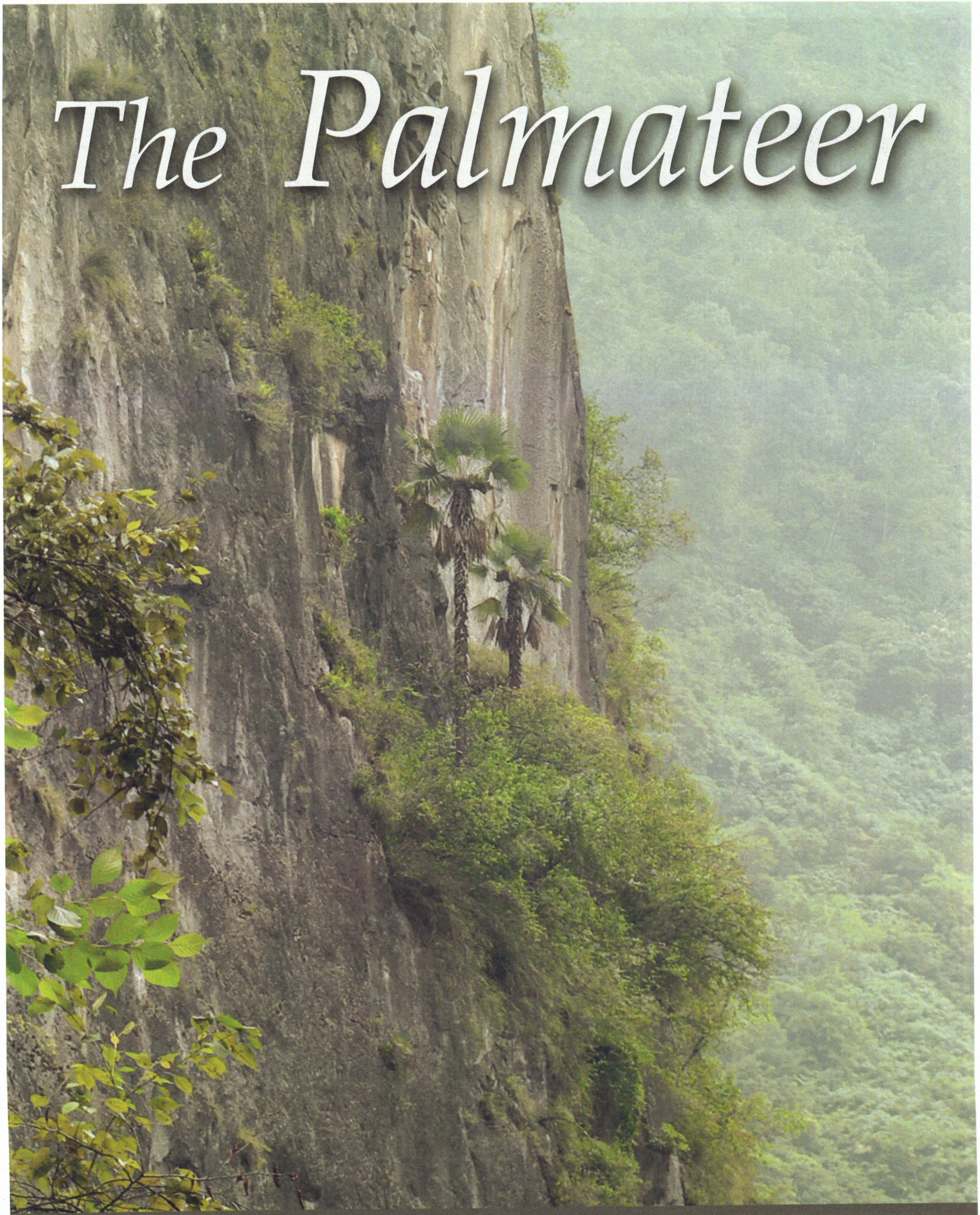

The Palmateer

Central Florida Palm & Cycad Society • Winter, 2009 • Volume 29, Number 3

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Contents

***The Palmateer* Editorial Team**

Interim Editor: Bob Johnson

Contributors: Rene Coativy, Walt Darnall, Chuck Grieneisen, Stephane Ringot, Eric Schmidt

Layout/Production: Bob Johnson

Front cover, inside front cover and **back cover photos:** *Trachycarpus princeps* in habitat, Yunnan, China (photos by Rene Coativy).

Right: Not a Coconut Palm, but the Giant Windowpane Palm, *Beccariophoenix sp.* (formerly *B. madagarensis*) growing in Scott Ward's Indialantic garden, one of the stops during the CFPACS fall meeting (photo by Bob Johnson).

Central Florida Palm & Cycad Society

www.cfpacs.org

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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

US Members (3-years): $40

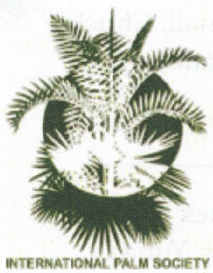
Foreign Members (1-year): $20

Please send dues to:

Karen Barrese
CFPACS Membership Chair
5942 Ehren Cutoff
Land O Lakes, FL 34639

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 $25 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

2010 CFPACS Sales

CFPACS will participate in five sales in 2010. Mark your calendars now and plan on attending the sales closest to you. If you have not attended one of these sales before, they are well worth the drive. You will find the largest selection of palms and cycads in central Florida at bargain prices. Those looking to expand their collections on a limited budget will find many palms selling for $10 or less, while those looking for larger specimens will be able to buy 15 and 25 gallon palms for near wholesale prices.

March

FIT Botanical Fest
Saturday, March 6
9 am - 4 pm
Florida Institute of Technology
150 W. University Blvd., Melbourne, Florida 32901
http://facilities.fit.edu/botanical_gardens.php

April

USF Botanical Garden Spring Sale
Saturday & Sunday, April 10-11
Saturday 10 am - 4 pm
Sunday 10 am - 3 pm
University of South Florida Botanical Garden
Pine and Alumni Dr., Tampa
www.cas.usf.edu/garden/index.htm

October

USF Botanical Garden Fall Sale
Saturday & Sunday, October 9-10
USF Botanical Garden, Tampa

CFPACS 3rd Annual Festival of Palms
Saturday, October 23 *(tentative date)*
FIT Botanical Garden, Melbourne

November

Downtown St. Petersburg
Waterfront Parks Centennial
Saturday, November 6
CFPACS will be a part of this centennial celebration with events at the Gizella Kopsick Palm Arboretum
Details forthcoming later in the year
Gizella Kopsick Palm Arboretum
901 North Shore Dr.
St. Petersburg, FL 33713
www.stpete.org/parks/palm.asp

Above: *(right to left) USF sale chairman Chuck Grieneisen and fellow growers Frank Tintera and Steve Farnsworth at the USF Fall 2009 sale.* **Left:** *Frank Tintera making final preparations before the sale begins (photos by Bob Johnson).*

President's Report

Bob Johnson

Looking back over the past two years it is evident that CFPACS has accomplished a great deal. I am thankful for the good foundation put in place by those who have been a part of the CFPACS leadership over the years. When I began my term as president in January, 2008 I knew that I wanted CFPACS to maintain the great things that we were doing and to expand as we were able. Two of the things that I have been most passionate about is increasing the number of grants given to support local institutions and plantings in central Florida and to increase our outreach to the local community. During the past two years CFPACS has not only maintained our meeting schedule, but we have increased our sale schedule, increased sale income and increased the number of grants given. Of the events that we have participated in, the Festival of Palms, Epcot Flower and Garden Festival and Boktoberfest were new events for CFPACS. Altogether we have sponsored and/or participated in 20 events and have awarded and/or fulfilled 7 grants as outlined below:

Meetings
8 regular meetings and 1 joint meeting with the South Florida Palm Society

Education & Outreach
Don Hodel talk (July 2008)

Festival of Palms (November 2008, October 2009)

Epcot Flower & Garden Festival (May 2009)

Grants
FIT (for the Dr. Gerome P. Keuper statue)

FIT (for the Botanical Garden)

Gizella Kopsick Palm Arboretum

Pineview School (cycad garden)

DeLaura Middle School palm garden (2009 HomeTown Grant)

Albin Polasek Museum & Gardens (cycad collection)

Bok Tower Gardens (completion of grant awarded in 2005)

Sales
FIT Botanical Fest (March 2008, 2009, CFPACS was a sponsor for 2009)

USF Spring Sale (April 2008, 2009)

USF Fall Sale (October 2008, 2009)

Boktoberfest (October 2009)

Festival of Palms (November 2008, October 2009)

If we can continue with this amount and quality of events and grants we will be doing well. Some areas that we would do well to improve in the future are:

Meetings - we need more new meeting venues. We have visited 13 gardens during our 8 local meetings over the past two years. Of those 13 gardens, only two were new stops on our itinerary.

CFPACS treasurer Catherine Johnson discusses the CFPACS publication Palms for Central Florida *with new member Richard Sill at Bokoberfest in Lake Wales (photo by Bob Johnson).*

Education and Outreach - we can use more volunteers to attend events and staff a CFPACS display. We can also sponsor more talks and workshops geared to homeowners and novice palm and cycad gardeners. We have published *Palms for Central Florida* as a supplement to the Fall Palmateer. Perhaps there are ways that we can distribute this publication beyond our membership, and publish more items like it to benefit not just our members but those outside of CFPACS.

Membership - increased education and outreach will lead to more members, we also need to implement other means of promoting the society and increasing membership.

Communications - we need more volunteers to help with *The Palmateer* in order to continue our publication with good content, and to get our newsletter back on a consistent production and mailing schedule.

I would like to thank all of the board members that have helped immensely with these projects and more over the past two years. Without your hard work and support we would not have accomplished all that we have.

Finally, I would like to invite one or more of our members to consider volunteering to be the next CFPACS president (if we have more than one person interested we can have an election!). The term for president is two years, so my term has now expired. I have found serving as CFPACS president to be a challenging and rewarding experience. If you are wondering what the job requires, I can say briefly that it is overseeing the work of the society with the assistance of a very capable board, each of whom carries out specific tasks. The majority of communication can be done via e-mail, and with all board positions filled, the president's main job is keeping in touch with the board members to stay abreast of the work that they are doing. The biggest challenge is if someone retires from their position. Then, the president and the board will need to find a replacement - and come up with a way to get the required work done while the position is vacant. If you would like more details on what being CFPACS president entails, please e-mail me at president@cfpacs.org

Until we have a new president in place, I will continue as president in the interim, although with reduced responsibilities. During this time I will delegate more and more to board members and other volunteers. This should serve to make the job of the next president even easier. If you don't think that you are the right person for CFPACS president at this time, there is still much to be done. If you are good at sending e-mails or making phone calls to enlist people's help, if you have experience with publicity - these are some of the things that we could use your help with.

Please contact me if you would like to serve the society in any way - there are many smaller short term and long term tasks that can be done by members without committing to serve on the CFPACS board.

Volunteer Opportunities

CFPACS is an all-volunteer organization and exists only through the work and support of its members. There are many projects that we need your help with in order to accomplish our mission. Our three biggest needs at this time are:

__New CFPACS President

__Authors and helpers for The Palmateer

__New meeting venues

Please e-mail Bob Johnson (president@cfpacs.org) if you are interested in helping in any of these areas, or to request additional information.

In Search of the Stone Gate Palm, *Trachycarpus princeps*

Stephane Ringot • Translation from French and photos by Rene Coativy

Originally published in French in *Le Palmier,* the Fous de Palmiers magazine

Numerous obstacles notwithstanding, I felt compelled to twice journey far from Paris, in 2005 and again in '08, to Bingzhongluo in Yunnan, China, the remote and restricted habitat for *Trachycarpus princeps*. Once in Kunming, the capital of Yunnan, an interpreter is essential if you do not speak Chinese as there's no signage in English at all, and the province incorporates several dozens of minority groups, each with a different dialect. Fortunately, my friend Oliver, who lives in Wuhan and is fluent in Mandarin, was able to join me along with his Chinese wife: without them travel to the palm would have been considerably more difficult.

By bus and taxi we left Kunming for Dali and then Bingzhongluo some 1000 kilometers [600 miles] by road, a trip of 24 hours. At latitude 28 degrees N, Bingzhongluo is in the NW corner of Yunnan, quite close to the border with Myanmar [Burma] and Tibet, and not far from India's northeastern-most projection, a very remote place indeed. The last leg of the trip is due north, following the course of the River Nu Jiang [called the Salween after it enters Burma], and many times frightening due to the sheer precipices on the roadside. As for catching some sleep on the bus, the challenges are somewhat different – the odor of fellow passengers' feet, the 'fog' of cigarette smoke, and the need to guard against theft.

Few cabdrivers are willing to drive the entire distance, on one occasion we almost died at night when the car fell into an unmarked crater, and boulders of all sizes remain on the road forever, with streams crossing it as well. But the beauty of the scenery and the surrounding mountains of the Himalaya supplemented the goal of seeing the palm, causing us to overlook these impediments and fatigue, 50 hours after departing France, till arrival at the small hotel, owned by Yanfai, in Bingzhongluo.

Still tired but invigorated by expectation, the next morning we followed the track – there is no road past the village – towards Stone Gate. This was in September 2005, my first visit to the nearly inaccessible *Trachycarpus* species, and I was emotional as we came close to where dozens of the palms clung to the sheer cliff on the opposite side of the river gorge. I was doubtful that we could attain the east bank, realizing how difficult it would be to cross the river. Indeed, Yanfai said it was impossible, but at my insistence he contacted a farmer to arrange a crossing: fortunately, he spoke the local dialect.

The region is inhospitable, with poisonous snakes, no hospital, no helicopter or ambulance and excellent physical condition is a requisite for approaching the palms. But though fearful and wholly reliant on the local people to complete my mission, there was no way I would be turned-back so close to the goal. After a few hours of slow progress in the difficult terrain, we approached the first palm, the objective fulfilled, a great moment indeed.

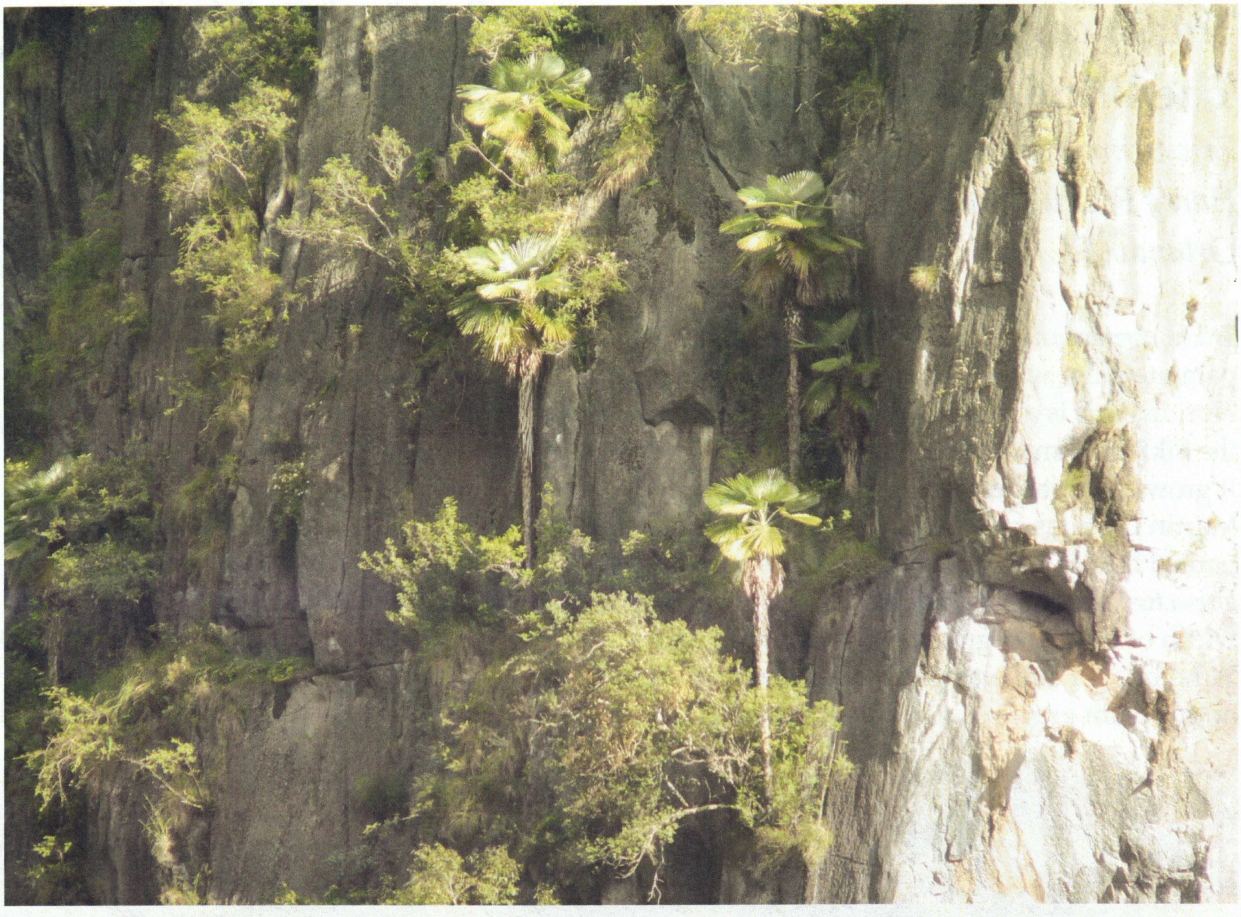
The Stone Gate gorge, on whose vertical sides the palms cling, drops about 300 meters [1000 feet], and I wonder if the mineral content of the crystalline limestone is a requirement for the species – soil pH is quite high. They are thriving on the darker side of the chasm, where they get sunlight from noon only for a few hours, the cliffside facing NNW for 2 ? miles. The pockets in which *T. princeps* grow are

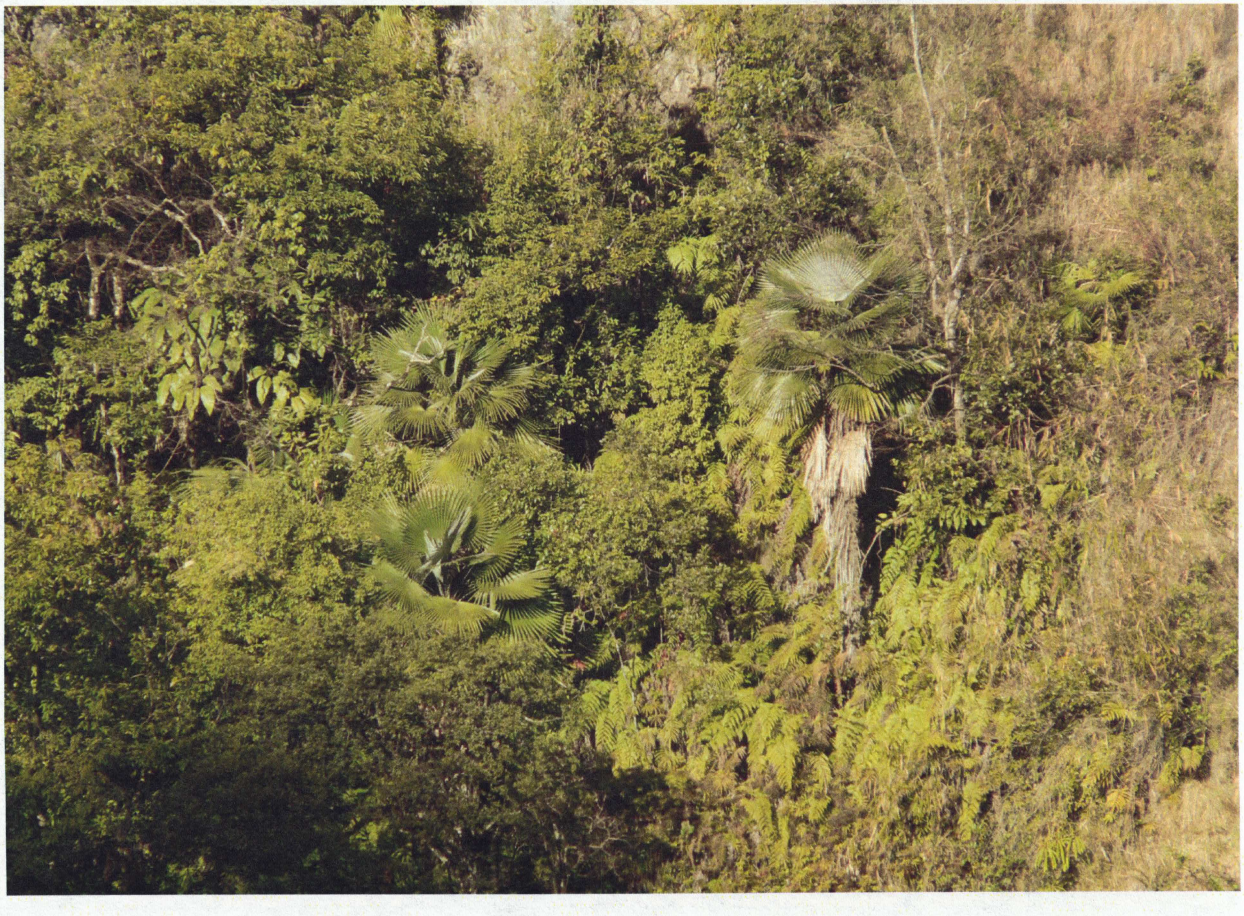
graveled and well-drained, and rich from the droppings of birds. Humidity is high and permanent as numerous springs flow from all over the cliff down to the river. The climate is subtropical, with summer highs of 28 deg. C, lows of 15 [82 – 59F]. In winter the range is between 20 C and 0 [68 – 32F].

Following are some of my conclusions regarding the cultivation of *T. princeps*. Germination has proven to be lengthy and sporadic, quite the contrary of the better-known *Trachycarpus* species. Two seeds germinated after some weeks, several others simultaneously after 10 months, and the balance after two years! I noticed that delayed germination resulted in the death of the seedlings soon afterwards. On the other hand, I did not incur any losses of seeds bought from a European source in 2008. I have found that *T. princeps* grows faster than *T. fortunei*, and they withstood -6 deg. C [21F] in my greenhouse, but I haven't enough experience to make a prediction about the level of their hardiness to cold.

On my second trip one of the guides dug some seedlings from the site to give to me. Of the six, three died and the balance refused to grow at all. I should never have accepted them, but I feared that he would have been upset at my refusal. Few seeds are available due to the large rats, and flowering seems limited, so seedlings should be left in place.

A trip to China's Stone Gate requires planning and great motivation, but it is worth the effort. The color of the undersides of the newest leaves is outstanding, waxy white, which is weathered-away in age by the heavy rains. In a setting of lush vegetation with a mystical ambiance, almost inaccessible in the foothills of the Himalaya, is my favorite palm: *Trachycarpus princeps.*





Trachycarpus latisectus
The Windamere Palm

Eric Schmidt
Harry P. Leu Gardens
Orlando, FL

Trachycarpus latisectus, the Windamere Palm, is a palmate palm with potential for growing in central Florida. This is a recently described palm native to the Sikkim Himalayan region in northeastern India. It grows at altitudes between 4000 to 8000 feet. Martin Gibbons and Tobias Spanner described and named this palm in 1997. The species name, *latisectus*, is Latin for "wide section", describing the width of the leaf segments. The common name Windamere Palm was given after seeing specimens of this palm growing at the Windamere Hotel in Darjeeling, India. Before being properly described, seeds of this palm were distributed as *Trachycarpus* "Sikkimensis".

Trachycarpus latisectus is a very ornamental palm that can grow 30 to 40 feet tall. The smooth trunk is slender, 4-7 inches in diameter and light gray in color. The circular leaves are unarmed and when mature can be 3-4 feet across. They are divided about halfway with broad segments and are dark green with a slightly glaucous underneath. Many times it has been described that this species of *Trachycarpus* resembles a *Livistona*.

Palms in the genus *Trachycarpus* have proven somewhat difficult to grow in central and southern Florida. There are nine species native to higher elevations in montane forests from northern India to southeastern Asia. They prefer cooler climates than that of peninsular Florida. They are also susceptible

Both pages: Trachycarpus latisectus growing at Leu Gardens (photos by Eric Schmidt).

to nematodes which are common in Florida's sandy soils. Here at Leu Gardens we first added *Trachycarpus latisectus* to the collection in 2000. They were planted in the Palm Garden. Three large one gallon specimens were planted in April 2000. Within two years all were dead. Nematodes were the culprit. The area in which they were planted is an area in which nematodes have previously been a problem. This area is also under very large and old Camphor Trees (*Cinnamomum camphora*) which have allelopathic tendencies. Many plants have a difficult time establishing themselves in areas adjacent to camphor trees. Nematodes in the sandy soil make it that more difficult. In spring 2004 several more specimens were planted in two other areas and they have grown well since then. So far our largest specimens are 3-4 feet tall.

In central Florida they prefer some shade when younger. They also like fertile acidic soil that is moist. They are slow growing as seedlings but begin to grow faster as juveniles. They are cold hardy in most of central Florida but are the most cold sensitive of the *Trachycarpus* species. Damage seems to occur below about 23-24 deg. F. from reports I have read.

January 21-23, 2009 Freeze Report from Highlands County

Walt Darnall

Like most areas of central Florida, Highlands County was hit hard by three back-to-back radiational freezes this past January. As a result, my palm and tropical garden, located just outside the small town of Lake Placid, incurred wide spread devastation. I haven't seen such cold and frost damage at my place since the infamous January 5, 2001 radiation freeze, when my open-yard low temperature dropped to 22 degrees. It was during that freeze that Archbold Biological Station, located eight miles south of Lake Placid, Florida, tied its all-time low of 13 degrees!

My unofficial low temperatures for January 21st, 22nd, and 23rd was 27, 23.5, and 27 degrees respectively. I recorded the above low temperatures using an Oregon Scientific digital thermometer placed between frond bases of a *Dypsis decaryi* palm, located about 20 feet away from the east side of my house. I all but know this spot isn't the coldest spot on my property (5.60 acres), and believe it was probably even colder in some of the more outlying low areas well away from my house.

The official low temperature, recorded by F.A.W.N. (Florida Automated Weather Network) located at the Division of Forestry Department, about 8 miles north of Lake Placid, was somewhat warmer, with the coldest reading of 29.65 degrees on the morning of January 22nd. Also on that date, Archbold Biological Station recorded an official low temperature of 15 degrees!

Temperature Contrasts Throughout Highlands County

It should be noted that last January's low temperatures here in Highlands County was by no means uniform throughout. High-ground areas as well as lake-front areas basically escaped freezing/frost conditions. But the low-ground areas, especially the rural outlying areas, got very cold (i.e., in the low 20s and upper teens).

The southernmost portion of the Lake Wales Ridge runs through Highlands County, where it ends about 10 miles south of Lake Placid. The elevation of the Ridge isn't consistent, but comprises hills and valleys. The town of Lake Placid is up on the Ridge, which I refer to as, "up on the hill." My property is located approximately 2 miles N.E. of town -- down off the hill (Ridge)!

Since my property is in a low area (relative to the surrounding terrain), cold air drains off the Ridge, where it settles here. Because the town is at a higher elevation, nighttime low temperatures during radiation cooling events (like January's freezes) are significantly higher than at my place; I would estimate 10 degrees warmer in town.

The town is essentially in the air inversion zone (warmer air above colder air during the night), thus enjoying warmer temperatures and little, if any, frost. However, the Ridge elevation is basically only good during radiational cooling events, not advective (windy) events. During advective cold events the air is mixed, stirred and blended by the wind, and cold pockets don't form; hence, air temperature is much more homogenous over the entire area.

Based on personal observation and records I've kept over the 12 years I've resided here, I would estimate that 95% of plant damaging cold events in Highlands County are radiational in nature. Hence,

high ground and proximity to lakes is the best place to live with respect to conduciveness of palm and tropicals growing. If only I had considered that before I moved here, I would have bought property on high ground. However, it wasn't a consideration at the time as I had no idea I would one day be fanatically and obsessively addicted to the palm growing hobby.

A few days after the freeze event, I drove throughout the Lake Placid area so as to observe the freeze damage. I was surprised to find little, if any, cold/frost damage to USDA zone 10 rated palms and shrubs, etc., located in high-ground areas, such as in town. Even the 50 feet tall African tulip *(Spathodea campanulata)* tree in town was in full bloom!

But somewhat conversely, I was also surprised that the normal "lake effect" (heat from lake water that has a warming influence to the immediate surrounding area) didn't extend out very far. I

Before and after: *Elaeis guineensis in Walt's garden showing damage and recovery after 10 months (photos by Walt Darnell).*

observed varying degrees of cold/frost damage to zone 10 palms and shrubs, etc., located in the front of lake-side homes, but the same palms and shrubs looked pristine in the back yards in proximity of the lakes. But the radiational freezes of last January were extra cold, whereas most winters the radiational cold events are warmer, and the "lake effect" extends out farther.

Then there were the low lying areas, like at my place. As I said in a previous article I wrote for the Palmateer regarding the infamous January 5, 2001 radiational freeze -- all the low lying areas, without exception, looked like the aftermath of a nuclear holocaust! Tropical types of landscapes were reduced to mush and shades of brown! It was truly a pitiful sight -- and a sight I hope is not repeated again this winter!

Palm Garden Cold Damage Summary

While the sheer low of 23.5 degrees at my place undoubtedly inflicted the most serious damage to my palms and tropicals, I'm sure there was a cumulative affect caused by the other two freezing nights where my low temperature was 27 degrees.

Palms incurring approximately 80% to 100% defoliation

The below listed palms (unprotected), with little exception, pretty much incurred the same degree of foliage damage:

Adonidia merillii
Arcontophoenix
Arcontophoenix alexandrae
Arcontophoenix cunninghamiana
Arcontophoenix maxima
Arcontophoenix myolensis
Arcontophoenix tuckeri
Caryota mitis
Cocos nucifera *
Dypis decaryi
Dypis leptocheilos
Dypis lutescens
Elaeis guineensis
Ravenea rivularis
Roystonea regia
Syagrus sancona
Veitchia joannis
Wodyetia bifurcata

* partially protected. See details further below.

Palms Partially Defoliated/Frost Burned

The below listed palms (unprotected) received various degrees of foliage damage as indicated:

Bismarkia noblis 'silver' form (25% burn on lower frond leaves only)
Caryota urens (30% burn on lowermost leaves)
Howea forsteriana (had this one covered with sheets, but top fronds were slightly burned)
Phoenix reclinata (20% leaf burn), P. rupicola (40% leaf burn)
Phoenix roebelenii (burn on top fronds exposed to sky)
Sabal mauritiiformis (some minor tip burn on leaves). I'm very impressed with the cold hardiness of this palm.

Undamaged Palms

The balance of my palm garden was basically undamaged by the freezes. This was due to the palms' cold/frost hardiness and/or protection I provided. For instance, I have a small *Latania loddigesii* (three years in the ground) I covered with blanket. Smaller zone 10+ palms, like *Adonidia merillii, Syagrus schizophylla, Hyophorbe lagenicaulis* and *vershaffeltii* et al were frond bundled, wrapped with insulation materials (blankets and sheets, etc.) along with supplemental heat (string lights, EasyHeat heating cables).

Some of my more cold tender palms too large to bundle and wrap (such as my *Cocos nucifera*), I wrapped heating cables around the trunk and growth bud area, and then wrapped over same with quilted blankets or similar insulation materials.

While the fronds got fried, the trunk and growth bud were fully protected. In fact, I placed a remote digital thermometer sensor under the wrappings of my *Cocos nucifera* (but away from direct influence of the heating cables) and the temperature never

dropped lower than 55 degrees! I could read this sensor from inside the house on my base station thermometer -- and it was very reassuring to me to know at least the trunk and growth bud of my *Cocos nucifera* was being protected. I feel had I not used the heating cables and insulation on my *Cocos nucifera*, in all likely hood it would have been killed. As a result of my protection method, this palm has made a near complete recovery, as the photos testify.

Surprisingly (at least to me, as my reference books say this is a zone 10b palm), was that my small *Cryosophila stauracantha* went completely unscathed. I could find no cold damage at all to this palm. I do, however, have it growing beneath oak tree canopy.

Dead Palms: I lost all of my *Veitchia* palms, which totaled about seven in number. Two of those had five feet of trunk and had been in the ground for several years.

I also lost one *Adonidia merillii* (3 Ft. trunk); *Syagrus sancona* (8 feet overall height); three seeding *Caryota mitis* ; six *Archontophoenix cunninghamiana* (all with 2-4 feet of trunk), and one *A. maxima* (this palm was weak going into winter, I think from a fungal problem). Oddly, none of my four *Archontophoenix alexandrae* palms died, and they are coming back strong. All the palm book references I have claim *A. alexandrae* is less cold hardy than *A. cunninghamiana*, but this is not so for my palms. I can state empirically (having more than 25 *A. cunninghamina* and five *A. alexandrae* in the ground, that my *A. alexandrae* take the cold better. I will qualify this by saying that *A. alexandrae* may be slightly less leaf hardy to frost and cold, they seem to be more bud hardy, plus they produce new fronds at a faster rate than *A. cunninghamina* -- and they just look better overall, in my opinion.

Non Palm (Tropical Plants) Damage: I realize that many of us palm hobbyists also have an interest in, and grow, various tropical plants, such as trees, shrubs, vines, etc. Hence, I will relate to you the adverse affect the freeze/frost had on some of mine non palm plantings.

While palms are my first love and main staple of my garden, I truly like tropical plants, trees, shrubs, vines, etc., to complement and round out my garden, so as to acheive the tropical look, as my late friend, Bob Riffle, always talked about and illustrated in his book, The Tropical Look.

Needless to say, last January's freezes were not kind to my tropicals.

My 35 feet high (and only nine years old) *Ficus altisimma* 'variegata' was 90% defoliated. All but the top leaves and the more interior leaves were spared. Most of the solid wooden subsidiary roots and outer branches were killed back up to 4 inches in diameter. Even my *Ficus microcarpa* (which is reputedly more cold hardy) was killed back to 4 inch diameter wood, as well as my two varieties of *Ficus elastica*. My *Ficus alii* was frozen down to its roots, but somehow survived. *Ficus benjamina* and *F. lyrata*, too, were frozen way back, and are now truncated.

All my exposed *Philodendron selloums* were defoliated; the ones under tree canopy were unhurt.

All but one of my *Cycas circinalis* were toasted. The one not hurt was growing more remote from the others, possibly its location slightly warmer.

All exposed Bananas, *Alocasia, Colocasia, Xanthosoma, Crinum*, crotons, etc., type plants were turned to mush.

A 40 -50 feet tall clump of bamboo (species unknown to me) I got as a single culm some years ago from the late John Bishock was mostly defoliated, but has since re leafed. My 40-50 feet clump of *Bambusa oldhamii* fared well.

Both my two small (12 feet tall) sausage trees *(Kigelia africana)* were frozen back to 2" diamater wood. But they grew back with a vengeance.

Hibiscus, Ixora, Tabernaemontana divaricata, Cordylines, Jatropha integerrima, Tibouchina,

Calliandra, Delonix regia, Schefflera actinophylla and *S. arboricola*, etc. were mostly defoliated and with much wood death.

My large 12 year old clump of *Sterlitzia nicolai* and *Ravanala madagascariensis* (Traveler's palm with five feet of trunk) were totally defoliated. My Traveler's palm has since grew back 11 fronds but will require another year to attain a near full crown.

All of my climbing vines, such as various species of *Philodendron, Monstera, Syngonium, Epipremnum*, etc. were totally defoliated. The sole exception was to those *Epipremnum* leaves growing higher than 25-30 feet up tree trunks, as the air was warmer at that height.

Lastly, my 10 feet high *Plumeria obtusa* planted on the south side of my house was partially killed. Only the main trunk and branches near the house survived, while the branches on the side away from the house were killed. I took cuttings from it and have a nice replacement plant ready to take the mother plants place come spring.

Palms and Tropical Plants Recovery Summary:

I would estimate that 85-90% of my cold damaged palms are recovering normally and have re grown respectable, albeit not full crowns of fronds. Some species will take the better part of two full years to totally re grow a full crown.

Of all of the relatively cold tender palms in my garden, *Elaeis guineensis* has made the most complete and fastest recovery. This palm pumps out new fronds at the rate of about one frond every 25 days or so. Further, the new spring fronds didn't exhibit the typical stunting and partial necrotic tissue areas of leaves like many other tender palm species do. I am extremely impressed with this palm and plan to get one or two more of them.

Following my *Elaeis guineensis*, I would say my *Cocos nucifera*, my two largest *Archontophoenix alexandrae*, and my seven *Bismarkia noblis* palms have made the best recovery.

Unfortunately, about 10 or so of my zone 10 palms are struggling and will probably die. Mainly, some smaller *Archontophoenix cunninghamiana* and *Wodyetia bifurcata*. These palms have pushed up a few very stunted and distorted fronds and their growth rate is only a fraction of its normal speed, notwithstanding I treated all my cold damaged palms with copper sulfate and hydrogen peroxide. My largest *W. bifurcata* with close to 12 feet of trunk is recovering normally, but will still be another year before it completely regrows a full crown.

With respect to my non palm plantings, all are making or have made a complete come back. However, the freeze damage did change the contour of my large *Ficus altissima* 'variegata' tree. My tree, by virtue of the loss of its larger subsidiary branches doesn't have the fullness it once had at its base. The tree now as a more tapered contour from bottom to top, getting fuller towards the top.

While my *Monstera deliciosa* vines have mostly recovered and are setting fruit again (they lost all their fruit from the freezes), the vines overall have less leaves than they did before the freezes. However, absent any killer freezes again this winter, the vines should fill out more with leaves in time.

Closing Comments

While this past January's freezes were bad and hurt my palm garden considerably, I know things could have been worse. Again, the radiational freeze of January 5, 2001 was colder. However, my palm garden back then was only a mere fraction of what it is today, in terms of the amount of palms and tropical plants I'm growing now. And then there was the infamous December of 1989 advective freeze, which luckily, I wasn't here to experience.

In any event, I'm hoping this winter will be milder, at least in terms of ultimate low temperatures. I understand a mild El Nino weather pattern is in place for this winter that may prevent the extreme low temperatures we saw this past January, even though the average winter temperatures may run slightly cooler.

I distinctly recall that during the stronger El Nino we had back in the winter of 1997-1998, I didn't experience any freezes. In fact, I can't recall seeing my thermometer drop below 40 degrees the entire winter. Heck, I would be more than satisfied if my lowest temperature this winter never dropped below 32 degrees, as was the case for me during the winter of 2007-'08, my second zone 10 winter since I moved here in late 1997.

Had my palm garden not been ravaged by last January's freezes, my wife and I had planned on hosting the fall 2009 CFPACS meeting at our place. Hopefully, if this winter cooperates, I will be able to hold a CFPACS meeting in 2010. My garden has changed and grown considerably since the last meeting here in June of 2003.

Good luck to all this winter and may your gardens flourish!

Before and after: *Cocos nucifera in Walt's garden showing damage and recovery after 10 months (photos by Walt Darnell).*

2009 Freeze Report from Oviedo

Chuck Grieneisen

When I first joined the society the old timers used to say that each freeze is different. Now speaking as an old timer, I can say that it's true. The January freeze of 2009 was the worst I have had since I started growing palms in 2000. My plants have seen lower temperatures than this but they have not gotten as much damage. The low for this freeze was only 31 degrees F, a very mild freeze temperature wise, but there was heavy frost everywhere. It was also a very penetrating frost. It burned things under the deepest tree canopies that I had. A garbage can with water in it had about an inch of ice in it. I had never had ice form in standing water before.

Since 2000 I have had temperatures of 27 in at least two winters but not as much damage. So, the lesson from this freeze isn't cold tolerance, it is FROST tolerance. It shows that frost is more damaging than the cold temperatures. Here is an account of the damage.

Palms

Species	Amount of cold damage	Canopy protection
Allagoptera arenaria	none	none
Archontophoenix maxima	80%	none
Arenga engleri	none	heavy
Arenga micrantha	none	heavy
Beccariophoenix alfredii	50%	light
Borassodendron machadonis	20-50%	heavy
Borassus aethiopum	50-60%	none to light
Borassus sambiranensis	60%	none
Brassiophoenix drymophloeoides	100%, died	light
Burretiokentia sp.	50-70%	heavy
Caryota himalaya "new"	none	heavy
Caryota maxima	25%	heavy
Caryota sp. "Ruth"	70%	heavy
Ceroxylon amazonicum	none	heavy
Chamaedorea plumosa	70-90%	none to light
Chamaedorea tepejilote	90 -100%, died	heavy
Chambeyronia macrocarpa	0-70%	heavy
Chuniophoenix hainanensis	none	some
Coccothrinax azul	none	none
Coccothrinax borhidiana	20% (one leaf)	heavy
Copernicia macroglossa	none	none to heavy
Desmoncus orthacanthos	died	heavy
Dypsis ambrositrae	100%, died	light to heavy
Dypsis baronii	90%, died	light to heavy
Dypsis sp. "orange crush" (very small plants)	none	heavy
Gastrococus crispa	70%	none
Kentiopsis oliviformis	75%	none
Kerriodoxa elegans	0-10%	heavy
Licuala parviflora	none	heavy
Licuala peltata var. sumawongii (elegans)	0-10%	heavy

Species	Amount of cold damage	Canopy protection
Livistona drudei	none	heavy
Livistona rigida	50%	some
Lytocaryum hoehnei	none	heavy
Lytocaryum weddellianum	none	some to heavy
Mauritiella armata	none	heavy
Plecticomia himalayana	none	heavy
Pseudophoenix sargentii	none	none to some
Ravenea xerophila	70-80%	some
Rhapis excelsa	none	some
Roystonia regia	70-90%	some to open
Syagrus schizophylla	90%	none
Syagrus vagans	none	some

The following plants were covered with either frost cloth or regular cloth blankets.

Chambeyronia macrocarpa (frost cloth)	none	heavy
Dypsis ceracea (thick blanket)	100%	heavy
Johannesteijsmannia perekensis (frost cloth)	none	heavy
Roystoinia regia (frost cloth)	50%	none

Speculations and Surprises

The following palms died:

Brassiophoenix drymophloeoides
Chamaedorea tepejilote
Desmoncus orthacanthos
Dypsis ambositrae
Dypsis baronii

It took all summer for some of the damaged ones to come back, if at all. It is common for the first leaf that emerges after heavy freeze damage to be stunted, each leaf afterward emerges larger until it is fully recovered.

Surprises: It was surprising how some of the "cold hardy" palms were so devastated by frost. *Chamaedorea plumosa, Ravenea xerophila,* and even *Dypsis baronii* were disappointing. Some of the surprise frost tolerant palms were the *Borrasadendrons*. I have three and they are right beside a *Zamia variegata (picta)* that got fried in a very protected area. They were undamaged right after the freeze, but damage showed up about a month later, they fully recovered by the end of summer. Still, they aren't supposed to be cold hardy. *Mauritiella armata* is not supposed to be cold hardy at all. One left outside about two feet away from the Zamia *variegata (picta)* that got fried, was undamaged, along with the ones in the greenhouse. The *Lytocaryum* faired very well too. I have several *L. weddellianum* and none of the smallest plants were damaged at all, although all of them were in shady protected areas that other plants were damaged in. *Chambeyronia macrocarpa* that had leaves covered were O.K., where the leaves were not covered they burned to about 70%. The damaged ones all came back. I had left two *Chambeyronia macrocarpa* "watermelon" form out and both of them were uncovered and were undamaged. The plant that can take colder temperatures but showed that frost is a killer was *Dypsis ambositrae*. A large one was out in the open, getting all the frost. The large one died. I had some very small ones in a protected area that were fine. The biggest palm surprise to me was the *Johannesteijsmannia perakensis*. I have two of them, one left under a blanket and one in the greenhouse, both undamaged. I have never gotten a *"Joey" altafrons* or *magnifica* through even a mild winter.

Cycads

Species	Amount of cold damage	Canopy protection
Bowenia serrulata	none	heavy
Cycas bifida	none	none
Cycas cairnsiana	50%	none
Cycad debaoensis	none	none
Cycas hainaenensis	none	none
Cycas pectinata	70-100%	heavy
Cycas petraea	0-20%	light to heavy
Cycas sp. "Wilailak"	none	heavy
Certozamia latifolia	none	heavy
Ceratozamia miqueliana	0-70%	none to light
Ceratozamia sp. Tomasanchale	none	some
Dioon califanoi	none	none
Dioon edule	none	none
Dioon mejiae	90%	none
Dioon merolae	0-70%	none to light
Dioon purpusii	0-10%	none
Dioon rzedowskii	70%	some
Dioon spinulosa	40-90%	some
Encephalartos bubalinus	none	some
Encephalartos "choala"	90%	some
Encephalartos chimanimaniensis	70%	heavy
Encephalartos eugene-maraisii	none	none
Encephalartos ferox	50-100%	heavy
Encephalartos gratus	50-100%	none to light
Encephalartos hildebrandtii	90%	heavy
Encephalartos ituriensis	100%	light to heavy
Encephalartos kisambo	100%	none
Encephalartos laurentianus	50-100%	light to heavy
Encephalartos lebomboensis	none	none
Encephalartos longifolius	none	none
Encephalartos manikensis "bandula"	70%	some
Encephalartos msinganus	50%	light
Encephalartos paucidentatus	70%	heavy
Encephalartos princeps	none	none
Encephalartos tegulaneus	80%	light to heavy
Encephalartos whitelockia	30-100%	light to heavy
Encephalartos sp. "Choala"	90%	some
Lepidozamia peroffskyana	0-60%	heavy
Macrozamia communis	none	none
Macrozamia moorii	none	none
Stangerea eriopus	none	heavy
Zamia inermis	0-100%	none
Zamia fairchildiana	100%	heavy
Zamia furfuracea	100%	light to heavy
Zamia furfuracea X integrifolia	100%	none
Zamia lindenii	90-100%	heavy

Species	Amount of cold damage	Canopy protection
Zamia tuerckheimii	40%	heavy
Zamia neurophylidia	100%	heavy
Zamia skinnerii	100%	heavy
Zamia varaigata (picta)	50-100%	light to heavy
Zamia sp. Mexico	none	none

Speculations and surprises

None of my cycads died. It first appeared that the cycads were harder hit than the palms. Some of them did have badly damaged leaves, but the caudex or stem remained undamaged. Most put out new leaves in the spring, some waited until summer, but all fully recovered. The only ones I covered with a frost blanket were *Zamia variegata (picta).* All the ones under the frost blanket were undamaged, the ones in the open in a very protected area had the 50-100% damage.

The biggest surprise was how variable different *Zamia inermis* were in response to frost. I had plants so close together that the leaves were touching each other, and one plant had 100% damage and the other one had no damage. With *Encephalartos whitelockii,* the smallest plants out in the open the most got the most damage, as was the case with *Encephelartos ferox, E. laurentianus, Dioon merolae* and *D. spinulosum* The damage between plants in the open and plants in the most protected areas was only about 20 or 30%. All have since recovered. I hope this article helps you decide which plants to cover the next time frost is forecast.

New Members

We extend a **warm welcome** to our newest members.
We are **glad** that you are a part of CFPACS!

Florida

Donna Allen, *St. Petersburg*

Charles Cobb, *Seffner*

James Fletcher, *Merritt Island*

Richard Sill, *Kissimmee*

Wayne Smith, *Brandon*

Patricia Walsh, *Melbourne*

Did you know? CFPACS is now on . . .

Facebook (www.facebook.com/pages/Central-Florida-Palm-Cycad-Society/145851341806)

Twitter (www.twitter.com/centralflapalms) and **Flickr** (www.flickr.com/photos/cfpacs/)

Check it out!

Spring 2009 Meeting Report

Bob Johnson

About 70 CFPACS members and friends traveled to Tampa on June 12 for our spring meeting. The day began at the garden of the late Dr. U. A. Young, one of the pioneer palm growers and palm society members. Dr. Young's garden has plantings dating to the 1960s, affording the visitor with magnificent views of many mature palm and cycad specimens. We were hosted by Dr. Young's son Brad, who has done a great job maintaining the garden - his recent work weeding, trimming and fertilizing was in evidence.

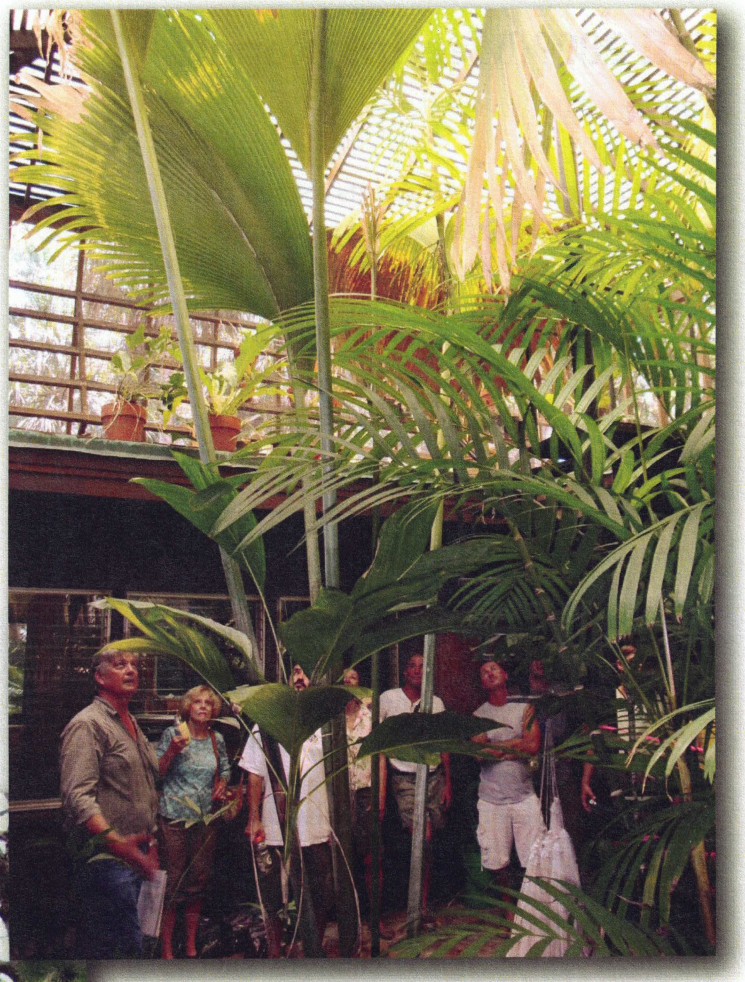
A smaller group was present for the start of the tour, with numbers swelling as the morning progressed. The Young garden is large enough to have some open spaces to allow viewing from a distance as well as jungle paths where you are immersed in palms, cycads and other tropical plants. The leaf crowns of *Borassus* tower high above, *Hyphaene* trunks twist and turn and *Attalea* fronds soar skyward. The sight of such large specimens in central Florida is inspirational. One thing was not in abundance - crownshaft palms. Outside of some *Chamaedorea*, a single *Archontophoenix cunninghamiana* was the only surviving crownshaft palm in the garden. Many others have been tried over the years, but even in a somewhat favorable microclimate, they have not survived long term. A desire for more plants that would endure freezes led Dr. Young to plant more and more cycads, the vast majority of which will recover from frost and freeze damage. Large *Ceratozamia robusta* types, *Encephapartos whitelockii* and several blue *Encephalartos* are among the highlights of the cycad collection.

Other notable palms included a *Jubaeopsis caffra* (probably the largest specimen in central Florida after the demise of the Kopsick specimen), *Borassodendron machadonis* (planted right next to the house and a few feet from the pool) and a double coconut (*Lodoicea maldivica)* growing in the atrium next to the pool. In addition to the palms and

Brad Young (left) gives a brief history of the garden as CFPACS members and guests begin to gather for a day filled with palm and cycad viewing and lively conversation. (photo by Bob Johnson)

cycads, aroids, bamboos, bromeliads, ferns and other tropical plants complete the jungle effect.

After lunch, most traveled north to Odessa (and several new visitors arrived) to spend the rest of the afternoon at Dorothy Kellog's garden. Dorothy's lakeside garden also sported several mature palm survivors including *Attalea cohune, Licuala spinosa* and *Sabal causiarum*. In addition to the palms, there were many aroids, bromeliads and cycads planted throughout the landscape. After wandering through Dorothy's garden, members and guests were treated to a great plant sale. Eight CFPACS palm growers brought a huge variety of palms, cycads and other tropical plants, making for a large and varied sale offering. Folks returned home with visions of two great palm gardens and more palms and cycads to plant in their own gardens. A special thanks to our gracious meeting hosts, Brad Young and Dorothy Kellog.



Left: *Attalea cohune at Dorthy Kellog's on Odessa.*
Above: *Brad Young and group admiring the "Coco de Mar" (Lodoicea maldivica) planted in the atrium.*
Below: *Ceratozamia sp. with stunning bronzwe emergent leaves at Dr. Young's (photos by Bob Johnson).*

Fall 2009 Meeting Report

Bob Johnson

CFPACS members and guests toured two gardens on the Brevard barrier island on September 12. Forecast to be a rainy day throughout central Florida, severe rain and flooding prevented several west coast members from attending. The storms rained themselves out on the west coast and never made it east, so it was a clear day for the 30 or so persons in attendance.

Our first stop was Scott Ward's Indialantic garden. Scott has been growing palms and tropical plants since 1995. Through copious use of fertilizer (see his article in the March 2009 Palmateer) his palms have grown to substantial size over the past 14 years. Scott's garden is meticulously maintained with palms, cycads, bromeliads, succulents and a variety of other tropical plants thriving in his third-acre residential lot. All of the plants are labeled, and as an added bonus, Scott placed several "before" photos throughout the garden so visitors could appreciate the transformation from typical suburban yard to organized jungle that has taken place over the years.

After lunch we reconvened at Steve and Cindy Rael's garden in Merritt island. Steve and Cindy grow a number of plants in addition to palms, including many interesting succulents, bromeliads and orchids. First-time auctioneer Dave Reed did an outstanding job auctioning off the plants donated by members. As usual, the day concluded with a plant sale. A special thanks to our hosts for the day Scott Ward, Steve and Cindy Rael.

For more photos of this and other meetings, see our **Flickr** page: www.flickr/photos/cfpacs/

CFPACS is looking for reporters to write reviews of future meetings. If you are interested in helping CFPACS with this please email palmateer@cfpacs.org for further details.

Scott Ward's Garden *Above: Flowering Pritchardia. Below: Copernicia macroglossa flanked by flowering bromeliads, Aechmea blanchetiana (photos by Lek Wallace). Left: Group enjoying Scott's garden, Copernicia baileyana is the large palm in the foreground (photo by Bob Johnson).*

Above: Dave Reid auctioning off a palm at Dave & Cindy Rael's (photo by Bob Johnson).

Left, top to bottom: Forking Aiphanes at Scott Ward's, view of Dave & Cindy's garden, Encephalartos arenarius at Scott's (photos by Lek Wallace).

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!**