

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

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NEWSLETTER EDITOR: Peter Bostock, contact as above.

From the Leader

Although I have briefly listed the excursions and meetings for both Queensland and New South Wales below, please be aware that all social events of the Fern Study Group have been cancelled for the foreseeable future, in line with Federal and State Government regulations and advice from both Native Plants Queensland (received from the NPQ President, Bob Bannon, on 21st March) and Australian Plants Society NSW.

In addition, due to the uncertainty of both the social situation over the next few months, and the possible recession of the Study Group (see below), I've decided that we will postpone collection of fees that would normally be due June 30, 2020. We will give all members a free year. "Paid-to" dates will be pushed back one year. If necessary, arrangements will be made to refund fees paid in advance.

I recently also (and independently of COVID-19) made the decision to resign as leader from the Fern Study Group, effective 30 June 2020. I discussed this at the February meeting in Brisbane, and made my intentions known to Peter Hind a little while ago. I hope that the Study Group will continue, and I will remain as a member as long as I can, providing technical advice if requested and images of ferns if desired. Whether the Study Group is placed into recess, folds up or continues with a new leader (or leaders) is in your hands. Please contact me or Jane Fountain (Study Groups Coordinator, email studygroups@anpsa.org.au) for more information or to offer your services.

Vale Kerry Rathie. A long time member of the Study Group, Kerry passed away 18th March 2020 after a short illness. Kerry brought a very learned scientific rigour to his cultivation of ferns, and was always on the lookout for plants to grow in his open garden beds and greenhouses. He hosted a number of Study Group visits over the years and these were always entertaining and informative. We will miss him. Our condolences to his wife, Annabel, and family.

Program for South-east Queensland Region (Postponed)

Peter Bostock

Sunday 5th April 2020. Meeting at Claire Shackel's residence, Upper Mt Gravatt, from 9:30 am.

Sunday 3rd May 2020. Eprapah Creek near Victoria Point, from 9:30 am

Sunday 7th June 2020. Maroochy Regional Bushland Botanic Gardens, Tanawha, from 9:30 am.

Program for the Sydney Region (Postponed)

Peter Hind

Saturday 18th April 2020. The Olde's country residence, Oakdale, at 11 am.

Saturday 23rd May 2020. Note change of date! Steve Lamont's residence, Castle Cove. Steve's mobile: 0409 955 224.

Saturday 20th June 2020. Walk from Evans Lookout to Neate's Glen via the Grand Canyon. Contact Peter Hind on 02 9625 8705 for further information.

Saturday 18th July 2020. Home of Gayle and George Hardy, Davidson, at 11 am. Contact information: 02 9453 9940.

Saturday 15th August 2020. Mt Tomah Botanic Garden, meeting initially at the Visitor Centre, 10:30 am for 11 am.

Saturday 19th September 2020. Meet from 11 am at the home of Natalie & John at 4 Laurel Street, Willoughby. Study of epiphytic & lithophytic ferns. Enquiries to Natalie & John on 02 9958 8766.

Saturday 17th October 2020. Meet from about 12 noon at the home of Kylie & Dwayne Stocks at Verdigris Nursery.

Excursion and General Reports

Fern Floras of Australia and New Zealand

Peter Bostock

Long out of print, the fern volume of Flora of Australia is now available from the Australian Government as a pdf (Acrobat) formatted ebook. Just type “Flora of Australia 48” into your favourite search engine and you should find the desired file pretty quickly. If you are into New Zealand ferns, the New Zealand botanical community has produced a series of digital files, with one or more fern families per file. These are available from this link: <https://catalogue.data.govt.nz/dataset?tags=Ferns>

ADD in ferns

Ron Wilkins

I’ll bet you all have a patch of *Nephrolepis* sp., *Calochlaena dubia*, or a *Platyserium bifurcatum* nestled on a tree, and know that they are effectively drought-proof. Most other ferns in my garden are afflicted with ADD (attention deficit disorder) to varying degree. The latter ferns demand attention - or eventually die. I’d like to give honourable mention to two very independent ferns I’ve come to appreciate more in hot and dry times in Sydney.

My *Pellaea falcata* was collected (probably illegally) from a colony growing on the roadside in a housing area at Mount Tomah, NSW. I can’t remember the street but I do remember the terrifying fierce dogs that threatened my life as I gently plucked a frond. It took to my garden immediately and spread into a patch eliminating all other ferns in its way. As you know, this is a handsome fern with dark green and shiny laminae. A nice patch of the plants is a pleasing sight. When a frond dies, however, the wiry rachis that persists on the rhizome is studded with tough, woody, 1 mm basal pinnae remnants that can rip the skin. Usually, I don’t wear garden gloves and I will not tolerate for long any vegetation with spines or spikes. So, after having my hand ripped on one occasion (OK, I should have used a clipper) I decided the patch had to go. The rhizome is branched, black and wiry, deep in the soil, and I thought I had extracted the whole tangled mass. But six months later after a heavy shower it was back again and so beautiful I did not have the heart to renew my attack. I also have a couple of small patches of *P. paradoxa*, equally resistant to drought. This species has 3 mm basal pinnae remnants, even crueller to the fingers. Calder Chaffey (in *Australian Ferns*) remarks that *P. falcata* behaves somewhat like a Resurrection Fern, but although in dry times the pinnae tips pale and curl, and recover after rain if they have not browned, this is nowhere near as spectacular as the true resurrection ferns like *Cheilanthes*.

The second fern to which I doff my battered gardening hat is *Rumohra adiantiformis*. In my garden this fern is irrepressible. Like *Pellaea falcata*, I’ve never watered it; it survives on whatever natural rainfall it receives, and looks green, leafy and fabulous even in drought. It is aggressive to those weaker ferns suffering from ADD. My patches started from a hanging basket specimen I bought at Gloucester, NSW, not far from Barrington Tops, and I thought there was a chance it was a native plant. However, it is clearly the variety used in florists for background ‘green’. I have seen the identical fern in the front gardens of many Californian residences so it gets around. I’ve been interested in the Australian variety of this fern which is usually epiphytic or lithophytic, and outside of Tasmania, not so common, in my experience. I once thought I could distinguish the varieties by features of their vascular systems, but I have lost confidence it is possible to do this. Nevertheless, our native, and this foreign fern from wherever it came, are different by reason of their differing vigour, which seems to be a genetic trait. But vigour is not a physical characteristic observable in a museum specimen. Neither is ADD. I’m getting into hot water here. I had better retreat before I create argument from those who know a lot more about ferns than I do!

Pyrrosia rupestris 'Sampsons Crest'

Tony Clarke



Brad Sampson, a friend who is in my local ANOS group came to visit me one afternoon to look at some of my native orchids. Brad noticed that I had a large collection of *Pyrrosias* and asked me what they were. I am proud of the forms of *Pyrrosia* that I have found over the years and was surprised when he said that he knew of a large clump of a plant that looked like these *Pyrrosias* that were in a remnant piece of coastal rainforest about 10 minutes drive from my house.

I was puzzled at his statement as I had walked near this area many times before and never seen any *Pyrrosias* there, in fact it is my experience that I have rarely (if at all) seen *Pyrrosia rupestris* near the sea but usually found at altitude. Brad said that he would send me a photo that evening of this plant. All afternoon I kept thinking what he had confused it with. Perhaps he had seen some sort of creeper, ah I know – he has seen a plant of *Hibbertia scandens* sprawling over a rock!

After dinner that day I turned the computer on and nearly fell over when I saw the photo, this large crested *Pyrrosia*

growing on a large boulder. I immediately phoned Brad and asked him to take me there next day. This fern is growing about 400 metres from the beach in an open area that has dappled shade mainly from large Eucalypts and could be vulnerable to bushfires.

Tallanbana, Springbrook, Sunday 3rd November 2019

Jeff Lynne

It was a bit nippy the morning a group of 13 or so fernies assembled at the Tallanbana picnic area in the glorious Springbrook National Park. A few newbies attended which is very encouraging – hope we didn't scare them off! The intention of the day was to get to Twin Falls and possibly Rainbow Falls as well. The whole area is fairly fern abundant. The FSG has been there before in 2008, 2009, 2011 and earlier in 2019 and have identified 56 different species overall. Not all of them were found in the area we visited on Sunday, as there are a myriad of tracks in the park covering a huge area and different plant vegetation communities.

We wandered down the track, much pointing and talking, 'What's that one?', 'Hey, look at this!', a great exchange of knowledge, everyone learning something. The track finally had to descend and we slowed down while we negotiated the stairs and ramps. Eventually we came to the first rockfall (many eons ago) and walked through the 'cave' and came to the area that Peter had promised us would be special. And indeed it was! A rockface with a calculated 21 square metres of *Hymenophyllum marginatum*. Now I have to admit that I've been past this point before and didn't give it a second glance. Hey, ignorance is bliss. But now that I know... This place is the pteridological equivalent to the Wailing Wall. It's the only **easily accessible** place in Queensland¹ to see this little bloke and it really does need a magnifier to see the detail as each frond is about the size of a grain of rice². Really dark mid vein and a dark margin. Quite unique once you know what to look for. All very cool.

At this point the group started to split up, some slowly ascending back up the track, others going on to Rainbow Falls and then on to Twin Falls. This proved good value as it added another 12 or so different species to the list. One fern of interest we found at Rainbow Falls was *Selaginella kraussiana*, a feral species which has colonised the area around the side of the track behind the falls. So we finished the day with 40 species.

We all finally met at the picnic area for lunch, lots more chatter then finally back off to home. Thanks to everyone for attending, another great day.



Hymenophyllum marginatum with fertile sorus at the top; approx. 3 times life size!

¹ the other sites are located at high altitude on Mt Lindesay and Mt Barney in southern Queensland.

² This is only a little bit exaggerated – the leafy part of these fronds can range in length from 2.5 to 35 mm.

List of ferns in the Tallanbana area, 2008–2019:

	Tallanbana 1 st March 2008	Tallanbana to Canyon Lkt, 1 March 2009	Tallanbana 1 st April 2011	Twin Falls Circuit, 4 th May 2019	Twin Falls etc. 3 rd Nov. 2019
<i>Abrodictyum caudatum</i>	X	-	X	X	X
<i>Adiantum hispidulum</i>	X	-	X	X	X
<i>Adiantum silvaticum</i>	X	X	X	X	X
<i>Arthropteris beckleri</i>	X	-	-	X	X
<i>Arthropteris tenella</i>	X	-	-	X	X
<i>Asplenium australasicum</i>	X	X	X	X	X
<i>Asplenium flabellifolium</i>	X	-	-	X	-
<i>Asplenium polyodon</i>	X	X	X	X	X
<i>Blechnum cartilagineum</i>	X	X	X	X	X
<i>Blechnum patersonii</i> subsp. <i>patersonii</i>	X	-	X	X	X
<i>Blechnum wattsi</i>	X	X	X	X	X
<i>Calochlaena dubia</i>	X	X	X	X	X
<i>Cheilanthes distans</i>	X	-	-	-	-
<i>Christella dentata</i>	X	-	X	X	X
<i>Christella parasitica</i>	-	-	-	-	X
<i>Cyathea australis</i>	X	X	X	X	X
<i>Cyathea leichhardtiana</i>	X	X	X	X	X
<i>Davallia pyxidata</i>	X	X	X	X	X
<i>Deparia petersenii</i> subsp. <i>congrua</i>	X	-	X	-	X
<i>Dictymia brownii</i>	X	X	X	X	X
<i>Didymoglossum bimariginatum</i>	X	-	-	-	-
<i>Diplazium australe</i>	X	-	X	X	X
<i>Diplazium dilatatum</i>	X	-	-	X	-
<i>Doodia australis</i>	X	-	X	-	X
<i>Doodia caudata</i>	X	-	X	X	X
<i>Gleichenia dicarpa</i>	X	X	X	X	X
<i>Gleichenia rupestris</i>	X	X	-	-	-
<i>Grammitis stenophylla</i>		X	-	X	X
<i>Hymenophyllum australe</i>	X	-	-	-	-
<i>Hymenophyllum cupressiforme</i>	X	X	X	X	X
<i>Hymenophyllum marginatum</i>	-	-	X	-	X
<i>Hypolepis muelleri</i>	X	X	X	-	-
<i>Lastreopsis acuminata</i>	X	-	-	-	-
<i>Lastreopsis marginans</i>	X	-	X	-	X
<i>Lastreopsis munita</i>	X	-	X	-	-
<i>Lastreopsis smithiana</i>	X	-	-	-	X
<i>Lindsaea linearis</i>	-	X	X	X	X
<i>Lindsaea microphylla</i>	X	X	X	X	X
<i>Microsorium scandens</i>	X	X	X	X	X
<i>Nephrolepis cordifolia</i>	X	-	-	X	X
<i>Notogrammitis billardierei</i>	X	-	X	-	-
<i>Pellaea nana</i>	-	-	X	X	X
<i>Platynerium bifurcatum</i>	X	X	X	X	X
<i>Platynerium superbum</i>	-	X	X	-	-
<i>Ptilotum nudum</i>	-	X	-	-	-
<i>Pteridium esculentum</i>	X	X	-	-	X
<i>Pteris umbrosa</i>	X	-	-	-	-
<i>Pteris vittata</i>	X	X	-	-	-
<i>Pyrrhosia confluens</i> var. <i>confluens</i>	X	-	X	-	-
<i>Pyrrhosia rupestris</i>	X	X	X	X	X
<i>Selaginella kraussiana</i>	-	-	-	-	X
<i>Sticherus flabellatus</i>	X	-	X	X	X
<i>Sticherus lobatus</i>	X	X	X	-	X
<i>Tmesipteris ovata</i>	-	-	X	-	X
<i>Todea barbara</i>	X	-	X	X	X

Fern Outing to Joyners Ridge Road

Claire Shackel

On a wet and foggy morning in early July 2019, nine members of the fern study group met at Mt Glorious to walk along Joyners Ridge Road, on the opposite side of Mt Glorious Road to the Maiala walking tracks. The rain held off but it was very wet under foot. At the entry point *Adiantum hispidulum*, *Asplenium australasicum* and *Lastreopsis marginans* were an indication of a good fern walk.

The road runs along below the top of the ridge with a steep rocky bank above and a very steep drop off below into a forest dominated by Piccabeen palms. A few ferns grew on the road edge but most were seen on the top side of the roadway. A nice group of *Christella dentata* grew in a patch of disturbed soil. At different times on the walk, *Arthropteris tenella*, *Microsorium scandens*, *Pyrrosia confluens* and *P. rupestris* were seen climbing trees. Other ferns seen were *Adiantum atroviride*, *A. formosum*, *Cyathea leichhardtiana*, *Doodia aspera*, *Lastreopsis microsora*, *L. munita*, *L. decomposita*, *Pellaea nana* and *Pteris umbrosa*. Although there was evidence of *Platycterium* fronds on the road, it was some time before *Platycterium superbum* and *P. bifurcatum* were seen in the high canopy. Conditions looked suitable for *Adiantum diaphanum* but it proved somewhat elusive, being the last fern seen before returning to the entry point.

With the weather not improving, it was decided to retreat to Jolly's Lookout for lunch.

Fern Outing to Witches Falls, Mt. Tambourine

Claire Shackel

Eight members of the Queensland group met at the top of the Witches Falls track on the first Sunday in August, 2019. There was a lovely bank of *Calochlaena dubia* along the mountain edge to greet us. After the usual morning coffee, the party set off down the track in an anticlockwise direction. The track runs through subtropical rainforest/vine forest and considering the dry period in SE Qld, it was in good condition. *Blechnum cartilagineum* was next on the list followed by two varieties of *Adiantum hispidulum*, var. *hispidulum* and var. *hypoglaucum*. When the track became rather rough and started to descend steeply, the party split up, with a couple returning to the cars. In this top section, ferns seen were *Adiantum formosum*, *Davallia pyxidata*, *Doodia aspera*, *D. australis*, *D. caudata*, *Hypolepis muelleri*, *Pellaea nana*, *Pteridium esculentum* and *Pyrrosia rupestris*.

As the track dropped down more steeply and the atmosphere became moister, the following ferns were seen: *Pteris tremula*, *Arthropteris tenella*, *Adiantum atroviride*, *Lastreopsis munita*, *L. decomposita*, *Dendroconche scandens* (*Microsorium scandens*), *Platycterium bifurcatum*, *Drynaria rigidula*, *Dictymia brownii*, *Cyathea cooperi* and *Christella dentata*, with *Nephrolepis cordifolia* right alongside the falls. Witches Falls had only a small trickle of water flowing over the rocks keeping the atmosphere moist. Some of the group completed the circuit walk and added *Platycterium superbum*, *Asplenium australasicum*, *A. polyodon* and *Diplazium australe* to the list.

Fern scale (staghorn scale) infestations

Peter Bostock



Asplenium Norfolk Gem
(photo: Loretta Taylor)

FSG member Loretta Taylor sent me a photo (left) recently of a scale infestation on *Asplenium* 'Norfolk Gem', a cultivar of the bird's nest fern. I believe this insect to be *Pinnapsis aspidistrae*, the so-called fern scale, which can infest quite a wide range of plants, not just ferns. In my experience it can be quite difficult to eradicate, but systemic insecticides are worth trying, and Calder Chaffey, in his book *Australia Ferns: Growing Them Successfully* suggests an Ampol oil. He says: "best controlled by spraying with an oil which surrounds the insects, suffocating them by cutting off their air supply. One of the best is Ampol D-C-TRON NR, 10 ml to 1 litre of water. For best results, spray two or three times at three-weekly intervals. White oil is often recommended, but is more likely to damage ferns than this newer preparation." He also recommends Disyston as a systemic insecticide, ingested by the insects and not harming the plants.

Fern Outing to Purling Brook Falls, Springbrook

Peter Bostock

Nine members of the FSG met at Gwongorella (Purling Brook Falls) picnic area for an excursion on the first Sunday in March 2020. This track runs fairly gently down to the cliff edge, with a detour to the Falls Lookout, and then dives fairly steeply to the bottom of the falls, crossing the creek below the falls via a new suspension bridge on the way. The weather was uncertain at the start of the day, but rapidly improved, so much so that we could see people swimming in the pools below the falls (some 100 metres below our vantage point). This walk produced a relatively small list of ferns, but was notable for the sheer volume of some. In spite of being very popular with visitors, encounters with wildlife were frequent. These included a second hand report of a very large Land Mullet skink, very large tadpoles in the creek above the falls, and various reports/sightings of a snake and smaller skinks.

During the walk, there was much discussion as to the complete absence of *Doodia* species – not a very common occurrence on any of our S.E. Qld walks. We also debated whether the very large stands of *Blechnum*, some with very long and robust fronds, particularly alongside the creeks, could be *B. camfieldii*, but eventually consulted the Flora of Australia keys and decided they were all *B. wattsii*.

Checklist for Purlingbrook Falls

Helen Jeremy

Adiantum formosum

Adiantum hispidulum var. *hypoglaucum*

Adiantum silvaticum

Asplenium australasicum

Blechnum cartilagineum

Blechnum nudum

Blechnum wattsii

Calochlaena dubia

Christella dentata

Cyathea australis

Cyathea cooperi

Cyathea leichhardtiana

Davallia pyxidata

Histiopteris incisa

Hypolepis muelleri

Lastreopsis microsora

Platycterium bifurcatum

Platycterium superbum

Psilotum nudum

Pteridium esculentum

Pyrrosia confluens var. *confluens*

Sticherus lobatus

Todea barbara

Unusual nest fronds on *Drynaria* × *dumicola*

Peter Bostock



'Fertile' nest leaves on Brad's plant
(photo: Brad Mayger)

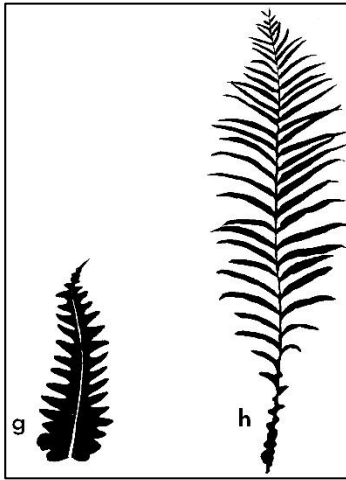
Almost a year ago, Brad Mayger, a colleague in the Dept of Environment and Science, contacted me about his *Drynaria* × *dumicola*, a plant he had obtained from me some 6 years earlier. The plant had produced some of the usually sterile nest leaves bearing 'dots' here and there of sori (groups of sporangia)! I had seen occasional plants of *Drynaria rigidula* produce these sorts of partly fertile nest leaves, but until then, not *D. × dumicola*. For those not familiar with this fern, it is a more or less sterile hybrid between *Drynaria rigidula* and *D. sparsisora*, and found only in a couple of remnant hoop pine vine forests in the Wide Bay region of southern Queensland. The lamina of the frond could be considered intermediate between *D. rigidula* and *D. sparsisora*, deeply lobed as in *D. sparsisora*, but retaining the small notches in the leaf margins inherited from *D. rigidula*, with basal pinna nectaries single or duplicated above and below the pinna midrib (inherited from both parents) and with sori impressed into the frond, but very irregular in shape, unlike either parent.

intermediate between *D. rigidula* and *D. sparsisora*,



Typical *D. × dumicola* frond, again from Brad's plant (photo: Brad Mayger)

I say ‘more or less’ sterile, because apparently fertile spores are produced on occasion, possibly by chromosome doubling (thereby restoring fertility to an otherwise sterile plant). I was given a plant grown from such spores by a nurseryman near Nambour many years ago, and it turned out to be a very miserably small plant, producing only a few fronds each year. However, the plants were typical of F2 generation of hybrids, in that their fronds were more or less identical to *Drynaria sparsisora* in outline,



but with the marginal notches and spore pattern of *D. rigidula*!

However the story doesn’t end there, because the hybrid fern \times *Aglaonaria robertsii* (*Aglaonaria coronans* \times *Drynaria rigidula*) is also very similar to *Drynaria* \times *dumicola*, at times exhibiting frond formation similar to both the F1 and F2 forms. See silhouettes of fronds of this hybrid extracted from Barbara J. Hoshizaki’s paper: ‘An “Inter-generic” Hybrid: *Aglaomorpha* \times *Drynaria*’, *American Fern Journal* 81(2): 37–43 (1991). These represent ‘unusual fronds’ (the left-hand nest leaf, g) and more typical fronds (right-hand silhouette, h), the latter producing a nest-leaf like growth at the base of the normal ‘fertile’ frond. *Aglaomorpha* species invariably produce humus-collecting lamina at the base of their normal fertile fronds, but apparently can produce *Drynaria*-like separate nest leaves, and this hybrid has inherited that trait.

Recent Fern Literature

Peter Bostock

Field, A.R. (2020). Classification and typification of Australian lycophytes and ferns based on Pteridophyte Phylogeny Group classification PPG I. *Australian Systematic Botany* 33: 1–102.

The abstract for this paper states “The classification and typification of all Australian ferns and lycophytes is updated to reflect the Pteridophyte Phylogeny Group I classification and the International Code of Nomenclature for algae, fungi, and plants, presenting 8 new nomenclatural combinations as well as 85 lectotypifications. The Australian fern and lycophyte flora comprises 2 classes, 14 orders, 32 families, 134 genera and 528 species and subspecies with the addition of 8 newly recorded and 6 newly recognised species since the publication of the Flora of Australia fern volume in 1998.

Overall, 208 species are endemic to Australia, with Queensland having the highest species diversity and endemism by state or territory, and Lord Howe Island having the highest concentration of species and endemics per unit area. The Australian fern and lycophyte flora shows diverse links with Africa, Asia and Oceania, with the largest overlaps being shared with Asia and Oceania. More species are endemic to Australia+Oceania than to Australia+Asia. Contrasting with the classification presented in the Flora of Australia, no genera of ferns and lycophytes are now considered to be wholly endemic to Australia.”

Ashley Field has compiled this comprehensive list of Australian ferns and lycophytes (tassel, ribbon and related ferns) based primarily on the earlier publication by the Pteridophyte Phylogeny Group (which I reported on in newsletter 138, Feb. 2017) but also drawing information from more recent studies, such as the one below.

Testo, W.L., Field, A.R., Sessa, E.B. & Sundue, M. (2019). Phylogenetic and Morphological Analyses Support the Resurrection of *Dendroconche* and the Recognition of Two New Genera in Polypodiaceae Subfamily Microsorioideae. *Systematic Biology* 44(4): 1–16.

This paper has significance for Australian and New Zealand Polypodiaceae, as some of our common and widespread ferns are placed in new genera, either in the resurrected genus *Dendroconche* or the newly created genus *Zealandia*.

The name changes are as follows:

Dendroconche ampla replaces the name *Colysis ampla*, *Dendroconche sayeri* replaces *Colysis sayeri* and *Dendroconche scandens* replaces *Microsorium scandens*.

Zealandia pustulata is proposed as a replacement for *Microsorium pustulatum*, with two subspecies, one (*Zealandia pustulata* subsp. *howensis*) endemic to Lord Howe Island, the other (subsp. *pustulata*) occurring in New Zealand, Australia and Tasmania.

Testo, W.L. & Sundue, M. (2014). Primary Hemiepiphytism in *Colysis ampla* (Polypodiaceae) Provides New Insight into the Evolution of Growth Habit in Ferns. *International Journal of Plant Sciences*, Vol. 175, No. 5, pp. 526-536

I'd more or less ignored this paper when it was published (my excuse, that was the year I retired and began the process of downsizing) but reading about the name change from *Colysis* to *Dendroconche* prompted me to re-examine this work. Hemiepiphytes are defined as plants which begin life as an epiphyte, and then, as they grow, establish contact with the ground, thereby greatly increasing their ability to obtain nutrients. This study is the first to identify our local wet tropics *Colysis ampla* [= *Dendroconche ampla*] as a member of this 'exclusive club'. The authors conclude that "Hemiepiphytes are likely underreported among climber- and epiphyte-rich groups of ferns. Primary hemiepiphytes may be more frequently derived from holoepiphytic [true epiphyte] ancestors because epiphytic gametophytes and sporophytes are preadapted to hemiepiphytic growth. We propose that hemiepiphytism provides a mechanism for acquisition of stable nutrient and water supplies by tree-dwelling plants.



***Colysis ampla*, photographed at the Daintree Rainforest Environmental Centre, Cape Tribulation, Nth Qld (photo: Peter Bostock)**

ANPSA Fern Study Group Membership

Dan Johnston, Treasurer

Please note – this is an information guide not a renewal notice!

Note 2: in view of the prohibition on meetings and group excursions, the annual fee for 2020-21, due on 30 June this year, is waived.

The annual subscription to the Fern Study Group is \$5 for per household receiving a single copy of the Fern Group Newsletter and is due on 1st July. Please note also that membership of an ANPSA affiliated body, such as Native Plants Queensland, is a necessary prerequisite for study group membership.

Newsletters are sent by email (colour images, Adobe Acrobat (pdf) file) or posted (B&W images).

If you are considering joining the Fern Study Group, please contact the Leader or Treasurer via email or phone numbers at the head of this document.

I'm happy to continue as treasurer, maintain the membership lists, and distribute the newsletter.
