



The Palmateer

Central Florida Palm & Cycad Society • Winter, 2010 • Volume 30, Number 4



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Central Florida Palm & Cycad Society

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The Palmateer Editorial Team

Editor: Bob Johnson

Contributors: Mike Merritt, Geri Prall,
William Tang

Layout/Production: Bob Johnson

Front cover: A group of *Jubaea chilensis* growing in habitat, Ocoa, Chile (photo by William Tang).

Inside front cover: *Jubaea chilensis* on slopes above the valley floor of Ocoa; coastal mountains are visible in the background (photo by William Tang).

Back cover: Two massive specimens of *Jubaea chilensis* at the botanical gardens in Pisa, Italy, with William Tang (see his article on page 14).



Dr. Merrill Wilcox with *Butia* X *Jubaea* hybrid that he produced. This is the closest thing to a *Jubaea* that can be grown successfully long term in Florida (photo by Geri Prall).

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Central Florida Palm & Cycad Society

www.cfpacs.org

CFPACS 2010 Leadership

Dave Witt • Incoming President

7026 Burnway Dr., Orlando, FL 32819
(407) 760-5741 • president@cfpacs.org

Bob Johnson • Retiring President & Palmateer Editor

PO Box 560907, Orlando, FL 32856
(407) 438-0250 • palmateer@cfpacs.org

John Green • East Vice-President

6650 Chain Fern Rd., Grant, FL 32949
(321) 729-3973 • eastvp@cfpacs.org

Ron Hart • Central Vice-President

1008 Little Fawn Ct., Apopka, FL 32712
(352) 455-1080 • centralvp@cfpacs.org

Mike Evans • West Vice-President

6015 - 100th Way N., St. Petersburg, FL 33708
(727) 393-8950 • westvp@cfpacs.org

Chuck Grieneisen • Secretary

PO Box 621689, Oviedo, FL 32762
(407) 359-6276 • secretary@cfpacs.org

Catherine Johnson • Treasurer

PO Box 560907, Orlando, FL 32856
(407) 438-0250 • treasurer@cfpacs.org

Karen Barrese • Membership Chair

5942 Ehren Cutoff, Land O Lakes, FL 34639
(813) 996-7148 • membership@cfpacs.org

Frankie Ramos • Webmaster

4169 N. Indian River Dr., Cocoa, FL 32927
(321) 634-5223 • webmaster@cfpacs.org

Mike Dahme • Seed Bank Rep (East)

PO Box 89, Grant, FL 32949
(321) 704-0708 • palmasiera@gmail.com

Lucinda McCartney • Seed Bank Rep (West)

4217 Marlin Ln., Palmetto, FL 34221
(941) 375-0239 • mccartney.lucinda@gmail.com

The **Central Florida Palm & Cycad Society** is an affiliate of the **International Palm Society** and **The Cycad Society**.

CFPACS is a nonprofit, nonpartisan organization dedicated to scientific and educational projects related to the study of palms and cycads, their propagation, culture, conservation, care, and development. We assist in the preservation of palms and cycads for future generations as well as promote and maintain public interest in palms and cycads.

CFPACS serves the following counties: *Alachua, Brevard, Citrus, DeSoto, Flagler, Hardee, Hernando, Highlands, Hillsborough, Indian River, Lake, Levy, Manatee, Marion, Okeechobee, Orange, Osceola, Pasco, Pinellas, Polk, Putnam, Sarasota, Seminole, St. Lucie, Sumter and Volusia*. We also welcome palm and cycad enthusiasts from beyond Central Florida to become members.

CFPACS Membership Dues for 2010:

US Members (1-year): \$15

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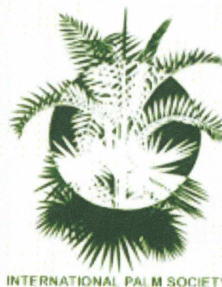
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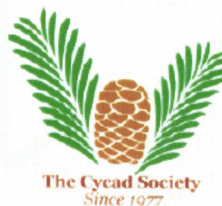
You may also pay by credit card at www.PayPal.com (please indicate "payments@cfpacs.org" in the "to" field).

Advertising: Please contact CFPACS treasurer, Catherine Johnson (e-mail treasurer@cfpacs.org) for advertising rates.



About the International Palm Society:

IPS membership dues are \$45 a year. Membership includes a subscription to *Palms*, the quarterly journal of the IPS. For further information on the IPS, please visit their web site: www.palms.org



About The Cycad Society:

TCS membership dues are \$35 a year. Membership includes a subscription to *The Cycad Newsletter*, the quarterly journal of TCS, and access to The Cycad Society seed bank. For further information on the TCS, please visit their web site: www.cycad.org

CFPACS News

Dave Witt New CFPACS President

Just when I thought I was out . . . they pull me back in. Yes, ladies and gents I'm baaack . . . kids are grown, palms as well, time to renew some old acquaintances along the circle of life, etc., etc., etc.

For those who don't know me, my name is Dave Witt, I reside in the Dr. Phillips area of Orlando. I've been growing palms here since 1993, and killing them at equal rates for nearly the same time. The phrase "that doesn't grow here" only served as twisted motivation for me to plant it, some paid off (mature fruiting *Bismarckia* for several years) and some didn't (we'll leave those for later). As a professional horticulturalist for over 12 years I've gained a great deal of hands on experience regarding what works for us, and what doesn't. I'm hoping to add in some of that practical advice to our publication and look forward to the newer challenges we face as a non-profit entity in a for-profit world.

Many things have changed since my last go round as president (looking at you internet) but one thing has not - I am always up for discussing palms. Please feel free to contact me with any suggestions and ideas you might have. We are always on the lookout for new meeting spots. They don't have to be old varied collections, newer gardens work quite well. Its the face to face socializing we're after, and that is something not even the vast internet can't replace.

Dave Witt
CFPACS President

A Word from the Retiring President

Thanks to all who have served CFPACS during my term as president - elected and appointed leadership, meeting hosts, sale vendors, seed donors, article contributors and other volunteers. It has been an honor and privilege to serve the membership of CFPACS and the greater central Florida community over the past three years. I wish the best to Dave Witt as he leads us as our new president.

Bob Johnson
Retiring CFPACS President

Getting the Most out of Your CFPACS Membership

You will get the most out of your membership by attending meetings and sales and getting to know your fellow members. To get the latest information on upcoming CFPACS events, please be sure we have your current e-mail address (we will not share your e-mail address with any other organization). Please send your e-mail address to Bob Johnson, palmateer@cfpacs.org.

CFPACS Spring Sales

FIT Botanical Fest

Saturday, March 5

8 am - 4 pm

Florida Institute of Technology
150 W. University Blvd., Melbourne

USF Botanical Garden Spring Sale

Saturday & Sunday, April 9-10

Saturday 10 am - 4 pm • Sunday 10 am - 3 pm

University of South Florida Botanical Garden
Pine and Alumni Dr., Tampa

If you are a CFPACS member that grows palms or cycads and would like to sell plants at one of these sales please contact Catherine Johnson (FIT sale) or Chuck Grieneisen (USF sale) - please see e-mail and phone info on page 4.

Time to Renew!

If you received a **renewal form** along with this issue of **The Palmateer** it is time for you to **renew** your CFPACS membership - your current membership expires with this issue. **Please send in your renewal form along with your payment today!**

CFPACS Fall Meeting in Orlando: Dave Witt's and the Nehrling Palm Cottage Gardens

Article by Bob Johnson

The CFPACS fall meeting convened in Orlando on October 16th. It was a perfect fall day in central Florida with a clear blue sky and temperatures in the low 80's. What ideal weather for visiting with old and new friends and viewing lots of palms.

Our first stop was Dave Witt's. Things have changed a lot at Dave's since the society last visited his garden in September, 2004 (in between hurricanes Frances and Jeanne). Dave's house burned down in early 2009 (thankfully all of his family was safe) and has since been rebuilt. The fire did little damage to the palms, but the ensuing freezes have.



Top - Dave Witt (blue shirt, touching palm) gives the crowd the lowdown on his *Corypha utan*. Planted in the spring of '96, it is damaged by every freeze but keeps coming back. An unusual sight growing this far north (photo by Chuck Grieneisen).

Left - One of Dave's *Bismarkia nobilis*, planted in spring of '94 at 4 feet tall, it now towers over the house and has been setting seed for several years (photo by Bob Johnson).

Insets - Dave's *Corypha* and *Bismarkia* as they appeared in 1999 (photos by Dave Witt).



Dave began growing palms in 1993 and has managed to fit quite a collection into a regular residential lot. Dave's *Bismarckia nobilis* has been fruiting for several years now, littering the ground below with seeds and seedlings. The most awe-inspiring palm in the garden is the *Corypha utan*, beaten back by each freeze but recovering every year. With interesting palms to see at every turn of the head, and Dave's erudite tour, it would have been easy to spend the entire day here!

After lunch we were treated to a visit to the Nehrling Palm Cottage Gardens in Gotha, just up the road from Dave's. Dr. Henry Nehrling (1853-1929) was an ornithologist and horticulturist. His Gotha garden ultimately became Florida's first experimental botanical garden where he tested over 3,000 new and rare plants for the USDA. Of these, over 300 new and beneficial plants were introduced into Florida's landscape.

Although few plants have survived from Dr. Nehrling's time, it was a real privilege to visit these historical grounds. We were treated to a DVD history of the garden and a tour by Henry Nehrling Society president Theresa Schretzmann-Myers. A restoration of the gardens is in the works. It is hoped that CFPACS will take part in the restoration with a grant to help plant palms and cycads and with volunteers to help with clearing and other tasks.

Thanks to Dave Witt, Theresa Schretzmann-Myers and the Henry Nehrling Society for hosting us!

*Top - Henry Nehrling's Palm Cottage, (built in the 1880s and moved to this site in the early 1900s) In front are several culms of *Bambusa oldhamii*, one of many species that Nehrling introduced into cultivation in Florida.*

Middle - Attendees perusing sale plants to find just the right palm or cycad to add to their garden.

*Right - Theresa Schretzmann-Myers, president of the Henry Nehrling Society standing next to a king sago (*Cycas revoluta*), one of the few surviving cycads from Dr. Nehrling's time (photos by Bob Johnson).*



CFPACS Holiday Meeting, Sarasota

Article and photos by Bob Johnson

With threats of an early freeze only days away CFPACS members and friends gathered in Sarasota for our annual holiday meeting. Three garden tours, a holiday feast, auction and plant sale awaited those not busy at home preparing their own gardens for winters first onslaught.

Our day began at the garden of Dr. Byron and Libby Besse. The Besse's garden is a mature garden, with mature specimens of palms and cycads under oak canopy and in full sun. Just a few houses down from the Besse's we had the opportunity to visit the garden of Beb Heaton. Bob's garden is a young garden, but it already contains an impressive collection of palms and cycads. It will get only better as the plants mature. Our final stop for the day was the garden of Rob Branch. Rob's garden has an amazing array of palms and other tropical plants, forming an ideal setting for the remainder of the days activities. We enjoyed a sumptuous feast prepared by Rob and Susan Dow with sides supplied by CFPACS members (thanks Rob and Susan, and all of those who brought food to share!).

After the meal Christian Faulkner and Phil Stager did a great job as auctioneers, and our members bid away to acquire plants at unbelievable recession savings. Most plants were auctioned off for between five and ten dollars! A few of the species that happy bidders went home with were *Bentinckia nicobarica*, *Brassiophoenix schumannii*, *Coccothrinax cupularis* and *Kentiopsis oliviformis*.



The day concluded with a plant sale, and members lingering to chat with one another until sunset.

Thanks go out to Dr. Byron and Libby Besse, Bob Heaton and Rob Branch for hosting CFPACS members and friends - the day was fun and memorable in every way!

Above - Kiersten Johnson is dwarfed by this *Copernicia macroglossa* growing in the Besse's garden. Kiersten, you better plant one now, you'll be 50-something by the time it gets this tall!

Left - Visitor's to the Besse's garden were awed by this huge *Encephalartos whitelockii* and other stunning cycad specimens.

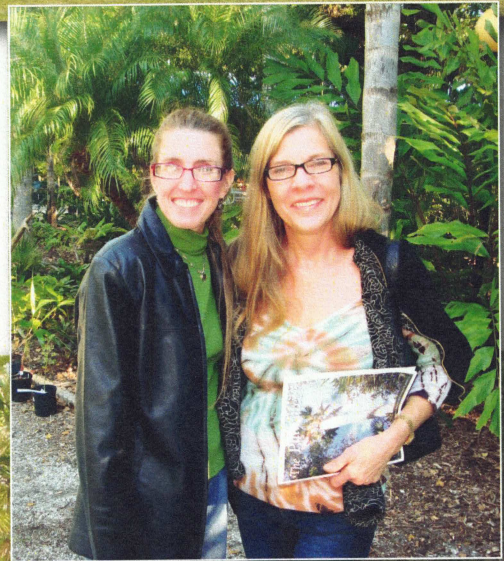


Above left - Just a portion of the full sun cycad garden at the Besse's. One of the benefits of CFPACS membership is having a chance to visit magnificent private gardens like this one.

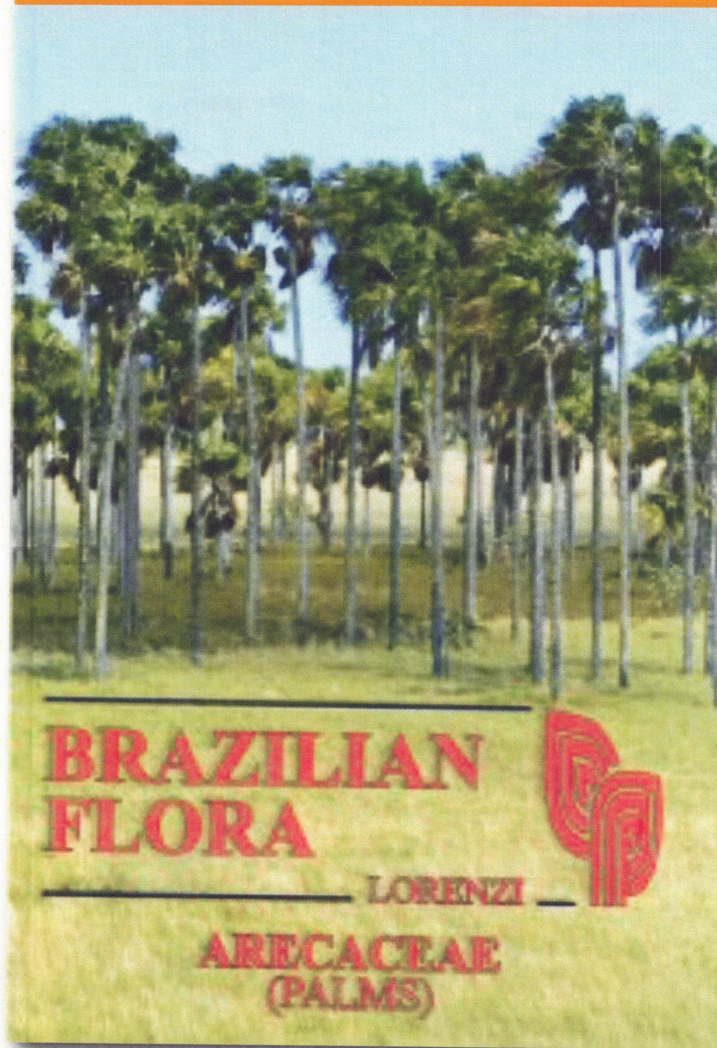
Above right - *Copernicia baileyana* growing at the Besse's garden.

Right - Catherine Johnson and Faith Bishock enjoying the afternoon portion of the meeting at Rob Branch's tropical paradise..

Below - Christian Faulkner and Phil Stager conducting the auction. CFPACS members took home rare palms at low, low, low prices!



Book Review



Harri Lorenzi, Larry R. Noblick, Francis Kahn, and Evandro Ferriera, *Brazilian Flora: Arecaceae* Instituto Plantarum de Estudos da Flora Ltda, Nova Odessa, SP, Brazil. 384 pp.

Reviewed by Mike Merritt
Keeau, Hawaii • merritt4154@gmail.com

This book was an excellent complement to the 2010 IPS biennial in Rio de Janeiro and even more so for the post-tour of palms in Minas Gerais and Sao Paulo states that took place immediately after the biennial and was led by principal author Harri Lorenzi. The book was available for purchase before and during the post-tour, but a rather frustrating series of problems caused by myself and arbitrary circumstances prevented me from doing so, so I had to rely on copies carried by my traveling companions. But I have my own copy now, and I have enjoyed the read. The book is published in Portuguese and English versions.

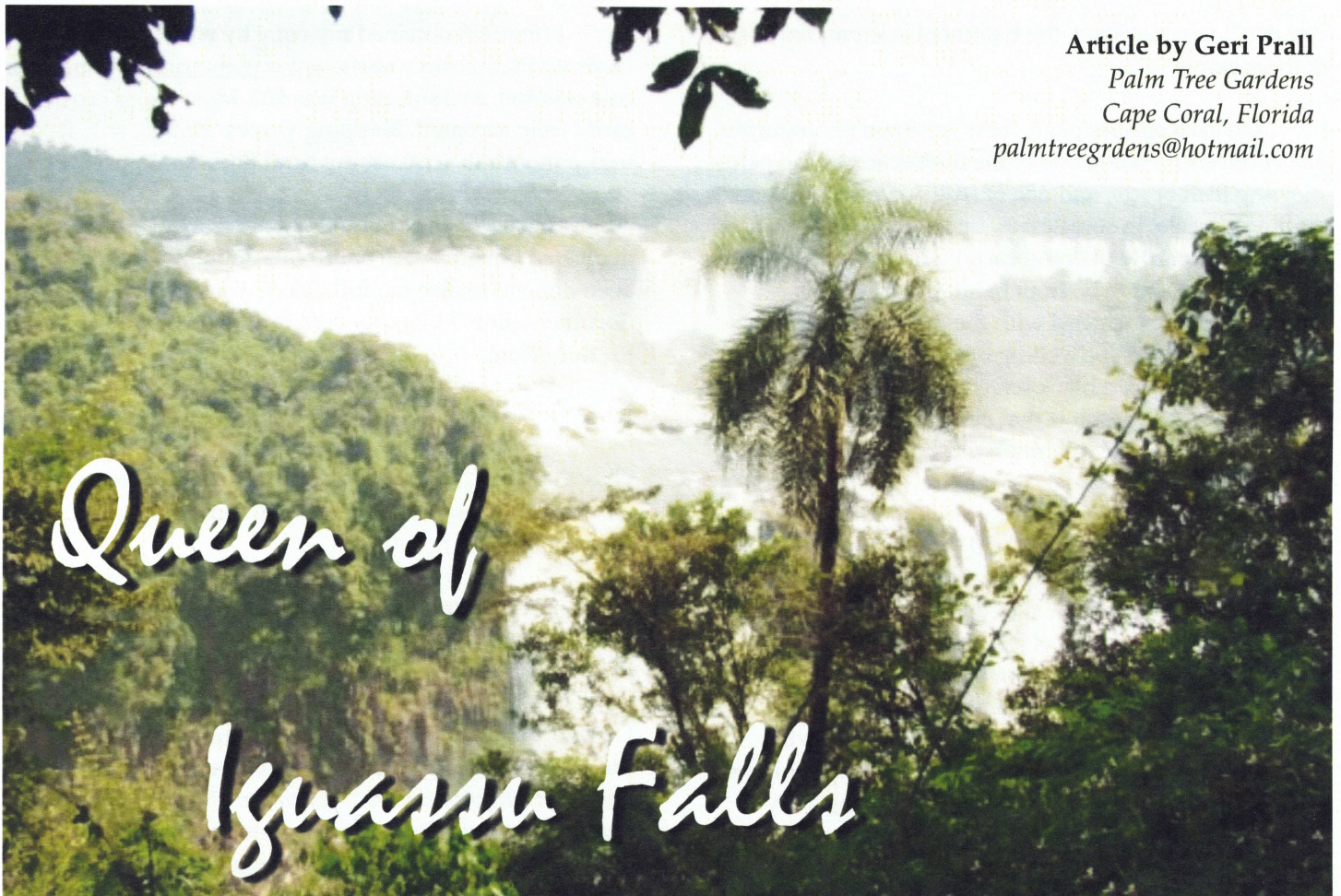
As indicated by the title, the book is envisioned as the first of a series of volumes on Brazilian flora. Pages from the book have a similar format to Lorenzi's book on Brazilian palms and palm exotics published only in Portuguese in 1996. The present book's citations only include a 2004 book on the same subject, which Harri Lorenzi (pers. commun., July 2010) describes as "more complete, with more information and with better pictures", in larger format, and also in Portuguese.

In the present book, each of the authors was given responsibility for the content of chapters dealing with specific genera: Larry Noblick for *Butia*, *Lytocaryum*, and *Syagrus*, Francis Kahn for *Astrocaryum*, Evandro Ferriera for *Bactris*, and Harri Lorenzi for the remaining genera. Because of the immense geographic area comprising the country of Brazil, a large part of New World species are included in the book. Some well-known non-Brazilian species receive brief discussion in the generic descriptions, which include keys to all the Brazilian species. A key to the genera is also provided in the front of the book.

Thirty new species are included in this book. Contrary to some expectations, this is not just confined to Larry Noblick's discoveries of new tough, diminutive *Syagrus*, *Butia*, and *Lytocaryum* species in semi-arid Brazil, but new species of many of the major genera are included. One *Astrocaryum*, four *Butias*, and five *Geonomas* are introduced as "*sp nov*". In many cases, species previously described but later lumped with others are again split off on the basis of new information supporting their distinctiveness. One example is the genus *Acrocomia*, where *A. totai* and *A. intumescens* are again considered separate species. The authors are appropriately reserved in making these changes, and often express their conclusions as tentative, subject to further research. Nevertheless, the authors may have earned themselves the term "splitters", even as previous authors have been described as "lumpers".

In describing the genus *Attalea*, the authors have diverged from their previous practice of basing their descriptions on the work of Glassman (1999) and now base their treatment on the work of Henderson, Galeano, and Bernal (1995).

The book begins with Lorenzi's foreword and acknowledgements, the genus and species index, and a general section on palms and their culture. Genera and species are presented alphabetically. In the new book, the authors repeat their previous procedure of devoting a full page to each and every species, major variety, and naturally occurring hybrid. For example, a page is devoted to each of the three varieties of *Geonoma maxima* (*chelidonura*, *maxima*, and *spixiana*). Where new species



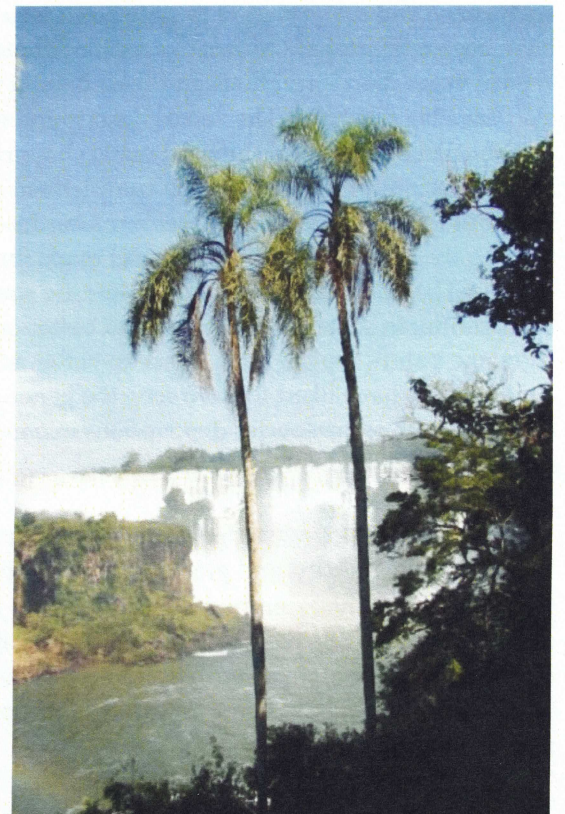
Prior to attending the IPS 2010 Biennial in Rio, we spent a few days in Iguazu Falls, touring both the Brazilian and Argentina side. One of the most spectacular palms, ruling over the falls was the queen palm (*Syagrus romanzoffiana*).

Queen palms are over planted in southwest Florida, lining streets in the city that where I live. They are often under fertilized and not planted in the correct location. If someone asks my recommendation for a landscape palm, I never recommend queen palms. I still wouldn't suggest planting a queen palm, but after seeing them in habitat, I gained new respect and a new found appreciation for this palm.

The other predominant palm found in the rainforest area of Iguazu Falls was *Euterpe edulis*. *Edulis* means edible - Heart of Palm was a delicacy there.

Many of the palms, as well as other plants, that we saw during the IPS Biennial are plants that we recognized and have growing in south Florida. The difference in tropical verses sub-tropical is evident in the size and the way they are flourishing. After last winter, growers in Florida agree that it would be great not to have winter freezes.

IPS Biennials include a variety of stops from seeing palms in habitat to popular destination (must-see tourist) attractions, and they usually include a visit to a local member's nursery. In Brazil, it was Hermino's nursery outside of Rio. The grove of *Areca vestiaria*, creating a walk through tunnel, wins the vote for the most colorful and memorable palms of the trip.



("sp nov") are described, the treatment is expanded to two or three pages.

On each species page, there are three photographs, one of the entire palm, one of the midsection of the palm showing fruit bracts, and one of fruits on a background centimeter scale. In some cases, one of the fruits is sectioned or part of the mesocarp is stripped off. Most palm photos seem to be from habitat. Additional photographs are included with the description of new species. Where forest-dwelling or small grass-dwelling species are imaged, a black screen is placed behind the subject plant. The result is that clear images are provided of species that would not otherwise be illustrated satisfactorily.

A small inset map of Brazil is included with red dots indicating the locations where the species is found. The text includes attribution to the botanist naming the species or variety, botanical references, the type locality, and lists of synonyms and common names. Major features of the species are presented in a thorough botanical description. Other paragraphs describe the distribution and habitat, uses (by indigenous populations and the potential for landscaping), and propagation (when the fruits ripen, how long the seeds take to germinate, and how many fruits are contained in kilogram). Sometimes the paragraph on major features includes notes describing the relation to similar species.

I do have a few complaints. Lorenzi explains his country's biogeographic zones in detail. A map showing such zones and their relation to state boundaries would have been a helpful aid to this discussion. Photos of the typical vegetation formations and their habitat would also have been helpful. The verbal description of species distribution by state and the inset maps showing the species distribution with red dots complement each other well, but I would have liked to see a master inset map naming the states outlined in the inset maps for each species. The photographs of large palms are sometimes uninspiring; in some cases, I have seen better ones that show the palm's typical appearance to better advantage. And I would have liked to have seen the general notes included with some species descriptions expanded into a standard paragraph for every species.

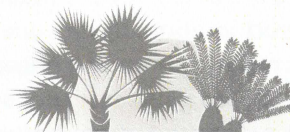
Pages are glossy (so don't spill your beer on them). The book cover is hard and glossy with a photo of a panorama of palms extending across front and back covers. There are 384 pages in all. At the back of the book are a glossary of botanical terms, an index of taxa with accepted names in bold print, an index of common names, and the list of references.

I (finally!) obtained my copy by visiting the Instituto Plantarum website www.plantarum.com.br. The cost was \$60, and shipping was \$25. Most major credit cards were accepted. Shipping was by airmail; still, it took a month to arrive at my rural Big Island post office.

Generally, the book strikes me as a labor of love by dedicated botanists. An enormous amount of work has been done to realize the full objectives of this documentation. I offer my congratulations to the authors for this effort.

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*Facing page - Queen palms (*Syagrus romanzoffiana*) in habitat, Iguassu Falls, Brazil.*

*Above - Spectacular grove of *Areca vestiaria* - the "orange crownshaft" or "sunset palm" - growing at Hermino's nursery outside of Rio de Janeiro (photos by David and Geri Prall).*

*Left - Dave and Geri standing in the *Areca vestiaria* tunnel at Hermino's nursery (photo by David Salmonowitz).*

The Chilean Wine Palm in Habitat



Fig. 1

Article and photos by William Tang

65 Corydin Dr.

Miami Springs, FL 33166

wlmtang@bellsouth.net

Chile is an isolated country. It is isolated by both climate and geography. To the east the snowy peaks of the Andes block migration for most plants and animals. To the north is the Atacama Desert, the driest on earth. The frigid Antarctic Ocean and Patagonia to the south is a formidable route for the migration of tropical plant groups such as palms. The vast Pacific Ocean stretches to the west with almost no archipelagoes to serve as stepping stones for dispersal of terrestrial biota. It is not surprising then that there is only one palm native to this country, the Chilean wine palm, *Jubaea chilensis*, which has no close living relative.

Recently I had the fortune to visit *Jubaea chilensis* in habitat. This palm once inhabited five of the fifteen administrative regions of Chile: Coquimbo, Valparaíso, Santiago, O'Higgins and Maule, however, due to population pressures and the exploitation of this palm for wine making, most of the wild populations have been wiped out. Wine production using this species required the trunks to be cut down. Also, much of the original natural habitat has been converted to pastures and farms. Today only two natural populations of the species are said to still exist. One is near the coastal city of Valparaíso. Tall specimens of this population can be seen on hilly terrain along Route 68 not far outside the city on the way to the capital of Santiago. This habitat is highly disturbed and the palms grow among introduced eucalyptus trees (Fig. 1).

The second wild population is located in La Campana, a national park northwest of Santiago. Charles Darwin, during his globe circling voyage aboard the HMS Beagle, stopped in Chile and climbed the 1880 meter peak of Cerro La Campana in 1834 and likely saw

the palms in this region. Partly due to the fame generated by Darwin's visit La Campana became a national park and as a result its wild palms were protected. Parque Nacional La Campana is divided into three sectors and palms are found only in the northern sector of Ocoa. Sector Ocoa is about an hour and a half drive from Santiago via Route 5 and abuts the Central Valley of Chile. The Central Valley is a relatively flat area, about 500 meters above sea level, between the coastal mountain ranges and the Andes Mountains and includes the city of Santiago. It has a Mediterranean climate, with wet winters and dry summers, during which virtually no rain falls. In many ways the region resembles the Central Valley of California in both geography and climate. In the summer temperatures in the Central Valley reach into the mid 80's Fahrenheit, but this is a dry heat, with low humidity. In winter the average temperatures are in the 50's Fahrenheit. Upon driving into sector Ocoa it becomes apparent that it forms a finger of the Central Valley where it meets of the coastal mountain range. The lower area of the valley is dominated by a dry scrub with occasional cacti. The major herbivore is the guanaco, a relative of the camel. Visible to the west are towering peaks of the coastal range (Fig. 2), and the Andes can be clearly seen to the east (Fig. 3). Groves of tall *Jubaea* are common along the valley floor of Sector Ocoa, especially near streams (Figs. 4, 5, 6 & 7). As one ascends in elevation a sweeping panorama becomes available and hundreds of palms can be seen in the valley and the lower slopes of the mountains (Figs. 2, 3, 8, inside front cover). At the lower slopes of the mountains *Jubaea* tends to cluster in steep gullies where moisture accumulates (Fig. 9), but surprisingly they can be abundant on some dry hill tops where few other plants seem to grow (Fig. 10). Here their roots may be able to tap into deep underground sources



Figure 1 - Wild *Jubaea* growing near Valparaíso; note the introduced eucalyptus trees.

Figure 2 - Sector Ocoa in Parque Nacional La Campana; looking west toward the towering coastal mountain range.

Figure 3 - Sector Ocoa in Parque Nacional La Campana; looking northeast hundreds of palms can be seen; the Andes are visible in the distance.

Figure 4 - A grove of Chilean wine palms on the valley floor of Ocoa.

of water that are not readily apparent. Vegetation zones are clearly demarcated along the mountain slope and most vegetation, including *Jubaea*, disappear above the lower levels (Fig. 2). *Jubaea* is a spectacular palm with massive trunks. Trunks often show changes in diameter with age, giving them the appearance of a "shoulder" (Fig. 11). The size and stature of the palms at the higher elevations appear similar to that of specimens lower down. Young plants can be seen, but are not abundant.

The Chilean wine palm is cultivated in the central squares of many Chilean cities, including the capital of Santiago (Fig. 12) as well as on private estates. It is cultivated in various botanical gardens around the world including the botanical gardens in Pisa, Italy (back cover). Many of these cultivated specimens are likely the descendants of wild populations that no longer exist and may be valuable as sources of genetic variation for breeding. In Florida the Chilean wine palm has not been successfully grown for extended periods. Although

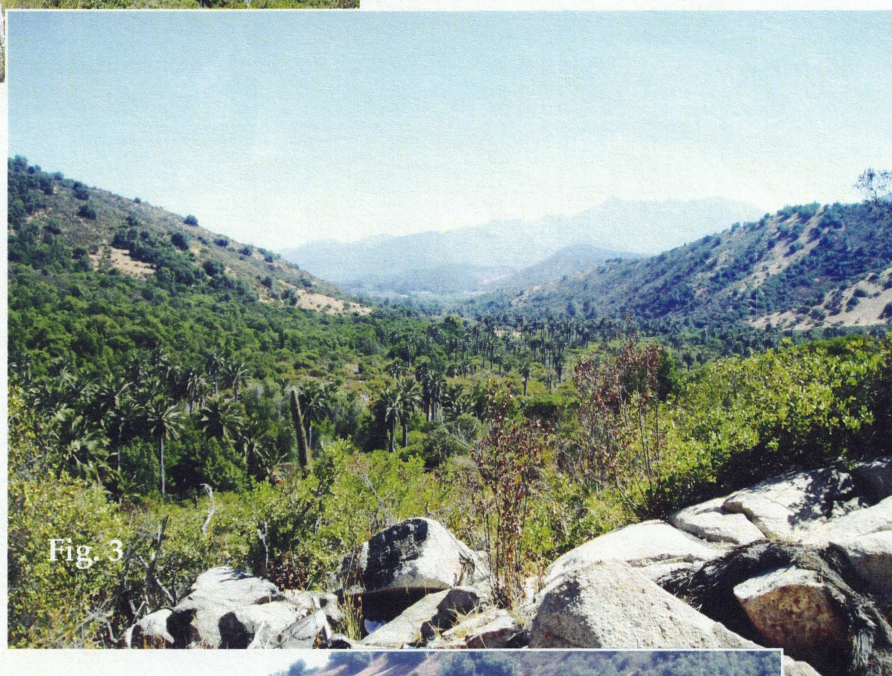


Fig. 5



it is resistant to frosts down to 5°F, it appears that the heat of Florida summers and perhaps the high humidity are detrimental and ultimately fatal to *Jubaea*. Hybrids of *Jubaea* with *Butia*, however, have been successfully grown in Tampa and other parts of the state. (see photo on page 3)

Acknowledgements

I would like to thank Ed Brown for sharing his experiences with growing *Jubaea* in Florida.

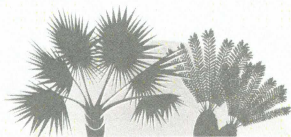


Figure 5 - Specimen on the valley floor of Ocoa.

Figure 6 - Detail of the trunk of *Jubaea* growing in the lowlands of Ocoa.

Figure 7 - Immature infructescences on a plant next to a creek.

Figure 8 - Specimen on slopes above the valley floor.

Figure 9 - *Jubaea* clustering on a steep gully at the base of a mountain.

Figure 10 - A group of Chilean wine palms growing on a dry hilltop.

Figure 11 - A group of *Jubaea* at lower elevation in Ocoa showing the narrowing of the trunk, which gives it the appearance of a "shoulder".

Figure 12 - Tall specimens of the Chilean wine palm growing in front of the cathedral in the Plaza de Armas in Santiago, Chile.



Fig. 6



Fig. 7



Fig. 8



Fig. 10



Fig. 9



Fig. 11



Fig. 12

