



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

Newsletter Number 154

ISSN 1837-008X DATE: May, 2023

LEADER: Steve Lamont: mobile: 0409 955 224; email: stevenl@diamondconway.com.au
TREASURER & MEMBERSHIP: Dan Johnston, 9 Ryhope St, BUDERIM, Qld 4556. Tel. 07 5445 6069,
mobile: 0429 065 894; email: ANPSAferns@bigpond.com
NEWSLETTER EDITOR: Dan Johnston, contact as above.

SAVE THE DATE

Jeff Lynne

It's on again!!!



The second...

Fern Study Group Fern Gathering!!!

Friday 4th November to Monday 7th November 2023

Seems as though last year's gathering went down fairly well so we thought let's do it again.

This year we'll be heading down south.

Not cast in concrete yet, but the itinerary will be something like Friday and Saturday in the Blue Mountains, Sunday in the Illawarra, maybe Kiama, and Monday at Verdigris Nursery near Batemans Bay. Monday will be a tour of the nursery with Kylie and Dwayne as well as a demonstration of fern propagation.

Interested? Give Jeff a call on 0412-728-626 or ferndog0112@gmail.com and let him know.

Program for Sydney Region

Peter Hind

Saturday 17 June 2023. Meet from 11am at the home of Natalie & John at 4 Laurel Street, Willoughby. Study to be decided. **Enquiries to Natalie & John on (mobile) 0438 102 666.**

Saturday 15 July 2023. Meet from about 10.30am for 11am start of walk from Neate`s Glen to Evans Lookout passing the Grand Canyon. Meet at Neate`s Glen parking area or, if full, Evans Lookout parking area & walk back along the road to the track entrance. Evans Lookout Road starts on the right-hand side of The Great Western Highway about 1.7 km before the traffic lights in Blackheath when approaching from Katoomba. We plan to descend via a well-made track about 200m to the canyon floor. (It`s actually only a small ferny creek.) About halfway, near Beauchamp Falls there is a view into the Grose Valley, a good spot for a rest & snack or lunch, before the ascent to Evans Lookout. Then walk back along the road to our cars along Evans Lookout Road. We can either walk back to our cars or perhaps arrange to park one of them at the Evans Lookout parking area. Perhaps carry lunch or eat back at the cars. As with all bushwalks, wear sensible footwear and clothing. Check the weather forecast as it can be cold at this altitude. Please **Phone Peter Hind on 02 9625 8705 to register for the walk or email petehin@bigpond.com**

Saturday 19 Aug 2023. Meet from about 10.30–11am at The Cathedral of Ferns, Mt Wilson in the Blue Mountains. The road on Mt Wilson is clearly signposted to the Cathedral of Ferns. Turn left at the T junction after passing through the Mt Wilson village (No shops). We plan to do an easy walk or two near the picnic area. Council toilets are present at the edge of the playing field. We should meet near these at the start of the cleared grassy area. A short walk in the rainforest is available the other side of the main road. Another trail is near to Cathedral Creek, below the rainforest area.

Saturday 16 Sept 2023. 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 first set of traffic lights into **Manns Road**. Follow Manns Road & at the 4th set of traffic lights (about 3k) turn **right** into **Maliwa Road** & **right** again between No. 5 & 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 07 4324 6077 or mobile 0415 512 511.**

Saturday 21 October 2023. To be advised – **contact Steve Lamont on 040 99 55 22 4 or Peter Hind on 02 9625 8705 closer to the date**

Saturday 18 Nov 2023. Meet about 10.30am 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 02 9654 2533. Also let Ian know if you intend being there or send apologies for those not able to make it.**

December 2023 and January 2024 – No Meetings, - MERRY CHRISTMAS & HAPPY NEW YEAR

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.

Program for South-east Queensland Region

Helen Jeremy

Sunday 4 June – Brisbane Botanic Gardens Mt Coot-tha. Meet at 9.30 am on the front porch of the Visitor Information Centre. We'll decide on our itinerary depending on the group's preferences on the day. Options include exploring the Australian Rainforest section along Mt Coot-tha Road, touring the Fern House, viewing fern plantings in the QLD Conservation area, and walking up to the Subtropical Rainforest section beyond the lookout and Bunya Forest.

For those who fancy a cuppa beforehand, meet at the Gardens Cafe from 8.45 am. BYO lunch or pick something up from the cafe.

Saturday 8 July - Box Forest Track, Cunninghams Gap, Main Range National Park (Note this is a Saturday excursion). Meet at 9.30 am at the West Gap Creek picnic area in the Cunninghams Gap section of [Main Range National Park](#), about 120km south-west of Brisbane. The picnic area is on the Cunningham Highway, 1.3km from the western park entrance and 3.1km from the eastern park entrance. Over morning tea, we will organise a car shuffle to the Summit and then walk the Box Forest Track downhill back to the picnic area for lunch. The track is Grade 3 and 2.5 km long.

Sunday 6 August – Baroon Pocket Dam, Kondalilla National Park. Meet at 9.30 am at the picnic area at the bottom of Narrows Road, Montville. Head north on the Maleny-Montville Road and, just before Montville township, turn left into Western Avenue, then after about 3km turn left into Narrows Road which descends steeply for about 2km to the dam. At the bottom, turn left to the picnic area. We will walk some way along the start of the Sunshine Coast Hinterland Great Walk from Baroon Pocket Dam, likely to the Lookout, returning by the same route.

Sunday 10 September - Korrumbyn Creek, Mt Warning NSW. Meet at 9.30 am at Wollumbin Palms Retreat, 112 Mt Warning Road, Mt Warning (just past Mavis' Kitchen). Park at reception. We'll be visiting this 65-acre private property along Korrumbyn Creek to discover what ferns are in residence. We'll plan our walk according to the weather on the day. There is a creek crossing which is a causeway that we'll need to cross, either barefoot or by car. There might be some steep terrain that we may or may not venture over, so you might like to bring poles if you need them.

BYO morning tea and lunch to have at the rotunda on site. You need to BYO enough drinking water for the day. For more details, please contact Michelle McLean 0414 920336.

Sunday 8 October - Study topic “Propagating ferns from spore” at Bonni Yee’s residence, Nerang. Meet at 9.30 am at 158 Country Crescent, Nerang. Drive up the 300m driveway and park at the top. We'll discuss some different methods of propagating ferns from spore and have a practical workshop. Please bring along any spore you are able to collect from your ferns at home, as well as any favourite media or equipment you might have. If you have some experience in spore propagation it would be great if you could demonstrate your method, so please bring along the materials you need.

Bring morning tea to share if you're able. BYO lunch. Tea and coffee provided.

Friday 3 to Monday 6 November - Trip to NSW. See Jeff's notice earlier in newsletter.

Sunday 3 December - Christmas gathering. Meet at 9.30 am at Helen's home at 71 Stuartholme Road, Bardon, for our end of year gathering and traditional “round-robin” raffle fern swap. Please bring a fern(s) to swap if you can.

Bring morning tea to share if you can. BYO lunch. Tea and coffee provided.

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

South-East Queensland Meeting Reports

Maximising the Morelia, D'Aguilar National Park, 19/3/2023 Brendan McIntyre

The three year La Niña has left the Manorina at Mt Nebo looking verdant and lush. Our initial steps were slow, thoughtful and imbued with a sense of wonder. The unspoken question was: How was the *Blechnum maximum* colony faring?

The group's croziers didn't have to unfurl for long before the *Pyrrosia* species caught their attention. *Pyrrosia confluens* and *Pyrrosia rupestris*: where was the Peter Bostock fern ID app when you needed one? *P. confluens*, also known by its apt common name, horseshoe fern, seems to offer up its sori arrangement more readily, forming a neat horseshoe shape - apex rounded. *P. rupestris*, on the other hand, plays hard-to-get and only reveals its sori when the fernies (Fern Study Group members) are not looking.

Next in line, and remaining within the Polypodiaceae family, but at the other end of the biomass spectrum, were the bulky *Platyserium bifurcatum* and *P. superbum*. They lend the Manorina entrance a rococo style, lavish and theatrical. In a time when the floral emblem of the State's capital is up for grabs, you could do a lot worse than the ostentatious *P. superbum*. After a good bit of neck craning through the tree tops our sights returned to ground level.

Lapping at our feet was an expanse of *Blechnum neohollandicum* and *Hypolepis muelleri*. *B. neohollandicum* brittle and dry to touch and *H. muelleri* hairy and unyielding. Helen prompted us to closely inspect the arrangement of pinnae at the base of the stipes on the *B. neohollandicum* as a distinguishing feature when compared with the mythical *Blechnum maximum*. Venturing beyond the border of the car park the group observed a small colony of *Adiantum formosum* and *Blechnum cartilagineum* and the first of many *Lastreopsis decomposita* stands, Wendy pointing out the scabby bullate scales along rachises, which set it apart from other Dryopteridaceae.

Next in line was a colony of *Nephrolepis cordifolia*, known for being overly boisterous and prone to displacing others. It wasn't long after, that Dan found *Adiantum hispidulum* var. *whitei* nestling at the side of the track. Dan expertly demonstrated what made its morphology distinct from *Adiantum hispidulum* var. *hispidulum*,



Adiantum hispidulum var. *whitei*

displaying the pinnae along the primary rachis which are at varying degrees of development divided pinnately. Fortunately for us, a small colony of *A. hispidulum* var. *hispidulum* was a short distance away allowing for compare and contrast. Due to favourable light, we were also able to get close up and personal to the white hairs present on the young *A. hispidulum* var. *hispidulum* fronds.

The ever reliable *Christella dentata* (Binung) and *Pteris tremula* emerged a short distance away, while the *Blechnum spinulosum* hid itself in a burnt out stag unable to avoid Yve's talent for discerning patterns in dark places. With every step, the anticipation of viewing the *Blechnum maximum* grew. *Adiantum atroviride* started to send up sprays of soft fronds along the edge of the path drawing us further into the heart of the Manorina.



Blechnum maximum

Eventually myth turned into reality and a healthy colony of *Blechnum maximum* spread before us on either side of the track. Our eyes focussed on the arrangement of the pinnae toward the base of the stipe to confirm its identity. As far as size goes, its fronds are significantly longer (<88cm) than your average *B. neohollandicum* and our lower legs became obscured by the large arching fronds as we hopped up and down the slope, a slight sense of Pteridomania creeping in. Tape measures in hand, the fernies went to work capturing data of the *B. maximum* colony on the Morelia track:

We set off at approx. 9:30 and arrived at 10:55 at the *B. maximum* colony
 Approx. GPS coordinates: -27.38281, 152.78040
 Length of colony: 30m
 Depth of colony either side of the track, right: 15m, left: 3m



Blechnum maximum



Blechnum neohollandicum

From the beginning the group had resigned itself to not completing the Morelia track, but we started to become mindful of time and knew there were more gems to be had. Light was struggling to penetrate the dense rainforest canopy and a couple of mystery ferns were stealing our collective attention: *Calochlaena dubia* and *Parapolystichum microsorum* being the offenders. As it got even darker we had to take our eyes off the ground, as epiphytes entered the fray: *Davallia pyxidata* had taken up residence in the broken crown of a forest giant and *Microsorium scandens* and *Arthropteris tenella* were negotiating their way skywards among the piccabeens and cabbage tree palms. The sole tree fern species to grace us with its presence was the little prickly *Sphaeropteris australis*.

As the light began to enter the forest again, Kerry identified an ancient *Cissus antarctica* snaking its way into the canopy. You could sense Kerry's relief the veteran was still standing, as only a few metres away stately trees on both sides of the track had been torn asunder. With the destruction the light poured in and the associated opportunists were popping up in numbers. Within the clearing, the group observed two species, which to the untrained eye, can be easily confused. Shiny fronds of similar size and a typical shield fern arrangement of pinnae, *Lastreopsis marginans* and *Arachniodes aristata* stood side by side like they were exhibits prepared earlier. Lessons learned, our merry troupe returned.

If you are seeking to maximise your time in Brisbane looking for indigenous ferns, then do yourself a favour and visit the Morelia track in the Manorina, D'Aguilar National Park. It won't disappoint.

Members present: Wendy and Dan Johnston, Helen Jeremy, Bev Weir, Kerry Williams, Phil Murray, Yve and Brendan McIntyre

ed. Brendan has again produced an excellent very detailed report, available at:

<https://drive.google.com/file/d/1VBVBEJeny-XHtRfoC32PICVA6Xh54XSi/view?usp=sharing>

MacDonald Rainforest Circuit, Tamborine National Park – 2/4/2023

Susan Dowrie

The concept for this outing was new and it was great to see such a big turnout of relatively new fern fiends. And, that they were all willing to stake their dignity on their in-situ fern identification skills! This was because there had been a Zoom meeting on identifying the ferns on the most recent list for the very track we were to tread - the MacDonald Rainforest Circuit, part of Tamborine National Park (no relation to Graham and Beth). The Zoom meeting on the evening of the Wednesday before (29 March) had taken us all through the identification features of all the ferns we were expected to see,

with beautiful ID slides and pictures put together by Helen and lots more detail and tricks given by Peter Bostock in his commentary. So on the morning of 2 April, everyone was keen to put their new skills to the test.

The checklists for each fern were worked through as we jostled for front row positions before each new fern we found and the success rate was high - most impressive. It really does help to have the information freshly installed in the old brain box ...! AND we found another 10 ferns not on the original list. The idea of having a Zoom on IDing the ferns we were likely to see just before the walk is a good one that I hope we might try again another year. Funniest part of the day was that we could not find any *Pyrrosia (confluens or rupestris)* - not even once back in the carpark. That has to be a first for a SEQ fern outing, doesn't it? Updated Fern List below in the order we saw them.

Blechnum cartilagineum, *Adiantum hispidulum*, *Platycterium superbum*, *Lastreopsis marginans*, *Blechnum neohollandicum (Doodia aspera)*, *Adiantum formosum*, *Arthropteris tenella*, *Asplenium australasicum*, *Parapolystichum microsorum (Lastreopsis microsora)*, *Diplazium assimile*, *Dendroconche scandens (Microsorium scandens)*, *Platycterium bifurcatum*, *Asplenium polyodon*, *Davallia pyxidata*, *Adiantum silvaticum*, *Sphaeropteris cooperi (Cyathea cooperi)*, *Christella dentata*, *Sphaeropteris australis (Cyathea leichhardtiana)*, *Adiantum diaphanum*, *Parapolystichum munitum (Lastreopsis munita)*, *Pteris tremula*

McDonald Residence “Growing ferns at home” – 7 May 2023

Helen Jeremy

Nine members were welcomed by Beth and Graham to view their many ferns and hear about how they are cared for. Those of us who had visited the McDonald's garden in the past have admired their collection of thriving ferns, so we were keen to learn exactly how they achieve such fine results.

The ferns in their feature fern garden were originally planted in the ground, but competition from the nearby *Stockwellia quadrifida* resulted in the ferns going backwards, so the McDonalds moved the ferns into pots. Not only has this allowed the ferns to flourish according to their individual needs, it has also enabled them to be presented in a very attractive fashion, with pots placed at different heights on a range of blocks or bricks. It also lets the McDonalds easily move the ferns under cover when there is constant rain.

We particularly admired the *Dicranopteris linearis*, growing up a tripod frame; the *Asplenium simplicifrons* with its occasional not-so-simple divided frond ends; and the attractive slender tree fern *Alsophila robertsiana (Cyathea robertsiana)*.

All the pots are plastic. Pots are matched to a fern's growing habit, e.g., *Adiantum silvaticum* in a large diameter, shallow pot; tree ferns in deeper pots; and climbers in pots with tripods and orchid clips to secure climbing growth.

The potting media is also matched to what you find in nature. The standard mix used is 50% premium potting mix with the other 50% comprising coconut peat, perlite and broken bark/charcoal/composted bark. For ferns requiring a freer soil, 10% washed river sand is used. Epiphytes are given a more open mixture like a commercial orchid mix. Creekside ferns have lots more coconut peat in their mix.

When ferns are potted up or repotted, they are given 1 tablespoon of slow-release fertiliser like Osmocote. On the day after potting, and then every few weeks, they are given a dose of Seasol and trace elements (Seasol diluted to the colour of dark tea



Naturally occurring epiphytes



Graham's complex *Asplenium simplicifrons*

and 1 teaspoon of soluble plant food like Thrive mixed together in an old sauce bottle). If a fern loses vigour, showing slowing growth and/or being pot bound, it is repotted. This usually provides the opportunity to divide the fern.

Graham shared some tips for individual species of ferns:

Adiantum atroviride – successfully spreads with a bit of water now and then. Their patch is 40 years old.

Adiantum caudatum – does very well in a pot.

Adiantum hispidulum – tends to get overgrown. Divide and repot.

Amblovenatum opulentum – grows well in the ground

Asplenium simplicifrons – has a very short rhizome so divide it when there are two crowns.

Blechnum camfieldii – is often attacked by nematodes. Cut off and dispose of damaged fronds. Water at soil level, not the foliage.

Blechnum patersonii – for pink growth, choose a shady spot and regularly water well.

Blechnum watsii – very difficult to grow in the ground, but is doing very well in a pot.

Christella subpubescens – water this fern from NQ very day and keep a saucer under the pot.

Davallia repens (*Humata repens*) – is very slow to grow.

Drynaria rigidula – excellent in hanging baskets. Attach the basket with a turnbuckle so you can regularly rotate it. Use an open mix containing chunks of coconut peat and charcoal, 1-2 cm in size, and perlite, as well as fine peat to hold water.

Gleichenia dicarpa – easy to establish in a self-watering pot.

Goniophlebium subauriculatum – easy to grow in a hanging basket.

Macrothelypteris torresiana – can be propagated from a piece of rhizome which has a bud of a frond.

Microsorium scolopendrium – Grows sideways naturally in NQ so tie up to a frame. Water every day and keep a saucer under the pot. Hates temperatures below 15°.

Pellaea nana – very hardy and easy to divide. Cut in half.

Sticherus species – resent disturbance and fail when divided, so find very small new plants in clay banks at the side of roads and take them home in a plastic bag. Pot up and put under mist, or cover pot with a plastic bag over a frame, for a few weeks.

Todea barbara – the 40-year-old specimen is hosed 1-2 times a week.

A highlight at the edge of the courtyard is a tree which is home to *Platynerium superbum*, *Platynerium bifurcatum* and *Pyrrosia confluens*, all of which have occurred naturally.

There are two *Angiopteris evecta* growing in the nursery shadehouse. Planted in the 1990s, they are watered three times a day and the larger one now has 4.5m fronds which have necessitated removal of some of the shadecloth roof. Graham has cut off an auricle and planted it in a box. It has taken 2.5 years to form a new plant. As one would expect, *Christella dentata* is weedy in the watered shadehouse, but *Deparia petersonii* also comes up readily.

In open garden beds around the house:

- *Hypolepis muelleri* has spread to a large patch in six months, being watered 1-2 times per week.



Feature garden of ferns in pots



L to R: *Christella subpubescens* sitting in a saucer; *Amblovenatum opulentum* growing in the ground; *Microsorium scolopendrium* climbing a tripod frame

- *Lastreopsis decomposita* has been planted in a spot with too much sun and nearly died. Graham has sheltered it with small branches and watered it with Seasol and trace elements, and it is now faring much better.
- *Macrothelypteris torresiana* is taking over a section to the detriment of other ferns. A *Diplazium australe* had been struggling for light under it and has died.

We then walked through their 40-year-old planted rainforest, which has a collection of ferns which can survive the tougher conditions (*Adiantum hispidulum*, *Blechnum neohollandicum*, *Microsorium punctatum*, *Pellaea nana* and *Blechnum cartilagineum*). Indeed, these ferns were looking a bit jaded from the dry spell we have had, but we could see they would bounce back once rain came.

Some interesting observations about ferns growing in this natural setting:

- After a *Platyserium superbum* died, an *Ophioglossum pendulum* emerged from the spent plant.
- The 35-year-old patch of *Drynaria sparsisora* has grown from one little piece and is not watered. The rhizome is huge and is just under the ground.
- *Adiantum formosum* was planted in one of the wettest spots which receives overflow from the pond. It has subsequently turned out to be a spot which becomes dry, but this species has very deep rhizomes and recovers when it rains.
- Leaping flea beetles have been eating circular holes in the fronds of *Drynaria* and *Microsorium* plants.
- *Acrostichum speciosum* has been planted in a spot where rain running off the tennis court pools, but is struggling with the recent dry weather.
- Graham has constructed a semi-circle of rocks and soil below a *Calochlaena dubia* on a small slope to replicate its natural growing conditions at the bottom of banks.



The crew dwarfed by the *Angiopteris evecta*

It was a most enjoyable and informative meeting. Thank you, Graham and Beth, for sharing your knowledge and experiences. I returned home inspired to always think about replicating the conditions a fern would naturally grow in, and to take better care of my collection of ferns in pots!

Other Articles

Revision of Thelypteridaceae and resulting name changes for Australian ferns

Peter Bostock

Recent systematic work on the fern family Thelypteridaceae in a number of scientific papers cited below, has resulted in a new-look generic system for this widespread family. New generic names have been proposed for a significant number of species in the family, including many that occur in Australia. A recent publication (see Almeida *et al.* 2023, below) in the Queensland Herbarium journal *Austrobaileya*, involving local and overseas authors, the latter from USA and Brazil, has finally provided a systematic position and name to a fern that I first collected in 1993 with colleagues from Queensland Herbarium and noted fern enthusiast Rob Jago (Cairns).

This fern was assumed at the time to be a robust form of *Pronephrium asperum*, but recent work has shown that it is an intergeneric hybrid between *P. asperum* (now known as *Abacopteris aspera*)

and the uncommon and somewhat overlooked North Queensland fern, *Christella queenslandica* (recently called *Amblovenatum queenslandicum*, but published originally as *Amphineuron queenslandicum*!). The hybrid has been named \times *Abacopterella altifrons*. It can be distinguished from *Abacopteris aspera* by the greater number of pinna pairs (10–20 pairs in \times *Abacopterella altifrons* vs. up to eight pairs in *Abacopteris aspera*), the incised (slightly lobed) pinna margins (vs. entire to very slightly crenate in *Abacopteris aspera*), and the pinnatifid apical pinna (vs. conform i.e. similar to lateral pinnae, in *Abacopteris aspera*). See Almeida *et al.* 2023 for drawings and colour photos.

As a result of the research, a number of new generic names have been added to the family with \times *Abacopterella*, *Grypothrix*, *Pakau*, *Reholtumia* and *Strophocaulon* being those that directly affect Australian (and New Zealand) ferns.

The following list is derived from Almeida *et al.* 2023, and follows on from the family-wide revision by Susan Fawcett & Alan R. Smith (Fawcett & Smith 2022) cited below. By the way, papers cited below are available as Acrobat (pdf) files from the web sites noted in References.

Australian taxa in the family Thelypteridaceae (after Almeida *et al.* 2023).

Macrothelypteris polypodioides

Macrothelypteris torresiana

\times **Abacopterella altifrons** [*Abacopteris aspera* \times *Christella queenslandica*]

Abacopteris aspera [formerly *Pronephrium asperum*]

Amblovenatum immersum [formerly *Amphineuron immersum*]

Amblovenatum opulentum [formerly *Amphineuron opulentum*]

Amblovenatum terminans [formerly *Amphineuron terminans*]

Amblovenatum tildeniae [This is a rare putative hybrid, based work reported in Bloesch *et al.* 2022, with possible parentage *Christella subpubescens* \times *Christella parasitica*]

Ampelopteris prolifera

Chingia australis

Christella arida

Christella dentata

Christella hispidula

Christella parasitica

Christella queenslandica [formerly *Amblovenatum queenslandicum*, based on *Amphineuron queenslandicum*]

Christella subpubescens

Cyclosorus interruptus

Grypothrix triphylla [formerly *Pronephrium triphyllum*]

Pakau pennigera [formerly *Pneumatopteris pennigera*]

Plesioneuron tuberculatum

Reholtumia costata [formerly *Pneumatopteris costata*]

Reholtumia sogerensis [formerly *Pneumatopteris sogerensis*]

Reholtumia truncata [formerly *Pneumatopteris truncata*] (this fern is restricted to Christmas Island in Australia)

Sphaerostephanos heterocarpos – Note correction of spelling of *heterocarpus* to *heterocarpos*. The International Code of Nomenclature (Turland *et al.* 2018), Article 23.5, dictates that a name published with Greek adjectival ending *-os* or *-on* must retain that Greek ending and not be corrected to the Latin equivalent *-us*, *-a*, or *-um* as R.E. Holttum did, when he published the new combination *Sphaerostephanos heterocarpus*, based on *Aspidium heterocarpon*.

Strophocaulon unitum [formerly *Sphaerostephanos unitus* var. *unitus*]

Thelypteris confluens

References:

- Almeida, T.E., Smith, A.R., Bostock, P.D., Bloesch, Z. & Field, A.R. (2023). \times *Abacopterella altifrons* (Thelypteridaceae), a new intergeneric fern hybrid from Australia. *Austrobaileya* 13: 41–50. See https://www.qld.gov.au/_data/assets/pdf_file/0022/381082/abacopterella-altifrons-austrobaileya-v13-41-50.pdf.
- Bloesch Z., Nauheimer, L., Almeida, T.E., Crayn, D. & Field, A.R. (2022). HybPhaser identifies hybrid evolution in Australian thelypterid ferns. *Molecular Phylogenetics and Evolution* 173: article 107526. Full text available via <https://www.researchgate.net>.
- Fawcett, S. & Smith, A.R. (2021). *A Generic Classification of the Thelypteridaceae*. *Sida, Botanical Miscellany* 59. BRIT Press, Botanic Garden | Botanical Research Institute of Texas, U.S.A.: Fort Worth. Full text available as pdf file from <https://www.researchgate.net>.
- Turland, N. J., Wiersema, J. H., Barrie, F. R., Greuter, W., Hawksworth, D. L., Herendeen, P. S., Knapp, S., Kusber, W.-H., Li, D.-Z., Marhold, K., May, T. W., McNeill, J., Monro, A. M., Prado, J., Price, M. J. & Smith, G. F. (eds.) 2018: *International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017*. Regnum Vegetabile 159. Glashütten: Koeltz Botanical Books. Available online at <https://www.iapt-taxon.org/nomen/main.php>.



A lateral primary pinna of \times *Abacopterella altifrons*, believed to be from the original 1993 Wet Tropics collection. Photographed in Rod Pattison's garden in 2016. Note the fairly deep lobing.