Fern Society of Victoria Inc.

NEWSLETTER

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May/June 2001

FERN SOCIETY OF VICTORIA Inc.

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SUBSCRIPTIONS:

Single -	$14.00	Pensioner/student $11.00
Family -	$16.00	Pensioner Family $13.00
Organisation	$16.00	
Overseas -	$21.00 - Payment by international bank cheque in $A please. Overseas sent by Airmail.	

Subscriptions fall due on 1st July each year.

Meetings are held on the third Thursday of each month except December and January
at the Kevin Heinze Garden Centre, 39 Weatherby Road, Doncaster (Melway 47; H1).

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.***

Opinions expressed 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.

CALENDAR OF EVENTS IN 2001

17th May monthly meeting

Ian Broughton

Establishing A Fernery In A Sunny Position

Competition category: Any sun-loving fern
5 Minute Fern Talk: Dorothy Forte

21st June monthly meeting

Bob Anderson

Landscaping With Rainforest Plants

Competition category: Any plant that is looking good!
5 Minute Fern Talk: Gay Stagoll

Excursion in Early Spring

Kinglake

(See Gay and Barry Stagoll's article in last issue)

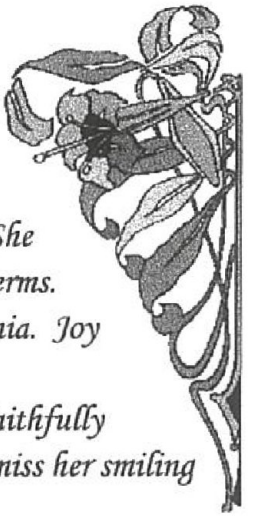
This will be a Fern Society promotion day, open to the public. The going will not be too difficult for moderately fit people so think about family, friends and garden clubs you could invite.

More details soon.

Meeting programme

7.00 *Sale of merchandise and Special Effort tickets. Also making library loans and lots of conversation.*
8.00 *General Meeting.*
8.15 *Workshops and demonstrations.*
9.15 *5 Minute Fern talk, Fern identification and pathology, Special Effort draw, Competition judging and results, Winner's tips.*
9.45 *Supper and another good yarn.* *10.00* *Close.*

Vale Joy Horman



We bid a sad farewell to Joy Horman who passed away recently in hospital after an illness.

Joy was a quiet, unassuming lady who was an enthusiastic and loyal member, willing to do tasks for the fern society if she felt they were within her capabilities. She joined us in our formative years and from 1990 served on the committee for several terms. She enjoyed many society excursions and in particular the magnificent one to Tasmania. Joy was a true fern lover, growing a large number of happy specimens at home.

Our Shows at the Herbarium, Nunawading and Mt Waverley would find her faithfully manning the door with her good friend Margaret Radley. Members will also sorely miss her smiling face greeting them at the door at meetings - and her quiet sense of fun.

We always found Joy to be a pleasant, happy and likeable person who will be greatly missed by the fern society. Sincere sympathy goes to Joy's family from all of us.

K. Hutchinson and L. Gresham

FROM HERE AND THERE.....

An Invitation . . .

We are indeed fortunate to have among the meeting-goers of our Society, some extremely gifted fern growers - both hobbyists and nurserypersons. The display of competition ferns every meeting is worth going for alone, without the interesting speakers, supper, other activities and good company. Please join us soon if you possibly can! We would love to meet you (or catch up with you if you are old friends). A warm welcome awaits you. □

The Blue, Blue Lake of Mt Gambier

Mt Gambier was the first part of South Australia to be named. In 1800 Captain James Grant of the Lady Nelson approached the coast and saw "two high mountains a considerable way inshore. I named the first ... after Captain Schanck and the other, Gambier's Mountain". Mt Gambier was to be built on the slopes of that 'mountain', which is an extinct volcano....

.....It used to be a mystery as to why the lake at Mt Gambier became a vivid blue colour between November and late March each year. Scientists have now discovered that when the weather gets warmer calcium particles form in the lake and absorb all visible light except blue. When the water cools in autumn the particles dissolve and the lake turns back to grey-green.

So sometime between November and March one year, take a trip to Mt Gambier and see for yourself the brilliant display the lake puts on!

From an article by Geoff Wright in his 'Jumbuck' column, Weekly Times January 2001. □

A Life-saving Strategy In The Bush

When bushwalking we all know to let someone know where we intend to go before we head off and if we get lost to stop and wait for rescue.

Chris Goudey handed on the following advice:

While you are waiting, or if you know you are only a short distance from your group or camp, you can SAFELY do something to help yourself. Make a point of reference by putting your gear down where you are standing or by hanging a bright article on a bush. From this spot, walk out in a straight line as far as you can go without losing sight of your reference point for even an instant. Then go staight back. Do this in different directions, trying to find a path or recognisable landmark and always returning directly to your 'base'. If this doesn't work, WAIT.

If you are going into thick, tall grass or very dense bush and have a companion waiting, get them to toot the car horn or blow a whistle frequently as an audible reference point.

Preparing a strategy may save the day - or your life. □

THE PRESIDENT PRESENTS.....

Much has happened over the last couple of months. Joy Horman passed away a few weeks ago. We will remember her at every meeting and show as we miss her at the door to greet us and sell us the Special Effort tickets. Between finishing my deliveries and our meeting yesterday, I met at Joy's house with her daughter-in-law and cleared out what was left of her fern and native orchid collection. Our meeting ended up being a sell-off of many of the plants, others were taken to be brought back to top condition and used as prizes, the rest were donated to the Kevin Heinze Garden Centre to be restored to good condition and planted in their fernery. $210 was raised from the plants that were sold - we will put the money to a special purpose, possibly to buying some books that will be suitably inscribed and added to the our library.

The Fern and Vireya Rhododendron Show has been and gone for another year. Our grateful thanks and congratulations to all involved over the three days and, again, most of all to Don Fuller for his efforts throughout the year, in preparation for the weekend. The displays were fantastic and the whole weekend passed without a cross word being spoken and with a lot of enjoyment. The only down side was that the constant rain on Sunday meant we had a disappointingly quiet day after a very encouraging Saturday. If anyone decided to wait until the rain stopped before coming out, they would have arrived around 5.00pm on Monday! But wasn't it a fabulous soaking (apart from the floods)? Special thanks too, to the Hodges' granddaughter Sheridan, who did a great job on the cash register on Saturday. She would be a really nice kid if she wasn't a Collingwood supporter.

HELP!!!

We are beginning to look for a new editor. Lyn has done a sterling job for a number of years, but is finding that the other pressures of life are beginning to weigh her down and she would like a break from the role of editor. While the need is not yet acute, we don't want to wait until Lyn cracks under the strain. If you would like to become more involved in the Society and learn a lot about ferns at the same time, then this could be the job for you. It would certainly be a distinct advantage to have access to a computer and to the Internet - it makes it a lot easier to get a very professional appearance to the newsletter. All assistance would be given to ensure the easiest possible transition into the role. The newsletter is produced on alternate months and is absolutely vital to the continuance of the Society. If you would like to know more, please don't hesitate to contact Lyn and have a chat about what's involved.

We are planning an excursion to Kinglake in Oct/Nov. It will be promoted to the public as publicity for the Society. People will be invited to come and learn about some of our native ferns and enjoy them in their natural habitat. If you are able and willing to be involved in organizing the day, please give me a call on 5964 6402.

Our speaker for March was to have been Barry Sheppard of the Australian Begonia Society. Unfortunately, Barry was hospitalized a couple of days before the meeting and was unable to come. I was particularly grateful to Barry White who saved me from a nervous breakdown by offering to gives us a slide presentation on Carnarvon Gorge. It was very enjoyable and re-kindled my desire to spend a week or two there myself. Thanks Barry.

At the May meeting, I will be giving a talk on establishing a fernery in a sunny position. The 5-Minute Talk is to be by Dorothy Forte if she has recovered adequately from a hip replacement. If not, we will be very understanding Dorothy! The competition category will be any sun-loving fern. This could include the genera Cheilanthes and Notholaena and many (but not all) species of the following genera: Pellaea, Dryopteris, Doodia, Polystichum, Hypolepis and Cyathea. Many other species could also be included such as Todea barbara, Calochlaena (Culcita) dubia, some species of Pteris and Adiantum ..... The list could go on and on, it would be possible to have a display of over 100 different ferns that are in cultivation here and tolerant of at least full morning sun in Melbourne. I have given a similar talk to a couple of different groups in the past, and it has been well received as being an eye-opener to the hardiness of many ferns, so I would encourage you to come and be involved in the discussion.

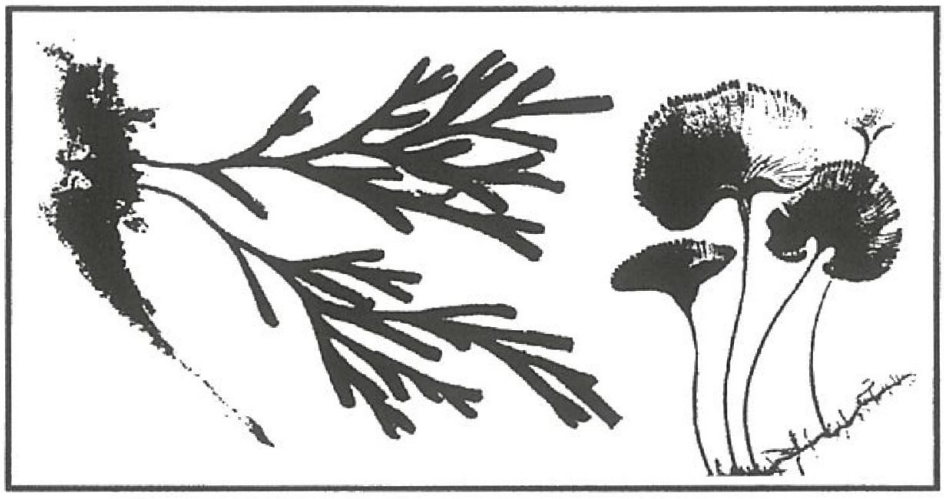
In June, Bob Anderson will be talking on landscaping with rainforest plants. Bob has had an interest (passion) for native plants for many years with a particular interest in rainforest plants. The competition will be open to any plant that is looking good through the chills of Winter - no cheating by bringing plants from heated glasshouses!!

We hope you can make it to the meetings and that you enjoy the wonder and beauty of ferns in the coming weeks.

Ian Broughton

Frond Memories

Graceful and varied in form, their luxuriant foliage evoking fecundity, ferns are mysterious and eloquent reminders of our primordial origins.



Far more than wattles, banksias and gums, Australian ferns are strangers to European eyes. Even Eugéne von Guérard, depicting the Australian landscape in the European style, could not paint out the exoticism of tree ferns. They must have seemed, as indeed they are, plants of another time.

Ferny charisma lies partly in their strangeness and visible antiquity. Ancient lineage is suggested by the unguardedness of membranous pinnae, such as the heart-shaped leaf segments of maidenhair fern (*Adiantum* sp.); by the fossil-like ribbing of fishbone ferns (*Nephrolepis* sp.); or by the unsophisticated matting of thick hairs on the stems of mother shield fern (*Polystichum proliferum*), lurking, shaggy and wet dog-like beneath erratically twisted fronds. Long-slumbering beasts are evoked by the furry packing and fiddleheaded nubs of furled fronds (croziers) of ferns such as the soft tree fern (*Dicksonia* sp.)

Ancient mechanisms are hinted at in the plethora of stem hairs and trunk fibre and in the absence of flowers; in leafy tongues of simple venation yet complex subdivisions; in fiddleheads ready to uncoil with the age-old springing force of young life; in the russet crumble of crusty, sporulating pinnae edges and spore dust streaming in shafts of sunlight between forest trunks.

Ancient patterns are evoked by the filigree of *Cyathea* tree ferns against the sky; by the faintly curled ridges and furrows of *Dicksonia* tree fern pinnules and its crown-shaped stem arrangements; by the softly bifurcated, silvery, chamois-textured plates of stag and elkhorn ferns (*Platycerium* sp.); and by the coralline texture and colour of rasp fern fronds (*Doodia* sp.).

Although ferns inhabit both arid and cold places, they are at their most diverse and diverting in the tropical zones. The British discovered this during their golden age of exploration in the 1800s. With the invention of the Wardian case, a kind of bell jar, more of Victorian England could indulge in the transportation and accommodation of tropical ferns. From the Wardian case in the drawing room to the heated "stovehouse" outside, ferns and ferneries swept England, the intricacies and peculiarities of fern form being uniquely suited to the Victorian style. Their own ferns were not overlooked - although glamorous by contrast, the tropical ferns drew attention to native British ferns, raising their status to the garden border, rockery and grotto outside.

It is not only the form of ferns but their amphibian preferences for watery environments, warmth and shelter that tell of direct primordial links. Both form and habitat provoke questions about their origins and their relationships to other living plants.

More than 4000 million years ago, roughly contemporaneously with the first jawed fishes (give or take a few million years), some multicellular green algae found themselves out of the water. Some had emerged from shallow pools, their non-vascular, dichotomously branching stems reaching into the air. Others landed as spores, colonising a land surface of undifferentiated soil that had not had plants before. The spores may have had help - their success in these first terrestrial forays may be attributable to endomycorrhizal relationships (an association of more than one kind of organism for mutual survival, similar to that which exists with lichens today).

The arrival on land was new and it drove the changes that followed. To survive without the primordial water that physically suported them and bathed them in nutrients close

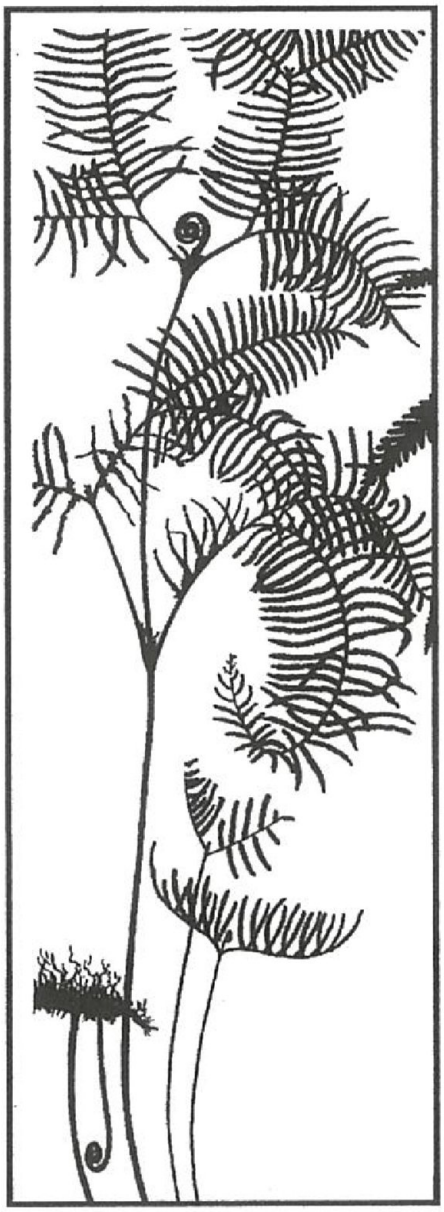
to the sunlit surface, they developed lignified vascular structures for the transport of water and nutrient, protective cuticles to prevent desiccation and a differentiation between the anchoring, feeding root below ground and the photosynthetic, food producing and reproductive shoot above ground.

By the beginning of the Carboniferous epoch 360 to 286 million years ago, the age of amphibians and the origin of reptiles and insects, primitive vascular plants had given way to forests of giant horsetails, clubmosses and early ferns. The weather was warm and humid, the land low-lying and swampy. As the world dried, entering the Permian period, (286 to 248 million years ago) followed by the Triassic (248 to 213 million years ago), the horsetails and clubmosses waned in stature, population and diversity but the ferns remained, dominating a forest under-storey beneath the newly evolving cycads and gymnosperms (conifers). During the Triassic period, while the Pangean super-continent formed, the first dinosaurs and mammals appeared and ferns were never to have it so good again. They were to give way, over the next 100 million years or so, to the dominance of the first flowering plants.

Evidence of development of life on earth and the invasion of land by plants is contained within a fossil record spanning an extraordinary 3.5 billion years. The record begins with the earliest known fossils of bacteria in ancient Australian rocks and includes fossilised impressions of fern-like precursors 415 million years old.

Despite the distribution of ferns throughout the Pangean supercontinent, Australia and the other southern continents (South America, Africa, Antarctica and New Zealand) retained an endemic fern flora which had begun to differ from that of the northern hemisphere flora long before continental drift. This early divergence is thought to have occurred as a result of large zones of aridity, climatically dividing Pangea during the Triassic period into what eventually became the northern and southern supercontinents.

With the wisdom of such a lengthy existence within their genes, it is not surprising that, given a little rain, ferns are among the first plants to colonise newly available habitats. Old habits die hard.



- Fleur Kreel: The Australian Financial Review Magazine, date unknown. It was passed on to me by a member some time ago and is used with thanks.

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A LOT ABOUT HOBBY GREENHOUSES

Robin Halley

This article was published in Volume XXIV, No. 1 (January 2000) of the San Diego Fern Society's newsletter "Fern World" and is reproduced with thanks to the SDFS and Mr. Halley.

Operating Systems and Accessories.

Operating systems are the items you use to get your new greenhouse ready to keep plants alive. This includes ventilation, heating, benches, shadecloth, flooring and so on.

Ventilation.

Ventilation is the single most important requirement for a greenhouse. Without good ventilation, a greenhouse is nothing more than a solar furnace (you can use it very effectively during the summer for drying fruit). Your ventilation system should be able to make a complete change of air every few minutes in summer to keep temperatures at a reasonable level. In hot climates shade cloth may be necessary to hold teperatures in check. Winter ventilation needs are lower.

Heating.

Heating is only necessary if you plan to use your greenhouse throughout the year. If you are using your greenhouse to start seedlings and root cuttings in the spring, supplemental heating will probably not be necessary. In mild climates, 12' × 12' and smaller model hobby greenhouses can be adequately heated with electric heaters (make sure electric heaters are not exposed to water to avoid a dangerous shock). In cold climates or with larger size greenhouses, you should use gas greenhouse heaters particularly where temperatures regularly fall below zero. When heating with gas, it is best to use a vented heater, because they vent harmful gases produced during combustion.

Shade Cloth.

Shade cloth is the way professional growers keep their greenhouses cool during those long, hot summers. It is relatively inexpensive and is also good for providing shade for plants that don't grow well in the full sun.

Flooring.

The floor of your greenhouse should allow easy drainage of water. Gravel and brick or concrete stepping stones laid over sand are probably your best choices. You will want to lay a sheet of woven weed barrier under the floor covering to prevent weed growth. Weeds harbour many pests and diseases. Wood slat floors are sometimes used, but they tend to get very slippery when wet.

Benches.

You will want benches in your greenhouse. They make a world of difference in the ease of gardening, and they also add a lot of extra working space to your greenhouse.

Build or Buy a Kit?

Once you know what kind of greenhouse you want, you must decide whether to build your own from a plan or assemble a prefabricated model from a kit. Base your decision on such factors as your available time, budget, and building skills. If you want to construct your own but are inexperienced, consider hiring a carpenter to help you. If saving money is your goal, you may be able to do that by building your own, especially if you are able to use scrap materials such as old windows and doors. Even if you buy new materials, you can buld for less money than prefab kits. On the other hand if money is not an issue but your skills are then a kit is the logical choice. Kits provide everything you need, including a lightweight foundation for some models. Before deciding on a kit, send away for catalogues and study them carefully. A greenhouse company with an informative web site can provide more information than a brochure and you will always have a fresh copy on your computer. Make sure assembly instructions are included as well as a list of any extra materials you will need to outfit the greenhouse such as landscaping cloth, gravel, patio blocks, etc. □□□□□

COMPETITION WINNERS

February meeting - Pteris

Competition		
1st	Barry White	Pteris pacifica
2nd	Diana Mayne	P. cretica 'Albo-lineata Alexandrae'
3rd	Don Fuller	P. multifida
Exhibitors' Draw	Don Fuller	
Special Effort	Don Fuller, Jack Barrett, Dorothy Forte, Pat Nicholls (2), Terry Turney.	

March Meeting - Lastreopsis

Competition		
1st	Ian Broughton	Lastreopsis glabella
2nd	Dorothy Forte	L. decomposita
3rd	Ian Broughton	L. rufescens
Exhibitors' Draw	Don Fuller	
Special Effort	Norma Hodges, Geoff Harding, Jack Barrett, Jean Boucher, Barry White.	

April Meeting - Nephrolepis

Competition		
1st	Don Fuller	N. cordifolia 'Chantilly Gold'
2nd	Don Fuller	N. exaltata 'Gretnae'
3rd	Don Fuller	N. exaltata 'Fluffy Ruffles'
Honorable Mention	N. garrettii #1 & #2, Fran Harrison and Jack Barrett	
Exhibitors' Draw	Jack Barrett	
Special Effort	Fran Harrison, Arch Busby, Mavis Potter, Don Fuller, Lyn Gresham.	

2001 FERN SHOW RESULTS

SECTION		EXHIBITOR	NAME OF FERN
1. ADIANTUM	1st	Don Fuller	A. raddianum 'Pacific Maid'
	2nd	Don Fuller	A. raddianum 'Fritz Luth'
2. ASPLENIUM	1st	Fran Harrison	A. flexuosum
	2nd	Don Fuller	A. polyodon
3. DAVALLIA	1st	Don Fuller	D. pixidata
	2nd	Don Fuller	D. tasmanii
4. NEPHROLEPIS	1st	Don Fuller	N. Aurea
	2nd	Don Fuller	N. Fluffy Ruffles
5. PYRROSIA	1st	Barry White	P. confluens
	2nd	Don Fuller	P. rupestris
6. SHIELD FERN	1st	Fran Harrison	Polystichum wonrovii
	2nd	Don Fuller	Drynaria rigidula
7. FERN IN A HANGING CONTAINER	1st	Barry White	Polypodium fauriei
	2nd	Fran Harrison	Drynaria rigidula 'Whitei'
8. ANY FERN IN A CONTAINER 150mm or less			
	1st	Jack Barrett	Asplenium Austral Gem
	2nd	Fran Harrison	Asplenium daucifolium

BEST FERN OF THE SHOW

Don Fuller's ***Davallia pixidata*** Congratulations, Don!!!!

Well done, winners!!! There were many breathtakingly beautiful ferns on show.

FERN SOCIETY OF VICTORIA SPORE LIST

ORDERING: The following spore is free to members who donate spore. Otherwise members 20 cents per sample, non-members 50 cents,plus $1 to cover postage and handling. Available from meetings or by mail from Barry White 24 Ruby Street West Essendon Vic 3040 Australia, Ph. (03) 9337 9793. There is no charge for overseas members however to cover postage two international coupons would be appreciated. Overseas non-members may purchase spore at three packets for one international reply coupon plus two coupons for postage and handling.

Acrostichum speciosum 12/00
Adiantum raddianum 'Dissected Leaflet' 7/00
Adiantum raddianum 'Pacottii' 7/00
Adiantum raddianum 'Victoria's Elegans' 7/00
Adiantum trapeziforme 9/99
Adiantum whitei 1/99
Aglaomorpha meyeniana 2/99
Anemia mexicana 3/01
Arachniodes aristata 5/00
Arachniodes simplicior 12/98
Asplenium australasicum 5/98
Asplenium difforme 3/01
Asplenium milnei 5/00
Athyrium filix-femina 12/99
Athyrium niponicum 'pictum' 3/01
Athyrium niponicum v. pictum (lge) 1/00
Athyrium otophorum 12/00
Blechnum attenuatum 2/98
Blechnum braziliense 1/00
Blechnum camfieldii 5/00
Blechnum cartilagineum 1/01
Blechnum chambersii 2/99
Blechnum chilense 5/00
Blechnum colensoi 3/01
Blechnum discolor 4/98
Blechnum filiforme 4/98
Blechnum fluviatile 2/00
Blechnum fraseri 2/00
Blechnum gallanum 12/99
Blechnum gibbum /00
Blechnum minus 6/99
Blechnum moorei (wide pinnae) 8/00
Blechnum novae-zelandiae 2/00
Blechnum patersonii 8/99
Blechnum penna-marina 4/98
Blechnum procerum 4/98
Blechnum punctulatum v. punctulatum 6/98
Blechnum sp. (Philippines) 4/01
Blechnum tabulare 6/98
Blechnum vulcanicum 4/98
Cibotium schiedei 4/00
Colysis sayeri 12/00
Coniogramme fraxinea 6/99
Coniogramme japonica 2/00
Cyathea albifrons 2/99
Cyathea aramaganensis 3/99
Cyathea atrox 3/99
Cyathea australis 9/00
Cyathea brownii 2/98
Cyathea celebica 3/99
Cyathea cooperi 9/00
Cyathea cooperi 'Brentwood' /98
Cyathea cooperi var. cinnamonia /99
Cyathea dealbata 9/98
Cyathea leichhardtiana 11.00
Cyathea medullaris 2/01
Cyathea muelleri 3/98
Cyathea robusta 2/98
Cyathea smithii 4/98
Cyathea tomentossissima 9/99
Cyclosorus interruptus 3/99
Cyrtomium caryotideum 7/00
Cyrtomium falcatum 8/99
Cyrtomium macrophyllum 5/00
Cystopteris filix-fragilis /00
Deparia patersenii 6/00
Dicksonia antarctica 9/00

(Continued on page 43)

Do you have any suggestions of **speakers or demonstrators** suitable (and willing) to speak at our monthly meetings? Do I hear you offering yourself?! You may have a passion for something (preferably but not necessarily fern-related) that we would find interesting. Please discuss your ideas with a committee member.

Articles for the newsletter are always needed. They can be as long or short as you like - there will be a place for them. If they are taken from other publications I would appreciate you obtaining permission to reproduce them or at least getting a contact number or address so I can.

Lyn.

(Continued from page 42)

Dicksonia fibrosa 8/00
Dicksonia squarrosa 3/00
Dicksonia youngiae 1/99
Diplazium australe 6/00
Doodia australis 12/99
Doodia media 3/01
Dryopteris crispifolia 12/00
Dryopteris cristata 6/00
Dryopteris guanchia 9/99
Dryopteris sieboldii 3/99
Elaphoglossum sp. 6/00
Goniophlebium subauriculatum 12/00
Gymnocarpium oyamense 6/00
Humata tyermanii (crested) 10/98
Hypolepis ambigua 2/00
Hypolepis dicksonioides 2/00
Hypolepis glandulifera 12/00
Lastreopsis acuminata 3/01
Lastreopsis decomposita 12/00
Lastreopsis glabella 5/00
Lastreopsis hispida 2/00
Lastreopsis microsora 12/00
Lastreopsis rufescens 12/00
Lastreopsis tenera 12/00
Llavea cordifolia 4/98
Macrothelypteris polypodioides 4/01
Macrothelypteris torresiana 6/00
Microlepia speluncae 5/98
Microsorum pappei 7/99
Niphridium crassifolium 10/99
Ophioglossum pendulum 2/00
Pellaea sagitta 3/01
Pityrogramma calomelanos v. aureoflava 4/01
Platycerium bifurcatum 6/98
Platycerium bifurc. cv. Hilo /99
Platycerium bifurc. cv. HulaHands /99
Platycerium bifurc. cv. Roberts /99
Platycerium bifurc. var. venosa "Mt. Lewis" /99
Platycerium bifurc. cv. Willinckii Scofield /99
Platycerium hillii /99
Platycerium holttumii /00
Platycerium supurbum 11/00
Platycerium supurbum (Cairns) /99
Platycerium veitchii 8/99
Pneumatopteris pennigera 2/00
Polypodium formosanum 9/99
Polystichum (crested) 10/98
Polystichum australiense 12/99
Polystichum formosum 6/99
Polystichum lonchitis 6/00
Polystichum retroso-paleacum 2/01
Polystichum richardii 2.00
Polystichum tsus-simense 3/01
Polystichum vestitum 1/00
Polystichum wonrovii 11/98
Pronephrum asperum 3/99
Pseudophegopteris aurita 4/01
Psilotum nudum 8/99
Pteris biaurita 3/00
Pteris comans 10/00
Pteris cretica 'Parkeri' 2/01
Pteris hendersonii 12/99
Pteris macilenta 2/99
Pteris tremula 2/01
Pteris wallichiana 11/99
Pyrrosia lingua 'Serrata' 1/00
Rumohra adiantiformis (Cale Form) 2/99
Scyphularia pycnocarpa 3/98
Sphenomeris chinensis 2/00
Sticherus cunninghamii 4/98
Sticherus flabellatus 8/99
Sticherua urceolatus 3/99
Tectaria confluens 6/00
Thelypteris limbosperma /00
Thelypteris navarrensis 6/00
Thelypteris patens 3/01
Woodwardia martinez 4/99 □□

Thank you to the following spore donors: Don Fuller, Lorraine Deppeler and Dorothy Forte.

Another Recipe.

Many years ago, the Henry Doubleday Research Association developed a garlic spray which could be used as a homemade, multi-purpose pesticide harmless to humans, animals and birds. It is an economical and effective way to deal with a range of common pests including snails, aphids, codling moth, beetles, grasshoppers, caterpillars and worth trying on other chewing and sucking garden pests.

85g garlic bulbs
1 dessertspoon kerosene!
600 ml water
7g Lux flakes or finely grated pure soap such as Velvet or Sunlight.

Chop garlic, mix with kerosene and leave to soak for 48 hours. Add water and mix in soap. Filter the resulting mixture and store in a glass or plastic container.

To apply, dilute 1 part garlic mix with 100 parts water. Apply with a spray bottle. As this is a contact spray, be sure to wet plants thoroughly, including backs of leaves. Repeat applications will be necessary to keep plants protected.

Reproduced from the Weekly Times, October 18, 2000. □□

HIGH HOPES (AUSTRALIAN CLIMBING FERNS)

Lyn Gresham

Ferns are very adaptable and it is perhaps not surprising that some have become climbers. The majority of our ferns are found in rainforests where climbing is a particularly useful habit. Most climbing ferns are fairly weak as climbers go, growing as root clingers. This can cause some difficulty in determining which are climbers and which are epiphytes, of which there are many; although the difference is one of degree only, those epiphytic species with long-creeping rhizomes are regarded as the climbers.

The most vigorous of the rainforest fern climbers are undoubtedly *Lygodium reticulatum* and *Teratophyllum brightiae,* each climbing by a different mode. The rhizomes of *L. reticulatum* are buried in the soil of the rainforest floor and the rhachises ascend high into the tree canopy by twining. When mature they are thin, brown and wiry, so tough that in some countries they are cut and used as canes for weaving. In the jungle they are quite difficult to see and can trip the unwary. *T. brightiae* is a very strong root climber with the rhizomes ascending high into the trees. It produces clumps of long, dangling fronds.

Some vigorous climbing ferns can be found in wet areas of open forest, often along the margins of swamps. One, *Stenochlaena palustris* climbs by a fleshy rhizome which twines around supports. It is capable of very rapid growth and smothers supporting trees with a curtain of foliage. Two species of *Lygodium* are also found in similar areas. The most widespread of these, *L. microphyllum*, extends from northern NSW to the Kimberley region of north-western WA while *L. flexuosum* is limited to tropical Queensland. The rhachises of the two species climb in a similar manner to that of *L. reticulatum*, a rainforest climber with very attractive foliage patterns.

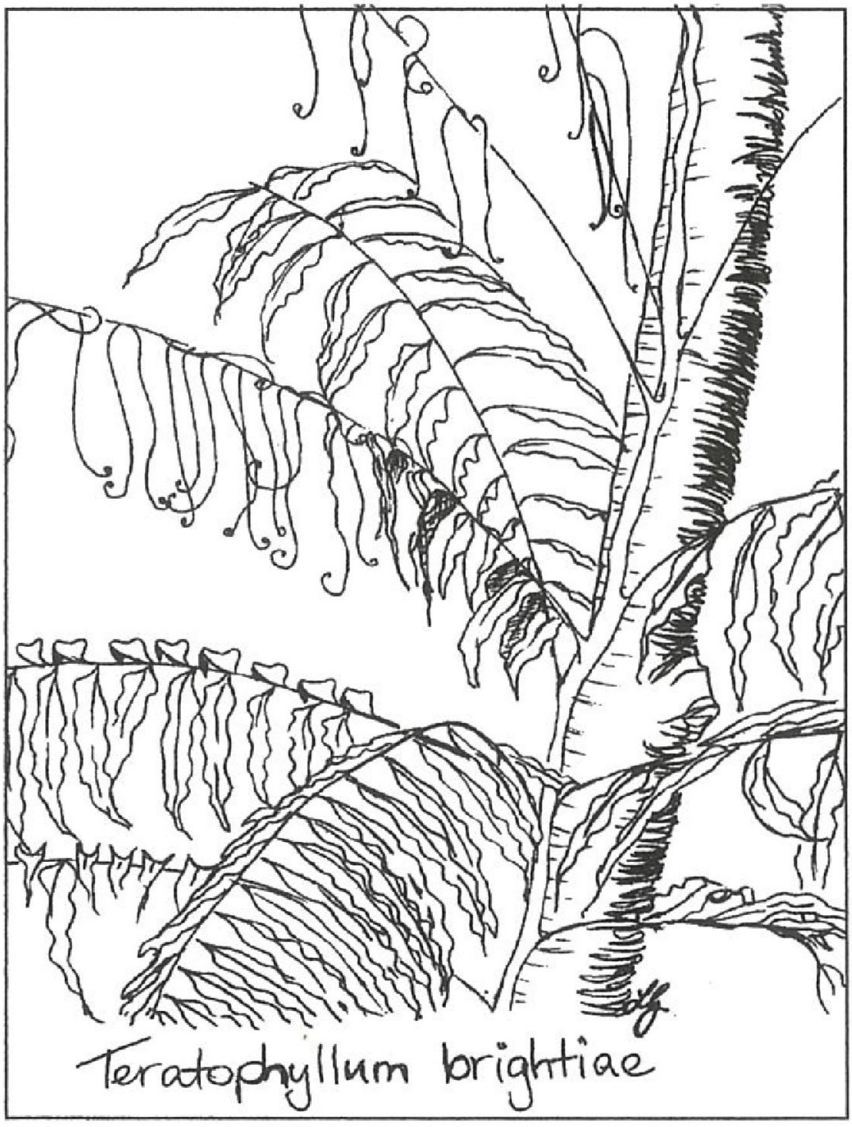
A brief discussion of some of our climbing ferns follows:

Colysis sayeri

Queensland

Polypodiaceae

The rhizomes of this relatively uncommon fern thread their way along the bark of trees in rainforest and creek margins. The fronds are thin-textured and vary in shape from entire to deeply lobed. They are very similar to those of *Colysis ampla* but are usually grey-green with more pinnae. The venation is conspicuous.



Dicranopteris linearis

Qld, NSW, NT, WA (north-west).

Gleicheniaceae

A widespread leaf-climbing fern which varies in growth from stunted in rock crevaces to tangled thickets in rainforests. The fronds branch by repeated forking and gain purchase on surrounding vegetation as they unroll. The young parts of the fronds and the dormant apices are protected by branched hairs. Mature fronds are usually glaucous beneath, with veins that branch two to five times. Each rounded sorus is made up of eight to fifteen sporangia. Two varieties are found in Australia.

Diplopterigium longissimum

Giant scrambling fern.

Gleicheniaceae

North Queensland.

This giant among ferns may form tangles up to six metres high and ten metres across along roadsides and embankments near rainfirest. The large, branching fronds are bipinnate and usually dark green above and glaucous below . The dormant apices are protected by delicate, fringed scales. Several rounded sori are borne on each ultimate segment Each sori is very small, usually consisting of three sporangia.

Lygodium flexuosum

Schizaeaceae

North Queensland.

Swamp margins are the favoured abode of this climbing fern which festoons low trees with daintily patterned foliage. The twining rhachises arise from an underground rhizome and bear both fertile and sterile pinnate fronds. The fertile leaflets are smaller than the sterile ones and bear marginal sorophores 3-5 mm long.

Lygodiums have horticultural potential. They prefer a moist, frost free, semi-shaded position and are excellent as indoor or glasshouse plants.

Pyrrosia adnascens

Qld (Cape York).

Polypodiaceae

A hardy fern found in low trees along the creek margins of rainforests in far northern Queensland. The fine, wiry rhizomes are covered with papery scales. The thick, tough fronds are dimorphic, with the sterile fronds being short and blunt. The fertile fronds bear masses of spores in small sori on the upper part. Fronds may shrivel during the dry but fill out with rain. This species makes a handsome basket fern for glasshouse culture. It will not tolerate frosts.

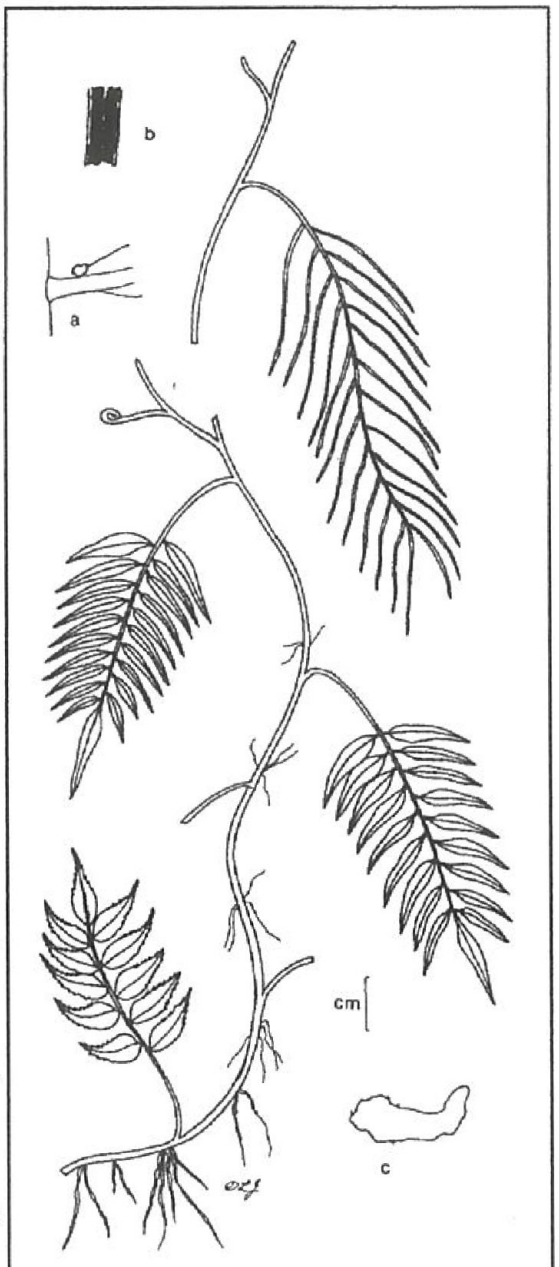
Stenochlaena palustris

Climbing Swamp Fern.

Blechnaceae

Queensland (north and south, NT, WA (north-west)

This coarse fern forms tangled thickets in swampy areas, sometimes climbing high into trees along rainforest margins or forming tangles in secondary forest. The climbing rhizome is green and scaleless except at the very apex. The large, drooping fronds are pinnate and the shiny, almost leathery pinnae have toothed margins. Fertile fronds seem to be produced rarely and then usually in the upper parts of the clumps. They are long and drooping with thin, linear pinnae.



Stenochlaena palustris
a) Rhachis junction and gland at base of pinna
b) Section of fertile pinna
c) Scale
Note the spreading roots which support the plant whilst it is growing upwards.

Teratophyllum brightiae

Lomariopsidaceae

North Queensland

Tree trunks in dense highland rainforests are often festooned with the long, delicate fronds of this climbing fern. The juvenile fronds are entirely unlike those of mature plants and are easily mistaken for those of another species. Juvenile fronds are small and have variously notched pinnae while the sterile, mature ones are up to 60 cm long, dark green and arch from the supporting trunk. The rarely seen fertile fronds are even longer and have narrow, linear pinnae.

Source:
"Australian Climbing Plants" D.L. Jones & B. Gray.

□□

How To Diagnose A Sick Fern.

When a fern growing in a pot lacks health and vigor and looks sick or worse, has the appearance of dying, don't just accept the inevitable. Try to determine what is ailing the fern and take corrective action. If the fern has died carry out a postmortem, remove it from the pot, examine the root system and the potting mixture. What you find may provide information that will enable avoidance of a similar problem in the future.

But a word of warning, some apparently dead ferns miraculously recover, so don't despair too soon. Begin any postmortem gently without undue disturbance of vital parts until you are sure that there is no life left.

The following symptoms may help diagnose the problem.

* Yellowing of fronds often caused by over exposure to the sun or even to reflected strong light. Change pot to a less exposed position or alternatively provide shade cloth or other protection. Problem could be caused by earthworms, which are great in the garden soil but a menace in pots, or poorly drained potting mix Remedy by repotting in a more open mixture and without worms.

* Fronds collapse and droop limply on the edge of the pot.
a) If a muddy sludge had developed, then there is too little aeration of roots.
b) If the potting mixture is very open and crumbly, then repot in a more moisture retentive mixture and ensure adequate watering.

*One of your successes suddenly loses its "bloom" and new fronds wither. Check the root ball.
a) The roots may have filled and outgrown the pot. This often occurs with fast growing tree ferns. Repot into a large container.

b) Root system not developed and sitting in top part of the pot. There may be something nasty in the potting mixture or this mix is too alkaline.

c) Most of our native ferns grow successfully in an acid mixture encouraged by decaying leaves and humus, but a few notably Adiantum capillus-veneris and several of the Pteris species like added lime.

Check the conditions that are recommended for the particular fern and adjust the mixture accordingly.

Another possibility is that the fern has been over potted, the excessive amount of soil holds too much moisture in proportion to the space occupied by the roots and they are not able to take up enough moisture to keep root properly aerated.

-Courtesy SGAP Fern Study Group as reproduced in the Fern Society of South Australia Magazine. Used with thanks.

Ferns - Not So Delicate.

The scene is the edge of an 18 year old volcanic lava flow in Hawaii. This is a desolate area, probably because of the sulphur in the atmosphere therfore acid rain, pH of roughly 33 in the ground. The rock all around is basalt.

Amazingly, little fishbone ferns are already beginning to colonise in this, one of the few places you'd think a fern couldn't grow.

This area is one of the few places on earth that are actually experiencing significant growth in area today. Though the growth rate is small because of the ongoing battle between the lava that is going into the sea and the waves that remove the new land, it is growing.

Just a few feet away are lava tubes. These tubes are thought to form when the lava 'river' cools around the outside and solidifies while the inside stays hot and keeps flowing. Eventually it all flows away and you are left with a hollow tube - the lava tubes we see today[2]. Inside, in a sheltered environment, lots of plants including tree ferns grow thickly. There are also lots of small ferns; maidenhair and so on, in the entrances and lighted portions of the tubes. But further in still there is something that I didn't believe could happen; in the walls of the almost pitch dark, cave-like atmosphere are maidenhair ferns. The only light is from artificial lamps installed to guide visitors through - very dull indeed.

So there is no need to keep on trying to kill your maidenhairs off with neglect - they're tougher than you might think! □□

1 An alternate theory to that published in Vol. 22, #6.

Making Yourself Useful - Ferns and their Uses.

Tahitians traditionally use the fronds of *Davallia solida* to make decorative headpieces. It grows prolifically on the base of coconut palms.

Pteris aquilina seems to have been an all-round wonder plant. It was believed to be a good soil improver, was used both as stable litter and as one component of winter feed for horses and mules working in British mines. Useful for kindling and firewood, it also made a serviceable thatch for houses in west Scotland, the stalks alone making a thatch of much superior quality to that made of the whole frond, which did not last long in the weather.

The list goes on! As it contains both tannic and gallic acid it was used to tan and dress chamois and kid leather in Europe.

The ashes of *Pteris aquilina* were sold to soap and glass makers by Scottish and Welsh peasant women. The fern was thoroughly dried and then burnt, producing strongly alkaline ash. This ash was moistened just enough to adhere together, then rolled into round balls about 2 to 2½ inches in diameter. When dried, the balls were easily transported to be sold to shopkeepers or at markets. This enterprise produced the considerable profit of between 3d and 8d a dozen. The price fluctuated with the seasons.

In Fiji a tree fern stump is traditionally used as a ridgepole in the village meeting house. The shaped stump can be clearly seen protruding 50 or 60 cm each end of the roof, the ends shaped in such a fashion as to suggest that some cultural significance is attached to it. It would also seem significant that no other village buildings use tree ferns in this way.

Often past newsletters contained something about the medicinal uses of ferns. I remember featuring ferns as part of human diets. I am sure that most of you know about *Azolla* used as fertilizer, especially in rice farming. You know about *Gleichenia* and *Dicranopteris* as methods to control erosion and the ornamental uses of ferns are definitely not new to you.

You might also heard of Bracken (*Pteridium*), and the Scottish use the Male Fern (*Dryopteris filix-mas*), as a substitute for hobs in breweing beer.

A friend brought us a pen-holder that was made from the stem of *Cyathea medullaris* from New Zealand. Then I read that it is also used to make vases and lamp-stands.

Some of the other interesting and fascinating uses of ferns are the following:

The rachises of some *Lygodium* are plaited and made into ropes, baskets, handbags, seats and house partitions.

Because of its resistance to seawater, the rhizomes of *Stenochlaena* are important for tying fish traps. The slender conductive tissue can be split from the rachises of the fronds of *Nephrolepis hirsutula* and used to weave hats, mats and baskets. The hairs and scales of tree ferns are used to stuff pillows and cushions. They say that fern fronds make a good stuffing for a mattress. This use goes back at least to Roman times.

The caudexes of tree ferns are used in the construction of houses and bridges. The leathery fronds of *Acrostichum aureum* are used as a thatch for dwellings. Bracken (*Pteridium*spp.) are used as a coarser thatch.

Silica granules are prominent in *Equisetum* and a handful of these can be used to scour pots and pans. It is good for scrubbing the floor too. It is verry useful as a fine sandpaper for polishing wood and smoothing tools, too. The stems of *Equisetum arvense* are used for the making of clarinet reeds.

The fibres in Bracken stems have been used as fiddle strings in Borneo.

In Japan the spores of *Lycopodium clavatum* are used to polish wood. In the 17th century these spores were also used as baby powder.

Because of the high oil content of *Lycopodium* spores, it was once used in the production of photographic flash powder, light flashes in theatres, gunpowder and fireworks. They also have anticoagulant properties and have been used to prevent clumping of tablets.

The ash resulting from burning bracken was used as a source of potash which had agricultural uses. It was also used for tanning leather and for making soap and glass until alkali became easily available.

The rhizomes of *Pteridium* were sometimes dried in the sun and made into balls of soap, for washing clothes.

In Hawaii the scales of tree ferns were used to embalm corpses which could then be kept for up to eight months before burial.

The midribs of *Dicranopteris linearis* are split and used as pens.

These are amazing but true uses of ferns. Fern folklore is something entirely different. . . .

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NEWSLETTER

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