

ASSOCIATION of

S.G.A.P. Fern Study Group

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Email address: nhealy@telstra.easymail.com.au> (N.B. It is *n* not *m*healy)

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

VACANCY FOR SECRETARY

In the last newsletter we advised that the position of Secretary and Newsletter Editor remained vacant. In the past, the one person has been responsible for both activities. However, following our request for someone to fill, or share, the duties, Mike Healy from Ballarat, Victoria has agreed to undertake the the role of **Newsletter Editor**, compiling and distributing the Newsletter. (Mike was Editor of the Ballarat SGAP Newsletter several years ago: And now, in semi retirement, feels he has the time to take on our Newsletter). As Mike was to be on holidays until late August it was agreed that the compilation and distribution of the August newsletter be delayed, to fit in with his availability.

However the position of Secretary remains vacant. Joan Moore has been undertaking the role on a temporary basis, but we would be pleased for someone to nominate themselves for the position. As previously stated, someone from N.S.W. would appear to be the most efficient solution. Therefore, if you feel you may be able to undertake the role, now that the newsletter duties have been removed from ther "job description", please contact Peter Hind or Joan Moore

ROD PATTISON'S FERN GARDEN

Contributed by Ian Cox

At the suggestion of Irene Cullen and Kerry Rathie during the recent ASGAP Biennial Conference in Brisbane, Tamara and I visited Rod Pattison's garden. Although we arrived completely unannounced, Rod happily led us on a tour of the garden. He explained that he has combed the forests of Queensland and Northern New south Wales searching for unusual ferns. Rod has an amazing collection!

The garden is a subtle mix of ferns, fern allies, palms, cycads, orchids, bromeliads, cordylines and other rain forest plants. During our guided tour, Rod pointed out many rare and unusual ferns. Tasselled, forked, serrated, lobed, variegated, unnamed, unidentified, crosses, special forms or varieties - Rod has them all!

Almost every inch of space is utilised. canopy trees he planted years ago protect the garden from direct sun. Pathways wind their way through the many rock-edged beds in the extensive back garden. The clever layout ensures that wherever you are, you feel as if you are enveloped by rainforest - private and secluded. Epiphytes hang from limbs of trees at every turn, including many spectacular *Platyceriums*.

I will not attempt to describe the plethora of ferns we saw. In any case we had trouble in absorbing all the information in the limited time we were there. No doubt some of the Brisbane members know this garden well. Rod said that the Herbarium in Brisbane is very interested in his collection, and I can understand why. He also said that a book is planned about his ferns.

It is a wonderful garden. It is by far the best fern garden we have seen. We felt very privileged to have seen it.

Rod's garden is in Australia's Garden Scheme and for anyone living close to Brisbane or intending to visit there, it will be open on Saturday 12th and Sunday 13th February 2000, from 10.00 am to 4.30 pm. The address is 447 Miles Platting Road, Rochdale. Some of the rare ferns that Rod has propagated will be on sale at this time.

Ian enclosed an advertisement re Rod's open day which I have endeavoured to replicate:

**AUSTRALIA'S
OPEN GARDEN SCHEME
Rochedale
Open Garden**

Saturday 12th & Sunday 13th February, 2000
Opening Times: 10am-4.30pm

Pattison Rare Plant Garden

447 Miles Platting Rd.
ROCHEDALE
Plants for sale

ADMISSION: \$4

Directions: UBD Brisbane 40th Edition: 201:R19 Garden opening
Information is given on the ABC 612 4QR Gardening program
Saturday mornings - 6:15am- 7am with Annette Mc Farlane &
8:40am with Barb Wicks.

Australia's Open Garden Scheme Guidebook is available for \$13.95
from ABC Shops, Book Stores and Newsagencies. **As a result of
Garden Openings during the 1998/99 season charities in Queensland
benefited by over \$60,000.**

For more information please call Barb Wickes on 5445 5177
or the Information Line 1900 155 064

ASGAP BIENNIAL CONFERENCE BRISBANE 1999

Contributed by Joan Moore

1. At the Brisbane conference on the 12th of July, Peter Bostock, from the Queensland Herbarium, presented a paper entitled "Cultivation of Australian Native Ferns". When I approached Peter and asked if I could copy and distribute his Paper to Fern Study members, via the newsletter, he gave unreserved permission. Therefore, a copy of this is included as an appendix to this newsletter.

2. Several Study Groups had displays of their interests at the Women's College, University of Queensland, where the interstate visitors stayed: And the Fern Study Group was well represented. Some of our south Queensland members had made a spectacular display of ferns in containers, all of them a rich, shining, dark green - a credit to their growers. I have made a list, but may be incomplete:

Angiopteris evecta	Goniophlebium subauriculatum
Acrostichum speciosum	var. knightii
Asplenium harmanii	five species of Lycopodium (Huperzia)
Asplenium simplicifrons	Microsorium pustulatum
Belvisia mucronata	Microsorium superficiale
Blechnum heterophylla	Pellaea falcata - two different
a tasselled Cyathea cooperi	"silver" forms
Cyathea baileyana	Pteris umbrosa
Dicranopteris linearis	Pteris vittata
Sphaerostephanus unitus	Sticherus flabellatus
Oenotrichia tripinnata	Tectaria muelleri
Callipteris prolifera	Teratophyllum brightiae

I had never seen some of these before - the Callipteris, Oenotrichia, Teratophyllum, - and was glad to have had the opportunity, as I am sure any other grower from the southern states would have. Many thanks and congratulations to the growers of these lovely plants and to the workers who set up the display.

SUGAR & TREEFERNS

Betty Rymer asks Have you discovered how sugar works? Surely sugar (sucrose) must be broken down by enzymes in solution to a monosaccharide before it can be absorbed - so what is the story. May be a bit like the banana story- there must be a plant psychologist at the gardens.

Note: Peter Hind says he answered this in a previous issue. Essentially he said: sugar does no good!

SYLVAN GROVE STUDY

The ASGAP Fern Study Group received a letter, in June, from Bankstown City Council re the above Study. The letter indicated that although they had anticipated sending a copy of the Service Profile to the Group by April, the review was still in process. They further indicate that the information provided by ASGAP was currently assisting in the review of

services, facilities and program and that the completed service profile **will** be sent so we can see how our information has been used in future planning.

TODEA BARBARA IN VICTORIA & IRELAND

Contributed by Mike Healy

Entering the recent debate on the growth habits of Todea Barbara (Austral King Fern), I have two stories that may be of interest for some readers:

1. Todea always grows either on the creek/river bank or right in the water itself. I have actually walked across a flowing creek in the mountains of Gippsland, Victoria, without getting my feet wet, by stepping in the crowns of Todea plants.

2. In 1998, my wife, Joyce, and I, holidayed in Europe, ending our trip in Dublin, Ireland. Whilst there, we visited the Dublin National Botanic Gardens, and of course entered the fernhouse. While in the fernhouse, I began talking to one of the gardeners who was trying to combat the most horrendous case of white fly I've ever seen. He showed me a very sick looking Todea Barbara: It seems that 100 years ago Baron Von Meuller gave the Dublin gardens a large plant and the specimen I saw was all that was left. I was asked how Todea's grew in Victoria: On being told it was always near running water and could tolerate cold conditions, the gardener indicated he would look at relocating it from the humid dryish glass house. Hopefully the plant can be saved and once again become a beautiful specimen.

The question that comes to mind from this encounter, is how many ferns survive over 100 years in cultivation? Maybe our members can let us know of plants they've encountered that have a long history.

RESPONSE TO GEOFF SIMMONS ARTICLE

Contributed by Betty Rymer

Reading Geoff Simmons article on Platycerium (June 1999) - in my own small patch of bush with plenty of tall Eucalyptus Pilularis and Turpentines, I have never seen P. Bifurcatum on a tree. They present themselves in the bush but always on a rock that is usually southerly or south-easterly facing and in a shady spot and often near the ground. In the open areas of my bush I have never found an elkhorn.

On investigating I see Clemesha and Jones state that in southern N.S.W. they grow on rocks and in Northern N.S.W. and Queensland they grow high in the trees.

This surely poses other questions! Light wouldn't be great at lower levels. The rocks being shaded don't get too much heat from the sun but maybe there is a desirable range of temperature needed for good growth. If one buys an Elkhorn from the trees does it grow as well in the shade house as one from a rock?

Answering the question. The amount of light required does not appear to be great. Direct sunlight is harmful.

Temperature - it would always be cool on a rock that doesn't receive direct sunlight. Sun causes losses - I had to protect very small elkhorns from sunlight after we had cut out pittosporums to allow more light into the bush.

Water - unless rain is heavy or continuous, the area can be quite dry (dry enough for a possum to sleep inside an elk) - so it seems not great quantities of water are needed.

Wind - protection from wind seems to be important. - This will have some control on temperature and water evaporation. Since these plants appear in odd places on rocks - no mature plants near - I presume wind must disperse these light weight spores. The number of sporling plants that survive is very small. I have 8 small plants left on a rock after 3 years - the rock was covered with a large colony of tiny plants.

Pests - don't seem to be a problem in the bush but as soon as they come into the shade house - beetle problems. Rabbits our main large pest don't seem to eat ferns.

SPORE BANK

Spore is available free of charge from Barry White, 24 Ruby St., West Essendon, Victoria. 3040. Ph: (03) 9337 9793. **A current list of spore appears toward the end of this newsletter.** When Ordering please include a stamped, addressed envelope. The letter "B" indicates spore collected in the bush. the area of collection is available on request. Spore donations are always welcome, including fresh samples of ones already on the list.

ILLAWARRA SGAP "FERN DAY"

Date: 10th October

Time: 10 am

Where: Sublime Point car park (enter from Princes Hwy. not Expressway) approx. 1 km north of top of Bulli Pass.

Illawarra Group of the S.G.A.P are having an outing to inspect fern areas on the South coast near Bulli. They have sent Fern Group members a cordial invitation to join them. After meeting, as above, they will later proceed to sites near Thirroul and then to Grevillea Park, where fern group members planted ferns a few years ago. Behind the park in the rainforest, it is reported there is quite a large population of *Botrychium Australe*.

SYDNEY REGION REPORT

Contributed by J.Moore

Report on meeting at Mount Druitt, 19th July, 1999

Peter Hind discussed Aspleniaceae, using the article on this family in the Flora of Australia vol. 48. There are only two genera: *Asplenium* and *Pleurosorus*. *Pleurosorus* is a small fern mostly found in fairly dry places, where it survives because of its hairy fronds and its ability to revive after wilting in dry weather. In the Sydney area, Peter has seen it growing naturally at Berowra. He says it may eventually be put somewhere else because of its peculiarities.

Asplenium species vary from simple to 1-5 pinnate; the simple fronded being: *A. australasicum*, *A. nidus*, *A. harmanii* and *A. simplicifrons*. We had a good example of the latter in Peter's specimen. Some many-pinnate *Asplenium*s may be confused with *Athyriaceae* spp., as the sorus is in a similiar position in both, but *Asplenium* has clathrate scales. The *Diplazium* group may be the most confusing. Peter thinks the groupings

within the genus are **odd!** e.g. why is simplicifrons not put with nidus? And flaccidum tends to hybridise with bulbiferum, but they are placed in different groups. And new species are being found all the time!

Footnote: "Clathrate" in the glossary of the Flora is defined as: "latticed or pierced with apertures like a trellis".

Sydney Members Outing to Royal National Park 20th June 1999

List by J. Thompson

Ferns seen on Forest Island Track:

Adiantum Aethiopicum	Dennstaedtia Davallioides	Pellaea Falcata
“ Formosum	Diplazium Australe	“ Viridis
“ Silvaticum	Doodia Aspera	Polystichum Australiense
Asplenium Australasicum	Hymenophyllum Cupressiforme	
Flabellifolium	Hypolepis Glandulifera	Platyterium Bifurcatum
Blechnum Cartilagineum	“ Muellieri	Pteridium Esculentum
“ Nudum	Lastreopsis Decomposita	Pyrossia Rupestris
“ Patersonii	“ Microsora	Sticherus Flabellatus
Cheilanthes Sieberi	Lindsaea Linearis	
Cyathea Australis	Microsorium Scandens	
“ cooperi		

The cabbage palm *Livistona Australis* was abundant along the creek. Terrestrial Orchids seen were *Chiloglottis sp.* leaves only and *Pterostylis Nutans* in flower.

Contributed by Peter Hind

The walk on Sunday went well despite only six of us turning up for it. Royal National Park charges \$9 per car entry fee, which is a bit rich, and they plan to put it up shortly! I suspect we won't be running too many trips into the National Parks when they do, or we will organize car pool to split the cost.

Forthcoming events in the Sydney Region

Saturday 18th September, 1999 - Meeting at Blacktown

To be held at the home of Les and Tess Taylor, 4 Prospect St., Blacktown. Arrive from 11 a.m. Study session subject is Blechnaceae. Bring lunch, plate for afternoon tea and chair. Enquiries to Les on (02) 9621 5840.

Saturday 16th October - Outing to the Watagan Range

Trip to the Watagans with the guidance of Roy and Bea Duncan to see, particularly the Boarding House Dam area and Gap Creek. Travelling from Sydney, along the Freeway, take the Morisset exit. Meet at 10 a.m. at the Fire Station located at the corner of Freemans Drive and Martinsville Road, Cooranbong, before proceeding to Mt. Falk Road and Gap Creek. Enquiries to the Duncans (02) 49531452. Roy says weather can't be guaranteed, check with him if doubtful.

Saturday 20th November, 1999 From 11am Picnic at Fagan Park, Galston, Arcadia Road.

This is our Christmas party, rather earlier than usual. Arcadia Road branches off from Galston Road at Galston township. about a kilometre up the road is the "main" entrance

to Fagan Park. Pass this, continue to the next right hand turn, Carr's Road, and proceed along this to the 'back' entrance, which is nearer to the bushland area. Just inside the gate is a large parking area, parking fee, unfortunately is \$3. Enquiries to Fred Johnston (02) 9651 1144.

SOUTH EAST QUEENSLAND REPORT

Contributed by Irene Cullen

Pellaea Study at Jindalee - Fifteen members met at Lorna Murray's home and brought a good variety of Pellaeas with them. It turned out that mostly of us brought varying forms of *P. nana*. There were also distinct forms of the silver Pellaea. We soon realised that *P. nana* can be very variable. All other species of Pellaea were discussed.

Display at the ASGAP Biennial Conference, Brisbane - The S.E. Qld. Group erected a display of Ferns in the Study Groups Display. We concentrated on using ferns that were typically Queensland Ferns. A good number of them were North Queensland ferns and created much interest.

Filmy Ferns Study at Algester. Once again we had a good collection of ferns to study - even if they were pressed specimens, mainly collected by Peter Bostock. It was an intriguing Study. We know why Peter is seen peering intently at tree trunks when we are on rainforest excursions and I'm sure there will be many more of us trying to find the *filmys* among the moss. Thank you Peter for a most informative study.

Qld. Fern Study Meeting Dates

September - Friday 10th at 2p.m. Set up Fern Display for S.G.A. Flower Show at Mt. Gravatt Show Grounds

October - Sunday 3rd - Excursion to Mt. Clunie. Meet at Picnic Grounds, Woodenbong at 9:30am Travel via the Mt. Lindsay Highway

November - Sunday 7th - Meet at Ron and Elaine Jell's home, 3 Friar Court, Clear Mountain for last meeting of the year. Bring a fern/ferns for a large Fern Exchange.

For information regarding South East Queensland Fern Study, please contact Peter Bostock Phone: (07) 302 6983.

DEADLINE FOR COPY

Contributions to the Newsletter are more than welcome - the success of the newsletter depends upon them. Even a short comment adds interest. Copy for the next issue should be forwarded, by mail or Email, to reach the Newsletter Editor by no later than 15th November, 1999. **As this is the last for the 1900's let's make it special.**

A paper given at the 20th Biennial Conference,
Brisbane 1999, of the A.S.G.A.P.

CULTIVATION OF AUSTRALIAN NATIVE FERNS.

Peter D. Bostock, Queensland Herbarium

Having completed a Bachelor of Science degree in Mathematics at the University of Queensland in 1970, Peter embarked on a career in computing spanning 11 years. He then 'saw the light' following the chance purchase of a couple of ferns (which soon became hundreds!), and commenced to add Botany subjects to his original degree. He was awarded a Master of Science in Botany in 1989, shortly after he had commenced as a Botanist at Queensland Herbarium.

Peter's time is more or less equally divided between corporate topics such as Year 2000 rectification, general computing and botany, although more and more the corporate and computing duties are beginning to predominate. His special interests include fern taxonomy and ecology, rare and threatened species, and Botanical Latin. Peter has published a number of scientific papers, alone or in conjunction with other authors. They include papers on fern taxonomy, bracken biochemistry and vine-forest distribution. Recently, Peter completed 10 years of research and flora writing with the publication of *Flora of Australia* volume 48. Peter's contribution to this volume covers about 150 species in 8 families.

This is a very broad topic to cover in 20 minutes! I am therefore going to confine myself to a few aspects of the topic at large, including some history, some random thoughts on cultivated ferns and some speculation on the pros and cons of fern cultivation.

I have an interest in the origins of native fern cultivation, and I decided to see what has been written about early 'exploitation' of our native ferns. As early as the first decade of the 19th century, a few of our native ferns had been introduced into cultivation in Britain, and by the latter half of the century, there were a considerable number of the hardier ferns, and some of our more difficult ones, being grown and sold in nurseries, botanic gardens and private collections. A surprisingly large literature exists on cultivated ferns, and many of our natives feature among these.

I will digress for a moment for some statistics: Australia (mainland and Tasmania) is home to about 445 species of ferns, or 490, if our outlying territories and smaller islands are considered. In the Australian states, some 153 species are endemic. The remainder include a significant proportion of Malesian species, and a smaller group of southern hemisphere (Gondwanan) distribution. The number of native ferns which have been successfully introduced into cultivation is difficult to determine, but from my own experience, and from the literature on native ferns, I suspect that about 20 percent or

some 80-90 species, are common in cultivation; I am also quite sure that someone, somewhere, in Australia or elsewhere, has tried to cultivate most Australian ferns. Michael Garrett, in his book on Tasmanian ferns, suggests that a third of that state's 100 species are suitable for cultivation (though perhaps some only in Tasmania). The forthcoming book by Calder Chaffey, on cultivation of Australian native ferns, covers about 200 species. Many of these will require some special care, such as climate control, special potting media etc. Nevertheless, the potential for success with these ferns is quite high (based on first hand reports for the majority).

To return to the history of fern cultivation, let me mention a couple of texts: firstly, Loddiges' *Botanical Cabinet*, a set of British books first printed in 1817. The volumes consist of partially coloured woodcuts, and text describing the plants, the source of British material and tips for cultivation (set opposite the plates). *Doodia aspera* appears in volume 1, with the description: "This fern is from New South Wales and is recorded by Mr. Aiton [Kew Botanic Gardens] to have been introduced in 1808 [presumably by Caley]. It is a very elegant plant. The soil which seems to agree best with it is sandy peat, and it should be liberally supplied with water. It seems to thrive best in a moderate stove heat, and throws up side shoots occasionally, by which it is propagated. The best season for separating them is in the spring". In 1848, W.J. Smith published

a list of ferns cultivated at Kew Botanic Gardens, and listed their origin where known—at least 10 fern species on this list were from Australia, most received from Allan Cunningham during the period 1823–1828. Many of these came from the Brisbane area.

Secondly, the publications of our own local 19th century fern enthusiast, Mr. Frederick Manson Bailey, Colonial Botanist. He was an ardent fern enthusiast as well as general botanist, and authored a number of books devoted to ferns. His books were primarily taxonomic in character. Nonetheless, in his second book, *The fern world of Australia, with homes of the Queensland species*, published in 1881, Bailey offers the following advice: “It is most necessary with ferns that they be planted quite shallow. The growing point of each rootstock should be kept well above the earth’s surface. To accomplish this is not easy except the planter has some experience, the following will be found an effective way to remedy the evil of deep planting...” and he continues by describing some techniques which are quite familiar to us today. Bailey and others grew many Queensland ferns in bush-houses in Bowen Park, near the current Royal Brisbane Hospital, and some of Bailey’s new species including ferns sent from North Queensland were based on this cultivated material.

Random thoughts on fern cultivation... Firstly, ferns can be quite long-lived. I am sure many of you have heard of ferns handed down from parents or grandparents, or have some plants in this category. Unless growing points are damaged, many rhizomatous ferns probably have potentially indefinite life-span. Indeed, there are likely to be examples in this state of colonies of ferns that are true clones, with possibly a millennium or more under their belt, so to speak. Common bracken fern, *Pteridium*, has been recorded from Scandinavia as growing in colonies determined to be a minimum of 1,200 years old; I am sure that other similar ferns are just as long-lived.

Another thought: mutations... many of you have ferns with some sort of mutation. Crested, contorted, excessively divided, even variegated, there are quite a few ‘sports’ in cultivation, as with other groups of plants. But possibly this degree of variation in our native ferns is underestimated. Queensland Fern Study Group

members are familiar with Rod Pattison’s wonderful collection of mutant ferns, including a large number of forms of the Basket Fern, *Drynaria rigidula*. One cultivar of this species is quite legendary in local circles! Known as *Drynaria* ‘Whitei’, it is a sterile mutation with deeply toothed margins to the pinnae, and has always commanded a high price at nurseries because of its relatively slow growth and need for vegetative propagation. It has apparently been cultivated continuously since its collection in the Glasshouse Mountains area of southern Queensland early this century. But instead of four mutations (one of which was apparently lost soon after collection), we now have at least 10 times that number. Hopefully, these will be formally described in the future (Rod is working towards that end). Some of these plants are sterile, like *D.* ‘Whitei’ while others are fertile. There is some evidence that even the sterile ones occasionally revert to fertile fronds. Most are ideal garden ferns, and well worthy of cultivation.

Hybrids... Many of Rod’s collections are not mutations, but more likely hybrids. Other than *Drynaria*, where only 1 hybrid is known (more about that later), Rod has collected specimens of *Doodia* (rasp ferns), *Blechnum* (water ferns) and *Asplenium*, in particular, which, while not proven, are almost certainly hybrids, some even inter-generic (*Blechnum* × *Doodia*, for example). This rich group of hybrids can offer us an insight in the evolution of ferns—their patterns of speciation and the extent to which variation which can occur in any given genus. Hybridity can throw a spanner into the works when the modern theory of cladistics is embraced by taxonomists. We have some good Mendelian ideas of the effects of hybridity—many gardeners are familiar with F1 and F2 generations, and even the possible proportions of some given character or trait that is present in one of the parents and will appear in 1 or more offspring. But ferns make this task difficult—the deliberate production of hybrids in cultivation is usually a hit-or-miss affair, and at least 10% of ferns (usually those with some drought tolerance, the ‘hardier’ ferns of the Victorian era) can produce offspring asexually, thus frustrating the process of hybridisation.

I mentioned a *Drynaria* hybrid. If you have absorbed the recent Flora of Australia volume covering the ferns, you may have noticed the

newly described *Drynaria* × *dumicola*. This very vigorous local fern hybrid (confined to two localities at about 25° South near Hervey Bay in southern Queensland), is a hybrid between *Drynaria rigidula* and *Drynaria sparsisora*. Both parents are near the end of their range (which extends from India to Asia and the western Pacific) and both are terrestrial (they are normally more commonly recorded as high epiphytes in the tropics), and they co-exist with the hybrid. This hybrid has a triple set of chromosomes, and must have arisen from hybridisation between a diploid (2X) and a tetraploid (4X), although there are a couple of ways this could have occurred. To complicate matters, some sporangia on the hybrid produce fertile spore, possibly doubled in chromosome number over the parent (hence viable offspring will be 6X), and there have been a few offspring—F2 generation, so to speak—produced by a local fern grower, Steve Moran, of Woombye. The hybrids display an intermediate shape to the parents, particularly in the foliage fronds, although some characteristics are additive i.e. both parental characters are present. The F2 plant (I have one only!) has none of the vigour of the parents or the F1 hybrid, but its morphology has segregated to show the frond shape of *D. sparsisora*, and the spore pattern of *D. rigidula*. This hybrid probably represents a living example of speciation in progress.

Ferns as weeds... There are reports of our native ferns causing problems as weeds in other countries. *Cyathea cooperi* in Hawaii and *Lygodium scandens* in Florida are the main offenders. So far, with the possible exception of some forms of *Nephrolepis*, the so-called Boston

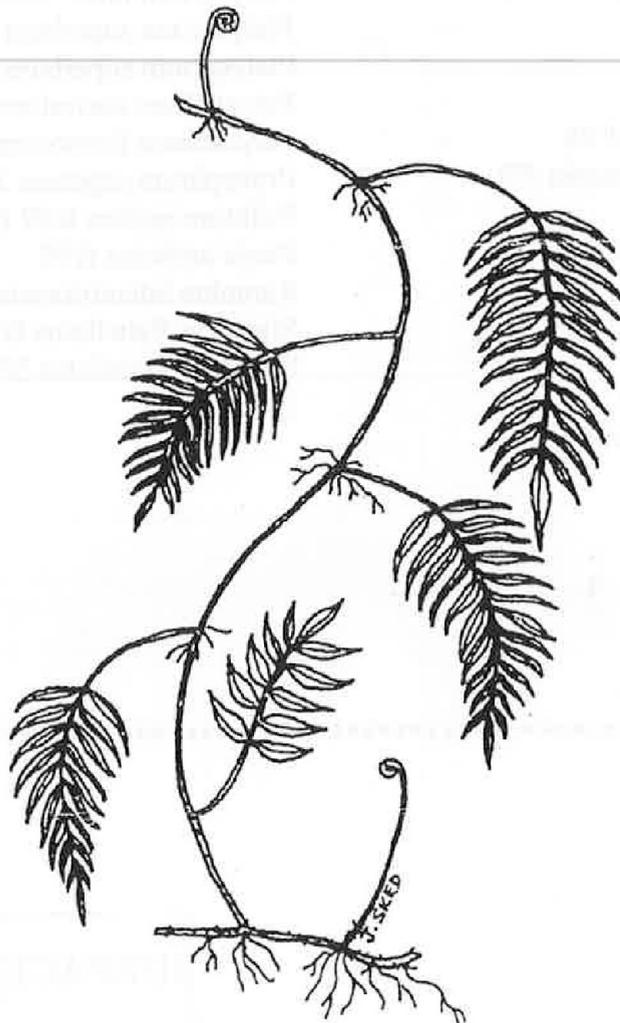
fern or sword fern, we have not introduced any truly weedy escapees locally, at least none which threaten local wildlife. I particularly want to mention *Nephrolepis cordifolia*, which is a ubiquitous garden fern in eastern Queensland, and surely in many other places as well. I believe that this fern is a native plant, although I am sure forms of it from other parts of the Tropics have reached Australia as well. As with Umbrella Tree (*Schefflera actinophylla*) which is weedy south of its natural range in Queensland (eg. in *Melaleuca* swamps around Moreton Bay), *Nephrolepis* has invaded areas of National Park and has colonised beach-front and rocky areas in extensive and mono-specific stands. As a result, it has been necessary to carry out weeding of some of these areas, although whether the attempts will be successful in the long run remains to be seen. Areas of bush around Brisbane are particularly at risk, given the huge spore stores available to be dispersed from local gardens.

Finally, the benefits of growing ferns... Speaking as an enthusiast, I find it hard to define my interest in these plants. Perhaps it is because they provide us with a window into the past, since plants similar in form to modern ferns can be found in fossils more than 60 million years old, and the origins of the earliest ferns lie over 300 million years in the past. Perhaps it is because their life histories are complex and sometimes quite cryptic. They are rewarding to grow; this may be because of a persistent belief that they are difficult subjects for cultivation! Finally, they evoke, at least in me, visions of misty rainforest and mountain-tops, a glimpse of the natural forest that we too rarely experience.

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S.G.A.P. Fern Study Group

SPORE LIST

- | | |
|-------------------------------------|--|
| Adiantum whitei 1/99 | Histiopteris incisa 5/97 B |
| Arachniodes aristata 8/98 | Lastreopsis acuminata 9/98 |
| Asplenium aethiopicum 5/97 | Lastreopsis nephrodioides 9/97 B |
| Asplenium australasicum 5/98 | Microlepia speluncae 5/98 |
| Asplenium milnei 9/97 B | Microsorium pustulatum ssp howensis 9/97 B |
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