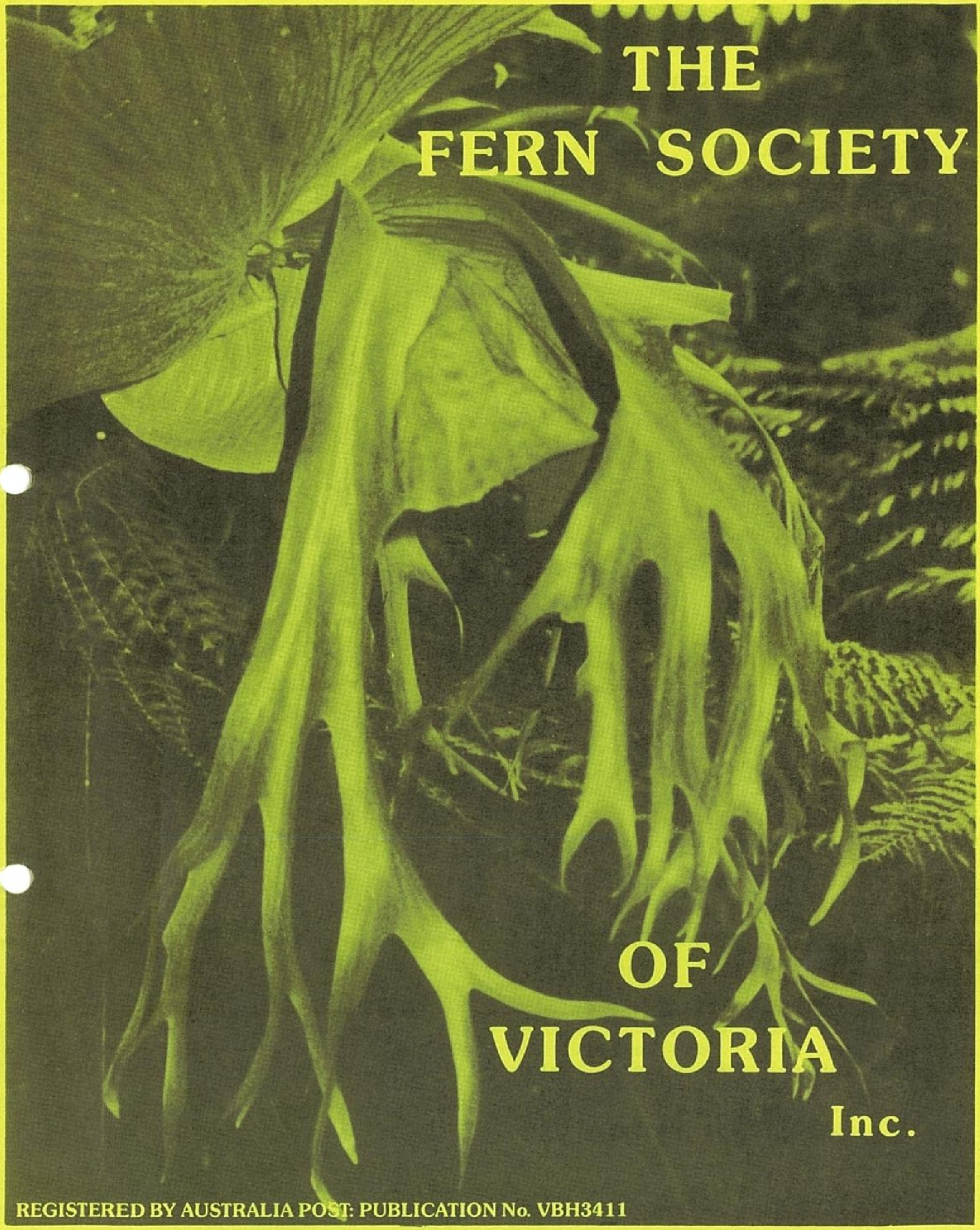

THE FERN SOCIETY OF VICTORIA Inc.

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NEWSLETTER

VOLUME 12, Number 8, August 1990

FERN SOCIETY OF VICTORIA Inc.

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PRESIDENT'S MESSAGE:

Our August gathering will begin with the 1990 Annual General Meeting at which the report of the outgoing Committee of Management will be presented and the Committee for the 1990-91 year elected. We have not yet received sufficient nominations to fill the vacancies created by the retirement of some of the present Committee Members, so I again urge everyone to further consider their availability to help in the functioning of the Society.

During the August General Meeting, which will follow the Annual General Meeting, Chris Goudey, who together with wife Lorraine recently visited the United Kingdom, will show some of the slides taken during that visit. As their travels included many outstanding horticultural centres, only part of the trip can be covered at the August Meeting. A further presentation will be made in October or November.

Kind regards.
Bob Lee.

N E X T M E E T I N G

DATE: Thursday 16th August, 1990.

TIME: Commencing at 7.30 p.m.

VENUE: The National Herbarium, Royal Botanic Gardens, Birdwood Avenue, South Yarra.

BUSINESS: Annual General Meeting - Committee Reports, Financial Statement and Elections followed by the August General Meeting at which the Guest Speaker will be Chris Goudey.

TOPIC: Photographic Highlights of English fern gardens, ferns collections, Personalities and items of general interest.

TIME - TABLE OF MEETINGS:

7.30 p.m. Pre-meeting activities; Fern, Book, Spore & Special Effort Ticket Sales; Library Loans.

8.00 p.m. Eleventh Annual General Meeting Commences.

8.30 p.m. " " " " Closes.

8.30 p.m. August General Meeting Commences.

8.50 p.m. Guest Speaker.

9.50 p.m. Fern Pathology and Identifications.

10.00 p.m. Special Effort Competition.

10.15 p.m. Supper.

10.30 p.m. Close.

MEMBERSHIP SUBSCRIPTION RENEWALS.

Membership subscriptions became due for renewal on 1st July with the exception of new Members who joined after 1st February - these should have received a separate letter confirming this.

If you intend to continue your Membership but have not already renewed your subscription, please do so by the end of August. Delivery of Newsletters will cease to people not financial at that date. Further, if there are any details on the address label on your Newsletter which are not correct, please make the appropriate corrections and return the label with your subscription renewal.

Bob Lee.

SPEAKER REPORT **GENERAL MEETING, 19th JULY, 1990.**

Highlights of a Fern Tour of the North Island of New Zealand by a group of Fern Society Members.

Field Notes written by **MARY FROST**.

DAY ONE (19th May) - WELLINGTON TO WANGANUI.

Using a rental car, the party left Wellington and travelled to Akatarawa looking for ferns along the roadside. Among those sighted were Blechnun capense; B. discolor; B. chambersii; B. fluviatile; Asplenium bulbiferum; A. oblongifolia; A. flaccidum; A. falcatum; Pyrrosia serpens; Microsorium diversifolium; M. scandens; Cyathea dealbata; C. medullaris; C. smithii; Dicksonia fibrosa; D. squarrosa; Histiopteris incisa; Paesia scaberula and Pterideum esculentum.

Trichomanes reniforme was seen growing in the sun on a very dry bank, and on climbing a steep gully, we came upon the lovely Leptopteris hymenophylloides together with Lycopodium billardieri; Lastreopsis glabella; L. hispida; Cyclosorus pennigerus; Pellaea rotundifolia; Doodia media; Lycopodium volubile and five different species of Hymenophyllum.

We travelled then to Bushy Park at Kaiiwi via Warkanae and Wanganui where we walked through the lovely gardens and native bush. Here we found Blechnum filiforme; Pteris macilenta; P. tremula; Adiantum cunninghamii; Polystichum richardii; Cyathea cunninghamii; Hypolepis distans and again at least five different Hymenophyllums. In addition, a beautiful group of Marratia was seen (introduced from New Caledonia). Many of the species seen earlier in the day were also sighted, so instead of listing every fern found I will only record those not previously recorded.

DAY TWO (20th May) - WANGANUI TO NEW PLYMOUTH via MT. EGMONT NATIONAL PARK.

This day began with misty rain and cleared as we travelled through lush green countryside with cattle, sheep, goat and deer farms in evidence. At Mt. Egmont National Park we enquired as to the best walks to take in search of ferns. We were told to try walks around the Information Centre and at the park entrance.

On the Information Centre walk the first fern to be seen was the lovely Leptopteris superba. In this area the mosses and lichens appeared to be dripping off the trees and Rumohra adiantiformis; Trichomanes reniforme were seen growing on logs, trees and on the ground. Hymenophyllums grew on the ground like a carpet. In addition we saw Tmesipteris tannensis; Grammitis billardieri; a Lycopodium (very different from L. billardieri), Trichomanes venosum; Ctenopteris heterophylla; Anarthropteris lanceolata and Polystichum vestitum.

On the bottom walk the cloud cover was very dense which made the forest dark and rain began to fall. Despite this, we discovered the largest Lycopodium billardieri that any of us had ever seen - it had fronds six feet long, a base clump measuring two and a half feet through and six feet in circumference.

New Zealand Tour - continued.

We also found two distinct Lycopodiums and an Asplenium flaccidum which grew on the same branch hanging at least five feet.

DAY THREE (21st May) - NEW PLYMOUTH TO HAMILTON.

We visited Pukekura Park at New Plymouth to see the fernery. We were given a conducted tour by a gardener who operated the fountain, for free. He explained the layout of the gardens, pointed out all of the rare plants and had the fernery opened early for us. The fernery has inter-connecting tunnels which have ferns growing everywhere in superb condition. We thought that the staff would soon have to thin out some of the ferns as the tree ferns were self-seeding, growing in unusual places and threatened to block the paths. Orchids, Bromeliads, Begonias and Insectivorous plants were superb.

We moved on then to Waitoma Gloworm Caves which were really spectacular. When we came out of the caves after a boat ride, we discovered rocks covered with Anarthropteris lanceolata.

DAY FOUR (22nd May) - HAMILTON TO DARGAVILLE.

We visited the Dinsdale Fernery at Hamilton which was designed by the late Ron McKenzie. The walk crossed up and down a gully which was planted with many native ferns and rare plants.

Among the fern species we saw superb specimens of Marattia (which New Zealanders call the King Fern), Cyathea dealbata and Dicksonia fibrosa all growing superbly in a simulated dense rain forest environment. This fernery is now owned by Kevin and Bo McLuskie and Kevin gave us a very interesting and informative tour.

In a roadside cutting, we found Adiantum hispidulum and Doodia media S.sp. Australis to add to our growing fern list.

DAY FIVE (23rd May) - In the DARGAVILLE District.

Today we took a round tour via Trouson Kauri Park, Waipoua Kauri Park, Puketi Forest Park and back to Dargaville.

At the Trouson Kauri Park we found the beautiful Blechnum fraseri; Asplenium oblongifolium (crested); Lygodium articulatum; (climbing everywhere); Tmesipteris lancelolata (a flat form); T. tannensis and Blechnum minus.

Later we moved on to Puketi Forest where we walked the Nature Trail to find that the ferns and other plants were named. Here we found Dicksonia lanata and were intrigued to see Paradise ducks making their homes in the lilies that grow in the crowns of trees.

New Zealand tour - continued at a later date.

Letters to the Editor.

MR. PETER MORRIS of North Essendon, Victoria, writes:

I recently missed watering a maiden hair fern which I kept in a hanging wire basket in a back porch. The fern is wilted and looks quite dead. Is there anything I could have done at the time of discovery to revive it?

ANSWER: Firstly let me assure you that you are not the only fern grower who has missed a fern in watering. It happens to all of us.

It is possible to revive a dried out fern; however not all ferns are capable of recovery - those of tropical or sub-tropical origins kept in warm glasshouses in southern Australia are cases in point - they seldom respond.

Despite this there are many species of ADIANTUM (Maiden hair) which do respond to treatment.

Cut all dead fronds from the crown. Remove the dried root mass from the basket and dunk this in a bucket of diluted Maxicrop - the dilution being about the colour strength of medium to strong tea. Leave the root mass in the Maxicrop until it is completely saturated even if this means leaving it immersed overnight.

Make up a fairly coarse, easy draining potting mixture and rebasket or pot the root mass - place in a well lit corner of your back porch, keep moist but not wet and revegetation should be noticed in about three (3) weeks.

If ferns such as PELLEAE PARADOXA or P. FALCATA dry out they will respond quite spectacularly to an overnight dunking in diluted Maxicrop.

ROSEMARY MAHER of Shepparton has written to ask what the differences are between ferns and SELAGINELLAS.

ANSWER: Young fronds of true ferns in most species unfurl from a tightly coiled crozier - SELAGINELLAS do not.

Both plants have prehistoric origins and propagate from spores.

Both produce a prothallus from a single spore and both rely on water to aid fertilization.

One single fern prothallus will produce both male and female reproductive cells from which sperm and an egg arise.

In SELAGINELLAS the reproductive cells are separate, that is the male cell (sperm) is produced by a male prothallus. The female cell (egg) is contained in a female prothallus. Each of these cells arise from different spores i.e. MICROSPORES produce the male prothallus whilst the female prothallus arises from MEGASPORES.

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OSMUNDA BANKSIAEFOLIA (POIR) KUHN. 1869.

Previous Names:- OSMUNDA BROMELIAEFOLIA OGATA.
" " PLENASIUM BANKSIAEFOLIUM POIR: TAGAWA. 1941.

Fronds up to one and a half metres tall, texture subcoriaceous, stipe and rachis grooved above, rounded beneath. Pinnae lanceolate, petiolate, articulate, fifteen to twenty five centimetres long and about two centimetres broad, the margins coarsely serrate (giving rise to the title banksiaefolia). Veins in groups with an anterior set of veinlets repeatedly forking and running to the sinus. When fertile sporangia are borne in clusters on the backs of pinnules which are much reduced in pannicles of clustered sporangia; commencing from the base of the frond with up to four pairs of pinnules. From the Philippines, China, Taiwan and Japan. Generally growing on stream banks or rain forest floors. My sporelings appear to be flourishing in my fernhouse ina protected situation.

Recently a helpful friend suggested that I should obtain a plant of Osmunda banksiaefolia to add to my collection as another Australian species. After examining all the Australian works in my library, I could find no record of this species. As a result I consulted our local Fern authority, Beryl Geekie who provided me with two sporelings. Given the best of treatment they are both now mature ferns which prompted me to prepare a watercolour with details for my records. I was not surprised to find that they are not native ferns; their habitats being the Philippines, China, Taiwan and Japan, where they flourish in rainforest situations.

In the watercolour, a stipe section is included along with a sporangia and green spore, a sporing frond with details of pannier. Although in the past it was often claimed that the Osmunda sporangia did not possess an annulus cell structure. Now the electron scanning microscope has revealed an inbuilt annulus that opens the sporangia.

Ray Best - Kenthurst. N.S.W.

OSMUNDA BANKSIAEFOLIA (PRESL) KUHN.

Essential Factors LEAF COLLECTION _ continued.

BEECH LEAVES (Northofagus). Whereas most of the leaf species previusly discussed rot down to an acid PH, Beech leaves rot to an alkaline PH. If you have access to Beech leaves, make full use of them by mixing them with Oak, Liquid Amber or Pin Oak leaves. By doing this a natural PH balance is achieved. On their own, Beech leaves are ideal for lime loving ferns such as Asplenium scolopendruim (Harts Tongue) and A. trichomanes (common spleenwort).

On the debit side of leaf collection however we have a few species which can be harmful to ferns.

PINE NEEDLES - contain resin and other toxins which can be tragic for all but a few species of ferns.

EUCALYPTUS - leaves when green contain eucalyptus oil - not helpful at all but if set aside to dry out for a few weeks they can be mulched. A good dusting of blood and bone powder forked through the heap helps to make these leaves quite useful. In this state they are particularly useful as a top dressing for a fern garden.

If you do not have access to a mulching machine, a possible alternative could be a motor mower. Failing that, simply heap up your leaves in the open and allow them to decompose - when ready they can be rubbed through a half inch mesh sieve.

To be continued - next month - more on "Essential Factors."

July Special Effort Winners.

Jenny Dawson
Jack Wilkinson
George Start
Bob Lee
Dawn Jackson
Leon Irwin
Mavis Potter
Mary Frost.

MISLEADING NAMES

by BARRY WHITE.

Botanical names are interesting, an understanding of their meaning can give an appreciation of some aspect of a fern. However they can at times be misleading, due sometimes to our ignorance, and sometimes to quirks in the naming system.

Diplazium australe, the Austral lady fern, receives its species name 'australe' because it occurs in Australia? If so, then why is Blechnum australe so called when it occurs in South America and Southern Africa; and also Polypodium australe which occurs in Europe. In botanical terms the species name australe or australis means southern and as with Polypodium australe may simply refer to southern Europe (despite it also occurring in Britain). The correct species name to indicate that a plant comes from Australasia is australasicum as applied to Asplenium australasicum.

Similarly Dicksonia antarctica does not mean the fern occurs in the antarctic region. Antarctic refers to the opposite end of the world to the arctic and indicates that the fern occurs in the southern regions of the world.

Blechnum minus (minus meaning small) has fronds up to 200cms long whereas Blechnum giganteum from Southern Africa has fronds up to 180 cms long. The epithet giganteum was given because the person naming the fern (Kaulfuss 1824) was comparing it with Blechnum spicant the small European fern. On the other hand the first Blechnum minus fern identified was probably a stunted form.

Pteridium esculentum is known as a poisonous fern, however it was eaten by the aborigines and therefore was given the name esculentum meaning edible. Presumably the aborigines treated the fern in some special manner before eating it as the fern has a collection of potent poisons. The young croziers can cause fatal multiple haemorrhages in cattle and sheep, longer term it may cause cancerous type growths in the bladder and gut of cattle, and concern has been expressed that the active principle may be present in milk and affect humans. Finally the fronds and the rhizomes contain a substance which can cause fatal thiamine (vitamin B1) deficiency. Esculentum therefore seems a most inappropriate epithet.

Pellaea falcata is commonly known as the sickle fern and falcatum also means sickle. A sickle is an harvesting tool with a semicircular blade as on the Soviet flag, the gentle curve on the pinna looks far more like a scythe than a sickle.

With Nephrolepis cordifolia the cordifolia refers to a heart shaped pinna. The only heart shape about the pinna is the indentation where the stalk is attached which has a faint resemblance to the indentation in the so called heart shape as used on playing cards and valentine cards.

The Microsorum genus includes quite a few ferns which do not have a small sorus (e g Microsorum diversifolium or Kangaroo fern). However there is now a move to place these ferns in a separate genus Phymatosorus (swollen sorus). Incidentally how much does a kangaroo fern resemble a kangaroo? The only resemblance that I am aware of is that some fronds may have a shape resembling a kangaroo's three toed foot.

WHAT IS A FERN

by Chris Goudey

Like gum trees, fuchsias, or even violets, ferns have stems, roots and leaves. Some have a characteristic appearance that we recognise at once as being a fern, but others do not.

In studying ferns one soon recognises that these plants differ from seed-bearing, or flowering plants in several ways.

The most significant is in the method of reproduction. Instead of seeds, ferns produce minute objects called sporangia - sporangia are usually filled with bounteous numbers of spores (sometimes up to 50 million per plant); these are the means by which the plant reproduces its kind.

Grouped with the ferns are other kinds of unusual plants, such as club-mosses, horse tails, adder's tongue, nardoo, comb ferns and others. They have similarities with ferns but differ somewhat in their structural features, they are usually referred to as fern allies. Many other plant families reproduce by means of spores, but are not allied to ferns, such as liverworts, fungi, lichen and algae.

Fossil records indicate that ferns have been a part of the earth's vegetation for millions of years. The species that survive today are only a handful compared to the countless number that once flourished.

In the carboniferous age some 350 million years ago ferns were the dominant form of vegetation, tree ferns, giant clubmosses and horsetails flourished. It was these giant ancestors of today's ferns that laid down our rich seams of coal.

Today, although our vegetation is dominated by flowering plants, over 10,000 species survive in tropical and temperate regions around the world. This is a relatively small number compared to the more than 325,000 species of seed-bearing plants.

Many ferns are found in temperate or subtropical countries, such as Australia, New Zealand, Japan and the Himalayas.

However, the richest fern areas occur throughout the tropics, such as Central and South America, the West Indies, Tropical Africa and the Indo-Malayan area. In these countries ferns grow in abundance, particularly on the cooler mountain slopes in the cloud zone.

Ferns can be found growing almost everywhere, from the Polar regions to the Equator, at altitudes ranging from sea-level to over 14,000 feet.

What is a fern: - continued.

Some ferns are worldwide in their distribution, such as the Annual fern Anogramma leptophylla and the Moonwort Botrychium lunaria. Some are cosmopolitan, that is, they occur right around the world at much the same latitude, some of these include the European Maidenhair fern Adiantum capillus - venerus, the Brittle Bladder fern Cystopteris filix - fragilis and the Shield Hares Foot fern Rumohra adiantiformis.

Others can be restricted to only one State, or just one small area. One local example is our Skirted Treefern Cyathea marcescens, or perhaps Tasmania's Dwarf Coral fern Gleichenia abscida.

Some ferns are climbers, they can be seen climbing their way up, 50 ft. or more into the tree canopy. Some grow on water, others grow under water. Many grow as hosts on other ferns, such as filmy ferns. Some species grow on coastal rocks where they are constantly splashed with sea water, others grow at such high altitudes that they are buried with snow for a whole season.

One remarkable group of ferns Lecarnopteris carnosa actually provide a home for ants; they have a swollen hollow rhizome which provides the ants with shelter. The theory is that the ants help feed the plant by bringing mineral substances from the ground and also with nitrogen in their excreta.

To be continued in a later issue - THE LIFE HISTORY OF FERNS.

The Marysville Excursion - October 20th & 21st.

Would all Members who plan to join our weekend excursion to the Marysville area on the 20th & 21st October, please ensure that they pay their deposit of $20 per person by the August meeting at the latest? Final details for the trip will be advised as soon as possible.

Bob Lee.

A CORRECTION:

On page 50 of the June issue of "Newsletter" an illustration appears against the name Adiantum pedatum. This name is incorrect and should have read Adiantum cultratum.

I apologise for any embarrassment this error may have caused.

Editor.

FORTHCOMING MEETING HIGHLIGHTS.

September 20th:	Monthly General Meeting at the National Herbarium.
Guest Speaker:	Mr. Bob Campbell.
Topic:	Commercial Glasshouses and glasshouse equipment.

BUYERS' GUIDE TO NURSERIES:

VICTORIA:

Allans Flat Plant Farm - Retail.
Tomkins Lane, Allans Flat, 3691. Ph: (060) 27 1375.
(25 Km south of Wodonga on the Yackandandah Road).
Specializing in ferns and indoor plants. Open daily, except Wednesdays, and all public holidays.

Andrew's Fern Nursery - Retail.
Cosgrove Road, Invergordon, 3636. Ph: (058) 65 5369.
Large range of ferns for beginners and collectors. Open daily, including public holidays, except Saturdays.

Austral Ferns - Wholesale Propagators. Ph: (052) 82 3084.
Specializing in supplying retail nurseries with a wide range of hardy ferns - no tubes.

Beasley's Nursery - Retail.
195 Warrandyte Road, Doncaster East. 3109. Ph: (03) 844 3355.

Cool Waters Fern Nursery - Wholesale Fern Propagators.
Beech Forest, 3237. Ph: (052) 37 3283.
Specializing in cool climate native ferns.

Fern Acres Nursery - Retail.
Kinglake West, 3757. Ph: (057) 86 5481.
(On main road, opposite Kinglake West Primary School).
Specializing in stags, elks and birdsnest ferns.

Fern Glen - Wholesale and Retail. Visitors welcome.
Garfield North, 3814. Ph: (056) 29 2375.

R. & M. Fletcher's Fern Nursery - Retail.
62 Walker Road, Seville, 3139. Ph: (059) 64 4680.
(Look for sign on Warburton Highway, 300m east of Seville shopping centre). Closed Tues. except on public holidays.

Mt. Evelyn Fern Centre - Retail.
63 York Road, Mt. Evelyn, 3796. Ph: (03) 736 1729.
Mail Orders welcome.

Ridge Road Fernery - Wholesale and Retail.
Weeaproinah, 3237. Ph: (052) 35 9383.
Specializing in Otway native ferns.

NEW SOUTH WALES:

Jim & Beryl Geekie Fern Nursery - Retail.
6 Nelson Street, Thornleigh, 2120. Ph: (02) 484 2684.
By appointment.

Marley's Ferns - Retail.
5 Seaview St., Mt. Kuring-gai, 2080. Ph: (02) 457 9168.

QUEENSLAND:

Moran's Highway Nursery - Wholesale and Retail.
P.O. Box 467. Woombye, 4559. Ph: (071) 42 1613.
(1 Km. north of Big Pineapple. Turn right into Kell Road).