



# THE MONTGOMERY NEWS

Newsletter of Montgomery Botanical Center

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# WHO WE ARE

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*EDITOR'S NOTE: The publication of this issue marks the end of the ten year service of Dr. Terrence Walters as MBC Executive Director. As he departed in April among the well wishes of all his staff, Terrence*



## A Farewell Letter

Terrence Walters, Ph.D.

In December of 2004, the Montgomery Team surprised me with a wonderful get-together on the Walter Haynes Overlook to recognize my ten-year anniversary as the executive director of Montgomery Botanical Center. As I sat back in a chair on the Overlook enjoying a piece of chocolate cake, I surveyed all of the individuals joining me on this special day. So many of the Montgomery team have been by my side for years through all of the development, expansion, building, restoration, and crises that typically occur with a quickly developing organization. In the early days there were eleven of us, while today we number 30. Each new member joining our team added value to the organization and

strengthened our commitment to our mission, purpose, and long-term goals. Two of the most extensive, intensive, and difficult projects that the Montgomery team undertook during the last decade were the restoration of Montgomery's Lowland Palmetum and the design, development, construction, and completion of Montgomery's six-acre Cycad Walk. These two extremely challenging projects clearly demonstrated the cohesiveness, commitment, and strength of the Montgomery team.

While reflecting back on my ten years, enjoying yet another piece of cake, I could not help but realize how fortunate I was to work alongside such amazing and wonderful individuals. In addition to the staff, I

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have had the unique opportunity to work with a devoted and committed team of volunteers, especially those working in the Montgomery Archive. I will always be indebted to Montgomery's staff and volunteers for enriching my life. I wish I could express in words how much each of them means to me and how much I valued their support and understanding throughout the past years as I continued to struggle to learn to be a botanical garden executive director.

As I looked at the beautiful surroundings of the Overlook, my eyes passed the Nixon Smiley Meeting Center, the site for Montgomery's director and member meetings. Seeing the meeting center took me back to November of 1994 when I attended my first Montgomery board of directors meeting. The meeting was my first experience with a non-profit board of directors. I sat quietly through the meeting, my forehead and palms perspiring from nervousness, and I wondered what I had gotten myself into—I had absolutely no experience working with a board or even being an executive director of a not-for-profit institution. Montgomery's directors have and continue to be a team of individuals strongly committed to supporting Nell Montgomery Jennings's vision and ensuring the long-term success of our organization. From day one, the directors remained committed to supporting me with the tasks associated with day-to-day, month-to-month, and year-to-year operations and tasks for an organization. During my tenure with Montgomery, I had the special opportunity to work with and learn from four board presidents. To this day, as I sit in on our semi-annual board meetings, I remain in awe of how the directors function as a team and together support our vision for Montgomery to become a leader in educational and scientific collections of palms and cycads.

Two highlights of each and every year for me are: 1) Montgomery's Annual Members Day - a day set aside each year during which directors, members, staff, and friends come together to evaluate and review the previous year's progress on our annual and long-term goals, and 2) the on-site consultation of Montgomery's master site planner and landscape designer Joe Hibbard of the internationally-recognized firm of Sasaki Associates. Montgomery Members Day includes meetings, lectures, lunch, and tours of the property—always an active but relaxing fun-filled packed day for all attendees. My favorite part of the Members Day agenda is the walking tour. It is the time

to show the members and our friends the progress, the successes, and often some failures during the past 12 months. The compliments, words of encouragement, and continuing support expressed during the tour brings me an amazing feeling of accomplishment and makes me proud to be part of the Montgomery team.

The Walter Haynes Overlook is a magnificently designed hardscape at Montgomery that was designed by Joe Hibbard of Sasaki Associates. Montgomery's directors remain to this day committed to Montgomery's 1992 master site plan and require that Joe spend one-week a year working with the team to update, when necessary, the master site plan, and to design the planting, landscape, and hardscape projects for the upcoming year. Throughout the ten years of working with Joe, He has taught me an amazing array of concepts for landscape design. However, I most appreciate Joe's demonstrations on how to develop and initiate what appear to be insurmountable and impossible projects. His landscape design is now expressing itself at Montgomery as the tropical plant collections grow and show-off their shapes, sizes, and colors. To the south of the Overlook is Montgomery's Palm Walk - probably Joe's greatest accomplishment at Montgomery. Joe and the Montgomery team spend the majority of Joe's annual on-site visit working on the Palm Walk design, plant by plant. I firmly believe that Montgomery's Palm Walk will become one of our most memorable landscape features for visiting supporters, students, educators, and scientists.

Finishing up a cup of coffee, at least my tenth one for the day, to wash down my last bite of the cake, my mind went back to 2002 when the Nixon Smiley Meeting Center and Walter Haynes Overlook were used for an international cycad symposium and workshop. With the support of the directors, the staff, the volunteers, and with funds obtained from many Montgomery friends, 13 cycad scientists representing six countries presented lectures and worked extensively on a number of systematic and taxonomic problems that we have in the scientific realm of the cycad world. The commitment to and support of undertaking such a symposium and workshop by the participants, the staff, and volunteers was truly amazing. Due to the success of the symposium and workshop, the proceedings culminated, in 2004, in Montgomery's first scientific volume and my first publication as an editor.

As I looked at the plants in the landscape surrounding the Nixon Smiley Meeting

Center and the Walter Haynes Overlook, my thoughts moved to one of the special and unique opportunities Montgomery created for me—traveling the world to obtain population-based collections of cycads and palms. These expeditions gave me the opportunity to spend one month each year being a full-time field botanist and interacting and developing friendships with other cycad and palm scientists, horticulturists, and enthusiasts. My expedition companions will always be special to me.

From my first day at Montgomery, I had the long-term support and friendship of numerous individuals from local, national, and international botanical organizations and institutions. Thanks to my colleagues at Fairchild Tropical Botanic Garden, The Kampong, Lotusland, National Tropical Botanic Garden, The Cycad and International Palm Societies, and University of Miami and Florida International University Biology Departments, I could always count on words of encouragement and support during difficult times. Many of these individuals and I have had some wonderful memorable times on the Overlook discussing botany, horticulture, finances, administration, development, strategic planning, and all the other areas involved with ensuring that Montgomery's mission was met.

It was now nearing 3:30 pm; Montgomery's closing time. The staff began leaving the Overlook to close out the day's projects. As my wife Deena, who was also at the get-together, and I looked out over the vast collections of palms and cycads, the restored Lowlands, the Silver Bluff Limestone Escarpment, the young crocodile that had just climbed onto Nypa Island, and the Palm Walk, we knew that Montgomery had become a garden that invokes wonderful feelings, a sense of serenity, encourages a greater appreciation of the diversity of the tropical plant world, and that its success and reputation as an internationally-recognized scientific tropical botanic garden is assured.

As I write this letter, which has been quite emotionally difficult, Deena and I are now busy planning a new phase in our lives together. In April of this year, I will begin working with the United States Department of Agriculture in Fort Collins, Colorado. I would like to take this opportunity to acknowledge and thank each of you allowing my time at Montgomery to be the most educational, fascinating, and enjoyable years of my life.

*Terrence Walters*

# Working out *Butia* Puzzles from Paraguay to Argentina

By Larry Noblick  
MBC Palm Biologist

**W**hy *Butia*? In *An Encyclopedia of Cultivated Palms*, Robert Riffle and Paul Craft describe the genus *Butia* as being “one of the most cold hardy of all of the pinnate palms” and worth considering as a potentially valuable landscape palm for the U.S. and, therefore, worthy of further study.

Many palms in this genus have gracefully arching, bluish leaves and distinctly rounded crowns, making them wonderfully attractive. The genus’s only real drawback is that most are slow growing and, with some exceptions, do not have the most attractive looking trunk, especially when young.

As a palm scientist, the main reason I am attracted to this genus is that I like puzzles, and there are so many interesting questions surrounding this genus. For example, it was initially believed that *Butia* was the ancestral genus to the more abundant *Syagrus* genus, but research recently uncovered that it’s more likely *Butia* evolved from *Syagrus* species rather than giving birth

to them. The concentration of all species in southern Brazil, Paraguay, Uruguay and northeastern Argentina indicates a more recent origin or radiation of the species.

## The Hunt for *Butia Yatay* in Paraguay

Argentina and Paraguay is home to several species of *Butia*—and a lot of *Butia* taxonomic confusion. One problem centers around *Butia yatay*, one of the most robust and I think the most attractive species of the genus. Originally described by Martius from Argentina where *B. yatay* is abundant, it has often been confused with *Butia paraguayensis*. This is a puzzle I was determined to solve. But first I had to determine if *Butia yatay* truly existed in Paraguay.

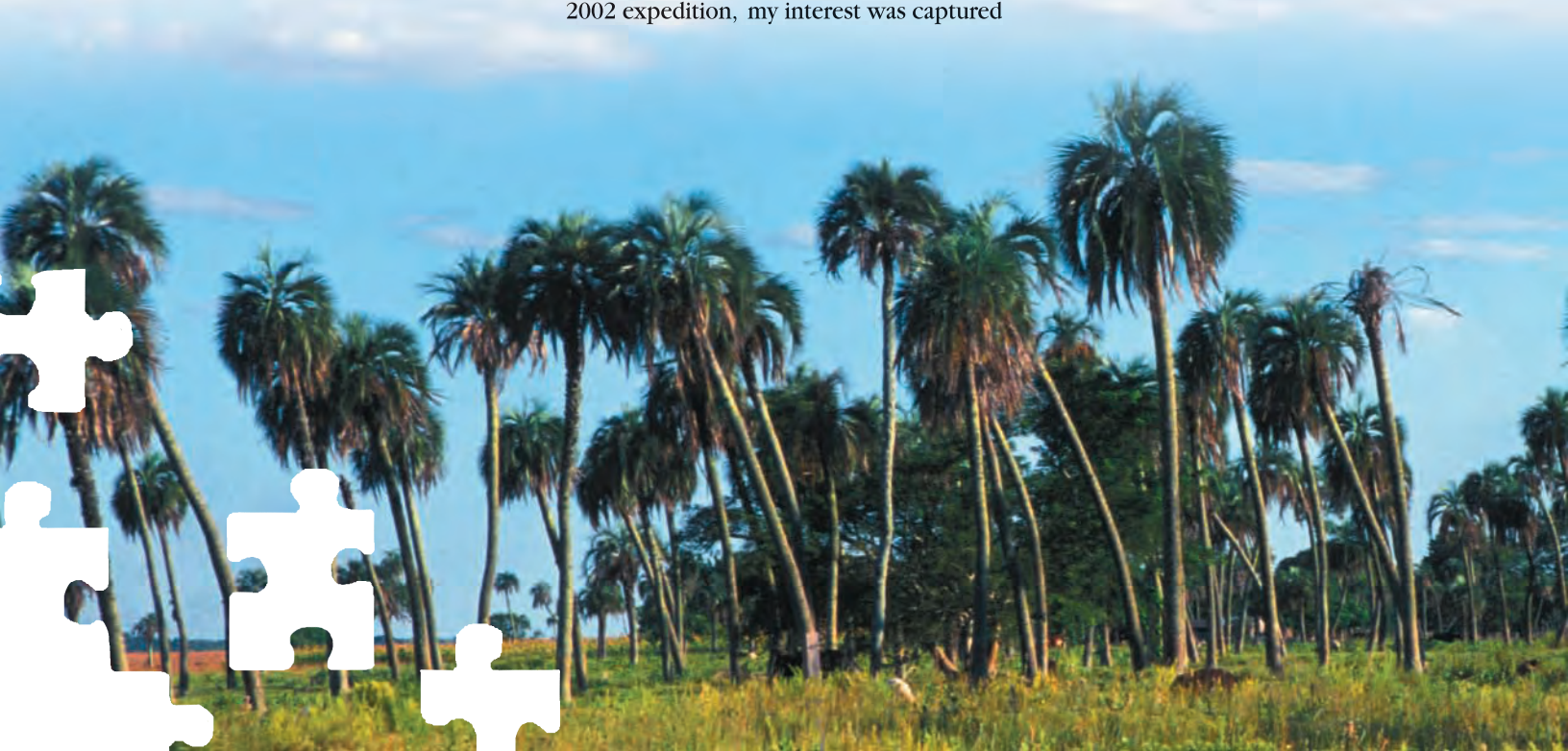
I could not find evidence from available herbarium material that a genuine *Butia yatay* has ever been collected in Paraguay, though there are reports of population sightings. On the last day of a 2002 expedition, my interest was captured

as a Paraguayan palm enthusiast talked about populations of a robust *Butia* in the swampy southern state of Neembuco, an area I had not yet explored. I also stumbled upon a statement made by the Paraguayan ecologist, Michalowski, in a 1958 article in *Principes*, who wrote of large *campos palmares* of *Butia yatay* in the southern Paraguayan state of Misiones (adjacent to Neembuco).

Anxious to investigate both states, I led an expedition to Argentina and Paraguay in 2004 thanks to a grant from the International Palm Society. During that trip, I discovered that the “robust *Butia*” (or, as I found, not so robust) from Neembuco was not *B. yatay* at all but is likely an unrecognized, yet distinct, Lower Parana River form of *Butia*, which I am in the process of trying to adequately describe.

Next, I headed for Misiones to investigate Michalowski’s 1958 statement. I came upon some of the largest and most robust *Butia* specimens ever seen in Paraguay. I also found Michalowski at least partially correct when I found a *campos palmares* in Ayolas, Misiones in Paraguay to be genuine *Butia yatay*.

While examining a sample of their inflorescence I could compare it to a now mature population growing at MBC that was propagated from seeds collected in this area during a 1996 MBC expedition, as well as to numerous herbarium specimens of *B. yatay* from Argentina. The wild population in Ayolas produced the same characteristic branches with densely congested flowering clusters that are typical of inflo-



rescences of this species. I could, therefore, conclude that Paraguay is home to genuine *Butia yatay*.

### Investigating Across Two Borders

When first attempting to come to terms with variations seen in the *Butia yatay*/*Butia paraguayensis* complex, I found great difficulty making any determination from sketchy herbarium specimens. The only way to resolve it was to intensely collect from the populations in southern Paraguay and northern Argentina.

Glassman (1979) suggested that *B. paraguayensis* may only be a smaller variety of *B. yatay* since the species is complex and extremely variable. After spending field time with both buteas, I found evidence that disagrees with Glassman's theory. I found both species are distinct in their own right. Hybridization, though, is still a possibility with crosses and back crosses between the two species or with other *Butia* forms that I am in the process of describing. In order to understand this questionable "hybridization," I needed to first understand both parents.

### Putting it All Together at MBC

Fortunately I was able to collect seeds from populations over a broad range to introduce into MBC's collection for further research. Together with the observations I carefully documented in the field and new herbarium specimens I made, I have everything I need to finally piece together the scientific picture of this intriguing palm puzzle. Look for my results in an upcoming research paper in 200\_\_.

## Exploring Western Panama

Jody Haynes  
MBC Cycad Biologist

When I was hired as MBC's Cycad Biologist in 2003, I quickly came to understand the importance of choosing expedition destinations carefully and meticulously planning them several years in advance. Ironically, the two MBC expeditions I have undertaken to date have also convinced me that it is important to take advantage of opportunities that arise serendipitously.

My most recent trip to Panama in 2004 came about after a friend sent me digital images of some unusual Panamanian cycads. Because MBC had undertaken several expeditions to Panama in the past, I didn't place any priority on these plants until I showed the photos to one of my cycad-savvy friends. He was shocked to learn of cycads growing on beaches near saltwater, and encouraged me to contact the original photographer to obtain more information about the plants.

It turned out that the person who originally discovered and photographed the plants, Gregg Hamann, was an avid cycad enthusiast. To my surprise, he was willing to fund and assist on a 10-day expedition to Panama to document and collect seeds of this intriguing plant for MBC's Cycad Collection. With considerable additional help from Dr. Alberto Taylor, cycad researcher at the University of Panama and long-time MBC collaborator, and cycad horticulturist, Greg Holzman, the expedition was planned in record time. In September 2004 we headed off to investigate the islands and the mainland of Bocas del Toro in western Panama for the reported cycads and collect ripe seeds from both palm and cycad populations.

This was my first trip to Panama and I was amazed at the rich plant diversity packed into such a small country—and how much we could accomplish in such a short time. For palms, we collected 259 seeds representing six taxa and seven new accessions, including *Colpothrinax cookii*, a new taxon for MBC. But it was the cycads that gave us our most exciting find.

We located, as Gregg's original photos promised, a beautiful "groove-leafed" *Zamia* cycad species, not only thriving on salt-laden beaches but also inland in a very different habitat. With that discovery came a lot of taxonomic confusion. We could confidently identify a mainland population of *Zamia skinneri* and found one that resembled *Z. neurophyllidia*, but there were other populations with significant differences. At least undescribed species are present that I working with my fellow collaborators to describe. We were able to document and collect from four island populations and two mainland populations including the plant's pollinator beetles.

Panama, I learned, is world famous for its biodiversity—one of the richest in the Americas with over 10,000 vascular plant species. I was thrilled from having experienced just fraction of it. They say that a Panama experience can only be surpassed if you come back, and I am very much looking forward to it.



Jody digitally captures his colleagues, (front to back) Gregg Hamann, Greg Holzman, and the guide, Rogelio as they stow herbarium specimens of the "groove" *Zamias*.



## On-Sightings



During their eighth consecutive annual visit, **Drs. John Dransfield** and **Natalie Uhl** examine characters of the *Hyophorbe lagenicaulis* as they finalize revisions to their next edition of *Genera Palmarum*.



**Drs. Brad Bennett** and **Scott Zona** use MBC's conifer collection to give a hands-on botany lecture to their class of Florida International University students.



**Ralph Tompson**, *Berea College, Kentucky*, and his graduate assistant obtained and photographed vegetative and reproductive samples from MBC's *Lysiloma* collection to make herbarium specimens for his revisional work on genera.



Cycad scientist **Dr. Piet Vorster**, Stellenbosch University, South Africa, and MBC Cycad Horticulturist Christine Wiese exchange information as they take the Cycad Walk.

## First Botanical Fellows Inducted in Program's Innaugural Year

Representing diverse areas of tropical botany, four researchers were selected by MBC's Board of Directors last November to become the first Montgomery Fellows.

**Dr. Mark Bonta**, Assistant Professor of Geology at Delta State University, has developed expertise in areas that cross traditional academic boundaries making him adept in biogeography, botany, social justice, as well as website construction. Dr. Bonta is known to be passionate about tropical botany research, and committed to disseminating this information to students, colleagues, and the general public. He recently collaborated with MBC's cycad biologist on a 2004 cycad expedition to Honduras which is already having a positive impact on the conservation of that country's dioons.

**Dr. John Dowe**, botanist at the Australian Centre for Tropical Freshwater Research, specializes in the floristics and ecology of tropical riparian vegetation. He is considered

one of the world's top palm researchers leading projects involving sytematics, ecology, cladistics, biogeography, and reproductive biology. Besides having an impressive scientific publication record and describing over 25 new species, Dr. Dowe is highly respected in the horticultural community, a photographer, illustrator, and past editor of three botanical publications.

Researcher **Silvia Salas** conducts studies and programs at the Mexican scientific institution, SERBO. One of the country's leading collaborator, teacher, and scientist,, she is a respected expert in the unique, diverse floristics found in key areas around Oaxaca and the dry forests of Mexico. Her projects focus on inventories, vegetation structure, conservation, sustainability, and strategy planning for better quality of life for indigenous communities.

**Dr. William Hahn**, Associate Dean at Georgetown College, is noted for his comprehensive work on palm systematics and introducing innovative approaches in molecular phylogenetic analyses. In education, he brings creative and new ideas to college program development and has 32 publications to his credit. Dr. Hahn has been a recipient of 12 grants/awards for scientific research, including the 2002 NSF-funded study he co-investigated with MBC's palm biologist, Larry Noblick on the phylogenetic and biogeographic studies of subtribe Butiinae (Cocoeae, Palmae).

Supported by a grant from the Kelly Foundation in 2004, the Montgomery Fellows Program was designed to support research of top tropical botanists using MBC's collections and provide opportunities for students to benefit from the expertise of the Fellows while they are conducting studies onsite. Fellows are now eligible to submit proposals to support research projects and MBC or to underwrite publication costs for MBC-related research papers. ■

## Research Notes

**Dr. William Hahn**, Georgetown University, obtained palm leaflet material from 29 palm taxa for his DNA analysis for a phylogenetic study of Butinae and Cocoeae.

**Dr. Donna Tremonte**, Harvard University, obtained seeds from MBC's cycad collection for her research on adaptive evolution of phytochrome A and its role in the ecological success of the first angiosperms.

**Jennifer Petersen**, University of California, Davis, obtained leaves from 13 accessions of MBC's *Chrysophyllum* collection for her research to develop genetic markers for use in her studies of the Sapotaceae.

During a two-week stay at the MBC guesthouse, **Julie Sannier**, Université Paris-Sud, examined palm pollen grains for her work on the diversity of pollen aperture ontogenesis in monocotyledons and gave a research seminar presented by the Coalition for Excellence in Tropical Botany.

**Dr. Hong Liu**, Tropical Research and Education Center, University of Florida and Dr. Bob Pemberton, USDA, Agricultural Research Service, Invasive Plant Research initiated a study on the life history of sewer vine (*Paederia cruddasiana*) using plants found in MBC's natural areas.

**Gary Wilson**, Curator, Queensland Herbarium and James Cook, Australia and specialist in the systematics and biology of *Bowenia*, examined MBC's cycad collection.





# Dear Dr. Walters

*Kathy Smith, a program enrichment volunteer for the Michigan school system, put together a presentation about Montgomery Botanical Center after her first visit and tour of the garden. She conveyed her own interest and enthusiasm in what she learned through anecdotes, photographs, posters, and specimens.*

*MBC's staff was pleased to learn of the mixture of awe, excitement and curiosity about our Center and collections expressed by the young students of Oakview Elementary School in St. Johns, Michigan. The following excerpts are taken from a sheaf of 48 delightful letters sent by one class of potential researchers treated to her presentation. The artwork was taken from the letter written by Hayley Barnes.*

"My name is Taylor Schroeder and I live in St. Johns, Michigan...I learned from Mrs. Smith that the palm trees with coconuts can be used in 1,000 different ways! Wow, that's amazing!!"

"So, scientists from all over the world come to your Botanical Center...I would love to meet so many scientists and to become one ever since I knew what it was...Well I think that what you do for the plants that are endangered is very marvelous and wonderful for the world. ..With all my respect, Tara Mather P.S. Keep up the wonderful work."

"Holy moly, boy did I enjoy those pictures or what...I couldn't believe how many kinds of plants there were...Oh sorry. I was so into the plants I forgot to introduce myself. My name is Colin Wilson...Good luck on your research."

"If I ever go to Miami I would go to the Montgomery garden and use 100,000 rolls of film, the pictures are so much like paradise...It's great that you are trying to keep the place in good condition and reusing all you can. The world should all do that! From, Jennifer Ashley

"It was so cool when Mrs. Smith...gave us some of the facts from Montgomery Botanical Center. It is so cool with all the neat palm trees and cycads. If I ever come to Miami, I will definitely come to the Montgomery Botanical Center because it sounds so fun and interesting..." By, Chelsea Hetherington

"My favorite thing about the pictures was the different color seeds the cycads had, and the different sizes they were. Some were red, black, pink, and some were big and some were small, so that was cool... Sincerely, Janel Thornton"

"I love how big your land is but how do you water a 120 acres? You must have one huge water and plumbing bill! ...I hope I hear about or see your wonderful botanical center again. Spencer Dean."

"Hello! My name is Hayley Barnes. I'm ten years old...I had a blast learning about your Center and your trees."

"I wish I could go there to see all the flowers and trees. I like the cycads because they have like pine cones on the bottom or top. From, Kylie Cuningham"

"Mrs. Smith showed us amazingly beautiful pictures from the fascinating garden. All of the trees are so extraordinary, all those bright and spectacular colors. It looks amazing...Jamie E. Cheeney"

"When I first saw both trees, the palms and cycads, I thought they were both the same thing but when I felt them the palm was soft and the cycads were pointy and sharp...From, Monique"

"Hi, I'm Lexy Krasovec...Your garden is very nice. It has plants I never would have dreamed existed. Thank you for making such a beautiful place."

"Hello, my name is Jared Eckley from Oakview South Elementary School telling you what a great place the Montgomery Botanical Center is and what great pictures we got to see...I like how you have many palms and cycads, even Kapok trees."

"I loved the pictures of your beautiful garden...I never knew that palms and cycads used to be 30% of the world's plants and now they're 3%. I hope I get to see your center someday in real life. From Jeff Makarauskas."

"It must be nice to have everything green all year round. I learned about flowers and all different kinds of trees. How do you keep the Montgomery Botanical Center clean all the time? It must be hard...It is great to learn about things so far away...Your friend, Nicole Sheltroun"

"My name is Megan Stoddard and I love your garden. I like the cycads and the pokey Kapok tree. I have never seen a cycad until today. I hope your garden stays nice for a long time."

"Wow! It must be awesome to be a great part of the Montgomery Botanical Center! ...My favorite plant is the red cycads! ...It has been an honor to write to you and to learn about the wonderful Montgomery Botanical Center! All due respect, Danielle Gyger"



## MBC Dicots: Guardians in the Garden

As MBC's dicot horticulturist, I am frequently asked this question: "Since MBC focuses on scientific collections of palms and cycads, how does the Dicot Collection fit into MBC's mission?" My eyes light up when I hear the question because I love talking about the important role dicots play in MBC's overall purpose.

But first, a bit of history: after purchasing the property in 1932, Robert and Nell Montgomery began a bold planting scheme. To complement his main collection of palms and cycads, the Colonel planted a wide diversity of tropical flowering trees and plants he acquired from all over the globe. A December 1939 inventory listed well over 500 individual flowering, tropical fruit, citrus, foliage, and native hammock species. Many of these plants have survived to become impressive in size and age.

We have added to this historic collection by researching, planting, and nurturing many new dicot species. This valuable collection is increasingly accessed by scientists, educators, and students.

But the Dicot Collection serves an even larger purpose at MBC. Species are chosen primarily to support the development of microhabitats where they serve as guardians for environmentally-sensitive populations of palm and cycad taxa.

As we begin developing a microhabitat, we first consider sites most like the required habitat. This was the case when we developed the section of The Cycad Walk to grow tropical zamias. Collected in the rainforests of Panama, Colombia, and Ecuador, they required plenty of moisture, drainage, shade, and wind protection.

The area we selected already contained a number of dicots. The natives, including oaks, gumbo limbos, and mahoganies, along with a few exotic specimens would provide strategic shade and wind protection. We had to relocate the beautiful but deciduous *Pseudobombax ellipticum* since it could not provide shade several months out of the year. A dominant canopy was still missing so we needed to identify a species that would provide deep shade and was tough, dependable, evergreen, and available.

After much debate and discussion, the decided winner was *Bucida buceras* (black olive). We procured and planted 18 trees ranging from 10-30 feet in precise locations throughout the area. After the young cycads were planted in beds raised for good drainage, another wind block was created by the palm team with the planting several *Chamaedorea cataractum*. MBC's irrigation team finished off the habitat with the addition of two watering systems: one

for moisture, the other for extra cold protection during the dry winter months.

One of our most ambitious projects that spanned several years was to develop a suitable growing environment for MBC's collection of cold-sensitive tropical palms. We sited a large area on the property that is bordered by a mature hardwood hammock on its west and north sides, and where the Colonel added tropical fruit trees to the wonderful Florida natives already growing on the property. The hammock barrier would provide a lot of protection from prevailing winter winds and the existing trees would shade some plantings. But to complete the microhabitat, much more development was needed. Hundreds of trees and shrubs were needed for additional shade and protection. We also decided to select some species that were deciduous so their leaf drop would help build the soil. I looked on this as a great opportunity to further diversify MBC's Dicot Collection by using a variety of both native and exotic flowering trees that would provide a colorful contrast to the green of the palms.

For the backbone of the open area to the east, I chose not only the dependable gumbo limbos, pigeon plums, and mahoganies, but also rarer natives like *Prunus myrtifolia* and *Ilex krugiana*—both of which are indigenous only to Miami-Dade County in the U.S. Three cannonball trees (*Couroupita guanensis*) were planted because they not only produce unusual aromatic fruit and flowers but also drop their leaves up to three times a year. Another fragrant tree, *Michelia champaca*, was planted along a new access road. I chose several legumes for their massive canopies and the nitrogen they add to the soil.

We are especially grateful for the wonderful selection of trees donated by high quality nurseries. Chris Oppenheimer/Botanic Wholesale donated several *Lonchocarpus violaceus* that, along with creating a wind block, produce beautiful lilac flower clusters (see cover photo). Freund Flowering Tree Nursery contributed a *Senna didymobotrya* (pictured above), a frequently yellow-flowering legume. Leslie Veber of Veber's Jungle Garden donated many native *Coccoloba diversifolia* and *Piscidia piscipula*.

As you can see from just two examples, MBC's dicots are more than just an impressive collection of tropical trees. Although their beauty will always be an attraction on MBC tours, they work—just like our staff—to support MBC's mission to advance research, education, and conservation in tropical botany. ■



## Quick Takes



With hands-on assistance from Dr. Larry Noblick, Steve Gardina, wildlife biologist at the Florida National Wildlife Refuge, is carefully positioning the last of 16 native Florida Royal Palms donated by MBC for habitat restoration within the refuge. Equipment Specialist Juan Corona (front right) and Grounds Supervisor Orlando Coy are making sure the truck is loaded securely for the trip.

MBC provided guesthouse accommodations to **Dr. Stephen Palumbi** (Stanford University, California) Florida International Universities Glaser Distinguished Lecturer for a week in December while he was here to present a week-long suite of lectures at FIU. Terrence Walters gave Dr. Palumbi and his FIU host, Dr. Kalai Mathee, a tour of MBC.

**International Institute of Ecological Agriculture** was provided digital images taken by MBC staffer Mary Andrews of MBC's Nypa collection for *Alcohol Can Be a Gas*, a book they are producing on ethanol as an alternative fuel to gasoline.

Judy Kay hand pollinated *Microcycas calocoma* plants for **Florida Tropical Botanic Garden** with pollen obtained from MBC's historical specimen. MBC's SeedBank and FTBG will equally share the resulting seeds.

**Marie Selby Botanical Garden** (Sarasota, Florida) requested and received documents associated with how MBC handles hurricane preparations.

**Mark Weathington**, Director of Horticulture, Norfolk Botanical Garden, Norfolk, Virginia, was given a tour of the facilities, property, and palm collection by Dr. Larry Noblick.

**Robert and Julie Smith** (son of Robert Fitch Smith, architect of MBC's historical buildings) visited MBC for a tour and to review the Robert Fitch Smith Archive Collection.

MBC hosted the **Sixth Annual MBC/FNGLA Event and Tour** on November 13. The event included a reception and a tour of MBC's flowering tree collection given by Dicot Horticulturist Scott Massey.

[www.botanicalauctions.com](http://www.botanicalauctions.com)

## MBC/FNGLA SeedBank To Launch Online Auction

In perhaps the first ever online seed auction, MBC and the Dade County Chapter of the Florida Nursery, Growers, and Landscape Association (FNGLA) will be able to more effectively distribute seeds generated by MBC's prolific plant collections to nurseries, horticulturists, and enthusiasts. The site, expected to be launched in early summer 2005, will have links to descriptive information about the plants, including habitat and native origins, horticultural data on seed germination and growing conditions, and photographs of growing plants.

The auction will be scheduled every two weeks by FNGLA. Profits help support MBC's SeedBank Program, which donates large numbers of seed to other scientific institutions, botanical gardens, and plant societies throughout the world—over 4 million since the program began in 1998. FNGLA uses their portion of the proceeds to support agricultural scholarships, community projects, and horticultural education.

Interested bidders can pre-register to get the first auction announcements, updates, and information by clicking on the "My Accounts/Register Now" link on the homepage.



## The Incomparable CYCAD 2005

Staff and researchers representing MBC had a busy and productive time participating in the 7th International Conference on Cycad Biology earlier this year.

Addressing cycad pest problems, MBC Cycad Horticulturist Christine Wiese presented a paper on MBC's management of scale. She followed up with a productive Q&A that brought the concern to a world-wide level needing continuation of a broader discussion in the near future.

Jody Haynes, MBC Cycad Biologist, shared results and offshoots of his last two research trips. From his most recent expedition to western Panama, he coauthored a paper presentation on Zamiaceae of that region with three of his field partners.

Jody's 2004 Honduran expedition with MBC Fellow, Dr. Mark Bonta, was especially fruitful. Jody gave a presentation on cycad flora of Honduras and authored the poster, "The Tree Dioons." Jody and Mark produced a paper on taxonomic changes to *Dioon mejiae* and worked together to organize and moderate a 4-hour workshop on Honduran cycads. Mark presented, "Ethnobotany of Honduran Cycads" and the paper, "Cycads in the Vernacular: A Compendium of Local Names" that he co-wrote with Dr. Roy Osborne

MBC Member and Botanical Consultant Dr. Tim Gregory was assisted by Jody on his poster presentation, "Key to the Species of Dioon." Tim's further contributions to the conference included the self-explanatory paper, "A Summary of the Results of the Montgomery Botanical Center/Instituto de Ecologia Universidad Veracruzana/SERBO 2004 Dioon Expedition to Western Mexico," that he co-authored with MBC Executive Director, Terrence Walters and MBC Fellow Silvia Salas-Morales.

Not wasting a moment, Tim and Jody organized a special focus meeting of the Cycad Database Working Group. Mark and Silvia were among the participants. Tim, Jody, and Mark also participated in a breakout meeting of the IUCN/Species Survival Commission Cycad Specialist Group meeting led by chair, Dr. John Donaldson.

Capping off the trip, Christine visited with local horticulturists and nurseries while Jody and Silvia enjoyed the 12-day post-conference tour of cycad populations in Mexico organized and lead by Dr. Gregory and Jeff Chemnick.

Information from the conference will be made available in a book of proceedings while there is expected to be an explosion of lectures, articles, and actions by individual attendees and presenters. ■



## The Villagers Help MBC Preserve Historical Treasures



Dr. Terrence Walters gratefully accepted a ceremonial (and actual) check from The Villagers for their 2004 support of the Montgomery Archive. Pictured from left to right are Becky Matkov, Judy Pruitt, Bobbi Rosenberger, Lisa Chaffin, Terrence Walters, Ellen Uguccioni, Claire Whitehurst, and Patsy Rodriguez.

Renowned internationally as a scientific institution, Montgomery Botanical Center, it is not as well known that MBC also houses an impressive historical collection of documents, memorabilia, art, and furnishings entrusted to the Center by Nell Montgomery Jennings. The nucleus of the collection is displayed in Nell's House, the main building of an original complex built by Colonel Robert Montgomery in 1932 during the heyday of the Art Deco Movement. Designed by notable architect, Robert Fitch Smith, it is a one of the finest examples of his work and of the period.

Today the sweeping lines of the staircase, majestic fireplace, and stylized Deco designs on the first floor of Nell's House integrate with the art and other objects displayed there as part of MBC's Montgomery Archive.

Currently in the early phases of a seven-year project to preserve the historical collection, much needed renovations are planned to maintain architectural details, ensure a secure, protective environment for the historical and art pieces, and provide a place for informal meetings, receptions, and fundraising events.

Since Florida's summer heat and humidity can take a great toll on natural materials, the first step we took was to ensure the collection was housed in a stabilized environment.

Part of this was accomplished in 2000. MBC was granted funds by the Kelly Foundation to convert a garage space into an environmentally controlled room to preserve the historical documents, original blueprints, early photographs, correspondence, original art, books, and the ongoing history of the Center.

Thanks to a generous grant from The Villagers, the oldest historic preservation organization in Miami-Dade County, we were able to install two new high-efficiency air conditioning systems to maintain uniform temperature and humidity year round for all open rooms and spaces on the first floor of Nell's House. Among the more interesting treasures, we can now display there with more confidence are a 1903 oil painting of the Colonel's mother by New Hope artist, Mary Smyth Perkins, botanical watercolors by Lee Adams, a rare collection of Orchid wood block prints, a jade snuff box collection, and over \_\_\_\_ antique Asian sculptures and carvings.

A popular gathering place for our historical tours, the rooms are also available throughout the year for small events and meetings. For more information about the collection, tours or room rental, contact Evelyn Young, 305-667-3800 x101. ■

### MBC BY NUMBERS 2004 Collection Inventory

	Planted in the Ground	Growing in Our Nursery <sup>3</sup>	Total in Collection <sup>4</sup>
<b>PALMS</b>			
Taxa <sup>1</sup>	400	173	483
Accessions <sup>2</sup>	1,788	603	2,333
Plants	5,755	2,328	8,083
<b>CYCADS</b>			
Taxa <sup>1</sup>	202	161	257
Accessions <sup>2</sup>	1,033	725	1,684
Plants	2,758	2,663	5,421
<b>OTHER</b>			
Taxa <sup>1</sup>	395	18	403
Accessions <sup>2</sup>	1,940	32	1,968
Plants	2,296	66	2,586

For detailed information on MBC's taxa and accessions, contact Collections Development, ext. 103

<sup>1</sup> Species, subspecies, varieties, etc.

<sup>2</sup> A collection of seeds from one source or locality

<sup>3</sup> Includes seedlings and plants

<sup>4</sup> A taxon or accession may be represented in both the ground and nursery

## TEAM NEWS



**Erika Witcher** joined MBC in a new assistant horticulturist position. Primarily focusing on the dicots, she also will help with palm and cycad horticulture. Erika is an experienced biological plant technician, has collaborated

with scientists on investigations, and is knowledgeable about scientific data collection methods. She is a welcome, and much needed, addition to our plant programs.

**Vickie Murphy** officially assumed the responsibilities of nursery horticulturist in January. After 5 year's experience on MBC's' palm team, Vickie brings not only relevant knowledge, but new ideas and a great deal of enthusiasm to her new position. **Randy Russ** was promoted from landscaper to fill the Vickie's vacated position of assistant palm horticulturist.

**Larry Noblick**, who served as MBC's Collections Development manager and palm biologist for the past nine years, decided to focus more time and energy on research and building the Palm Program at Montgomery. **Barbara Bohnsack**, chosen for her superior organizational skills and leadership, left her position as field supervisor to assume the role of Collections Development manager. At the same time, she will serve as MBC's dicot biologist. **Laura Vasquez**, who has proven herself as a field specialist, was promoted to fill the vacancy left by Barbara. ■

## Remembering Volunteer Mike Kambour

Mike Kambour, an MBC volunteer since 1996, passed away this January. He will always be remembered for his friendliness and loyal dedication. Mike applied his expertise in photography to raise the bar for scientific imaging in our Collections Database Program, spending many hours in the garden recording plant growth and development. Thanks, Mike, for sharing your precious time and being a true friend of Montgomery. ■



# Thanks

## FOR YOUR SUPPORT IN 2004!

The Executive Director, managers, and the entire MBC team wish to acknowledge the following individuals, foundations, companies, and associations who help make a difference.

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**About the Cover:** A bee is tapping into the pollen of the inflorescence of a *Lonchocarpus violaceus*, one of \_\_\_\_ saplings donated by Botanics Wholesale. A part of MBC Dicot Program, these trees provide a wind shield for young palms.

Photography by Mary Andrews

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## from THE MONTGOMERY ARCHIVE

# Natural Inspiration: MBC's Botanical Art Collection

From its very inception, Montgomery Botanical Center was the blending of art and science. Since Nell Montgomery's love of plants extended into her personal artistic expression, it is not surprising that her vision for a research and educational center included "landscape design excellence"—the chief impetus behind MBC's Olmstedean-designed garden that provides access to our scientific plant collections.

Nell not only created her own work (pictured below) but was an avid collector of botanical art, both antique and contemporary. Much of her collection was inherited by MBC and now featured in The Montgomery Archive.

One fascinating piece is an original edition of *Curtis's Botanical Magazine*, Vol XIV, 1800. This journal (shown above) contains 35 hand-colored engravings by botanical illustrator, S.T. Edwards with accompanying text about each plant. William Curtis, an apothecary with a life-long passion for flora and fauna, launched the publication in England in 1787. The journal began as an ongoing authoritative source for horticultural information on the multitude of plants Britain was importing from all over the world, and it is still being published today. Considered the greatest scientific periodicals of all time, the journal has the added distinction of being the oldest periodical in existence that includes colored plates.



The illustrations quickly became the journal's chief glory and source of success.—the sheer number of plates appearing on its pages over the centuries exceeds 11,000. Through the journal, Curtis provided an invaluable training ground and public outlet for some of the most talented botanical artists of the day. Their beautiful work helped launch the Victorian obsession with botanical illustration that lingers with us in the digital age.

Of all the works of art Nell entrusted to the Center, the botanical illustrations resonate most perfectly with MBC's mission. Researchers and art connoisseurs alike appreciate the combination of scientific rigor and artistic beauty represented in these works. And like our scientific plants and data, the collections and information about them are available to scholars, students, and enthusiasts who wish to view or study them.

