

ASSOCIATION OF

*S. G. A. P. Fern Study Group*

*Newsletter Number 70*

ISSN 0811-5311

DATE - SEPTEMBER 1995

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**A SAD NOTE FROM SOUTH-EAST QUEENSLAND**

Irene Cullen, from the "Sunshine State", our longest and most reliable correspondent, conveyed some sad news in her recent report. She wrote,

We had an interesting meeting here yesterday (13 August) discussing the Lastreopsis and making plans for our Fern Display at our Annual Flower Show 2nd and 3rd September. Really nothing much to give you notes from South East Queensland. I believe that Lorna Murray slipped an article on the "Identification of Genera" to you - said that because of the haste she was in at the time, she didn't even put a covering note with it and apologises.

Lorna is our Region President and is carrying a tremendous load. It was compounded two weeks ago by Allen's sudden death - heart attack. It happened one day after they came home from a three weeks trip up North. We are all in shock over it and Lorna is doggedly carrying on with her duties. She is a tremendous person. Allen was a good friend and tireless worker. I know many of the Sydney Group will remember him well from our joint meeting at Bonny Hills.

(Ed: I am sure all would want to join in expressing heart felt sympathy to Lorna. Indeed Allen Murray is remembered with affection. He loved touring and we greatly admired his mobile home which he and Lorna took to many parts of the country often with his camera ready and his eyes open for Grevilleas. His enthusiasm for his native State attracted many of us to want to cross the border. We can only guess at the depth of Lorna's loss, for Allen was not only her loyal husband but also her staunchest supporter).

In concluding her note, Irene mentioned the seriousness of the drought in South East Queensland with lots of the dams providing water for local townships and crop irrigation almost dried up. We certainly hope that the rains come very soon. Finally Irene advised that her phone number now has an extra digit - South East Queenslanders please note (07) 3273 1055.

In our June 1995 Newsletter, thanks to Kyrill Taylor, we published an article taken from the 'National Geographic' - "Plant That Ended an Australian Trek". In this issue of our Newsletter there is a sequel, on this occasion, contributed by our Leader who spotted the article in the "'Pteridologist' Volume2 Part 6. The article follows:

## MARSILEA POISONING IN 19TH CENTURY AUSTRALIA

MICHAEL GRANT, 3 Greenhill Road, Moseley, Birmingham B13 9SR.

A recent report in Nature (368:683-684) by J.W. Earl and B.V. McCleary has shed a pteridological light on the gruesome fate of the Burke and Wills expedition to traverse the then unknown interior of Australia. Setting out from Melbourne in 1860 with the aim of documenting flora and fauna and taking geophysical measurements, the expedition turned into a race to cross the continent before another team led by John Stewart.

On arriving at Cooper's Creek Burke, a police inspector, split the group taking one scientist, Wills and two others, King and Gray. This four man team reached the Gulf of Carpentaria on the north coast successfully, but their return was delayed by monsoons and the remainder of the expedition was found to have deserted the Creek.

The four were by now running low on grain flour and began to eat the Aboriginal flour made from the ground sporocarps of *Marsilea drummondii*, the nardoo fern. The specialised preparation of this flour had been demonstrated to them by Aborigines but this advice was forsaken in favour of grinding and cooking, their greatest mistake. The four began suffering from hypothermia, weakening of pulse and severe muscle wasting leading to an inability to move. Wills's detailed diary of their decline revealed the classic symptoms of beri-beri, now known to be caused by a deficiency of vitamin B1. He was aware that they were suffering from nutrient deficiencies, indeed he had recommended that they eat *Portulaca oleracea*, common purslane, to prevent scurvy. However, vitamins were unheard of until 50 years later when Funk put forward his theory of four separate 'vitamines' in 1912. Burke, Wills and Gray died at the Creek while King, with failing strength, continued to pound the sporocarps into flour. He was then cared for by Aborigines until eventually rescued, but remained crippled for the rest of his life.

It is now known that their beri-beri was severely exacerbated by the nardoo diet. The bean-like sporocarps contain two or three times more thiaminase than bracken fronds. Thiaminase is an enzyme that breaks down vitamin B1 and causes staggers in horses and a similar disease in sheep that feed on nardoo. The clover-like fronds contain a hundred times more thiaminase than bracken!

The sporocarp of the nardoo fern is extremely resistant to heat: the spores will apparently germinate after fifteen minutes of boiling, and the thiaminase, unusually for an enzyme, will survive cooking. The Aborigines avoid its toxic effects by grinding it in plenty of water to dilute not only the enzyme but also co-substrates (adenine, proline and hydroxyproline) which the enzyme requires to break down vitamin B1. Contamination by amino acids from other organic sources is prevented by avoiding contact with bark or leaf utensils. The thin paste is spooned straight into the mouth with a mussel shell.

This is a good example of a traditional food processing practice rendering an otherwise poisonous plant palatable in a harsh environment. With our biochemical understanding we can only marvel at how the Aborigines developed their detoxification process.

## **Blechnum penna-marina - Alpine water fern.**

One of my favourite ferns in our garden at Kenthurst is *Blechnum penna-marina*.

During a trip to the Snowy Mountains area we brought back a single root of this fern and planted it. It has thrived. At the end of the first year it had spread to about three-quarters of a metre. After two years it had grown to about one and a half metres wide.

Our *Blechnum penna-marina* is growing on the eastern side of the house, and receives morning sun for a couple of hours. It seems to like this sun. Except during the middle of winter, the fern grows very quickly. Its rhizomes creep just under the soil, and the new fronds are crowded around the growing ends. This is one reason our fern always looks attractive. The whole clump at any time looks brilliant and alive. The fronds do not die off to any extent during winter.

I would not describe this fern as showy, but as vibrant. Its verdant fronds can brighten an otherwise dull corner of the garden. It looks particularly good if growing near rocks.

Our *Blechnum penna-marina* receives fairly regular watering, and seems to like its friable, humus-rich soil. A couple of months ago we decided it had out-grown its allocated area of garden (seeing it had about doubled in area each year). I took a large fork, loosened it underneath, and lifted. The whole matted fern (one and a half metres of it) came up in one piece. It is now doing well in its new location.

The authorities say that fertile fronds are not produced on *Blechnum penna-marina* in areas with mild winters. During last winter (1994) we had a few frosts, and a small number of fertile fronds appeared. The fertile fronds are slightly taller, the pinnae being narrow, widely-spaced and curved.

We have also tried a cultivar of *Blechnum penna-marina* in our garden - cv *Cristata*. This has much shorter fronds which are crested. In a similar aspect and soil it is doing as well as its big cousin, although on a smaller scale.

*Blechnum penna-marina* is found in elevated and cold areas - both above and below the treeline. It likes moisture, and often grows in sphagnum bogs, and amongst grass or rocks. Frequently it grows near creeks.

According to *Native Plants of the Sydney District* (Fairley and Moore), *Blechnum penna-marina* is uncommon in the Sydney area. It occurs near Jenolan Caves and on the Boyd Plateau in the upper Blue Mountains. Its northerly limit is Mt Kaputar, and grows south from there along the Great Dividing Range into Victoria, in the mountains of Tasmania, New Zealand and South America. It is also found on the sub-Antarctic islands. It is one of the southernmost ferns of the world.

Have other readers of the Newsletter had as good results as us with *Blechnum penna-marina* - or were we just lucky?

(Our thanks to Ian Cox for contributing the above article)

## FERNS IN GARDEN DESIGN

Following on from the March 1995 Newsletter, listed below are further ferns attractive and easy to maintain and considered valuable in garden design.

### Arichniodes aristata

The glossy dark fronds make this one of the most appealing ferns. It forms spreading colonies but is not invasive.

Form: Shiny green roughly triangular fronds are erect, spreads very slowly

Size: Up to 1 m

Soil Type: Loamy well composted with good drainage.

Aspect: Shaded

Watering: Improved by periodic good soaking but will withstand dry periods.

### Asplenium australasicum

This is the familiar Birds Nest Fern a favourite throughout all but the coldest parts of the world because of its small root ball making it an ideal container plant. In nature it is generally found growing as an epiphyte on trees or on rocks.

Form: Leathery fronds are simple, erect, spreading in a rounded tussock.

Size: To 2 m tall, fronds are up to 20 cm wide.

Soil Type: Plant on top of a log or rock, keep out of wet soil. Favours an open mixture with lots of leaf litter.

Aspect: Provide some protection but dislikes heavy shade.

Watering: Seldom necessary.

### Asplenium bulbiferum

A very attractive fern which because of its semi pendant habit is often seen at its best when grown on a rock wall. It likes a damp situation and in nature is often found along creek banks or near waterfalls. However it is very hardy and tolerant of a range of conditions. It is commonly available from nurseries. A feature is the numerous bulbils or plantlets produced towards the end of the pinnae.

Form: Dark green soft fronds erect or drooping.

Size: Up to 1.2 m tall.

Soil Type: Loamy and well composted soil or can be grown as an epiphyte. Grows happily in a large basket or pot.

Aspect: Shaded.

Watering: Likes moisture but will survive with only periodic good soaking.

## DEADLINE FOR COPY

Thank you to all who have contributed articles and information to this Newsletter. All contributions received gratefully. Items for the September Newsletter should be forwarded to reach the Secretary by no later than 15 November 1995.

REPORT ON THE MID NORTH COAST GROUP'S  
 OUTING ON 19TH & 20TH MARCH, 1995

compiled by Steve Clemesha

The area we visited was in mountain areas south of the Oxley Highway about mid way between Wauchope and Walcha.

Our first stop and meeting place was at Stockyard Creek. This was a creek in rainforest country. Only a few fern species were seen there and nothing very unusual. We then drove along forest roads in Doyal's River State Forest to Tirrel Creek about 25 km from Stockyard Creek.

We stopped at a number of places on the way. In rainforest country we saw Asplenium australasicum, A. polyodon, Platyserium bifurcatum and both NSW Pyrrosia species. Each of our stops were different.

Cyathea australis and C. leichardtiana were seen a few times and Todea barbara was seen only once in a roadside gutter. It was absent from creeks where we would expect it later in the trip. Another fern we saw only beside roads was Gleichenia dicarpa. This is a sun loving species so its absence from shadier places was not surprising.

We camped at Tirrel Creek and went on the walk to the falls. Along this walk we counted 46 different fern species. These included 4 different Adiantum species, each in separate areas to their liking ie A. formosum on rainforest flats, hispidulum in more open places and silvaticum along the track under rainforest trees. We saw A. aethiopicum also. Lindsaea microphylla grew on road banks near the creek.

Cyathea australis and C. leichardtiana grew in the gully the creek was in. Dicksonia antarctica grew in wetter places near water.

At the Falls a wet rock had on it a patch of large-leaved plants of Phymatodes pustulum (I like its old name of Microsorium diversifolium better) while only a few metres away on another rock Phymatodes scandens grew. Polystichum fallax grew near the waterfall. This fern is very similar to P. formosum and the two grow in similar places.

They differ as follows. The apical spine of the pinnules of P. fallax is longer than the marginal ones and the scales at the base of the stipe are of two distinct types - larger dark brown (black also is reported but I have never seen them) and small fluffy scales.

In P. formosum the marginal spines of the pinnules are the same size and the scales on the stipe are all one type.

Only mature plants show this pinnule difference. In younger plants both are like *P. formosum*. *P. fallax* is the commoner species in N.S.W. I have seen *P. formosum* only at Cunningham's Gap in Queensland. Plants we formerly have recorded as *P. formosum* appear to be *P. fallax*.

Our group also went to Ellenborough Falls and walked along the track at the top of the falls. The views were spectacular and the forest type varied and a total of 19 species of ferns were seen there.

### S.G.A.P. FERN OUTING 19-20 MARCH 1995

S: roadsides, from Stockyard Ck on Oxley Hwy to Doyle's River Rd

T: Tirrel Ck, Doyle's River S.F.

E: Ellenborough Falls, top track.

SPECIES	S	T	E
<i>Adiantum aethiopicum</i>		X	
<i>Adiantum formosum</i>		X	
<i>Adiantum hispidulum</i>		X	X
<i>Adiantum silvaticum</i>		X	X
<i>Arthropteris beckleri</i>		X	
<i>Arthropteris tenella</i>		X	X
<i>Asplenium australasicum</i>	X	X	X
<i>Asplenium flabellifolium</i>	X	X	X
<i>Asplenium polyodon</i>	X	X	
<i>Blechnum cartilagineum</i>	X	X	X
<i>Blechnum minus</i>		X	
<i>Blechnum nudum</i>	X	X	
<i>Blechnum patersonii</i>	X	X	
<i>Calochlaena dubia</i> (Culcita)	X	X	X
<i>Cheilanthes distans</i>		X	
<i>Cheilanthes sieberi</i>		X	
<i>Christella dentata</i>		X	
<i>Cyathea australis</i>	X	X	X
<i>Cyathea leichhardtiana</i>	X	X	
<i>Davallia pyxidata</i>	X	X	X
<i>Dennstaedtia davallioides</i>	X	X	
<i>Dicksonia antarctica</i>	X	X	
<i>Dictymnia brownii</i>	X	X	X
<i>Diplazium australe</i>	X	X	
<i>Doodia aspera</i>	X	X	X

SPECIES	S	T	E
<i>Gleichenia dicarpa</i>	X		
<i>Grammitis billardieri</i>		X	
<i>Histiopteris incisa</i>	X	X	
<i>Hymenophyllum cupressiforme</i>		X	
<i>Hypolepis glandulifera</i>	X	X	
<i>Lastreopsis acuminata</i>	X	X	
<i>Lastreopsis decomposita</i>	X	X	X
<i>Lastreopsis microsora</i>	X	X	
<i>Lindsaea microphylla</i>		X	
<i>Lunathyrium petersenii</i>	X	X	
<i>Microsorium diversifolium</i>		X	
<i>Microsorium scandens</i>	X	X	X
<i>Pellaea falcata</i>	X	X	X
<i>Pellaea paradoxa</i>		X	X
<i>Platynerium bifurcatum</i>	X	X	X
<i>Polystichum formosum</i>		X	
<i>Pteridium esculentum</i>	X	X	X
<i>Pteris tremula</i>		X	
<i>Pteris umbrosa</i>		X	
<i>Pyrrosia confluens</i>	X	X	X
<i>Pyrrosia rupestris</i>	X	X	X
<i>Sticherus flabellatus</i>		X	
<i>Sticherus lobatus</i>	X		
<i>Todea barbara</i>	X		

Report on the Mid North Coast Group's  
Visit to the Coffs Harbour Area  
on 17th & 18th June, 1995

Compiled by Steve Clemesha

On Saturday, 17th June, our group drove to Glenreagh Falls on Middle Creek, east of Glenreagh.

On the way we stopped at Anderson's Mountain. Rainforest trees grow both sides of the road in this area and we thought an interesting range of ferns may grow there.

The number there was not as great as we hoped for. *Platycterium bifurcatum* and *Asplenium australasicum* grew high in the trees and *Arthropteris tenella* grew over some rocks and the bases of trees. Among the ground ferns *Adiantum formosum* and *A. hispidulum* were present and also fairly common ferns such as *Doodia aspera*, two species of *Hypolepis* and some others. In all not a very interesting range and the area was rather disappointing.

Middle Creek is never disappointing. It is a sandstone area and has a number of plants growing there that are found in the sandstone near Sydney and the Blue Mountains but otherwise are absent from the area. Among these are Mountain Devils (*Lambertia formosa*) and *Blechnum ambiguum*. As with its habitats near Sydney, it grows on damp rock faces in shade and caves. *Schizaea rupestris* also is found in the area but we did not see it this trip. *Psilotum nudum* grows in damp rock crevices in great numbers and nearby on shady rocks grow mats of *Grammitis stenophylla*.

Large plants of *Todea barbara* grow in wet places near the creek. Some of the ferns in the area were less plentiful than on an earlier visit because parts of patches of plants had died during the drought.

On Sunday, 18th June, we went to Swan's Road in the Bruxner Park area. Most of this walk was through rainforest. Some parts were quite wet and others were through more open country. In this variety of habitats we saw 22 different species of ferns which was a greater number than were seen at the two localities we visited the day before. *Lastreopsis decomposita* was present in moist Eucalypt forest while *L. microsora* grew in rainforest habitats. Usually these two species do not grow intermixed which is just as well as they often are confused. The fronds of the two are alike in general appearance but those of *L. microsora* are more flaccid and the ends of the ultimate segments are rounded or serrated while those of *L. decomposita* end in a short spike.

*L. decomposita* has short, thick, creeping rhizome while that of *L. microsora* is slender and less compact. Both ferns are good garden subjects and do not spread quickly and become a nuisance.

## REPORT FROM SOUTH-EAST QUEENSLAND

### Excursion to Ravensbourne, 5 March 1995

The visit to Jim and Betty Johnson's property was thoroughly enjoyed by 15 members and 5 visitors. After years of drought, eleven inches of rain had fallen in the month prior to our visit. We were warned that the ferns may not be too abundant. As a small spring fed creek runs through the property and to had quite stopped running all through the drought, we decided to take a look at it anyhow.

To our delight we were able to record 27 ferns. Three of these were not recorded there before and we were told at least two others that have grown there previously were not sighted that day. The tracks to both the creek and cave area areas were steep. Jim conveyed the "not so fits" down and back in his buggy. Slowly but surely it will travel any bush tack.

Both his "buggy" and his "slasher" were ingenious contraptions, each being made from bits and pieces of about ten different vehicles. (It took more than half an hour to drag the male members of the party away from them, before our walk could commence.) Equally admired was their unique weekender and a cabin on the creek. Thank you, Jim and Betty for a wonderful day. A list of the ferns, compiled by Lorna Murray, follows.

*Adiantum aethiopicum*, *A. diaphanum*, *A. formosum*, *A. hispidulum*, *Arachniodes aristata*,  
*Asplenium attenuatum*, *A. australasicum*, *Blechnum cartilagineum*, *B. patersonii*, *Christella dentata*,  
*Culcita dubia*, *Cyathea australis*, *C. cooperi*, *Davallia pyxidata*, *Dryanaria rigidula*, *Doodia aspera*,  
*D. media*, *Lastreopsis decomposita*, *L. microsora*, *Microsorium scandens*, *Platercerium bifurcatum*,  
*Ptilotum nudum*, *Pteridium esculentum*, *Pyrrhosia rupestris*, *Pteris tremula*, *Schizaea bifida*,  
*Sticherus flabellatus*.

Irene Cullen

### Report on meeting at Greenbank, 4 June 1995

A relatively small group of 10 enthusiastic members gathered at the home of Kerry Rathie for another discussion meeting. In the absence of Rene Cullen, Peter Bostock took the chair.

Peter first discussed some aspects of the new Herbarium building which is to be built in the Mt Coot-tha Botanic Gardens near the present Administration Building. Ideas regarding design of an herbarium had been canvassed recently on the Internet by the local botanists and some answers had already been received. Advisable practices for the storage of specimens were also discussed. For the amateur collector Peter suggested that mounting specimens on cardboard in ziplock plastic bags was adequate, but the bags should be put in the freezer every 6 months or so to kill carpet beetles, which can be a problem in Queensland.

The main discussion was about some aspects of the classification of ferns and general considerations for division into families were considered. We had to remember that all classifications are artificial divisions. As a family covers a wide range of characteristics, the genus naturally being narrower and less variable., no 1, 2 or sometimes even 3 characters can distinguish one family from another. *Angiopteris* and *Marattia* are similar so why should they be in separate families?

Within families some genera are difficult to separate, and examples considered were *Doodia* and *Blechnum*, genera of filmy ferns (should there be only 6 genera in Australia?), and some problems in the *Thelypteridaceae* with *Christella*, *Cyclosorus* and *Chingia*. Some of the variations between otherwise recognisable species may be due to hybrids occurring. As *Christella dentata* is tetraploid, it may be a stabilised hybrid.



Two new species of Queensland aquatics have recently been noted. *Thelypteris confluens* was found in flowing water in mound springs east of Taroom, this being only the third record for Queensland of this species. *Isoetes muelleri* has been found in melonhole country near Roma. This species formerly occurred near Amberley, and we were advised to look out for plants of the species.

Thanks are due to Peter for once again sharing these aspects of his knowledge of fern structure and classification with us, and then for identifying ferns brought to the gathering by members. An interesting walk around the Rathie garden followed the meeting, when we saw many ferns growing among other plants in the rainforest area.

Lorna Murray.

## NOTES FROM THE SYDNEY AREA

### Report on Meeting at Kenthurst, 18 June 1995

Prior to the meeting, Betty and Eric provided quick tours of a small part of their extensive property. There had been heavy rain in the preceding days and the moist soil, running stream, moss covered rocks and the rainforest that the Rymers have created, made for a fern paradise. Our congratulations to the owners of this wonderfully diverse garden and the myriad of ferns.

After attending to our forward program we considered NSW Region's request for advice regarding a proposal to harvest and export 20,000 *Dicksonia antarctica* tree ferns from a property in the Otway Ranges, Victoria. As Peter explained, it was surprising that this fern was apparently so abundant away from waterways and drainage lines (where it is not supposed to be taken). As *Dicksonia antarctica* is particularly slow growing, it appeared that the ferns that were being considered for destruction were probably from 20 to 60 years old. It seemed wrong to be taking such an enormous number of plants without an undertaking to replace them or to demonstrate the sustainability of the project. It was accordingly decided to ask NSW Region to protest against the proposal.

The Study Session dealt with the four Australian members of the genus *Lygodium*. There are about 40 species world-wide. Peter commenced by warning that we might find identification of the Australian species was not as easy as a quick perusal of the distinctive drawings in Jones & Clemesha might make it appear. We soon agreed when we commenced the task of matching drawings with the various pieces of *Lygodium* fronds brought to the meeting. *Lygodiums* are really quite remarkable and distinctive. No other ferns have a rachis which twines in the manner of *Lygodium* species. If a bud on the main rachis is damaged, the bud on the next level grows and produces branches. The frond is capable of almost constant extension. There are reports of the fronds reaching 25 m, the longest of any fern. Kyrill said that he had measured one frond which he untangled from around his 18" basket specimen of *Lygodium japonicum*, as 20' long.

*Lygodiums* can be propagated from spore or by layering - peg the lower nodes down into a friable, peaty potting mixture. Once started they can be cultivated readily. The rhizome requires shelter but the fronds grow best out of the shade and some species only produce fertile leaflets when exposed to strong light. Peter had brought a potted *Lygodium reticulatum* to the meeting. From Queensland, Tahiti, Vanuatu, New Caledonia and Fiji, it is readily distinguished because of the reticulated venation. Using a hand lens we were able to see the veins connecting with the next vein before reaching the mid rib or margin of the fronds. The sterile fronds have a leathery feel and their margins are finely crenate.

**FORTHCOMING EVENTS : IN THE SYDNEY REGION**Saturday 16 September 1995, Visit to Mt Tomah

Meet at 11 o'clock at the Visitors Centre inside Mt Tomah Botanic Gardens. Peter will conduct us on a guided tour and put a name to all those ferns you have wondered about. Hopefully, Peter and Margaret will be safely home from their recent trip to North Queensland. Enquiries to Peter 625 8705.

Sunday 15 October 1995, Meeting at Dural

Meet from 11.30 am at the home of Pat Kenyon and Ted Newman at 1057 Old Northern Road Dural. Enter from private road on right hand side exactly 2 km past Dural Post Office. The meeting proper will commence at 1.00 pm and in lieu of study, Peter will tell us of some of the ferns seen on the recent North Queensland tour. The segment "A Members Fern" will be presented by Moreen. Bring lunch and a plate for afternoon tea. Enquiries to Pat 651 2765.

Saturday 18 November 1995, Outing to Minnamurra

The Minnamurra Falls Reserve is about 130 km south of Sydney, 13 km west of Kiama along a sealed road from Jamberoo. There are over 50 fern species recorded for this locality. Meet at the parking area around 10 am for 10.30 start of walk. Late lunch at cars and early departure for the drive home. Enquiries to Peter 625 8705.

Sunday 3 December 1995, End of Year Get-Together, Dee Why

Meet from 11.30 for our festive season gathering to be held this year at Stony Range Flora Reserve, Pittwater Road, Dee Why. Please inform Jan 971 6132, or Cynthia 451 6531, as early as possible before the date whether bringing meat, salad, or sweets for pooled lunch. Bring own cutlery and crockery. In keeping with our tradition, please bring a gift - maximum \$5 (or several according to the number in your party).

**FORTHCOMING EVENTS : IN THE MID NORTH COAST , N.S.W.**Week end 23 & 24 September 1995, Outing to Washpool

This is a beautiful area! For details contact Charlie Charters, phone (065) 86 1088 .

**FORTHCOMING EVENTS : IN SOUTH EASTERN QUEENSLAND**Sunday 5 November 1995, Excursion to Springbrook

Meet at the small picnic area, just past the divided Highway at Springbrook at 10 am.

Sunday 3 December 1995 Break up Function at Pullenvale

Meet 9.30 am at Geoff and Merle Goadby's home 123 Haven Road, Pullenvale. Bring fern or appropriate gift for our Christmas exchange.

Sunday 4 th February 1996. Excursion Pullenvale.

Meet 9.30 am at Graham Nosworthy's home 609 Grandview Road Pullenvale, to start our excursion.

## Ferns in San Diego Gardens

by Phyllis Bates

Early this spring I had a phone call from a gardener in the area. she was concerned about the condition of her Boston fern, which was losing a lot of leaflets. after a few questions, I suggested that she put the fern outdoors at least during the daytime, for it seemed likely that the fern was not getting enough light indoors. Her response was that she did not know that ferns would grow outdoors -- ferns are houseplants!

A second incident that focused my attention on ferns in the garden was a list of the top ten ferns for the landscape in various regions of the United States. the list was in a new edition of the Brooklyn Botanical Garden handbook on ferns. The handbook has a lot of interesting reading matter, but I was so surprised by the species suggested for the Southwest that I took a survey at our meeting (and a couple of other places as well) to see how growers would reply to the question *What ferns are you and your neighbors growing in your gardens?*

Since the meeting I have had several members ask for the outcome of the survey so we can make valid suggestions about the ferns we find satisfactory in our San Diego gardens.

In order of highest number of times mentioned, the top ten ferns were:

*Asplenium nidus* (Bird's Nest fern)

*Asplenium bulbiferum* (Mother fern)

*Platycerium bifurcatum* (Staghorn fern)

*Nephrolepis cordifolia* (Sword fern)

*Cyrtomium falcatum* (Holly fern)

*Adiantum raddianum* (Maidenhair fern)

*Davallia trichomanoides* (Rabbit's Foot fern)

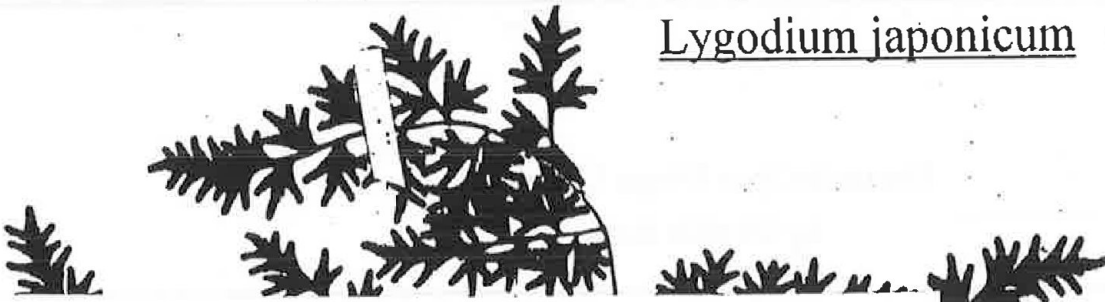
*Rumohra adiantiformis* (Leather Leaf fern)

*Nephrolepis exaltata* (Bottom fern)

*Sphaeropteris cooperi* (Australian Tree fern)

The above article was taken from "The Fern World" the June 1995 issue of the Newsletter of the San Diego Fern Society. We note that six of the top ferns are Australian natives and that two of the others are exotics which have naturalised in parts of Australia. We wonder about *Asplenium nidus* though, given our difficulty in keeping it alive away from the tropical warmth - what are the chances of the top fern being *Asplenium australasicum*?

Lygodium japonicum



**NOT EVERYONE LIKES LYGODIUMS!**

A letter from Geoff Simmons from Elimbah, Queensland, arrived just in time for our meeting at Kenthurst on 18 June 1995. Geoff wrote as follows:

*"As a member of the SGAP Fern Study Group, I was interested to read in the Newsletter that a meeting on the genus Lygodium was being held in June.*

*I would be interested if any members have any suggestions on how to rid my garden of this pest. Of the top ten weeds that I have, this would be number 3 in degree of nuisance. I refer to Lygodium japonicum which produced spores that distribute widely so one finds plants in sites that are not wanted. It's climbing habit results in disfiguring of plants such as Graptophyllum excelsa and the growth of this fern in rock crevices makes removal difficult. Herbicide of the glysohate type has only minimal effect. Perhaps a member has a suggestion regarding a suitable fernicide."*

Sporangia in two rows  
each protected by membrane



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