



ASSOCIATION OF

# *S. G. A. P. Fern Study Group*

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## FORTHCOMING EVENTS IN THE SYDNEY REGION

### Saturday 24 September 1994, Meeting at Blacktown

#### **Note change of date!**

Meet from 12 noon at the home of Tess and Les Taylor, 4 Prospect Street, Blacktown. During the Study Session commencing at 1 o'clock, Peter will conclude his discourse on the genus *Doodia*. "A Member's Fern" will be presented by Joan Moore. Enquiries to Les 621 5840.

### Saturday 15 October 1994 Outing to Mooney Mooney Creek.

Meet at 10 am ready to move off at 10.15 sharp on moderately easy walk alongside the Creek. It will be about 4 km to reach the Dam, lunch at a fine flat rock area and then return along the same route. Be captivated by the regrowth of ferns since January's disastrous fires. Carry lunch and drinks. Directions from Sydney: Leave FreeWay at Gosford Exit, travel on Pacific Highway towards Sydney for 8 km, as soon as bridge over Mooney Creek is crossed turn right into Karloo Road and continue along this dirt/gravel road for 2 km to level grassed area where we leave our cars and begin the walk. Enquiries to Moreen 528 4881.

### Saturday 19 November 1994, Meeting at Caringbah

Our hosts are Maurice and Ailsa Haenke, 28 Taren Road South, Caringbah (off President Avenue). Meet from 12 noon, Study Session to begin sharp at 1 pm when Peter will tell us of all the Australian members of the Osmundaceae Family! Patsy Hefferen will discuss "A Member's Fern". Enquiries to Maurice 524 9845.

### Saturday 3 December 1994 Christmas Function at Kenthurst.

Meet from 11 am for our festive season gathering at the home of Tamara and Ian Cox, 5 Ivy Place, Kenthurst. Please contact Tamara on 654 2533 as early as possible to advise what you will bring towards the pooled lunch. Bring own crockery and cutlery and in keeping with tradition, a gift (or several according to the number in your party).

## DEADLINE FOR COPY

Articles and information for our Newsletter are always needed and much appreciated. Items for the December issue should be received by the Secretary by no later than 15 November 1994.

## WHICH DAVALLIA?

Contributed by Ray Best

In May of 1981 Barbara Joe Hoshizaki of the "Los Angeles International Fern Society" did a study for "Baileya" the Journal of Horticultural Taxonomy Volume 21 No 1 May 1981 for "The University of California Herbarium" titled "The Genus Davalliaceae in Cultivation". The name Davallia comes from the name of Swiss Botanist Darvall.

Confusing species are Davallia trichomanoides, D. mariesii, D. solida and associated species.

Barbara lists the following: Davallia griffithiana, D. feejeensis, D. epiphylla, D. denticulata, D. embolostegia, D. divaricata, D. canariensis, D. bullata, D. tasmanii, D. mariesii, D. solida, D. trichomanoides, D. pyxidata, D. trichomanoides forma barbarta, D. trichomanoides var. loranii.

A member of the Fern Group some considerable time ago, Les Taylor, who had a very good collection gave me a rhizome of a species of Davallia which he considered I did not have. This according to his title was D. embolostegia. I planted this in a basket in my fernhouse it thrived finally becoming mature. However it did not produce spores. So I prepared a few more baskets from rhizome pieces. These are now all mature - still no spores. This started me on a search for details. The only details of this species that I could locate came from Barbara Joe Hoshizaki. Barbara states that Davallia embolostegia has no obvious grooves on the rachis. Whereas my specimen has distinct grooves. So the question now becomes which Davallia is it? I shall include a rhizome piece along with blade etc., for group discussion. Unfortunately no spores on any fronds.

Barbara gives the following description: Davallia embolostegia Copeland : Phillip. 1906  
Rhizome to 14 mm wide, rhizome about 9mm long and 1.5mm wide basically attached, roundish triangular and gradually or abruptly tapered to a long slender apex, the margins pale or not with inconspicuous minute spine like teeth formed from two excurrent marginal cells; stipes 30 to 50 cm long to 7mm wide distant not grooved, the entire length, somewhat woody, the stipe bundles + or - 8. stipe scales few, thin, greatly distorted when dry very narrow oblong to ovate, or lanceolate-attenuate, the larger ones about 5mm long and 1 mm wide, sometimes attenuate into a long filiform apex basally attached, the margins entire, the cells large and uniform thin walled. Blade up to 1 metre long and as wide. 4 pinnate then pinnatifid mostly about 60 cm long and as wide, the divisions not crowded, clearly stalked to the third division level, the rachis not grooved or only weakly so, the pinnules acuminate; ultimate sterile segments oblong or narrowly obovate, mostly reaching the margins, the weak veins falsley developed or or absent, ultimate fertile segments narrow - oblong, the large ones with several indusia; each indusium usually borne on a lobe, the indusia flanked by teeth, well developed teeth sharp and pointed straight ahead or slightly divergent, or teeth reduced to notches or absent 1.5 mm long about 0.5 mm wide, the upper margins extended to a blunt point or beak, free, submarginal to supermarginal. From the Phillipines, Borneo at higher elevations to 2,300 metres, on trees semi-tender to semi-hardy, a large fern evergreen. On page 13 of this study the fern is illustrated showing a slightly grooved rachis and a fertile pinnule or lobe.

This plant differs from mine in a number of ways :- Six scales of differing types are illustrated - in my fern both stipe and rachis are distinctly grooved, this groove carries a short distance into the stipe but ultimately disappears entirely. Only one type of scale exists. Is my plant an D. embolostegia or a hybrid species (no spores). I suggest a hybrid species. Possibly Davallia embolostegia X D. feejeensis (coarse form) from Fiji.

3.



RHIZOME  
SIDE VIEW

RHIZOME  
SCALE  
LENGTH 7mm  
4X

RACHIS  
PORTION

RHIZOME  
TOP

RACHIS  
SECTION

R.B.

R.B.

DAVALLIA ?

## NOTES FROM MID NORTH COAST, N.S.W.

Contributed by Steve Clemesha

On the 28th and 29 July our Group went to the Watagan Mountains. We stayed at Bea and Roy Duncan's place which was a nice and warm and we appreciated that as the weather for our visit was showery. We enjoyed seeing Bea and Roy's interesting garden and fern collection.

Our first outing was to Gap Creek Reserve. A common fern on this walk and also elsewhere in the Watagans was Polystichum australiense. Our group has not previously seen this species although it is recorded from the Tweed and Hastings Rivers. It appears to be most plentiful on the central coast. On the north coast in the ranges we have P. formosum and on the higher mountains P. proliferum.

This walk was rich in the number of fern species. All five Adiantum species were seen although A. aethiopicum was only along the track to the falls. On this walk also was Blechnum cartilagineum and at the base of the falls on wet rock Lunathyrium peterseni.

Lastreopsis decomposita, L. microsora and Arachniodes acuminata grew near the creek.

Pyrrosia rupestris and P. confluens were seen. P. confluens was of interest as it mostly is a fern from north of the Hunter River. Another which is more plentiful further north is Asplenium attenuatum which we found on moist rocks. Actually all rocks were moist for our visit.

In the afternoon we went to Boarding House Dam. This area is interesting with its moss walls (vertical sandstone). Hymenophyllum cupressiforme the common filmy fern was very abundant on the rocks. On one wall plants of Vittoria elongata grew. Some plants were large and attractive, the colony was an impressive one and is thought to be the southern most one known.

As most of the walk was beside the creek a number of creek side ferns were seen such as Todea barbara, Lastreopsis acuminata and some Blechnums.

The next morning we walked around Heaton Circle track. This passed through a variety of habitats with the result that a large variety of ferns were seen. Adiantum formosum was very plentiful and extensive. There were areas where it was absent and where A. silvaticum was present. We never saw the two species growing together. An impressive colony of Asplenium attenuatum grew on a rock.

Our last stopping place was The Pines Picnic Area and Trail. This is mainly a wildflower area but there are some very large Todea barbara growing beside the creek. Tmesipteris truncata grows on some of these. Sticherus flabellatus and S. lobatus grew close together which is unusual as mostly they prefer different habitats. Gleichenia dicarpa also grew there and one small plant looked like G. microphylla. This species has fewer darker scales than G. dicarpa. Juvenile and shade grown plants of G. dicarpa can have flat pinnules.

It was a very enjoyable couple of days and we thank Roy and Bea for looking after us so well.

## THE WATAGANS, 28th &amp; 29th JUNE 1994

GENUS	SPECIES	1	2	3	4
ADIANTUM	AETHIOPICUM	X		X	
	DIAPHANUM	X			
	FORMOSUM	X		X	
	HISPIDULUM	X		X	
	SILVATICUM	X	X	X	
ARACHNIODES	ARISTATA	X			
ARTHROPTERIS	BECKLERI	X			
	TENELLA	X		X	
ASPLENium	ATTENUATUM	X		X	
	AUSTRALASICUM	X	X	X	
	FLABELLIFOLIUM	X	X	X	
	POLYODON	X		X	
BLECHNUM	CARTILAGINEUM	X	X	X	X
	NUDUM		X	X	
	PATERSONII	X		X	
	WATTSII		X	X	X
CALOCHLAENA	DUBIA	X	X	X	X
CHEILANTHES	SIEBERI			X	
CHRISTELLA	DENTATA				X
CYATHEA	AUSTRALIS	X	X	X	X
	LEICHHARDTIANA	X		X	
DAVALLIA	PYXIDATA	X	X		
DICTYMIA	BROWNII	X			
DOODIA	ASPERA	X	X	X	X
	CAUDATA	X			
GLEICHENIA	DICARPA				X
	MICROPHYLLA				X
GRAMMITIS	BILLARDIERI		X	X	
HISTIOPTERIS	INCISA		X		X
HYMENOPHYLLUM	AUSTRALE	X			
	CUPRESSIFORME	X	X	X	
HYPOLEPIS	GLANDULIFERA	X			
	MULLERI		X	X	X
LASTREOPSIS	ACUMINATA	X	X	X	
	DECOMPOSITA	X		X	X
	MICROSORA	X		X	
LINDSAEA	LINEARIS				X
	MICROPHYLLA		X		X
LUNATHYRIUM	PETERSENII	X			
PELLAEA	FALCATA	X	X	X	
	FALCATA var Nana	X	X	X	
	PARADOXA	X		X	
PHYMATOSORUS	SCANDENS	X	X	X	
PLATYCERIUM	BIFURCATUM	X	X	X	
POLYSTICHUM	AUSTRALIENSE	X		X	
PTERIDIUM	ESCULENTUM	X	X	X	X
PTERIS	TREMULA	X			
	UMBROSA	X			
PYRROSIA	CONFLUENS	X			
	RUPESTRIS	X	X	X	
STICHERUS	FLABELLATUS		X	X	X
	LOBATUS				X
TMESIPTERIS	TRUNCATA				X
TODEA	BARBARA		X	X	X
VITTARIA	ELONGATA		X		

1. Gap Creek Reserve  
2. Boarding House Dam

3. The Heaton Circle Track  
4. The Pines Trail

## NOTES FROM THE SYDNEY AREA

### Report on Outing to the Watagans, 19 June 1994

Our thanks to Bea and Roy Duncan for their big part in making this a very enjoyable outing. We began the day by redezvousing at their property, Roy guided us to the trails in the Mountains and we ended it back at their property being fortified by hot drinks and loaded down with about two dozen ferns (said to be surplus to their needs) together with a barrow full of their home grown oranges!

Thirteen of us enjoyed two walks through the Watagan State Forest, firstly in the Gap Creek Reserve and then after lunch to the Boarding House Dam picnic area and moss wall. With Roy showing us the way, Peter merely had to put a name to each new fern species that we found as well as name every other plant that "looked different". Both walks were along good level tracks through temperate rainforest parched from the the lack of rain. We last visited these areas in November 1988 (reported in our Newsletter No. 44, March 1989). Ferns listed on this occasion were recorded by Patsy and efficiently listed with the aid of her spreadsheet. Ten days after our visit Patsy was back to the Watagans again, on this occasion with members of the Mid North Coast Group, repeated the Gap Creek and Boarding Hose Dam Walks and also walked the Heaton Circle and Pines Trails. Thank you Patsy for listing the ferns on all four walks - refer later.

### Report on Meeting at Dural, 16 July 1994

Our thanks to Pat and Ted for looking after all 26 of us who gathered at their property for this meeting. Peter presented the study session dealing with Doodias of N.S.W., using as his text "Flora of N.S.W."

Peter explained that all the Doodia species have simple pinnate fronds. The key in the "Flora of N.S.W." firstly separated Doodias into (A) those with most segments attached by broadened to confluent bases (D.aspera & D.maxima), and (B) those which had more than one pair of pinnae free (D.media & D.caudata).

Group A was really no problem in the field in N.S.W.. Peter explained that he had not known D.maxima to be collected in this State. From the Mt Tamborine area in Southern Queensland, it was thought to be a natural hybrid, in Peter's view, probably between Blechnum nudum and Doodia aspera. It was not known to have been cultivated from spore.

Peter told us of another species that should appear in Group A. He has collected it west of Kyogle in the Wiangerie State Forest, growing on basalt banks. Unlike D.aspera, this new species has its sori in single row closer to the margin and at an angle and the basal pair of pinnae are free and relatively long. The stipe on the new species is only just slightly asperous (rough).

In theory the two species in Group B should be easily distinguished when fertile material is available because the fertile fronds on D.media are not markedly dimorphic whereas those of the usually smaller D.caudata are dimorphic. In practice, the many forms and possible inter breeding, make identification less certain. Peter mentioned that many forms volunteer in his collection and even in the bush, Peter said he found D.caudata generally variable.

Extract from "Ferns & Allied Plants of Victoria Tasmania  
& South Australia" by Betty D. Duncan & Golda Isaac



50 mm

Doodia aspera

Doodia caudata

Doodia media

Members spent some time trying to separate the two subspecies of D. media which Peter had brought to the meeting. The distinguishing feature being the transition from pinnae that are free to those that are attached by broad bases. When the transition is abrupt (over less than four pairs of pinnae), we have subsp. media. Where the transition is gradual, (taking place over more than four pinnae) we have D. subsp. Despite an earnest search, we didn't succeed in finding a D. media with the transition occurring across four pairs of pinnae!

There are two varieties of D. caudata in N.S.W. The fronds on the more common var. caudata are pinnately divided for most of their length, but often have an elongated terminal pinnae. On var. laminosa fronds are undivided for most of their length with a few pairs of short broad pinnae at the base.

### A Member's Fern

Presented by Dulcie Buddee.

It seems that most presenters of this item have difficulty in choosing the fern. Dulcie admitted agonizing over the choice, said she didn't have a particular favourite and in any case, most of her ferns were in the ground and not transportable to meetings. Having given her excuses, Dulcie produced an attractive D. rigidula growing happily its numerous nest fronds overflowing the basket - all without, according to Dulcie, any special treatment. "Just a little fertiliser when I think of it", Dulcie told us. The Drynaria had been purchased from the Wagga Fern Grove in 1990 in a 3 inch pot and now, the mid to largish basket now hangs from a branch of a Grevillea robusta, mostly in shade but it receives a good deal of afternoon sun and a fair bit of wind.

### Report on Outing to Mt Wilson, 21 August 1994

On this fine winter's day in the Upper Blue Mountains (fine = it wasn't raining and we had on our thickest parkas!) Rose led us first to a copious off-the-road parking area and then along "Rose's Trail", through choice, unspoiled, temperate rainforest, descending to Waterfall Creek. It was a truly beautiful place abounding in ferns, mosses, epiphytes on epiphytes, thick layers of leaves over soft basalt soil. Rose reminded us that she had been trying for ages to coax the Group into visiting this magic place. Leptopteris fraseri was the plant of the day being particularly plentiful close to the Creek. This is a truly beautiful fern with bright green, filmy fronds. Mature specimens were on all sides, with arching fronds more than 1 m in length and several featuring 12 cm diameter by 40 cm high trunks. Some of these ferns had apparently started life on the side of a wet rock face their long roots reaching down more than 1 m and on occasions reuniting into a bundle when touching the rock ledge below.

We commenced the climb out anticipating an early lunch (soup for some) at the cars. Very quickly the tranquility of the surroundings - or something, took our breath away and we proceeded upwards slowly indeed. Rose assured all that it was the same track that we had descended but it proved to be much longer! The very late lunch was ultimately greatly enjoyed. Some of the ferns identified on the day were: Adiantum aethiopicum, A. formosum, Asplenium bulbiferum, A. flabellifolium, A. flaccidum, Blechnum ambiguum, B. cartilagineum, B. patersonii, B. watsii, Cyathea australis, Dennstaedtia davallioides, Dicksonia antarctica, Diplazium australe, Doodia aspera, Histiopteris incisa, Grammitis billardieri, Hymenophyllum rarum, Lastreopteris acuminata, L. decomposita, Leptopteris fraseri, Pellaea falcata, P. falcata var. nana, Phymatosorus diversifolium, P. scandens, Polystichum proliferum, Polyphlebium venosum, Pteris tremula, Pyrrosia rupestris, Sticherus lobatus, Tmesipteris billardieri, T. truncata, Todea barbara.

## NOTES FROM SOUTH EASTERN QUEENSLAND

### Meeting at Mt Gravatt, 5 June 1994.

There were nineteen members at this meeting held at the home of Mrs Val Jimmieson at Mt Gravatt. Arrangements were finalised for the excursion to Mt Nebo in July, and then the organization of the fern display at the Queensland Region's Annual Exhibition of Australia's Native Flowers in September, was discussed.

The topic for this meeting was the classification of ferns into families. Once again we must thank Peter Bostock for leading the discussion and for explaining many aspects of fern classification to us. Peter's approach was to refer to keys for classifying ferns, with particular reference to the book by Clifford and Constantine. The terms used in their keys such as circinate venation were explained.

We first learnt how the various groups of fern allies were separated from one another, and from the Polypodiophyton, those usually recognized as true ferns. We also saw how the arrangement of the vascular tissue could be used to identify some families. For example we examined some of the *Aspleniums*, noting the unusual X-shaped organization of the vascular bundles.

Before the meeting finished Peter gave us a report on his recent trip to North Queensland, when he investigated the various fern species along numerous creeks on the eastern side of the Divide between Innisfail and Cairns.

Many varieties of ferns were brought along for identification and discussion. We also had the pleasure of looking over the Jimmieson garden, where an unbelievable number of ferns and small plants were looking very healthy in a rainforest setting. A very large basket of *Drynaria rigidula* was much admired.

Our Flower Show this year will mean that all members must rally around and try to maintain the standard of previous Shows. Cliff Ritchie on whom we have depended for the excellence of our displays has not been well for some time and will be unable to help us. We hope you are with us again very soon Cliff. We miss you. Also on the not well list is member Pauline Croft.

### Report on Outing to Mt Nebo, 24 July 1994

Contributed by Merle Goadby

Sunday dawned cold and dry, followed by a pleasant clear sunny day for our walk. Because of winter viruses only nine members met at the picnic area, Manarina Natinal Park, for our gentle walk to Mt Nebo and back. The track moves through both vine scrub and open forest to a rocky lookout. From there we enjoyed the view stretching to Moreton Island and the Glasshouses, and looking over the annual show at Samford Showground, to which duty had called for a couple of members.

Despite the dry spell, much of the country had not dried out. Most ferns still looked in good condition.

The Mt Nebo area was of particular interest to Peter Bostock, as it is believed to be the source of a very early specimen of *Doodia media* held in the collection of the Queensland Herbarium. Our fern sightings confirmed the suspicion that there could be naturally occurring fern hybrids in the locality.

Ferns for Manorina National Park (roughly in order of sighting) are: Hypolepis muelleri, Doodia aspera, Blechnum cartilagineum, Lastreopsis decomposita, Adiantum hispidulum, Christella dentata, Cyathea cooperi, Adiantum formosum, A. aethiopicum, Doodia media subsp. australis, Arachniodes aristata, Arthropteris tenella, Davallia pyxidata, Drynaria rigidula, Microsorium scandens, Pyrrosia rupestris, P. confluens, Asplenium australasicum, Platycerium bifurcatum, Lastreopsis microsora & L. marginans.

FORTHCOMING EVENTS : IN THE MID NORTH COAST , N.S.W.

For details about forthcoming events contact Charlie Charters, phone (065) 85 6296

IN SOUTH EASTERN QUEENSLAND

Weekend 10 & 11 September 1994, Fern Display, Rochdale

Set up display on Friday 9 September at Queensland Region Annual Flower Show, Redeemer College, Rochdale Road, Rochdale.

Weekend 22 & 23 October 1994, Outing to Cooloola National Park

Intending participants, make your own accommodation arrangements with Rainbow Waters Holiday Park, Carlo Road, Rainbow Beach, 4581 - phone (074) 86 3200, Cabins, Caravans & Campsites available. For further particulars ring Merle Goadby (07) 374 1964 or Irene Cullen (07) 273 1055. Interstate "Fernies" on holiday are most welcome to join us.

Sunday 20 November 1994, End of Year Meeting at Algester

At the home of Russell and Irene Cullen, 220 Ridgewood Road, Algester. Bring a special fern for Fern Exchange and fresh ideas for next year's programme.

SUBSCRIPTIONS OVERDUE

The annual subscription for the 1994 calendar year was due in January.

An "X" appearing in the space opposite means that our records show that your subscription has not been received. We value your membership but this will be the last Newsletter we will be sending unless you advise us otherwise.

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