

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

Newsletter Number 151

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NEWSLETTER EDITOR: Dan Johnston, contact as above.

Fern Study Group Port Macquarie Fern Gathering

Jeff Lynne

When: 4th to 7th November 2022

Where: Based around Port Macquarie

An easy 4 hours north of Sydney

A slightly longer 5 and a half hours from Brisbane

What's going on?: Trips to local ferny spots

Wilson River area, Willi Willi National Park

Plateau Beech, Werrikimbee National Park

Boorganna Nature Reserve, Comboyne

North Brother Rainforest Walk

Middle Brother National Park

Or any of half a dozen other areas of interest



And what else?:

BBQ dinner at Jeffs Place

Meet and greet all those other FSG members who have just been a name until now.

Expressions of Interest invited

Phone Jeff on 0412-728-626

Or email ferndog0112@gmail.com

Itinerary available closer to event

Program for Sydney Region

Peter Hind, Steve Lamont

Saturday, 18 June, 2022. Meet from about 10:30 am at the home of Gayle and George Hardy at 19 Aranda Drive, Davidson (an apparently invisible house?) As usual, bring a plate for morning or afternoon tea. Study to be decided.

Saturday, 16 July. Meet from about 10.00 am for 10.30 am start at Mountain Lagoon for a walk to the Green Scrub. Park before the start of the Mtn Lagoon Firetrail before the Junction of Sams Way which forms a loop road around the Lagoon. Take packed lunch and water. No real track. We enter via an old access fire trail through private property. The owner knows our intentions and is intending to check how overgrown it is. Plan B, if access not really passable, is for us to drive to Mt Tomah Botanic Gardens. Register with Peter Hind on 96258705

Saturday, 20 August. Meet from about 10.30 am for 11 am start of The Circular Walk (Waterfall Walk) at Waterfall Creek Picnic area, Mt Wilson. Drive through Mt Wilson settlement to the T junction; turn right into the dead end road to the picnic area on your left. The relatively easy track does have steps into and out of the rainforest and is usually well maintained. Bring picnic lunch and thermos of hot drink and perhaps water as the tanks attached to the picnic sheds are not always reliable. There are pit toilets. There is a flush toilet available near the Firestation on the road in to Mt Wilson. **Phone Peter Hind on 96258705 to register for the walk. Or email petehin@bigpond.com**

Saturday, 17 September. Meet at 11am at the home of Dot Camp, 118 Manns Road, Narara. From Sydney, travel on the F3, take the Gosford exit & pass through Kariong, continue to the bottom of the hill to West Gosford. Turn **left** at the second set of traffic lights into **Manns Road**. Follow Manns Road and at the 4th set of traffic lights (about 3k) turn **right** into **Maliwa Road** and **right** again between No. 5 and 7 Maliwa Road into an unnamed private road. We plan to do a bushwalk in nearby Strickland National Park. The Plant lovers fair is also on at Kariong. Bring lunch, water, etc. and wear comfortable walking shoes. Dot will be our guide. **To register your attendance or if lost phone Dot on 43246077 or mobile 0415512511**

Saturday, 15 October. Meet at Margaret and Peter Olde's Country Residence at 140 Russell Lane, Oakdale at 11 am. Ring Margaret on 46596598 if lost on the way there.

Travel Instructions to the Olde's at Oakdale -Access via M5. Take Picton turn-off, drive approx. 10 km to Picton. Turn left at Picton into Argyle St, then first right into Barkers Lodge Road. Drive on Barkers Lodge Road to Oakdale sign (17 km. Approx.). Russell Lane is on the right at the Oakdale sign. We are on the right just past a very large dam and market garden – 140 – “Silky Oaks”.

Saturday, 20 November. Meet about 10.30 am at the home of Ian Cox, 5 Ivy Place, Kenthurst. Enjoy the opportunity to explore this excellent fern garden and extensive plantings of other attractive natives that do so well on this sandstone bush block. End of year party. **No study**, please bring a plate or dish to share. Please let Ian know what you intend bringing to try & avoid too much of the same. **Enquiries to Ian Phone 96542533 also let Ian know if you intend being there or send apologies for those not able to make it.**

December 2022 and January 2023 – No Meeting. -MERRY CHRISTMAS & HAPPY NEW YEAR

Saturday, 18 February 2023. Meet from about 10.30 am for 11 am start at the home of Peter and Margaret Hind, 41 Miller Street, Mt Druitt. Study to be decided plus some more forward planning? Phone (02) 96258705

Please bring a plate to share for morning or afternoon tea.

To help us comply with COVID19 restrictions phone the host if a house or leader if a walk before the event. Restrictions are subject to change by the NSW Govt.

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

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

All outings are subject to weather conditions being favourable.

Sunday 5 June – Manorina, D’Aguilar NP *CHANGED DESTINATION***** Meet at Manorina car parking area at 9.30 am. Coming from Brisbane on Mt Nebo Road, Manorina is 2 km past the Mt Nebo township, on the right. There are road works on the city side of Jollys Lookout so the trip might take you a few minutes longer than usual. At Manorina, we’ll explore part of the Morelia walking track (it’s rated Grade 4 but it’s a fairly easy walk, being a gentle climb on a good track) and the Atrax Circuit (750m Grade 3 circuit). There is a sea of ferns along the track which are thriving in these moist conditions and we’ll find at least 25 species. A highlight is a patch of *Blechnum maximum*. We’ll also be able to test our skills at identifying the different *Adiantum hispidulum* varieties. There are no facilities at Manorina. The nearest toilet is at Jollys Lookout and we’ll go there to have our BYO lunch.

Sun 3 July - Roma St Parkland, Brisbane. Meet at 9.30 am at the gazebo outside the Fern Gully entrance in the College Close Carpark (off Parkland Crescent, metered parking for up to four hours at \$1.50 p.h.). We’ll explore the Fern Gully, the fern understories in the Subtropical Palm Forest and Rainforest gardens, as well as the collection of *Angiopteris evecta*. There are also other plantings of ferns to admire elsewhere in the gardens. There are several places where we can enjoy our BYO picnic lunches, and for those wanting to explore further, there are 16 hectares of gardens.

Sun 7 August - Fran’s property, Tomewin NSW. Meet at 9.30 am at Fran’s property at Tomewin, NSW. This is just over 2km south of the NSW/Qld border in the Gold Coast hinterland and about 20 minutes’ drive from Exit 95 (Currumbin) on the Pacific Motorway. Fran has 26 naturally occurring ferns on her property, including three species of tree ferns. Most of the paths are flat, but it is a steep block so if you normally use poles, bring them along. BYO morning tea and lunch. Exact details of access to the property and parking arrangements will be sent in the reminder email in late July.

Sun 28 August - Wendy and Dan Johnston’s garden, Buderim. Meet at 9 Ryhope St, Buderim at 9.30 am. We recommend parking in our driveway. We have a large garden, nursery, and shade house with an extensive range of ferns. If members are keen, we could also visit our nature refuge nearby to see the natural ferns there, particularly along a creek line.

Sun 9 October - Purlingbrook Falls, Springbrook NP. Meet at 9.30 am at the Purlingbrook Falls car park at the end of Forestry Road (Gwongorella picnic area). In pursuit of more species, we’ll go further than we did when we last visited here in March 2020 and walk the 4km circuit which descends into the gorge. Followed by BYO lunch in the picnic area.

Fri 4 - Mon 7 Nov - Port Macquarie 4 day excursion

Sun 4 December - Christmas gathering. Meet at Bev and Bill's home in Chandler, from 9.30 am, for our end of year gathering and traditional “round-robin” raffle fern swap. BYO morning tea and lunch, as well as a fern(s) to swap if you can.

Please RSVP for all SEQ meetings to Helen Jeremy at heljeremy@gmail.com

Sydney Group Meeting Reports

Steve Lamont

Safari to Mt Wilson – 13 February 2022

This time we were looking for *Lastreopsis hispida* – the hairy one. We didn't find any. But we looked all day and so exhaustively that we discovered something else interesting. We (Kevin) found *Lindsaea trichomanoides*. This has apparently not been recorded for Mt Wilson before. It's a cute little fern (see the picture) that looks very unlike its cousin *Lindsaeas* (Pete says I shouldn't make genus names plural but I ignore him because it otherwise sounds odd).



Lindsaea trichomanoides

After lots of rain, Mt Wilson looks magnificent. The waterfalls were huge; the *Blechnum nudums* were prolific and beautiful; the *Microsorums* had gone mad; and the mosses had filled in every spare space.

Apart from the more-usual things, we saw: quite a few *Asplenium flaccidum*; a few *A. gracillimum*; *Tmesipteris obliqua*; an odd *Pyrrosia rupestris* that was almost all long, skinny fronds and almost no button fronds; lots of weird colourful fungi (including some phosphorescent types); lots of different (very happy) mosses; and the small patch of *Lindsaea trichomanoides*.



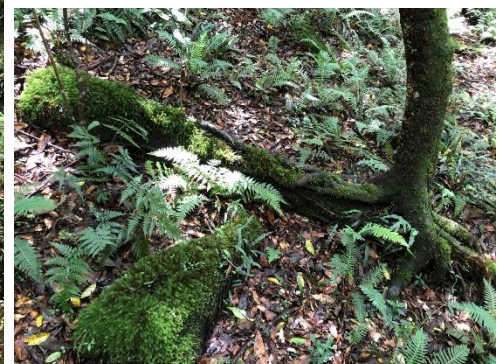
Asplenium flaccidum

Because of all the rain, things were boggy. At times, one or both feet would disappear to the shin. On one steep, slippery slope, I face-planted and was covered head-to-foot in dark mud. I stumbled down into the creek for a wash and, after an hour or so, had dried and looked as clean as when we started.

It was a great day and the mountain was beautiful. I also learned a lot from Kevin and Pete.



Pete and Kevin (we didn't coordinate the camera and the smiles well)



The usual stuff – *Blechnum nudum*, *Lastreopsis microsora*, *Microsorium scandens* and lots of moss.

Sydney FSG Meeting – February 2022

This was held at Pete Hind's place. Further highlights of Pete's place (ones we haven't featured before) include...



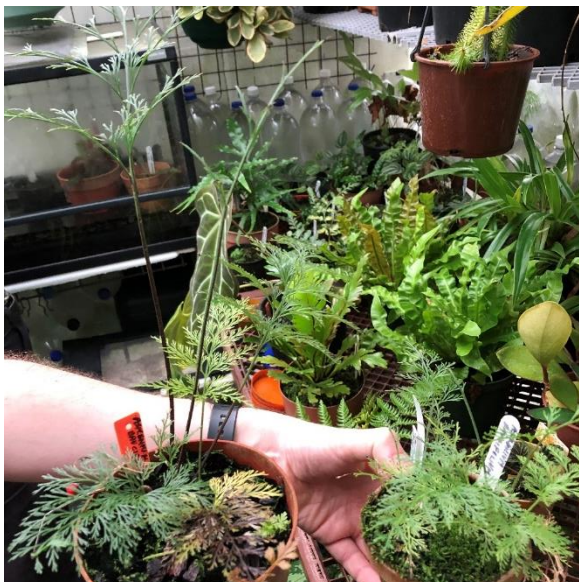
Stenoclaena palustris and *Dicksonia fibrosa* (above) and a big *Colysis ampla* (right).



Glasshouse specimens including *Goniophlebium percussum* and *Microsorium musifolium* (above) and *Asplenium daucifolium* (below). You can see the water bottles that keep temperature even. Much of the glasshouse is constructed from water containers.



Davallia repens (again in the glasshouse) and part of the *Blechnum* collection (below).



Sydney FSG Meeting – March 2022

The March meeting was held at my (Steve Lamont's) place.

Since Matt Renner visited us and spoke in March last year, I've been experimenting with epiphytes. I'm afraid I've been a bit unfaithful, and the experiments have included moss and miniature orchids as well as ferns and filmy ferns.

All the recent rain has meant that plants have become established easily and quickly.

The results have been interesting so far. But there's a long way to go and I'm not sure what will happen if we get a hot, windy summer. I'll report again after we've had some heat.



This started off as a backdrop for a few *Aspleniums* but I got a bit carried away with the moss. The *Aspleniums* are *A. flaccidum*, *A. athertonense* and *A. attenuatum*; the *Blechnum* is *penna-marina* and the filmy fern is *Leptopteris fraseri*.



This will look better when the strings come off (and when I trim the dead bits).

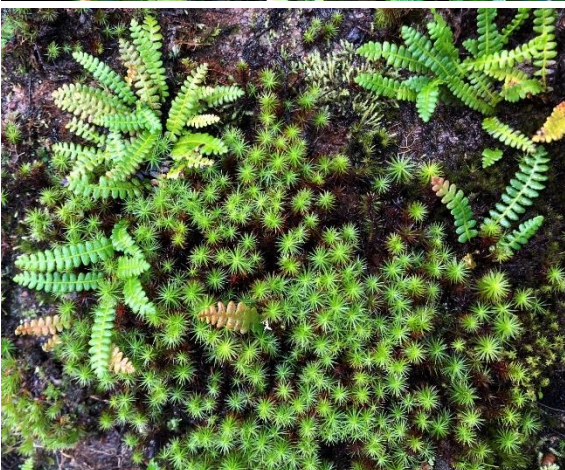
A closeup.





Here's another one and my foot.

This (above left and below) is *Asplenium polyodon*, *A. flaccidum*, *Hymenophyllum cupressiforme*, *Grammitis stenophylla*, *Sarcochilus falcatus* (orange blossom orchid), *Thuidium* (moss), *Dicranum* (?) (moss) and *Blechnum nudum*, all crammed onto one old tree-fern stump. (The tree-fern is not dead; it's just pinning.)



Blechnum penna-marina and *Dawsonia*

Sydney FSG Meeting – May 2022

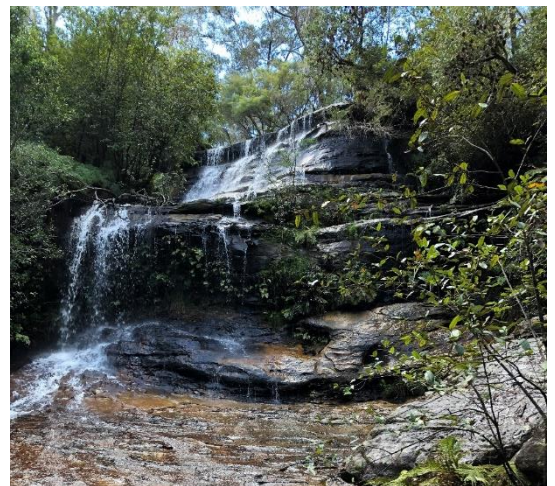
This was at the loop walk that links Adelina Falls, Junction Falls and Cataract Falls near Lawson in the Blue Mountains. It was beautiful – lots of *Blechnum* (including *cartilagineum*, *gregsonii*, *minus*, *nudum*, *patersonii* and *wattsii*), lots of *Sticherus* (including *flabellatus*, *lobatus* and *urceolatus*), *Notogrammitis billardi*, and very large *Hymenophyllum cupressiforme*...



The intrepid party – Pete Hind, Leslie Waite, Ian Cox, Gorgeous George Hardy, Kylie and Dwayne Stocks and Matt Gibson – at Federal Falls (above) and a freshwater crayfish who did not like us.

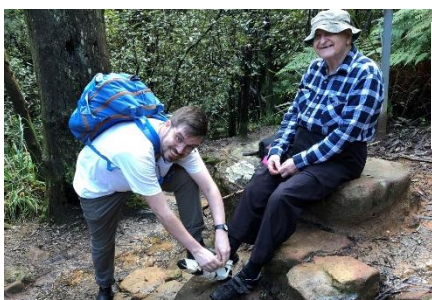


Cataract Falls



Junction Falls

Asplenium flabellifolium



Wardrobe malfunction.

South-East Queensland Meeting Reports

Springbrook Trig Excursion, 10th April 2022

Sue Dowrie

With rain predicted, Graham McDonald's warning that the road from Mudgeeraba to Springbrook was closed by landslides reminding us of the terrible impact of recent flooding, and then our calming coordinator Helen Jeremy being ill and unable to come, the Fern Study group outing from the end of Bilborough Court at the southern end of the Springbrook Plateau could have been a horror story – but Sunday 10 April was a beautiful day. Sunny with just a hint of cloud vapour.

The circuit track we followed was the access road for the vehicles servicing the communication towers standing at Mt Trillinmam (958m above sea level), past a locked gate. We could complain that because of the dense and low clouds, we had no view into NSW (the Rous Valley?) from the cliff line below the towers once we'd climbed up to them. Those clouds though - that constant cool and damp air - clearly demonstrated why the rainforest on this part of the Springbrook Plateau was closer to the temperate style than we usually see in Queensland. There was a small paddock of grass and weeds to traverse before we got to the rainforest. The access road we walked along is maintained with loads of fist sized rocks. There was, for me at least, a surprising amount of *Hibbertia scandens* growing in the margins of the rainforest, different from the usual form as it had a pointed leaf rather than the usual rounded lance shape. None were in flower. We were a bit distracted too by some more unusual tree species, and the number of trigger orchids growing in tree clefts and the weight of moss on them. We didn't see a lot of fungi, and what we did see was apparently a foreign invader, not native - bright orange buttons on a fallen log. There were no Antarctic Beech trees (*Nothofagus moorei*). Was that because the soil wasn't basalt?

Beth kept us on track, refocusing on ferns, and she compiled the list we saw (see below), including keeping track of all the new classification names. It was fun to have three different tree ferns to examine easily up close, so we were all able to feel the difference between smooth, bumpy and prickly stems. Graham showed us the fern (*Arthropteris palisotii*) new to southern Queensland that he discovered when he and Beth were checking this walk out. I confess I would have assumed it was another *Pellaea nana*, as those we saw up there looked as though they were on steroids. It didn't have good light on it as it's shaded by vegetation. Graham did well to spot it on his scouting trip with Beth! I think he's keen to go back to try for a better photograph. There is some talk of doing this walk again this spring (as an addition to the monthly programme). Date to be discussed at the August meeting - but let Helen know if you're interested in joining this rerun. It may be done on a weekday. Hopefully without a rerun of the "leech inside mouth" experience!

See below for comments by Peter Bostock on the identity and distribution of this fern...

Back to the rave excursion report now: beyond Graham's fern, we found the large sandstone blocks that closed the return part of the circuit to vehicles, but which we were able to slip between. This part of the road/route was not maintained and both sides were often deeply eroded, making for sometimes vertiginous footing (unless you opted for the slippery moss covered narrow ridge left from the middle of the original road). I certainly slowed down over this bit but it wasn't that long. The rainforest was denser and the enormous size (over your head) and beautifully grouped stream lilies were amazing - I think one of our number was so inspired by these that he raced ahead to go home and start planting something similar to grow at his place!

The noise of water got louder and louder and I think Beth was concerned we'd have to cross a stream (or return the way we'd come), but our route was luckily clear of water. The intense orange colour of the soil was really obvious in the washouts, which I assume means it was full of iron. The water loving ferns were thriving and had arranged themselves in family groups so it was possible to compare them easily - three *Diplazium* species grouped together. We toddled back to our cars and moved to the Goomoolahra Picnic Area at the end of Springbrook Road for our picnic lunch and a squiz at the waterfall lookout there. A lovely day! Thanks to all for splendid company.

Comment by Peter: *Arthropteris palisotii* is an eastern Australian fern, also known from islands to our north (PNG, Philippines) as well as from the western Pacific (across to French

Polynesia). It is fairly common in the Wet Tropics, but up to now its quite disjunct southern Australian population was believed to be confined to the NSW side of the border. I have been a sceptic regarding identification of this fern in NSW, because it seems to often (always?) occur with both *A. tenella* and *A. beckleri*, and in one population I was able to study in some detail (Bar Mountain, in the NSW Border Ranges National Park), it seems to have all the features of a hybrid between the latter two species. However, the Queensland material is a good match to herbarium material in Qld Herbarium, and agrees with key features in Flora of Australia vol. 48, and I am happy now to accept that this southern population is in fact a very disjunct population of *A. palisotii*. It would, however, be very useful to see a genetic study carried out on the species in Australia! Note too that a collection needs to be made from the Qld population for submission to Qld Herbarium, to place it in the official “present in south east Qld” domain.

Checklist supplied by Beth McDonald:

Sighting Order*	Species
8	<i>Abrodictyum caudatum</i> ?
9	<i>Alsophila leichhardtii</i>
10	<i>Arthropteris beckleri</i>
16	<i>Arthropteris palisotii</i>
12	<i>Arthropteris tenella</i>
2	<i>Asplenium australasicum</i>
14	<i>Blechnum patersonii</i>
22	<i>Christella dentata</i>
7	<i>Dendroconche scandens</i>
13	<i>Dictymia brownii</i>
20	<i>Diplazium assimile</i>
21	<i>Diplazium australe</i>

Sighting Order*	Species
19	<i>Diplazium dilatatum</i>
4	<i>Hypolepis glandulifera</i>
1	<i>Hypolepis muelleri</i>
17	<i>Lastreopsis decomposita</i>
11	<i>Parapolystichum microsorum</i>
6	<i>Pellaea nana</i>
3	<i>Platynerium bifurcatum</i>
5	<i>Pyrrosia</i> sp.
9	<i>Sphaeropteris australis</i>
15	<i>Sphaeropteris cooperi</i>
18	<i>Zealandia pustulata</i>

* Order seen during anti-clockwise walk around the loop track.

Other Articles

Drynaria rigidula ‘Whitei’ – Some Historical Facts

Rod Pattison

C.T. White collected this plant at the Glasshouse Mountains in May 1910. (see attached Appendix A).

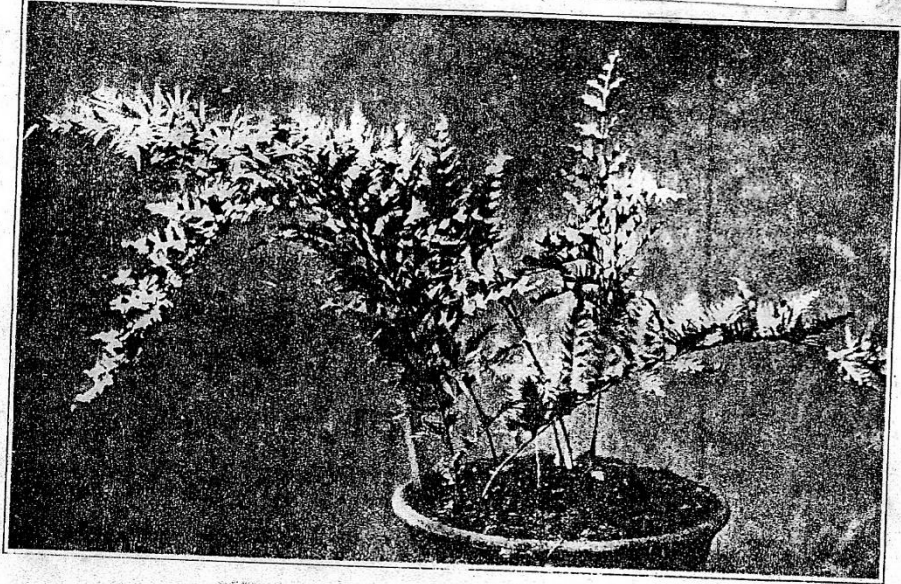
An old time resident of the Glasshouse Mountains village, Ted McCosker Snr informed me that White found the plant on Mt. Crookneck growing on the left hand side of the main southern walking track in a depression filled with ashes.

After White’s find, people from the village would occasionally take a rhizome for themselves until finally someone decided to remove all the rhizome. Consequently the fern no longer exists on the mountain.

White never passed a type specimen on to the Queensland Herbarium, so no one knows for sure if their Whitei is the true form as two later collections described as Whitei were made on Keppel Island and the Logan River. These were never submitted to the Herbarium either.

The original Whitei has the majority of its pinnae broadly triangular as detailed in the attached Appendix A. This is not a feature of the Keppel Island and Logan River forms which look more like *Drynaria rigidula* ‘Vidgenii’ (formerly written as “cv. Vidgenii”, corrected from Bailey’s “vidgeni”).

P. rigidulum, *Sw.*, var. *Whitei*, *Bail.*
Nov. var. (Plate XXII). This very distinct
and beautiful variety has somewhat the
appearance of *P. r.* var. *Vidgeni*, *Bail.*, but
the fronds have much broader and more
deeply divided leaflets. The characteristics
of the plant will readily be seen from the
photograph and drawing, reproduced herewith, taken from plants culti-
vated in the Brisbane Botanic Gardens. Collected at Glasshouse
Mountains by C. T. White (Field Naturalists' Club, Excur., May, 1910.)



EXTRACT FROM
"OLD AGRICULTURAL
JOURNAL"
DEC 1911



Polypodium rigidulum, *Sw.*, var. *Whitei*, *Bail.* n. var.
(b) A single pinna, natural size. (c) Portion of pinna enlarged to show veining.

Var. Vidgeni. There are no fronds with articulate pinnae in this form, their place is taken by a higher developed state of the greater number, of the usually sessile scarious fronds peculiar to *P. quercifolium* and *P. rigidulum*. Fronds two to three feet high, pinnate. Pinnae on rather long somewhat flattened petiolules, the margin much incised, cuneate at the base, not articulate upon the rhachis, more membranous than in the typical form and although having the same tomentum on the early growth this is soon lost and the whole plant assumes a beautiful glossy green; no sori has been noticed on any of the fronds of this form, but should it be produced on these nonarticulate fronds then *P. rigidulum* will fall to a form of *P. quercifolium*. Found in a small scrub at Oxley, Brisbane River, by J. G. Vidgen, Esq., Hon. Sec. Queensland Acclimatisation Society, in 1875. As a scenic plant this will be found eminently useful.



EXTRACT FROM
"THE FERN
WORLD
OF AUSTRALIA"
- SIRREA 1875

Polypodium rigidulum, var. *Vidgeni*
Syn. Cl. Fl. p. 718)

Doodia x Blechnum (Oceanopteris)

Dwayne Stocks, Peter Hind

In 2005 we moved onto a bush block on the South Coast of NSW. There were quite a few ferns on our block, and this is what led to us to start collecting them. Around 2007, we started operating our fern nursery as a way to expand our collection. This may possibly have grown into a bit of an obsession over the years.

Our stock plants were all kept in the nursery, and we would get plenty of volunteers popping up here and there with all the spore floating around. Anything that looked different, we would put aside. Over the years, we ended up with quite a few oddballs; things that didn't really match the species we had, but looked similar. Quite a few of these looked like *Blechnum* or *Doodia*. Of course, *Blechnum* has recently been split into different genera, but for the purposes of simplicity I'm going to gloss over this a little and use the old genus name in places so I can use a single name that encompasses all the crosses.

Skip forward a decade plus some and we had come to the conclusion that most of these oddballs were probably hybrids. Most looked a bit like *Doodia aspera*, a common native in our area. We already had 2 different forms of *Doodia maxima* which also seemed to fit in this group of oddballs. I'll get back to these later.

We'd never seen any of these oddballs in nature, despite 15 years of treks into the bush. A bit of cresting here and there, but no hybrids. And this is where the irony kicks in.

Early this year, we were doing a bit of gardening on the top of our block. There was this patch of ferns I'd mowed around for years. They were in a slight depression about 1 metre across and more than once I'd considered mowing them as well.



From a distance, they just looked like *Blechnum cartilagineum* (now *Oceanopteris cartilaginea*). But when I was walking past this patch on the way to where we were gardening, I noticed this:



Certainly not what you'd expect to see! The spore pattern clearly indicated a cross. I had a bit of a laugh then. I'd been searching for ages for a hybrid. And in the end, I had been walking past one a few times a week for years without even noticing. The patch is about 20 metres from my front door and both parents naturally occur within 10 metres of the patch.

Now, let's revisit *Doodia maxima*. There has been speculation that this is a cross as well; more specifically a cross between *Doodia aspera* and *Oceanopteris cartilaginea*. If this is in fact true, then the patch on my block is also a *Doodia maxima*, which makes at least 3 variant hybrids. One of the other two looks more like the *Doodia* though.

So, onto the technical stuff, courtesy of Peter Hind from our local Fern Study Group.

Doodia maxima = *Blechnum cartilagineum* x *Doodia aspera*

Peter Hind: "I have no doubt that plants ascribed to this taxon (*Doodia maxima*) are unrelated to each other being an assemblage of separate sterile? Clones. The result of a recurring natural hybrid between *Blechnum cartilagineum* and *Doodia aspera*, based on the observable morphological characteristics inherited from the purported parents. The plants that look closer to *D. aspera* have a harsh sandpaper texture and are more or less not dimorphic, they have pale green fronds with the lowermost pinnule pair occasionally deflexed, these last two characters are derived from *B. cartilagineum*.



The sori in all are like *Doodia aspera*, but are in a single row each side of and close to the pinnule midrib, rarely a few in a second row. Most plants are closer in appearance to *B. cartilagineum*, the fertile fronds being narrower than sterile fronds. Most Herbarium material, including C. Fraser's collection from The Warragumba

[Warragamba] River in 1825 held at Kew (a possible holotype), consist of fertile fronds only.

Herbarium specimens from Qld & NSW held at Brisbane & Sydney shows its range as being from Noosa Heads, Qld to Lawlers Ck West of Dalmeny on the South Coast of NSW.

Anecdotal reports suggest that *Doodia maxima* is sterile. Each clone needs to be tested, although if fertile you would expect to find larger unconnected colonies.

A new occurrence of this taxon has recently been discovered by Dwayne Stocks on Currowan Ck, W of Batemans Bay NSW. It consists of one patch of interconnected plants.

The sterile fronds have much wider pinnules than the fertile ones much like many plants of *B. cartilagineum* (*B. cartilagineum* & *Doodia aspera* are both abundant at this site)



This clone besides being noticeably dimorphic has quite a distinctive sori pattern, at least some of the pinnules having a second row, alternating with the ones close to the midrib coalescing as they ripen (large fronds of *D. aspera* often have two rows of sori).



The deflexed lowermost pinnule pairs on the sterile fronds are particularly noticeable, as in *B. cartilagineum* they point backwards forming an acute angle with the upper surface of the stipe.





The basal stipe scales are fairly long and resemble those of *Blechnum cartilagineum*.

I have kept to the older nomenclature as there does not appear to be a consensus about which newer classification is being accepted. NSW Plantnet includes *Doodia* in the description of *Blechnum* but not in the key, it still has *Doodia* as a separate genus. A footnote reproduced below from the same *Blechnum* description page suggests a different arrangement may be adopted.

A proposal to split *Blechnum* into 15 genera by Gaspar et al. (2016) was adopted by the global Pteridophyte Phylogeny Group. This split maintains the genus *Doodia*, which rendered *Blechnum sens. lat.* paraphyletic. NSW has yet to apply the proposed segregation of *Blechnum* to the collection. See Gaspar AL de, Almeida TE, Dittrich VAO, Smith AR, Salino A (2017) Molecular Phylogeny of the fern family Blechnaceae (Polypodiales) with a revised genus level treatment. *Cladistics* 33: 429–446. <https://doi.org/10.1111/cla.12173>, and Gaspar AL de, Dittrich VAO, Smith AR, Salino A (2016) A classification for Blechnaceae (Polypodiales; Polypodiopsida); new genera, resurrected names and combinations, *Phytotaxa* 275(3): 191–227. <https://doi.org/10.11646/phytotaxa.275.3.1>

If this latter arrangement is adopted the above become *Oceanopteris cartilaginea* x *Doodia aspera*.” (Peter D. Hind, 12 February, 2022)

And with the technical aspect out of the way, just a few thoughts to try and tie things together a little better. So we have 3 different *Doodia aspera* x *Oceanopteris cartilaginea* hybrids in our collection. How is this possible.....

So, I was having a conversation about genus jumping with a person in the US about a month ago. Now this topic was new to me at the time, but in short it is about crossing ferns from different genus that should not cross. And from all accounts, they can (they have the plants to prove it). The interesting bit lies in the technique they are using to do this and it would explain our 3 hybrids. The idea is that you sow one species first, and you sow it light (don't use much spore). 2 months later, you sow the second species heavy. Why do this you may ask. Well, as the prothalli matures, it produces the female organs. By waiting a couple of months, the first species has reached this point. Now we are surrounding these with the second species, which will be primarily male (to start with). This maximises the chance of cross fertilization between the two. And apparently, any hybrids will look most like the mother (the first species sown). If we apply this logic to our *Doodia aspera* hybrids, it means that one hybrid should look like the *Doodia* and the other like the *Oceanopteris*, which is true.

What about the third one though . So this third one comes from North Queensland where the variant *Oceanopteris cartilaginea* var. *tropicum* lives. This is a smaller plant that looks a bit different. This could explain the third hybrid.

And one final thing. On my block the *Oceanopteris cartilaginea* drop spore a month or so before the *Doodia aspera*. With the logic above, that means that any hybrid here will look like the *Oceanopteris*, which it does.