



# Tropical Fern & Exotic Plant Society, Inc. Newsletter

Volume 14, Issue 5

Editor: Reggie Whitehead May 2012

## April in Review

**Speaker-** Dr. Bruce McAlpin  
**Topic-** Cultivation of Staghorn Ferns and other Tricks of the Trade

**Treasurer's report balance** — \$12,424.93

**President** Marni Valent called meeting to order at —7:35 p.m.

**Hospitality** — Emaly Israel and Martha Bogaard

**Raffle provided by** —Philip Iloo of Stelmar Gardens and David McLean of Trinity Church Gardens- (**Secretary's note:** I can't recall EVER seeing a better raffle table at a plant society. The raffle tables were full to the edges, and over a dozen types of Begonias were available. Among the plant luminaries: *Aspidistra 'Mary Sizemore'*, *Philodendron davidii*, *Sansevieria Rhino Horn*, several *Adiantum* ferns, *Hoyas*, and many more. This diversity is one of the best reasons to belong to the Society; it would be hard to find this level of sophistication in any other society. It is also a testament to the speaker, who always attracts a good crowd, who in turn appreciate the raffle...)

Other news: long time member and plant collector Dale Magrew died in late April at the age of 89. He will be missed by many for his contributions to horticulture

and to the Society.

Marie Nock introduced Dr. Bruce McAlpin, formerly of Miami-Dade Community College where he taught horticulture for 30 years, formerly on staff at New York Botanical Garden, and from Las Cruces Botanical Garden in Costa Rica. Bruce has spoken here several times, and always shows his prowess with his excellent speaking ability as well as a great show-and-tell for interesting plants. He is a superb grower, and now lives in the town of

*(Review continued on page 3)*

## Next Meeting, Monday, May 28

The Tropical Fern & Exotic Plant Society presents **Georgia Tasker** who will speak on **Gardens of South Asia: Botanical and Otherwise** on Monday, May 28<sup>th</sup> at 7:30 pm. in the Corbin Building.

Georgia is a writer on staff at Fairchild Tropical Botanic Garden. She writes for The Tropical Garden magazine, has a blog on gardening on Fairchild's website, and has written 3 handbooks in her on-going series, *Gardening with Fairchild*. She is also a passionate traveler. We are fortunate to have her share her travel experiences with us.

There will be plants for Raffle donated by **Tim Anderson** and **Craig Reid**. Refreshments will be served.

## Annual Show and Sale Reminders

Here are some last minute reminders regarding our upcoming Show and Sale.

You may pick up plant entry cards at the May 28 meeting, or on May 31 when you bring your plants in.

All plants must be identified before they are entered for display. If you are unsure of the botanical name, someone will be there to help you on May 31. All members are encouraged to participate in the display. Judging will be on a fair scale affording both the novice and seasoned grower a chance to win awards.

The success of this show depends on the generous nature of our members, who by the way made the past shows so successful.

All you will need to bring are your plants, we handle them from that point on. You will need to come back on Sunday after the show to collect your ribbons and plants.

Remember, we will begin accepting plants at 10 a.m. on Thursday, May 31. You may bring plants in, up until 7 p.m. that evening. **However, it would be extremely helpful for plants to arrive earlier in the day so that they may be properly placed in the display.** If you need help in getting a plant to the garden, please let Tom Moore know (305) 666-0219. We will try to accommodate all reasonable requests.

*(Show and Sale continued on page 2)*



(Review continued from page 1)

Muse, Florida, about 25 miles east of Ft. Myers.

The meeting started at 7:45, with Bruce speaking to the society on the return leg of a trip which took him through a number of interesting spots, including the Atlanta Botanical Garden and the legendary Plant Delights Nursery in South Carolina. Bruce brought with him some of his trademark interesting plants, including a giant pencil-leaved **Sansevieria**, some 5 feet tall. Also on display were curious succulents such as **Euphorbia hedyoides**, and a truly touchable **Mammillaria**, **M. plumosa**. On the subject of **Platyceriums**, Bruce made several salient points, starting with classification, moving on to mounting, and finishing with pest control and repotting / re-mounting plants.

Primarily, **Platyceriums** are grown as mounted plants on boards or plaques made of plywood or other durable materials. There are 2 basic groups of these ferns: the multiple-plant, freely pup-producing **P. bifurcatum** types, and the much larger and slower **P. wandae / P. superbum** types. The **bifurcatum** group has many variants, most of which are easy to grow and some can be easily purchased at retail garden centers. The larger **P. wandae / P. superbum** group are more the collectors' items, and often have more of a personality and require more attention to re-mounting than the **bifurcatum** group. Many ferns grow better with high quality, calcium free water such as rainwater or reverse osmosis ( RO ) water. Noted fern grower Charles Alford uses RO water with excellent results. Most of the staghorn species prefer to grow with moist root systems, although several species like to dry out somewhat in the winter / short day months to avoid root rots.

Bruce uses small pieces of roofing plywood / CDX sheathing as a mounting wood for his plants. Bruce uses Wisconsin Sphagnum Moss rather than the more expensive Chilean / New Zealand orchid moss. The plant is mounted to the board on top of the moss by criss-crossing nylon fishing line over the sterile shields, and using a staple gun tacker to affix the line to the edges of the boards. Care should be taken to avoid pinning down the center emerging frond; it will be damaged if the mounting wire or line cuts across it. In larger plant species, galvanized or aluminum wire can be punched directly through the sterile shield fronds and through pre-drilled holes on the board, to allow enough tension to be put on the plant to hold it on the board.

Bruce uses Milorganite fertilizer on his plants with good results, and suggested that Osmocote or Dynamite can also be used effectively, although at very low rates to avoid burning the plant. The fertilizer can be mixed in with the moss at the time of mounting. April is the best month to fertilize. Bruce suggested using Marathon granular insecticide to control many scale and mealybug problems, using ½ teaspoon on each plant. Once treated with Marathon and controlled-release fertilizer, the plant only needs regular watering to grow well. Certain species need cold-protection when temperatures go below 50F, but otherwise the plants are durable.

The standing room-only program ended at 9 p.m. The ensuing Raffle took half an hour, ending with a lot of happy members.

*Respectfully submitted*

*Craig Morell, C.P.A.*

*Certified Plant Addict*

# **A Brief Introduction to Ferns — *Continuation***

*Courtesy of the American Fern Society*

## **Sporangia**

The Sporangia are the reproductive structures of the ferns and fern allies. They are miniature sacks or capsules that produce the dustlike spores that are the "seeds" by which ferns are propagated. Several sporangia grouped together are called a Sorus. The arrangement of sporangia varies greatly in ferns. Most ferns that we would see as we walk through the forest would have their sporangia on the underside of the frond, arranged in an organized pattern usually associated with veins in the pinnule (leaf). Many times (but not always) the ferns provide a protective covering for the Sorus called an Indusium.

## **Spores**

The "seeds" of the ferns and fern allies are called Spores. Normally they are formed in groups of four. Spores contain oil droplets and sometimes chlorophyll in addition to their nucleus. Ferns drop millions, often times billions of spores during their lifetime but very few ever land in a spot suitable for growth.

## **Life Cycle of Ferns**

The life cycle of the ferns may seem complicated but it has worked quite successfully for millions of years. Though spores come from fronds of ferns, the fronds do not come directly from the spores. Spores from the parent fall to the ground and with an enormous amount of luck (millions perish for every success) they will find suitable moisture and light. The tiny single-celled organism starts to grow by cell division. Soon orderly arrangements of cells form little green heart shaped plants or Prothallia (gametophytes). These plants go unnoticed by most people as they are only 1/2 inch or less across and lie flat on the ground. This is an independent plant with its own simple "root" system (rhizoids) to provide it with nutrients and water.

The Prothallium then grows Antheridia or male organs and Archegonia or female organs on its underside. The Antheridium produces spermatazoids (or antherozoids) which will swim via a droplet of water to the egg produced by the Archegonium. The fertilized egg then begins to grow the Sporophyte, the plant that we know as a fern.

Although this is the primary form of propagation there are several other ways that ferns procreate. Apogamy, the production of a sporophyte without fertilization, usually occurs when a gametophyte is grown under dry conditions. Some ferns adapted to life in desert regions use this form of reproduction more frequently than others. The other major form of propagation is vegetatively via their rhizomes, in an infertile hybrid (there are quite a few among the ferns) this would be their only form of propagation.

## **Life Cycle of the Fern Allies (briefly)**

Fern allies procreate in a similar manner to the ferns. The Lycopodiums have a very similar life cycle, the main difference is that their prothallia normally grow underground gaining nutrients with the help of mycorrhizal fungus. Equisetum (the horsetails) have two different spores which grow into separate male and female plants. The spermatazoids must swim from the Antheridium of one Prothallium to the Archegonium of another Prothallium. Selaginella and Isoetes, two other fern allies also have differentiated types of spores. There is the female Megaspore, that is much larger than the male Microspore. The Megaspores are able to render more assistance in the growth of the young sporophyte when it arises.

*It's ShowTime*  
*Annual Fern & Exotic Plant Society*  
*Show and Sale*  
*Saturday and Sunday*  
*June 2nd and 3rd*  
*Come, have fun, you'll love it.*

**Raffle Tables for — 2012**

*May 28.....Tim Anderson and Craig Reid*

**Tropical Fern & Exotic Plant Society**  
6880 S. W. 75 Terrace  
South Miami, FL 33143

\_\_\_ Individual Member \$15. \_\_\_ Household Membership \$17.

\_\_\_ Life Membership \$125. \_\_\_ Life Household Membership \$150.

Member's Name: \_\_\_\_\_

Name of additional member: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip + 4: \_\_\_\_\_ + \_\_\_\_\_

E-mail: \_\_\_\_\_

Phone: \_\_\_\_\_ Amount enclosed: \$ \_\_\_\_\_

## ***Tobacco: Our New Friend***

by John Banta

In 1559, Jean Nicot traveled from France to Portugal to negotiate a royal marriage. A botanist friend invited him to dinner. After dinner, the botanist showed Nicot an interesting plant he had received from Florida. This plant had remarkable medicinal values. The Spanish name for the plant was “tabaco” derived from a New World language. Nicot introduced tobacco to the French court. Its reputation as a medicinal herb assured its wide distribution. Linnaeus named the plant “**Nicotonia**” in honor of Nicot’s role in introducing the plant. At that time, 1754, there were only 2 species in the genus. We now recognize over 60 species of **Nicotiana**.

On any list of plants beneficial to mankind, tobacco would be a dubious addition. It seems that Australian

tobacco, *Nicotiana benthamiana*, has taken the place of eggs in the production of influenza vaccine. The last swine flu pandemic required 6 months of egg based technology to produce any quantity of vaccine to reach the market. *Medicago*, the company producing the new flu vaccine claims that it can produce over 10 million doses of vaccine in one month. *Medicago* utilizes a neat new method to produce virus-like particles. These virus-like particles contain no viral genetic material so they cannot produce the flu. Over 75% of volunteers developed an immune response to the virus. *Phillip Morris International* has entered into a partnership with *Medicago* to explore new opportunities in tobacco adjacent businesses.

***Next Meeting, Monday, May 28, Georgia Tasker, Gardens of South Asia , 7:30 p.m.`***

***Tropical Fern & Exotic Plant Society, Inc.  
6880 S. W. 75 Terrace  
South Miami, FL 33143***