

ASSOCIATION of

S. G. A. P. Fern Study Group

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SPORE BANK: Barry White, 24 Ruby Street, West Essendon. Vic. 3040

FROND LOSS IN FERNS DUE TO CLIMATIC FACTORS

Contributed by Geoff Simmons

A recent 4 day forced absence from my garden, meant that the ferns did not get a drink during this period. At present south east Queensland is experiencing a very dry period and fire hazard is high. During the four days, temperatures were in mid-twenties, and winds varied in velocity. As a result the ferns suffered to varying degrees.

Complete loss (desiccation) of fronds occurred in two *D. antarctica* ferns and partial loss in another. All were several years of age and protected by part shade with some protection from wind. A *Todea barbara*, of several years in mostly full sun, was another victim although one would have expected it to have sufficient soil moisture.

One of three *Angiopteris evecta* plants (all in self watering pots) had complete collapse of fronds and contrary to previous experience, did not return to upright stance when watered. A recently planted *Cy. rebecca* also had dried fronds. It remains to be seen whether these plants put out new fronds.

On the other hand, *Platycerium bifurcatum* including *spp hillii*, and *Asplenium* varieties of the birds nest type showed no evidence of deterioration due to these adverse conditions. Two aged *Cy. cooperii* also seem unaffected.

It would seem that the vascular system of affected ferns was not able to cope with the loss of moisture from the fronds. A factor not easy to judge was the extent to which ground moisture played a part.

MUSINGS PROMPTED BY READING OF 'AUSTRALIAN FERNS: GROWING THEM SUCCESSFULLY.'

Letter from Kerry Rathie

I have finally had the time to look at Calder Chaffey's excellent book. There is always something one would do differently (but not necessarily better). Calder perpetuates the myth that *Angiopteris evecta* & *Marattia* are difficult to grow from spore, & much easier to grow from stipules (auricles). I believe the opposite is true, & have hundreds of baby *Angiopteris* to prove it. The stipule method involves many months of keeping the auricle moist without letting it rot, & is for someone more patient

& meticulous than yours truly. The spores are exceedingly short-lived, like most or all green-coloured spore.

For *Pellaea calidirupium*, I presume his information "the only growing zone information available is that it grows in Brisbane in sheltered conditions" came from me, & he played it safe. No need. My main clump, 3 m in diameter, is in full sun at all times, exposed to all winds, & has grown in 10 years from a 4" pot-full, despite 20 or so pots-worth having twice been harvested for sale from the centre of the clump. Some went to Sydney two years ago, to study group members. The central vacuum soon filled up again. This fern also thrives in my bushhouses. I imagine it would thrive in all the areas that Calder suggested it might be tried!

I was sorry to see *Arthropteris palisottii* omitted from the book. I have found it at least as easy to grow (in S-E Qld.) as *A. tenella*, & easier than *A. beckleri*. Space limitations doubtless lead Calder to omit the *Lindsaeas*. They are certainly very touchy in pots, as a rule, but *L. microphylla* & *L. ensifolia* are growing well in raised sandy-loam beds with light tree shade at my place near Brisbane. In fact, the latter is spreading vigorously both at my place & at the garden of Ray & Gwen Norris near Redland Bay. It is also colonising pots in a nearby bushhouse, at my place.

The N. Qld. species of *Polystichum*, also omitted, is easy to grow outdoors in sheltered spots in Brisbane. Some of these little-seen ferns should, I feel, be mentioned, as spore propagation has the ability to quickly transform the status of a fern from "rare in cultivation" to "relatively common".

Rumohra adiantiformis grows quite easily in full sun in Brisbane, as does *Selaginella brisbanensis*, which is surprisingly drought tolerant. *Sticherus spp.* & *Gleichenia dicarpa* seem to prefer full sun here, but tolerate light shade.

Calder mentions some popular cultivars of *Drynaria rigidula*, but not the equally (if not more so) widely cultivated "Knightiae" cultivar of *Goniophlebium subauriculatum*, which is somewhat similar to the frilly-pinnae 'Whitei-type' cultivars of *Drynaria rigidula*. *G. subauriculatum* *Knightiae* is much more often seen in cultivation in Qld. than the wild-type form. Many unobservant owners think it is a *Drynaria*.

Calder gives the commonest colour variant for those many ferns which have colourful new fronds, without indicating the wide range of genetic variation in colouration within a great many species. Many, perhaps all, do vary, & the variation is genetic. For example, young leaves of *Blechnum cartilagineum* can be pink, red, fawn, cream or green, & all these occur within two hours drive of Brisbane. *Doodia* & *Adiantum spp.* also vary greatly, except for *A. hispidulum* var. *whitei*, which always seems to have green new fronds.

Height varies greatly between clones of *Adiantum hispidulum* (2" to 18" or more), & the form of *A. formosum* from Boolbunda Rock (inland from Bundaberg) is unusual in being dwarf (< half normal height) & a much lighter green than usual. Again, this is genetic; clones grown side by side for ten years are still utterly distinct.

Pellaea nana normally has glossy green new fronds, but higher-altitude forms from northern N.S.W. are cream (rarely) to pink to red. A rare colour form in *P. nana* & the as-yet-unnamed oblong-leaflet *P.* given a name, in the recent fern volume (No. 48) of the Flora of Australia (p.267, last paragraph). The silvery form of this species has been in cultivation in Qld. for many years, with collections from Stanthorpe, inland from Nambour & Gympie, & from north Qld. It is as hardy as *P. nana*, & nearly as tough as *P. calidirupium*. It was the fern described as *P. falcata* "two different silver

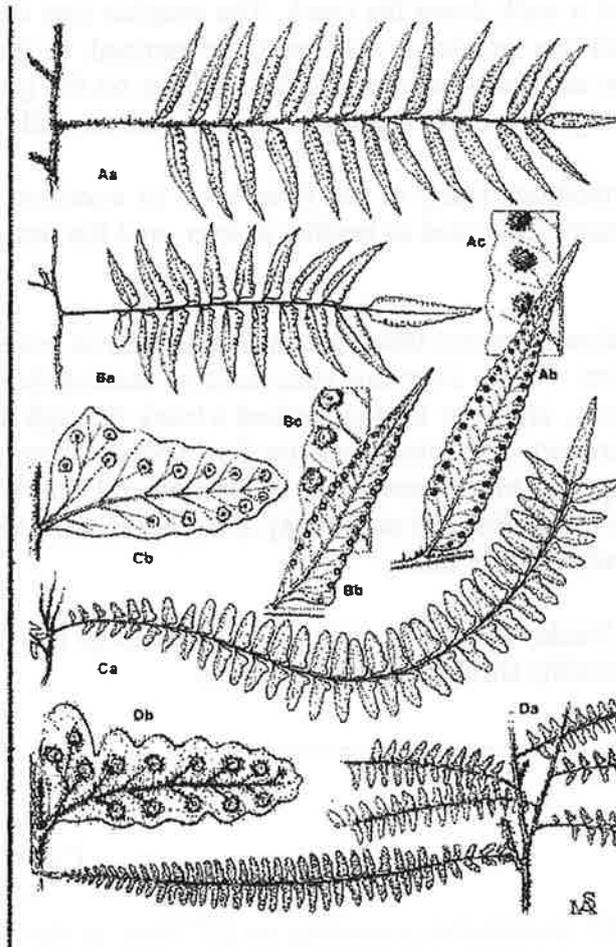
forms" in Joan Moore's writeup of the fern display at the 1999 ASGAP Conference (p.3, Sept. '99 newsletter), or rather it was one of them, the other form being silver *P. nana*.

Geoff Simmons in the June '99 issue (No.85, pp. 1 & 2) asks why *Platynerium*s are usually only seen high in trees, & why they seem not to germinate on trees & rocks near ground level. The answer, I suspect, is he has not been out & about enough. In many moist places where adults are common, I've seen baby stags & elks at an average density of several per square foot on every fallen tree trunk & rock available, for walks of several km. (e.g., plateau areas near Mt. Lindesay in S-E Qld.). Dry times cause heavy mortalities, & I suspect wallabies eat a lot of low-lying plants, as they do with king orchids (*Dendrobium speciosum*). Baby stags regularly pop up on the trunks of some of my cycads, but dry winds usually kill them unless I intervene.

Someone a year or two back asked if *Doodia heterophylla* was as easy to grow as other members of the genus? Well, it nearly is. I suspect it likes it a little wetter, & can tolerate a little more shade, but it does well under conditions other *Doodias* like. The book by Jones & Clemesha gives the impression it is relatively rare, but this is certainly not so for ferny areas between Brisbane & Gympie. In many areas it is the dominant fern, particularly in fairly open areas near creeks. It is extremely variable, in size & in frond morphology for both fertile & vegetative fronds. Some new fronds are green, & others pink or red. If well watered, it tolerates full sun.

Regards, Kerry.

Fig.23.1



ARTHROPTERIS:¹ A. *Arthropteris tenella* Aa. Frond & part of rhizome, Ab pinna x 1.3, Ac part pinna x 4. B. *A. submarginalis*...C. *A. palisotii* Ca frond/part rhizome, Cb pinna x 2; D. *A. Beckleri* Da Frond/part rhizome Db. Pinna x 4

¹ From Ferns of Queensland, 1990 by S.B. Andrews. Diagrams and part text from p245

NOTES FROM SOUTH EAST QLD.**Contributed by Irene Cullen**

It was great to be back in Brisbane in time to attend the final meeting of Fern Study for the year 2000. A happy crew met at the home of Doug and Kath Johnson for the occasion. The Johnson's have a rather steep hill-side home which backs on to the lovely Toohey Forest. They had an interesting collection of ferns. A spectacular feature was a narrow passage hung with large *Platycerium superbum* along its entire length. After hearing reports of the group's activities of the past three months, we started on the program for 2001. Then followed our usual fern exchange and a splendid repast provided by our hostess and members.

REPORT ON WEEKEND VISIT TO MT CLUNIE, VIA WOODENBONG - Sat. 30th September – Sun. 1st October.

Contributed by Lorna Murray

On Saturday morning, 11 Queensland members of the Study Group and 3 NSW members met at the cabins at Mt Clunie, the property of Jim and Fran Standing. Three people set up camp nearby, while the others settled into the 2 well-appointed cabins. On this occasion the weather was fine and hot, and we had good views of the nearby mountains, including Mt Barney and Mt Lindsay.

After an early lunch we set off for a walk down the creek. The weather was very dry, compared to the situation at the time of our visit the previous year, and we noticed in particular the less dense understorey below the tree canopy and the great increase in leaf litter on the ground. In particular there were many dead leaves of giant stinging trees, which had to be avoided carefully.

In spite of the excessively dry conditions many of the ferns were in excellent condition. In particular *Hypolepis glandulifera* in open situations looked as healthy as ever, and the ferns along the creek, where there was still water looked fine.

On the Sunday morning, after 2 other members from Queensland joined us, we set out with our lunches to explore other parts of the property. Nearly everyone succeeded in making the walk over rough terrain down an overgrown part of the creek, after our leaders hacked a track through the vegetation. Although we inspected other parts of the property this time no extra fern species were seen, so that the list of species recorded is the same as reported in the newsletter of December 1999. We were very grateful to Jim Standing for guiding us on all the walks, and on Sunday 2 members were very pleased to get a ride up the hill on the back of his four wheel drive bike.

Before leaving to return home on Sunday afternoon, we inspected the large native garden with Fran, and admired the tremendous range of healthy shrubs and groundcovers.

SYDNEY MEMBERS REPORT

Contributed by Joan Moore

Planning of the programme for 2001 occurred at a meeting on 26th Nov. at the Cox's home. Details will be in March Edition as copy will be too late for December Edition.

Editor's note: It was a nice surprise to see Tamara Cox and her ferns featured on Burke's Backyard recently.

OCTOBER EXCURSION TO THE GLOW WORM TUNNEL – BLUE MOUNTAINS.

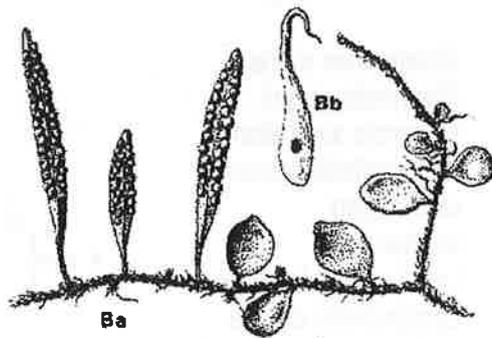
Contributed by Joan Moore

Members elsewhere are probably wondering just what this is, and how it fits in with fern study, so I am adding a short explanation; facts supplied by Peter Hind, who knows the area well. Early in the century miners began extracting oil from the kerosene shale deposits found at Glen Davis Valley, in the northern part of the Blue Mountains. The oil was processed in a cracker on the spot and went then by pipeline over the mountain to the next valley, Wolgan Valley, to Newnes. Here it was put into tanks and taken by train to the main Western Line at Newnes Junction. For this, a single track line was built through the mountains. This mining operation closed down after the last war, about 1950, and the rails of the track were taken up.

The immense cuttings, the tunnels, the embankments of the line were left, and are now used as the road. It is kept in some sort of repair, by National Parks and Wildlife, and is visited by quite a lot of people who like the bush in spite of a rough ride. The road now continues down to Lithgow, but people coming from the coastal side of the mountains meet at the parking area of the Zig Zag Railway. From here there is a road through a forestry area (equally rough) which soon joins the Tunnel road. And now for the ferns:

The road as it goes down approaching the tunnel goes between high rock walls that are now covered in ferns: *Todea barbara*, *Blechnum nudum* - these got larger and larger the further down we went - *Calochlaena dubia* with fronds to six feet high. *Gleichenia* sp. - we could not get close enough to distinguish the species as there is frequently a deep trench between the road on the embankment and the rock walls. On these walls we could see *Asplenium flabellifolium*, *Pyrrosia rupestris*, *Blechnum ambiguum*, *Lidsaea microphylla*, *Hymenophyllum cupressiforme*, *Cyathea australis*, *Pteridium esculentum*, and also *Histiopteris incisa*.

The entrance to the tunnel itself is almost obscured by the hanging fronds of *Cyathea* and *Todea*. Peter says that on the other side of the tunnel there is *Dicksonia antarctica*, and *Leptopteris fraseri*, but we did not go through this time. I never had any intention of going through - not brave enough. It is long, curved and DARK! Also very rough underfoot, and just now very wet. So I have not seen the glow worms!



*Pyrrosia Rupestris*² – Ba Sterile & Fertile Fronds & part of rhizome. Bb. Rhizome scale x 8

The Zig Zag Railway has nothing to do with ferns other than the fact that its parking area is the best point of access to the Glow Worm Tunnel road. This descent was built in 1866-1869 to take the railway down to Lithgow and open up the inland. It consists of a series of gently sloping ramps down the

² p291 Ferns of Queensland, 1990 S.B. Andrews

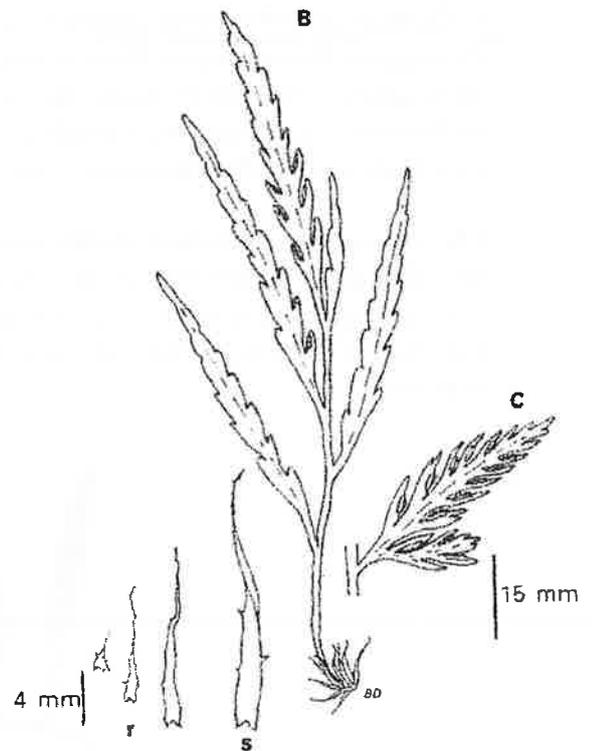
escarpment like the letter Z, connected at their extremities by reversing stations. By 1907 the traffic was such that a new more gradual descent was built. The rails were removed from the Zig Zag. For a time, venturesome people were able to drive their cars down it. Peter Hind said he had driven down it! I had a look at the top of the descent once, some time in the fifties or sixties, but decided not to try it.

In 1968 a group of enthusiasts began negotiations with the Government and Lithgow Council: by 1975 they had relaid the track and began operating limited trips for tourists. It is now a company The Zig Zag Railway Co-Op. Ltd. Now the full length of the descent is in operation and regular trips down and up are run. It is very popular with tourists and, of course, railway buffs. Steam engines pull old style carriages down the immense cuttings and along three beautiful stone viaducts, and there are terrific views. (I have not done this ride myself yet. Hope to some day.)

1999 FERN NAME CHANGES

The following name change list was included in the Fern Society of Victoria's Nov./Dec. Newsletter. Whilst both Australian and exotic ferns are included, the list has been reproduced in its entirety for those who may also take an interest in ferns in general.

Previous Name	New Name
Asplenium terrestre	Asplenium appendiculatum
New Species	Asplenium cimmericum
Blechnum banksii	Blechnum blechnoides
Blechnum minus	Blechnum "gracilis" novae - zelandiae
Blechnum capense	
Sp. 1. Kiokio	Blechnum novae -zelandiae
Blechnum capense	
Sp.2. Mountain	Blechnum montanum
Blechnum capense	
Sp. 3. Green Bay	Blechnum triangularifolium
Cheilanthes humilis	
Subsp. Sieberi	Cheilanthes sieberi
New Species	Grammitis gunnii
Lycopodium australianum	Huperzia australiana
Lycopodium cernuum	Lycopodiella ceruum
Lycopodium deutorodensum	unchanged
Lycopodium fastigiatum	unchanged
Lycopodium laterale	Lycopodiella lateralis
Lycopodium ramulosum	Lycopodiella diffusa
Lycopodium scariosum	unchanged
Lycopodium serpentinum	unchanged
Lycopodium varium	Huperzia varia
Lycopodium volubile	unchanged
Phymatosorus pustulatus	Microsorium pustulatus
Phymatosorus genus	Microsorium genus
Pteris hybrid	Pteris "Punakaiki"
Trichomanes venosum	Crepidomanes venosum.



Asp. terrestre³ renamed
As **Asp. Appendiculatum**.
B. Young erect plant; C Pinna from
mature frond. At left scales from
rachises (c) and base of stipe (s)

³ p.174 Ferns & Allied Plants of
Vic. Tas. & S.A. 1986 B.D. Duncan
& G. Isaac

SPORE BANK

CURRENT LIST

Contributed by Barry White

Acrostichum speciosum 4/00
Adiantum whitei 1/99
Arachniodes aristata 5/00
Asplenium australasicum 5/98
Asplenium milnei 5/00
Blechnum camfieldii 5/00
Blechnum chambersii 2/99
Blechnum fluviatile 2/00
Blechnum minus 6/99
Blechnum patersonii 8/99
Cyathea australis 9/00
Cyathea celebica 3/99
Cyathea cooperi 9/00
Cyathea cooperi 'Brentwood' 98
Cyathea cooperi var. cinnamonia
99
Cyathea leichhardtiana 1/00

Cyathea robusta 2/98
Cyclosorus interruptus 3/99
Deparia petersenii 6/00
Dicksonia antarctica 9/00
Dicksonia youngiae 1/99
Diplazium australe 6/00
Doodia australis 12/99
Lastreopsis acuminata 9/98
Lastreopsis hispida 2/00
Macrothelypteris torresiana 6/00
Microlepia speluncae 5/98
Ophioglossum pendulum 2/00
Platynerium bifurc. cv. Hilo /99
Platynerium bifurc. cv. Hula Hands
/99
Platynerium bifurc. cv. Roberts /99

Platynerium bifurc. var. venosa
"Mt. Lewis" /99
Platynerium bifurc. cv. Willinckii
Scofield /99
Platynerium hillii /99
Platynerium superbum 6/98
Platynerium superbum (Cairns) /99
Platynerium veitchii 8/99
Polystichum australiense 12/99
Polystichum formosum 6/99
Pronephrium asperum 3/99
Ptilotum nudum 8/99
Pteris comans 10/00
Pteris umbrosa 12/99
Sticherus flabellatus 8/99
Sticherus urceolatus 3/99
Tectaria confluens 6/00

Thanks to Joan Moore for donation of spore.

More spore donors wanted, please. No special qualifications required, if you are uncertain about the material please send it and I can sort it out. Mixtures of spore and sporangia are quite acceptable, as are portions of fertile fronds.

ORDERING SPORE

Spore is available free of charge from Barry White, 24 Ruby St,
West Essendon. Vic. 3040. Ph: (03) 9337 9793

When ordering please include a stamped addressed envelope
The area of collection is available on request. Spore donations are always welcome,
including fresher samples of ones already on the list.

Obituary. The Sydney group has recently lost a valued member, Les Taylor. Les came to outings and meetings for as long as he could, but the illness won in the end. Les was a very long time member of N.S.W. Region: he managed some of the flower shows we put on in the seventies and for many years he was a Vice President of N.S.W. Region, and for nine years was President of The Blue Mountains Group. His first great interest was prostantheras: he would give talks to Groups about them. Then he switched to ferns and transformed his garden (and his talks), accordingly. He was a member of the Fern Group since soon after its foundation. He will be missed.

CONTRIBUTIONS SOUGHT – Thanks to everyone who sent such good articles, it really makes the newsletter interesting, and easier to edit. I would once again like to appeal to individuals or groups to send articles, questions on their favourite plant, an interesting spot they may have visited, a tip on how to grow, or propagate plants, or something you've discovered about watering, light, mixtures, fertilisers etc. Questions have generated a deal of interest in the past. It is your newsletter, help us make it work better for you!

FUTURE EVENTS

Forthcoming events for South East Queensland

Sunday 4th February, 2001 Meet at the home of Doug and Kath Johnson 104A Bankside St., Nathan at 9.30 a.m. Topic *Lastreopsis*

Sunday 4th March. Excursion to Bryces Rd. Mt. Glorious. Meet at Maiala National Park - lower entrance at 9.30 a.m.

Sunday 1st April. Meet at Geoff and Merle Goadby's home at 9.30 a.m. Their address 121 Haven Rd Pullenvale. Topic will be *Adiantums*.

For further information contact Peter Bostock 07 3896 9505 (work) or Irene Cullen 07 3423 7347 Fax 07 3423 7393

Forthcoming meetings for Sydney:

Saturday, February 17th, 2001. Our next meeting will be at the home of our leader Peter Hind, 41 Miller St., Mt. Druitt. from 11a.m. Peter will lead a discussion on *Pellaea*. (ph: 9625 8705)

DEADLINE FOR COPY – Closing date for material to be included in the MARCH, 2001 Newsletter is FEBRUARY 15th, 2001. Your contributions are valuable – whether as a group or individual. I strongly urge groups from the various States to send articles.

Merry Christmas & Happy Fern Growing in the New Year



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