

S.G.A.P. - Fern Study Group - Newsletter

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DEAR MEMBERS:

In order to present a report to our study group co-ordinator, I have to collect some information about ferns and need your help. I would be so pleased if you could complete the enclosed questionnaire and return it to my address. The answers when summarised will help to show how native ferns are used in the Australian garden and will be a reflection of our mutual interest and study. One hundred percent response is very desirable - so if you have an extensive fernery, one maiden-hair fern in the bathroom, or have noticed a clump of fish-bone fern near the water tank, your co-operation is most important.

*** EXCITING NEWS ***

I am delighted to tell you that the well known Sydney artist, Betty Maloney, has accepted a commission from our Fern Study Group to produce a watercolour painting of a native fern. This work of art will be raffled and all proceeds donated to the Burrendong Arboretum for use in extensions to the shade area.

Earlier in her career, this most celebrated painter of Australian Flora, illustrated and co-authored the popular books, "DESIGNING AUSTRALIAN BUSH GARDENS", "MORE ABOUT BUSH GARDENS" and "ALL ABOUT BUSH GARDENS". These books were said to have led to more people becoming interested in gardening with native plants than any other single factor at the time.

A more recent and major work "PROTEACEAE OF THE SYDNEY REGION", a strictly limited collectors edition, with text by Alec Blombery, is beautifully illustrated with eighty-six of Betty Maloney's magnificent paintings. Details of the raffle will be in our June Newsletter.

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*Mrs. Olive Lecky of Narrabeen has donated
Fifty Dollars towards the cost of purchasing
Cycads for the Burrendong Arboretum.*

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MRS. IRENE CHAMPION OF SLADE POINT, QUEENSLAND, WRITES ABOUT FERNS IN HER GARDEN:

"My 17 year old daughter, Jeanette, has been collecting ferns for several years and now has a collection of over 90 species, though not all of these are native and some are still unidentified. Between us, we have approximately 50 species of native ferns. The majority of these are planted in a protected area of the garden (we don't possess a fern-house); living very close to the coast we are not troubled by frosts though winds, especially the hot northerlies, do pose a problem at times.

We read with interest the comments made on the difficulty of buying some of the species which are common here. We have *Drynaria rigidula* growing in the ground and as a large clump on an old tree trunk; two other ferns which grow 'wild' in our district as well as our garden, are *Microsorium punctatum* and *M. membranifolium*. Recently Jeanette and I, as members of the Mackay Branch of S.G.A.P., were given permission to collect plants from an expanding dairy on Eungella Range. Although in the grip of drought, we were able to find a number of different ferns to add to our collection."

Irene sent a list of fifty five species which included some that would need heating in Sydney such as *Oenrichia tripinnata* and *Antrophyum reticulatum*.

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FOR THE (RICH) COLLECTOR

I have recently received photographs and descriptions of two *Lycopodiums* offered for sale. From the photographs both appear to be excellent specimens. The text of the letter is as follows:-

We are offering one LYCOPODIUM CARINATUM for sale by tender

Number of Fronds - FIFTY (50)

Number of Tips - EIGHT HUNDRED (800)

Length of longest fronds - 74 cm (29 Inches)

Grown in Nursery for Three Years

Written tenders must be submitted and close with the undersigned at 12 noon Friday 27th May, 1983.

The highest or any tender not necessarily accepted.

C.R. & D.M. BARTLETT, 40 ANGUS STREET, BABINDA NORTH QUEENSLAND 4861
Telephone (070) - 671265

The same conditions of sale apply to the second *Lycopodium* and it is described as follows:-

LYCOPODIUM DALHOUSIANUM - (BLUE TASSELL FERN)

Number of Fronds - SIXTEEN (16)

Number of Tips - THIRTY EIGHT (38)

Length of longest fronds - 120 cm (47 Inches)

Grown in Nursery for Three Years etc.

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MOUNT WINDSOR the MAGNIFICENT

Ross Scott

The Rainforest of North Queensland has long been known for its magnificent trees, luxuriant vines, countless epiphytes, ferns and lichens. This whole elegant order has been moulded and adapted by time, into the most complex and diverse life system on earth. There is beauty here, especially after rain when colours are brighter and each drop of water festooning the leaves acts as a prism and decks out the forest in diamonds.

The outlook for the Rainforest of Queensland is not good. Over 50% has gone, another 14% is in National Parks and the remainder is in State Forests and subject to logging. The last great area left is the Upper Daintree River and Mt. Windsor Tableland, about 150 square miles of rugged country. Nearly half of this area has been added to the Mosman Gorge National Park and the rest is being logged.

Over twelve months ago alternate life style groups and conservationists waged a campaign to have logging stopped, but it was hard to maintain pressure when the area concerned was four hours drive from the nearest town and the effort died. It was then that we decided to try to visit the area to see what was happening, to do a botanical survey and try to salvage any interesting specimens. It was quite obvious that a permit to enter this most controversial area would not be easily gained so we carefully compiled our application. I had just completed a survey of the fern species of the Conondale Ranges, for the environmental section of the Forestry Department. This was a good contact point. Typewritten requests for botanical specimens (on notepaper with impressive letterheads) were obtained from the State's largest (private) Botanical Gardens, a College Horticultural Lecturer, and a High School Project Club.

These papers, plus a statement of our aims and an assurance that any interesting specimens would be lodged with the Queensland Herbarium, were sent to the Forestry Department via a friend who worked there. He confided later that a shudder went through the organisation at the audacity of anyone wanting to enter such a delicate area, but the fact that the objective was scientific and not for profit, saved the day! The permit allowed the collection of three specimens of each epiphyte from fallen trees, fronds of ferns for taxonomic purposes, and - Joy of Joys - fertile fronds for propagation of spores. No removal of complete fern plants was allowed.

Two and a half days driving and we were camped by Crater Lake on Atherton Tableland; the next day north through Mareeba, Mt. Molloy, Mt. Carbine and across Macleod River where a right turn pointed the panel-van towards the Great Divide - fifteen miles to the east. The country was dry, dusty, stunted Eucalypt and Melaleuca plains with granite hills rearing up ahead. The road up the Range was all curves and hair-pin bends and at 3,500 ft. it went from dry Eucalypt Forest to Rainforest in a matter of yards. This marked the limit of the 60 inch rainfall belt and the classification would be simple Notophyll Rainforest with Kauri Pine replacing Hoop Pine in the Rainforests further south.

Half an hour, driving through forest that became more lush as each mile passed, brought us to the "Motel Mt. Windsor", headquarters for the next few days. Take thirty sheets of roofing iron and an equal number of bush poles, assemble them with as little imagination as possible and you have the building. Furnishings? Two refrigerators - both defunct; three beds, wrecked or close to it; a kitchen cabinet and a table made from two oil drums and a large plank. The fireplace was large and adequate. The ex-owners, timber cutters, had moved further on. Well, it was accommodation in keeping with a rough bush expedition and we accepted it cheerfully.

We were allotted 500 acres along Stewart Creek - an area of perpetual dampness and a collector's paradise. *Simplicifrons* by the thousand and *Subauriculatum* by the yard. *Colysis ampala* and *Platycterium hillii* decorated the tree trunks and huge clumps of *Drynaria quercifolia* fought a battle for existence with *Davallia pyxidata*. One large clump of *Vittaria ensiformis* was seen *Crypsinus simplicissimus* climbed amongst the branches. In one damp spot we were sure that we had found a *Pronephrium* but it was identified as *Dryopteris poecilophlebia*, about three feet high and lettuce green in colour, really eye-catching; the *Asplenium nidus* is much smaller than its southern "cousin", *A. australasicum*, its fronds were rarely more than three feet long. *A. attenuatum* was present along the creek banks. *Blechnums cartilagineum*, *nudum*, *patersonii* and *wattsii* were as common as grass. No - *B. articulatum* did not put in an appearance! One days collecting in this area showed about forty species present, a fact that was quite puzzling. A few days later when we had moved many miles to the west, it became clear that the greater the yearly rainfall, the more species were growing. This is a reasonably accurate theory but cannot be taken on to its ultimate limit. Twenty five miles to the east we could see Thorntons Peak where two weeks earlier, 45 inches of rain had fallen in 48 hours!

Following two days of collecting, we walked out as far to the east as we could go, beyond the area where the timber had been removed, only fertile fronds with ripe spores were collected in this area. Plunging into vines along the bank of a large creek we found ourselves "knee deep" in *Bolbitis taylorii*; it grows from a rhizome but the fronds are arranged in a rosette; it is one of the few ferns that are more blue than green. *Cyathea rebecca* were as weeds and peering into over two hundred crowns hoping to see a wig caused this species to lose some of its charm; but then, after two hours of scrambling, I rested under a slender tree-fern and Andrew asked what species it was. "Its probably only another ----!" I began to say, turning my head to peer upwards. Eureka! There was the wig. So we stood - gazing at the legendary *Cyathea baileyana*. *C. robertsiana* was also rarely sighted; *Asplenium polyodon* (*falcatum*) and *Arthropteris palisotti* were common as were *Diplazium assimile* and *D. dilatatum*.

Ahead lay twenty miles of unbelievably rugged country - also utterly fascinating - but we were not equipped for that and, rather late, turned back for a fast return trip to camp. Here our haste led to the BLUNDER!!

While breaking through a large pile of dead branches, I saw a patch of delicate *Aspleniums* and selecting a fertile and then a sterile frond plus roots, I hurried on. Weeks later at the Herbarium, the fertile frond was identified

as an undescribed fern to be named *Asplenium lewisense*, while the sterile frond was from an unknown *Asplenium* that climbed trees on a fast growing rhizome similar to that of the *Arthropteris* species. The unknown *Asplenium* is still just that "unknown" and will have to remain so, until like Macarthur - "WE SHALL RETURN".

Back in camp I spent an afternoon drying and packing specimens while Trevor explored a nearby gully. He returned with several yards of pencil thick rhizome from which grew a lanceolate leaf about ten inches long, one inch wide, dull green and the texture of brown paper. The rhizome spiralled around a large elkhorn and was supported on stiff roots about an inch above the surface of its host - *Oleandra* is rarely collected and most unusual. This alerted us to the possibilities of what had appeared to be a not very productive area. We now discovered that this seemingly, not very interesting gully, filled with dead tree tops and logs, glistened with the shiny, purple new growth of *Pteridoblechnum neglectum* and the glossy sheen of *Selenodesmium*, the only filmy fern found in the area. *Lindsaea obtusa* (tall form) also grew there.

So - what is the future of this fascinating area? The eastern half of the plateau, the 120 to 180 inch rainfall area and the most valuable, is safe in the National Park. The Rainforest traversed by us would be in the 60 to 120 inch area. The sections that have been logged are recovering, with new growth well under way, there are no noxious weeds to compete with the native species.

However, the logging roads are sheer tragedy. The Rainforest grows on top of about thirty feet of coarse granite sand and once tracts of trees are taken away, there is nothing to stop the washing of embankments and gutters. Originally there were creeks, sparkling pools and lacy cascades flowing over water worn granite. Now all is sand, sand, sand. Gone too are the Platypus and fish that once lived in the pools. It was this aspect that left a taste of gall in what was otherwise a week reaching the pinnacle of delight and enchantment.

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Our industrious Secretary, John Lee, keeps in touch with interstate members; he recently corresponded with Reg Williams of Glenorchy, Tasmania. Through John, Reg sent us this description and several fertile pinna from what must be a very handsome fern.

A HYBRID ASPLENIUM

Reg Williams

In late 1974 I was a member of a climbing party called upon to extricate a walker from a coastal cliff face near South-East Cape in the far south of Tasmania. A companion of the man in trouble had spent a day walking out to get help and, early on the following morning, four of us were landed by helicopter on a rocky shore about an hours rough walking away from the scene. The rescue was effected without incident. The victim was in good shape despite having spent some seventeen hours perched on a small ledge.

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On the way back through forest to the helicopter pick-up point, I noticed some large terrestrial ferns, obviously *Asplenium*, but not consistent with any species known to occur in the State. Detailed botanising was out of the question; however, I collected a frond for later examination.

The fronds were approximately one metre in length. Their shape resembled that of *A. bulbiferum*. The pinnules, however, were more like those of *A. obtusatum*, except that the margins were much more deeply toothed.

A few weeks later I managed to persuade some friends to accompany me on a return visit, on foot this time, to camp in the area, collect more material and to examine the surroundings. The walk in, around the rocky coastline took several hours.

A number of plants were found, growing under a tree canopy in the company of *A. bulbiferum*, this too having fronds one metre or so in length. Present also was *A. obtusatum*, both on the nearby shoreline and, in a more luxuriant form, in the forest.

I returned home with a complete plant which I later divided, sending one piece to Sydney for examination by Dr. Tindale who determined it to be a hybrid of *A. bulbiferum* and *A. obtusatum*. I potted two more pieces. They both grew and survive still, though somewhat diminished in size. The plants still produce spores in reasonable quantity, and while it is doubtful if these would be viable, it could be of interest to attempt to propagate them. I am forwarding some material in case someone would care to try the experiment.



Top

Underside

A. bulbiferum x *obtusatum*
fertile pinna actual size



SPORE BANK NEWS:

I would like to thank those members who sent spore. The bank is well stocked. I hope that more members will contribute to further add to the variety of species.

Although there has been a lot written about growing from spore, there are many people worried about losing sporelings when potting on. Some loss will occur, but from my own experience, I believe that it is most important to keep potting on into the same medium, which has been sterilised in the same manner.

As the young fernlets are pricked out and thinned into different trays, keep them covered with clear plastic, when they reach a height of about two inches they can venture out into their own small pot and gradually be hardened off.

PHYLL BROWN

AVAILABLE FROM THE SPORE BANK:

ACROSTICHUM aureum	4/82	LASTREOPSIS acuminata	10/82
" speciosum	6/82	" decomposita	11/82
AMPHINEURON opulentum	1/83	" marginans	11/82
ANGIOPTERIS evecata	1/83	" microsora	11/82
ARTHROPTERIS tenella	12/82	" munita	11/82
ASPLENIUM bulbiferum	11/82 ✓	" smithiana	8/82
" nidus	10/80	" walleri (Nth Qld)	8/82
" polyodon pinnate	11/82	LEPTOPTERIS fraseri	9/82
BLECHNUM ambiguum	10/82	LYGODIUM microphyllum	8/82
" cartilagineum	11/82 ✓	MACROTHELYPTERIS poly - polioides	10/82
" gregsonii	10/82 ✓	" torresiana	1/83
" indicum	1/83	MICROLEPIA speluncae	6/82
<i>fabronii</i> " nudum	11/82 ✓	OPHIOGLOSSUM pendulum	10/82
" orientale	6/82	PELLAEA paradoxa	11/82
" vulcanicum	10/82	PLATYCERIUM superbum	10/82
" wattsii	11/82	" veitchii	1/83
CHEILANIHES distans	4/80	POLYSTICHUM australiense	11/82 ✓
" sieberi	11/82	" proliferum	11/82
CYATHEA australis	11/82 ✓	PRONEPHRIUM asperum	2/83
" cooperi	3/82 ✓	" triphyllum	1/83
" rebecca	11/82	PSILOTUM nudum	6/82
" robertsiana	11/82	PTERIS comans	10/82
DICKSONIA antarctica	12/82 ✓	" tremula	11/82 ✓
DIPLAZIUM assimile	1/82	RUMOHRA adiantiformis	1/83
" species ?	11/82	SPAEROSTEPHANOS heterocarpus	10/82
DOODIA aspera	11/82 ✓	" unitus	10/82
" caudata	10/82	TAENITIS pinnata	10/82
" media	10/82	TECPARIA devexa	1/83
DORYOPTERIS concolor	6/82	" muelleri	1/83

- *fabroto*.
N. Lond.

Adiantum ^{ETH.} _{H.}
Calceat dulcis

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Exo tr. 11.

COURTESY OF W.A. FERN SOCIETY:

Learning about Ferns:

Use good reference books; trial and error; note other peoples methods but remember that what works for one, may not work for another. There are good reasons for this. For instance, one person's shade house may be cooler or warmer or there may be differences in the soil or water. A neutral PH is probably sufficient for a start as plants absorb their needs more easily when the PH is neither too acid nor too alkaline.

It is a good idea to know what family your ferns belong to. Each fern has at least two names; the first is the family name like our surname (generic) and the second is usually a descriptive name (specific). By knowing the family name and using reference books you can ascertain growing conditions and try to re-create something similar. For example, Blechnums, no matter what species, will not tolerate lime in the mixture. (There are over 200 of them in the Southern Hemisphere). In their natural habitat, they occur where the ground is wet and peaty and so prefer a mix that is a little on the acid side with plenty of water. Aspleniums in nature occur mostly on trees or rocks where there is very good drainage but enough old decayed leaves to prevent drying out. Leaf mould and sand is a good basic potting mix for ferns. Although rainforest soil is heavy and clay-like, the ferns occur either in the very thick layer of decayed leaves that acts like a sponge, holding its moisture yet letting the excess drain away, or on the damp trees. The canopy formed by leaves and branches above and the leaf mould below, help to keep the place humid, even in a dry season.

Ferns do not send roots down into the earth to obtain the minerals that they require but the trees do it for them. The tree draws essential minerals up into its leaves and when they fall and start rotting down as they return to the earth, the ferns growing in the leaf mould are able to absorb what they need from them. The uniform control method of growing plants was started in California years ago. Instead of using leaf mould, the gardeners used peat moss and sand and as there was no food in this, they added the nutrients that were required. Therefore, they were able to control the size and growth rate. The amount of light, water and warmth were also controlled as these have an effect on growth. Sufficient light is essential and here again, it is helpful to know your fern's name. Ferns that have a bluish look need more light than their green relatives. Ferns from darker areas of the rain forest have very dark green leaves; sometimes their new fronds are pink. The lighter green *Pteris tremula* and *Todea barbara* grow near waterfalls and open spaces where there is more light from above. Some ferns are covered with whitish hair or have silver or yellow dust on the underside of their leaves. The purpose of this is to conserve moisture and these ferns grow in dry areas; try to avoid watering their foliage. *Platycterium veitchii* is one of these and comes from inland areas of Queensland where it is dry and hot. They grow on rocks and get their moisture from seepage.

Here's to Happy Healthy Ferning

ERNIE FERNIE

AN INVITATION FROM BARRIER REEF NURSERY, BABINDA - NTH QUEENSLAND

*I read with some amusement of your "intrepid" travellers ordeal to sight *Acrostichum* ferns at close quarters. These ferns do grow in great profusion in much more accessible places if you know where to go. We are on the Bruce Highway at the foot of Mt. Bellenden Ker and would like to extend an invitation to any members travelling this far north to call on us for directions to colonies of ferns in our area. We also have most varieties in cultivation. Members are most welcome to a full nursery "tour" through our spore house and propagation areas which are not open to the public.*

Carol Stroud (070) 675226

John would like to remind those who have not sent their two dollars subscription fee for 1983 before April 30th, that we will consider they no longer wish to be Fern Study Group members. While they will receive no further Newsletters, we do thank them for their past interest.

PROGRAMME:

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- APRIL - SUNDAY 17th: Meet at 11.00 a.m. at the home of Addie and John Lee, 76 The Bullwark, Castlecrag. Bring your lunch and a "plate" for afternoon tea. We will discuss ferns listed in the Jones & Clemesha book from *Ampelopteris* through to *Arthropteris*. Members who have any of these species, please bring them along.
- MAY - SUNDAY 22nd: Meet at 10.00 a.m. at the Hydro Majestic Hotel, Medlow Bath. Bushwalking.
- JUNE - SUNDAY 19th: Meet at 11.00 a.m. at the home of Phyll and Viv Brown, 254 Edgar Street, Condell Park. Bring your lunch and a "plate" for afternoon tea. We will begin to discuss *Asplenium* ferns.

Molly Murray
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(Mrs.) Molly Murray - Leader
Fern Study Group - S.G.A.P.