



Fern Society of Victoria Inc. **NEWSLETTER**



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September/October 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.

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CALENDAR OF EVENTS IN 2001

20th September

Annual General Meeting
and election of office bearers
Followed by the monthly meeting
Special speaker; Ron Robbins
is coming from Adelaide to speak to us on
Platycteriums and Drynarias

Competition category: Staghorns, Elkhorns and Drynarias.
 There will not be a 5 minute talk due to the nature of the evening.



Excursion on Sunday 7th October

Kinglake



This is a Society promotion day, so think about who you could invite.
 There will be a fern walk, nursery, lecture, discussion for guests
 and members, food, optional local attractions—what a day!
 Meet at Fernacres Nursery at 10.30 a.m.
 Map and details can be found on page 69.



18th October

Keith Hutchinson
will present

My Fabulous Favourites
12 Beautiful Ferns that are Easy to Grow.

Competition category: the Blechnaceae family – Doodia, Blechnum, Woodwardia, and Pteridoblechnum.
 5-minute Fern Talk: Ian Broughton.



15th November

Gary Backhouse
Victorian orchids
especially our terrestrials



- Renew your membership NOW!

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. |

The President's Annual Report.

August 2001



As I first contemplated a three year term as President, I was somewhat daunted by the prospect and decided that the only way to treat it was on a year-by-year basis. I have now reached the end of the three years, and I am quite surprised by how quickly those daunting years have passed. I am also left wondering what I was worried about – the time has been more than enjoyable, the role has not been at all onerous, the re-establishment of my involvement of the Society has been worthwhile and sharing the leadership (and building relationships) with the other Committee members has been a highlight of the time.

Again I thank Barry White, Don Fuller and Lyn Gresham for their efforts as Secretary, Treasurer and Editor respectively and congratulate them for jobs well done. Their commitment has made my job much easier. Don also continues to put in a lot of work leading the Show Sub-Committee and that also has been greatly appreciated.

George Start (Vice-President), John Oliver (Membership Secretary), Barry White (Secretary who doubles as Spore Bank Manager) and David Radford (Librarian) also receive grateful thanks. Many other people are involved in running the Society: the other Committee members – Norma, Jean, Gay, Jack and Brian; Joy (who passed away during the year) and Margaret who have looked after the special effort table at our meetings with Pat's assistance while Margaret was away; Margaret faithfully manned the admissions table at the show again this year; Dick who looks after the sound system and recording the meetings, John and Norma who are always busy setting up and packing up; Jean and Norma who serve coffee, tea and biscuits with a smile and work hard preparing salads and sweets for our Christmas lunch, the Show Sub-committee and all who help every year at the show. My personal experience has been that being involved in running our Society has increased my enjoyment of our activities – I hope you have all felt the same way and thank you all for your willing participation.

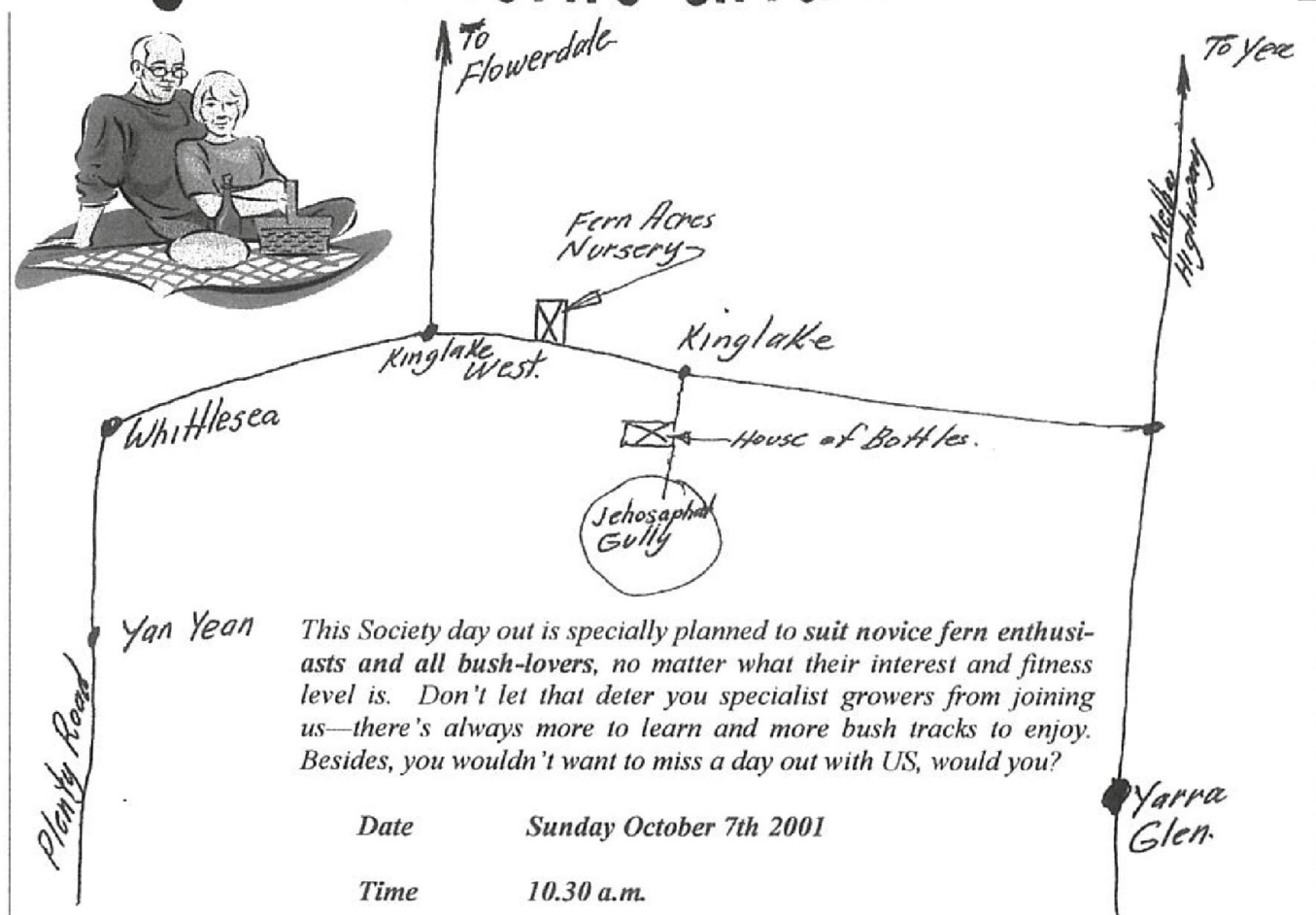
Our talks on ferns during the past year have included: "The Ferns of New Zealand" by Barry White; "Pteris" by Terry Turney; "Establishing a Fernery in a Sunny Position" by Ian Broughton; "Carnarvon Gorge" by Barry White; a forum on problem ferns and fern problems and "Pressing Ferns" by Chris Goudey. Another topic we enjoyed was: "12 months on a bush property in the outskirts of Healesville" by Bob Anderson.

Meeting attendances in the mid-20's during the year continue to be a little disappointing, but we do realize that the location of our venue makes it difficult for members to the west of the city to attend. Those of us who do come, have a really good time of fellowship and some learning. At high school I had an English teacher who frequently told me not to be facetious, but it is in my nature to take life less than totally seriously, so our meetings tend to be somewhat light-hearted. Committee meetings are held in much the same vein and I think we all enjoy our involvement.

To close, I would like to encourage you all to become more involved – I guarantee you will get more out of your Society if you do. We have a pressing need for a new Editor and a less-pressing need for a new President – my three year term is over but I am willing to continue on the basis of six months at a time. We also need more people coming to meetings, suggesting discussion topics and helping at the Show. If you think you could help in any of those areas then please let us know. Most importantly – come to the meetings so we can enjoy your company.

Ian Broughton

Kinglake Picnic and Fern Walk



This Society day out is specially planned to suit novice fern enthusiasts and all bush-lovers, no matter what their interest and fitness level is. Don't let that deter you specialist growers from joining us—there's always more to learn and more bush tracks to enjoy. Besides, you wouldn't want to miss a day out with US, would you?

Date Sunday October 7th 2001

Time 10.30 a.m.

Place Meet at Fern Acres Nursery, 1052 Kinglake Road, Kinglake West (opposite primary school).

Program

Morning tea (about \$2 per head) followed by a **lecture and tour** of the Nursery until lunch time. Opportunity to buy.

Lunch at 12.15 at Jehosaphat Gully (see map above). Bring your own lunch and drinks. There are at least four electric barbecues, under cover shelter and toilets where we are going.

The **fern walk** after lunch should take approximately ½ hour (I bet we take an hour! -Lyn) after which Society members will talk a bit about the ferns and any other interesting features we see with our visitors.

Other activities in the area that you and your guests may like to pursue after the walk-and-talk are:

Kinglake House of Bottles, 8 Parkland Rd, Kinglake (Tearooms and Museum displaying bottles, rocks, minerals, fossils and a decorative shoe collection). Closes 5.00;

Sunny's Nursery and Display Garden, 1205 Whittlesea-Kinglake Rd, Kinglake West, Rhododendrons, Camellias, Iris, Conifers, also doll, yowie and carnival glass museum. Closes 5.30;

Giverny Estate 69 Cherry Lane, Toolangi (kiwi fruit wine, hazelnuts and walnuts. Closes 4.00.

Your presence will be a valuable contribution to the success of the day.

Start inviting guests NOW!

We need **approximate** numbers for catering. Please call Brian Nicholls on 9836 6507 before the September meeting to tell him how many people you are bringing—but keep inviting more!!

Car pooling will be organized at the September meeting or call any committee member beforehand.

THE PRESIDENT'S PLACE



I trust that you are all surviving the vagaries of the weather wherever you live. In the last four days we have had 41mm of much needed, and greatly appreciated, rain and the forecast for the coming week suggests that August will be our wettest month of the year so far. With river flow rates into our reservoirs at alarmingly low levels, we need to have a lot more wet weather before we are out of the risk of water restrictions being introduced during Spring or Summer. Don't be put off working with ferns in the months ahead as there are a number of things you can do to keep your ferns looking good in spite of water restrictions.

If you are repotting ferns, use a good quality potting mix and make sure it has water storage crystals added - they will absorb water and swell into jelly-like gobs, the water will then be available to the plant as the potting mix dries out. As we come into warmer weather, treat your potted ferns with a soil wetting agent - this will assist the thorough wetting of the root-ball with the minimum amount of water. You could also mulch your potted ferns - I have found a layer of fine pine bark to be very beneficial, you could also try coarse gravel or pebbles.

For ferns in the ground, the most obvious thing you can do to reduce water use is to mulch them with a generous layer of organic mulch - remember to be careful about any effect it may have on the pH of your soil. Again, as Summer approaches, treat your ferneries with a soil wetting agent to ensure that what water you do use will penetrate right through the root zone.

Our July forum on fern problems was an enjoyable evening - commiserations to those who won the competition that evening: Problem Ferns. Jack Barrett's terrarium was a real eye-opener being absolutely riddled with fungal hyphae. Chris's talk in August on pressing ferns was very informative and helpful - it was great to see Chris and Lorraine again. Jean's 5-minute "Fern" Talk about her hollow rock formations filled with different coloured ochres was intriguing. I could just picture her out in some desert cave painting kangaroos, emus and handprints on the cave walls.

Don't forget our excursion to Kinglake on Sunday 7th October. You will find full details and a map elsewhere in the newsletter.

In September, we will be holding our AGM. Remember our need of a new Editor, and my term as president has been completed. If you would like to consider either role, please give me a call (or Lyn to discuss the role of Editor) and I will gladly fill you in on what is required. We will also have Ron Robbins over from Adelaide to give us a talk on *Drynarias* and *Platycteriums*. Please come and take advantage of his years of experience with these ferns. The competition category for the evening is *Drynarias* and *Platycteriums*.

In October, Keith Hutchinson will speak on "My Fabulous Favourites - 12 Beautiful Ferns that are Easy to Grow". The competition category will be the *Blechnaceae* family - *Doodia*, *Blechnum*, *Woodwardia*, and *Pteridoblechnum*. I will be giving the 5-minute Fern Talk.

In November we will be privileged to have Gary Backhouse (a co-author with Jeffery Jeanes of "The Orchids of Victoria", a magnificent book with colour photographs of each of our 270 species of orchids) speak on Victorian orchids, especially our terrestrials. If his photos are half as good as those in the book, it will be an evening to remember. Please make every effort to come, and feel free to invite friends or family who may be interested.

Looking forward to seeing you in the coming months.

Ian Broughton

THE VAIL THEORY

ROY VAIL, MONA, AR



Fig. 1 A ring cluster of *Platycerium andinum* near Picota, San Martin, Peru. The root mass of these clusters contains great amounts of black fibre that probably aids in water retention.

In "Philosophical Investigations" Ludwig Wittgenstein observed "One is unable to notice something - because it is always before one's eyes." During my third trip to Tarapoto, Peru, I finally noticed what had been before my eyes the two trips before - *Platycerium andinum*, when growing on a vertical tree limb, forms clusters of plants that are arranged in a ring around the tree trunk (Fig 1) The buds of the individual plants grow in a horizontal row, and the top of the cluster is open !

This small insight led me to search the literature for photos of *Platycerium* species to see if any others formed ring clusters. They do. *P. coronarium*, *P. elephantotus*, *P. willinckii*, and *Pquadridichotomum* form ring-shaped clusters.

With the exception of *P. quadridichotomum*, all of these species have one thing in common, their clusters

are made of large individuals. Forming the ring-shaped cluster may be a response to having large-sized individuals. If new plants sprouted below the main group, they would be in the shade of the others. If new plants sprouted above the main group, they would rob the others of water and nutrients. *P. quadridichotomum*, the exception, remains one of the least understood species in the genus.

Besides ring clusters, other *Platycerium* colonies form basket clusters (Fig. 2). The top of the resulting basket is open if the *Platycerium* species has the upper part of its base fronds extended, thin, and foliaceous. New plants grow out from the thicker parts of the base frond where the roots are located and form the sides and the bottom of the basket. It is essentially a colony of plants shaped like a water-collecting vessel. Mature plants of *P. bifurcatum*, *P. stemaria*, *P. Veitchii*, and *P. willinckii* var *venosa* (*P. bifurcatum* var *venosa* from Mt Lewis), form these basket clusters (Fig. 3). The new plants emerging from the base fronds are called "pups" by hobbyists. Pups form where there is the most constant moisture or along the bottom edge of the

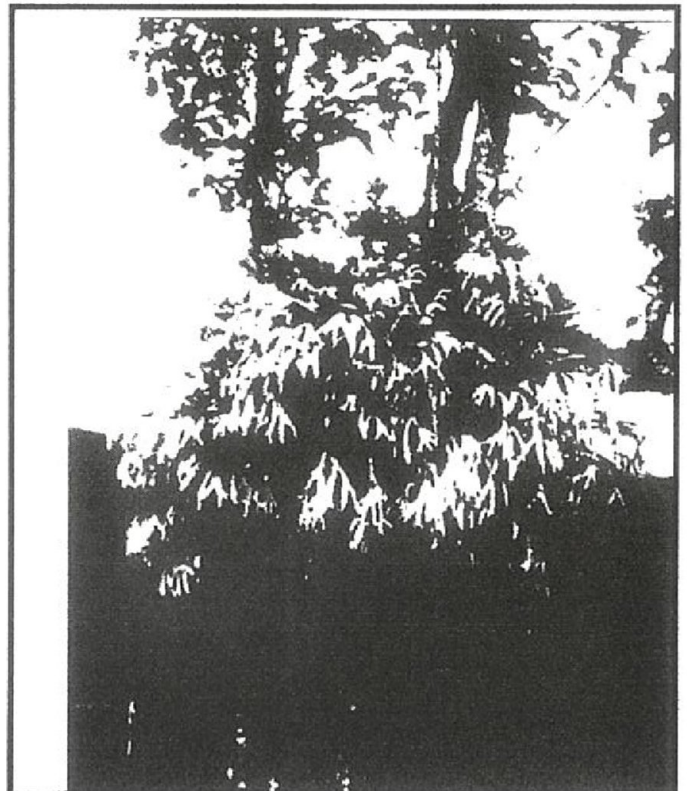


Fig. 2 *Platycerium bifurcatum* basket cluster photographed near Millaa Millaa on the Atherton Tablelands, Queensland, Australia.

plant. In nature constantly moist spots would be where the basket is leaking water. Forming pups over them could function to seal the leaks.

It seems to me that both the ring and the basket cluster, since they are open at the top, are adapted to collecting and storing water for the entire colony of plants. This indicates that this growth habit is an adaptation to native areas where water is scarce, or where there is a definite dry season.

Another group of platyceriums form neither rings nor baskets (*P. alcicorne*, *P. hillii*, *P. madagascariense* and *P. ellisii*). These form ball-shaped colonies (Fig. 4). The base fronds of these species lack the foliaceous upper extension and have instead thick spongy base fronds that are oppressed on one another or the substrate. Individual plants develop everywhere even across the top of the colony, resulting in a ball-shaped cluster. It seems to me that the ball-shaped cluster is characteristic of *Platycerium* species native to areas where rainfall is abundant and therefore collecting and storing it is not a major problem.

In nature the cluster types are not always obvious. When the original plant of a ring forming species happens to germinate on a large horizontal tree limb, the ring can not be completed because the limb is in the way. When clusters happen to start one above the other on limbs that reach in various directions, the result looks more like a mess than a pattern, but with careful observation the cluster types can be identified.

Solitary species are those that do not form a colony. All except one have the upper part of their base extended and form a partially or fully open basket against the substrate. Most open basket clusters are adapted to collect more water, then the same form in solitary plants would also indicate their moisture needs. Solitary species forming open baskets include *P. holttumii*, *P. superbum*, *P. grande*, *P. wandae* and *P. wallichii*. The only solitary species forming a closed basket is *P. ridleyi*, here the base fronds (shields) not only grow back, covering the top of the plant they are far thinner than those of most *Platycerium*. This is perhaps evidence that *P. ridleyi* is adapted to living where water is abundant.

Hobby Applications

With the cluster-forming *Platyceriums* it is important to view a new pup not simply as a plant to be removed and traded, but as a step in the development towards

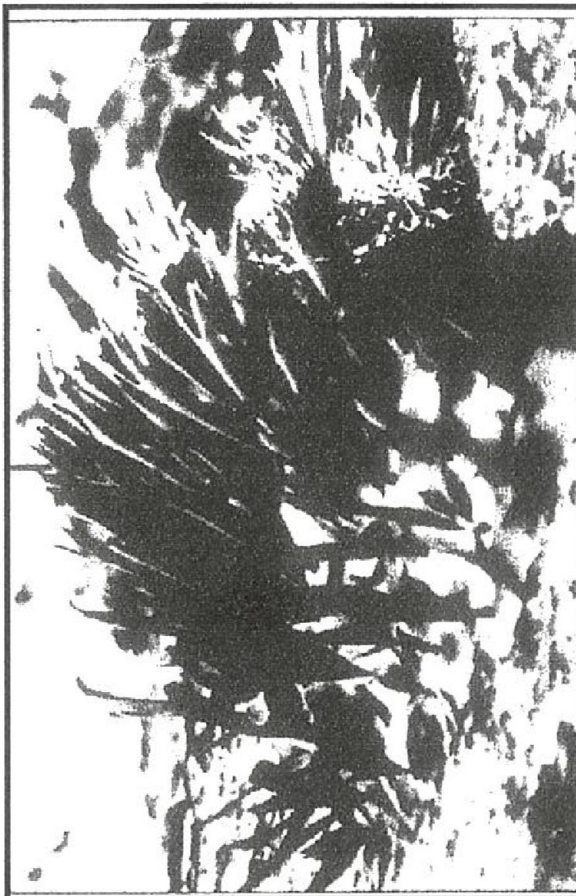


Fig. 3 A half-basket of *Platycerium veitchii* on the north rim of the Blackdown Tablelands National Park in Queensland Australia. This species lives on rock faces in near desert conditions. Some individuals have survived in the top of this half basket.

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Fig. 4 Two ball clusters of *Platycerium hillii* in Cairns, Queensland, Australia.

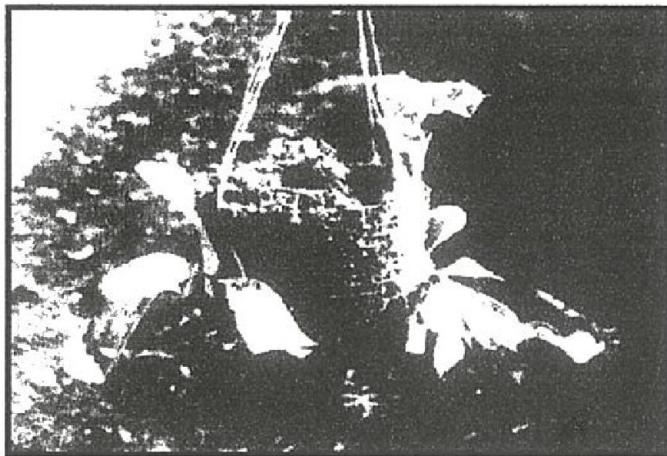


Fig. 5 Example of a basket for the ring forming species *Platycerium elephantotus*. There is a plastic

clustering. Even if left to pup on a large plague, basket-forming species will form half a basket cluster, and ball-forming species will form one side of a ball cluster. If one wishes to grow plants as they look in nature, plaques are suitable. Basket or ring forming species should be mounted so they can completely surround a central round piece of wood (tree trunk). They also could be placed in a wire basket suited to their eventual shape (Fig. 5). The ball forming species look spectacular if allowed to cover a large ball of moss.

Calling all this the "Vail Theory" means that if it becomes generally accepted, it will have a name - blush blush - but if it gets thrown out as useless, then the fern world will know who to blame for proposing it. My opinion is it will change the way we look at our *Platycerium*.

Comments are welcome: Roy Vail, 200 Ridge, Mena, Arkansas, 71953, U.S.A, <vailroy@hotmail.com>

CS

[Editor's Note: For those who are not familiar with platyceriums, elkhorn or staghorn ferns, these plants produce two kinds of fronds. The foliaceous fronds (also called fertile fronds) function to carry on photosynthesis and bear the spores. The base fronds (also called shield fronds or humus-collecting fronds) function to anchor the plant to a tree trunk or rock and by their usually thicker spongy tissue provide their own media into which their roots may grow and absorb water. On some platyceriums the upper part of the base frond may be extended, thin and foliaceous. They remain green for weeks to months, then turn brown and scarious (papery). These foliaceous extensions may be entire to deeply lobed, erect or arching forward from the substrate, hence be in a position to efficiently collect water and detritus (hence the name humus-collecting). Some platyceriums reproduce from their roots and the new plants emerge from the surfaces of the base fronds and eventually form a colony. Others lack the ability to reproduce by roots or rhizomes.]

This article has been copied from another fern society's magazine. However as I have unfortunately lost reference to its source, I cannot publish proper acknowledgement. My apologies to the author and editor and thanks for a thought-provoking item.

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2-The blue pellets are almost instantaneous and you see snails lying dead nearby.

3-The third type is fawn in colour and Iron based, which makes it non-injurious to native animals and worms, and presumably, harmless to frogs as well.

-Fern Society of South Australia Newsletter.

Tassel Ferns

Family: Lycopodiaceae
 Genus: Huperzia
 Species: 250, including 18 in Australia and one on Lord Howe Island.

Originally the genus was known as *Lycopodium* but it was renamed *Huperzia* after Johann Peter Huperz, a German botanist who wrote about ferns and grew the species of *Huperzia* which was first described. The genus *Huperzia* comprises terrestrial, lithophytic and epiphytic species of fern allies (ie not true ferns), commonly known as tassel ferns or club mosses.

Habitat

Tassel ferns grow on trees and rocks, and are found mostly in rainforest or moist situations in other forests. Many occur at high altitudes on trees covered with mosses or other epiphytes.

Cultivation

Tassel ferns grow well in cultivation, in hanging baskets, in greenhouses or conservatories.

Soil types

Tassel ferns do not like soil and must be grown in an epiphytic potting mix, made of a mixture of pine fines composted, charcoal, vermiculite, perlite, sphagnum moss and peat moss. The mix must be open and light and very free draining.

Watering

Tassel ferns like plenty of water in summer, but in Perth's temperate, cool winters they must be allowed to almost dry out. It is suggested that watering of tassel ferns be done only in the morning to ensure that the plants are not wet by evening when the temperature drops.

Fertilizing

Apply weak, liquid fertilizer during spring and summer, and ease off during the cooler months.

Situation

In temperate areas such as Perth they can be grown

well providing that they receive plenty of filtered or bright light (not direct sun). A situation under perspex[®] roofing is probably best. Ensure that the plants do not suffer wind damage. Air movement is fine, and try to keep the area rather humid. Plants do better if they are hung from the roof, about one metre from the roof line. I have had one experimental plant growing for three years under 50% shade cloth in extreme weather conditions, from -30C to 44C, rain, hail and shine. It is still thriving. (I was advised that this species is extremely hardy. It was sold as a *Lycopodium squarrosus waaga*).

Pests

The only problem encountered in the Perth area is occasional attack from coconut scale. Snails and slugs will eat the tips, but as most of the plants are hanging, they usually are out of their reach. Spray for the coconut scale with Malathion[®] and White Oil.

Propagation

This is by division of stem cuttings or by tip layering.

Species

Huperzia phlegmaria (Coarse or Common Tassel Fern) From north east Queensland (coast to tableland), Polynesia, Malaysia, south east Asia and Africa.

Found as an epiphyte on trees or a lithophyte on rocks. A hardy species which can be reproduced by division of rhizomes or layering

Huperzia prolifa (Square Tassel Fern) From north east Queensland in rainforests to high altitudes, as an epiphyte on trees. Division as for *H. phlegmaria* (above)

Huperzia squarrosa (Water or Rock Tassel Fern) From north east Queensland in rainforests, as an epiphyte on trees or a lithophyte on rocks and moist rock walls.

This article comes from the W.A.F.S. Newsletter of June 2001 and is a report of a talk presented by John Banasiewicz. Used with thanks.

☺☺☺

KNYSNA FERN

Leaves (fronds) of the Knysna or seven weeks fern (*Rumohra adiantiformis*) are used extensively in the florist trade, both locally and abroad. It is a protected plant that is harvested from the southern Cape forests, but is currently also cultivated in nurseries or underneath thinned pine stands.

Scientific studies have provided a basis for its sustained harvesting from the forest. Ecologically the frequency of frond harvesting and quality of the fronds

are controlled by the internal cycling of nutrients, in particular potassium, through the plant. The size, moisture content and life period of the mature frond is controlled by the potassium reserves in the plant. The potassium content is high in the growing tip and unfolding frond, and as the frond ages, the potassium is recycled to the growing tip. Too-frequent harvesting of the mature fronds reduces the potassium in the growing tip and causes a reduction in size and quality of newly developed fronds.

COMPETITION WINNERS

July meeting - the sickest fern

(in keeping with the night's theme; "Our Problem Ferns")

Competition

- 1st Norma Hodges' unidentified black stump
2nd Geoff Harding's VERY CLOSE friend's collection in a box
3rd Barry White for the amazing number of problem ferns he produced
*it must be said that all our exhibitors excelled at finding really sad (or worse) ferns and all are to be...er...congratulated on their lack of effort!!

Exhibitors' Draw Keith Hutchinson

Special Effort Margaret Radley (2), Pat Nicholls (2), Keith Hutchinson (1!).

August Meeting - the family Gleicheniaceae

Competition

- 1st *Dicranopteris linearis* Ian Broughton
2nd *Hypolepis rugosula* Dorothy Forte
3rd *Calochlaena dubia* Ian Broughton

Exhibitors' Draw Ian Broughton / Don Fuller

Special Effort Jean Boucher, Dick Kissane, Lyn Gresham, Pat Nicholls (2 again!)
Dorothy Forte.

Listen to tape for more

Knysna Fern cont...

The commercialisation of this indigenous, protected plant has definitely contributed to a better study of the species, and to conservation of the species and the small forest patches on farms which otherwise would be cleared.

From: *The Magnificent Natural Heritage of South Africa*, by Johann Knobel Sunbird Publishing, 1999.
FERNATIX*ZA FEBRUARY 2001 *JKH*

as a groundcover or thicket. It has long-creeping, branching rhizomes. Moist soil and strong filtered light or morning sun are required. It may be slow to establish but then becomes easy to grow and maintain, and can even become a pest if not given sufficient room to grow.

The last paragraph is from Calder Chaffey's recently released book, "Australian Ferns—Growing them successfully". Used with thanks.

August Winner's Comments Dicranopteris linearis

Ian collected the winning plant in Cairns and in two years since collection it has reached about two metres in height. In Ian's Victorian garden it is growing in a greenhouse with frost control heating (i.e. just enough to take the chill off our cold winter weather) only. The fronds don't even blemish at all in the cold so for a fern found in the tropics that's not bad! Ian guesses that they would probably take frosts to about -3°C.

Members of the Gleicheniaceae family (*Dicranopteris*, *Gleichenia* and *Sticherus* in Australia) generally can be said to resent disturbance but *Dicranopteris linearis* will divide and replot fairly well.

The Veiny Fan Fern is a fern to grow in the garden



Dicranopteris linearis A-B *D. linearis* var. *linearis* C-D
D. linearis var. *altissima* E *D. linearis* var. *subferruginea*.

Source; 'Flora of Australia' Volume 48

Speaker Report - May 2000

VIREYA RHODODENDRONS

Bill Taylor and Ian Broughton

Vireya Rhododendrons were introduced into cultivation with six species collected from the wild in 1843. In a short time breeding programmes had commenced and there were 250 hybrids by the late 1800s or early 1900s. This was in the era of coal-heated stove-houses and plentiful labour, which lasted until the first World War when most of the available workers went soldiering. Through this difficult time many of those hybrids were lost to us forever, though there are a few which are still grown today—150 years later.

There are two native Rhododendrons (both Vireyas) here in Australia; *Rhododendron lochae* (or lochiaie) and *R. notiale*. There is an enormous number of lochae hybrids around today, typically with small, vibrant red, bell-shaped flowers.

In contrast to Australia, New Guinea has 300+ species of Rhododendron and there are between 400 and 450 worldwide.

Some Vireyas will grow up to two or three metres—in fact, some New Guinea species can be six to eight metres!

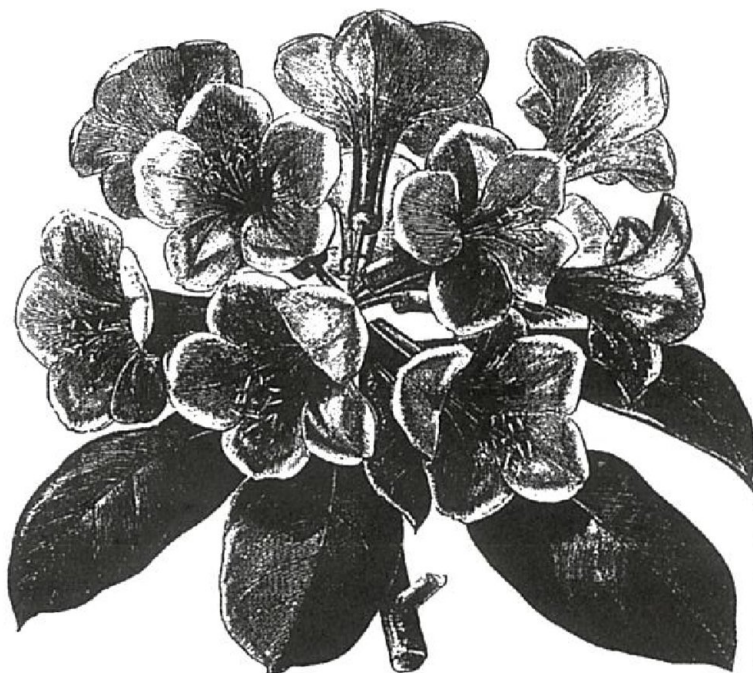
and some will produce some flowers almost all year. When asked the difference between a Rhododendron and a Vireya Rhododendron, Bill explained that it is very easy to distinguish between them by the seed. Rhododendron seeds have no tail or only one, Vireyas have a tail on both ends of the seed. Propagation by seed is most successful if it is planted within two weeks of collection as the seed is not viable for long.

Cultivation

Vireyas and ferns make great (garden) bedfellows. They have similar needs regarding growing medium, depth of soil, fertilizer and water. Vireyas require more light, which makes them ideal for providing shade for your ferns.

They can be grown in containers indefinitely, treefern logs and any hollow logs being excellent choices. Again, in this situation they can coexist with ferns very happily.

They even make good subjects for hanging pots though watering becomes more of an issue of course. Small growing ones which have a more pendulous habit are perhaps the best choices.



Rhododendron taylori—not named after our speaker but beautiful anyway!

Growing medium

In their natural habitat they grow in 4—6" of a very organic, sandy loam, always on the side of a hill. So above all else, Vireyas need GOOD DRAINAGE. If growing yours in a pot, make sure the mix is an open, organic one and if they're in the ground, unless the drainage is perfect, build a mound of organic matter—sticks and leaves etc. to plant it on. Secondhand potting mix is also good.

Feeding

Not much. Vireyas are NOT gross feeders. If they are over-fed with slow-release fertilisers they will show chlorotic (pale) veining on the new growth. They will recover, but what's the point?

Bill fertilizes at half strength, twice a year (in early Spring and Summer). Don't fertilize going in to Winter because they will keep growing instead of setting flowers. You'll get a lovely, green, vigorous bush—but no flowers.

Ian doesn't feed his Vireyas or ferns which are growing in the garden at all, though he does mulch heavily about twice a year.

Pruning

Prune any time there are no flowers on the bushes. They flower on the terminal (end of stem) growth, so are largely self-pruning and those species and hybrids that flower heavily will stay reasonably bushy because of this. However there are some that are 'naturally leggy' and will only produce one or two shoots when pruned. These are not so rewarding but still often worth growing for the beauty of the flowers that they do produce.

If you want to prune to control the size of a bush, try to leave some foliage as a defoliated Vireya will often die. However, a plant with a healthy, vigorous root ball could well have enough 'oomph' to send out new shoots from bare branches. If you need to defoliate the plant, always cut to about 1/2" above a node (which may be an obvious shoot or more likely, only a slight swelling under the bark).

Repotting

The correct procedure is to pot up your Vireyas after pruning but repotting and feeding will not produce flowers so many people don't.

Propagating

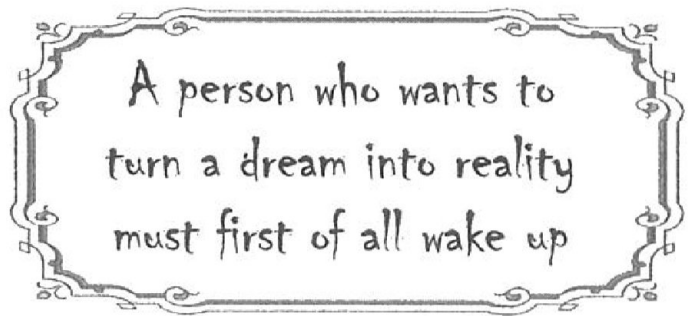
You can propagate Vireyas from conventional stem cuttings or by using the leaf bud technique. Some varieties strike readily, others are not so successful, but all are worth trying. Both our speakers use rooting hormone in either liquid or powder form, and they agree that great success can be achieved even with minimal propagating facilities. Bill uses a polystyrene box lined with plastic with an inch layer of water-saturated peatmoss and 1 1/2 inches of propagating mix into which the cuttings are planted. It is then covered with plastic. Ian uses five parts perlite to one of coprapeat. Both are successful. John Hodges struck his cuttings in a sand/propagating mix and they weren't even covered!

The best material to use for stem cuttings is first year wood, though second or even (if you're desperate) third year growth is worth a try.

The leaf bud technique involves removing a leaf complete with a growth bud and a sliver of stem material and potting it at minimal depth in propagating medium. Care is needed (and good eyesight) to make sure that there really is a bud in the leaf axil. The leaf alone will produce roots, but there must be a bud to produce shoots, the 'above ground' part of the plant. Again, the bud is indicated by a swelling under the bark.

Watering

Yes, they demand freely drained soil but they also want to be kept moist.



Cold and Frost

Some plants stay perfectly green in the cold, others become tinged with lovely reds. Vireyas can survive occasional, light frosts but do not tolerate repeated frosts. Having said that, Ian told us of his father deciding to 'wait and see' after his bushes had been cut to the ground by frost. The following Spring they sent up a wonderful crop of new shoots - up to sixty per plant! As a general rule, older plants will withstand cold better than young ones. Provided there is some green showing after frost, they will almost certainly recover no matter what their age.

Flowering

Some Vireya varieties are particularly seasonal in their flowering, some flowering once, for two to three months a year, others flower two or three times a year and some will produce some flowers almost all year. With careful selection, and frosts permitting, you could have flowers all year. Light frost could burn the buds off, usually in late Winter/early Spring and rob you of flowers until the next buds are produced.

Why would we want to plant Vireyas in with our ferns? We have already learnt of their similar cultural requirements. In areas that receive full sun for part of the day, the taller growing ones can provide valuable shade for ferns. When in flower they also provide pleasing colour and sometimes even perfume to the fernery.

VVVV

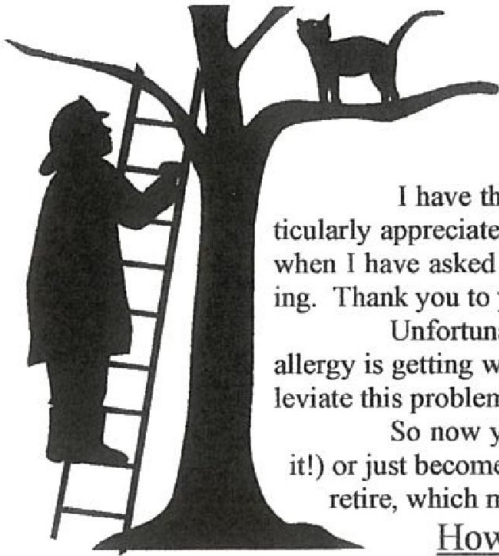
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S.O.S.!!

WANTED: New Editor



I have thoroughly enjoyed my five years as editor of this newsletter. I have particularly appreciated the great generosity with which many of our members have responded when I have asked them for help or advice. It has always been most generously forthcoming. Thank you to you all.

Unfortunately, my hands have seen fit to become allergic to the computer. This allergy is getting worse with each issue I produce and I can't find any way to prevent or alleviate this problem.

So now you know; no, I haven't got the huff, gone off ferns or fernists (far from it!) or just become lazy (now, that's a thought.....) but it is becoming necessary for me to retire, which means finding another editor. Hmmmmm.

How about you?

Let me try to tell you what I have gained from 'doing the job'. First, I have grown to know so many of you personally and that has been great. I have also received a huge amount of grace from you when I have made the numerous (in some instances oft repeated) blunders. You're a forgiving lot—must be due to the type of people who are drawn to ferns and other matters green. That's my theory, anyway.

Then, I have learned so much about the world of ferns. One of the first things was how to spell all those curly botanical names and the correct way to write them!!

Because I committed myself to going down to the city for as many meetings as I could, I have heard numerous wonderful speakers and seen literally thousands of slides (nearly all on my favourite subject), I'm sure. I have also been able to borrow from our extensive library and purchase garden products at reasonable prices. Not to mention the coffee

I'll put you onto a great perk that goes with this job; you get to read all the newsletters we regularly receive from fern societies around the world, before everyone except the secretary does. There are always some brilliant articles in them, many of which have appeared in these pages.

Please give it some thought. I will give my successor all the help I can to get them going in the privileged position of Editor of the Society Newsletter. Contact me or any committee member to find out more.

Lyn Gresham

About Roundup.

This article has been taken from a speaker report in the Western Australian Fern Society magazine and, as always, is used with thanks.

Many people waste their Roundup by adding more than the recommended dose, spray dry grass or weeds early in the morning and use our (South Australian) alkaline sediment laced tap water.

Dry plants cannot absorb this chemical, to get a good kill fresh growth absorbs much better so wait a day or so after rain or watering the weeds.

Remember to spray in the late afternoon when the chemical is not likely to be broken down by as much sunlight.

Roundup is neutralized by sedimentary alkaline clays which are very common in South Australia.

The best (but impractical) way is to use distilled water so the suggestion is to use acid water, still a bit impractical so unless you live near a highly industrial-

ized area where your tank water is contaminated with alkaloids it may be the best option.

The kill rate of roundup depends on the age and type of weed, the weather, your dose rate and the time of application. Old leaves absorb less and take longer to die, fresh new leaves absorb easily so the kill is quicker. Sometimes two to maybe six weeks.

Remember Roundup is a growth hormone, little doses kill, big doses make plants grow! SA Ed. Comment

When you add any chemical to your spray unit remember to rinse the measuring device into the container as well and not under the tap or onto the ground.

Wear gloves, mask, head covering, overalls if possible or a full set of clothes and boots or shoes. Wash the clothes separately afterwards, as well as the gloves and wipe your boots with a wet cloth and wash it too.

RRRRR

An article from Southern Africa THE USE OF INDIGENOUS XEROPHYTIC FERNS.

Petro Lemmer

Provided their natural conditions are met many ferns can be grown in the garden. Of the about 243 indigenous fern species in southern Africa, some 80 are xerophytes, ie. sun-loving, dryland ferns. In fact, these ferns are amongst the first plants to emerge green and healthy after a veld fire.

Xerophytic ferns are specially adjusted to protect them against desiccation. Some have a thick waxy layer on their leaves; others have thick hairs or scales and the leaves roll up when conditions are hot and dry. In this way a microclimate in which moisture is conserved is formed within the coiled leaf.

To plant a xerophyte successfully in the garden, one has to emulate its natural habitat (This, in fact, is recommended for *all* ferns.) Dryland ferns just do not grow in typical green house conditions or in shady, moist areas of the garden.

Dryland ferns have only a few, albeit very important, requirements: sufficient sunlight, moderate moisture and cool protected root areas. They can successfully be planted in rockeries at the base of large stones or tree stumps. Dig a diagonal hole, somewhat larger than the volume of the pot from which the plant is to be removed, under the stone or stump, half-fill the hole with good compost, and tuck the roots of the fern under the stone/stump and fill the hole with compost. *Cut off all but one leaf* (very, very important to lessen transpiration). Water the fern once daily until it is well established, i.e. new leaves have formed. Gradually reduce the water until nature can take over.

Most dryland ferns belong to the genera *Pellaea* (cliff brake) and *Cheilanthes* (lip ferns). They grow naturally in the drier central and western parts of the country. Never attempt to grow winter rainfall ferns in gardens in summer rainfall areas, and visa versa. They do not survive.

Of the better-known dryland ferns (also more readily available at nurseries) the following are worth planting:

Pellaea calomelanos (grey cliff brake) is a grey-green fern with black stipes, the leaves of which are covered with a waxy layer. They function well as accent plants amongst green ground cover.

The leaves of *Cheilanthes viridis* var. *glauca* are also

covered with wax, and appear blue green, especially if the plants have been kept in full sun. In full sun these plants grow to a height of about 25cm and are excellent as ground cover. The leaves of the lip ferns are very hairy and they are usually very bright green. The hairy lip fern, *Cheilanthes hirta*, has many geographical varieties and are excellent rock garden subjects.

Actiniopteris species (radial ferns) are small plants with fan-shaped leaves borne on thin green stipes. They only grow to 15 cm in height and contrast well with the grey leaves of the cliff brake. Plant them in light shade, but remember not to water too much.

Pteridium aquilinum (bracken) is the only indigenous fern not protected by legislation. It is a large fern, and, provided that you have a large garden, can be used in the background. It is, however, invasive.

The rusty back fern, *Ceterach cordatum*, grows naturally in rock crevices. It is a very pretty rosette-shaped fern with golden-brown scales on the underside of the leaves. The rosette is about 20 cm in diameter. This is a very difficult fern to grow.

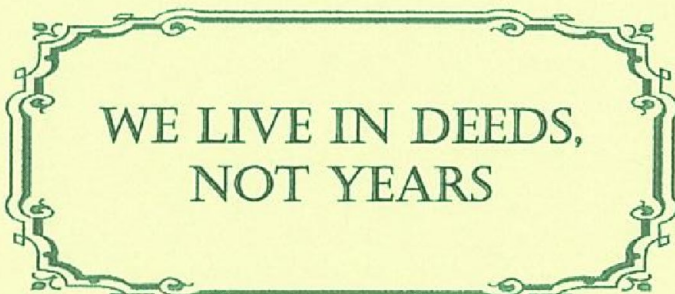
Mohria caffronum, (scented fern) closely resembles the hairy lip fern, and has the same growing requirements.

The xerophytic spike moss (these are fern allies, and not true moss) such as *Selaginella dregei*, are excellent to cover those open, difficult patches in rockeries. In nature they grow on sheet rock in full sun. Because the very thin plant layer can become very hot water sparingly, but often.

Xerophytic ferns are admittedly difficult to grow, but once established, can form the focus of any garden.

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This article is reproduced from "Pteridoforum", (#56, October 2000) the journal of the Fern Society of Southern Africa and is used with thanks.



WE LIVE IN DEEDS,
NOT YEARS

NEWSLETTER

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