JANUARY 2010

AFTERNOON TEA: MOMMY AND ME TEA
Sunday, January 17, 3:00 p.m.
Tickets and information at 305.667.1651.

THURSDAY NIGHTS AT FAIRCHILD
Thursday, January 21
6:00 – 9:00 p.m.
Family Movie Night, Kung Fu Panda

4TH ANNUAL INTERNATIONAL CHOCOLATE FESTIVAL WITH COFFEE AND TEA
Friday, Saturday and Sunday
January 22, 23 and 24
9:30 a.m. – 4:30 p.m.

MOONLIGHT TOUR AND MEMBERS’ LECTURE
Wednesday, January 27
6:00 – 8:00 p.m. Lecture
7:00 – 9:00 p.m. Moonlight Tour
Finding Balance, Dr. Kaia Calbeck, South Miami Hospital. Exclusively for members.

THE FAIRCHILD CHALLENGE PRESENTS: ENVIRONMENTAL DEBATES
Saturday, January 30
8:30 a.m. – 3:30 p.m.

FEBRUARY 2010

GALA IN THE GARDEN
Saturday, February 6, 6:30 p.m. – 12:00 a.m.
Tickets and information at 305.667.1651, ext. 3375.

FAMILY FUN DAYS ON SUNDAYS
Sunday, February 7, 12:00 – 4:00 p.m.

MEMBERS’ LECTURE
Wednesday, February 10, 6:00 – 8:00 p.m.
The Wilderness Waterway and Other Backcountry Canoe/Kayak Adventures in Everglades National Park, Park Ranger Christi Carmichael. Exclusively for members.

THURSDAY NIGHTS AT FAIRCHILD
Thursday, February 11, 6:00 – 9:00 p.m.

EASTER BRUNCH AT FAIRCHILD
Sunday, April 4, 10:30 a.m. – 2:30 p.m.

FAMILY FUN DAYS ON SUNDAYS
Sunday, April 4, 12:00 – 4:00 p.m.

MEMBERS’ LECTURE
Wednesday, April 14, 6:00 – 8:00 p.m.
Exploring Florida Bay and Other Tricky Shallow Waters in Everglades National Park, Park Ranger Bob Showler. Exclusively for members.

THURSDAY NIGHTS AT FAIRCHILD
Thursday, April 15, 6:00 – 9:00 p.m.
Howl at the Moon, bring your pooch for a night at Fairchild

PLANT SHOW AND SALE
Presented by the Bromeliad Society of South Florida
Saturday and Sunday, April 17-18
9:30 a.m. – 4:30 p.m.

APRIL 2010

THURSDAY NIGHTS AT FAIRCHILD
Thursday, April 1, 6:00 – 9:00 p.m.
Family Movie Night, Hotel for Dogs, dogs invited!

EASTER BRUNCH AT FAIRCHILD
Sunday, April 4, 10:30 a.m. – 2:30 p.m.

FAMILY FUN DAYS ON SUNDAYS
Sunday, April 4, 12:00 – 4:00 p.m.

MEMBERS’ LECTURE
Wednesday, April 14, 6:00 – 8:00 p.m.
Skin Cancer Awareness and Prevention, Staying Safe in the South Florida Sun, Dr. Arthur Colsky, South Miami Hospital. Exclusively for members.

THURSDAY NIGHTS AT FAIRCHILD
Thursday, April 11, 6:00 – 9:00 p.m.
International Orchid Festival Preview and Art Lecture

8TH ANNUAL INTERNATIONAL ORCHID FESTIVAL
Friday, Saturday and Sunday
March 12, 13 and 14, 9:30 a.m. – 4:30 p.m.

THURSDAY NIGHTS AT FAIRCHILD
Thursday, March 25, 6:00 – 9:00 p.m.
Movie Night, Pretty in Pink

This schedule of events is subject to change. For up-to-the-minute information, please call 305.667.1651 or visit www.fairchildgarden.org.
This tree, behind Dr. Hong Liu and her Chinese colleagues and outside of a Buddhist temple, is the sole surviving wild plant of *Carpinus putoensis*, a tree species endemic to the Zhoushan Archipelago.

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Tropical monsoon forest in the protected area of Diaoluoshan, Hainan Island. Photo by Fu-De Liu

Palau Island, Micronesia, showing the habitat of the Ponapea palm. Photo by Carl Lewis
SCIENCE AT FAIRCHILD:
Conservation and Biodiversity on Pacific Ocean Islands

By Hong Liu, Alan Tye, Patricia Jaramillo, Walter Simbaña, Pablo Madriz, Shuqing An, Zhongsheng Wang, Wei-Xiang Xu, Fa-Guo Wang, Han Xu, Xi-Qiang Song, Jennifer Trusty, Mike Maunder, Carl Lewis and Javier Francisco-Ortega

Composite of LANDSAT imagery, Mosaiced version by ESRI, degraded 150m resolution. Prepared by Daniel Gann, FIU, GIS RS Center.
At Fairchild we continue to follow the steps of Dr. David Fairchild, who 70 years ago (December 1939 – June 1940) navigated on board the Chinese junk *Cheng Ho* to explore and collect plants from remote islands of the Pacific Basin. 2009 was the multiple anniversary year of Charles Darwin’s birth (200 years), the publication of the *Origin of Species* (150 years) and the establishment of one of our major Pacific collaborators, the Charles Darwin Foundation for the Galapagos Islands (50 years), we are also celebrating our links with places that Darwin visited on his famous voyage and where he made important plant collections, particularly in the Galapagos Islands.

Plants from the Pacific Islands are at the core of our history and they represent an important component of our living collections, research, conservation and education programs. Our research and conservation program in the Pacific is increasingly active. We have ongoing projects based on plants of the Galapagos, Cocos Island, Micronesia, Hainan Island, Hawaiian Islands and the Zhoushan Archipelago. These activities have been instrumental in our graduate program, have provided new accessions for the living collections of the garden and, most important, have helped to establish partnerships among researchers from Abu Dhabi, China, Costa Rica, Ecuador, Kenya, Micronesia, Samoa and the United States.

As part of our graduate program with Florida International University (FIU), Nicole Andrus and Dr. Jennifer Trusty obtained their master’s and Ph.D. degrees working with Galapagos and Cocos plants, respectively. Cocos Island is relatively close to the Galapagos and is situated approximately halfway between this archipelago and the Central American coast. With the support of the Parque Nacional Isla del Coco, the Charles Darwin Foundation, the U.S. Environmental Protection Agency and the Tropical Biology Program and Latin American and Caribbean Center of FIU, Dr. Jennifer Trusty and Nicole Andrus made several expeditions to those islands. Nicole Andrus focused her study on *Darwininiothamnus*, a Galapagos genus of sunflowers dedicated to Charles Darwin; she found that *Darwininiothamnus* is divided into two major taxonomic groups. One of them is closely related to species from Chile, whereas the second has its nearest relatives in the Antilles. This study provided the first clear molecular evidence for a link between Galapagos and Caribbean floras. Her field studies confirmed that one species, *D. alternifolius*, is critically endangered and on the verge of extinction. Species of this genus are severely affected by the cottony cushion scale, *Icerya purchasi*, an invasive insect from Australia that arrived in the Galapagos in 1982.

Dr. Trusty has produced the most comprehensive flora study for Cocos Island. Her study also led to the discovery of two new endemic species of *Miconia* (Melastomataceae) and provided a needed framework for future conservation studies. Using DNA techniques, Dr. Trusty also investigated the affinities of the endemic flora with that of the nearby Galapagos Islands and the mainland; her molecular data appear to confirm a lack of phytogeographic links between Galapagos and Cocos.
Our team of palm researchers and horticulturists has been studying the rare palms of Micronesia. In particular, they have been working to conserve palms in the genus Ponapea, which are found on the islands of Pohnpei, Kosrae and Palau. Our DNA research determined that Ponapea palms have a high priority for conservation because of their unique phylogenetic placement. For this reason, the endangered and critically endangered species in the genus have a high priority for conservation.

The Hawaiian Islands represent the most isolated piece of land on our planet and both the Americas and Australasia have been major sources for the flora of this archipelago. Using molecular data we have confirmed that three species of the morning glory genus Jacquemontia represent an extraordinary example of long-distance dispersal linking the Hawaiian Islands, the Caribbean Basin and Tropical Africa; no other plant group has such a remarkable transcontinental disjunction involving the tropics from the New and Old World.

Our latest island projects in the Pacific are in the South China and East China seas and focus on Hainan Island and the Zhoushan Archipelago. These projects are supported by several funding agencies from China and by the Mohamed Bin Zayed Species Conservation Fund. We are currently developing three major studies on these islands. Being part of the Indo-Burma Biodiversity Hotspot and with an area of 13,089 square miles, Hainan is the second largest island of China. It is only 15 miles from the Leizhou Peninsula (Guangdong Province) and has the most pristine and extensive tropical forests of China. We are preparing an endemicity study for the seed plants of Hainan that involves several colleagues from China and the United States (see the Winter 2009 issue of The Tropical Garden). As part of his master’s thesis at Nanjing University Wei-Xiang Xu is using DNA tools to investigate the affinities of Wenchengia, a mint genus endemic to Hainan that is a complete taxonomic enigma.

Zhoushan is composed of more than 1,400 islands and 3,300 reefs and it is the largest archipelago of China. The islands are located on the East China Sea close to Zhejiang Province. Zhongsheng Wang is the principal investigator of a project focusing on conservation of the critically endangered Carpinus putoensis (Betulaceae), a species endemic to Putuo Island that has a single individual remaining in the wild. We are trying to understand the reproductive biology of this species in order to propagate it for future reintroduction. The project also has a strong outreach component, aiming to increase conservation awareness of the species on the island and to provide conservation guidelines to land managers.

Our studies on the Pacific Islands are part of international partnerships. They not only aim to advance science, education and plant conservation in the Pacific, but also to establish multicultural bridges between the West and the East. From this perspective they will help to fulfill the role of Fairchild in our local community and worldwide as a catalyst for education, horticulture, science and the arts.

Follow the Cheng Ho expedition on our blog!

Exactly 70 years after David Fairchild’s famous Cheng Ho expedition, Fairchild is celebrating by posting daily journal entries written by the ship’s photographer, Edward “Ned” Beckwith. Follow along with the journey at www.fairchildgarden.org/chengho.