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

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NEWSLETTER EDITOR: Peter Bostock, contact as above.

Program for South-east Queensland Region

Peter Bostock/Dan Johnston

November, 2016. Meet at the home of Wendy and Dan Johnston at 9 Ryhope St, Buderim. Subject: ***to be advised***. In the Sunshine Coast section of the Brisbane UBD Street Directory Map 78 Ref F2. Ryhope Street is T shaped and our home is on the left at the end of the left branch of the T (This was formerly 57 Amaroo Drive, disconnected from the main part of Amaroo Drive, and some maps and car GPS devices still think that is the address).

December, 2016. Christmas Party, Sunday 4th. Meet at Rod Pattison's residence, 447 Miles Platting Road, Rochedale at 9:30am. Bring food and a fern or two for the round-robin raffle, if you have one (or more) to spare.

February, 2017. Meet 9:30 am on Sunday 5th at Sue Dowrie's residence, 67 York St, Coorparoo. Topic to be decided, although the usual planning for future meetings and excursions is on the agenda!

Program for the Sydney Region

Peter Hind

December 2015 and January 2016 – No Meetings – MERRY CHRISTMAS.

Saturday 18 February 2017, Meet from about 10.30 am for 11 am start at the home of Peter and Margret Hind, 41 Miller Street, Mt Druitt. Study to be decided plus some more forward planning? Phone 02 9625 8705. Please bring a plate to share for morning or afternoon tea.

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.

Excursion Reports

Sydney Area Fern Study Meeting, 17 September, 2016

Dot Camp

Our October outing was to Sylvan Grove Native Garden at Picnic Point. This park of approx. 4 acres is situated in a lovely bush setting featuring some 1,500 species of native plants. We were treated to a feast of ferns with many very large *Asplenium australasicum*, *Platycerium superbum*, *Platycerium bifurcatum* and other ferns as listed below. We also enjoyed the many flowering native plants & orchids including large flowering clumps of *Dendrobium speciosum* perched on rocks throughout the garden.

Adiantum formosum
Adiantum aethiopicum
Adiantum hispidulum var. *hispidulum*
Adiantum hispidulum var. *hypoglaucum*
Angiopteris evecta
Asplenium × *lucrosum*
Asplenium australasicum
Asplenium simplicifrons
Asplenium flabellifolium
Asplenium harmanii
Blechnum cartilagineum
Blechnum wattsii
Blechnum nudum
Blechnum minus
Blechnum patersonii
Cyathea australis
Cyathea cooperi
Calochlaena dubia
Davallia pyxidata
Doodia aspera
Doodia caudata
Doodia media
Deparia petersenii subsp. *congrua*
Dicksonia antarctica
Drynaria rigidula
Goniophlebium subauriculatum 'Knightiae'
Histiopteris incisa
Hypolepis glandulifera
Hypolepis muelleri
Lastreopsis acuminata
Lastreopsis marginans
Lastreopsis microsora
Microsorum punctatum
Microsorum scandens
Microsorum pustulatum
Nephrolepis cordifolia
Nephrolepis exaltata ? (not Australian)
Pellaea falcata
Pellaea viridis (not Australian)
Platycerium bifurcatum
Platycerium superbum
Platycerium veitchii
Polypodium aureum, also known as *Phlebodium aureum* (not Australian)
Polystichum australiense
Psilotum nudum
Pteridium esculentum
Pteris umbrosa
Pteris tremula
Pteris vittata
Pyrrosia confluens
Pyrrosia rupestris
Tectaria confluens
Todea barbara

Excursion report for 'Sagrado', Mt Mellum, 3 July 2016

Claire Shackel

A small number of Fern Study Group members met at 'Sagrado', the property of Ian and Chrissie McMaster situated on the foothills of Mt Mellum west of Landsborough. Ian, the current President of SGAP (Qld Region) Inc., has an extensive area of basalt-derived soils overlaying sandstone. This has resulted in six or more vegetation habitats, ranging from sandstone cliffs to open forest to moist rainforest. The McMasters have done a lot of work clearing lantana and revegetating major areas. They had an existing fern list of some 39 species and we did not see them all, but added another four. The group only traversed a relatively small part of the property, close to the house.

Morning tea and lunch were eaten while admiring the beautiful view of the Glass House Mountains. We had to pull ourselves away from the lovely surroundings and look for ferns. There were magnificent specimens of *Platycerium superbum* and *P. bifurcatum* on the trees on the drive.

While walking around the area, the following ferns were seen: *Adiantum formosum*, *A. hispidulum* var. *hispidulum*, *A. hispidulum* var. *hypoglaucum*, *Arachniodes aristata*, *Asplenium australasicum*, *Blechnum cartilagineum*, *Calochlaena dubia*, *Christella dentata*, *C. parasitica*, *Cyathea cooperi*, *Doodia aspera*, *D. heterophylla*, *Lastreopsis marginans*, *L. microsora*, *L. munita*, *Nephrolepis cordifolia*, *Pellaea paradoxa*, *Pteridium esculentum*, *Pteris tremula*, *P. umbrosa* and *Pyrrosia confluens* var. *confluens*. We were able to add to the list of ferns on the property, with sightings of *Hypolepis glandulifera*, *Pyrrosia rupestris*, *Psilotum nudum* and *Ophioglossum pendulum*, the latter two forming pendulous curtains underneath staghorn ferns in the rainforest canopy (see image on opposite page).

On a sandstone roadway cutting, *Dicranopteris linearis*, *Lindsaea microphylla* and *Lycopodiella cernua* were growing in harsh, almost impossible looking conditions. A short drive across the property to a grassy open spur bordered by low sandstone cliffs provided habitat for *Drynaria rigidula.* It was disappointing that more members were not able to enjoy the day.

Leader's note: I was very pleased to see Ian's comments about the Fern Study Group visit in his President's Notes in the September 2016 issue of Native Plants Queensland. I have to say the benefit of such 'field trips' goes both ways! We in the study group rely on visits to private properties for quite a few of our excursions; you might say we have, over the years, visited and often revisited most of the accessible (at least to the older members) National Park and State Forest walks, so it is refreshing to find somewhere new to visit. Of course we also get a great deal of satisfaction in finding new records and sometimes even new species!

Ferns at 'Wynne', Tomewin, New South Wales, 7th Aug. 2016

Claire Shackel

Pyrrosia rupestris climbing up tree trunk

Fran Middleton's property, 'Wynne', at Tomewin in northern New South Wales was the venue for our August meeting. It was a pleasant drive along Currumbin Creek and then a mountain climb over the border. Fran's house was up a steep drive with a magnificent view of Mt Warning. At the entry to the house was an impressive bank of *Sticherus flabellatus*. On peering under these fronds, *Blechnum patersonii, Adiantum hispidulum* and numerous baby tree ferns were seen growing. *Cyathea cooperi* and *C. leichhardtiana* were common and a few specimens of *C. australis* were also seen. Large plants of *Platycerium superbum* were common, nearly covering some trees but only two *P. bifurcatum* plants were seen. Most of the ferns on the list, with the exception of *Angiopteris evecta* and *Dictymia brownii*, have volunteered after the lantana was cleared. This has been ongoing over the last fourteen years and it would be interesting to return in say five years to see what else had moved in from the surrounding area.

Adiantum hispidulum var. *hispidulum*
Adiantum hispidulum var. *hypoglaucum*
Angiopteris evecta
Arachniodes aristata
Asplenium australasicum
Blechnum patersonii
Calochlaena dubia
Christella dentata
Cyathea australis
Cyathea cooperi
Cyathea leichhardtiana
Davallia pyxidata
Dictymia brownii
Diplazium dilatatum
Histiopteris incisa
Hypolepis glandulifera
Hypolepis muelleri
Lycopodiella cernua
Nephrolepis cordifolia
**Pityrogramma calomelanos* var. *austroamericana*
Platycerium bifurcatum
Platycerium superbum
Pteris tremula
Pteridium esculentum
Pyrrosia confluens var. *confluens*
Pyrrosia rupestris
Sticherus flabellatus var. *flabellatum*

(* indicates a naturalised species)

Bracken, *Pteridium esculentum*, showing matted hairs under the pinnae and the marginal indusium.

Crozier on *Histiopteris incisa*.

Other Articles

The Australian Fern Weevil

Kylie Stocks

In July, I attended the 125th Anniversary of the BPS (British Pteridological Society) in Cumbria, UK. Since then I have been included in the emails of their 'Cultivar Group' which looks at all the fancy cultivars that individuals are growing (or have discovered) around the UK.

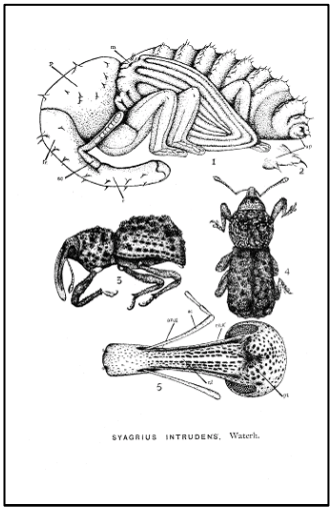
Recently, a member of the group has had an outbreak of a nasty pest they describe as the 'Australian Fern Weevil'. This pest is also in evidence in wild plants, as we discovered during some of our field trips. The weevil eats the fronds and the larvae eat their way through the leaf stalks and rhizomes of the plants. The result is devastating damage and most often results in plant death.

As I am Australian (obviously!) I was contacted directly, and asked for information on how to deal with this nasty pest. I found this request rather mysterious, as I have never encountered it in the nursery.

So I did some research, and discovered that the pest, *Syagrius intrudens*, is indeed an Australian species, discovered by Waterhouse in 1903. For those of you who haven't seen it either, it looks like this.

The image to the left is from Mark Telfer's website from May 2012.

The article also states that "*Syagrius intrudens* is definitely a rare species, previously known from six sites: Co. Dublin (Dublin Botanical Gardens), West Cornwall (Tregithy Woods area), East Sussex (Leonard's Lee), East Kent (Hothfield Common), Glamorgan (Bridgend) and Guernsey (Fermain Bay). As a flightless species, it must be getting around with the help of gardeners moving fern plants around."



The pest is obviously becoming less rare, given our discovery of it in the wild. To the right are the original drawings by Waterhouse. Hopefully the similarity between the photographed image and the drawn image are obvious!

So, our British counterparts are all in a flap about how to get rid of this nasty pest. So here was my response: "Given that I've not seen it, perhaps it population is kept in check here by a natural predator? A bit of quick research on Google seems to imply that it natural enemy is *Jarra syagrii*, an insect belonging to the order Hymenoptera and the family of the shield wasps (Braconidae). The scientific name of this species was first validly published by Pemberton in 1921.

The predator was introduced into Hawaii in 1921 by entomologists to control the fern weevil (sound familiar?), which was causing similar issues to what you are experiencing, and 'significantly checked' the population of Australian Fern Weevil.

If you guys have been experiencing outbreaks of this pest for as many years as the papers indicate, and have been hitting them with heavy doses of organophosphate insecticides and other nasties, what you may have is a population which has become immune to the pesticides. What they don't tell you when you use insecticides is that there are only a certain number of pests which are susceptible to the poison, so when you use it you kill them which leaves the rest to multiply. So you end up with a whole population which are immune!

None of which helps you at all, I know.

I came across an article which said Acetamiprid could be used as a soil drench (Bug Clear Ultra Vine Weevil Killer marketed by Scotts is worth a try). And drenching the soil is preferable to a spray, as it allows the chemical to get into the roots of the plant, which transfers into the leaves and your dear little bugs can then eat it. And there are a number of other chemicals - pyrethroids and the abovementioned organophosphates which might be effective. You would also want to use them as a drench. But I believe the most effective treatment available at the moment is a pathogenic nematode. These guys can supply you: http://www.greengardener.co.uk/. I'm told the nematodes are temperature sensitive, so make sure you get some advice on that!! I believe they overwinter in the damp compost, so ideally you should remove the mulch from around the base of your plants and allow the soil to dry out a bit."

I'd be happy if anyone else could shed some light on this, and whether my advice seems sensible.

To date the only other input has been this, from Alistair Urquhart: "I am looking into the chemistry of the insecticides under discussion. These neonicotinoids are chlorinated derivatives of the naturally occurring insecticide nicotine (Solanaceae) and therefore all contain in the formula the nasty pyridine ring. The inclusion of Chlorine in the formula produces a particularly evil nerve poison. At first sight Thiacloroprid (Provado Vine Weevil Killer) should be as effective as any other available. I would advise male members of the group to be extra careful when using Acetamiprid.

Generally, we recommend Confidor as a safe insecticide for use with our plants (although it is known to kill bees). But its active ingredient is Imidacloprid, which is derived from nicotine."

Australian Climbing Ferns

Peter Hind

Study Notes for Sydney Group Meeting 16 July 2016

We are restricting the definition and study to those ferns that usually start at or near ground level, with upward growing generally light seeking fronds or rhizomes usually longer than one metre. Most climb by rhizomes producing aerial roots – root climbers.

Semi-climbing fronds are produced by some Gleicheniaceae e.g. certain *Gleichenia* species, *Diplopterygium* and *Dicranopteris*. The frond terminals appearing to be capable of indefinite growth. *Lygodium* is unique as it has fronds capable of twining around surrounding vegetation and other *Lygodium* fronds. Its fronds are also capable of indefinite growth.

Arthropteris – all five species are root climbers. Four species and one sterile purported natural hybrid between *A. beckleri* and *A. tenella*, often misidentified as *A. palisotii*. The latter has only been recorded for south-eastern Qld and eastern NSW as far south as the Illawarra Region. The image (left) shows true *Arthropteris palisotii*, both frond surfaces, from Lake Barrine (phot. M. Hassler).

Microsorum – root climbers: 3 definitely climb. These are *M. scandens*, *M. pustulatum* and *M. scolopendria*. *M. grossum* has been confused with the previous species, it has a very thick rhizome and is mostly terrestrial, less frequently climbing.

Blechnum – Australia has only one root climbing species, *B. contiguum* on Lord Howe Island.

Colysis – both species climb. The two Australian species are *C. ampla* and *C. sayeri*.

Humata (***Davallia***) – both Australian species climb. *H. repens* is often not attached to the ground; *H. pectinata* is the rarer one in

Australia.

The Australian *Davallia* species not previously included in *Humata* do not climb. *D. denticulata* is terrestrial with geotropic rhizomes. *D. pyxidata* (treated as a subspecies of *D. solida* by some) is epiphytic with more or less erect shrubby rhizome branches. *D. solida* – rare in Australia, it is usually epiphytic on rocks, e.g. near Mt Tozer, Iron Range area (pers. obs. P. Hind).

***Pyrrosia* –** as with *Humata*, included here because *Pyrrosia* species often cover large areas epiphytically on vertical substrates, often to ground level and at least in *P. rupestris* have long root climbing rhizomes.

Teratophyllum brightiae – root climber.

Lomariopsis kingii – root climber.

Stenochlaena palustris – less roots, more scandent, bare rhizomes over boggy ground, but often climbing up tree trunks as the aerial rhizome tends to curve and stiffly twine (pers. obs. P. Hind).

Oleandra – *Oleandra musifolia* (in the past, incorrectly reported as *O. neriiformis*) is the only species in Australia. It's most frequently on rocks, but often climbs up tree trunks with its stilt roots keeping the rhizome well clear of the substrate.

Lygodium – twining fronds – all species. Photo on right shows *L. microphyllum* twining around itself and fronds of *Drynaria* × *dumicola* in a garden in Brisbane.

***Sticherus* –** semi-climbing fronds, particularly *S. lobatus*.

Gleichenia – semi-climbing fronds, particularly *G. microphylla* and *G. dicarpa*.

Dicranopteris linearis – semi-climbing fronds.

Diplopterygium longissimum – semi-climbing fronds.

Rumohra adiantiformis – in the Blue Mountains near Sydney it is epiphytic on rocks and usually grows horizontally. In Tasmania it's often appearing to be terrestrial, but is not really, as it favours rotting fallen logs on the forest floor. Pers. obs. P. Hind (it's hardly a climber).

Most epiphytic ferns with short possibly climbing rhizomes such as *Crypsinus*, *Dictymia*, *Drynaria* and most *Hymenophyllaceae* (filmy ferns) are not included in this short study.

Dictymia brownii 'Glenrock'

Tony Clarke

Most fern lovers who have encountered this reasonably common epiphytic/lithophytic fern in the bush would agree that it is stable and never seems to deviate in frond length or shape. About 6 years ago Rod and I were bushwalking in a remnant piece of coastal rainforest near my home in Jewells, Newcastle when we came upon a colony of *Dictymia brownii* sporelings on a large boulder adjacent to a rocky creek. After a short time looking at these, Rod brought my attention to a sporeling that had crested tips. We were quite pleased to find this cultivar as it is (to me at least) quite attractive in its normal form.

ANPSA Fern Study Group
Financial Statement
1st July, 2015 to 30th June, 2016

Initial balance	10,265.99
Plus Membership fees*	385.00
Term deposit interest	174.88
Donations	30.00
Subtotal	10,855.87
Less Newsletter costs	302.60
Final Balance	**10,553.27**

$10,000 is held as a term deposit; $548.27 is in the Society Cheque Account; and $5.00 cash to be banked. Both bank accounts are with the Commonwealth Bank.

*Membership fees received for future years have not been noted previously, but as these rate as incurred liabilities, details are now included:

Subscription Year	Number Received	Liability
2016-2017	37	$185.00
2017-2018	19	$95.00
2018-2019	9	$45.00
2018-2020	4	$20.00
2020-2021	1	$5.00
2021-2022	1	$5.00
2022-2023	1	$5.00

Signed Dan Johnston, Treasurer

In my opinion, the above is a true and fair representation of the state of affairs of the study group, according to the records and explanations supplied to me.

Signed Noreen Baxter, Auditor