

# Fiddlehead Forum

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## *Robin Halley 1944-2010*

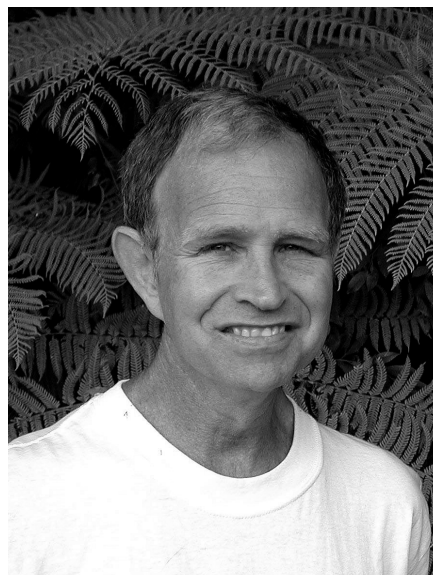
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*submitted by the San Diego Fern Society*

The worldwide Fern community has lost one of its most ardent enthusiasts. Nearly everyone on 6 continents who was interested in ferns knew Robin Halley's name and his reputation as a person of extensive fern information. He networked with others passionate about ferns, maintained a question-and-answer forum by email and began a website for the San Diego Fern Society. He traveled to Great Britain, China, New Zealand, Australia, Costa Rica and other tropical countries to meet with fellow ferners, tour their gardens, and speak to their fern societies. While there he would trek the backwoods looking for ferns, photographing, and often arranging to bring back unusual specimens, enduring the numerous exporting and importing regulations at home and abroad. All this while working for a San Diego computer firm.

Robin Halley became interested in ferns in the early 1980s, and quickly joined the San Diego Fern Society which had just been established a few years earlier. He began collecting ferns, learning their botanical names, and creating the outdoor and indoor environments that gave each one the proper temperature and moisture to thrive. There were shelves, shade structures, and enclosed containers filling all possible spaces on his La Jolla property. The collection grew to over 400 different ferns of perhaps 300 different species. He felt that an avid collector could amass perhaps 1,500 ferns in a lifetime (he seemed to want to do it), which would be only 10% of the world's ferns, he said. Unusual ferns from his collection were always highlights of and top prize-takers at the annual San Diego Fern Society show.

Robin shared his knowledge of ferns with his local fern society and with the Los Angeles International Fern Society. He gave many lectures and demonstrations, wrote numerous articles, and served as Fern World editor for years. He would generously share divisions of his ferns with interested members of



*Photo by Robbin Moran*

the San Diego Fern Society. He wanted to increase the public's awareness of the variety and beauty of ferns, and help people to obtain and successfully grow them. He could offer probable identification of an unknown fern, especially if, as he would point out, the grower had a mature frond with spore, and hopefully some of the rhizome structure!

Robin had courageously waged a determined 5-year war against cancer. A celebration of his life was held on January 8, 2011. His wife Linda gives his preferences if anyone is interested in making a donation in Robin's memory: Moore's Cancer Center, San Diego Hospice, and Lung Cancer Alliance. We will miss him, and we acknowledge and honor his contributions to pteridology.

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The Editors of FIDDLEHEAD FORUM welcome contributions from members and friends, including miscellaneous notes, and reviews of books on ferns. Articles may be submitted electronically on disk (PC compatible) or typed (using a simple font like Helvetica in a minimum of a 12pt font.)

Regular membership in the American Fern Society is on a calendar-year basis and includes access to field trips and the spore exchange. Regular members receive the *Fiddlehead Forum*, but not the American Fern Journal, for \$12 (+\$3 expedited delivery fee, except U.S.A., Canada, and Mexico) Individuals interested in regular or journal membership should contact the membership secretary.

## AFS HOME PAGE

[www.amerfernsoc.org](http://www.amerfernsoc.org)



# 2011 AFS Annual Meeting - July

The American Fern Society will have its annual meeting in conjunction with the Botany 2011 conference, which will be held on July 9–12, 2011, at the Chase Park Plaza Hotel in St. Louis, Missouri. Events will include a luncheon (at which the annual society meeting will be conducted), a session of pteridophyte research presentations, the annual AFS Council Meeting, and a fern foray. The one-day fern foray will occur on Saturday, 9 July, starting at 8:00 a.m.. Preliminary information on the fern foray is as follows:

***Ferns and Other Plants of the LaBarque Creek Watershed*** — LaBarque Creek is one of the last relatively unaltered permanent stream systems in the St. Louis metro region. It represents an unusual example of a successful partnership to fulfill unified conservation goals in a mosaic of public and private land ownerships. The watershed encompasses some 13 square miles in northwestern Jefferson County and is notable not only for its rich stream biota (including 42 fish species), but also for its diversity of habitats and plant communities. The creek cuts through thick layers of the Ordovician-age St. Peters sandstone formation, forming abrupt transitions from dry glades and woodlands on the ridgetops to picturesque sandstone bluffs with associated overhangs and waterfalls, along with mesic forests and a range of open to sheltered mesic streamside habitats. The area supports a relatively rich flora, with 173 bryophyte and more than 770 vascular plant species documented thus far, including 27 species of state conservation concern. The pteridophytes comprise 28 ferns and 5 lycophytes. Many of these are typical Midwestern species, but some are restricted to acidic substrates and a small colony of *Lycopodium dendroideum* represents a southwestern disjunct from the main distribution of this species.

The foray will involve moderately difficult walking, often off-trail, over sometimes rocky or steep terrain and sometimes along wet stream-banks (the usual stuff for finding neat ferns). Lunch and beverages will be provided. However, participants should come prepared with sturdy shoes or boots, sun protection, and rain protection. Temperatures likely will be hot (daytime highs in the 90s). Missouri is famed for its ticks and chiggers (as well as mosquitoes), so bug spray will also be essential.

Information on the Botany 2011 Conference will be posted as it becomes available on the conference website, [www.2011.botanyconference.org](http://www.2011.botanyconference.org). In addition, members who have not asked to be excluded from advertisements will receive detailed conference information in the mail, likely in March. Full conference registration tends to be pricey, but in the past organizers have offered a greatly reduced “Naturalist” rate for those who only want to attend the AFS social and meeting events. Those who have questions should contact the Membership Secretary, George Yatskievych ([George.Yatskievych@mobot.org](mailto:George.Yatskievych@mobot.org)).

# *British Pteridological Society Memberships*

by George Yatskievych

Our sister society across the Pond is the British Pteridological Society (BPS). This society has many of the same goals as does the American Fern Society (AFS) and has a broad, worldwide membership. More information on this group is available at their informative web site: [www.nhm.ac.uk/hosted\\_sites/bps/](http://www.nhm.ac.uk/hosted_sites/bps/). For many years AFS and BPS have had a reciprocal dues arrangement; that is, members of BPS can renew their AFS memberships directly through the BPS membership secretary and thus pay in Pounds Sterling, and AFS members may pay their BPS memberships through the AFS membership secretary and thus pay in U.S. Dollars. More than 80 AFS members take advantage of this arrangement to renew their BPS memberships annually. Anyone else who is interested in joining the BPS should contact George Yatskievych, AFS Membership Secretary, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166-0299 U.S.A. ([George.Yatskievych@mobot.org](mailto:George.Yatskievych@mobot.org)).

Dues for BPS are adjusted each year, depending on the conversion rate between U.S. and British currency at the beginning of each December. These rates include

airmail shipping. Like AFS, the BPS has two levels of membership. Optional members (2011 rate = \$29.25) receive *The Bulletin*, a newsletter, and *The Pteridologist*, a beautiful full-color magazine with articles of interest to both amateurs and professional fern enthusiasts. Full members (2011 rate = \$38.00) receive both *The Bulletin* and *The Pteridologist*, as well as *The Fern Gazette*, which is a scholarly journal of pteridophyte research (similar to the *American Fern Journal*).

The BPS also has a spore exchange and produces an annual list of fern items for sale ranging from coffee cups to shirts, stationery, and miscellaneous fern publications. These exclusive items are available for purchase only to BPS members. However, you do not need to be a BPS member to subscribe to their brand-new electronic newsletter, *Fern World*. To subscribe to this new publication, please visit the following web site: [issuu.com/pterrythe-fern/docs/newsletter\\_1](http://issuu.com/pterrythe-fern/docs/newsletter_1). Subscribers can also receive e-mail reminders each time a new issue is posted to the web site by signing up at: [eepurl.com/bGLcz](http://eepurl.com/bGLcz).

## *Plant Explorer*

by Mark Glicksman, c/o Morris Arboretum of the University of Pennsylvania, 100 E. Northwestern Avenue, Philadelphia, PA 19118 USA [glicks@bg-map.com](mailto:glicks@bg-map.com) web: [www.bg-map.com](http://www.bg-map.com)

**Plant Explorer** — the interactive plant information site from Longwood Gardens, in Kennett Square, Pennsylvania, has introduced new features:

- **What is This Plant?** A plant image selected at random is displayed with the caption “What is this plant?” Mouse over the image to reveal the plant name.

- **Recently Viewed Plants, Garden Features and Tours:** View a scrollable list of plants, garden features and Tours recently viewed by other visitors to the site.

Image Thumbnails Search results are accompanied by image thumbnails. Mouse over a thumbnail to enlarge it.

You can access Plant Explorer at [plantexplorer.longwoodgardens.org/](http://plantexplorer.longwoodgardens.org/)

## *Birmingham Fern Society Annual Lecture — May*

Speaker: Naud Burnett (landscape architect and owner of Casa Flora, Inc.)

Topic: Growing Ferns from Tissue Cultures

May 18, 2011, 6:30 PM, Garden Center at the Birmingham Botanical Gardens

2612 Lane Park Road, Birmingham, Alabama

# Introducing the Patented Ferns

by Guenther Machol, gkmachol@hotmail.com

U.S. plant patents have been on the scene since 1931; ferns made their first appearance in 1947, when a patent was issued for a cultivar of *Nephrolepis whitmanni*. (Using today's nomenclatural rules, this would probably be considered *N. exaltata* 'Whitmannii,' one of the hundreds of cultivars of *N. exaltata*.) (A. R. Smith, pers. comm.) Since then a total of 35 fern cultivars have been protected. This short note is intended to provide a glimpse of those patents. (See Table)

The U.S. Patent and Trademark Office (USPTO) publishes an overview of plant patents. (Ref. 1) Here are some excerpts:

*A plant patent is granted by the Government to an inventor (or the inventor's heirs or assigns) who has invented or discovered and asexually reproduced a distinct and new variety of plant, other than a tuber propagated plant or a plant found in an uncultivated state. The grant, which lasts for 20 years from the date of filing the application, protects the inventor's right to exclude others from asexually reproducing, selling, or using the plant so reproduced.*

*... required: that the plant was invented or discovered and, if discovered, that the discovery was made in a cultivated area.*

*... required: that the plant be shown to differ from known, related plants by at least one distinguishing characteristic, which is more than a difference caused by growing conditions or fertility levels, etc.*

*The purpose of asexual reproduction is to establish the stability of the plant. This second step of the invention must be performed with sufficient time prior to application for patent rights to allow the thorough evaluation of propagules or clones of the claimed plant for stability thus assuring that such specimens retain the identical distinguishing characteristics of the original plant.*

Most of the fern patents involve a discovery, described as a "sport" or "mutation" of a parent fern found in a cultivated area. (Note that plants found growing in the natural environment are excluded.) Other terms used are "somaclonal variant" and "chance sporeling." The one invention, a hybrid, is described as "a single selection from the cross."

Methods used for asexual reproduction, as well as stability information, are specified in the patents and are listed in the Table. Principal methods given for propagation are tissue culture (tc) and divisions (divs); one patent lists "spores" (presumably apogamous). Stability is described either as having occurred over "successive" generations or propagations, or as quantified.

A plant patent additionally includes an abstract which describes the most important characteristics of the fern (See Inset); a detailed botanical description, including leaf colors (referred to the Royal Horticultural Society Coulor Chart); one or more photographs; and often a detailed comparison with a closely related fern. An entire patent — in PDF format — can be downloaded from a website if its patent number is known. (Ref. 2) This number can be obtained by using the USPTO patent search website. (Ref. 3)

## References

1. U.S. Patent and Trademark Office, "General Information about 35 U.S.C. 161 Plant Patents. Available at [www.uspto.gov/web/offices/pac/plant](http://www.uspto.gov/web/offices/pac/plant).
2. Website for PDF images of patents: [www.pat2pdf.org](http://www.pat2pdf.org).
3. USPTO website for patent searches is [patft.uspto.gov](http://patft.uspto.gov). (The argument used for ferns in Advanced Search was CCL/PLT/379)



US00PP09113P

[11] **Patent Number:** **Plant 9,113**

[45] **Date of Patent:** **Apr. 18, 1995**

*Dictionary of Gardening*, Apr. 1992, The Stockton Press, N.Y., pp. 147, 148.

*Primary Examiner*—James R. Feyrer  
*Attorney, Agent, or Firm*—Allen, Dyer, Doppelt, Franjola & Milbrath

[57] **ABSTRACT**

A sport of *Rumohara adiantiformis* (Leather Leaf Fern) is described. The sport is characterized by difference in the fronds, which are denser, much flatter, darker in color, and larger and possess a more pronounced point at their terminal end.

**Table. U.S. Fern Plant Patents**

#	Pat. No.	Cultivar Name	Year	Parentage	Propagation	Stability
1	PP21218	Ariane	2010	<i>Nephrolepis exaltata</i>	tissue culture	generations
2	PP20949	Crispy Wave	2010	<i>Asplenium nidus</i>	spores	generations
3	PP20126	Ocean's Fury	2009	<i>Athyrium hybrid*</i>	tissue culture	propagations
4	PP17420	VP005	2007	<i>Microsorium punctatum</i>	tissue culture	generations
5	PP16531	Sunjest	2006	<i>Nephrolepis oblitterata</i>	divisions	generations
6	PP16271	VP004	2006	<i>Nephrolepis falcata</i>	divisions	generations
7	PP15958	Nr. 20	2005	<i>Nephrolepis exaltata</i>	divisions	generations
8	PP15721	Pewter Lace	2005	<i>Athyrium niponicum var pictum</i>	tc and divs	propagations
9	PP15315	Tiger Fern	2004	<i>Nephrolepis exaltata</i>	divisions	30 generations
10	PP15072	Burgundy Lace	2004	<i>Athyrium niponicum var pictum</i>	tc and divs	propagations
11	PP14995	Nr. 21	2004	<i>Nephrolepis exaltata</i>	divisions	generations
12	PP14214	VP001	2003	<i>Nephrolepis cordifolia</i>	leaf cuttings	generations
13	PP14190	Nevada	2003	<i>Nephrolepis exaltata</i>	tissue culture	generations
14	PP13653	Crocodyllus	2003	<i>Microsorium musifolium</i>	tissue culture	generations
15	PP12803	Silver Falls	2002	<i>Athyrium niponicum var pictum</i>	tc and divs	propagations
16	PP11864	Regina	2001	<i>Nephrolepis exaltata</i>	tissue culture	100 generations
17	PP11806	Underhill	2001	<i>Rumohra adiantiformis</i>	tc and divs	8 generations
18	PP11230	Laua'e Iki	2000	<i>Microsorium scolopendrium</i>	rhizome divs	15000 plants
19	PP9826	Glowstar	1997	<i>Pellaea falcata</i>	tissue culture	20 generations
20	PP9260	Delila	1995	<i>Nephrolepis exaltata</i>	tissue culture	generations
21	PP9238	Bronze Venus	1995	<i>Adiantum pubescens</i>	tissue culture	12 generations
22	PP9113	Diamond	1995	<i>Rumohra adiantiformis</i>	rhizome divs	separations
23	PP9067	Orlando	1995	<i>Nephrolepis exaltata</i>	tc and divs	generations
24	PP8061	Victoria	1992	<i>Asplenium antiquum</i>	tissue culture	--
25	PP7299	Napa Cottage	1990	<i>Nephrolepis exaltata</i>	tc and divs	generations
26	PP5755	Dallas Jewel	1986	<i>Nephrolepis exaltata</i>	veg. cuttings	generations
27	PP5339	--	1984	<i>Sphaeropteris cooperi</i>	tissue culture	thousands
28	PP5128	Eleanor	1983	<i>Nephrolepis exaltata</i>	tissue culture	5000 plants
29	PP4257	Courtney Anne	1978	<i>Nephrolepis exaltata</i>	stem cuttings	propagations
30	PP4253	Frizzie Lizzie	1978	<i>Nephrolepis exaltata</i>	veg. prop.	10 generations
31	PP4023	Golden Boston	1977	<i>Nephrolepis exaltata</i>	runner prop.	2 years
32	PP4010	Erect	1977	<i>Nephrolepis exaltata</i>	stem cuttings	propagations
33	PP3936	McAllister	1976	<i>Nephrolepis exaltata</i>	stem cuttings	propagations
34	PP3136	--	1972	<i>Nephrolepis exaltata</i>	divisions	hundreds of plts
35	PP772	--	1947	<i>Nephrolepis whitmanni</i>	runner buds	generations

\* *Athyrium niponicum var pictum* x *A. filix-femina* 'Congestum Cristatum'

## *Fifth Symposium on Asian Pteridology and Fern Show in China*

by R.H.G. Ranil, Sri Lanka

The Fifth Symposium on Asian Pteridology and Fern Show was successfully held on 14-17 November, 2010 at the Pattaya Hotel, in Shenzhen, China. It was jointly

organized by the Fern Committee of the China Flower Association, State Key Laboratory of Systematic and Evolutionary Botany, Chinese Academy of Science,

and Shenzhen FairyLake Botanical Garden. The theme of this symposium was Recent Advancements in Pteridophyte Research: Opportunities and Challenges. The symposium aimed to achieve the following objectives allowing beginners and eminent in the field to share and disseminate information on pteridophytes:

1. to show the richness of the Asian pteridophytes,
2. to disseminate recent research results on pteridophytes,
3. to highlight the economic importance of ferns and lycophytes for future commercial ventures, and
4. to strengthen collaboration between researchers, hobbyists, and commercial growers.

More than 150 participants, including eminent scientists and other fern enthusiasts from China, Hong Kong, India, Indonesia, Japan, Kenya, Malaysia, Netherlands, Russia, Sri Lanka, Taiwan, United Kingdom, U.S.A., and Vietnam participated and shared their research findings and experiences on pteridophytes.

rum for the participants to share various research ideas and new findings among fern enthusiasts from various countries. Further, it was an important gathering because students, eminent botanists, researchers, fern growers, and hobbyists working and studying in different aspects of pteridology in Asian countries as well as regions outside Asia were able to get together here. Also, the symposium supported the development of a collaborative network among both the beginners and the more experienced in the field. The contributions of the younger generation working with ferns were significant in all of the sessions. Among the presenters, the majority are working on molecular phylogeny of ferns, and their talks highlighted the advancement of pteridological studies using modern technologies. At the same time, some researchers very clearly explained the importance of studies involving classical taxonomy as well as molecular work. In parallel to the oral presentations, the poster session included about 20 posters covering various aspects of pteridophytes.



Fig. 1. Participants of 5th Symposium on Asian Pteridology and Fern Show. Photo courtesy symposium organizers.

Oral presentations were grouped into eight sessions and began with Dr. Hans Nooteboom from Leiden addressing the gathering on “Ferns in Flora Malesiana.” After that, the attention of participants was drawn to the topic of “Building bridges: steps towards a fully integrated evolutionary biology of ferns” by Dr. Harald Schneider, of London. Later, other presenters delivered interesting talks on diversity, biogeography, ecology, morphological characterization, reproductive biology, evolution, molecular phylogeny, cytology and conservation issues related to ferns. It was an important fo-

All the participants visited the Shenzhen FairyLake Botanical Garden in the afternoon of 17 November. Here, they observed a wide variety of flora in both natural habitats and created environments under the net houses. A fern show was also held in a shade house of FairyLake Botanical Garden and it showed the diversity and ornamental value of the fern flora of China. Some of the participants subsequently went on a one-day fern-excursion to the nearby Mount Wutong, but part of the group then experienced a longer foray to Mount Nankun, Guangdong Province, during the pe-

riod of 18-20 November. Mount Nankun is a national nature reserve covering a land area of 180,000 hectares with natural habitats that include a large number of endemic, rare, and endangered flora and fauna. Waterfalls, perennial and seasonal montane streams and natural caves are the most interesting components of this green paradise.



Fig. 2. The author and Peris Kamau observing *Blechnum orientale* in its natural habitat.

Participants had a good opportunity to become familiar with the fern flora of South China and were able to study their natural habitats and patterns of distribu-



Fig. 4. Fertile frond of *Osmunda vachelii*.

tion. Species belonging to the genera *Adiantum*, *Angiopteris*, *Blechnum*, *Cyathea*, *Diplazium*, *Dicksonia*, *Dicranopteris*, *Drynaria*, *Elaphoglossum*, *Grammitis*,

*Leptochilus*, *Osmunda*, and *Pteris* were observed in the wide range of habitats and ecological conditions on Mount Nankun. It was extremely difficult to identify some plants in the field at the species level, which indicates the importance of exploration, field observation, and collection of ferns as well as laboratory work. Harald Schneider, Hans Nooteboom, George



Fig. 3. The group studies *Grammitis* and other ferns on a moist rock face during the foray to Mount Nankun.

Yatskievych, and Peter Hovenkamp helped to identify many ferns in the field, while giving guidance and advice for beginners.



Fig. 5. The common *Dicksonia* species in disturbed habitats of Mount Nankun.

All participants agreed that the symposium and field trips helped to provide a more comprehensive under-



Fig. 6. Harald Schneider and Peter Hovenkamp discussing a specimen collected by Hui Dong.

standing of Asian pteridophytes, while developing a collaborative spirit among scientists and fern enthusiasts in Asia as well as other regions of the world. The conference was very successful and there is no doubt that the younger pteridologists were impressed and mo-

tivated to initiate further studies on pteridophytes. Participants thank the organizing committee (particularly Liu Hongmei of Shenzhen Fairy Lake Botanical Garden) and all the others who made the event so fruitful. The 5th Symposium on Asian Pteridology was successfully concluded by declaring Bogor, Indonesia, as the place for the 6th Symposium on Asian Pteridology.

#### Acknowledgements

The author acknowledges the organizing committee for providing partial financial support to attend the conference. The comments from Dr. George Yatskievych are also appreciated.