

ASSOCIATION of

S.G.A.P. Fern Study Group

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LEADER: Peter Hind, 41 Miller Street, Mount Druitt, 2770

SECRETARY: Moreen Woollett, 3 Currawang Place, Como West, 2226

TREASURER: Joan Moore, 2 Gannet Street, Gladesville, 2111

SPORE BANK: Jenny Thompson, 2 Albion Place, Engadine, 2233

Were Our Faces Red!

At our July meeting Peter drew attention to a letter received from Harry Franz of Goomeri. Harry had written about problems which he was experiencing with his fern collection and his letter was dated 24 June 1989. We don't know how the letter was overlooked, it just turned up! We have written an apology to Mr Franz and tried at this late stage to assess the cause of the problems raised. We have also asked Irene Cullen and her fellow members in South Eastern Queensland to provide any possible advice or assistance to Mr Franz from within their knowledge and resources. We only hope that the ferns are still alive and growing. An extract from Mr Franz's letter and the relevant parts from our delayed response follow, as these comments may be of general interest.

Mr Franz wrote as follows:

I am wondering if you can give me any information on fungal diseases of ferns. Things have been going really well till this last year.

I have two types of problem.

(1) Pellaea paradoxa Leaves slowly turning brown from leaflet tips, almost completely defoliating some plants. I have repotted some plants to see if it might be a nutrition problem. Plants are still showing some new growth. Older leaves still browning and dropping off. This may not necessarily be a fungal problem. I have not treated with a fungice.

(2) Birds Nest Fern and a similar ground growing Asplenium. Large black spreading patches on leaves. Has killed a very nice Birds Nest fern mainly from around the centre. Have had similar problems with other plants such as Begonias to a lesser extent. Very severe on above plants. I have done some spraying with Mancozeb - Benomyl mix to no avail.

(3) Asplenium bulbiferum, Davallia, and several others (I can't remember names at moment). Premature death of fronds - killed some small Asplenium bulbiferum. Have been spraying some plants with Mancozeb - Benomyl mix with good results. A couple of grown plants very sick - not insect attack.

In responding to Mr Franz, the following points were made. It is difficult to comment accurately on the particular problems without actually seeing, examining and knowing more about the ferns and the conditions under which the ferns are growing. It did seem though that all the problems mentioned would have been exacerbated if the ferns were housed in humid conditions with lack of air circulation and lots of water.

Peter, noting the remarks about lack of evidence of insect damage, thought that the problem with Pellaea paradoxa may even have been physiological. This species does have the habit of shedding its pinnules during some winters. Peter stressed the importance of keeping this species relatively dry during the winter months.

Black patches often occur on Birds Nest ferns, but in Asplenium australasicum this complaint is not regarded as being life threatening. It is a hardy fern tolerates dry conditions but doesn't like it overly wet, in fact it needs good drainage. If the fern had been kept wet possibly this may have brought on the fungal problem. Some members at the meeting said there had been recent reports of a serious fungal problem in Platycterium species in some parts of Queensland. A final thought, we wondered if the fern could have been Asplenium nidus which is not cold tolerant and can easily be lost.

The premature yellowing and dying of the fronds on Asplenium and Davallia species would certainly be exaggerated by over wet, very humid conditions. It was suggested that the affected fronds should be removed and destroyed, which in any case, is good maintenance practice.

To any member who may be visiting Brisbane.

23rd Annual Exhibition of **Australia's Native Flowers**

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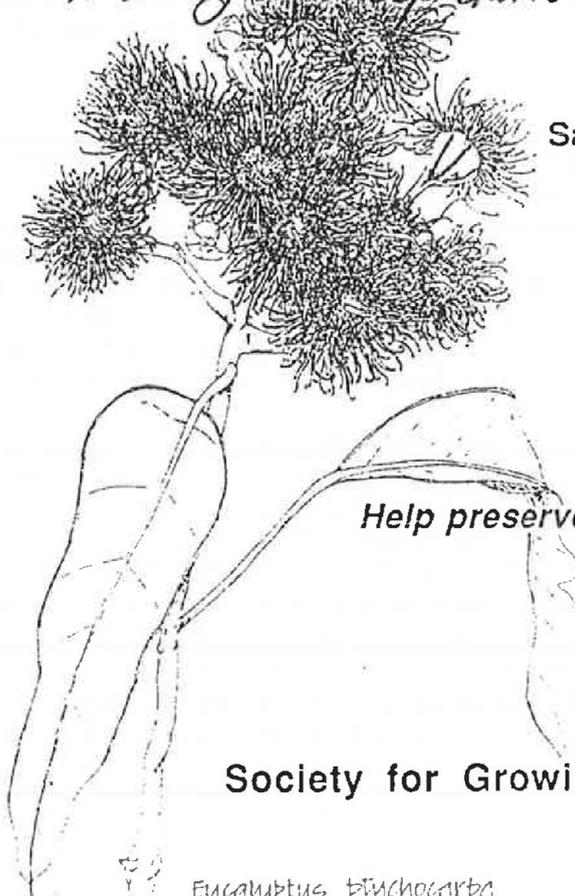
Refreshments Available or bring your own Picnic to the College Grounds

Enquiries P.O. Box 585, Fortitude Valley, Q. 4006.

Displays Officer Ph. (07)374 1946 Publicity Officer Ph. (07)349 7308

Society for Growing Australian Plants Queensland Region Inc.

Eucalyptus tinchoarba



(Our thanks to the Western Australian Fern Society Inc for the use of the articles on this and the following page)

STAGHORNS & ELKHORNS
(PLATYCERIUM)

These are epiphytic ferns (meaning the plant is growing on or is attached to another plant but NOT a parasite) which is remarkably specialised in as much that they are self contained. The nest leaves are spreading and act as a very efficient litter collecting device. As the new leaves grow the old nest leaves curl inwards and die, trapping all the debris to compost it. The roots grow into this rich humus and are protected from hot and drying winds.

The old nest leaves make up the bulk of the plant, the true leaves are thinner, often pendulous and spectacular with the spore carried in a brown patch on the underside of the frond. These fall off when they are old.

The genus consists of twelve species mainly found in the tropics of South America, Africa, Malaya and Australia. In Australia the four main species available in Nurseries are:- Superbum, Bifurcatum, Hillii and Veitchii.

PLATYCERIUM SUPERBUM (Pronounced Superb-um) Superb.

An easily grown fern and common in cultivation it is one of the most spectacular of the species in the world. They grow on trees, logs and rocks in the rain forests from northern N.S.W. to northern Queensland.

The plant entirely lacks the ability to produce plantlets and so the single plant just gets larger and larger in the bush until they are so large that they fall from their host and crash to their death. Spore is borne on the underside of the true fronds in a large brown patch. Small plants produce only nest leaves that press tightly against the host, covering the plants roots. Eventually they produce an antler (true frond) that can grow up to 2 metres long and dangle from the centre of the nest leaves.

Mounted on trees in the garden where they get filtered light the plant makes a spectacular show, or grown on slabs of wood or tree fern in the shadehouse. They respond well to applications of fertilizers such as "Garden Party", aged animal manures, slow release fertilizer, pure blood and bone are all suitable.

Often incorrectly sold as *Platycerium grande*, however this species (*grande*) has two spore patches on each of the true fronds.

PLATYCERIUM BIFURCATUM (Elkhorn)

The most common of the elkhorns, it grows over a wide area of eastern Australia from southern N.S.W. where it is found in large clumps on boulders and rock faces. Further north in Queensland it is found on a variety of trees, from giant rainforest specimens to Casuarinas in the swamps, often in open bushland and even on old cycad trunks. Other epiphytes frequently grow on the clumps.

Bifurcatum is very hardy and will withstand frosts. The nest leaves are deeply lobed; true leaves are semi erect or nodding, forking two or three times and the spore is carried on the underside tips of the leaves. Plantlets grow from buds on

the outer lower margins of the nest leaves and once the plant is established it can produce large numbers of pups each year, thus the plant will grow into a large specimen. Grown on tree trunks (any sort) in a filtered light area, or shaded from the afternoon sun they respond well to fertilizers. We have planted several eyes in wire baskets and in time they form a complete ball and hung on a patio or in the shade house it can make a good conversation piece.

PLATYCERIUM HILLI (Elkhorn)

A tropical elk from northern Queensland, the nest leaves are shallowly lobed, true fronds are erect and lime green in colour. Given a sheltered position it is hardy in temperate Australia.

PLATYCERIUM VEITCHII (Silver elkhorn).

A fairly rare and beautiful species that grows in central and northern Queensland mainly in rock crevices in low rainfall areas. It has a thick, fleshy texture with a dense silver hair covering which acts as a water-conserving device, making it drought tolerant and frost resistant. Easily grown on trees, slabs of wood or hanging baskets, it prefers more light than other elkhorns. A very pretty elk.

IN GENERAL:-

Diseases - Few pests attack Platyceriums. Slaters can be a problem in the plant if bananas are used as a source of food.

Fertilizer - Use sparingly during the growing summer months. Small amounts about every two months.

Water - In the hot summer months water every second day, twice a week during the warm months and less in the winter.

Growth - Both *superbum* and *bifurcatum* once established are good growers and will tolerate most weather conditions in W.A. *Hilli* and *veitchii* are slow growers and require a little more attention in colder areas. You will find that if you keep them drier in winter the plant will grow better in the warmer months.

References: D.L. Jones & S.C.C. Clemesha - Australian Ferns & Fern Allies.

D.L. Jones - Encyclopedia of Ferns.

Written by Colin & Margaret Mace,
Mace's Nursery, Bunbury, W.A.

PLANT A GARDEN FOR YOUR SOCIETY

First plant four rows of "peas", Presence, Promptness, Preparation and Preservation. Next plant three rows of "squash". Squash gossip, squash unfair criticism and squash indifference. Then plant five rows of "lettuce". Let us be faithful to duty, be loyal and unselfish, be true to our obligations, obey rules and regulations and love one another. No garden is complete without "turnips", turn up for meetings with a smile, new ideas and with determination to make everything count for something good and worthwhile.

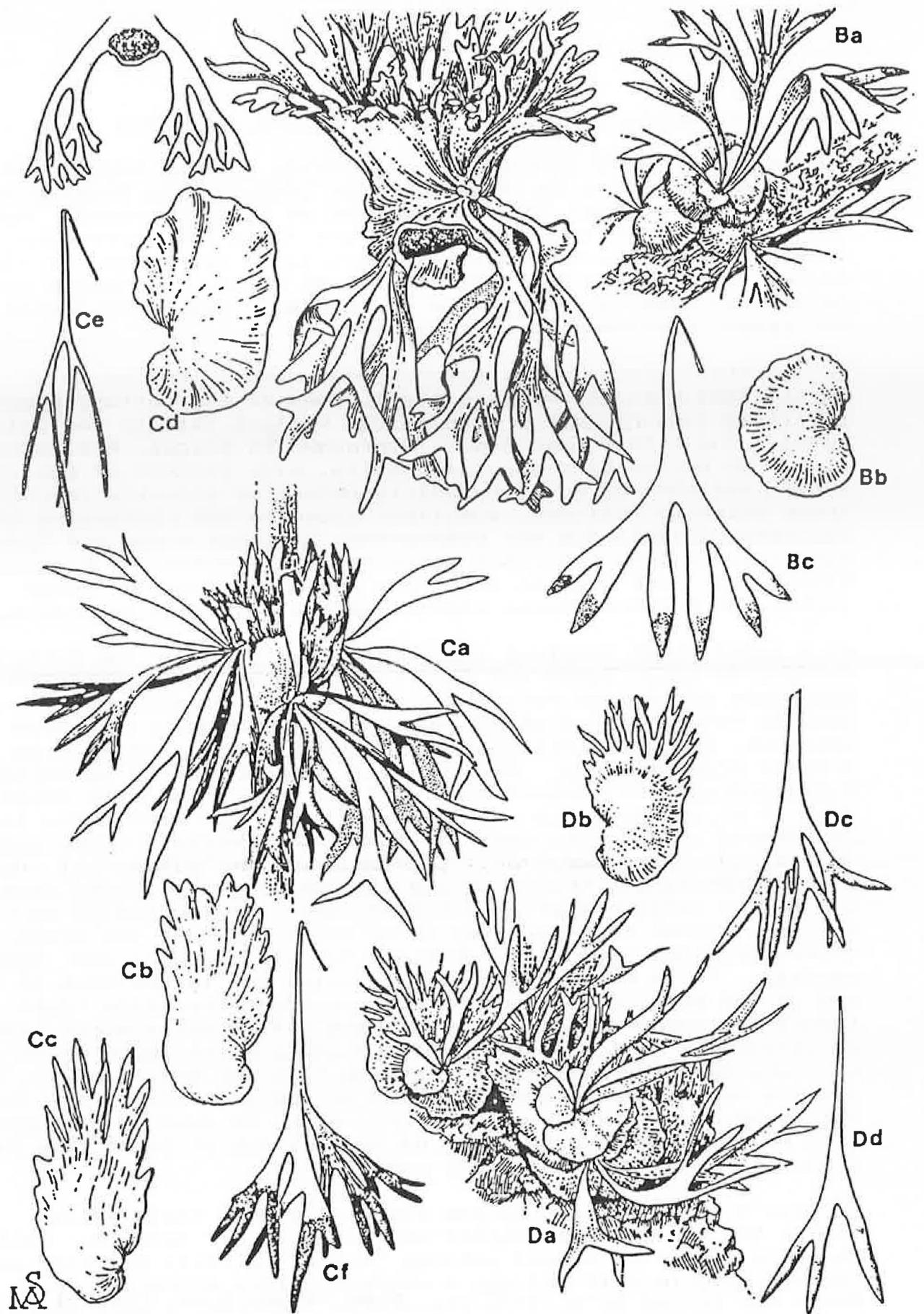


Fig. 28.6. A. *Platycerium superbum*. Aa. habit x $\frac{1}{18}$. Ab. fertile frond from below x $\frac{1}{36}$. B. *Platycerium hillii*. Ba. habit x $\frac{1}{18}$. Bb. nest frond x $\frac{1}{12}$. Bc. fertile frond from below x $\frac{1}{12}$. C. *Platycerium bifurcatum*. Ca. habit x $\frac{1}{24}$. Cb., Cc. & Cd. nest fronds from various plants showing variation in lobing. Cb. & Cc. x $\frac{1}{12}$. Cd. x $\frac{1}{15}$. Ce. & Cf. fertile fronds from below from two different plants x $\frac{1}{12}$. D. *Platycerium veitchii*. Da. habit x $\frac{1}{18}$. Db. nest frond x $\frac{1}{12}$. Dc. & Dd. fertile fronds from below from different plants x $\frac{1}{12}$.

(This page copied from "Ferns of Queensland" by S.B. Andrews)
 N.B. Scale has been increased by 40%.

Report on Outing to Cabbage Tree Creek, 23 June 1991

Our visit was made through Avoca Reserve, a Crown Lands Trust which incidentally, is chaired by our Leader. The Reserve is an unspoiled area about 10 km south west of North Richmond. Recent heavy rain had left the bush clean and fresh and seeing the numerous grass sticks and woody pears alone was worth the visit. Access to the creek (and the ferns) was steep, and though not hazardous, some of the fifteen in the party less sure footed than our Leader proceeded very cautiously.

During the course of the descent Peter drew attention to Cheilanthes distans and C. sieberi, then at the bottom, Elechnum cartilagineum, Pteridium esculentum, Pellaea falcata and Culcita dubia. The little used track, overgrown in places, kept progress slow. We passed Lindsaea microphylla, wide patches of Doodia aspera and then Pyrrhosia rupestris before we actually reached the creek which we followed, sometimes crossing and recrossing it. Sticherus flabellatus was widespread, Elechnum nudum and Todea barbara were prominent near the water and a number of Platycterium bifurcatum were seen in the trees and on the edge of large rocks. The few tree ferns sighted were all Cyathea australis.

At a point which involved some scrambling, four of the party decided to have lunch and finish early - a similar decision had been made earlier by Pete and his five year old son. Peter pointed out Asplenium attenuatum, its bulbils make this fern conspicuous, Sticherus flabellatus, Hymenophyllum cupressiforme and a small Grammitis sp. Abiding by "Flora of N.S.W." we called it G. billardieri, but superficially it did seem to fit the description of G. meridionalis - an examination of the spore size is often needed in order to separate these two species. There were several adjacent clumps of this fern, numerous plants but none with fronds longer than 7 cm and the many fertile fronds examined all bore a large number of pairs of sori - we counted 15 on average. Other ferns sighted as we continued down the creek included Adiantum hispidulum, Pellaea falcata var nana and Doodia caudata. Three more of the party elected not to continue to the end of the walk, despairing of ever reaching the place "just around the corner where the bush opens out". But shortly after we arrived at that promised spot and ate a quick lunch as we sat on rocks near the junction of Cabbage Tree and Bola Creeks. Exploring nearby Peter found Davallia pyxidata to add to our list before we commenced the return trek, which as usual was completed at a much faster pace enabling us to overtake at least some of the other members our original party.

It wasn't until we reached the steep climb out that the sun shone, the day suddenly warmed and we shed our jackets. Back to the cars and after a most welcome "cuppa" we still had time on the way home to call and see a wholesale fern nursery. Thank you Peter for taking us to this attractive location, a walk which is thoroughly recommended to at least those who are fit and agile.

Notes on Meeting at Mt Druitt, 20 July 1991

A first sighting of Peter's garden, the front dominated by a row of huge palms, tells one that it is special. But it is a garden that really merits closer study because of the varied collection of interesting plants, many of which are seldom seen in nur-

series. Of particular interest are the palms, cycads, orchids and of course ferns.

Our meeting attended by 15 members was held out of doors at the rear of Peter's property on a perfect winter's day. During the proceedings we were enthralled by a family of Spotted Pardalotes, a few feet away busily homemaking in one of Peter's large hanging baskets. At the conclusion of the brief meeting Peter conducted members through his large hot house, very large shade house and the garden. The many ferns admired during our visit included: In the hot house, Diplazium queenslandicum, later others of this species were seen in the shade house and in the garden, some with a prominent trunk, Microsorium punctatum with fronds pale yellow rather than the normal green, Nephrolepis auriculata and N. hirsutula (also seen in the shade house), Davallia denticulata, Colysis anpla of gigantic size spreading across the floor and being trampled on, C. sayeri, Oenotricha tripinnata, Doryopteris concolor and then finally Humata repens.

In the shade house, Lycopodium phlegmaria, L. proliferum, L. lockyeri and L. marsupiforme - the last two of these were only described in 1985 and are not in most of our books, Asplenium simplicifrons, A. polyodon, Lastreopsis acuminata, L. decomposita and L. tenera, Pteris umbrosa, Blechnum ambiquum, B. whelani, B. wurunuran and B. articulatum, the stipe bases and tip of the rhizome almost filled its 10" pot, a very robust fern topped with brilliant pink new fronds, Diplazium dilatatum, Sticherus flabellatus var compactus, Adiantum hispidulum, A. whitei, Peter said that this fern now believed to be a variety of A. hispidulum, arrived as a volunteer in a 10" pot in which a palm was growing, it now completely fills the pot.

In the garden, Platycterium superbum an outstanding specimen, An-
giopteris evecta, Doodia aspera covering a large area, and two fine ferns from Lord Howe Island, Diplazium melanochlamys and Cyathea brevipinna.

Peter offered this tip, when dealing with ferns that have been dug up or otherwise moved. Place fern in a large clear plastic bag and seal, ensure that there are no holes in top of bag or it might fill with water, leave several months for the fern to establish, then open bag for a further few months - for this stage it may be necessary to invert the bag so the opening is at the bottom.

Thank you Peter for your hospitality and for showing us your remarkable collection of ferns.

Report on Outing to Bowens Creek, 17 August 1991

The Mount Irvine Road from Bilpin is now closed to vehicular traffic and so it is now a splendid walking track through attractive bushland. Traversed, as 14 of us did on a sunny winter's day with cars waiting at the Bowens Creek end, it is all down hill walking and no stress except for initial fine tuning of the car shuttle.

Ferns listed on the way to Bowens Creek, in order of sighting, were Gleichenia dicarpa, Pteridium esculentum, Gleichenia microphylla, Lycopodium laterale - all by no means rare, these tassels always seem to evoke our curiosity, Iodea barbara, Gleichenia rupestris - this meant we had sighted all three local members of this genus, a good opportunity for the dilettante to check identification features, Calciata dubia which proved to be

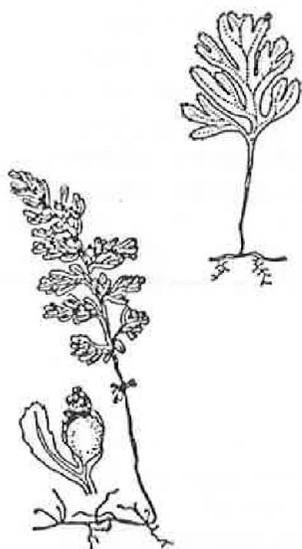
easily the most frequently seen fern on the day, Blechnum cartilagineum, Asplenium flabellifolium, Lindsaea microphylla, L.

linearis (thanks Rose for spotting this one), Schizaea rupestris, Blechnum ambiguum, B. wattsi, Sticherus flabellatus, Pyrrosia rupestris, Blechnum nudum and Cyathea australis.

Lunch was eaten beneath Doryphora sassafras covered in showy white flowers and Peter showed us the less spectacular but quite rare shrub Cyphanthera scrabella which was growing nearby. Near our lunch spot grew Lastreopsis microsora, L. acuminata and Hypolepis glandulifera.

Fortified by lunch we followed Peter along the Creek marvelling at his keen sight as he showed us three tiny filmy ferns, Hymenophyllum cupressiforme, H. pumilum - this one is rare and has only been recorded in a few locations, and H. marginatum which is not so rare but is nevertheless seldom by all except the most observant. Grammitis billardieri was also prominent among the same mossy rocks. At this point a few of us were reminded of the cardinal bushwalking rule "Don't lose sight of the leader" as only part of the party proceeded further upstream along a wallaby track. Additional ferns recorded were Blechnum patersonii, Lepidopteris fraseri, Pellaea falcata var nana, Cyathea leichhardtiana and Microsorium scandens. Most remarkable though were the hundreds of Blechnum nudum thriving on huge mounds of silt and decomposing leaves and debris.

Altogether a day of many pleasant memories not the least being of the numerous honeyeaters, grey thrush and bold little scrub wrens.



1 H. pumilum C. Moore

Delicate epiphyte. Rhizome long-creeping, branched, dark brown to black, young parts sparsely covered with red-brown hairs. Fronds to 3.5 cm long; stipe not winged, wiry, 4-17 mm long; rachis usually winged; lamina 1-pinnatifid, glabrous, to 2 cm long and 0.5-1.5 cm wide, margins toothed. Sori 1 or 2 per frond, at the apex; involucre \pm circular to oblong, apex rounded, toothed; receptacle included. Epiphytic in cooler rainforest of the Blue Mtns and adjacent ranges; uncommon. CC CT

3 H. cupressiforme Labill.

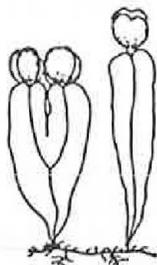
Common Filmy Fern

Rhizome long-creeping, much-branched, dark and wiry, young parts sparsely covered with red-brown hairs. Fronds 2-9 cm long; stipe not winged, 0.5-3.5 cm long; rachis with a narrow, entire or toothed wing; lamina 1-3-pinnate, mostly 1-pinnate with primary pinnae pinnatifid, glabrous, 1.5-6 cm long and 1.5-2.5 cm wide, margins toothed. Sori borne on the upper side of the secondary rachises, terminal on short lateral segments; involucre obovate, apex rounded; receptacle club-shaped, included or slightly exserted. Usually found growing in mats on rocks in rainforest, also in protected sites in drier areas. NC CC SC NT CT ST CWS; Qld, Vic., Tas.

4 H. marginatum Hook. & Grev.

Bordered Filmy Fern

Rhizome long-creeping, filiform, black or dark brown. Fronds to 3.5 cm high and 2.5 cm wide; stipe dark, not winged, with a tuft of reddish brown hairs at the base; lamina simple or once forked (rarely forked 2 or 3 times), glabrous, light green, the margins with a black band 1 or 2 cells deep, not toothed. Sori marginal, solitary at apex of frond or of each lobe; involucre \pm circular or ovate, 1-2 mm long, the marginal black band 2 or 3 cells deep; receptacle cylindrical, included within the involucre. Grows on rocks in rainforest, usually near creeks or waterfalls. CC NT CT; Qld, Tas. [Craspedophyllum marginatum (Hook. & Grev.) Copel.]



Report on Mid North Coast Outing on 4 & 5 May 1991.

Our outing really got under way on the Friday with Phyllis and John arriving at Charlie's place in Wauchope for lunch, then Rose and Patsy arriving from Sydney. After lunch we piled into the 4 wheel drive for a quick jaunt to Blue Creek Dam (the old Wauchope water supply), the afternoon quickly disappearing.

On Saturday morning we picked up Betty White from Sydney, and headed for Camerons Camp - but a detour found us at Sitting Bull and the Bluff, two picnic areas downstream from the Wilson River Reserve. Unlike the Reserve only a few ferns were found at each place. Lunch time found us at Camerons Camp where Jean Hope and friend from Coffs Harbour joined us. After lunch and a scramble for rooms we headed for Banda Banda State Forest - what looked like being a good trip was suddenly stopped by a large tree across the track. After investigating this spot we returned to the experimental pine plantation where we filled in the afternoon. Fern wise the day was disappointing but everyone had enjoyed the day.

Sunday saw all up bright and early, with the arrival of Phil Avery and party from Kempsey. We left camp and headed for Beech Plateau, with the usual snail pace our party set off on the round trip. We found the same ferns as last year, but noticed that several large ferns had disappeared. After a late lunch most headed for home while Rose, Patsy, Phyllis and John stayed over for another day. Overall the weather was pleasant and everyone had a most enjoyable week end. Lists of ferns recorded follow:

The Bluff: *Lycopodium* sp, *Gleichenia dicarpa*, *Christella dentata*, *C.parasitica*, *Asplenium australasicum*, *Pyrrosia confluens*, *Lindsaea microphylla*, *Sticherus flabellatus*, *Calcita dubia*, *Platycterium bifurcatum*, *Cyathea australis*.

Sitting Bull: *Adiantum aethiopicum*, *Doodia aspera*, *Asplenium australasicum*, *Christella dentata*, *Pyrrosia confluens*, *Blechnum nudum*, *B.cartilagineum*, *Dennstaedtia davallioides*, *Platycterium bifurcatum*, *Cyathea australis*.

Banda Banda: *Blechnum wattsi*, *B.patersonii*, *Asplenium flaccidum*, *Pyrrosia confluens*, *Microsorium scandens*.

Beech Plateau: *Lastreopsis acuminata*, *L.decomposita*, *Diplazium dilatatum*, *D.australe*, *Blechnum cartilagineum*, *B.nudum*, *B.patersonii*, *B.wattsi*, *Dicksonia antarctica*, *Grammitis billardieri*, *Hypolepis glandulifera*, *Todea barbara*, *Arachniodes aristata*, *Pyrrosia rupestris*, *Fellaea falcata* var *nana*, *Asplenium polyodon*, *A.flabellifolium*, *A.bulbiferum*, *A.flaccidum*, *Cyathea australis*, *C.leichhardtiana*, *Doodia aspera*, *Histiopteris incisa*, *Hymenophyllum flabellatum*, *H.cupressiforme*, *Sticherus lobatus*, *Tmesipteris truncata*, *Dictymia brownii*, *Microsorium scandens*, *M.diversifolium*.

Report on Mid North Coast Outing on 15 & 16 June 1991.

After a lot of mix ups with dates the June outing was finally held on the week end of 15 & 16 June. After an early lunch we all assembled at Jean Hopes. Jean, Rose Bach, Phyllis Brown,

John, Judy and Charlie set off for Woolgoolga Creek picking up Steve on the way. At Woolgoolga we turned inland to the Nature Reserve where we set off along the creek, crossing it about six times before we arrived at the Falls. It is a beautiful area with an abundance of ferns - we found 31 varieties during the afternoon. After a short break and a cuppa we all headed back to Jean's place, where we had a lovely dinner and an interesting discussion on ferns and touring Australia, the evening finishing up about 10 pm.

On Sunday we met for the 40 km drive to Glenreagh Falls. Norm coming along with Jean for the day, and Tony Winter and Steve meeting us at the Glenreagh Falls parking area having come by a shorter route. It would have been a short walk to the Falls if the track had been good - but we had to scramble over rocks, along a very rough path and across the creek. It was well worth the effort to see the view of ferns and orchids hanging on the cliff with the water trickling down. We were amazed at the Psilotum nudum growing from the cracks between the rocks. Also Blechnum ambiguum was very plentiful. It was a very successful day with 23 varieties of ferns being identified. After lunch by the creek we all headed for home, with everybody having enjoyed a very pleasant week end.

The following lists of ferns were recorded:

Woolgoolga: Adiantum diaphanum, A. silvaticum, Arachnioides aristata, Arthropteris tenella, Asplenium attenuatum, A. australasicum, A. polydon, Blechnum cartilagineum, B. patersonii, Christella dentata, Cyathea australis, C. leichhardtiana, Davallia pyxidata, Dennstaedtia davallioides, Dictymia brownii, Diplazium australe, Doodia aspera, D. caudata, and another Doodia species resembling D. squarrosa, Hypolepis glandulifera, Lastreopsis acuminata, L. marginans, L. microsora, Microsorium scandens, Nephrolepis cordifolia, Pellaea paradoxa, P. falcata var nana, Platynerium bifurcatum, P. superbum, Psilotum nudum, Sticherus flabellatus.

Glenreagh Falls: Adiantum diaphanum, A. hispidulum, Asplenium polydon, Blechnum ambiguum, B. camfieldii & affin. camfieldii, B. cartilagineum, Cheilanthes sieberi, Christella dentata, Culcita dubia, Doodia aspera, Grammitis stenophylla, Gleichenia dicarpa, G. rupestris, Lindsaea microphylla, Lycopodium cernuum, L. laterale, Psilotum nudum, Pteridium esculentum, Pteris vittata, Pyrrosia rupestris, Schizaea rupestris, Todea barbara.

Well Done Peter Althofer!

We have heard some great news! Peter Althofer is back home after a long spell in Dubbo Base Hospital. He is walking around and has even taken a mattock to the garden and also been out to his beloved Burrendong Arboretum. We pray that this progress continues and wish Peter a total recovery and look forward to sharing our interest in ferns. We are sure that all members of the Fern Study Group would want to join in sending our sincere good wishes to both Peter and Hazel. We look forward to having you lead us on the occasion of our next Burrendong working bee.

Pteridophytes of Eungella National Park

Peter D. Bostock, Botany Branch, Dept of Primary Industries, Meiers Road, INDOOROOPILLY 4068

Eungella National Park, of more than 50,000 hectares, is situated on the Clarke Range about 80 km west of Mackay in Central Queensland. Much of the park is above an altitude of 700 metres, and the third highest mountain in Queensland, Mt William (1259 metres) is within the park boundary. The park's geographic position between the 'wet tropics' of north Queensland and the subtropics to the south, coupled with the wide variation in land-forms, makes the area truly a 'mixing bowl' for ferns and ferns allies (this is also true of other plants, of course!).

While the top of the plateau at Eungella is mostly cleared for dairy farming, there is still an extensive area of complex vine-forest or rainforest along the rim of the escarpment and extending north along the Clarke Range, and east through the foothills. Finch Hatton Gorge is also included in the national park. The area is very wet! During the flood-rains of Cyclone Joy early in 1991, more than 2 metres of rain was recorded, and this resulted in large land-slips along the eastern escarpment. Such occurrences are not uncommon during any wet season.

But enough of the geography! The 'official' records of the Queensland Herbarium were consulted late last year, and produced a figure of some 70 species of pteridophytes for the area. If this seems a little low, read on... (Some new records for filmy ferns were recorded by John Croxall and Barbara Parris in the early 1970's but they didn't give duplicate specimens of all of their collections to the Queensland Herbarium).

Subsequently, Steve Pearson, a ranger with the National Parks and Wildlife service, began to take an interest in the ferns, and he sent quite a few specimens to the Herbarium for identification. I asked him to look for a few that should have been there, but weren't present in the Queensland Herbarium collections, and eventually the list of known ferns topped about 85 species. Included among Steve's recent finds (all are new 'official' Queensland Herbarium records) are *Adiantum silvaticum* (common in the area), *Diplazium longissimum* (uncommon), *Angiopteris evecta* (quite rare, only about 8 or so individual plants found), *Botrychium australe* (one small colony near Eungella township), *Blechnum whelanii* (common in some areas) and an *Asplenium* which has been tentatively identified as *A. parvum* (found near the top of Mt William).

In April/May this year, I was fortunate to be asked to survey ferns in the Central Queensland area, from Rockhampton north to Proserpine, and of course this included the Eungella area. My total time at Eungella was limited to 3 days, but I hoped this could be offset by the knowledge of the area which Steve and Alison Pearson could impart. I was constrained to spend one day along the rim to the south of Eungella township, one day in the Mt William area and one day in Finch Hatton Gorge.

On the first day (in fact, the first hour) at Broken River on the Rainforest Discovery walking track, I confirmed John Croxall's records of *Microtrichomanes vitiense* and *Gonocormus saxifragoides* on tree trunks beside the walking track. I also realised quite quickly that not only was *Lastreopsis microsora* present, but that *L. tenera* was also.

The latter, although quite common, more so than the former, was apparently unrecorded. While these two look quite similar in the field, they can be separated by comparing the short-creeping rhizome of *L. tenera* with the long-creeping one of *L. microsora*. *Lastreopsis smithiana* (otherwise more or less confined to the Lamington Plateau area in southern Qld) and *L. rufescens* are also in this area. I still have not satisfactorily worked out the exact number of species of *Diplazium* in the park - certainly *D. queenslandicum* is present, but probably also *D. assimile* and maybe also *D. australe*! *Deparia petersenii* (*Lunathyrium japonicum*) is also recorded.

Day 2, in the Mt William area, was altogether too short to do the area justice. On the walk into Cattle Creek, well below the summit of Mt William, one can see *Cyathea cooperi*, *C. robertsiana*, *C. rebecca*, *Blechnum whelanii* and *B. cartilagineum*, while in the creek, *Marattia salicina*, *Cyathea leichhardtiana*, *Blechnum nudum*, *B. patersonii*, *Todea barbara*, and *Dicksonia herbertii* are to be found. Two species of *Grammitis*, *G. wurunuran* and *G. stenophylla* are present on rocks in the creek. Filmy ferns are abundant, and include *Hymenophyllum baileyianum*, *H. samoense* (previously known only as far south as Mt Spec) *H. walleri*, *Crepidomanes bipunctatum* and *C. walleri*, plus *Selenodesmium elongatum*. Other species of note in this area are *Tmesipteris truncata* and both species of *Vittaria*. *Elaphoglossum callifolium* is also recorded from further up the creek, under the lee of Mt William.

Day 3 - Doolamai Falls in Finch Hatton Gorge - was notable for the steep climb up a long series of switchbacks, followed by a mad scramble around and over giant boulders which form the bed of the creek above the falls. This area produced two surprises - *Vaginularia acrocarpa*, which according to Qld Herbarium records was previously known to occur only as far south as Ravenshoe, and *Microgonium bimarginatum*, which occurs both north and south of the region, but was not recorded from Central Queensland itself. *Humata repens*, *Ctenopteris contigua* and both *Vittaria* species were common on boulders or tree trunks in the gorge. In the carpark, Steve Pearson pointed out a colony of a terrestrial *Ophioglossum*, probably *O. petiolatum*. *Doryopteris concolor*, *Microlepia speluncae* and *Cheilanthes tenuifolia* are also present in the car park area. On the road into the gorge, a lone plant of *Blechnum orientale* stands in swampy ground near a creek crossing. We saw no others of this species in the area.

In summary, the pteridophyte flora of Eungella National Park currently stands at about 100 species (plus some varieties) in 29 families. I can recommend a visit, but don't forget the 'Rid' - scrub ticks and leaches are a feature of the landscape and not to be easily avoided!

Flora of N.S.W. Volume 2 Gwen Harden (ed.)

SPECIAL OFFER The Royal Botanic Gardens and N.S.W. University Press have released the second volume of this definitive four volume guide to plant life in N.S.W. The magnificent 630 page Volume 2 covers plants in the eucalypt, acacia, grevillea, banksia and boronia families, among others. Each species is accompanied by a line drawing and there are hundreds of colour photographs.

Orders may be placed direct with The Friends of the Royal Botanic Gardens, Mrs Macquaries Road, Sydney, 2000 (ph. 02 398 8900) at \$56 per hardcover edition - a saving of \$14 on normal retail price, collect or plus \$7 postage and packing. Offer expires November 1, 1991.

Report on S.E. Qld Group Excursion to Queensland Herbarium

On Sunday 4th August 1991, the South Eastern Queensland Group of "Fernies" met at the gate to the Herbarium at 9.30 a.m. There was a good roll-up of about 35 members and visitors, and they were escorted to the annex where the fern collection is housed.

Paul Forster kindly gave his time to assist Peter Bostock to show us some of the work being done in the Herbarium in relation to ferns. Firstly Peter explained the methods used for the preservation and storage of specimens, and the extent of the collection. Ferns comprise only a small percentage of the Herbarium collection, but there is a large number of fern specimens from Queensland and New Guinea.

Then we had an opportunity, in small groups, to inspect the sections holding the fern specimens, while at the same time others members were able to examine more closely certain specimens which were taken to the meeting room.

Finally before the meeting ended we were shown slides taken by Peter on the recent trip by the 2 botanists Peter and Paul to parts of Cape York Peninsula. The Maleny Springs area and Glennie Tableland are so remote that these places are inaccessible to most of us, so it was most interesting to see such very good slides of these places, and of the large range of ferns occurring there.

The group expressed their appreciation to Peter Bostock and Paul Forster for having made this visit to the Herbarium possible.

(Our thanks to Lorna Murray for the above article)

Generous Donors

Over the years our Group has made sizeable donations to Burrendong Arboretum and the large fern collection that has been established there. Some of the funds were raised by buying in and selling ferns at SGAP NSW Regional Exhibitions. Another important source of funds is the humble raffle usually conducted at monthly meetings of the Sydney Group. Tess Taylor handles ticket sales and there is no better seller. The ferns offered as prizes are invariably donated, resulting in the proceeds representing net profit. At our July meeting ferns were donated by Geoff Long and our host Peter as well as by Rose Bach and Roy and Bea Duncan. Gratitude is expressed to all donors but particular thanks must go to Rose and the Duncans for contributing so many ferns. Their generosity is greatly appreciated. Apart from the boxes of ferns given to us at our latest meeting, thank you too for the many other occasions when you have given ferns towards our fund raising endeavours.

Deadline for next Newsletter

Contributions are most welcome. Closing date for next issue is 15 November 1991. Please forward to Secretary.

FORTHCOMING EVENTSIn the Mid North Coast of N.S.W.

Saturday, Sunday 14 / 15 September 1991, Outing to Swans Crossing
This ferny area is in the Kew / Comboyne district. For details of meeting place please contact Charlie Charters (065) 85 6296.

In the Sydney Region

Week of 16 to 22 September 1991, "Spring in the Gardens"
One of our members, Phil Lane is managing the N.S.W. Region's Exhibition this year at the Royal Botanic Gardens and is in need of all the assistance that he can get. If you are willing to help in any capacity, please contact our Secretary or alternatively phone Phil, outside business hours on (02) 948 7496.

Sunday 27 October 1991, Meeting at Engadine
At the home of Martha & Tony Henderson, 30 Terrigal Street, Engadine. From Princes Highway turn into Cambrai Avenue then left to Lantana Road, left to Jellingel Road, right to Tibboburra Place and right to Terrigal Place - look for the home with the prominent native garden. If you get lost, phone the Hendersons on 520 4990. Arrive from 11 am, meeting sharp at 11.30 am, study session on Asplenium spp., those that are confined to the Southern parts of Australia. Enquiries to the Secretary on 528 4881.

Sunday 17 November 1991, Outing to the Watagans
Bea and Roy Duncan have kindly agreed to us gathering together at their home prior to leading the way to the Mountains for a circular walk of about 3 to 4 km to Heaton Lookout. Lunch at our cars. The Duncan's home is at 167 Freemans Road, Morisset and we plan to meet there around 9.30 for 10 am sharp start. Some members have expressed interest in travelling from Sydney on the Saturday prior to the Outing and the Duncans are happy to have you call that day and will help with advice about accommodation.

Saturday 30 November 1991, Function at Camperdown
Our last get together for the year is to be at the home of Anne and Geoff Long, 23 Fowler Street, Camperdown. Plan to arrive from 11 am and as usual on these occasions it is planned to pool lunches. Please contact Anne 519 5536 to advise whether bringing meat, salad, sweets, etc. Tea and coffee will be provided. In keeping with the tradition of these functions please bring a gift (or several according to the number in your party).

In South Eastern Queensland

Week end 14 & 15 September 1991, Q'land Region Native Flower Show
To be held at Redeemer College, 745 Rochedale Road, Rochedale. Fern Display set up 3.30 pm Friday 13 September.

Sunday 3 November 1991, Meeting at Sunnybank Hills
Visit to Cliff Ritchie's Fernery, 85 Lang Street, Sunnybank Hills. Discussion Christella spp and related members of the Thelypteridaceae Family.

Sunday 1 December 1991, Christmas Breakup at Mt Glorious
To be held at Joyce Ward's home, Fahey Road, Mt Glorious. Meet at 9.30 am. Excursion to be arranged after lunch. Bring Christmas fare and a fern for a Fern Exchange.