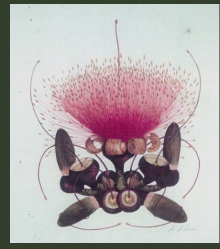


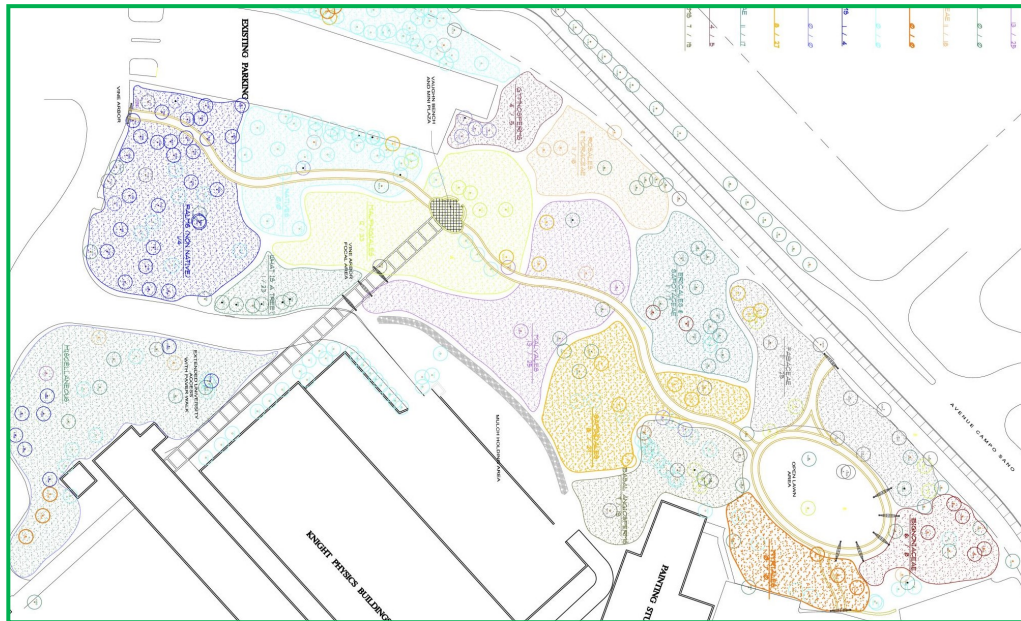
Gifford Arboretum Newsletter

Fall 2013

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A New Plant Catalog for the Gifford Arboretum



Map of the Gifford Arboretum Showing 14 Exhibit Areas

The Gifford Arboretum was created in 1947 to serve the educational and research needs of the University of Miami. While groupings by plant families and a special section for native trees have always been pursued, it wasn't until the last decade that the existing and excellent division of the Arboretum was created. The catalyst for this most recent rework was the destruction visited upon the Arboretum by Hurricanes Wilma and Katrina. But the credit for creating the 14 Exhibit design, and then using that to replant the Arboretum with many new and unusual species, belongs to Professor Carol Horvitz (then Arboretum Director) and Dr. John Cozza (then Aldridge Graduate Student Curator for the Arboretum). They benefited from the input of many interested botanists, educators, and concerned citizens in creating the plan, and their plant additions greatly increased our collection's value for educational and research purposes, as well as for inspiring interest in and appreciation for tropical plants. I have been privileged to follow in their footsteps (and those of many others who have loved and assisted the Arboretum). I have tried to not only continue and foster their overall vision for the Arboretum, but to add value to our collection and its interpretation when I can.

The present design entailed dividing the Arboretum into 11 Exhibit areas based on taxonomic distinctions, and 3 Exhibit areas based on a theme (What is a Tree?) or geographic division (S. Florida Natives and Maya Cocoa Garden). While our natives section has been a long-standing part of the Arboretum, the other 2 non-taxonomic exhibits were new concepts that provided new direction.

Overlaying a new master plan is never easy with a garden that is already over 50 years old unless you are going to tear everything out and start over again. Obviously, starting over was not an option, especially since the existing trees had been ones selected by former UM botanists for their botanical, ethnobotanical, and/or evolutionary interest. But Drs. Horvitz and Cozza created a division of the Arboretum that helps communicate its present and instruct its future even as they preserved historic specimens of value and beauty, but that were not appropriate to an Exhibit's stated parameters.

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However, for additional reasons, the Exhibit names must be considered guidelines that instruct and inform, but do not create limitations. Having only 14 Exhibits based on taxonomic and geographic divisions can only begin to cover the great diversity of plants, but maintaining a diverse collection is very important for our education and research goals (while also often having conservation value). In addition to historic placements and biodiversity goals, plant selection and placement decisions must also include horticultural considerations, including then available space. Shade loving plants need to be planted where they get shade, large specimens where they have room to grow, water lovers where they get water, etc. As a result of these various factors, many of our Exhibits include at least some plants that do not fit that Exhibit's stated parameter. Some of these would be appropriate in other Exhibits, but there are also trees that are not within the parameters of any existing Exhibit. Nevertheless, these plants are clearly of significant value to the Arboretum's collection.

In planting new trees, I have tried to follow the divisions created in our Exhibit structure as much as reasonably possible. For example, all of the 7 new palm species have been planted in the Arecaceae Exhibit. But horticultural and space considerations can make it inadvisable to maintain a too rigid approach. For example, 9 gymnosperms have been added, but there was only appropriate space for 5 of those in the Gymnosperm Exhibit. The others were cycads, with three of them being *Dioon* species that were planted close by in the Moreaceae Exhibit. However, the other new cycad (*Encephalartos ferox*) needs shade, and it was planted in the What is a Tree? Exhibit. With all of these cycads, horticultural needs and space limitations trumped the desire to have all of our gymnosperms planted in the Gymnosperm Exhibit area.

There has also been one deviation that was primarily for aesthetic reasons. Thus, of the 8 new Fabaceae species, all were planted in the Fabaceae Exhibit except for one that was also appropriate for the Maya Cocoa Garden (*Gliricidia sepium*) and one that is a vine that was planted on a large oak tree next to the parking lot where the Arecaceae and South Florida Natives Exhibits meet. This last addition was a Jade Vine (*Strongylodon macrobotrys*), a vigorous Fabaceae species that requires a stout tree for a suitable trellis. But even more than horticultural considerations, the primary reason for this placement decision was that its turquoise, pendulous flowers are both striking and beautiful. They are not only effective for inspiring interest in tropical plants, but I believe they will help raise awareness of our Arboretum so that it does not continue to be our community's best kept secret.

Our last catalog was created in 2008 and it provided a list of the then existing collection based on Exhibits. However, it was not very helpful for locating plants in the ground because the catalog lacked plot maps. In addition, loss of specimens in the collection and the many taxonomic changes of recent years have caused the catalog to become out of date. Obviously, the catalog also does not include plants added to the Arboretum since that time except when they were replacements of prior species. In addition, taxonomic changes, new additions, losses of prior specimens, and damage or loss of old signage have caused us to also need new tree identification signs in the Arboretum.

While the mixes of plants in the Exhibit areas foster many of the values that make our Arboretum great such as botanical diversity, ethnobotanical interest, evolutionary insight, and ecological interactions, they also make it harder to arrange interpretation of the collection in a logical way that maximizes its value for education. We need a catalog that is comprehensive but also easy to use for those seeking to learn about our plants, including being able to easily locate species of interest in the Arboretum.

After consideration and consultation, it was initially decided that the new catalog should be online rather than printed, and that the plant lists by Exhibit area should be paired with verbal descriptions of the Exhibits as well as plot maps. While another printed catalog may become desirable in the future, being online allows us to update the catalog as plants die or new additions occur; make updates as taxonomic changes occur; and provide free access to the information for our constituents. It also provides the framework for further improvement in the future. It is my hope that we will not only gradually upgrade the quality of our online information (for example, the ability to type in a plant name and instantly be shown where it is located in the Arboretum), but also information readily available in the Arboretum itself (an expansion of QR codes in the Arboretum could someday not only provide our catalog information, but also comprehensive information on each species).

For our listings of plants, it was decided that the best way to organize the information is initially by where the plants are located physically in the Arboretum. Letter designations were adopted for each Exhibit starting with A for the Arecaceae Exhibit and ending with N for the Maya Cocoa Garden. Accordingly, if a plant identification number starts with 'A,' one would know immediately that this specimen is planted in the Arecaceae Exhibit.

Each individual plant specimen then needs to be assigned its own identification number and the old catalog's use of alphabetical order in assigning numbers within Exhibits was continued. However, in the new system, there will be 3 plant lists for each Exhibit area. First will be a list of species in alphabetical order that correspond to that Exhibit's title; second will be a list of species that

other Exhibit areas of the Arboretum; and, finally, a list of species planted in the Exhibit that do not fit within the Exhibit's title and, where applicable, indicating the Exhibit to which it belongs botanically and/or geographically. Thus, for example, with the Arecaceae Exhibit, the first list is of the 43 palms planted in the Exhibit, listed alphabetically by botanical species names. The second list then lists palms that are located in other Arboretum Exhibits and indicating which one so that they can be located easily. The third and final list is the specimens in the Arecaceae Exhibit that are not palms and accordingly do not technically belong there. Examples would be our majestic *Enterolobium cyclocarpum* and our *Ipomoea carnea*, neither of which are palms, but are planted in the Arecaceae Exhibit. The former is a member of the Fabaceae family and the Fabaceae Exhibit is duly noted as the area to which it belongs taxonomically. On the other hand, *Ipomoea carnea* is a member of the Convolvulaceae family and part of the Solanales order, which is outside the parameters of our Exhibit designations so no further Exhibit designation is indicated. Together, these lists not only provide a list of every Arecaceae species in the Arboretum and their locations, but also a list of every plant in the Arecaceae Exhibit. To also help easily recognize which species planted in the Arecaceae Exhibit are palms and belong within the Arecaceae family, the first list uses one or two digit numbers, while the third list of non-Arecaceae species in the Exhibit uses three digit numbers.

While space does not permit the inclusion of the verbal description or plot map of the Arecaceae Exhibit, shown on the next page are shortened plant lists for the Arecaceae Exhibit so that you can see how the proposed system would work. While we hope you will appreciate and agree with this new approach, the new catalog is a work in progress and we welcome any constructive suggestions you might have. Please contact Steve Pearson at sdpearson@bio.miami.edu or (305) 284-1302 with any comments or suggestions. In addition if you are interested in helping edit, spell check, or gather information for the catalog, please contact me. As time allows, a goal is to implement a short list of informative codes for the "Comment" area. For example, H for hardy, CS for Cold Sensitive, ST for Salt Tolerant. Helping research this information is fun, a great way to learn, and appreciated. Thank you!



Part of the Arecaceae Exhibit at the Gifford Arboretum.

*Note young *Bactris gasipaes* in lower left corner of the photo on left when planted 2 years ago and, in photo on right, how it looks today.*

Director's Message

Thank you to all Friends of the Gifford Arboretum for your interest in and support of our Arboretum. If you are able, please make a year-end donation to the Arboretum to help us with current needs, including new identification signs for our trees, structural pruning for hurricane resistance, and nutritional supplements needed to properly maintain a rare and unusual collection.

As a short follow up to my last Director's Message proposing the need to change the approach and philosophy in our landscaping ordinances, many have said they agreed with my comments. However, to date, there has been no movement to get any municipality to give my proposal a try or to take advantage of the funding I offered. As I drove through the Redland area recently, I couldn't help noticing how many wood rose vines are growing rampant because their bright yellow flowers drew attention to their presence. We know that this is an aggressive, invasive species, yet do not require its eradication. As invasive plants (and animals) continue to reek havoc on our natural ecology, I can't help feeling that we are



like Nero and fiddling while Rome burns.

Areaceae (The Palms)

Areaceae Species in the Areaceae Exhibit

Identification Number	Order	Family	Subfamily	Genus & Species	Common Name	Area of Origin/ Distribution	Comments
A1	Arecales	Areaceae	Coryphoideae	<i>Acoelorrhaphe wrightii</i>	Everglades Palm, Paurotis Palm	Florida, West Indies, Central America	Salt tolerant clustering palm. Palmate leaves light green above and silver underneath
A2	Arecales	Areaceae	Arecoideae	<i>Aiphanes aculeata</i>	Ruffle Palm	South America	Solitary trunk and spiny. Fruit edible and seeds used to make candles. Pinnate
A3	Arecales	Areaceae	Arecoideae	<i>Bacris gasipaes</i>	Peach Palm	Central and South America	Solitary or clumping palm with pinnate leaves and edible fruit. Commercial value as sustainable source of heart of palm. Unlike GA specimen, most <i>B. gasipaes</i> have spines on trunks.
A4	Arecales	Areaceae	Coryphoideae	<i>Bismarckia nobilis</i>	Bismarck Palm	Madagascar	Solitary trunk with ringed indentations from old leaf base. Large palmate leaves, often silver.
A5, A6	Arecales	Areaceae	Arecoideae	<i>Carpentaria acuminata</i>	Carpentaria Palm	Northern Australia	Sole species in Carpentaria genus. Slender, tall trunk, with elegant pinnate leaves.

Areaceae Species in Other Gifford Arboretum Exhibits

Identification Number	Order	Family	Subfamily	Genus and Species	Common Name	Area of Origin	Comments	Location in G.A.
N-	Arecales	Areaceae	Arecoideae	<i>Attalea cohune</i>	American Oil Palm, Cohune Palm	Mexico and Central America	Source of cohune oil used by Mayans as lubricant, and for cooking and soapmaking	Maya Cocoa Garden
N-, N-, N-, N-	Arecales	Areaceae	Arecoideae	<i>Cocos nucifera</i>	Coconut Palm	Pantropical (Naturalized)	Origin unknown but likely Pacific. Nuts float but mainly distributed by man	Maya Cocoa Garden
L-, L-, N-	Arecales	Areaceae	Coryphoideae	<i>Sabal palmetto</i>	Sabal Palm/Cabbage Palm	South Carolina to Florida, Bahamas	State Tree of Florida. Source of thatch and heart of palm. Hardy. Palmate.	Florida Natives, MCG
N-	Arecales	Areaceae	Arecoideae	<i>Syagrus romanzoffiana</i>	Queen Palm	Southeast Brazil to Northeast Argentina,	Ornamental, but also used in Philippines for thatch and food wrapping. Pinnate	Maya Cocoa Garden

NOTE: There is also a group of *Sabal palmetto* at the west end of walkway from the south end of Physics Building to the G.A.

Non- Areaceae Species in the Areaceae Exhibit

Identification Number	Order	Family	Subfamily	Genus and Species	Common Name	Area of Origin	Comments	G.A. Exhibits in which Species Belongs, if any
A101	Fabales	Fabaceae	Mimosoideae	<i>Enterolobium cyclocarpum</i>	Guanacaste, Ear-pod tree, parota, huanacastle	Central America, Mexico to Colombia	Large, spreading tree that delays fruit development up to 9 months to coincide with rainy season. Wood is water resistant. Seeds from green pods boiled and eaten	Fabaceae, MCG
A102	Solanales	Convolvulaceae	N/A	<i>Ipomoea carnea</i>	Shrub Morning Glory	Mexico, Central America, South America	Stems used to make paper and pipes. Medicinal for anticarcinogenic and oxytoxic properties.	N/A

Do You Really Want to Plant Acid Loving Plants in South Florida?

What can be done to help acid loving plants thrive (or even survive) in southern Florida is an issue that often arises for plant lovers. Here, our soil Ph generally ranges from 7.4 to 8.4, squarely within the alkaline category which is generally considered anything above a Ph of 7. There are pockets of soil in Miami-Dade County that are sandy and have a more acidic Ph. But, if you part of the majority, you live in areas where your soil consists mostly of oolitic limestone, a substance that is both hard and very alkaline.

My basic advice is to keep your acid loving plants in pots where the soil is not in contact with our alkaline soil. Of course, potted plants have their own sets of requirements and potential problems, but there is generally more work (and often expense) involved in maintaining an acid loving plant in our soil than in a pot. Why not just plant your yard with easy to grow things that fit your tastes, but are not invasive? Many flowering trees, fruit trees, and palms are easy to grow, zericapic, and benefit the environment. However, to make sure that we are providing habitat and food for our native fauna, I advocate that every yard should include at least some native species. If you take the foregoing advice about acid loving plants, it is more likely that you will be enjoying favorite pastimes like sports and boating on weekends, while also maintaining a yard that is lovely and that benefits you and the environment.

But if you are a CPA (Certified Plant Addict) and your favorite thing is to be working in your garden on weekends, then you are probably going to want to plant some acid loving plants because experimentation is part of the fun of being a gardener. It is said that gardening is the slowest of the performing arts, and one consequence of longevity is that there will always be some things that just don't make it in spite of your best efforts. But so what? You tried, and maybe your next adventure will turn out better! If you are going down the path of planting acid lovers, be prepared for some failures.



Myrciaria cauliflora, an acid loving plant in bloom
(Picture from growjim.blogspot.com)

One thing that we can do is to amend our soil to make it more acidic. One of the best ways for that is by working peat moss into your soil and, with very acid loving plants like Jaboticaba (*Myrciaria cauliflora*), you can't overdue it. However, as Maurice Kong taught me years ago, you should only add peat to your soil after the peat has been thoroughly soaked; dry peat will wick moisture away from your plant, which is not something to be encouraged, unless perhaps you are in a cactus and succulent garden! Even with peat moss, however, the soil acidity will eventually be neutralized by contact with our native alkaline soil and the process will be even quicker if you are irrigating with water that is alkaline.

What else can be done? Well, besides utilizing special fertilizers and supplements that can quickly get expensive and can sometimes be detrimental to the environment, the next best thing for everyman is to use lots of mulch around your plants. Larry Schokman has been preaching this as gospel for decades, and Larry and I worked together on the Miami Beautification Committee to pioneer the use of mulch in unmanicured public areas. In conjunction with volunteer based tree plantings in the late 80's and 90's, we utilized LOTS of mulch around flowering trees planted on I-95, natives planted at the NW 17 Ave. entrance to SR 836, and in many other plantings. That so many of those trees continue to thrive is evidence of the benefits of heavy mulch for almost all plants (again, we are not talking succulent gardens or, as a rare exception, citrus, which likes highly aerated soil). Not long after that work began, mulch started being used in parks and other

public landscapes in the county, and soon municipalities were also following suit. Of course, they sometimes still haven't learned that mulch is generally best configured like a donut, and never like an anthill, but greater use of mulch was a step forward. Mulch provides many benefits to plants and, for our purposes, one of them is that it helps acidify the soil as it decomposes.

The next easy thing that can be done to further increase your soil's acidity is to recycle your coffee grounds, tea, and even leftover liquid coffee and tea by pouring them around the base of your acid loving plants. This can really give your acid loving plants a boost, especially if you are a regular and hearty drinker of coffee or tea. As Craig Morell taught me, adding these, especially along the drip line, will also keep nematodes and millipedes away from your plants. That's an added benefit that should also be remembered if you like to grow tomatoes.

Always remember that every species is unique, and that every individual is a little different. No formula fits everything so always try to consider what habitat your plant grows in naturally. Research on plant origins may sound like work, but it is part of the mystery and challenge of gardening and, I think, the fun. And don't get too discouraged when you are not successful. Some of my favorite tropical rhododendrons, which have inspiringly

5

tropical flowering plants are the Vireya Group of beautiful flowers. I have been the happy owner of two

of them and, having long been a lover of temperate rhododendrons, I thought I understood what the tropical Vireyas would like, including an acidic soil and moisture. While that was true, and I was smart enough to grow them in pots, my plants slowly died, with one lasting a little over 2 years. One of my mistakes was that in my quest to acidify the soil and hold moisture, I had mixed in too much peat. I later learned that this group of rhododendrons tends to be epiphytic and needs good drainage as well as air circulation. My soil was too heavy and I lost those beloved plants, but I can't wait to try again! However, my next challenge may be to substitute local groundwater with something less alkaline for irrigation. Our local water is a major reason why many of our attempts to acidify the soil fail, or at least need ongoing maintenance (i.e. more mulch and coffee grounds). I will have ponder that further as I don't have a reverse osmosis system (expensive) or a rain barrel (cheap and good for environment too, specially if alternative is city water), but the point is that a little research about new plants will increase your odds of success.

As a last example of why a plant's native habitat needs to be duly considered, I have often thought how nice it would be if we could grow more Australian plants here as many of them come from areas of similar rainfall amounts, temperature ranges, and soil types. But that is often difficult because those plants evolved with wet winters and dry summers, something that we can never naturally provide here. So, again, we are stretching the envelope. Some enjoy the challenges of that, but for others, stick with easier to grow plants and enjoy the other things that you like to do on weekends. And if you really, really want to grow acid lovers, then also consider moving to Opa Locka. Like some other northern parts of the county, the sandy soil there has an acidic Ph of 6.4.

ARBORETUM EVENTS SINCE LAST NEWSLETER

April 4, 2013: Dr. Walter S. Judd, University of Florida Distinguished Professor of Botany - Our Gifford Arboretum Lecturer of 2013 is a world renowned tropical botanist and taxonomist. Dr. Judd presented **“An Introduction to the Diversity of Flowering Plants: How Much has Changed as a Result of the Molecular Revolution.”** We learned that, although there have been some significant breakthroughs as a result of DNA molecular analysis, it has mostly supported the traditional taxonomic divisions based on morphology. In addition, differences were often simply the result of improper morphological analysis and the use of “drop box” families when taxonomists were not sure of proper classification.

May 2, 2013: Ms. Linda Evans, President of the Miami Blue Chapter of the North American Butterfly Association – Possessing a wealth of knowledge and a desire to share it with others, Ms. Evans presented **“Butterflies: How they Function; What they Need; and Why they are Important.”** We learned what butterflies inhabit South Florida, what plants need to be grown as larval host and nectar plants, and the rewards of doing so for ourselves, local fauna, and the environment

September 4, 2013: Ms. Kirsten Llamas, Author of Tropical Flowering Plants – After earning a MS in Botany from UM, Ms. Llamas combined her interest in plants with her skills in photography to create Tropical Flowering Plants. This book won the American Horticulture Award and is a great resource for anyone interested in tropical flowering plants. She is also creator/Webmaster for www.TropicalFloweringPlants.com, a forum for learning about rare and unusual species, and she presented **“Variety for the South Florida Garden – Rare and Unusual Plants”**



Participants at the tour of the Scared and Magical Trees, led by John Cozza and Steve Pearson.



Delonix elata flower opens white before deepening to golden yellow after first day

September 14, 2013: Mr. Steve Pearson, Director of the Gifford Arboretum – Mr. Pearson conducted a **walking tour of the Arboretum that focused on the Sapindales Order**. With six of its families represented in the Arboretum, this tour included some of our favorite fruit and native trees as Mr. Pearson described some of the characteristics of this order and its families.

October 2, 2013: Dr. Larry Noblick, Palm Biologist at Montgomery Botanical Center - Dr. Noblick presented **“From the Jungle to the Garden.”** After describing some of the palms at MBC that were planted by Col. Robert Montgomery and others since 1932, he focused on his own field work, showing palms in their native habitats as well as how they look at MBC today. We learned about the trials and tribulations of palm collecting, as well as its rewards, and the importance of botanical gardens in conserving palms and expanding our knowledge.

October 16, 2013: Music in the Arboretum - Performances by the Stamps String Quartet and a Jazz Ensemble from UM’s Frost School of Music were enjoyed in the Arboretum.

October 24, 2013: Dr. John Cozza, FIU Botany Instructor and former Graduate Curator of the Gifford Arboretum – Dr. Cozza conducted a **walking tour of the “Sacred and Magical Trees of the Gifford Arboretum.”** The tour was a fun and educational event, and a great way to get into the Halloween spirit. This tour was repeated with co-leadership by Steve Pearson on November 16th for some student groups.

November 6, 2013: Ms. Adrian Hunsberger, Urban Horticulture Agent at the University of Florida/Miami-Dade County Extension Office. Ms. Hunsberger presented **“Vegetable Gardening for Your Health and Sustainability.”** An entomologist with lots of experience using biological and organic pest control methods, attendees not only learned a lot about how to grow their own food but how to do it without utilizing pesticides and other chemicals that may be dangerous to our health.

November 20, 2013: Music in the Arboretum - Featuring a delightful mix of jazz standards and original works, a jazz performance by the Bassless Quartet from UM’s Frost School of Music was enjoyed in the Arboretum.

We have some great programs and activities lined up for the Spring semester. Please check them out and plan to join us!

February 5, 2014 –Meeting and Presentation by Dr. Suzanne Koptur - Dr. Koptur is a Professor of Biological Sciences and Director of QBIC (Quantifying Biology in the Classroom) at Florida International University. A pollination biologist and plant lover, she will present an interesting program entitled **“Pollination Mechanisms and Plant/Animal Interactions in the Apocynaceae (Milkweed Family).”** 7:00 pm in Cox Science Center Room 166.

March 5, 2014 –Meeting and Presentation by Dr. Osman Gutierrez – Dr. Gutierrez is a Research Geneticist with the USDA’s Agricultural Research Services here in Miami. He will **“speak on Making a Better Chocolate: Breeding, Diseases and Marker Assisted Selection in Cacao.”** This event will give us a better appreciation of one of our favorite foods and the important role of science in its production. 7:00 pm in Cox Science Center Room 166.

April 3, 2014 – The 26th Annual John C. Gifford Lecture by Dr. P. Barry Tomlinson – Dr. Tomlinson is Professor Emeritus at Harvard University, where he was a Professor of Botany for 32 years. This illustrious academic career followed 11 years of work as a Research Scientist at Fairchild Tropical Botanic Garden. Today, he is also a Research Associate of Montgomery Botanical Center and Fairchild, and Crum Professor of Tropical Botany at the National Tropical Botanical Garden. His topic will be **“Longevity in Plant Cells - Are Palms the Longest-lived Trees?”** This will be an opportunity to learn about some of the groundbreaking research that Dr. Tomlinson conducted on how palm cells significantly differ from those of conifers and hardwoods. 7:00pm in Cox Science Center Room 145. A reception and refreshments will follow. Note that this lecture is on a Thursday.

There will also be a special **luncheon honoring Dr. Tomlinson** on Friday, April 4, 2014 where attendees will have the chance to meet and greet Dr. Tomlinson and discuss his work in a more informal and personal setting. Please contact the Arboretum’s director at sdpearson@bio.miami.edu if you are interested in attending this luncheon.

May 7, 2014 –Meeting and Presentation by Ms. Georgia Tasker – A well-known and respected author and plant expert, Ms. Tasker was garden writer for The Miami Herald for more than 30 years and now writes for Fairchild Tropical Botanic Garden. She will speak on **“Pathogens, Parasites and Pesticides put Honeybees in Peril.”** This is a topic that should be of great interest and concern to all of us. 7:00 pm in Cox Science Center Room 166.

We will have **Music in the Arboretum** performances on **January 15, 2014, February 19, 2014, March 19, 2014, and April 16, 2014** (3rd Wednesdays of month) at **6:00 pm**. These open air performances feature a variety of types of music played by different ensembles from UM’s Frost School of Music. Performers to be announced.

There will also be monthly **Tours of the Arboretum** on topics and at times to be announced

All Gifford Arboretum events are free and open to the public except for the luncheon honoring Dr. Tomlinson

For further information about upcoming events or for  **driving directions, please visit our website at** www.bio.miami.edu/arboretum.

Please Donate to the Gifford Arboretum

Mailing Address: John C. Gifford Arboretum, Rm. 231 Cox Science Center
University of Miami, 1301 Memorial Drive, Coral Gables, FL 33124-0421

Website: <http://www.bio.miami.edu/arboretum>

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- Please keep me informed of activities at the Gifford Arboretum.
- Please find enclosed my tax-deductible donation to the University of Miami-Gifford Arboretum. (Tax deduction excludes value of benefits)
- Please send me information about including the University of Miami in my estate plans.

Membership levels (annual)

- Student friends \$5
 Friends \$25
 Supporters \$100
 Donors \$1,000
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Benefits

- newsletter and discounts
newsletter and discounts
all above plus t-shirt
all above plus special luncheon
all above plus display on plaque

T-shirt size (circle one): S, M, L, XL

Make your donation by check: Total amount enclosed \$ _____
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LEAVE A LEGACY FOR TOMORROW, TODAY

Through tax and estate planning techniques and incentives, planned gifts allow you to meet your personal financial objectives while ensuring the future of the Gifford Arboretum. Planned giving options include bequests, trusts, and charitable gift annuities.

PLAN YOUR GIFT

To learn more about planned giving opportunities that can benefit you and the Arboretum, contact Kyle Paige, JD '89, director of estate planning and giving, at kpaige@miami.edu or 305-284-1527.

Please make a gift to the Gifford and/or include Gifford Arboretum in your estate plans to help support the ongoing work of caring for the trees and to enable the Arboretum to remain a central feature of the UM campus for generations to come.

HELP US GROW

