



Fiddlehead forum

Bulletin of The American Fern Society

Editors: Joan Nester-Hudson and David Schwartz

Platycerium Night — San Diego Fern Society, Jan. 2011

submitted by Kathie Russell

To start the fern growing year in San Diego, California, we traditionally have a *Platycerium* Night in January for our Fern Society. It seems that the staghorn ferns are growing at this time of year, and it can be a great time to divide plants and remount the “pups.”

Don Callard, who lives in Del Mar a few blocks from the Pacific Ocean, has grown *Platyceriums* in his yard

for years. He watched his grandfather grow them, and now Don grows many species and cultivars and has always been willing to share his experiences. He has also observed plants in nature growing in Australia, Thailand, Cambodia, Laos, and the Philippines.

Platyceriums are found in tropical and subtropical areas of the Old World, with just one species, *P. andinum*,



Fig. 1. Several *Platyceriums* including the *P. superbum*, about midway on display board (close-up shown in Fig. 2). These plants were displayed at the San Diego Fern Society Show in August 2010 and all were grown in southern California. photo by Kathie Russell

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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.amerfernsc.org



in South America. Certain plants such as *P. wallichii* are known to have a dormant period during the dry season. When water is provided, San Diego has a good climate for all but the most cold-sensitive plants.

For our society members, it is always useful to review how Platyceriums grow, as epiphytes with two types of fronds. The shield fronds grow against moss or other organic matter, and against a board or other support (in nature, a tree). They are green, eventually turning brown but remaining on the plant. The larger leafy fertile fronds extend outward from the growth point, often arching upward, then pendulant. These fronds with antler shape are the basis of the common name staghorn fern. There are brown spore patches on the underside of these fronds in a mature plant.

Some species reproduce by forming pups, new growth points that can be separated to establish a new plant. Other species are not known to pup; thus new plants must be grown from spore, such as *P. grande*, *P. superbum* and *P. coronarium*.



Fig. 2. *Platycerium superbum* taken August 2010 at San Diego Fern Society Show, plant owner Don Callard.

photo by Kathie Russell

Don demonstrated how to remove a pup from a plant and mount it on a board. He used a couple of tools repurposed from the kitchen: a medium-sized knife (serrated preferred) and an ice pick. Also needed are monofilament fishing line or coated wire, green or sphagnum moss, and a board. Don likes cedar fencing material, cut to size, with a hole drilled near the top for hanging and a nail in the side. He soaked the moss in water with a couple drops of ordinary dish detergent to pre-wet it, then pressed moss against the board. He pulled and cut the pup from the mother plant, using care to preserve root material for both plants. Don used the ice pick to firmly hold the pup against the board, then tied the line to the side nail and wound it several times around, both above and below (but not directly on) the growth point. The pup then was ready to hang, and new shield fronds will cover the fishing line within a few months. Similarly, the “scar” on the mother plant will be covered over with new growth.

Pups may either be left on the mother plant or may be removed when about five inches across. It is recommended that plants purchased in pots be mounted as described above. Place a label on the plant with the correct botanical name, as identifying species and cultivars later may be a challenge.

Don suggested that any balanced liquid fertilizer (half strength) can be used monthly during the growing season, all year except late fall in California. The tradition of providing potassium to *Platycerium* plants by placing a banana or banana peel behind the shield fronds is not recommended since it encourages slugs and snails. In nature, debris falls into the plant, providing some nutrition.

Water must get behind the shield fronds to the roots; spraying the front of the plant with a hose will not be adequate. Don places water drip lines into the shield fronds from above. Alternatively, small plants may be submerged in a tub of water for a few minutes, then hung to drain. Don recommends keeping plants moist but not wet, so large plants need water less frequently. As the plant grows, shield fronds may turn around the board. Good drainage is important at the base, and room for watering at the top. In nature it is common for Platyceriums to grow completely around a small tree trunk.

Most Platyceriums thrive in bright shade. In contrast, *P. veitchii* seems to grow best in full sun in Don’s yard. All the tropical species should be protected from cold. Plants of *P. bifurcatum* and other sub-tropical species thrive in coastal California outdoors with only protection of trees or lath structures, and tolerate short durations of cold temperature down to 28 degrees F.

Many San Diego Fern Society members keep Platyceriums, and several are very good at growing these unique ferns. Don suggests that new growers start with *P. bifurcatum*, *P. hillii*, and *P. veitchii*.

Suggested reading:

Vail, R. 1984. *Platycerium hobbyist's handbook*. Mena, AR: Desert Biological Publications. (note that some species names have been revised in recent years).

Hoshizaki, B., & Moran, R. (2001). *Fern grower's manual* (Rev. Ed.). Portland, OR: Timber Press.

Field Course: Taxonomy and Biology of Ferns and Lycophtyes

August 21–27, 2011, Humboldt Field Research Institute, Stueben, Maine

Drs. Robbin Moran (New York Botanical Garden) and Carl Taylor (National Science Foundation) will teach this course about the identification, phylogeny, and ecology of ferns and lycophtyes. Morning lectures will review the major families and place these in a phylogenetic context. The afternoon field trips will emphasize identification and ecology of local genera and species. The course will visit several habitat types along and near the eastern Maine coast to see as many species as possible. Herbarium specimens of northeastern species

not found locally will be available for study. Besides identification, we will discuss the distinctive biology of ferns and lycophtyes, such as their life cycle, hybridization, polyploidy, unusual adaptations (iridescent ferns, ant ferns, apogamy), biogeography, and uses of ferns by people. Carl Taylor will give several lectures on the biology and identification of quillworts (*Isoëtes*), a group in which he is a world expert. For more information, visit www.eaglehill.us/ or call the Eagle Hill office at 207-546-2821.

Book Review: Ferns and Fern Allies of Korea

Korean Fern Society, 2005. GeoBook, 6 1/4 x 9 1/4 inches , 400 pages, about \$40.00, www.geobook.co.kr
submitted by Barbara Joe Hoshizaki, May 2005*

Admiration and interest in ferns is an international matter. I am delighted to announce that the Korean Fern Society had produced a handsome fern book that is profusely illustrated with color photographs. This attractive book fills a longstanding gap in the fern literature on Korea. The members of the society cooperated in locating the species, photographing them, and writing the text. Members of the Nippon Fernist Club and the renowned fern specialist Dr. T. Nakaike of the Chiba Natural History Museum, Japan assisted them. Considering that the Korean Fern Society is only 4 years old and currently has less than 100 members, the fruitful outcome of the work speaks for the intense dedication, enthusiasm, and hard work of the members and the organizational skill of their president and their council. The president of the Korean Fern Society, Dr. Jon Kun Kim, tells me that last year (2004) the society members identified 33 species not recorded earlier and one new species. In the book there are 331 species treated. Dr. Kim believes that these entries cover about 90% of the Korean ferns.

The species are distributed in 28 families among 64 genera. A few varieties and forms are also included among the species entries. The classification system uses genera names, which are familiar to western readers. In the book's arrangement the botanical names of the fern families, genera, species entries, and index are given in Latin, a boon to our Western readers. All other information is in Korean. Highlights in the front matter are an illustrated glossary, four pages of close up photography showing different types of fiddleheads and fern sori. The ferns are arranged by families and each family has keys to the genera and each genus has keys to the species. Each entry has its Korean name along with the botanical name in Latin. For some species, a few synonyms in Latin are given.

After each entry a short description follows. Accompanying each entry are 3 to 7 colored photographs with

captions that usually depict views of the habit, frond and sorus. Additional photographs may depict other views and structures. A total of 1,200 photographs are used.

For fern lovers traveling to Korea, having access to this book is a must. Since many of the Korean ferns are in United States gardens, fern gardeners browsing through the pages will find familiar species, be able perhaps to match a long unidentified plant to its botanical name, or become piquant with some fern or photograph. (I was piquant about a fern called *Mankyua chejuense*; it turns out to be a relative of the adder's tongue fern that has palmate leaves!) Fern gardeners in the northeastern coast and the northwest coast of the United States may grow many of the ferns in this book. Many Korean species also grow in the southeastern states as well. A scattering of the subtropical and tropical ferns from the south coast of Korea that experiences warm ocean currents will also grow in Florida and southern California.

Non-Western language books that are so profusely illustrated as this fern book would be of much wider use if translations were available. It would be so helpful to have the botanical keys, if not the whole book, translated. Surely some fern lover with a retentive mind could translate the captions. Though many of the photographs are self explanatory, some of the details important in identification might be overlooked by non-Korean readers. Until such a project can be initiated, we are happy to have such a treasure of photographs and a list of Korean Ferns all bound together in this handsome book. Congratulations to the Korean Fern Society.

*From Joan Nester-Hudson: This review "fell through the cracks" in 2005 and I apologize for the late publication.

Election Results

Ballots for the office of Secretary of AFS were included with the 2011 renewal notices. There were 173 votes received and all of these were in favor of retaining

Mary Clay Stensvold for another term. There were no write-in votes. Good job, Mary!

Fern Foray in Southeast Ohio - June 24-26

There will tentatively be a weekend fern foray in southeast Ohio the weekend of June 24-26. The foray will be based in Athens, Ohio, but will go as far west as Highland County (Chillicothe area).

Participants can expect to see up to seven species of lycophytes, two horsetails, three ophioglossoids, and up to 40 true ferns (= total 52 species or so).

If you are interested, please contact John Knouse (Jknouse) at jknouse@frognets.net. Web: jknouse.athens.oh.us/ferns/Fern_Foray-2011.html.

Tentative schedule:

START NOON, FRIDAY, JUNE 24:

Drive to Highlands Sanctuary in Highlands County for the afternoon, then visit Paint Creek State Park in early

evening. This is a limestone-rich area; the dam site is an exceptional site for seeing *Pellaea glabella*.

SATURDAY, JUNE 25:

Drive to Lake Katharine State Nature Preserve, Hocking Hills State Park, and Crane Hollow Nature Preserve, in Jackson and Hocking Counties. These are very acidic, scenic areas with many sandstone cliffs.

SUNDAY, JUNE 26:

Explore in the Athens area around Strouds Run State Park. This is a more pH-neutral area.

All three days will feature beautiful scenery — if you like gorges and cliffs, then you will want to make it Friday and/or Saturday!

The Dr. & Mrs. Paul Dent Woodland Garden

by Ralph Archer

A woodland flower and fern garden, named The Dr. & Mrs. Paul Dent Woodland Garden, is now being installed at the Creasey Mahan Nature Preserve in Goschen, KY near Louisville, KY. Phase I of the woodland garden planting will cover approximately one acre of land. Last fall, most of this area was cleaned and prepared for planting and the remaining area was cleared this past spring.

The woodland garden will feature a display of native ferns and wildflowers with beds of exotic ferns and flowering garden plants separating the native plant woodland display from a picnic area. A re-circulating

water feature has been installed. It simulates a hillside spring feeding a stream lined with rock leading to a pond. It will also feed a bog area for wetland plants.

Current plans are to plant over 2,000 fern and wild-flower plants this spring. More than 1,200 ferns are on order. They cover 12 genera, 65 species and 110 taxa. Twenty of the fern species are eastern North American ferns native to this area. More than seventy species of wildflowers and fifteen species of flowering trees and shrubs have been ordered. As suitable fern and wild-flower species become available in future years, they will be added to the garden and natural display areas.

Approximately fifty native canopy trees were planted last fall to provide replacements for the existing first growth tree cover. Much of it has been and most of the rest will be removed as the more desirable, mostly oak and hickory, trees develop. Additional canopy and flowering trees plus flowering shrubs will be planted this year.

Phase II is planned to start in 2012. It will cover about five acres and consist of additional woodland planting. Plants will be selected from locally native plants and include six more native fern species. Phase III is under discussion. The current thinking is to develop an area that is considerably larger than Phase I and II combined. The site includes a natural spring, stream and wetland.



Scenes from Florida's Lygodium Wars

by Guenther K. Machol, gkmachol@hotmail.com

“Old World climbing fern (*Lygodium microphyllum*) is an aggressive, nonnative invasive fern of moist habitats in South Florida. The fern’s ability to grow up and over trees and shrubs and to form dense horizontal canopies allows it to cover whole communities of plants, reducing native plant diversity. Some Everglades tree islands are so completely blanketed by the fern that it is not possible to see trees and other vegetation beneath the fern canopy. First found to be established in 1965 in Martin County, this fern now infests more than 200,000 acres in South Florida” (1). For vivid scenes of its invasive growth habit, see the video,

Old World Climbing Fern (*Lygodium microphyllum*) (2): www.youtube.com/watch?v=DEYSqfkL75w

“**Japanese climbing fern (*Lygodium japonicum*)** is a highly invasive nonnative plant infesting public conser-

vation lands in North and West Florida and present in much of the southeastern U.S.” (3). “*L. japonicum* commonly forms patches of dense mats in the understory, and sends a few climbing strands into the canopy” (5). “Likely introduced into Florida as an ornamental plant in 1932, Japanese climbing fern appears to be rapidly spreading in North and West Florida, but also may pose a significant threat to Central Florida” (3). For graphic images, see the video,

Japanese Climbing Fern (*Lygodium japonicum*) (2): www.youtube.com/watch?v=47JHmMJpoFQ

Biological control is a vital part of Florida’s integrated approach to the management of these pests (5). The small brown lygodium moth (*Neomusotima conspurcatalis*) is one such agent (4). Recent efforts have led to the establishment of moth field populations at several



Fig. 1. *Lygodium microphyllum* infestation. Photo by Peggy Greb, USDA ARS, www.forestryimages.org

sites in Florida, where encouraging results — “substantial defoliation damage by caterpillars” — have been obtained. For graphic images of the defoliation damage, see pp. 15-22 in Boughton and Center (2010).

References

1. Weed Alert: Old World climbing fern (*Lygodium microphyllum*). Florida Fish and Wildlife Conservation Commission, Tallahassee, FL. Web: myfwc.com/media/226477/InvasivePlants_Lygodium.pdf
2. Plant ID Videos by UF/IFAS Center for Aquatic and Invasive Plants and the Florida Fish and Wildlife Commission, Invasive Plant Management Section. Web: plants.ifas.ufl.edu
3. Weed Alert: Japanese climbing fern (*Lygodium japonicum*). Florida Fish and Wildlife Conservation Commission, Tallahassee, FL Web: myfwc.com/media/226474/InvasivePlants_JapaneseClimbingFern.pdf
4. Boughton, A., & Center, T. (2010). *Prospects for biological control of Old World Climbing Fern – Encouraging results with the brown lygodium moth and update on other agents*. USDA, ARS, Invasive Plant Research Laboratory, Ft. Lauderdale, FL. Web: conference.ifas.ufl.edu/aw10/presentations/Wed/Session%20B/1635%20Boughton.pdf (Abstract at: www.ars.usda.gov/research/publications/publications.htm?SEQ_NO_115=253120)
5. Hutchinson, J., Ferriter, A., Serbesoff-King, K., Langeland, K. & Rodgers, L. (eds) (2006). *Old World Climbing Fern (*Lygodium microphyllum*) Management Plan for Florida, 2nd Edition*. Florida Exotic Plant Pest Council Lygodium Task Force, West Palm Beach, FL. www.fleppc.org/Manage_Plans/Lygo_micro_plan.pdf

Los Angeles International Fern Society

by Donna Radoumis

Please join us on the 3rd Friday of the month for the Los Angeles International Fern Society's (LAIFS) monthly meeting at the Los Angeles County Arboretum, 301 N. Baldwin Ave, Arcadia, CA (off the 210 freeway); 7:30 p.m. in the downstairs Lecture Hall. Stay for refreshments and for the Plant Opportunity Table.

For further information on LAIFS please go to: www.laifs.org.

Future Meetings

MAY 20:

Don DeLanom, Horticulturalist and Fairplex Landscape, Supervisor (Location of annual L. A. County Fair in Pomona). This is always a fabulous talk.

JUNE 11 AND 12: FERN AND EXOTIC PLANT SHOW AND SALE

Venders Selling Ferns, Exotic Plants, Garden Treasures, Art, Garden Supplies and Garden Books, Beautiful Gar-

den Displays, Many Drawings DAILY. Speakers: Ken Ueda & Norm Nakanishi on basic fern culture in different climates, Don Wood on *Platycerius*, Monica Salembeier on *Plumeria*, Others to be announced at the show. Los Angeles County Arboretum, 301 N. Baldwin Ave, Arcadia,. Show FREE. Admission to Arboretum \$8, Seniors \$6, Kids \$3

JUNE 17: LOTUSLAND OVERVIEW

Corey Wells, Plant Healthcare Coordinator of Lotusland. Corey is in charge of overseeing plant health throughout the 37 acre property. His specialty is compost tea for plant consumption (not for humans). Corey promotes organic and ecological practices. Lotusland website: www.lotusland.org

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2011 AFS Annual Meeting - July 9-12

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, Ferns and Other Plants of the LaBarque Creek Watershed, will occur on Saturday, 9 July, starting at 8:00 a.m.

Information on the Botany 2011 Conference will be posted as it becomes available on the conference website, www.2011.botanyconference.org. Those who have questions should contact the Membership Secretary, George Yatskievych (George.Yatskievych@mobot.org).



Huperzia porophila. Photo by G. Yatskievych.