is rare in the Blue Mountains. Tree ferns were notable for their scarcity, only a few *Cyathea australis* being present.

Some of us walked up the creek where we observed more *Hymenophyllum lyallii*. Most of the group headed further along the trail downstream to see the spectacular view inside the Grose Valley.

Sunday 19 April: - The Valley of the Waters at Wentworth Falls followed by Adelina and other Falls at Lawson.

I met the BPS group outside “The Conservation Hut” café at the end of Fletcher Street in Wentworth Falls. The weather had changed to light rain which worsened as the day wore on. After looking at the rather limited (by the weather) view from the cliff edge we set off down the myriad of steps downwards towards The Valley of The Waters. The *Gleichenia* here was mostly *G. dicarpa* and a small amount of *G. rupestris*, its fronds showing a noticeably whitish underside, *Sticherus lobatus* was also abundant here. *Blechnum ambiguum* and *B. wattsii* where also here along with *B. minus* and some *B. patersonii* in darker areas. The group was most excited at seeing *Schizaea rupestris* growing on the wet cliff face, many photos being taken. A small amount of *Blechnum gregsonii* was growing more or less in the seepage near the falling water. Martin was very much taken by a young *Cyathea australis* that had extremely glossy fronds. We descended past Empress Falls, but by the time we reached the foot of the next waterfall the rain was dampening everyone’s enthusiasm to push on down to the valley floor, another few hundred metres down. The decision was made to head back up. There were quite a few *Diplazium australe* plants at this point. Lunch was bought and eaten at The Conservation Hut. Unfortunately due to the wet weather closing in we did not get to see the “Wentworth Falls” and *Microstrobos fitzgeraldii*.

After lunch and driving to Lawson, we started the Adelina Falls walk in reverse, starting at Cataract Falls a little further down the road on Cataract Creek, a tributary of Lawson Creek on which both Adelina and Junction Falls sit. The light rain continued for the rest of the day. *Lindsaea microphylla* was soon seen along the track to Cataract Falls. The first cascade access was fairly wet underfoot and too treacherous to walk on the normally drier slide below the first cascade. *Sticherus lobatus* and *Gleichenia dicarpa* where quite abundant here and along the track. Under a wet inaccessible overhang on the other side of the creek *Leptopteris fraseri* was seen again along with *Todea Barbara* in more exposed sites. *Todea* was also along the creek banks downstream of the two cascades.

Sticherus flabellatus was seen below the lower Cascade. The ultimate pinnae angle to the midrib on this bright green Umbrella fern is close to 45 degrees unlike the much commoner (in this area) *S. lobatus* whose

pinnules are much closer to 90 degrees to the midrib. *S. flabellatus* is also green on both sides, whereas *S. lobatus* is somewhat bluish underneath.

After a brief look at *Asplenium flabellifolium* in clefts between some sandstone tors, we crossed the creek and an intervening ridge into the next (Lawson Ck) catchment. Descending the steps we left the drier eucalypt forest of the ridge to enter a pocket of rainforest covering the confluence of Cataract and Lawson creeks. A short track to the left took us to the foot of Federal Falls back on Cataract Creek.
At the edge of the rainforest canopy *Blechnum cartilagineum* and *Calochlaena dubia* where abundant. In wetter parts nearer to Federal Falls *Diplazium australe* and *Histiopteris incisa* were noticed. *Leptopteris fraseri*, *Blechnum patersonii* and *B. ambiguum* were present below and at the side of the falls. Only one plant of a *Lastreopsis* species, probably *L. acuminata* was seen on top of a rock, not on the forest floor where one would expect to find it.

We regained the main track alongside Lawson Creek and within about 100 metres reached the foot of Junction Falls. Here two separate creeks fall into a large amphitheatre, the main one being on Lawson Creek, the second smaller waterfall is on Ridge Creek. The walls are decked with *Blechnum patersonii*, several plants having deeply lobed fronds, some *Blechnum ambiguum* also on the walls and with *Blechnum wattsii* on the nearby slopes. On the wetter parts closest to the falls, *Leptopteris fraseri* was still with us, it being often locally abundant in the Blue Mountains. *Grammitis stenophylla* was growing on isolated rocks amongst *Hymenophyllum cupressiforme*.

Our ascent above these waterfalls to Adelina Falls revealed one extra epiphytic fern—*Pyrrosia rupestris*—on a few large rocks at the edge of the dry forest and the wetter gallery rainforest along the creek. At Adelina Falls *Blechnum minus* was reasonably abundant in wet areas on the steps and along the creek. *Blechnum nudum* was also reasonably common here in the better-lit sites. On the wet walls at the side of the waterfall amongst *Libertia* & *Gleichenia*, *Blechnum gregsonii* was first sighted. As we climbed back to the road, amongst the *Gleichenia* at the side of the track and steps were many more plants of *Blechnum gregsonii*, several of them with fertile fronds present. Some of the party had gone on ahead and reached the cars first. They drove up the road to give some of us a lift back to the parking area. I had packed enough hot water in Thermos flasks for everyone to enjoy a warm cuppa after such a cool wet walk.

Monday 20 April Mt Wilson Waterfall Loop & Cathedral of Ferns then Govetts Leap at Blackheath.

Dot Camp, Steve Lamont & Ron Wilkins joined us for the Mt Wilson part of today's fern forays. We started the Waterfall Loop trail in reverse leaving the waterfalls until last. The group found the first soak/creek head full of *Leptopteris fraseri*, *Lastreopsis acuminata* and lined with *Dicksonia antarctica*, quite exciting. *Pellaea falcata*, *Polystichum proliferum*, *Doodia aspera*, *Blechnum nudum*, *B. cartilagineum* and plenty of *B. patersonii* were also at this site along the track. Tall *Cyathea australis* preferred the slopes away from the creek. A few narrow bell-like whitish flowers were seen on *Fieldia australis* "Jungle Bells" the only member of the *Gesneriaceae* in NSW. Further down the track in a moist but fairly flat area, *Diplazium australe* was abundant amongst a groundcover of *Polystichum proliferum* and *Lastreopsis* acuminata under a forest of *Dicksonia antarctica*. *Microsorum scandens* was seen climbing many of the rainforest trees. As we reached the edge of this flat we traversed a rocky area with Eucalypts in place of the Coachwood – Sassafras rainforest.

Microsorum pustulatum pustulatum was abundant in this well-lit area. This rocky zone is on the edge of the basalt capping and sandstone rocks start to appear. On the first rocks we had to scramble down, *Hymenophyllum cupressiforme* was abundant, amongst this *Grammitis stenophylla* and *Asplenium flabellifolium* grew. The track picks up the creek and follows it upstream to the lower waterfall, the face of which is sandstone. *Leptopteris fraseri* was here too in the spray zone, high up the side of the falls. *Hymenophyllum flabellatum* was abundant, Martin & Barry climbed up to check it out. *Asplenium flaccidum* was on trees nearby and on the rocks below the falls. *Pellaea nana* was also frequent on these rocks.

Above the waterfall on top of some large rocks *Asplenium bulbiferum* was seen—it used to be very abundant along the track. A large shawl of *Tmesipteris obliqua* was seen on a *Dicksonia antarctica* below the falls. The next waterfall is composed of basalt columns. The *Dicksonia* trunks here are thickly covered on their sheltered sides with *Crepidomanes* (*Polyphlebium*) *venosum*. The rain was still pouring down as we regained the picnic area and our cars above the waterfalls. We ate our lunches in the old picnic shed, it being the only place to get out of the rain. A hot cuppa went down well after lunch. I'm glad I refilled the flasks from yesterday.

After lunch, before leaving Mt Wilson we made a short visit to the grandiosely named Cathedral of Ferns. There are actually less fern species here than along the just completed Waterfall Walk. The parking area is around the edge of a large grassy clearing, with large clumps of *Sticherus*, probably *S. urceolatus*, present at the

edges of the Eucalypt forest. *Calochlaena dubia* was also more abundant here. At the bottom of this clearing a small track leads us into the Cathedral of Ferns. Starting in waist high *Blechnum nudum* thickets, then crossing the sealed road we enter the rainforest dominated by *Acacia melanoxylon* (Blackwood). *Polystichum proliferum* is very abundant here, interspersed with *Diplazium australe* & *Lastreopsis acuminata*. Tall *Cyathea australis* and larger but shorter *Dicksonia antarctica* give some ferny height.

Martin discovered a more dissected form of *Polystichum proliferum* along this track. Dot, Ron & Steve said farewell at this point and the rest of us drove around to Govetts Leap at Blackheath – our final foray for the Sydney, Blue Mountains region. The BPS party drive to Armidale via Lithgow & Mudgee tomorrow.

Govetts Leap Blackheath

A few of us decided to walk down the track towards the foot of the falls, the rest enjoyed the spectacular view and went back up the road to the nearby National Parks visitors centre. Although quite wet, the rain had eased a little allowing us to walk down the many steps in reasonable comfort. We were able to enjoy the spectacular views of the waterfalls 300 m clear drop and the floor of the valley covered in thick rainforest.

Blechnum nudum, *B. ambiguum* and quite a lot of the Blue Mtns endemic ferns including *B. gregsonii* were at the side and sometimes on the track, but mostly growing on the steep cliff face, often in Sphagnum moss. *Drosera binata* attracted some attention with its antenna-like, divided, fly trapping leaves. More *Schizaea rupestris* plants were seen on the wet cliff face. *Sticherus lobatus* and lower down the cliff under overhangs we met *Sticherus urceolatus*. *Gleichenia rupestris* with its white underside was abundant on the wet walls. About three quarters of the way down, due to the lateness of the hour and the rain getting worse, we decided to walk back up. It's quite a steep track with several steel steps to negotiate the steepest sections of the cliff, they seem to get steeper on the way up!

Back at the cars it was time to say farewell & Bon voyage to the BPS group. Jennifer Ide on behalf of the group presented me with two books. "Fern Books in English published before 1900", by Nigel Hall & Martin Rickard, & "Polystichum Cultivars Variation in the British Shield Ferns" by the late J.W. Dyce, edited and expanded by Robert Sykes and Martin Rickard. These last two authors being present willingly signed their books for me.

To sum up it was a sometimes hectic but thoroughly enjoyable four days of hosting and leading the British Pteridological Society participants on bush walks in the Blue Mountains. I hope they had better weather as they headed north, particularly in the fern rich area of Northern Queensland.

Other Sydney Meeting Reports

Asplenium Spleenworts (Subject of July meeting) *Dot Camp*

Aspleniums are a popular group of ferns, making an attractive addition to the garden or can be grown in a pot. Some features of aspleniums:

- Grow as lithophytes, epiphytes or terrestrials,
- 28 species in Australia, with 18 confined to Queensland,
- leathery feel to the fronds,
- elongated, latticed sori often in a herringbone pattern,
- oblong or linear sori opening towards the midrib,
- rhizomes erect or creeping, scaly,
- diverse in their size & appearance
- a number of species produce plantlets or bulbils on their lamina,
- genus hybridises freely in the wild, some of which are cultivated.
- usually found growing in rainforests.

Report of the meeting at Illawong on the 17th October, 2009 *Dot Camp*

Peter Hind was unable to attend this meeting & so the group decided to postpone the scheduled discussion of *Nephrolepis* to a later date. The meeting discussed a range of fern topics including:

- general growing tips for ferns,
- spore propagation,
- sites on the internet to purchase spore,

- Kylie attended & reported on the Victorian Fern Society October meeting, where the guest speaker Ron Robbins from South Australia spoke about & displayed Platyceriums including *P. bifurcatum 'Netherlands'* & exotics including *P. alicorne*, *P. wallichii* & *P. wandae*.
- we looked at photo's of Kylie & Dwayne's fern nursery at Currowan Creek, west of Batemans Bay and have identified it as a destination for a future visit.. You can view their nursery at www.verdigris.com.au.

We would be interested to hear from you:

- Have you tried using araldite, liquid nails or similar to attach epiphytes?
- What do you use to control white coconut scale?
- Fern spore needs good light to germinate. It was suggested that leaving a light on for 15 hours would hasten germination, particularly during the short winter days.

We enjoyed our walk through Margaret's beautiful garden with her interesting fern collection & thank her for her generous gifts of plants & spore to members.

South-east Queensland Meeting Reports

July 2009 Meeting at Baxter's

Claire Shackel

There was a good roll up for the July meeting at Ray and Noreen Baxter's home. Having been forewarned that they had few ferns, everyone arrived with pots and bags of specimens of *Microsorum*. Most species were represented and Peter was able to point out features used to identify the assembled ferns including one misidentified *Drynaria*.

Microsorum can be distinguished by differences in the rhizome structure and by behavior:

- *M. scolopendria* starts life as a terrestrial but becomes epiphytic as soon as possible. It has a slender more or less cylindrical rhizome with dull squarrose small dark scales. Lamina is deeply lobed.
- *M. grossum* has a larger, obviously cylindrical rhizome and is terrestrial or rarely lithophytic. The rhizome has large blister-like scales and the lamina is deeply lobed.
- *M. membranifolium* has a short creeping fleshy rhizome and the spores produce a prominent protrusion on the upper surface.
- *M. scandens* has a flattened densely scaly rhizome. The leaves have a distinctive venation and can be entire or lobed. Called the hay-scented fern (for those who with sensitive noses) due to presence of a chemical called coumarin. Can be confused with *M. pustulatum*, with which it often co-exists.
- *M. pustulatum* has a round rhizome that can be terrestrial or epiphytic; the rhizome usually loses its scales and becomes whitish with age. Leaves are usually more leathery than *M. scandens*.
- *M. australiense* is similar to *M. punctatum* but usually grows on tree trunks and has smaller leaves. The spore patches are larger. There are significant differences in rhizome scale shape and size, and average spore size between these species.
- *M. punctatum* grows along the ground and the rachis is winged. The sori are minute dots. There are a number of cultivars with differing degree of cresting and marginal processes.
- *M. maximum* (sometimes referred to as *M. punctatum lobatum*) is half way between *M. punctatum* and *M. grossum* and is a hybrid between them. The bottom part of the frond is lobed like *M. grossum* with a long top like *M. punctatum*. It is a robust fern exhibiting hybrid vigor. The spore patches (sori) are also intermediate in size, but are sterile.

Also represented were specimens of a *Microsorum* that has been marketed as the kangaroo fern, *M. pustulatum*, but which is an exotic of unknown origin with a thicker rhizome than the latter, with very long finely acute rhizome scales, quite different to the broad blunt scales of *M. pustulatum*.

Venman Bushland National Park

Claire Shackel

The excursion for August was to the Venman Bushland National Park in the Redlands area south east of Brisbane. The vegetation was open forest with a grassy understory and did not promise to be a very good fern area. The Venman circuit took the group down to a small creek and up and out into a cleared area under power lines and back to the creek. *Pteridium esculentum* was common on the dry hill sides. *Cheilanthes sieberi* inhabited the exposed rocks under the power lines. In the moister areas near the creek *Blechnum cartilagineum*, *Calochlaena dubia*, *Lindsaea ensifolia*, *Cyathea cooperi*, *Sticherus flabellatus*, *Hypolepis muelleri* and

Adiantum atroviride were found. There were only a small number of ferns observed but everyone had a very pleasant morning walk and *L. ensifolia* was an interesting find.

Ferns observed: *Pteridium esculentum*, *Cheilanthes sieberi*, *Blechnum cartilagineum*, *Calochlaena dubia*, *Lindsaea ensifolia*, *Cyathea cooperi*, *Sticherus flabellatus*, *Hypolepis muelleri*, and *Adiantum atroviride*.

Buderim Forest Park

Claire Shackel

For the October meeting the fern study group meet at the Edna Walling Memorial Garden entrance to Buderim Forest Park. In the planted gardens were the following native ferns *Cyathea australis*, *Rumohra adiantiformis*, *Christella dentata*, *Platycerium bifurcatum*, *Hypolepis muelleri*, *Adiantum hispidulum hispidulum*, *Nephrolepis cordifolia*, *Stenochlaena palustris*, *Polystichum* sp. and the exotic *Blechnum occidentale*.

The track in the park led steeply down to a creek that formed Serenity Falls. Initially the track was through rainforest and the ferns seen were *Arthropteris tenella*, *Lastreopsis marginans*, *Doodia heterophylla*, *Adiantum hispidulum hypoglaucum*, *Cyathea cooperi* and *Christella parasitica*. As the track came into more open forest the flora changed and the ferns seen were *Christella dentata*, *Adiantum silvaticum*, *Blechnum cartilagineum*, *Doodia aspera* and *Calochlaena dubia*.

At the bottom of Serenity Falls, *Adiantum diaphanum* and *Selaginella brisbanensis* grew under a slight overhang. Peter tried to convince us that very dark strands of moss on a rock wall were a filmy fern. He took a small sample and put it in a plastic bag with a little water and by lunch time it had rejuvenated and could be seen to be the filmy fern *Crepidomanes saxifragoides*!

For lunch we went to Wendy and Dan's home and had a walk around their extensive garden that is a work in progress. They have removed large quantities of exotic weeds and have been replacing them with natives including many ferns.

Burrendong Botanic Garden and Arboretum Seeking Ferns

Dan Johnston

Marion Jarratt of Burrendong Botanic Garden and Arboretum is seeking a variety of ferns for their Fern Gully. If you are able to help, please contact Marion Jarratt,

Remembering Joan

Ron Wilkins

Somehow when Joan Moore died in February 2007, a record of her passing did not get into the Fern Study Group Newsletter, though a memorial article 'Vale Joan Moore' by Harry Loots and Kyrill Taylor was published in Native Plants for New South Wales Vol. 42 (3), 12. In fact we did not discover for some months afterwards that she had died, and sadly none of us were present at her funeral. Recently, through the good offices of Dot Camp and the generosity of Joan's cousin, her library was distributed amongst members of the Sydney group. Books included some choice pieces, some of which were densely annotated by Joan attesting to her very detailed knowledge of the nomenclature and distribution of Australian ferns.

Joan very competently ran the business side of the Group for well over a decade in addition to her other activities at the Sydney Herbarium and for the Australian Plants Society. She was an interesting person, a former teacher in England, France and Australia. In the last years she had trouble remembering scientific names of ferns (don't we all) but this worried her a lot. In addition she sometimes got lost on her way to excursion venues, and for these reasons gradually faded out of active participation in the group.

Joan had a well established fern garden. Because of some trouble with her arm she could not use the hose when water restrictions were introduced. I tried watering the garden for her but I could see this was pointless. When the garden was first established, it was thickly mulched with high quality plant detritus. Certain ferns thrived on this stuff and they did not require artificial watering. I have examples from her garden of *Lastreopsis munita*, *L. tenera*, *L. microsora*, *L decomposita*, *L. marginans*, *Microsorum pustulatum* subsp. *howense*, *M. scandens*, *M. pustulatum*, *Polystichum australiense* and *Arachniodes aristata*. All these ferns and several others such as species of *Doodia* and *Histiopteris incisa* grew in healthy patches each of a couple of square metres in the shade of some native trees and tree ferns. A patch of *Cheilanthes* in full sun sprang up from time to time after rain. Tough little bugger she would say. Her fern garden was living proof that well established ferns of selected species can grow in a Sydney suburban setting with only natural watering. And it always looked great.

We remember with gratitude her generous contributions to the Fern Study Group.