

**THE
FERN SOCIETY**

**OF
VICTORIA**

Inc.

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NEWSLETTER

VOLUME 12, Number 4, April 1990

FERN SOCIETY OF VICTORIA Inc.

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Membership Secretary:	John Oliver	-	879 1976
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Family - \$16.00 (Pensioners - \$11.00);
Overseas - A\$30.00 (by Airmail).
(Subscriptions fall due on 1st July each year)

President's Message:

Terry Turney's talk on the describing of ferns at our March meeting drew many appreciative comments during the supper period. I think a lot of us in the rather small audience were surprised how entertaining a technically oriented fern study evening could be made when well presented! To illustrate the purpose and application of formal botanical descriptions, Terry went step by step through a detailed description of *Nephrolepis cordifolia*, using numerous transparencies on the overhead projector together with "hands on" examination of samples of plants by the audience to explain each point. The formal botanical phrases in the Speaker Report are explained in the Glossary but unfortunately we cannot reproduce the transparencies; reference to a good book on ferns could be a partial substitute.

The April meeting will feature a talk on "Recent Studies in Australian Ferns" by David Jones, currently of the Australian National Botanic Gardens in Canberra. David is well known as the author of several books on ferns and other plant families (mainly Australian natives) and has drawn a significant amount of his subject matter from personal observations during numerous field trips. His last talk to our Society in 1982 was a real highlight and I'm sure the next one will be also. Don't miss it!

NEXT MEETING

at 7:30 p.m., Thursday, 19th April
at the Herbarium, Botanic Gardens
Birdwood Ave, South Yarra

RECENT STUDIES IN AUSTRALIAN FERNS

by

David L Jones

of

The National Botanic Gardens, Canberra.



Program:

- | | |
|-----------|---|
| 7:30 p.m. | - Fern and Book Sales,
Spore Bank,
Library Loans,
Special Effort Ticket Sales. |
| 8:00 p.m. | - Meeting |
| 8:30 p.m. | - Recent Studies in Australian Ferns
by David L Jones |
| 9:30 p.m. | - Fern Pathology and Identification Table
Special Effort Drawings |
| 9:45 p.m. | - Supper |
| 10: p.m. | - Close. |



DAY TRIP TO GLEN NAYOOK

The trip to Glen Nayook (near Powelltown) will be on Saturday 28th April and will be by bus, as sufficient numbers at the March meeting registered their intention of going. The outward trip will be via the Princes Highway and the return via the Maroondah Highway after a visit to Fletcher's Nursery at Seville. The bus will leave the Moreland Bus Lines depot at 65 Colebrook St, Brunswick at 8:00am and make 2 or 3 pickups in the northern and eastern suburbs at appropriate locations (to be advised at the April meeting). The return trip should reach the depot at about 5:30pm.

We have hired a 40-seat bus in anticipation of sufficient further interest (attendance at the March meeting was low). Cost will be \$20 per head with a full load and slightly more for lower numbers. The cost includes a barbeque lunch.

Would members who wish to go on the trip but have not yet registered their names please do so at the April meeting or by phoning Keith Hutchinson on 45 2997. We would appreciate a deposit of \$10 per person at the April meeting to confirm bookings.

SPEAKER REPORT: MARCH GENERAL MEETING

TOPIC: DESCRIBING FERNS

SPEAKER: DR. TERRY TURNEY

Terry commenced his talk by stressing that his aim was to show how botanists describe ferns, using terms which were understood universally so that they could convey information clearly and concisely. With the aid of a clock to illustrate he made the point that if all members present were to describe it we would have at least 50 different descriptions. If this clock was then taken into another room with 10,000 other different clocks, would your description enable another person to identify it? This could only be accomplished if the description listed the unique parts of the clock, and we all agreed on what the descriptive words ^{meant}. So it is with writing descriptions of ferns.

Botanists define words to describe ferns and sometimes the meanings of the words are not quite what we generally use for the same word. Also they should agree on what features are important and sometimes they don't agree, as that which one sees as important another may not. Many terms also involve a subjective assessment of a property rather than an accurate measurement.

Terry now moved on to the fern *Nephrolepis cordifolia* and led us through a very detailed description from the book "Ferns of Jamaica" by George Proctor, using some illustrations from David Jones "Encyclopaedia of Ferns" projected overhead, some actual *Nephrolepis cordifolia* plants held by the audience and a glossary showing the meaning of the terms used (see p.30)

This fern was first described by Linnaeus as *Polypodium cordifolium* in 1753 but changed by various botanists over the years to *Aspidium tuberosum* (in 1810) - *Nephrodium tuberosum* (in 1827) - *Nephrolepis tuberosa* (in 1836) and finally to *Nephrolepis cordifolia* by Presl in 1836, which is the name we use today.

The plants are usually terrestrial, that is, growing in the ground, not on trees or on rocks, with numerous slender lateral stems running along the ground called stolons. The stolons form new plants by rooting at the tips, and also bear small scaly tubers which can store food for the plant. The roots of the *Nephrolepis* have few features useful for diagnosis, unlike ferns such as the *Cyathea*s with their large caudex and extensive root system and *Cheilanthes* which have very small minor roots coming off the major roots.

The Rhizome is quite upright, concealed by densely clustered stipe bases, clothed in orange brown linear attenuate scales up to 10mm long and 0.5mm wide, glabrous (without hairs) but quite hairlike at the apex. Terry stressed that scales are very important diagnostic features in identifying fern species. Fronds are erect coming out of the rhizome tightly bunched with stiff stipes 4 - 17cm long (much shorter than the blade), densely but decidedly clothed with pale brown filiforme attenuate scales, glabrous except at the abruptly expanded fibrillose-ciliate bases. The blades are

linear with firm texture, 25 - 50 cm long, 2.5 - 5cm broad, with rachis having similar scales to the stipe tending to be tufted at the bases of pinnae.

The pinnae are glabrous, sessile, mostly 40 - 75 to a side, oblong or narrowly deltate oblong, usually 1.5 - 2.5cm long, 0.5 - 0.9 cm wide, obtuse or acutish at the apex. Sometimes the pinnae are slightly falcate, inequilateral at the cordate, with short auriculate base, the auricle overlapping the rachis, the margins subentire to shallowly crenate, with veins mostly 1-forked (once forked). Terry made the very interesting observation that the sori containing the spores are almost always at the end of a vein on the back of the pinnae and that sori are quite important in identifying a fern. Sori are distinguished by colour, shape and position on the pinnae, also whether they have an indusium, and if so, how the indusium opens.

Nephrolepis cordifolia has supramedial sori, with the indusium firm, lunate or broadly reniforme, the sinus broad and shallow or nearly lacking. The ripe spore are shed as humidity decreases, causing the cells on sides of the sporangium to shrink and split, forcing the spore to be catapulted out. Another interesting characteristic of *Nephrolepis* is the small white dots often appearing on top of the pinnae. These are called lime spots, which is exactly what they are, small amounts of lime excreted by glands called hydathodes.

In closing Terry emphasised the main difficulty in identifying a fern is learning the words used by botanists and understanding on what they mean. Once this is accomplished, it becomes quite simple.

As members had brought along several other species of *Nephrolepis*, a short discussion followed. The species were:- *Nephrolepis cordifolia plumosa*; *cordifolia* cv Black Petticoat; *exaltata*; *exaltata* cv *Bostoniensis*; *exaltata* cv *Whitmani*; *acutifolia*; *hirsutula*; cv *Kimberly Queen*.

President Bob Lee expressed appreciation to Terry for the excellent preparation and presentation of his subject. All members then showed their support with very warm acclamation.

Please Note: Space does not allow me to cover the minute details Terry used to simplify each descriptive word. A glossary used for *Nephrolepis cordifolia* is included on the following page. In the coming issues of the Newsletter, Terry will present a comprehensive glossary of terms botanists use to describe the wonderful diversity of fern flora.

Written by Keith Hutchinson.

Glossary of Proctor's descriptions

1. The Species, *Nephrolepis cordifolia*

stolon - long branch, often rooting at nodes
rhizome - stem from which fronds are produced
 - contains the growing tip
ascending - with point turned up
erect - upright
stipe - stalk supporting the frond
linear - long, narrow of equal width
attenuate - drawn out to a long point
glabrous - without hairs
apices - tips
deciduous - falling off with regular seasons
filiforme - long and narrow, threadlike
fibrillose - covered with fine fibrous scales
ciliate - having a marginal fringe of hairs
rhachis - main axis of the frond
sessile - without a stalk
oblong - rather long than wide
deltate - triangular
falcate - sickle-shaped
inequilateral - sides of unequal length
cordate - heart-shaped at base
auriculate - having an ear-like lobe at base of pinna
sub-entire - almost smooth margin - not crenate or serrate
crenate - with shallow rounded teeth
supramedial - located nearer margins than mid-vein, but not touching margins.
lunate - crescent-shaped
reniforme - kidney-shaped
sinus - space between teeth or lobes on a margin

2. The Genus, *Nephrolepis*

elongate - drawn out in length
proliferating - reproducing by vegetative means
stolon - runner with roots
articulated - having a distinct joint
1-pinnate - once divided with divisions extending to rhachis
terminal - ending
distal - away from point of attachment
medial - near the middle
submarginal - just below the edge
orbicular - circular
bilateral - spore having two flat sides (same as monolete)

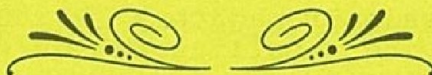
FORTHCOMING MEETINGS

May : An Introduction To Ferns
by Doug Thomas
June : Mini-talks by Members



Spore Bank:

Urgently requires spore - some stock is getting old and needs replacing.



March Special Effort Winners:

David Latter.
Joy Horman.
Anne Bryant.
Margaret Radley.
Albert Ward.
Mavis Potter.




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Presidents Message (cont'd.)

Our 1990 Fern Show is now over but a report on it will have to wait until the next Newsletter. Many thanks to all who joined in the activities and congratulations to those whose combined fern growing and artistic skills produced the magnificent display.

Best Regards
Bob Lee

BUYERS' GUIDE TO NURSERIES

Victoria:

- * Allans Flat Plant Farm - Retail.
Tomkins Lane, Allans Flat, 3691, Ph:(060) 27 1375.
(25Km 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,
inculding 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.
Weeaprounah, 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 Street, 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.
(1Km north of Big Pinapple. Turn right into Kell Road).