PBBN

redicors Algorolv

TENSILBER

DATE MAY '80

VOLUME

NUMBER

## OFFICE BEARERS:

PRESIDENT: Chris Goudey, Lot 8, Cozens Road, Lara, 3212. Tel. (052) 82 2154 VICE-PRESIDENT: Ian Buckmaster, 312 Waiora Road, Macleod West, 3085 VICE-PRESIDENT & TREASURER: ALBERT Jenkins, 11 Morwell Avenue, Watsonia, 3087 SECRETARY: Irene Bolster, P.O. Box 154, Ferny Creek, 3786. Tel. 755 1222 BOOK SALES: Lorraine Goudey, Lot 8, Cozens Road, Lara, 3212: Tel. (052) 82 2154 EDITOR: Keith Hutchinson, 17 Grandview Grove, Rosanna, 3084. Tel. 459 9716 (A.H.)

### PRESIDENT'S MESSAGE:

At our April meeting, Rod Hill gave a very interesting talk on collecting and propagating ferns from spore without the aid of a glasshouse. Rod set up a very interesting display of the various stages of spore growth and germination, etc. for all to see.

Ian Buckmaster spoke later in the evening, on Ferns in Contrast. Ian brought in quite a large selection of specimens, including two Platyceriums, one extra-large Elkhorn fern (Platycerium bifurcatum) and a smaller Staghorn fern (Platycerium superbum).

The winners of last month's competition:

## Novice Section

1st - Mrs. C. Anderson 2nd - Mrs. Ada Bolger 3rd - Mrs. A. Bryant

Open Section

1st - Mr. G. Andrews 2nd - Miss Y. Goudey

3rd - Miss C. Goudey

The fern for next month's competition is a silver fern.

Albert Jenkins and I went to Adelaide at Easter to meet members of the South Australian Fern Society.

We thoroughly enjoyed ourselves, and are grateful to Ron Yates, Alan Mortimer and other members of the committee for their hospitality.

We saw several beautiful ferneries, as well as visiting a number of wholesale Fern Nurseries.

Whilst meeting with the committee of the S.A.F.S., we discussed the combined trip to the Otways by our two Societies and worked out the final details, which are as follows:

Our bus will leave Lansdowne Street, East Melbourne, at 6.00 a.m. on Saturday 3rd May. Please report to Albert Jenkins at the bus, as he will have the list of names.

The bus will stop at the Werribee Post Office to pick up passengers, and again at Geelong if required. Our bus will then proceed on through Forrest and Turtans Track to Beauty Spot, where we will meet up with the South Australian Fern Society members.

After going for a walk through Beauty Spot, we will all move up to the Lavers Hill Hall, where a light lunch will be provided for us at a small

After lunch, we will all move on to Melba Gully where we will see representatives of all the rain forest ferns that occur in the Otways region. Melba Gully would be the most accessible deep rain forest area in the Otways; it has well-graded walking tracks and an abundance of ferns, including several rare species. After leaving Melba Gully, the two buses will visit a large wholesale Fern Nursery where we will all be able to buy ferns native to the area, including some of the less common species.

Please bring good walking shoes, and a raincoat.

There are still a few vacant seats on the bus, so if any of your friends want to come, please ring our Secretary Irene Bolster (755 1222). We expect the cost per person to be between \$8.00 and \$10.00.

> CHRIS GOUDEY President

### SECRETARY'S REPORT:

We hope that those members who visited the greenhouses at the Botanic Gardens enjoyed the tour, and were not too envious of some of the ferns there. If there is a sufficient number of members interested, perhaps we can arrange another visit in the future.

I now have brochures and registration forms for the Autumn School for Home Gardeners, organised by the R.H.S.V. at Ballarat. The School will be held from 21st - 23rd May, 1980, so there is not too much time to think about it. One of the speakers will be Jan Maher; her subject is "Compact Gardening" and no doubt ferns will be mentioned. Anyway, please let me know if you want an application form.

Lately, I have heard of members who have been sick for a while, and cannot attend meetings. If you know of others, please pass on their names to me, and we will send them good wishes on behalf of the Society.

We should have a good day in the Otways - it is a beautiful part of the State.

But do bring good walking shoes and a waterproof - it can be quite wet. Not for nothing is one small township, Weearproinah, recorded as having one of the highest rainfall figures in the State!

IRENE BOLSTER Hon. Secretary

\*\*\*\*\*

#### TREASURER'S REPORT:

Our income for the month included the following: Badge sales \$34.50, returned from Book Sales Account \$250, six new members \$29.75, plant sales \$21.50, and supper donations \$7.10.

Expenses were Newsletter printing and postage - \$187.35, leaving a balance of \$476.52. Expenses pending are: Hire of Hall \$20, and rental of postal box \$20. When these are paid, our balance will be \$436.52.

ALBERT JENKINS Hon. Treasurer

\*\*\*\*\*\*

### FERNS IN CONTRAST: Resume of Ian Buckmaster's talk at April meeting.

The main subject of our April meeting was to provide members with an understanding of the wide range of contrasting features of fern.

Mr. Ian Buckmaster left members in no doubt as to the reality of these contrasting features. The program was set to cater for fern contrasts in fronds, rhizomes, scales/hairs, sporangia, polymorphism and dimorphism.

Ian provided the 'pantomime' approach to explain certain hypothetical differences between Platycerium bifurcatum and Platycerium superbum.

For P. bifurcatum, the differences are: This Elkhorn comes mainly from the fringes of the rain forests and the lobed leaves are held aloft for wind dispersal of spore. The leaves being held aloft with the

## FERNS IN CONTRAST (Cont'd)

sporangia on the points (fingers) of the lobes is also a safety precaution against being eaten by the long-legged and long-necked animals abounding in the fringes of rain forests. The plant has adopted these survival values. It would appear that nature did not stop there. The sometimes harsh, silt-strewn, and drying winds meant less opportunity to reproduce than were available to its counterpart, P. superbum in the sheltered parts of the rainforests, and it therefore adopted the ability to produce bulbils (pups) which P. superbum does not possess. It also has a strong, nutbrown scale-like leaf for protecting roots, and these are also used for capturing food such as dust and leafy material that is either carried by wind or falls from the trees to which the fern clings.

A perfect haven for spiders and ants, but also a fine method of preventing the roots from drying out. This plant has the ability to withstand freezing conditions for a short period - a very hardy plant, and often admired in many gardens. It can stand full sun, but prefers afternoon shade in our climite.

Contrastingly, Platycerium superbum is found only in the sheltered parts of the rain forests. This plant is much more delicate. It is delicate in colour, and generally demonstrates the reliability of its reproduction (only by spore) in the best of conditions, as it does not have bulbils.

Its survival value can be recognised by means of its sporangia position, just above the first fork of the fertile leaves, which hang pendular.

The position of the sporangia protects the plant from the short-legged, shortnecked rodents and wild pigs of the forest floor. There is no need for the leaves to be held high for wind dispersal because of the tranquillity of the forest parts in which it abounds.

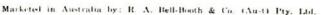
Leaves or fronds? We are told that the Platyceriums do not have fronds, because there is no rachis. The definition of a frond is a leaf wherein the pinna is confluent with the rachis or midrib. The leaf may be simple (or entire) or with lobes. Some ferns have simple leaves, some have lobed leaves, some have fronds. Some have dimorphic phases (dimorphism) - they have both kinds of leaves, or they have both kinds of fronds. 'Di' means twice, and 'morphic' means change, so that they are twice changed to be 'dimorphic'. Examples were shown of these changes.

Polymorphic change relates to the genes of the plant, the fundamentals of protoplasm and the prothallus stage.

There were specially constructed cards with spores and sporangia attached, for demonstration with an eye glass.

Unfortunately, time did not permit covering of some material which is of great interest in this area.

IAN BUCKMASTER



VIC -

Factory 4.

375 Bayswater Road, Ray-water, Victoria 3153 104 Batherst Street, Phone: (03): 720/2200

N.S.W. -

Suite 38. International House.

Sydney, N.S.W. Phone: (02) 61 8257 TAS. -

9 Edward Street, Perth Tasmania 7300. Phone; (ma) 98 2150





MAXICROP FOLIAR FEEDING IS OFTEN THE QUICKEST WAY OF GIVING HELP WHEN IT'S MOST NEEDED.

### Preparing a suitable medium:

A fairly coarse, porous material seems best. Dicksonia (Soft Treefern) fibre (preferably old, chopped and sieved) and/or Gardenitis (crushed charcoal may be added) gives very good results.

Pots may be filled with this medium, or simply add a layer (2 - 3 cm.) above your normal potting mix.

Sterilize by carefully pouring boiling water through the medium. Cover with glass until cool.

### Obtaining spore:

You may collect your own (see February Newsletter), purchase spore commercially or obtain spore through a fern society spore bank.

Wherever you obtain the spore, many failures result from sowing sporangia husks instead of spore itself. If a mixture of spore and husks is placed on a sheet of paper, and the paper inclined and repeatedly tapped sharply, the coarser husks will slide down the paper, leaving the much finer spore behind.

#### Sowing the spore:

Probably most failures come from sowing too thickly. Cover the end 1 cm. of a clean pen-knife blade (or small metal spatula) with spore and gently tap off the excess. The thin layer of spore still adhering to the blade is sufficient to sow a 4" pot at least. Simply tap the blade sharply about 6 - 7 cm. above the pot to dislodge the remaining spore.

(If sowing from gelatine capsules, tip the spore into the cap and there should be sufficient adhering to the inside of the capsule for sowing a 4" pot again. If the spore is reluctant to be tapped out, wipe it out with a clean dry cotton bud and tap this over the pot.

# Conditions for germination:

Spore must remain moist at all times to germinate successfully, and so is best kept under glass.

Pots do not need to stand in water.

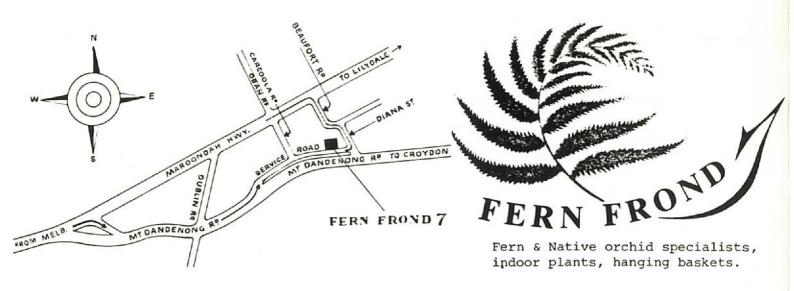
Best results seem to be obtained with a fair amount of light, but not direct sunlight. (A north-facing window protected by wide eaves, or with diffused sunlight, is good.) With fresh spore, germination should be apparent within 3 - 4 weeks.

#### Potting on:

The heart-shaped prothalli may produce fronds at virtually any time from a few weeks to several years.

The tiny sporelings may be pricked out into tubes or trays with only the first or second frond developed, but are best kept under humid conditions until fronds are about  $3-4\ \mathrm{cm.}$ , and gradually hardened off.

\*\*\*\*\*\*



## PATHOLOGY DEPARTMENT:

An increasing number of ferns for assessment seem to be suffering from a poor potting mix. This, in most cases, seems to be not so much the fault of the owner as the fault of the previous owner.

#### POTTING MIX:

First create good drainage and thoroughly clean your container.

Make up a mix of friable material from some of the following: peat moss, sandy loam, tree fern fibre, rotting wood chips, coarse sand,
charcoal, leaf mould, cow manure, worm cast, ligna peat, mountain soil,
peanut shells, etc.

You do not need all these ingredients, but whatever you do, do not rely on somebody else's potting mix which was not made up for ferns.

It is always difficult to give a proper diagnosis, and the simple problems such as insectivorous attack and fungus disease seem to be understood by most of the members. The proper treatment for these problems is also understood. This is good - soon I will be able to pack away the PATHOLOGY sign!

Some hints which I feel might be of value are -

Don't create sudden changes - e.g., from a sheltered spot to a draught, from a shady spot to a sunny spot, from a hot condition to a cold one, from a humid condition to a dry one, from a dry situation to a wet one. Ferns are fussy, and need gentle treatment. They attract insects, just as we do. A new crozier is a succulent thing to aphids and slugs! Prevention is better than cure.

At the previous meeting, I was promoting the use of a special 'eye-glass' with a double lens. I believe it is an important item in your study of ferns for disease and for fern spores.

Disease contrasts, and how to spot them couldn't be covered because of lack of time - perhaps another time.

The eye-glasses are available from O.P.S.M. stores for \$2.20 each. I still have a few left, and these may be obtained at the Pathology table.

IAN BUCKMASTER

### SPORE LIST - MAY, 1980

Spore samples may be purchased at monthly meetings, or by sending a list of your requirements, with stamped self-addressed envelope, <u>plus</u> a 20¢ stamp for each species requested, to Mr. R. Hill, 41 Kareela Road, Frankston, Vic., 3199.

At the May meeting, there will also be <u>limited</u> quantities of over 40 additional species, many of them made available by the British Pteridological Society (and include species of the genera Dryopteris, Athyrium and Polystichum, with a number of varieties of Polystichum setiferum).

#### SPORE VARIETIES AVAILABLE:

Adiantum concinnum (10-79)

- A. gracillimum (3-80)
- A. hispidulum (3-80)
- A. mathewsii (3-00)
- → Aglaomorpha meyeniana (12-79)

  Angiopteris palmiformis (12-79)
- Arachniodes aristata varigata (2-80)
  Asplenium flabellifolium (2-80)
  - Athyrium australe (3-80)
  - A. japonicum (4-80)
  - A. japonicum (Taiwan) (?)
- Blechnum ambiguum (1-80)
  - B. articulatum (11-79)
  - B. brasiliense (12-79)
  - B. cartilagineum (12-79)
  - B. chambersii (3-80)
- -B. discolor (12-79)
  - B. fluviatile (3-80)
  - B. orientale (12-79)
  - B. penna-marina (1-80)
  - B. vulcanicum (3-80)
  - B. wattsii (4-80)
  - B. sp. (King Is.) (12-79)
- Cheilanthes distans (2-80
  - C. tenuifolia (11-79)
  - Christella dentata (2-80)
- Cibotium schiedei (12-78)
- Colysis ampla (1-80)
- Culcita dubia (3-80)
  - Cyathea australis (2-80)
  - C. baileyana (3-80)
  - C. brownii (2-80)
  - C. callosa (12-79)
  - C. contaminans (12-79)
  - C. cooperi (1.80)
  - C. cunninghamii (2-80)
- C. dealbata (2-80)
  - C. integra (12-78)
  - C. medullaris & smithii (6-79)
  - C. regeccae (8-79)
  - C. woollsiana (8-79)
  - C. sp. (Borneo) (?)
  - C. sp. (Taiwan) (11-79)

Cyclosorus truncatus (12-79)

- C. sp. (4-80)
- Cystopteris fragilis (2-80)
   Dicksonia anuarcuica (11-79)
  - D. squarrosa (1-80)

Dryopteris aemula (?)

Dryopteris crassirhizoma (8-77)

- Lastreopsis hispida (4-80)
- ▲ L. marginans (12-79)
  - L. shepherdii (12-79)
  - L. tinarooensis (1-80)

Leptopteris fraseri (1-80)

Llavea cordifolia (11-79)

Matteuccia orientalis (?)

- M. struthiopteris (12-79)
- Osmunda regalis (contorted) (12-79)

Pellaea falcata nana (12-79)

Platycerium coronarium (12-79)

P. holttumii (12-79)

Polypodium aureum glaucum (1-80)

P. vulgare (10-78)

Polystichum aculeatum (2-80)

- P. australiense (2-80)
- P. formosum (12-79)
- P. lentum (3-79)
- P. munitum (11-79)
- P. proliferum (2-80)
- P. setiferum (3-80)
  - P. s. 'Falcatum Dyce' (?)

Pteris blumeana (12-79)

- P. comans (1-80)
  - P. tremula (12-79)
  - P. tripartita (12-79)

Rumohra adiantiformis (5-79)

Sphaerostephanos taiwanensis (8-79)

-Sticherus lobatus (2-80)

Todea barbara (2-80)

Treeferns (mixed Cyatheas -

subgen. Sphaeropteris)

#### NEWS IN BRIEF:

Acknowledgement: We inadvertently omitted to acknowledge the source of the excellent photograph of Chris Goudey which was featured in last month's Newsletter. We are indebted to The Sun newspaper for the use of the photograph.

To ensure that our Newsletter is distributed early in the Closing date: month, it is most important that contributors forward their items before the 20th of each month.

Monthly competition: Don't forget - the subject for next month's competition is a silver fern. We would like to have as many entries as possible.

## From the Judges' Box:

There have been a number of queries regarding the judging of ferns at As our May meeting is to be a Demonstration Night, our monthly mestings. I will try to explain the procedures used, when I will have ferns for you to compare. Do bring along your notebooks, but even more important, bring along your silver fern. It is only by entering that we can learn more about our own ferns. The competition is a fun thing - so why not be in it? Thanks to those who entered the April competition, but we do need more than four entries please! Glad Andrews

Judges' Steward

## Demonstration night:

Another item of interest we have planned for the Demonstration Night is a talk and demonstration on the Use of Ferns in Floral Art. This will be ably handled by Norma Stafford, who is very experienced in this art, and is also a Floral Art judge. This should be of great interest to the ladies in particular, so don't miss the May meeting.

### DIARY DATES

MAY OTH, 1980 - Dan instration Night (Various Speakers) 8 p.m. - Burnley Horticultural Hall JUNE 12TH, 1980 - Neil Laird, on "A SELECTION OF UNCOMMON FERNS"

Note: In the event of a power strike on the evening of any meeting, we regret that the meeting must be cancelled.