

ASSOCIATION of

S.G.A.P. Fern Study Group

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JOHN LEE

A Tribute contributed by Bill Jones

Members of the Fern Study Group will undoubtedly be aware of the death earlier in the year of John Lee, a man of many talents, a marvellous sense of humour, friendly and a real gentleman. John was 85 and had battled a serious illness over the last few years, but not many people would have known that because of his spirit and determination in those years.

John was a member of the Fern Study Group for many years and Secretary for 11 years, an indication of his interest and dedication. I suspect that John's interest in ferns may well have been aroused in his former house and surroundings at Castlecrag, which was in a shady gully surrounded by natural ferns. Those who were fortunate to have visited his house at Castlecrag were always fascinated by it and the marvellous native garden on the roof and the rock incorporated into the house.

John was one of the early members of SGAP and he always participated actively in it. In SGAP's early flower shows, John often demonstrated garden techniques and I have been immensely impressed by the number of the present members of SGAP whose first memory of a contact with SGAP was that with John at a SGAP flower show. They always remember his friendliness and his enthusiasm.

John was a member of the North Shore Group of SGAP and was President for several years. When Harbourside Group was formed, John became a member of this group as well, and he was President of the Harbourside Group for several years and a regular member until his death.

John worked at OTC and I understand he had a distinguished career with them including some years in Fiji before the war.

John was a dedicated family man and to Addie, who shared in all of John's enterprises and John's children and grandchildren, we extend our sympathy and love.

Vale John Lee

Members who had met John were no doubt saddened at his passing in March this year. John was one of the ten S.G.A.P. members who met in November 1974 and decided to form the Fern Study Group. The meeting was held in John and Addie Lee's home, as was the inaugural meeting in February 1975. A warm friendly man, John was possibly our most esteemed member. Thank you Bill Jones for providing the preceding tribute (page 1).

When Do Ferns Shed Spore?

There has already been some response from members reporting dates when ripe spore had been observed on various of our native ferns.

Details of this project were given in the March 1990 Newsletter. Briefly, the object is to compile a list of dates (time of the year) when ripe spore had been observed. It is envisaged that it will be necessary for members to continue keeping a record of sporing times by periodically noting down this information. From time to time the information can be forwarded to the Secretary. When sufficient data is available it is proposed to schedule it for analysis and reporting in our Newsletter.

One of the first responses to the request that members note and report observations of ripe spore came from Ray Best. Enclosing a copy of the recording sheet from our March Newsletter, Ray wrote as follows:

"Unfortunately, ferns do not behave like vegetables or flowering plants. There appears to be an uncertainty principle, which probably accounts for lack of recorded material. Also, lots of so called spores sold, comprise mostly annulus cells and waste material. Ask any experienced grower.

Over the years in collecting spores and propagating from them; I realized the difficulty of attempting to define the exact time of fertile activity. About this time also a local wealthy friend decided to invest quite a deal of money in building a large fern house making a study in propagation from an overseas source. He purchased, at some considerable expense, from a large continental firm several quantities of many exotic spores. After completing all the conditions required, he commenced propagation.

After virtual complete failure he decided to consult me. I requested samples of his spores for investigation. He assumed that I desired to acquire some for my own propagation, and refused to provide any. After continued failure he decided to allow me to examine them with his supervision. Thus it was with the use of my microscopes we examined the so called spores, only to find masses of annulus cells and waste material sold as spores. Obviously, even the so called reputable firms lack the knowledge to understand what they are doing, with very wasteful and unsatisfactory results."

Thank you for the above item, Ray. One lesson that we should glean from Ray's article, is to check with a hand lens before assuming that we are looking at spore.

More of Grammitis pseudociliata

In the March 1990 Newsletter in the article titled "Tasmania the Polystichum State" reference was made to a "different" Grammitis collected by Irene Cullen.

Later enquiry of Golda Isaac of "Ferns & Allied Plants of Victoria Tasmania & South Australia" fame, brought forth some helpful information about G. pseudociliata. Also, Golda forwarded a precious frond which had been collected in Tasmania in company with Michael Garrett. Golda included a pressed specimen of G. magellanica ssp. nothofagetii. These two ferns are splendidly drawn in the aforementioned book by Betty Dunca & Golda Isaac. A photocopy of the samples provided by Golda is shown below.



Acting on Golda's advice, a letter was written to Michael Garrett who was kind enough to reply. The following is part of Michael's response.

"Although I have not found Grammitis pseudociliata in Mt Field National Park, there is no reason why it couldn't occur there. I originally found it near Hastings Caves in far SE Tasmania, and have since only found it on the west coast at Macquarie Harbour and on the Arthur River in the NW. Just the other day, I also heard of a fourth sighting, again in the SE of the State.

However, all these locations have conditions similar to those around Russell Falls. The one key factor is that all plants found have been growing on live trees of the Tasmanian endemic, Eucryphia lucida (Leatherwood). I know that this tree is common around Russell Falls.

Although I would certainly not discount the fact that your plant is G. pseudociliata, I would think it more likely to be G. billardieri. The sori number and arrangement is similar in both ferns. Plants of G. billardieri may be completely glabrous, or more usually have hairs on the stipe, base of frond (sparse), and perhaps on the rachis. G. pseudociliata is recognisable even from a distance, with a dense covering of pale hairs over the whole lamina and stipe. The fronds of G. billardieri are mid-green in colour, glabrous and shiny, with entire regularly undulating margins. Fronds of G. pseudociliata are pale green and dull, with entire margins in young plants, but with age get very irregularly lobed or toothed margins. I have not found G. magellanica ssp. nothofageti at Russell Falls, but it is common not far away. However, its fronds are long and narrow and completely glabrous.

I hope this information hasn't added to the confusion. Professional botanists in Tasmania still scratch their heads when confronted with some members of this genus. It makes it a bit harder when you don't have in front of you specimens of different species with which to make comparisons."

More Spore Please

A request by Jenny Thompson

Dear Members, I wish to update and replenish the spore in the Spore Bank as some of it is over two years old. I would be grateful for any spore donations so I can have a fresh supply when requested. I would also like information from those members who have received spore from the Bank, on your success rates as this will give me some idea on how long to keep the spore of various species.

Spore Available from the Spore Bank

Requests for spore from the Spore Bank should be accompanied by a stamped, addressed envelope, the standard size envelope and postage of 41 cents, is usually sufficient for orders of up to 6 species.

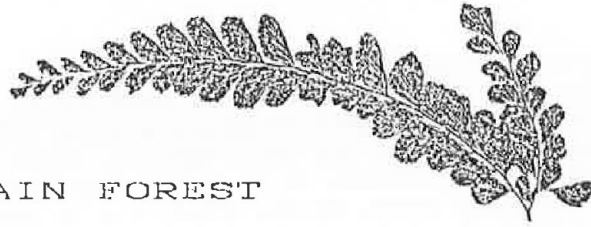
Listed below are species for which spore is currently on hand. Where known, the month and year spore was collected are shown. Although some spore is old, the spore appears to be in good condition and is maybe worth a try.

Asrostichum speciosum -, Adiantum (Comboyne) 4/86, A. formosum 4/90, Amphineuron opulentum 9/85, 5/89, Arachniodes aristata -/89, Arachniodes (Variegated) -, Blechnum minus 3/90, B. nudum 8/88, B. wattsi 3/90, Cheilanthes distans 3/90, C. sieberi 3/90, Christella dentata 7/89, c. subpubescens 8/83, Cyathea australis 11/83, C. australis (Blue Tinge) 11/87, C. cooperi 1/88, C. cooperi (Robust) 1/86, C. cooperi (Rusty) -, C. cunninghamii -, 3/86, C. leichhardtiana -, C. rebecca 11/82, C. woollsiana -/86, Davallia solida 12/85, Dicksonia antarctica -/87, Diplazium australe -, Lygodium reticulatum -, Ophioglossum pendulum 4/84, Pellaea falcata 3/90, Platycerium bifercatum 11/84, P. superbum 9/83, Pronephrium asperum -, Psilotum nudum -, Pteris comans 4/84, P. pacifica 9/85, P. (Terania Creek), P. umbrosa -, Rumohra adiantiformis 2/83, Sphaerostephanos unitus -.

Jenny's phone number for any enquiries regarding the Spore Bank is (02) 520 5039.

FERNS

OF THE RAIN FOREST
CALDER CHAFFEY



ASPLENIUM - SPLEENWORTS Family - ASPLENIACEAE.

Those unused to growing ferns could be forgiven for thinking that members of *Asplenium* belong to several different genera. What could look so different as a Bird Nest fern (*A. australasicum*), Hen & Chicken (*A. bulbiferum*) and Necklace fern (*A. flabellifolium*)? Frond shape cannot be used to identify either genus or species in this family as there is such a wide variation. Yet there is a common structure which sets this genus apart. Two aspects of this structure can be readily identified in the field. Rhizome scales are small and dark and have a latticed structure referred to as clathrate or looking like a stained glass window. Secondly the sori are elongated and covered by an indusium that opens towards the midrib.

A third structural entity which can only be ascertained in the laboratory is that of the vascular bundles of the stipes which are X shaped. Veins on the fronds are also branched while the sori are usually on the upper vein.

The original *Aspleniums* probably had large finely dissected fronds with one vein and one sorus to each lobe of their leaflets. The original ancestor was one common to *Davillia* (hare's foot ferns) and *Asplenium* from which both evolved. Simple frond *Aspleniums* probably evolved from these pinnate forms with a *Davillia*-like sorus at the end of a short vein. The vein shortened so that the sorus came to rest on the side of the next vein and extended along it, the indusium opening towards the midrib.

Spleenwort was the common name originally given to various members of the genus *Asplenium* in Scotland where at least one species was brewed into a kind of tea and used as a tonic. All Australian *Aspleniums* make excellent pot plants or cultured epiphytes. They are easy to grow in a very loose well drained potting mix.

A. THE BIRD NESTS.

There are three Australian species of bird nest ferns.

a. *Asplenium australasicum*.

The rhizome is thick, fleshy and tufted with black to purple brown clathrate scales 25 mm long by 2 mm wide. Stipes are very thick and very short. Fronds are erect but spread into a rosette forming a funnel. They are simple and undulate in many specimens, thick and leathery, up to 2 m in length by 200 mm in width, obtuse to acute at the apex. The rachis is almost flat on the dorsal surface but markedly keeled underneath. Sori are about 4 mm apart and extend from the midrib to about 3/4 of the width of the frond along the lateral veins.



The roots are dense and spongy covered with persisting brown root hairs. The root system is relatively very small which makes these ferns easy to contain in pot culture, even specimens up to 4 m across. The fronds make a funnel shaped structure which gives them the typical 'bird nest' shape and collects leaf debris in the forest which rots and forms an excellent growing medium. You will often find other epiphytes such as hare's foot fern growing in this humus. The fern is usually found as an epiphyte growing on rain forest trees but often also in the ground or amongst roots. It does best in light shade. It rejects complete shade and continuously wet soil but will grow in quite dry conditions. The characteristic undulate leaves are very attractive.

It is easily cultured from spores and occasional offsets may be separated and grown. Division also works, the main plant being cut through the rhizome into 3 or 4 equal segments and the fronds reduced to one third. This method is slow to reproduce the new plants and prone to failure and cannot be recommended.

Distribution is from Queensland in the McIlwraith Range to southern coastal NSW. Good specimens can be seen in practically any rain forest or rain forest remnant from Lismore to the Queensland border. Some of the best in the district are in the small restored forest patches in the Rocky Creek Dam reserve.

b *Asplenium nidus*.

This fern is similar in many ways to *A. australasicum* but with some fundamental differences. The rhizomes have thin clathrate scales 20 mm in length by 2 mm in width with hair-like appendages along their margins, black on areas exposed to light, purple brown where covered with leaves. It is smaller and the fronds make an open bowl-shaped structure on their proximal parts, bright green, 1 m in length by 100 mm in width. The rachis which is dark brown is markedly rounded above with an insignificant keel beneath. Veins are once or twice forked and unite to become continuous 0.5 mm from the frond margin. Sori extend from the midrib to half the width of the frond.



It is very variable and there are many natural varieties which have not been well studied or named. Convolute forms are sought after. *A. nidus* is cold sensitive and its natural distribution is N.E. Queensland (Capt York to Tully) Malaysia and various Pacific Islands. It grows in colonies on rocks or in trees and will grow well in this district provided it is not in a frost area.

There is much confusion about this species and the name *nidus* is commonly referred to *australasicum*. It is very common to see *australasicum* wrongly labelled in shops and nurseries.

c. *Asplenium simplicifrons*.

The third Australian bird nest fern has a fleshy tufted rhizome covered with broad scales. Fronds are narrow 600 mm long and 30 mm wide with an acuminate apex. Sori do not reach either the margin or midrib. This is a slender fern never reaching the size of the other bird nest ferns and occasionally has offsets. It is a common epiphyte or lithophyte in N.E. Queensland and will grow in this district if protected from frost.

(Thank you Calder for allowing us to use the above article. Recalling Calder's little sketches, we should have no more difficulty sorting out *australasicum* and *nidus*, provided we can remember which has the keel below! Calder originally wrote the item for the Far North Coast SGAP Group's Newsletter)

OBITUARY

Word has just been received (16 May) from Irene Cullen, that Allan Ward has passed away. Allan, husband of Joyce Ward, is well and affectionately known not only to South Eastern Queensland members, but to many friends and acquaintances in Sydney, where the Wards were prominent in SGAP. How time moves inexorably on, is it just on 10 years since the Wards left Sydney? We extend our sincere sympathy to Joyce.

More Growers Please Report

In our June 1989 Newsletter several members who purchased ferns at the N.S.W. Region's 1988 Exhibition held at Bankstown, provided information concerning the performance of those ferns.

A year has elapsed since the comments were published and Kyrill Taylor has obligingly provided another report bringing us up to date with the performance of ferns that he bought. What has happened to that same group of ferns bought by other members? If you acquired ferns at the September 1988 Exhibition would you please supply comments. This request applies whether or not you provided information last year. Please write and tell us how well or otherwise the ferns that you bought at the Exhibition have grown.

Kyrill's report, written in his inimitable style, follows on the next page.

A GROWER'S FURTHER EXPERIENCE.

Lycopodium phlegmaria : As reported in Newsletter No. 45 of June 1989, this plant continues to THRIVE (No! this is not a "commercial"!) Eighteen months after purchase in its 3" pot this plant has such growth in size (diameter) of stem - or is it 'stipe'?- that I suspect some one is slipping it steroids or even "elephant juice" - each new stem exceeds the previous one in that the diameters are greater and the length before branching, forking or bifurcating is increasing. Two upright new stems currently measure 4mm dia. and 6mm dia. respectively - the 4mm stem measures 14cm. to 'fork', whilst the 6.5mm stem measures 16.5cm to fork - colour is rich and lush and if I were a gourmet caterpillar I'd make straight for it! Tell me Doctor, is this child of ours "normal"!?

Lycopodium proliferum : When last reported this weaker cousin of the above was lingering between life and death - happily for all of us 'some body' pulled the 'life support' plug on this specimen and it slipped into that great "Pteridophyta in the sky" where all such ailing species recline.....

Pteris tripartita : Sturdy growth! Let's talk about this for a time - two stout and 'luscious' new stipes came and were cut off in their youth by voracious snails leaving the plant with little to show for itself other than very small (although healthy and 'typical') fronds - snail bait, a torch and the patience which comes with age (mine!) brought to an end the threat to its existence: Voila! What do we now have- (Allan Woollett attendez vous!) Stipe A = 660mm (2'2") to lamina - Tripartita- which has a spread of 120cm (3'8"). Stipe B = 840mm (2'9" to lamina still unfurling...Stipe C= fiddle head now 3" above the almost auricular form of the tufted rhizome. Stipe D = just emerging, in very healthy form, from the rhizome - question is, "Should I move the fence to allow it more 'spread' - should I remove the Euc. Robusta which has 'over seen' its development so far or run the risk of the swamp mahogany being pushed over anyway!?

Colysis sayeri : Remains abundantly happy in its 10" basket - my earlier concerns with the threat of a Sydney winter were unfounded - left in the fern house with lattice strips as roof and cover it not only survived but has become thicker, greener, and more spreading in style- hum! probably be some trauma when I transfer it/him/her to a 16" basket in the near future - do they make larger diameter baskets?

Microsorium superficiale : "An average plant.....to start with....." description of the earlier report is something better than the current condition would warrant - where have I gone wrong!? No, must be the plant!! It appears to be in a state of suspended animation - maybe it was born close by a politician and has been in a state of stultification ever since! I have found this plant to be attractive to beetles and such like and to suffer "burn spots" whenever a frond comes into contact with a wire hanger - will treat this plant in an intensive care programme !

General Note:- It seems that no matter how "pacivated" the galvanized hangers of baskets may appear they do always(?) have sufficient residual acid on them to burn fronds of the softer and more fleshy fern species - this surely is a field of research to be investigated - is there an alternative to
galvanized hangers?

Pyrrhosia lanceolate :It is with regret that we note the 'passing' of this once 'slow start' specimen, it having joined L. proliferum in another "environment"....least said the better.. it was always a worry!

Fees Now Overdue

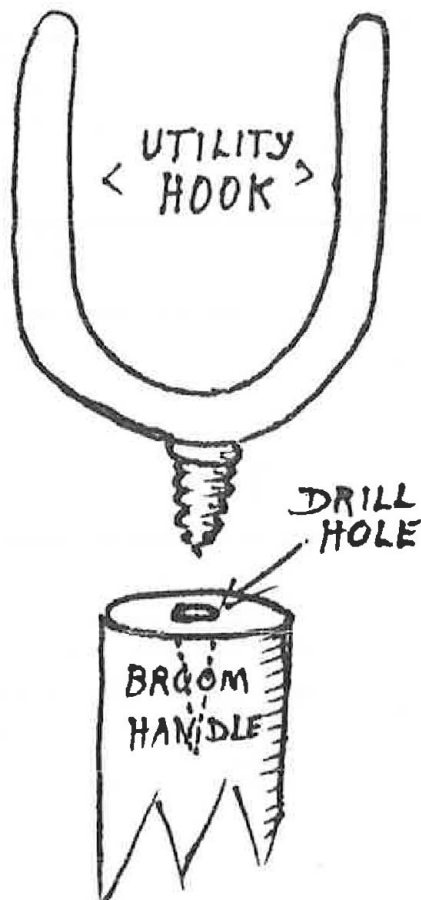
Subscription to the Fern Study Group is \$3 each calendar and are now overdue for 1990. Receipts are not posted, but you will know that our records show you as being financial, unless a red cross appears here If an "x" appears at the end of the preceding line, then our records indicate that your payment has not been received. Please contact or pay fee to the Treasurer if you wish to continue to receive these Newsletters.

'Ferns of Queensland' by S.B.Andrews

This new book which is expected to be available in August 1990, is the first complete reference published on Queensland ferns. It includes descriptions of 394 species of ferns and fern allies, keys for identification and 145 plates of detailed drawings. The book will be available from the Queensland Department of Primary Industries for \$45 plus \$7.50 handling costs. Our Study Group has the offer of a substantial, but yet to be determined, discount for a bulk order. Therefore, if you wish to buy a copy of 'Ferns of Queensland' as part of what is a one-off offer for a bulk purchase, advise our Secretary (02) 528 4881 by no later than 1 July 1990.

A Thought. Extract taken from the South Florida Fern Society Newsletter

Who knows, with plenty of canopy coverage, lots of mulch, and an early morning watering, we may be able to convert some of the burgeoning numbers of xerophytic gardening advocates to our camp.



HANGING BASKET AID

This piece of equipment, made from a large plastic coated "Broom or Utility" hook and a long broom handle, is invaluable when lifting or removing hanging baskets. By supporting the weight of the basket with one hand, the chains are easily dislodged from their holding point, with the "fork". The same procedure can be used when hanging a basket up. This saves using a step - ladder or rickety substitute.

Irene Cullen.

Report on Visit to Tari Creek, 24 March 1990

An atypical prompt start to the day and 24 members left their cars 20 km on the Putty Road north-west of Upper Colo Heights. The track to Tari Creek led us through open sclerophyll forest. It had been a wet summer and the ground was sodden most of the way. The surrounding flora was most appealing, Acacia saliciformis covered in large pale yellow flower heads, the prostrate Persoonia champaepitys and another shrub of the same genus P. oblongata - both in flower, were real crowd stoppers.

Among the first ferns sighted was the dainty Lindsaea linearis and Cheilanthes sieberi, the latter proving to be widespread during the day. Other ferns listed in the first part of the walk were Pteridium esculentum, Todea barbara, Blechnum nudum, B. cartilagineum, Culcita dubia and Hypolepis muelleri. Near the track there were large patches of Adiantum aethiopicum and Doodia aspera.

We crossed the creek wading, hopping and climbing according to our different talents and after a short distance through more lush vegetation, had tantalising glimpses of ferny areas that were too wet to explore.

Lunch was eaten at a flat rocky section of the creek. Nearby grew Gleichenia microphylla and Hymenophyllum cupressiforme. About one half of the party turned for home after lunch. The remainder made an easier crossing of the creek and continued along the track getting spectacular views of the rock formations that welled up high on both sides of the valley floor. Among rocks we found Pellaea falcata and growing on the rocks a large patch of Cheilanthes distans, the under surface of the pinnae covered by whitish scales.

Shortly after we left the Eucalyptus deanei and thick understorey behind and entered a level, grassy area which Peter told us was a diatrema. Right in the centre we came across a 2 m plus diamond python shedding its skin and seemingly quite unconcerned at our presence.

As is usual on our outings, the walk back was at a much faster pace, hurried more so on this occasion by the increasingly heavier rain. It was nevertheless worth getting wet. Thanks Peter for taking us to this attractive area which no one else in the party had visited previously. Although we didn't find many different species of ferns the walk was enjoyable with no climbing or steep descents and some of the flora was exquisite and the scenery superb.

Notes on Meeting at Kenthurst, 21 April 1990

On an almost fine day 21 members attended our study meeting at Eric and Betty Rymer's home, our meeting room being almost part of the garden.

Peter led the discussion on the Blechnums of Tasmania by highlighting the identification features using a simple key which he had prepared specially for the occasion. Including Blechnum wattsii sp from King Island, there are 10 Blechnums native to Tasmania. Of these all except the King Island form of B. wattsii are also found in various other States.

A check revealed that most of the ten *Blechnum* species were grown by at least some of the members present. Exceptions were *B. Chambersii* and *B. Wattsii* sp. from King Island,, although some members told of having lost these two. As Peter pointed out, both ferns apparently resent Sydney's hot weather. Only two members reported having *B. vulcanicum* growing successfully. On the other hand, most members have the local *Blechnums* *B. cartilagineum*, *B. nudum* and *B. wattsii* thriving in cultivation. The key to the Tasmanian *Blechnums* prepared by Peter is as follows.

A Key to the *Blechnum* spp of Tasmania

- 1 Fronds not dimorphic (fertile & sterile fronds similar) *B. cartilagineum*
Fronds dimorphic (fertile & sterile fronds dissimilar)2
- 2 Sterile fronds undivided to pinnately lobed....*B. patersonii*
Sterile fronds regularly pinnate..... 3
- 3 Sterile pinnae attached by their broad bases...4
Sterile pinnae stalked at least at the middle of the frond..8
- 4 Rhizome wiry, medium to long creeping (plant 5-15 cm tall) *B. penna-marina*
Rhizome thick plants ± tufted.....5
- 5 Sterile fronds with widest pinnules at base....*B. vulcanicum*
Sterile fronds with widest pinnule towards the middle.....6
- 6 Sterile pinnae margins entire.....*B. nudum*
Sterile pinnae margins crenate.....7
- 7 Lowermost sterile pinnae confluent & reduced to lobes,
stipes only a little scaly...*B. chambersii*
Lowermost sterile pinnae stalked or at least free from
each other, stipes very scaly..*B. fluviatile*
- 8 Lower sterile pinnae tiny & rounded, less than
1/3rd the length of central pinnae. Sterile
pinnae margins finely serrated.....*B. minus*
Lower sterile pinnae not markedly reduced in size..9
- 9 Sterile pinnae margins crenulate. Rachis with
both scales & glandular hairs. Sterile pinnae
mostly less than 2 cm long & 1 cm wide.....*B. fluviatile*
Sterile pinnae margins coarsely serrate. Rachis
with scales only. Sterile pinnae mostly more
than 2.5 cm long & more than 1 cm wide.....10
- 10 Rhizome scales dark brown or black.....*B. wattsii*
Rhizome scales brown to chestnut brown...*B. sp nov. "King Island"*

The sodden ground, our visit followed the period of Sydney's big wet and a drizzle which developed in the late afternoon, prevented more than a brief look at the Rymer's large shade area and huge garden. Suffice to say the ferns were in excellent condition, *Lygodium japonicum* every bit as good as Betty related in our March 1990 Newsletter, *Adiantum hispidulum* var Whitei, *Asplenium polyodon* and *Todea barbara* were just a few of the ferns that were admired. Had conditions been drier, the whole of the day could have easily been occupied among the many interesting plants both inside and outside the fernery.

Notes on Outing to Wilson River. (Wauchope District) on 5/6 May 1990

With interstate rivalry and State of Origin clashes topical, this week end was organized at the suggestion of the South Eastern Queensland Group in order to improve fellowship and share knowledge. The weather was brilliantly fine and the venture succeeded admirably. Present for at least one of the days were 10 Queenslanders, 18 Sydney members, 3 Northern N.S.W. members attending their first Fern Study Group outing and 4 visitors from S.G.A.P. Mid North Coast Group.

Two weeks of fine weather after record rains had put the streams, bush and the tracks in excellent condition. There was no dust (except on the access roads), no mud and no leeches.

Saturday was spent in the Wilson River Primitive Reserve where Peter took us on three separate walks. The Forestry Department had kindly provided a plant list which included 32 different species of ferns. At the end of the day, 31 of these had been located - the one not seen being Adiantum aethiopicum, a fern known to us all. Additional to the ferns on the Forestry's plant list, 15 other species were identified with an assurance of accuracy. As well as our reputable Leader, who many of us think possesses the sharpest eyes in the business, present were two former Leaders of the Group, Bob Coveny, who on this occasion was mainly occupied searching for liverworts and mosses, and Phyll Brown. Also there was Peter Bostock whose clear description of identification features greatly pleased we learners. The ferns added to the Forestry plant list were Adiantum diaphanum, Lastreopsis microsora, Asplenium flabellifolium, Diplazium australe, Doodia aspera, Dennstaedtia davallioides, Hypolepis glandulifera, Dicksonia antarctica, Grammitis billardieri, Hymenophyllum cupressiforme, Macroglenia caudata, Pyrrosia rupestris, Pteris tremula, Pellaea falcata var nana and Arachniodes aristata.

We spent the Sunday in Werrikimbe National Park, most of the time at Plateau Beech. On the attractive easy graded walk through the Antarctic Beech forest, we identified 30 different species of ferns. Found and identified at Werrikimbe and not on the amended list from the previous day were Asplenium bulbiferum, A. flaccidum, Hymenophyllum flabellatum, Lastreopsis decomposita (we were told to look for the brown inflated scales along the rachises on the underside of the fronds), Microsorium diversifolium and Tmesipteris truncata.

The following ferns which were on the amended list for the Wilson River Reserve, were not sighted at Werrikimbe : the five Adiantum species, Arthropteris beckleri and A. tennela, Asplenium polyodon, Christella dentata, Culcita dubia, Davallia pyxidata, Diplazium dilatatum, Cyathea cooperi, Dennstaedtia davallioides, Lastreopsis microsora, Lunathyrium japonicum, Platyserium bifercatum, Pteridium escalentum, Pteris tremula, P. umbrosa, Pyrrosia confluens, Sticherus flabellatus and Vittaria elongata.

Keep Pests Away from Stagorns From the South Florida Fern Society

One of their members soaks a cotton ball with insect repellent and places it about 3 inches from the wooden frame. She resoaks the cotton once a week and she never has any bugs bother her plants.

FORTHCOMING EVENTS IN THE SYDNEY REGIONSaturday 16 June 1990, Meeting at Epping

At the home of Rosina Bach, 33 Third Avenue (Corner Audine Avenue), Epping. Arrive from 12 noon, meeting will start at 1 pm. Study will deal with the Blechnum spp other than those from North Queensland and Tasmania. Bring afternoon tea. Hot water will be supplied thanks to our hostess. Enquiries to Rose 869 1692.

~~Saturday~~ 15 July 1990, Outing to Somersby Falls

Meet in car park nearest to the Falls at 10 am., ready to start walk at 10.30. The walk covers only a short distance, but on our last visit finds included Blechnum camfieldii, Tmesipteris truncata and Schizaea rupestris. A late lunch at cars should enable us to beat most of the traffic back into Sydney. Enquiries to Moreen 528 4881.

~~Saturday~~ 26 August 1990, Meeting at Dural

Norma and Fred Johnston are our hosts at 18 Taylors Road, Dural. Leave Old Northern Road at Dural shops, turn into Galston Road, continue past Swaines Nursery then 2nd turn to right into Carters Road, then 2nd to left is Taylors Road. Arrive from 11, meeting and study on the genus Nephrolepis to begin sharp at 12 noon. Bring lunch and afternoon tea, hot water available. Enquiries to the Johnstons 651 1144.

Week 17 to 23 September 1990, Spring in the Gardens

Helpers required for the Region's Exhibition. Set up is on 15 & 16th,, then assistance wanted with displays and plant sales. If you are not already committed and can help on any of these days, please advise Moreen 528 4881.

Saturday 13 October 1990, Outing to Galah Mountain

Meet at 9.30 at the Clarence Railway Station on the Zig Zag Line, this is on the Bells Line of Road, ready for 10 am sharp start. We will travel in car convoy to the beginning of the walk. The track is reasonable but somewhat steep and can be slippery so wear appropriate footwear. Carry lunch. Enquiries to Peter 625 8705.

FORTHCOMING EVENTS IN SOUTH EASTERN QUEENSLANDSaturday 16 June 1990, Outing to Mt Tamborine

Meet 9.30 am in car park, Cedar Falls, Mt Tamborine. Arrangements will be made then for July outing.

Date to be fixed - July 1990, Currumbin

Details to be finalised at June outing for visit to John Bolger's in Tomewin Road, Currumbin. Let's hope third time will make it - October '89 was too dry, April '90 too wet!

Saturday 5 August 1990, Outing to Elimbah

Meet 9.30 am at Geoff Simmons, Lot 19, Old Gympie Road, Elimbah. Geoff will show us his methods of propagation.