

Fern Society of Victoria Inc.

NEWSLETTER



ABN 85 086 216 704

Vol. 24, Number 2
March/April 2002

FERN SOCIETY OF VICTORIA Inc.

POSTAL ADDRESS: P.O. Box 45, Heidelberg West, Victoria, 3081
NEW E-mail: http://gardenbed.com/clubs/clubs_vicferns.cfm

OFFICE BEARERS:

President:	Ian Broughton	Phone	(03) 5964 6402
Imm. Past President	Chris Goudey	"	5282 3084
Vice-President	George Start	"	5962 5059
Secretary	Barry White	"	9337 9793
Treasurer	Don Fuller	"	9306 5570
Membership Secretary	John Oliver	"	9879 1976
Spore Bank Manager	Barry White	"	9337 9793
Librarian	David Radford	"	9598 8398
Editor	Lyn Gresham	"	5796 2466
Book Sales	Ivan Traverso	"	9836 4658

("Kilpara", *Selectors Road, Mangalore, Vic, 3663)

COMMITTEE MEMBERS: Jean Boucher 9707 1592, Lyn Gresham 5796 2466,
 Brian Nicholls 9836 6507, Jack Barrett 9375 3670, Gay Stagoll 9844 1558, Norma Hodges 9878 9584.

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.

THE BUSH HOUSE NURSERY **WHOLESALE AND RETAIL**



Visitors welcome

Lorraine Deppeler
 Phone (03) 5565 1665
 18 Hermitage Drive,
 Allansford 3277

AUSTRAL FERNS

Wholesale Propagators.

Phone (03)5282 3084.

- Specialising in supplying retail nurseries with a wide range of hardy ferns; no tubes.



Calendar of EVENTS IN 2001

MONTHLY MEETINGS

VENUE: Kevin Heinze Garden Centre, 39 Weatherby Road, Doncaster. (Melway 47:H1)

TIMETABLE for GENERAL MEETINGS:

- 7.30 Pre-meeting activities - Sale of ferns, spore, books, merchandise and Special Effort tickets. Also library loans and lots of conversation.
- 8.00 General Meeting.
- 8.15 workshops and demonstrations.
- 9.15 Fern identification and pathology, Special Effort draw.
- 9.45 Supper and another good yarn.
- 10.00 Close.

Monthly Meeting

21st March

The Secret (Sex) Life of Ferns **Terry Turney**

We hope to see a permission note from your parents!

The competition is, appropriately, for Lady Ferns and Male Ferns which includes species from Dryopteris, Athyrium and Diplazium genera.

Monthly Meeting

18th April

Ferns on the Internet **Barry Stagoll**

Competition: Davallias

Annual Special Event

April 27 & 28

Fern Show 2002

This will be another sizzler. For details see page 22.

FERN GLEN

Wholesale and Retail.
Visitors welcome.



D. & I. Forte,
Garfield North, 3814.
Phone (03) 5629 2375

WANTED TO BUY
by the co-author

Chris Goudey is seeking
a number of copies of his book
"FERNS IN AUSTRALIA."

Price negotiable.

Do you know of anyone who may be willing to
part with their copy?
Contact Chris on 03 5282 3084.

The President's Page

Greetings and salutations to you all. It's great to be able to communicate through my computer again. I have recently spent a lot of time (and money) trying to set up two of our computers as a network running on Windows 2000. It has been a major headache and meant a new scanner and modem, as my old ones weren't compatible with W2K, and a lot of the software that came with other hardware items won't run under W2K so, although the hardware may run, some of the refinements can't be accessed. In the middle of all this, my motherboard died, which meant a new motherboard and CPU. My report for the last issue of the newsletter was due right when the motherboard committed suicide – thanks Lyn for plugging the hole so well.

It has certainly been a kind summer for our ferns and gardens in general. I've even noticed that we have had less pests and diseases in the nursery this year with the cooler summer weather. The down side has been that many fruit growers have been very badly affected. We have a friend who manages a vineyard in Yarra Junction – their grape development is currently about 3-4 weeks behind, and there is the possibility that, if we have an early start to winter, they may lose the crop altogether. However, I have enjoyed the cooler than expected weather and I have estimated that we've saved \$2-300 on water by not having to water any of the lawns or gardens at all this summer except for the ferneries.

I really enjoyed having a meeting again last week, after two months off. We had a good attendance and some lively debate about future directions for the Society. We will try some of the ideas later in the year – one of the suggestions that received a strongly positive response was to move at least some of our meetings to a Saturday afternoon, especially during winter. The general consensus was to adopt a "suck it and



see" approach to the suggestions that were made. Because the suggestions included more excursion-based meetings like the trip to Kinglake and meetings in members' homes, we will need people to offer to organize outings or to host meetings – if you would like to be involved please let me, or one of the other committee members know – if we don't have members willing to help in this way then these ideas just won't get off the ground.

A good deal of our discussion focused around the pros and cons of trying to join forces with the other fern societies in Australia to form a national body. This is something that will have to be discussed further at committee level but, again it would depend on having people who would be willing to drive such a move.

Don't forget our show in April – details can be found elsewhere in the newsletter. It is vital that as many as possible are involved in promoting the show, helping to set up on Friday, assist in running the event on the weekend and pack up on Sunday evening. But we also need you to come along, invite your friends and family and support the event.

We have a guarantee of a fun night at our next meeting – maybe with a few blushes thrown in – as Terry Turney presents a talk titled "The Secret (Sex) Life of Ferns". The competition will be (appropriately) "Male Ferns and Lady Ferns (No sex please – a lot of us are British)" – this will include ferns in the genera *Dryopteris*, *Athyrium* and *Diplazium*. Do make an effort to join us, as it is sure to be a lot of fun and, knowing Terry, a very informative evening too.

In April, Barry Stagoll will make use of modern technology to share an evening of ferns on the internet. The competition category is to be *Davallias*.

I hope you enjoy an autumn filled with gardening and ferns.

Ian Broughton

Thought: Life is a gamble. We were given two ends—one to sit on and one to think with. Success depends on which one we use. Heads we win, tails we lose.

Probus Rosanna July 2001

FERN SHOW 2002

Combined Fern and Vireya Rhododendron Show

Saturday 27th April— Sunday 28th April 2002

By the time you receive this newsletter the Show will be only 5-6 weeks away, so now is an excellent time to start grooming your ferns. I ask (urge, BEG) all members to make a special effort to contribute to both the competition and display.

A reminder of the fern competition categories and some points of clarification.

Category 1. ADIANTUM

- " 2. ASPLENIUM
- " 3. DAVALLIA (including HUMATA and SCYPHULARIA)
- " 4. NEPHROLEPIS
- " 5. POLYPODIACEAE - restricted to the following genera:
GONIOPHLEBIUM
MICROSORUM
PHLEBODIUM
POLYPODIUM
PYRROSIA
- " 6. Fern in container 150 mm (6 inches) or less.
- " 7. ANY OTHER FERN
- not covered by Categories 1 - 5.

Category 6 is especially provided for those members who do not, or cannot have large ferns. All members are urged to have a go at this category.

Our feature display is ASPLENIUM. We need to display as large a range of species and cultivars as is possible, so please bring them along even if they are not in competition condition. Whilst we would like as many of the rarer types as possible we also need to ensure that we display the more common species or cultivars.

If you wish to contribute to the Show but have a problem getting your ferns there, please talk to any member of the Show committee who may be able to assist. Please make sure that your ferns are labelled with their correct botanical names (as far as possible) and that they have some form of personal identification as this will help ensure your ferns are returned to you.

We will commence setting up for the Show at 11.00am on Friday 26th April and should be able to start accepting ferns for competition, display and sales by 1.30pm. If you are only able to bring in ferns after 6.00pm or early Saturday morning please contact Don Fuller (9306 5570). We will need a large number of people to make the show function effectively so please let me or other Show Committee members know when you are able to help. We need people to staff the door, sales area, display area stewards and the refreshment area. We especially need people to help with the setting up on Friday and the cleaning up after the Show on Sunday.

Those wishing to sell ferns are reminded that you must contribute to the competition / display and that you must obtain a 'booking form' from Bernadette Thomson (9399 1587). We also need a number of cardboard boxes suitable for fern sales. If you can help please bring them along.

The Fern Show is a very important activity of our Society (plus a great social occasion) so please give it your full support. Please publicise it wherever possible. Two Show flyers are included with this newsletter for this purpose. Hopefully you can display them in such places as garden centres, libraries, community noticeboards etc. If you belong to a Garden Club please promote it there. There is a special invitation to those members unable to attend our regular meetings to come along and participate. We'd love to get to know you.

See you at the Show!

Don Fuller

NAMING FERNS OF HORTICULTURAL INTEREST

BARBARA JOE HOSHIZAKI
MILDRED MATHIAS BOTANICAL GARDEN,
UNIVERSITY OF CALIFORNIA, LOS ANGELES, CA 90024

The rising interest in ferns has created a need to know more about how cultivated ferns are named. This information is scattered in publications that are often quite technical or not easily available to fern growers. In anticipation of continued activities in introducing new fern variations, and in response to questions from the trade and fern hobbyists, some basics on how ferns (and other plants) are named are discussed in this paper, with emphasis on the issues and problems most frequently encountered. For full directions on naming cultivated plants see the International Code of Nomenclature for Cultivated Plants obtainable from the American Horticultural Society, Mt. Vernon, Virginia 22121, USA. For a very readable concept of cultivars see Pringle (1973); for an in-depth coverage see Styles (1986) and Van Der Maesen (1986).

CODES GOVERNING THE NAMING OF FERNS.

The naming of plants is governed by two codes that the vast majority of botanists and horticulturists abide by voluntarily. The International Code of Botanical Nomenclature (ICBN or Botanical Code), concerns itself with naming both cultivated plants and wild plants, and the International Code of Nomenclature for Cultivated Plants (ICNCP or Cultivated Code) is for cultivated plants, particularly cultivars, or cultivated plants below the rank of species. The Cultivated Code supplements the Botanical Code by dealing with special situations applying only to cultivated plants and carries on for horticultural, agricultural, and silvicultural plants where the Botanical Code stops. The two Codes are separate in that names published in one Code are subject only to the provisions of that Code and have no standing in the other Code. Therefore, name priorities and other such problems are dealt with according to the Code in which the name was published. Both Codes are periodically revised.

Since taxonomy and nomenclature are two different processes, both must be used to properly name a plant. Taxonomy is the discipline in which the describer decides what needs a name. Nomenclature is the method of naming a plant based on rules in the Codes. It is difficult for nonbotanists to understand that there are no rules or restrictions on deciding which plants should be named; this is up to the training and judgment of the botanist. However, the actual formation of the name, where and how it is published, etc., must follow the rules in the Codes. Disagreements on the judgment of the botanist may occur. His peers may discuss any differences and offer their criticisms or corrections, usually through the literature. One of the most common errors is to name a plant that already has been named, perhaps in some obscure journal many years ago. When this is discovered, the oldest name has priority and becomes the legitimate name while the later name becomes a synonym.

RANKS USED TO CLASSIFY CULTIVATED FERNS.

How does one decide if a variation of a species should be classified as a subspecies, variety, form, or cultivar? Or more basically, what are the differences in these ranks or categories? If it is of consolation to the bewildered gardener, botanists themselves have not completely agreed upon the use of these ranks except for their hierarchy. The glossary at the end gives nomenclatural definitions of the commonly used ranks, followed by a brief taxonomic explanation of how most botanist use the ranks. This will help in distinguishing differences between ranks and assist in determining why a variant is placed in a particular rank.

One of the most confusing terms to gardeners is the application of the term "variety". In common usage it may denote a botanical variety, a garden or cultivated variety (cultivar), or any plant variation. As used in this paper and technical botanical publications in the Codes "variety" specifically means the rank of botanical variety (varietas).

Fern hobbyists and growers who are interested in the naming of fern variants will find the Cultivated Code particularly helpful in elucidating the naming procedures for new variants. The objectives of the Cultivated Code are to encourage uniformity, accuracy, and stability in the naming of the many variants (cultivars) of cultivated plants. To assist in interpretations of the Codes, a glossary of the more difficult terms used was published (McVaugh et al., 1968).

RANKS USED TO CLASSIFY CULTIVATED FERNS.

The ranks of subspecies, variety, and form are ordinarily applied to plants occurring in the wild, and the naming of plants using these ranks is governed by the Botanical Code. Among other requirements, the Botanical

(Continued on page 23)

Code specifies that the name and a brief description or diagnosis be in Latin to be considered validly published.

The naming of cultivated varieties (cultivars) is governed by the rules in the Cultivated Code. Among other requirements, the cultivar names and the accompanying description must be in modern language (not Latin). Many authors are unaware of the distinction between the naming of a fern variant as a botanical variety (*varietas*) versus a cultivated variety (cultivar). This confusion is understandable since the term variety has been so loosely used in the past. To avoid having a new name later declared invalid, it is important that editors and others be aware of this distinction.

WHAT IS A CULTIVAR?

The latest Cultivated Code (1980, Article 10) defines cultivars as follows: "The international term cultivar denotes an assemblage of cultivated plants which is clearly distinguished by any characters (morphological, physiological, cytological, chemical or other), and which, when reproduced (sexually or asexually), retains its distinguishing characters." Cultivars may arise either in nature or in cultivation. Although this is not specifically mentioned in the current Cultivated Code, it is mentioned in the Botanical Code (1983, 1988 Article 28.2, Note 1). **The confusion on this matter may be traced to an earlier Cultivated Code (1953, Article C.3 iii), which had specified that the term "cultivar" be applied to those special forms which have originated or are maintained only in cultivation.** Determining what plant meets the definition of a cultivar is left to the describer; anyone is free to make this decision. Once a choice is made, the next step is the forming of the name and its publication according to the rules of the Cultivated Code. Commercial interests and fern hobbyists have coined many names that have the format of a cultivar name and some may indeed meet the definition of a cultivar (Article 10), but have not met the publication requirements of the Cultivated Code. These names have no standing in either Code, are less stable and are essentially common names. There may be several common names for the same plant; they may also vary from area to area, from language to language, and may be produced, altered or discarded by anyone at will. Such names for *Platycerium* and *Nephrolepis* variants are particularly numerous and confused in the United States.

THE COEXTENSIVE RULE:

TWO NAMES FOR THE SAME PLANT

A little-discussed but important change in the latest Cultivated Code is that a cultivar may have two legitimate names: the cultivar name and the botanical name. An example would be the names for peppermint; *Mentha cv. Pfeffer-Minze*, the cultivar name, and *M. X piperita*, the coextensive botanical name. The coextensive rule reads: "Usually a cultivar will comprise a part only of the species, botanical variety or other botanical category under which it is classified. A cultivar may however be coextensive with any of these." (Cultivated Code 1980, Article 10, Note 5).

My initial reaction is that two legitimate names for the same variant would be very confusing, especially with ferns where the literature is strewn with variety and form names of uncertain identity and hierarchy, and the names of ferns in gardens and the trade are equally confused. Fortunately, except for complex plant groups such as *Dryopteris*, or special situations, botanists have little reason to make up new botanical names for plants already having cultivar names. Also, it does not follow that all the *varietas* or *forma* names given to ferns in the past will automatically become legitimate botanical names. For example, the name *Athyrium filix-femina var. glomeratum* should not serve as the coextensive botanical name for both nomenclatural and taxonomic reasons. First, the *varietas* name was not described according to the rules in the Botanical Code, and second, the plant originated in cultivation, not in the wild and therefore would not fall under today's taxonomic meaning of a botanical variety. It best fits as a cultivar, and should not have a name under the Botanical Code. When a plant named as a variety or form is subsequently considered to be a cultivar, the Botanical Code (1988, Article 28.2, Note 2) and the Cultivated Code (1980, Article 27) specify that names published before 1, January 1959 be maintained but changed to a cultivar rank. Thus *Athyrium filix-femina var. glomeratum*, which originated in a spore sowing, is changed to *A. filix-femina cv. Glomeratum*. The vast majority of ferns listed under the rank of variety in the literature before 1959 are not botanical varieties but cultivars, or less frequently, forms by today's concepts. After 1959 a new cultivated variety must be named as a cultivar in a non-Latin form (the so-called "fancy name" of the Cultivated Code).

Where coextensive names exist, one or the other may be used where appropriate at the discretion of the user. The coextensive rule technically allows commercial interests to introduce new cultivar names and use them instead of existing botanical names. This may become very confusing for advanced fern hobbyists and a serious problem for present and future fern taxonomists, especially if the cultivar names are as poorly documented as they are today. There are, of course, advantages to the coextensive rule that are not discussed here since they have less impact on fern horticulture.

PLANT MONSTROSITIES

I use the term 'monstrosity' with all due respect to gardeners who find this term distasteful for their garden

(Continued on page 24)

plants. Monstrosity was defined to be a plant or specimen exhibiting an abnormal structural condition (McVaugh et al., 1968). The early Botanical Codes (1466, 1972, Article 71) rejected any name based on a monstrosity. This was to avoid complicating the botanical literature with plant names based on abnormal characters. But the difficulty of defining what constituted a monstrosity was one of the factors in its deletion from the Botanical Code. With the deletion of Article 71 and the addition of the coextensive rule, plants with abnormal differences (monstrosities) can technically be named as forms (or whatever a taxonomist chooses) rather than cultivars. The interpretation of a form accepted by most botanists is that the differences distinguishing it should be sporadic in appearance, but scattered throughout the range of the species. Some of the fern monstrosities are very rare, and could hardly be said to appear throughout the range of the species. Such an example is *Athyrium filix-femina* cv. *Victoriae*. The best rank for such plants when brought into cultivation is to consider them cultivars.

HYBRIDS

Botanists name hybrids between species of the same or different genera according to the Botanical Code. Hybrids between species of the same genus are designated by a formula, such as *Adiantum capillus-veneris* X *A. jordanii*, or by an equivalent name as *Adiantum* X *tracyi*. Hybrids between species of different genera are designated by a formula, such as *Aglaomorpha coronans* X *Drynaria rigidula*, or by a name combining part of the genus name of one parent with all or part of the other, such as X *Aglaonaria robertsii*. Interspecific or intergeneric hybrids made in cultivation should be given a cultivar name in addition to the species epithet even if no other cultivar of the hybrid exists (Cultivated Code, 1980, Article 19, Recommendation 19A). For example, one variant of the hybrid X *Aglaonaria robertsii* is given a cultivar name, cv. *Santa Rose*, to distinguish it from other offspring of the same parents that might be produced. Recently a selection of cv. *Santa Rose*, called "Sunburst" has appeared in the trade, validating the need to give hybrids a cultivar name to prevent confusion. In this case cv. *Sunburst* was not a later hybrid, but a tissue culture selection from cv. *Santa Rose*.

Hybrids between species, particularly those of horticultural interest, may also be named under the Cultivated Code (1980, Article 18). No Latin descriptions are required in contrast with the Botanical Code. The parents may be hybrids themselves, and the hybrid epithet must be in non-latin form and consist of no more than three words. The Cultivated Code recommends that the name include the word Hybrid(s), Cross(es), or grex. A cross between *Pteris ensiformis* and *P. tremula* may produce hybrid offspring, all of which could be covered by the name *Pteris Ekstrand Hybrids*. In accordance with Article 19 (see above) the first cultivar may be cv. *John*. If an offspring of this same cross, even if produced years later, is worthy of recognition, it may be called cv. *Mary*. (A cross using *P. ensiformis* cv. *Victorias* and *P. tremula* was successfully made by Mr. John Ekstrand. Although both hybrid plants have been lost, one did reach maturity, see Hoshizaki, LAIFS Fern Journal, April 1992).

Infraspecific hybrids (those made between ranks lower than a species, e.g., subspecies, variety, form, or cultivar) are seldom named by botanists. If they are given a name, a formula name is recommended even though long and cumbersome (Botanical Code, 1988, H.10B, also see H.12.1). The Cultivated Code (1980, Article 28) allows hybrid offspring of infraspecific rank parents to be given a "group" name under the group system (see discussion under Descriptive Names and Group Ranks, in the Glossary and Figure 1E). Hybrid names are often referred to as collective names because they cover all the progeny of a given cross, even if the same cross is made on separate occasions.

According to the 1988 Botanical Code, a hybrid may be indicated by the prefix "notho" as in *Polypodium vulgare nothosubsp. manroniae*, which indicates the subspecies *manroniae* is a hybrid. The use of the multiplication sign, X, also indicates a hybrid, but is omitted where collective names are used in the Cultivated Code (1980, Article 18, Recommendation 18B), for example *Lilium* (Bellingham Hybrids) cv. *Shukan* not *Lilium* (XBellingham Hybrid) cv. *Shukan*.

CULTIVARS OF UNKNOWN PARENTAGE

Occasionally cultivars appear that are difficult to identify as to the species from which they may have originated. This is common with roses and orchid cultivars where there has been a long history of cultivation and hybridization. The fern cultivars which are known as to their genus but not to their species may be sterile or so altered in shape as not to be readily identifiable. Botanists have used several methods of naming such plants. A cultivar of unknown parentage may be classified under the species suspected to be the parent. For example, the *Nephrolepis* known as cv. *Duffii* is thought to belong to *N. cordifolia*, hence *N. cordifolia* cv. *Duffii*. However, some botanists have expressed doubts as to whether the cultivar belongs to this species. In earlier times garden plants unknown as to species may have been given species status, as *Adiantum bessoniae* (a garden plant that was later found to belong to *A. tenerum*, and thus became *A. tenerum* cv. *Bessoniae*). However, the 1953 Cultivated Code (Article C. 24) provided a solution for such plants by allowing the cultivar name to appear directly following the genus name when the exact parentage is unknown, uncertain or of complicated origin. Thus, *Nephrolepis* cv. *Duffii*

(Continued on page 25)

is acceptable. Though the 1980 Cultivated Code has omitted Article C.24, it does use such names in the text. Currently, some *Adiantum*, *Asplenium*, and *Polypodium* cultivars are unknown as to their species.

DESCRIPTIVE NAMES AND THE GROUP RANK

Some fern horticulturists lament the loss of the multi-worded descriptive names for their garden plants, as *Polystichum setiferum* var. *multilobum plumosum magnificum*. Actually there is no loss of such names since almost all of them were formed before 1959; they may be maintained as they were originally named except changed to the cultivar status as cv. *Multilobum Plumosum Magnificum*. However, after 1959 new names must be in non-Latin form. Thus, the Cultivated Code will permit new cultivar name as cv. *Multilobed Plume* or cv. *Magnificent Plume* and even cv. *Multilobed Magnificent Plume*. The code does, however, prefer cultivar names of one or two words and it states that they must not consist of more than three words (Cultivated Code, 1980, Article 30).

One way to meet the requirements of the Cultivated Code, but still provide some description with cultivar names and to make it easier to comprehend a large assortment of cultivars, is to use a "group" name. The group rank was discussed earlier under Hybrids, in which offspring of an infraspecific cross could be given a group rank. The Cultivated Code (1980, Article 26) also allows the group rank to apply to non-hybrid offspring and specifies that "a group denotes an assemblage of similar cultivars and is intermediate between a species and cultivar in rank." The group name is expressed in non-Latin form. A hypothetical example would be *Polystichum setiferum* *Multilobed group*. When cited with a cultivar name it would be *P. setiferum* (*Multilobed group*) cv. *Magnificent Plume*. The group name is not an essential part of the full cultivar name so may be omitted in usage if desired. The *Multilobed group* would contain all the cultivars with tripinnate fronds and abnormally rounded divisions while the *Acutely-lobed group* would contain all the cultivars with tripinnate fronds and acute divisions (Druery, 1912). Since the Cultivated Code does not specify any limit to the number of words in a group name, a name using the system of Dyce (Dyce, 1987) may be *P. setiferum* (Division B, *Divided Multilobed group*) cv. *Magnificent Plume*. More information on group names is found in Dyce, Fig. 1A, 1B and Kaye, 1968.

Group ranks for cultivars of *Polypodium vulgare* would of necessity be very different from those of *Polystichum setiferum*, as would also those of *Pyrrosia lingua* which are so popular among Japanese fern hobbyists. To form workable group ranks, a thorough knowledge of the variations within the species will be required and the system devised must be flexible enough to allow the addition of new variations. A very desirable feature of a group system encourages the identification of unknown cultivars. Much more study along the lines of Dyce, Kaye and others must be done, presented, and then generally agreed upon before use of the fern group rank can be expanded.

A FERN REGISTRATION AUTHORITY

Perhaps one of the greatest horticultural needs among serious fern growers, trade people, and even fern researchers is the establishment of International Registration Authority (IRA) for ferns. Its function is to compile, publish, and maintain a list of cultivar and hybrid names of horticultural interest. Anyone wishing to register a new cultivar or hybrid name would inform the Registration Authority which could advise on its acceptability. Thus, name duplication would be avoided and assistance in checking the correctness of the name as governed by the Cultivated Code would be accomplished. This is particularly important as several international organizations with trade interests have established regulations requiring, among other things, that names be correct and not duplicated. For more information on TRA see Leslie in Styles (1986).

Now is a favorable time to start a Fern Register for several reasons. Horticultural interest in cultivated ferns is high, and botanical interest in the taxonomy of cultivated plants is also increasing. The Cultivated Code presents few technical problems in the naming of fern cultivars. However, a readily available, simplified version of the Code with an updated glossary that can be understood by the lay reader is absolutely necessary to promote use of cultivar names and the success of a Fern Register. Unfortunately, there are fewer and fewer people who are familiar with the history and identity of many older fern variants, and their help in sorting and clarifying confused variants would be of inestimable value. Computers can now ease the labor of record keeping, and copier and fax machines could be used to make frond silhouettes for vouchers, though photographs would be better for ferns where three-dimensional frond features are important. Herbarium specimens of newly described cultivars designated as "standards" would be most desirable for ferns but curating and storing them presents problems that a fledgling Fern Register may not have the resources to handle. A single Fern Register to handle all the fern cultivars presents a staggering work load, especially in the beginning when there is a great backlog of unregistered ferns. Having different registrars for different species or genera would distribute the work load. Countries having an historical interest and live collections of particular cultivars would be ideally suited to maintain the registers. Great Britain, for instance, could be responsible for cultivars of *Athyrium filix-femina*, *Polystichum setiferum* and others. Japan could be responsible for *Pyrrosia lingua*, *thunbergiana*, and *Psilotum nudum*, and the United States responsible for *Nephrolepis exaltata* and so forth. Fern

(Continued on page 26)

organizations located in areas where collections of certain cultivars are a specialty, such as *Platyserium* or *Adiantum*, could undertake registration of such groups. Botanists specializing in particular genera that have many cultivars, as *Pteris*, may help local registration authorities with cultivars they would hesitate to register. The whole endeavor of starting a registration authority will require much work, organization and perseverance. But work need not wait until every piece of the plan is in place; just preparing a list of present cultivars would be a significant start. If we do not act, opportunities will be lost and the continued proliferation of loosely given names and accompanying confusion will escalate, possibly to a point where the tangle will be impossible to unravel. We need a registration authority that can guide us through the maze of fern names of the past, connect them to the present, and prepare us for the future.

SUMMARY

1. The majority of fern variants originating from nature or cultivation that are of interest to horticulture are named according to the provisions of the Cultivated Code. Exceptions may be some wild plants and some hybrids which should be named according to the Botanical Code.
2. The two Codes are separate. A plant named under one code has no standing in the other Code regarding rules of priority and so forth.
3. The distinction between a botanical variety (*varietas*) and a cultivated variety (*cultivar*) is important in naming ferns of horticultural interest.
4. The coextensive rule allows two names for a cultivar, the cultivar name and the botanical name.
5. In the trade, common names are often used as though they are cultivar names. Common names have no standing in the Codes and lack the stability the Codes offer.
6. Cultivated varieties named under the botanical variety rank before January 1, 1959 are changed to the cultivar rank.
7. After January 1, 1959 new cultivar names must be in non-latin form and cannot consist of more than three words.
8. Monstrosities brought into cultivation from nature are best named in the cultivar rank.
9. In regard to hybrids, intergeneric and interspecific hybrids made in cultivation may be given names according to the Botanical Code, but interspecific and infraspecific hybrids may also be given names under the Cultivated Code.
10. Names of cultivars of unknown parentage may be formed by having the cultivar name appear directly after the genus name.
- II. Trademark names and cultivar names have different relationships in different countries. The Cultivated Code specifies that cultivar names, in general, may not be registered as trademarks, but trademarks may become cultivar names.
12. Group ranks may be used to group ferns with many cultivars.
13. Systems of group names applicable to various species with many cultivars need to be developed.
14. An International Registration Authority for ferns needs to be organized, perhaps with subcommittees to register different genera.
15. A simplified version of the Cultivated Code and a glossary worded in easily understood language is overdue.

LITERATURE CITED

- Druery, C.T. 1913. *British Ferns and Their Varieties*. Routledge and Sons, Limited, London, p. 459.
- Dyce, J.W. 1987. Classification of Fern Variation in Britain. *Pteridologist* 1(4): 154-155.
- International Code of Botanical Nomenclature - 1966, *Regnum Vegetabile*, 46: 402; 1972, 82: 426; 1978, 97: 457; 1483, 111: 472; 1988, 118: 328.
- International Code of Nomenclature of Cultivated Plants - 1953. The Royal Horticultural Society London, p. 29.
- International Code of Nomenclature of Cultivated Plants - 1980. *Regnum Vegetabile*, 104: 31.
- Kaye, R. 1968. *Hardy Ferns*. Faber and Faber, Ltd., London, p. 203.
- McVaugh, R., R. Ross, and F. A. Stafleu. 1968. An Annotated Glossary of Botanical Nomenclature. *Regnum Vegetabile*, 56: 31.
- Pringle, J. S. 1973. The Concept of the Cultivar. *The Garden's Bulletin* (Royal Botanical Gardens, Hamilton, Canada) 27(3): 13-27.
- Stacy, C. A. 1989. *Plant Taxonomy and Biosystematics*. Edward Arnold, Hodder and Stoughton Limited, p. 264.
- Styles, B.T. (ed.). 1986. *Infraspecific Classification of Wild and Cultivated Plants*. Clarendon Press, Oxford, p. 426.
- United States Department of Commerce, Patent and Trademark Office. 1990. *General Information Concerning Patents*, p. 42.
- Van Der Maesen, L.J.G. (ed.). 1986. *First International Symposium on Taxonomy of Cultivated Plants*. *Acta Horticulturae*, 182. International Society for Horticultural Science, Wageningen.

GLOSSARY

TAXONOMIC RANKS MOST OFTEN USED TO CLASSIFY FERN VARIATIONS GOVERNED BY THE BOTANICAL CODE

species (sp.) - the category of of the lowest principal nomenclatural rank." (Usually considered to be a group of organisms that interbreed and are reproductively isolated from all other such groups.) Example: *Osmunda regalis*; or the genus understood: *O. regalis*.

subspecies (subsp.) - a subordinate division of a species." (A subdivision of a species, a distinguishable group occurring within a specified geographical area, a geographical race. Some species may consist of two or more subspecies, in which case, the first named subspecies repeats the name of the species Example: *Athyrium filix-femina* ssp. *filix-femina* mostly in Europe and *A. filix-femina* ssp. *cyclosorus* in northwestern North America.

variety (varietas, var.) - Nomenclaturally, a rank of subordinate in rank to that of subspecies." (A botanical variety, a distinguishable group occurring within a specified habitat, e.g., bogs, grasslands, etc.; an ecological race. Sometimes used in the sense of a subspecies.***) Example: *Athyrium filix-femina* var. *californicum*

form (forma, f.) - A rank of subordinate to species (or variety or subvariety); usually differentiated by a very minor character, and commonly the lowest rank in the hierarchy. (A minor genetic variant found sporadically but scattered throughout the range of the species) Example: *Dennstaedtia punctilobula* f. *cristata*.

GOVERNED BY THE CULTIVATED CODE

group - An assemblage of similar cultivars; intermediate between a species and cultivar in rank. (A group of cultivars with similar character(s).) Example: *Polystichum setiferum* Multilobed group. Example, cited with a cultivar *Polystichum setiferum* (Multilobed group) cv. *Magnificent Plume*; or the group name may be omitted: *Polystichum setiferum* cv. *Magnificent Plume*.

cultivar (cv.) - An assemblage of cultivated individuals distinguished by any characters significant for the purposes of agriculture, forestry, or horticulture, and which when reproduced, retains its distinguishing features. (A cultivated variety which when reproduced retains its distinguishing character(s) and is a selection from any species, infraspecific rank or hybrid.) Example: *Adiantum raddianum* cv. *Pacific Maid*, or *A. raddianum* 'Pacific Maid', or when the species is understood *A. cv. Pacific Maid*, or *A. 'Pacific Maid'*.

GOVERNED BY THE BOTANICAL OR CULTIVATED CODE

hybrid - The offspring of the sexual union of plants belonging to different taxa." (The hybrid name is expressed as a formula name of binary name and applies to all the offspring of all identical crosses. If a grower desires to recognize individual offspring, each may be named as a cultivar.)

intergeneric hybrid - hybrids between species of different genera. (Named under the Botanical Code in Latin form using a formula name or its equivalent binary name.) Example of a formula name: *Aglaomorpha coronans* X *Drynaria rigidula*. Example of an equivalent binary name: *XAglaonaria robertsii*. Example when cited with a cultivar name: (*Aglaomorpha coronans* X *Drynaria rigidula*) cv. *Santa Rosa*, or *XAglaonaria robertsii* cv. *Santa Rose*.

interspecific hybrid - hybrids between species of the same genus. (May be named under the Botanical Code in Latin form or under the Cultivated Code in non-latin form without use of a formula name.) Example of a formula name under the Botanical Code: *Platyserium elephantotis* X *P. stemaria*. Example of an equivalent binary name to the above, named under the Botanical Code: *Platyserium Xelemaria*. Example of a Botanical Code name cited with a cultivar: (*Platyserium elephantotis* X *P. stemaria*) cv. *Sanchez*, or *Platyserium Xelemaria* cv. *Sanchez*. Example of a Cultivated Code name: *Pteris Ekstrand Hybrids*, for all the offspring between parents *Pteris ensiformis* and *P. tremula*. Example of a Cultivated Code name cited with a cultivar: *Pteris (Ekstrand Hybrids) cv. John*, or *Pteris cv. John*.

infraspecific hybrid - hybrids between ranks lower than a species, such as subspecies, variety, form, or cultivar. (Generally not named under the Botanical Code. Under the Cultivated Code named only if worthy of recognition and then placed in a group rank or a particular offspring named as a cultivar.) Example when named as a group: *Pteris Victoria Star* group, for all the offspring from the cross between *Pteris ensiformis* var. *ensifformis* and *P. ensiformis* cv. *Victoriae*. Example when a particular offspring is named as a cultivar: *Pteris (Victoria Star group) cv. Gem*, or *Pteris cv. Gem*.

+ Definitions from McVaugh et al. (1968).

\$+ From Stacy (1989).

++f *Pteris* examples mostly hypothetical.

}}}

FERN SOCIETY OF VICTORIA

SPORE LIST

ORDERING The following spore is free to members who donate spore. Otherwise members 20 cents per sample, non-members 50 cents, plus \$1.00 to cover postage and handling. Available at meetings or by mail from Barry White, 24 Ruby St. West Essendon Vic. 3040 Australia, Ph. (03) 9337 9793. There is no charge for overseas members however to cover postage two international coupons would be appreciated. Overseas non-members may purchase spore at three packets for one international reply coupon plus two coupons for postage and handling. There is a limit of 20 packets per order.

- | | | |
|--|--|--|
| Acrostichum speciosum 12/01 | Cyathea leichhardtiana 11/00 | Platycterium bifurc. cv German Hybrid 9/01 |
| Adiantum radd. 'Le Grand Morgan' 1/02 | Cyathea lepifera 5/01 | Platycterium bifurc. cv Lemoinei 9/01 |
| Adiantum radd. 'Dissected Leaflet' 7/00 | Cyathea medullaris 2/01 | Platycterium bifurc. cv Roberts 9/01 |
| Adiantum radd. 'Pacottii' 7/00 | Cyathea tomentosissima 9/99 | Platycterium bifurc. cv. Hilo /99 |
| Adiantum radd. 'Victoria's Elegans' 7/00 | Cyclosorus interruptus 3/99 | Platycterium bifurc. cv. HulaHands /99 |
| Adiantum trapeziforme 9/99 | Cyrtomium caryotideum 7/00 | Platycterium bifurc. Mt. Lewis 9/01 |
| Aglaomorpha meyeniana 2/99 | Cyrtomium falcatum 8/99 | Platycterium bifurc. ssp. veitchii 9/01 |
| Anemia mexicana 1/02 | Cyrtomium macrophyllum 5/00 | Platycterium bif. cv Willinckii Scofield /99 |
| Arachniodes aristata 5/00 | Cystopteris filix-fragilis /00 | Platycterium hillii /99 |
| Asplenium australasicum 11/01 | Deparia petersenii 6/00 | Platycterium holtumii /00 |
| Asplenium milnei 1/02 | Dicksonia antarctica 9/00 | Platycterium superbum 10/01 |
| Asplenium scolopendrium 2/02 | Dicksonia fibrosa 8/00 | Platycterium superbum (Cairns) /99 |
| Asplenium surrogatum 1/02 | Dicksonia youngiae 1/99 | Pneumatopteris pennigera 11/01 |
| Athyrium filix-femina 12/99 | Diplazium australe 6/00 | Polypodium formosanum 9/99 |
| Athyrium niponicum 'pictum' 3/01 | Doodia australis 12/99 | Polystichum australiense 12/99 |
| Athyrium niponicum v. pictum (lge) 1/00 | Dryopteris cristata 6/00 | Polystichum braunii 2/02 |
| Athyrium otophorum 1/02 | Dryopteris cristata /00 | Polystichum formosum 6/99 |
| Blechnum articulatum 1/02 | Dryopteris cycadina 2/02 | Polystichum lonchitis 6/00 |
| Blechnum braziliense 1/00 | Dryopteris erythrosora 1/02 | Polystichum retroso-palaceum 10/01 |
| Blechnum camfieldii 5/00 | Dryopteris guanchia 9/99 | Polystichum richardii 2/00 |
| Blechnum cartilagineum 1/01 | Dryopteris sieboldii 3/99 | Polystichum tsus-simense 3/01 |
| Blechnum chambersii 2/99 | Elaphoglossum sp. 1/02 | Polystichum vestitum 1/00 |
| Blechnum chilense 5/00 | Gymnocarpium oyamense 6/00 | Pronephrum asperum 3/99 |
| Blechnum fluviatile 2/00 | Humata tyermanii 1/02 | Pseudophegopteris aurita 4/01 |
| Blechnum fraseri 2/00 | Hypolepis ambigua 2/00 | Psilotum nudum 8/99 |
| Blechnum gallanum 12/99 | Hypolepis dicksonioides 2/00 | Pteris biaurita 2/02 |
| Blechnum gibbum 1/02 | Hypolepis glandulifera 1/02 | Pteris comans 10/00 |
| Blechnum milnei 1/02 | Lastreopsis acuminata 3/01 | Pteris cretica 'Parkeri' 02/01 |
| Blechnum minus 6/99 | Lastreopsis decomposita 12/00 | Pteris dentata 1/02 |
| Blechnum moorei (wide pinnae) 8/00 | Lastreopsis glabella 11/01 | Pteris macilenta 1/02 |
| Blechnum novae-zelandiae 2/00 | Lastreopsis hispida 2/00 | Pteris quadriaurita 1/02 |
| Blechnum patersonii 8/99 | Lastreopsis microsora 12/00 | Pteris ryukyensis 2/02 |
| Blechnum sp. (Philippines) 2/02 | Lastreopsis rufescens 12/00 | Pteris tremula 2/01 |
| Cibotium schiedeii 4/00 | Lastreopsis tenera 12/00 | Pteris umbrosa 1/02 |
| Coniogramme fraxinea 6/99 | Macrothelypteris polypodioides 4/01 | Pteris wallichiana 1/02 |
| Coniogramme intermedia 2/02 | Microsorium fortunei 10/01 | Pteris zahlbruckneriana 4/01 |
| Cyathea aramaganensis 3/99 | Microsorium pappei 7/99 | Rumohra adiantiformis (Cape Form) 2/99 |
| Cyathea atrox 3/99 | Microsorium pustulatum 1/02 | Sticherus urceolatus 3/99 |
| Cyathea celebica 3/99 | Niphidium crassifolium 10/99 | Thelypteris navarrensis 2/02 |
| Cyathea cooperi 11/01 | Ophioglossum pendulum 2/00 | Woodwardia martinez 4/99 |
| Cyathea cooperi var. cinnamonia /99 | Paesia scaberula 1/02 | |
| | Pellaea falcata 11/01 | |
| | Pellaea sagittata 1/02 | |
| | Pityrogramma calomelanos v. aureoflava 12/01 | |

Thank you to the following spore donors – Ron Robbins, Don Fuller, Lorraine Deppeler, Nev Deeth and Rose Bach. More spore donors are welcome.

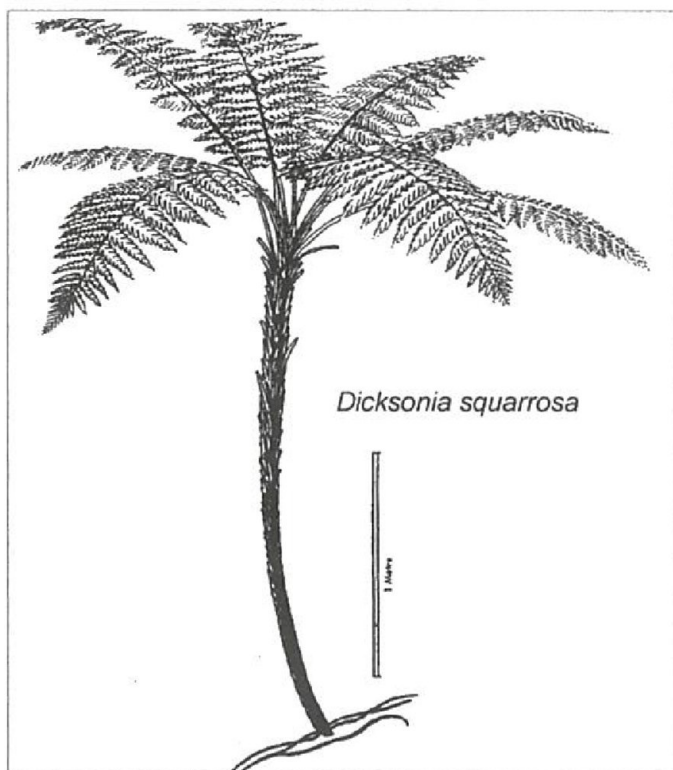
October 2001 Speaker Report

Some OF My Favourite Ferns And How To Grow Them

Keith Hutchinson

Not listed in any particular order

1. *Dicksonia squarrosa* Wheki



This compact tree fern with a rather slender trunk has red-bronze hair in both the trunk and stipes, and when they catch the sun they shine delightfully. Often growing with multiple trunks, it often regrows when the top section is cut off. Sometimes the spent fronds will hang on, giving it a skirted appearance.

A native of New Zealand where it tolerates quite a lot of sun, I feel the Wheki just pips our beautiful *Dicksonia antarctica* for a tree fern for a small fernery.

2. *Polypodium australe*¹ 'Cambrium'

A very attractive fern from the Cambrian Mountains of Wales. It likes a position in filtered sunlight and grows in most soils provided it has good drainage.

It grows particularly well in the garden but is also an excellent tub fern, preferring a wide, shallow pot with an occasional feed of well rotted cow manure.

As you would expect of a fern from the Welsh mountains, it is fully cold tolerant.

Strangely the new fronds seem to develop in late summer and autumn rather than spring. Keith shears off all the old fronds in late summer when he notices new ones

forming and they then produce a lovely display of attractive fronds of delicate, cloth-like appearance.

A must for any garden.

3. *Drynaria rigidula* 'Whiteii' Basket Fern.

A real good collector's fern. When well grown it is a magnificent sight. Preferring a very open mixture in a large basket or tree fern tub, it often has a spread of over a metre. My mixture contains tree fern fibre, 1 cm pine bark, coarse leaf mould, charcoal and a small amount of well aged manure. Water sparingly in winter and divide if you want to, just before the new fronds start to move.

4. *Platycerium veitchii* Silver Elk

A quite rare elk fern and yet one of the easiest to grow. It will tolerate Melbourne's hot summers and cold winters. I love the shield fronds; as they become papery they show the membranous structure and are quite dissected. The fertile fronds can dissect up to twelve times and show off their silvery, wooly texture to great advan-

Multicrop

Maxicrop

Australia's original liquid SEAWEED
plant food concentrate

- Stimulates vigorous root development
- Builds resistance to insect and fungal attack
- Enhances fruit and flower formation
- Non burning, easy to use on all plants
- Minimise transplanting shock
- Harden plants during periods of stress
- Establishes plants quickly after planting or transplanting

Multicrop & Maxicrop products
are available at all leading
garden supply outlets.



tage.

Silver elks need a lot of light. Mine are attached to a tree and receive full sun until about 3 pm. The other thing they need is NOT a lot of water. I find that nine times out of ten people who are having trouble with their silver elk are overwatering it. Mine rarely get any water except for rain.

The silver elk does well on a soft tree fern slab but can also be grown on a timber back if holes are drilled and then filled with sphagnum moss.

A must for any collection.

5. *Todea barbara*

King Fern

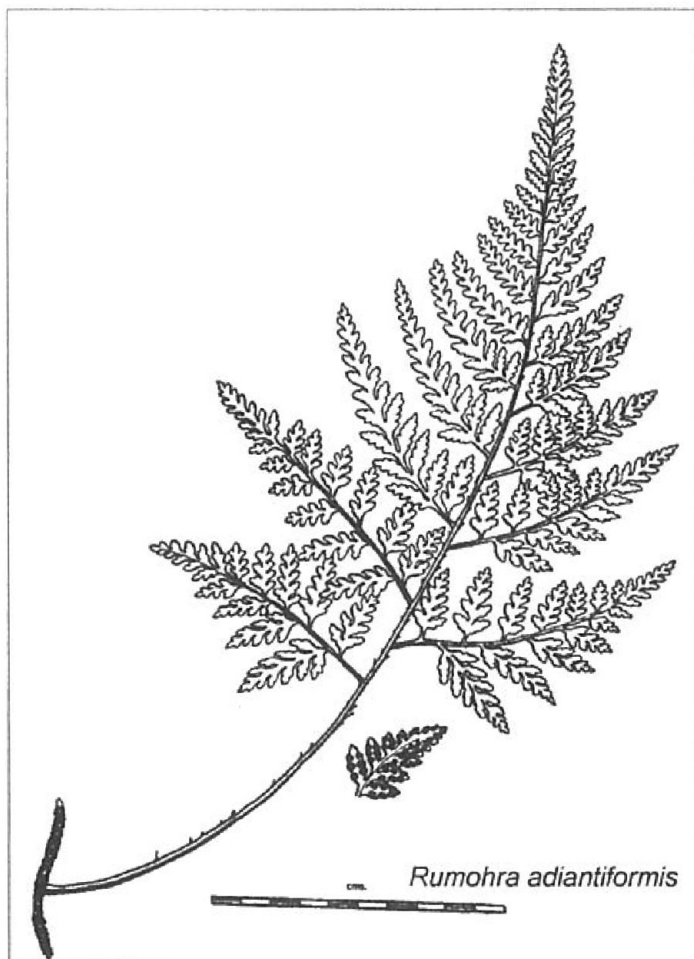
A magnificent fern for a feature spot in your fernery. Given plenty of room it is very regal—every inch a king, hence the name of King Fern. It must have rich soil and plentiful water in hot weather. The spore is ripe when it is still green but must be sown quickly as it is only viable for a short time.²

6. *Aplenium bulbiferum* × *surrogatum*

'Island Beauty'

This beautiful fern is one of Chris Goudey's hybrids. A great indoor fern, which does well for several weeks before needing refreshing in the fernery. Also a great pot plant in a semi-shaded spot and does well in most cool areas of the garden.

Responds well to liquid fertilizer and Maxicrop[®] but I find the slugs and snails think it delicious! Can be



grown from the numerous bulbils it produces.

7. *Rumohra adiantiformis*

Leather Fern

This fern will tolerate quite a lot of sun. It is called the Leather Fern because the fronds feel tough and leathery and last many days when cut for floral work. As it quickly develops into a large clump it can be divided. Ours looks quite good as a tub plant for one or two seasons.

Will grow in most soils. I prefer it as a background fern.

8. *Pteris tremula*

A very quick growing fern which is easy to grow from spore but is not long lived. Can be used indoors for a short time and is also a good tub plant.

Likes a moist spot out of strong wind but is not over fussy about soil type. Once you have one, you may often see more popping up in any moist spot in the garden.

9. *Davallia mariesii*

Hares Foot Fern

This rather common fern is very useful as a ground cover under tree ferns and as a border fern. Hardy in almost any conditions, all it needs is an occasional feed of compost or well rotted manure and a grooming in early spring. The spent fronds turn a burnt orange colour in late winter and as they brown off I tease them out with a soft plastic rake. They are easily propagated by layering or semi-ripe rhizome cuttings in late spring.

10. *Pellaea viridis*

This fern is native to Africa and is very good for a small rock pocket. I presume it grows in an area of limestone rock banks as it favours an alkaline soil. Can be grown in a pot as it is quite a small fern when fully grown. Watch for snails and slugs as they can demolish a frond in minutes. Likes semi shade and good drainage.

11. *Polystichum retroso-paleaceum*

A very handsome Japanese fern, grows to about 50 cm high in most soils. Likes filtered sunlight. It is truly perennial, dying back to the base each winter, then in early spring a flush of glossy fronds appears almost overnight. A very striking addition to any fernery. Prefers acid, well drained soil and a mulching prior to summer.

12. *Cheilanthes myriophylla*

'A Resurrection Fern'

This graceful, hardy fern which is found from California through central America to Chile, is great for a spot in your fern garden which may get a fair amount of sun. I find the small pinnules fild up on a hot day and this diminishes the exposed surface area, and reduces transpiration.



Pteris tremula

WINNERS!!!!

Fern Competition for February 2001

- 1st Don Fuller—"Island Beauty"
(*Asplenium surrogatum* x *As. bulbiferum*)
- 2nd Don Fuller – "Austral Gem"
(*Asplenium difforme* x *As. dimorphum*)
- 3rd Ian Broughton
Polystichum proliferum x *Polystichum richardii*

Competitors' raffle – Dot Forte

General raffle - Arch Busby,
Reg Kenealy, Jean Boucher,
Margaret Radley, George Start.

NATIVE FAUNA NEED NATIVE FLORA

Platypus prefer gum and wattle trees. According to the Australian Platypus Conservancy, radio tracking studies undertaken in 1998 by their group in Melbourne's southeastern suburbs indicated that Platypus tend to avoid using stream segments dominated by willows, at least in summer. Further studies have confirmed this.

Each 25-metre section of Running Creek (a tribu-

FERN ACRES NURSERY



Retail.

Phone (03)5786 5031.

1052 Whittlesea - Kinglake Road, Kinglake West
(opp. Primary School).

Melway Ref: 510 N11.

Specialising in elks, stags, bird's-nest ferns and native epiphytic orchids, species and hybrids.

Wide range, low prices.

A very good pot plant, it will survive indoors for quite some time. A good addition to any fern garden.

Footnotes:

- ¹ 'Australe' does not refer to Australia but means 'southern', or 'from the south'.
- ² The advice was given that *Todea barbara* spore should be collected when the lowest (most advanced) ones go brown (dehisce). At that stage some spore at about the middle of the frond will be just ready to sow.



tary of Diamond Creek), used by radio-tagged platypus in late summer and early autumn supported on average 11 medium to large trees growing within 8 metres of the water, of which 82% were native eucalypts or wattles and 8% were willows. By comparison, the same amount of bank in the area NOT used by Platypus supported an average of fewer than 5 medium to large trees, of which only 21% were natives and 70% were willows.

So was it the willows or the scarcity of trees that put platypus off? Read on.

Differences in water quality were also apparent when a site dominated by gum trees was compared to one dominated by willows. Only about a quarter as much oxygen was dissolved on average in water under willows as compared to that under eucalypts—a level low enough to stress many aquatic insects, which are the platypus' main food supply. Research in Tasmania also found that streamside willows are associated with very low dissolved oxygen levels in summer, possibly due to high rates of bacterial growth within the dense root mats willows have. These root mats are also likely to physically impede platypus activity at these sites.

Happily, Melbourne Water is planning a program of catchment rehabilitation for Diamond Creek and its tributaries, which involves replacing willows with appropriate indigenous trees and understorey species, and fencing stream banks to control access by livestock, for the benefit of not only platypus but all aquatic wildlife habitats.

Source: Indigenotes, Volume 13, Number 5, 2000



NEWSLETTER

If undeliverable return to:
FERN SOCIETY OF VICTORIA INC.
P O Box 45, Heidelberg West, 3081
Victoria Australia.
Print Post approved PP334633/0002

**SURFACE
MAIL**

Postage
Paid
West
Heidelberg
Vic. Aust.
3081