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# NEWSLETTER

VOLUME 19, Number 4 - July / August, 1997

# FERN SOCIETY OF VICTORIA Inc.

POSTAL ADDRESS:

P.O. Box 45, Heidelberg West, Victoria, 3081

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SUBSCRIPTIONS:

Single -

\$13.00

Pensioner/student \$10.00

Family - \$1

\$15.00 Pensioner Family \$12.00

Overseas -

A\$20.00 (Magazine by airmail)

Subscriptions fall due on 1st July each year.

#### **OUR SOCIETY'S OBJECTIVES.**

The objectives of the Society are;

- \*to bring together persons interested in ferns and allied plants
- \*to promote the gathering and dissemination of information about ferns
- \*to stimulate public interest in ferns and
- \*to promote the conservation of ferns and their habitats.

# ADVANCE NOTICE - FERN SHOW 1998. APRIL 18th - 19th

Our FERN SHOW in 1998 will be held on the weekend of April 18th and 19th at the Mount Waverley Community Centre, on the corner of Miller Crescent and Stephensons Road, Mount Waverley.

This venue is much larger than we have had previously and therefore it has the scope for more activities. However to achieve the maximum from this improvement we need more members willing and able to be involved. The Show Committee are anxious to hear from anyone willing to help or any ideas that you may have.

## 1997 FORTHCOMING MEETINGS & EVENTS

JULY GENERAL MEETING Thursday 17th July at 8.00 p.m.

# THE PROPAGATION OF FERNS BY RHIZOME CUTTINGS

presented by Ian Broughton

AUGUST GENERAL MEETING Thursday 21st August at 8.00 p.m.

### WHAT'S IN A NAME?

presented by Terry Turney

VENUE:

Victoria Bowling Club, 217 Grattan Street, Carlton.

#### MEETING TIMETABLE:

7.30 Pre-meeting activities - Sale of ferns, spore, books, merchandise and Special Effort tickets.

Also library loans.
8.00 General Meeting.

8.30 Topic of the Evening.

9.30 Fern Competition judging, Fern identification and pathology, Special Effort draw.

9.45 Supper.10.00 Close.

### **MONTHLY COMPETITIONS:**

JULY

a) Holly Fern (Cyrtomium)

b) Any large-rhizomed fern

**AUGUST** 

Blechnum

SEPTEMBER Lastreopsis and Microlepia

# SPEAKER REPORT FROM MEETING OF MAY 15TH, 1997. FRASER ISLAND AND ITS FERNS.

Presented by Don Fuller. Report written by Lyn Gresham.

In June 1996 six members of the Society went on a tour which included Carnarvon Gorge (a report of which appeared in last November/December's Newsletter) and Fraser Island, both in Queensland. The touring group spent three nights and two full days at Fraser Island. Unfortunately they did not have the best of weather but the windy, cool conditions don't seem to have dampened their adventurous spirits - the quest for ferns MUST go on, and on it most certainly went!

#### THE ISLAND.

In 1836 a ship sank 300 Km north of an island in the Pacific. The captain's wife, Elizabeth Fraser, was among those who survived and were eventually rescued from the island. It was later named after her.

Fraser Island is unique. It is the world's largest sand island, being 122 Km long and approximately 20 Km wide. It is also the only place in the world where rainforests grow on sand dunes, some of which are 200 metres high. The highest point on the island is 240 metres above sea level.

Lying off the east coast of Queensland near Hervey Bay, Fraser Island is a little less than 300 Km north of Brisbane. The northern third of the island is a 52,000 ha National Park, (The Great Sandy National Park) and the whole island was listed as a World Heritage Area in December 1992.

Prior to Fraser Island having National Park status and World Heritage listing, commercial activity on the island included sand mining for the heavy minerals of rutile and zircon, and timber cutting. Timber from the Satinay trees of Fraser Island was used for the construction of sidings in the Suez Canal in the 1920's.

The sand which makes up Fraser Island actually comes from the mountains of New South Wales (at LEAST 300 Km south, for the foreigners). It is washed down to the sea in rivers and creeks and the currents carry it north until its progress is impeded by rocky headlands. It builds up behind and around these rocks, forming and continually re-forming the island. Fraser Island has four volcanic headlands; Middle Rocks, Indian Head, Waddy Point and Boon Boon Creek. They are the only areas of true rock on the island, the strikingly coloured sandstone cliffs really being just sand stuck together.

Because the buildup of sand has been generally from east to west, the west coast is predominantly flat mangrove country and not very scenic, whereas the centre and east are much more picturesque.

#### FRASER'S SAND DUNES.

The brilliant white of some of the sand is due to the action of fungi and plants which have removed the minerals and impurities from it. It is called Pleistocene; oceanic or beach sand up



to 2 million years old, from the last glacial period.

Thin grey layers can sometimes be seen in the sand. These are organic matter and show where the old sand's surface with its own vegetation once was. In some places the tops of dead trees which grew on this surface can be seen emerging from the new dunes. So we can see the ongoing process of dunes covering old dunes which had been stabilised by vegetation.

### NOTICE OF ANNUAL GENERAL MEETING.

The eighteenth Annual General Meeting of the Fern Society of Victoria Inc. will be held at 8.00 p.m. on Thursday the 18th September 1997 at the Victoria Bowling Club, 217 Grattan Street, Carlton.

Business to be transacted will be:

- 1. Receive and deal with the President's Report on behalf of the Committee of Management.
- 2. Receive and deal with the Treasurer's Report.
- Election of Office Bearers and Committee Members of the Committee of Management for 1997 - 98.
- 4. General Business.

#### Nominations for Committee of Management

Nominations are now called for the positions of Office Bearers and Committee Members for the year September 1997 to September 1998. Nominations should be in writing, be signed by the proposer and seconder, and include the written consent of the nominee. They must be received by the 11th September, not less than seven days prior to the Annual General Meeting. Nominations may be called at the Annual General Meeting only if insufficient have been received previously to fill all vacancies.

#### General Business

Items to be discussed and voted on under General Business at the Annual General Meeting must be notified to the Secretary in writing not less than 21 days prior to the meeting.

Christopher J. Goudey President.

### MEMBERSHIP SUBSCRIPTION RENEWAL.

Membership subscriptions fell due on 1st July. The new, reduced rates are as shown inside the front cover of this newsletter.

Please use the enclosed RENEWAL FORM as it helps our records system run smoothly and efficiently. Why not do it now, before you forget or lose the renewal form, thus avoiding costly and time consuming reminder notes.

### NEW MEMBERS' APPLICATIONS.

We have updated the pamphlet which contains an application form for NEW membership, brief fern cultural notes and a list of suggested hardy, interesting ferns for beginners. Free copies are available and are useful promotional handouts to friends, garden club members, local flower show visitors etc.

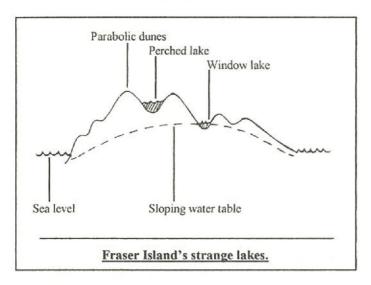
Send an addressed, business size pre-stamped envelope with your request for up to six copies, or a C4 size envelope prestamped to the value of \$2.20 for larger quantities, to P.O. Box 45, Heidelberg West, Vic. 3081.

HELP YOUR SOCIETY GROW!

#### THE LAKES AND THEIR INHABITANTS.

The island has over forty freshwater dune lakes, which are exceptional in their diversity, age and number. These are of two types:

<u>Perched lakes</u> are perched above the water table on an impervious pad of mud, sand and peat. Fraser Island has forty perched lakes, half of the world's total. Lake Boomanjin (200 hectares) is the world's largest perched lake.



<u>Window lakes</u> are formed when the ground surface is below the water table. On Fraser Island the water table is well above sea level, as shown in the diagram above.

Many of the lakes abound in turtles, frogs, fish and other aquatic life. The turtles (and presumably the other aquatic wildlife) grow to a much smaller size than the same species on the mainland because of the low nutrient content of the pure water.

#### LAND ANIMALS AND BIRDS.

There are over two hundred dingoes on the island. Quite a common sight and not nearly as shy as mainland ones, they are regarded as the purest strain of dingo in Eastern Australia because of their isolation.

Birdlife abounds on Fraser Island. More than 240 bird species have been sighted, many of them migratory. The dawn chorus is really something worth hearing.

#### THE TRIP.

Access to Fraser Island is by ferry. Our group left from River Heads (at the mouth of the Mary River) and landed on shore in the estuary of the Wanggoolba Creek about halfway down the west (mainland) side of the island. Before leaving the mainland the group had to leave their coach. On arrival they transferred to a four-wheel-drive bus which was ideal for getting around on the sandy terrain.

As they went across the island to Eurong Resort where they stayed (sounds as though the poor things had to rough it, doesn't it? Looked like it, too) they passed through the rainforest in the centre of the island, which contains very tall trees, some of desirable timber. They include Satinay (Syncarpia hillii), Blackbutt (Eucalyptus pilularis), Kauri Pine (Agathis robusta), Brush Box (Lophostemon confertus) and Hoop Pine (Araucaria cunninghamii). The valleys of the

rainforest are often dominated by Piccabeen Palms (Wait for it - Archontophoenix cunninghamiana). As you travel away from the central rainforest towards the eastern coast you move into lighter, lower timber - Scribbly Gum (Eucalyptus signata), Paperbark (Melaleuca sp.) and similar trees.

A few hundred metres before reaching Eurong (you know, the RESORT we heard about) the first ferns were sighted patches of a ground fern growing beside the road in dense clumps up to 100 metres across. Most of the sensible (i.e., fern) people walked back to have a look, and found, to their astonishment, that these were *Drynaria rigidula* (Basket Fern), normally an epiphytic species but looking extremely healthy and obviously thriving as a terrestrial fern among leaf litter in the island's sand. We also saw slides of their nest fronds, equal to the best I've ever seen, I think. It must have been a wonderful sight. Imagine them growing like that!

#### DAY ONE.

The weather the next morning being unsuitable for the planned flight over the area, they did an island bus trip roughly north travelling for 50 or 60 Kms ON Main Beach, the island's main road, to Middle Rocks. Normal road rules apply here, although it sounds as though maybe speed restrictions are relaxed somewhat.

#### ELI CREEK.

Their first stop was at Eli Creek, on the bottom edge of the National Park. It is the largest freshwater stream on the eastern side of Fraser Island. Flowing at the rate of one million litres per hour, it begins six kilometres inland in a Picabeen Palm forest. The gully there is below the water table, making the stream a window in the water table, from whence it runs swiftly to the ocean. Had it not had an exit point, it would have been just one more window lake.

There is a boardwalk of some 200 metres constructed on both sides of the creek, and it was there that they saw their only ferns (except Bracken which was plentiful) for the day. From the boardwalk was seen *Gleichenia dicarpa*, the Pouched Coral Fern and *Lygodium microphyllum*, the Climbing Maidenhair growing in fairly swampy conditions, virtually in the water, really.

#### THE SHIPWRECK "MAHENO".

A once luxurious passenger liner, the "Maheno", was driven ashore by a storm in 1935 while under tow to Japan for scrapping. It now sits high on the beach where our group passed. They paused to have a look at this huge iron skeleton, a manmade eyesore in a beautiful, natural setting. (That is my observation, not Don's.)

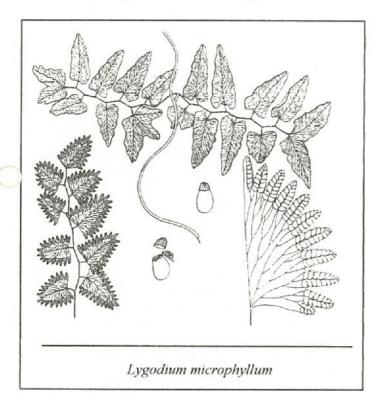
# DAY TWO. THE SCENIC FLIGHT etc.

The weather being better on Day 2, five of the six somewhat frustrated Fern enthusiasts took to the sky to have a look at the island from above. From their slides we were able to form some idea of its size and nature. Being 122 kms long, it is a large island. We saw lots of forest and many lakes.

After the plane trip they were bused along the beach to the track which goes to one of them, Lake Wabby, reached after a walk of 40 - 45 minutes. Lake Wabby is interesting because

a white sand dune is gradually encroaching across it and at present the lake is approximately semicircular, the roughly straight 'cut' of the dune forming a beach. This lake supports quite a diversity of wildlife; an abundance of turtles, twelve species of fish including large catfish and an abundance of other species.

Beside the track in, there were more *Drynaria rigidula* looking very happy growing in pure sand. Also along the track was seen some *Schizaea dichotoma*, Branched Comb-fern, some interesting fungi on a tree (emphasising the humidity - it is a RAINforest) and quite a number of small ground orchids.



After lunch the bus took them inland from Eurong to Central Station, a most unromantic name for a lovely spot which had been the central control place for the timber industry and is now one of the main Ranger Stations for the island. The area around Central Station was where they saw the most ferns, first in the immediate environs of the buildings - we saw Davallia pyxidata, our Australian Hare's-foot Fern, a few Staghorns (Platycerium superbum) and Don told us of abundant Elkhorns (P. bifurcatum), Tape Fern (Vittaria elongata) and Asplenium australasicum or Birdsnest Fern in the trees above them. There is a boardwalk which goes for some 500 metres along Wanggoolba Creek and on one side of it was found Psilotum mudum, the Skeleton Fork-fern. Also seen here was Angiopteris evecta, the Giant Fern, which is one of four rare ferns which grow in one creek each on Fraser Island. Yes, in! Our members only saw one specimen of this fern, though they conceded that there may quite well be more there. We hope so. We also saw a tall tree-fern which they think was Cyathea cooperi though they could not get close enough for a good look, and below that Dicksonia youngiae, Bristly Treefern. Our members also saw but did not photograph the following ferns here; Blechnum camfieldii, B. cartilagineum or Gristle Fern, Macroglena caudatum Jungle Bristle-fern and Nephrolepis cordifolia, the common Fishbone Fern. Unfortunately for us, the area is quite dark, making photographing the

ferns difficult.

Though it was mid-to-late afternoon the group moved on through Pile Valley to Lake McKenzie. The sand there is incredibly white and the area very scenic but they didn't find any ferns.

The last slide we saw depicted the ferry on which our intrepid trippers returned to the Big Island, sometimes called mainland Australia. The most interesting (and most atmospheric, as Don pointed out) feature of that ride was the full rubbish removal truck which was travelling with them. All rubbish is removed to minimise the impact of human presence there. (Much is being done to try and protect our environment for and from us. We only hope that it is enough.)

Don concluded his presentation with the comment that travelling on a general tour is not to be recommended if you are trying to see the ferns of Fraser Island. Generally the areas that are more popular as tourist destinations are fairly fern-free. There are undoubtedly many good fern areas in the rainforest but they are a long, long way from accommodation or places within access from the bus so private transport and plenty of time are essential if you are to get to these places, even for a fit and energetic walker like Barry! However it is a very unique and interesting place to visit. In total they saw seventeen ferns of the fifty on a list they had so from that perspective it was disappointing.

#### FERNS OBSERVED ON FRASER ISLAND

Angiopteris evecta Gant Fern Asplenium australasicum Birdsnest Fern Blechnum camfieldii Blechnum cartilagineum Gristle Fern Davallia pyxidata Australian Hare's-foot Dicksonia youngiae Bristly Tree-fern Drynaria rigidula Basket Fern Gleichenia dicarpa Pouched Coral-fern Lygodium microphyllum Climbing Maidenhair Macroglena caudata Jungle Bristle-fern Nephrolepis cordifolia Fishbone Fern Platycerium bifurcatum Elkhorn Platycerium superbum Staghorn Psilotum nudum Skeleton Fork-fern Pteridium esculentum Bracken Branched Comb-fern Schizaea dichotoma Vittaria elongata Tape Fern

Enthusiastic thanks was expressed to Don for an informative and interesting talk and some lovely views of the Island.

Footnote: Members who attended this meeting will notice that not all of this article came from Don's talk. Channel 9 thoughtfully featured Fraser Island in "Our World - Islands of Australia" within a week of the meeting so I was able to learn more about it and add the bits I remembered. -L.G. &

# SPEAKER REPORT - APRIL 1997 GENERAL MEETING MY FAVOURITE FERN

Various Members

#### Chris Goudey.

#### "Maori Princess"

Asplenium bulbiferum x oblongifolium

This popular fern's introduction into Australia was from New Zealand, where a lovely ninety-year-old lady, the daughter of a Maori chief gave Chris one plant. He has since sold at least 35,000 of them.

In the years to follow the Goudeys did a lot of oversow planting in the hope of producing other hybrid cultivars. They planted lots of different Aspleniums and oversowed them with the *A. bulbiferum* from New Zealand. This resulted in a few hybrids but they never all had bulbils on them.

The A. bulbiferum in the trade here is no good for hybridising as it itself is a hybrid, but the A. bulbiferum in N.Z. is the true species and that is the one they use. It is quite difficult to get hold of in Australia (even if you know what you're looking for, which I don't - Lyn).

#### "Island Beauty"

Asplenium bulbiferum x surrogatum.

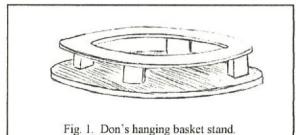
Chris has always been attracted to an Asplenium from Lord Howe Island which used to be A. pteridoides, is now A. surrogatum. He was keen to cross this with A. bulbiferum because he thought he would 'have a beauty'. From one tray of spore he got two plants of the Spleenwort we know as "Island Beauty".

8000

#### Don Fuller

#### Phlebodium aureum cv. Mandianum

This four-year-old fern is growing in a coarse mix in a fibreglass house. It is up high to get plenty of light and is kept moist. In the last year or two it has really flourished. Don makes his own organic mix which is quite open and which he uses for all the epiphytes he



grows. It is loosely based on one in Doug Thomas' booklet \*"What to do about Ferns".

Don's fern in a wire hanging basket was sitting on a stand which drew a lot of interested comments. When asked for variously the pattern and the recipe, he described it as 'just a hunk of wood, cut out, and four blocks on another piece of wood'. His hunk of wood worked perfectly - usually the simple designs work best, don't they? I have endeavoured to draw it for you to copy. It's good for transporting pots with rounded bottoms to shows etc. or for working on pots at a comfortable height.

more

#### Owner unknown - a show leftover.

#### Davallia pyxidata

"The one that sends its rhizomes UP". This fern grows in Victoria but is very rare and very small here. It is reported to get bigger in cultivation. It is only known to grow in three places in the Black Range, all on high peaks in crevices of boulders, which must collect and store enough heat and moisture for the fern to survive. Quite exposed to the elements, including full sun, the fern sends its rhizomes (much finer than its northern counterparts') along the cracks and upwards in the distinct 'pyxidata' fashion.

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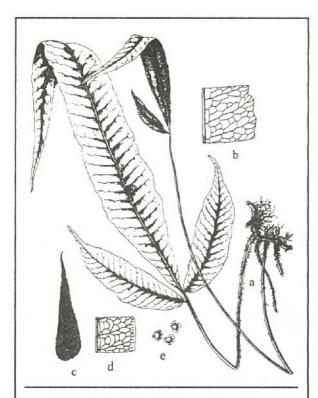
#### Lyn Gresham

#### Pyrrosia lingua 'Nokogiri-BA'

Purchased from the Geekies in Sydney (contrary to my statement at the meeting) as an established plant in 1995, this form of *P. lingua*, which has bluntly lobed and crinkled margins, is hardy once established. It likes good light, seems to prefer being up high and isn't keen on being disturbed. I like it because it's interesting and it tolerates our cold winters.

#### Platycerium bifurcatum

The baby I showed is a favourite because it is one of the first successes I have had at removing 'pups' and establishing them - and I took it to have a skite! I lost about half of that batch until I remembered a hint to grow them in a pot, at an angle. Since the pots have been chocked up at one side, the survivors certainly looked happier, and have even started to grow.



Bolbitis heterolita. a. Habit. b. Portion of sterile pinna, showing venation. c. Scale from rhizome. d. Portion of fertile pinna. e. Spores.

Some didn't suffer the transition onto a board too well, but most are doing fine.

Section Section

#### Norma Hodges

Davallia . . .?

Norma likes this fern for its colour - it has beautiful bronze new growth. Its name was unknown but Chris suggested it might be *D. dimorpha*. It grows in shade, in an open situation. A beautiful fern.

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Barry White

Ampelopteris prolifera

This is a fern which Barry saw in Carnarvon Gorge and which intrigued him. (See Vol 18, page 94) Dorothy had one which was thriving under the bench in the fernery but her husband weeded while she was away. Barry now has a bit of it, which we saw. It has a peculiar growth habit; there are two different types of pinnate frond, one which is virtually continuous and horizontal with buds in pinna axils some of which root and form new plants freely, much as couch grass does. And we thought ferns were nice plants! Also from this type of frond grow normal fronds that come up with terminal pinnae. It forms an untidy, scrambling mess. Habitat is terrestrial, in or near water or wet ground, in both shade and sun. Plantlets from proliferous buds sometimes attach to tree bark and become epiphytic when the parent dies. A very interesting fern.

8000

#### Dorothy Forte

Bolbitis heteroclita

So tiny it looks more like a moss, this is a RARE fern which is very difficult to grow. Bought from Chris ten years ago (He imported it from the Philippines), Dorothy has it growing in a plastic or fibreglass orb formed by two domes which fit together, on her hot water service in good light. It produces spore and also forms small plants along the stems.

900

#### Keith Hutchison

Polypodium australe 'Cambricum'

Discovered growing in rocks high up in the bleak mountains of Wales, this fern likes to be extremely well drained. It seems to prefer a shallow pot to the ground, and would probably suit a terracotta pot better than plastic. The new fronds come out in autumn. Growing outside, it gets a good half day of sun and is thriving. Keith wrote about this fern in one of his "My Favourite Fern" articles.

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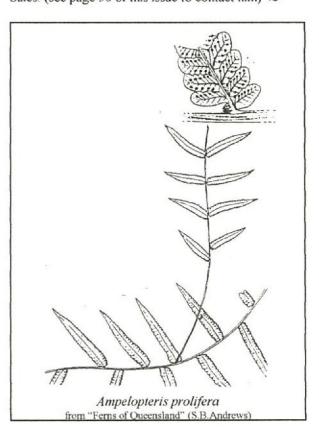
#### Jack Barrett

Polypodium formosanum - Grub Fern

Most of us will be familiar with the Grub Fern. Jack brought in two which are growing in a glassed-in porch; one in a shallow plastic pot and the other in a coconut shell. They had recently offered to die so Jack had cut all the fronds off. A good flush of new ones very soon appeared and both ferns were lovely.

Second Second

\*Available from Ivan Traverso who handles our Book Sales. (see page 50 of this issue to contact him) &



# FERNS OF JAPAN.

Barry White

Japan is not often thought of as a country rich in ferns however according to Kunio Iwatsuki of the Botanical Gardens of the University of Tokyo, Japan has 634 species of ferns. Jones and Clemesha in their book state that Australia has 416 species of ferns.

The following information is taken from Kunio Iwatsuki's paper in "Fern Horticulture: Past Present and Future Perspectives". This publication is the proceedings of a conference held in London in 1991 to celebrate the Centenary of the British Pteridological Society.

The Japanese archipelago has a total area of only 318,000 square kilometres. The central and southern parts are washed on the eastern side by the warm Black Current, and by the cold Oyashi Current in the North. The result is a moist climate with a rainfall of 1,000 mm, with some localities receiving 3,000 to 4,000 mm. The warm Black Current means that the central and southern parts have a warmer climate than might be expected for their latitude. Also only 20% of Japan is suitable for cultivation, the remainder being covered by steep-sided mountains clothed in dense

green forest. A third factor contributing to the diverse fern population is the existence of land bridges some 180,000 years ago.

A variety of fern species are eaten. Bracken (Pteridium aquilinum) and Japanese Royal Ferns (Osmunda japonica) are particularly enjoyed. The bitter taste of bracken is removed by treatment prior to cooking; formerly the shoots were immersed in water with wood ash, but today a solution of sodium chloride (common salt) is used, which at the same time removes any potential carcinogens. Other species, often used for side dishes, are the fertile shoots of Equisetum arvense (Horsetail), the fiddle-heads of Matteucia struthiopteris (Ostrich Fern), young plants of Ceratopteris thalictroides (a tropical submerged water-fern), and, as it name suggests, Diplazium

esculentum (Edible Fern/Vegetable Fern).

Many Japanese are interested in ferns. The Japan Fernist Club is 40 years old and has about 640 members. There are also a number of local fern groups publishing their own

newsletters. The Japan Society of Pteridologists is for professional botanists and holds seminars every second month.

#### FERN TYPES

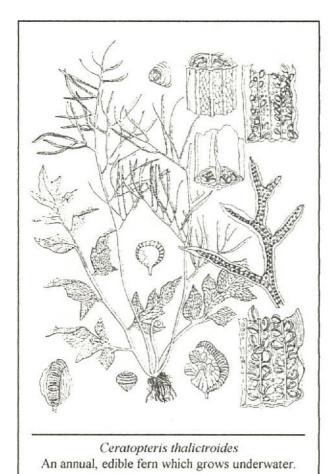
Epiphytes. These typically occur in the warmer areas and include members of the Psilotaceae, Lycopodiaceae, Selaginellaceae, Hymenophyllaceae, Davalliaceae, Vittariaceae, Aspleniaceae, Polypodiaceae and Grammitidaceae families. Other species such as members of the Lepisorus and Lemmaphyllum genera occur in the cooler but very moist north. It is stated that most of the epiphytes grow readily in pots.

Davallia mariesii which grows throughout Japan is commonly grown as a hanging ball known as Shinobu-dama.

Saxicolous Ferns. These are ferns growing on or among rocks. In the warmer areas of Japan these are found growing on moist, moss-covered rocks, in other areas they grow in the crevices. The ferns include members of the Asplenium, Selaginella, Pyrrosia, Osmunda and Lindsaea genera. Many of the saxicolous ferns are cultivated, some are very attractive when grown as Bonsai on rocks and can frequently be seen in exhibitions.

<u>Terrestrial Ferns.</u> These include the greatest number of ferns and include members of the Dryopteris, Cyrtomium, Polystichum, Arachniodes, Thelypteris, Athyrium, Diplazium and other genera. They commonly grow as grown cover in evergreen broad-leaved forests.

Aquatic Ferns. There are not many species in



this category. They include Isoetes, Azolla, Salvinia, Marsilea and Ceratopteris. Ceratopteris as mentioned before is an edible fern. It is an annual and grows under water.

There are a number of good illustrated books on Japanese ferns, most of them written in Japanese. Recently published is an authoritative work in English, "Flora of Japan. Volume 1. Pteridophyta and Gymnospermae" by Kunio Iwatsuki and others. Unfortunately it has no illustrations and its price is (U.S.) \$514.



# Vale Ray Best.

Members of our Society will be familiar with Ray Best's book "Growing Ferns" with its excellent pictures and drawings.

The following is taken from the June issue of the Newsletter of the Fern Study Group of the Society for Growing Australian Plants.

"All who knew Ray Best would have been saddened at word of his passing in February. Although frail in the recent years, Ray enjoyed reasonable health until the end and died peacefully aged 84 years. Here was a man who was a legend in his own time among fern lovers. Ray never failed to respond positively and cheerfully to the numerous requests our Group made of him. We marvelled at his knowledge of all things and the power of his intellect. His drawings and paintings of ferns are brilliant in their detail and clarity. His book "Growing Ferns" published seventeen years ago is still one of the finest introductions to the subject. But so much of his work has not been published, so much of his knowledge has been lost with his passing. We have lost a treasure, a remarkable man and a staunch supporter of our cause. We wish to convey to Marie our sincere sympathy."

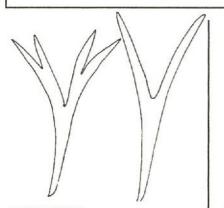
Ray was a member of the Fern Society of Victoria for many years. He accompanied us on our trip to Tasmania, gave a talk to our members and contributed a number of articles to the Newsletter. These articles were accompanied by his own excellent illustrations. Ray also designed the logo which is used on our letterheads.

The Fern Society of Victoria is appreciative of all the contributions made by Ray to our Society and regrets the passing of one who taught himself so much about ferns and who was always only too happy to pass this information on to others.

Barry White

# LEARNING YOUR WAY AROUND FERNS 3. MORE FROND DIVISIONS.

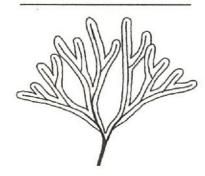
Lyn Gresham.



#### **BIFURCATE**

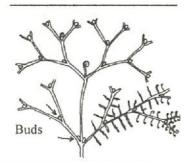
(bi-two, furca-fork) with two lobes.

eg., Platycerium bifurcatum.



#### **DICHOTOMOUS**

(dichotomia-a cutting in two)
Repeatedly forking into two more or less equal branches.
eg., Microtrichmanes digitatum.



#### **PSEUDODICHOTOMOUS**

(Pseodo-false, dichotomous-see above). Apparently dichotomous (see above). eg., Gleichenia and Sticherus species (Coral and Fan Ferns) appear to be dichotomous but actually also have a small dormant bud at the fork.



#### **PALMATE**

(palmatus-hand shaped)
Divided like a hand, with the
divisions or lobes radiating from
a central point. Also now frequently described as digitate.
eg., Dryopteris sieboldii



#### **PALMATIFID**

(fidus-split or cleave) Divided like a hand, the divisions extending about halfway. eg., Hausmannia dentata, a fossil.



#### PALMATISECT

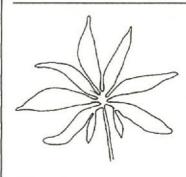
(Sectus-cut, divided) Divided like a hand, but with the divisions extending almost to the base. eg. Clathopteris menisculoides (above), a fossil.



#### PEDATE

(ped-foot,) Divided like a hand, but with the lower pair of lobes divided again.

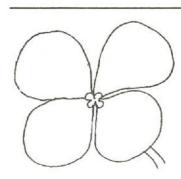
eg., Phlebopteris smithii, a fossil.



#### PEDATE AND PALMATISECT

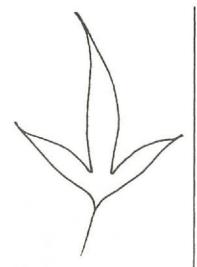
Palmate, with the divisions extending almost to the base and with the lower lobes divided again.

eg., Doryopteris pedata.



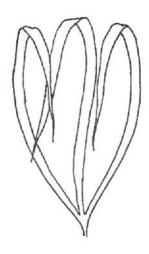
#### QUADRIFOLIAR

(quadri-four, folium-leaved) Having four leaflets arising at the same point. eg., Marsilea mutica.



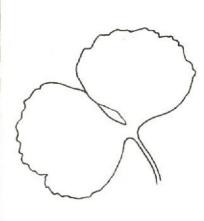
#### TRILOBED

(tri-three, lobus-a rounded projection or division) Partially divided into three lobes. eg., Microsorum pteropus.



#### TRIPARTITE

(tri-three, -partito-divide) Divided into three more or less equal parts, the divisions extending to the base or almost so. eg., Tectaria tricuspis (fertile frond, as shown.)



#### DIDYMOUS

(Didumous-twin) Twinned, with the two parts similar and attached only by a

small portion. eg., Dipteris novoguineensis.

\* Much thanks to Terry Turney for his expertise, accessibility and patience during the writing of this article. L.G.

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# FERN COMPETITION RESULTS

### MAY GENERAL MEETING

COMPETITION CATEGORY: An Adiantum (Maidenhair)

Adiantum raddianum 'Fritz Luth' John Hodges

Adiantum formosum

John Hodges

Unidentified Adiantum

Norma Hodges

EXHIBITORS' DRAW: John Hodges

SPECIAL EFFORT:

Don Fuller, Lyn Gresham, Bob Lee, Angela Milligan.

#### **JUNE GENERAL MEETING**

COMPETITION CATEGORY: A Doodia (Rasp Fern)

1. Doodia aspera

Don Fuller

Doodia media

Dick Kissane

3. D. caudata var. laminosa

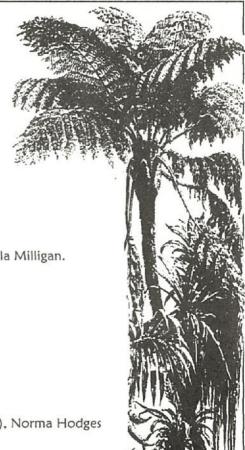
Barry White

EXHIBITORS' DRAW: Barry White

SPECIAL EFFORT:

Joan Rowlands, Peter Theophilos (twice), Norma Hodges

(twice), Fran Harrison.



# Supplementary Talk at May Meeting MAIDENHAIRS.

Barry White.

We had an unexpected pleasure at our May meeting two for the price of one! The Fraser Island presentation was rather short so Don Fuller did that one and
Barry White, who was to have shared it with Don,
spoke about our Competition Ferns for the night
which were Maidenhairs. Between them they brought
along quite a collection to illustrate Barry's talk, and
with the competition entries we were treated to an
interesting and impressive display.

Maidenhairs come in many shapes, sizes, growth habits and cultivation preferences. There are fine, large-leafed, congested, crested, lobed, incised, weeping and upright ones, tropical ones, cold tolerant ones and more. It is quite bewildering to the novice Maidenhair Fern collector - my advice is "Don't lose the labels"!!

Barry divided the ferns present into three broad categories, as follows. Of the thirty or more Maidenhairs at the meeting, I have just picked out a few.

#### Adiantum raddianum.

The old name for Adiantum raddianum was Adiantum cuneatum. Cuneatum comes from cuneate which means "wedge-shaped", a reference to the shape of the pinnules. There are at least seventy cultivars of this species which makes it the most popular cultivated Maidenhair by far in Australia.

- 'Fragrans'. This is probably the closest we will get to the true A. raddianum species. It is very widely sold and is one of the most hardy ones.
- 'Victoria's Elegans' is a very old, hardy cultivar. Heritage fern enthusiasts will be interested in this one.
- 'Grandiceps' is thought to be a crested form of 'Elegans' (not to be confused with 'Victoria's Elegans'). 'Grandiceps' means 'large headed' and refers to the heavy cresting on the fronds of this lovely fine fern. Of course there are many other crested Maidenhair cultivars.

#### The 'Other' Exotics.

There were only two in this category; *Adiantum* concinnum and the tropical Silver Dollar Maidenhair, *A. peruvianum*. Others are grown by our members but were not on show.

#### Our Natives and Some Varieties of Them.

A. capillus-veneris comes in quite a few different varieties, though not nearly as many as A. raddianum.

Adiantum formosum is commonly named the Black Stem Maidenhair or the Giant Maidenhair. Formosum means 'handsome'. It grows in East Gippsland though it is uncommon there, and places north.

Adiantum aethiopicum. Many of you will be familiar with this fern. 'Aethiopicum' means 'from Ethiopia' though in common with many ferns it is also found in a number of other countries, sometimes quite remote from each other. There were also displayed three plants of an attractive variety found near Beechworth by Mary Frost and informally known now as Adiantum aethiopicum var. 'frostii'. Though propagated by plant division, the frond shapes and forms vary quite a bit. The spore may be sterile - it is not known to have been successfully grown from spore.

Adiantum hispidulum or Rough Maidenhair has stems which are rough to the touch. It does occur in Victoria though is not very common here. It is quite widespread in the other eastern states and was found on Lord Howe Island. The new fronds are often an attractive, rosy red colour, hence the other common name of Rosy Maidenhair. This fern seems to be quite variable in plant size and frond shape. A. hispidulum var. 'Whitei' looks quite different though it has been classed as a variety of A. hispidulum.

Adiantum diaphanum, known in this country as the Filmy Maidenhair (diaphanum means semitransparent) has light, delicate fronds and a soft feel. It is found in the eastern states, though rarely in Victoria. If your Maidenhair is escaping through the drainage holes in the bottom of its pot, it could well be A. diaphanum. Distinctive features are, (1) short, black hairs on the back of the pinnae, quite hard to see, whereas A. hispidulum, though similar, has a mass of white hairs on the back of the pinnae and (2) nodules on the roots.

Adiantum silvaticum comes from north of Victoria. It has a bluish tinge to the fronds and slightly rough stalk. It is quite an attractive fern.

Thanks to Barry for some interesting information on these popular ferns and to you and others for the display of ferns.

Lyn Gresham.

### SPORE LIST

ORDERING The following spore is free to those members who donate spore. Otherwise members 20 cents per sample, non-members 50 cents, pus \$1.00 to cover postage and handling. Available at meetings or by mail from Barry White, 24 Ruby St. West Essendon Vic. 3040, Ph. (03) 9337 9793. There is no charge for overseas members however to cover postage two international coupons would be appreciated.

A booklet on spore collection and sowing is available for 40 cents or free to spore donors,

Acrostichum aureum 08/96 N B Adiantum concinnum 6/97 Anemia mexicana 5/97 Asplenium australasicum 5/97 N Asplenium aethiopicum 5/97 N Asplenium milnei 5/97 N Asplenium scolopendrium 5/97 Asplenium surrogatum 5/97 N Astrolepis sinnulata 10/96 Athyrium niponicum v. pictum Blechnum cartilagineum 5/96 N Blechnum chambersii 5/97 N B Blechnum fluviatile 5/97 N B Blechnum minus 5/97 N B Blechnum patersonii 11/96 N B Blechnum wattsii 5/97 N B Calochlaena dubia 5/97 N B Cheilanthes bonariensis 10/96 Cheilanthes buchtienii 10/96 Cheilanthes multifida 4/96 Cheilanthes pulchella 5/96 Coniogramme fraxinea 1/96 Cyathea australis 5/97 N B Cyathea cooperi 6/97 Cyathea dealbata 3/97 Cyathea leichhardtiana 2/96 N B Cyathea medullaris 5/97 Cyathea woollsiana 3/97 Cyrtomium caryotideum 5/97 Cyrtomium macrophyllum 5/96 Dicksonia youngiae 11/96 N B Dryopteris athamantica 4/96 Dryopteris atrata 4/96

Gleichenia dicarpa 5/97 N B Gleichenia microphylla 5/97 N B Histiopteris incisa 5/97 N B Hypolepis glandulifera 5/96 N Hypolepis rugosula 4/96 N B Lastreopsis acuminata 5/97 N B Lastreopsis glabella 4/96 Lastreopsis hispida 5/97 N B Pellaea calomelanos 5/97 Pellaea cordifolia 10/96 Pellaea falcata 5/97 N Pellaea viridis macrophylla 5/97 Pellaea viridis 5/97 Pityrogramma calomelanos 5/96 Platycerium superbum 5/97 N Polystichum australiense 5/97 N Polystichum braunii 4/96 Polystichum formosum 5/97 N Polystichum proliferum 5/96 N Polystichum setiferum 'Rotundatum' 4/96 Polystichum tsus-simense 5/97 Pteris argyrae 5/96 Pteris biaurita 5/97 Pteris comans 5/97 N B Pteris cretica 'Parkeri' 5/97 Pteris sp. (Nepal) 1/96 Pteris umbrosa 5/97 N Rumohra adiantiformis (Cape Form) 5/97 Rumohra adiantiformis 5/97 N B Sticherus lobatus 4/96 N B Sticherus tener 5/97 N B Thelypteris navarrensis 6/97 Thelypteris patens 4/96

Thank you to the following spore donors: Dorothy Forte, Ray Chivers, Lorraine Deppeler, Lyn Gresham, Jean Boucher and Rose Bach..

The spore list is shorter this month, donations of new material would be most welcome.

N.B. The letter 'N" after a fern indicates a native, and the letter 'B' one collected in the bush. The area of collection is available on request.

#### CANCES DE L'ANTES DE L

Opinions expressed in articles in this Newsletter are the personal views of the authors and are not necessarily endorsed by the Society, nor does mention of a product constitute its endorsement.

# BUYERS' GUIDE TO NURSERIES.

#### VICTORIA:

Andrew's Fern Nursery / Castle Creek Orchids - Retail. Phone (03)5826 7285.

Goulburn Valley Highway, Arcadia 3813 (20 km south of Shepparton).

Large range of ferns and orchids for beginners and collectors. Open daily 10am - 5pm except Christmas Day.

Austral Ferns - Wholesale Propagators. Phone (03)5282 3084.

Specialising in supplying retail nurseries with a wide range of hardy ferns; no tubes.

Coach Road Ferns - Wholesale. Phone (03) 9758 6878. Monbulk 3793.

Retail each Saturday and Sunday at Upper Ferntree Gully Market (railway station car park) Melway Ref, 74 F5. Wide selection of native and other ferns. Fern potting mix also for sale.

Fern Acres Nursery - Retail phone (03)5788 5431. 1052 Whittlesea-Kinglake Road, Kinglake West 3757. On main road, opposite Kinglake Primary School. Specialising in Stags, Elks and Bird's-nest Ferns.

Fern Glen - Wholesale and Retail Phone (03)5629 2375, D & I, Forte, Garfield North 3814. Visitors welcome.

Kawarren Fernery - Wholesale and Retail. Phone (03)5235 8444. Situated on the Colac-Gellibrand Road, Kawarren (20 km south of Colac),

The Bush-House Nursery - Wholesale and Retail. Phone (03)5566 2331.

Cobden Road, Naringal (35 km east of Warnambool), Ferns - trays to advanced. Visitors welcome.

#### NEW SOUTH WALES:

**Jim & Beryl Geekie Fern Nursery** - Retail. Phone (02) 9484 2684. 6 Nelson Street, Thornleigh 2120, By appointment.

Kanerley Fern Exhibition and Nursery - Wholesale and Retail. Phone (049) 87 2781. 204 Hinton Road, Osterley, via Raymond Terrace 2324. By appointment.

Marley's Ferns - Wholesale.

Phone (02) 9457 9188.

5 Seaview Street, Mt. Kuring-Gai

All Fern Society members welcome. By appointment,

#### **OUEENSLAND:**

Moran's Highway Nursery -

Wholesale and Retail.

Phone (07) 542 1613.

Bruce Hwy, Woombye (1 km north of Big Pineapple: turn right into Kiel Mountain Road).

P.O. Box 47, Woombye 4559.



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