



# Friends of the Randell Research Center

December 2017 • Vol. 16, No. 4

## Irma's Impacts

### *Storm preparation, recovery prompt thoughts of early Pinelanders*

by Cindy Bear

**P**lants flowering at the wrong time of year suggest the approach of a powerful wind. Dolphins inexplicably abandon the harbor. Familiar birds are suddenly nowhere to be seen. Such observations have been recounted by local fisherfolk and Native Americans as signs that a serious storm is on the way. We are often asked if Pineland's earliest residents predicted destructive storms and how they survived the deadly impacts of such events. These questions were on our minds as we watched the approach of Hurricane Irma while preparing our buildings and properties for a predicted direct eyewall approach over Pineland with a 9-12 foot storm surge and over 100 miles-per-hour winds. Having heard the stories, we tried in the days just before Irma's arrival to watch for signs of the storm's approach. Would we see changes in the winds, waters, and wildlife? But, over and over again we found ourselves pulled to electronic media for data. People of the past must have had their own warning signs – we have ours. And, heeding the information, we prepared.

Sensitive archaeological materials were evacuated to our parent museum, the Florida Museum on the University of Florida campus. We trimmed trees around the Ruby Gill House and the Calusa Heritage Trail Visitor Center. We secured vulnerable books, paper materials, and reference collections in plastic bins. We disconnected computers, shrouded furnishings in plastic sheeting, pulled maintenance equipment from the field. The Pineland Post Office, which we manage, was shuttered. Our staff simultaneously prepared their homes, families, and pets preceding evacuation orders.

Archaeological excavations give evidence of a powerful storm that struck Pineland about A.D. 300. Creatures large and small, as diverse as sea turtles, sea urchins, and surf clams, were blown across Pine Island Sound and stranded on Pineland's shore. Soils from uplands and maritime areas, borne by wind and water, forever changed the landscape. After the storm, tiny truncatella snails moved in to feed on decaying plant matter that marked the high reach of the storm surge and then themselves died in place. All of this evidence points to a massive storm that happened 1700 years ago, what would be called a category 4 or 5 today.

Did Pineland's people have the advantage of preparing for that storm? Archaeological evidence of their lives on the scale of days is



*Cindy at the entrance ramp leading to the classroom the day after Irma. (Photo by Charles O'Connor.)*

not possible, and the Calusa and their ancestors left no written records. Archaeological evidence does show that these residents made specific and targeted decisions about matters related to climatic and seasonal influences and passed on that knowledge. Pineland residents nurtured specific plants, changed fishing methods to coincide with seasonal abundances, and engineered their landscapes. Their tools evolved and improved in function and manufacturing technique and they staged dramatic processions and rituals and sang songs with words and meaning we will never know. They lived at this place, fraught with tropical storms that uproot everything once thought permanent. They may not have predicted the powerful A.D. 300 hurricane but doubtless they were not surprised that it happened.

As it came to pass, we were fortunate. A 25-mile shift of the eyewall to the east meant Irma made landfall at Marco Island instead of directly at Pineland. It also reduced the storm surge to about 3.5 feet above normal predicted high tides. Sustained winds of 79 miles per hour were measured at Ft. Myers Beach but gusts well above 79 were felt across the area. Our buildings held strong, although we joined over 6 million Floridians in being without power and we lost internet capabilities for a month.

Vegetation at our sites did sustain major damage, including the toppling of a tree at the Ruby Gill House that blocked Pineland Road and meant that we sprang into action post-storm immediately after the danger passed. As we cut our way through downed branches the size of small logs with chainsaws and steel-bladed loppers, we found ourselves reflecting on post-storm activities of past Pinelanders. Our thoughts wandered to Calusa crews erecting buildings that could hold a thousand people, and responses to

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storms that must have ranged from wistful sadness to steely determination to clean up and rebuild.

We bemoaned aloud that these days downed wood is “debris” and wondered how we might use it if only we were not on a schedule that necessitated it be moved to the road to be taken “away.” We thought too of the recent work by RRC archaeologists and colleagues at Pineland and Mound Key focusing on the role of fuelwood as a means to preserve surplus food through drying and cooking, an essential factor in the rise of the Calusa into a powerful non-agricultural society. Recognizing the previous importance of wood somehow made the days of cutting and clearing less weary.

The most startling and impactful change to the vegetation was the loss of the top of an iconic strangler fig (*Ficus aurea*), which had graced the top of Brown’s Mound. With its base already at 25 feet elevation, its massive limbs reached nearly 60 feet high. Although hurricane-force winds caused the damage, an expert determined the tree had not been compromised in advance at the point where limbs and braches were torn from the trunk. A section of hefty trunk remained (see the accompanying photos), but there was little doubt that the amount of weight beyond the split meant more would fall at some impossible-to-predict time, causing damage to the deck and danger to visitors.



Considering the deck, the surrounding trees, the sensitive nature of the mound, and a desire to save remaining parts of the tree, Gerard’s Tree Service brought in a specialized crane to lower trunks to the ground. Gerard himself embraced the tree, strapped himself to the trunk, and cut it into smaller segments. We marveled at the white latex sap oozing into the cut surfaces of the limbs, being reminded of the usefulness of that sap to the Calusa.

People sometimes mark the passage of time with references to events of significance — holidays, deaths, anniversaries, memorable storms. Since 2004 we’ve had conversations with local folks who, upon considering a question of when something or other had come to pass, will often reply “well, it was before Charley” or “it was

*All the rooms in the Ruby Gill House were shrouded in protective plastic in case of a roof leak. This is a view of the great room and library, looking east. (Photo by Charles O’Connor.)*

about a year after Charley.” No doubt, the remaining large trunks of the fig now arranged at the perimeter of Brown’s Mound will become part of our tour narratives as we share with visitors commonalities we have with the people who, in about A.D. 600, first discarded the shells that formed the base of the mound. It is likely too that we, like many Floridians, will begin to define our shared past as “before Irma but after Charley.”

Several volunteers helped us before and after Irma including Cathy House, Kay Luongo, Paula Streeter, Brenda Anderson, Bruce Anderson, Gayle Sheets, and Charles O’Connor, along with Rachael Kangas and Sara Ayers-Rigsby of the Florida Public Archaeology Network. Our part-time maintenance assistant Dale Schneider and full-time grounds and maintenance specialist Gary Vinson toiled ceaselessly in advance of the storm and, as we go to print, are finally nearing completion of storm-related clean-up and repair tasks. Bonnie Zeller and Prudence Romano gave support to Linda Heffner, who faced many challenges including insuring our office tasks were completed without reliance on the internet. Without the assistance of all, the managerial tasks faced by Cindy Bear would have been fraught with peril! Throughout Pine Island, neighbor helped neighbor and devised solutions to cope with the difficulties at hand. Surely the Calusa who lived at Pineland did the same, some 1700 years ago.

## New and Renewing Friends of the RRC

August 16, 2017 to November 15, 2017

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*\* = donated goods and services.*

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# The Strangler Fig

by Cindy Bear

**T**he *Atlas of Florida Plants* (Florida. plantatlas.usf.edu) lists 11 members of the genus *Ficus* as vouchered in Florida and notes that only one, the *Ficus aurea*, is native. It is known as the Strangler Fig because it often begins its growth as an epiphyte from a seed lodged into a crevice of the host tree, although it can grow from buried seeds. As the seedling grows, it makes its way down the host tree's trunk until it reaches the ground, where it roots itself in the soil and then grows back up around the host tree, appearing to "strangle" it, hence the name. These beautiful broad-leaved trees can reach 70 feet tall and the canopies 65 feet wide.

Because not all bear fruit at the same time, and because they are widespread in tropical and subtropical environments,



Gerard Cicoria saws the branches of the damaged strangler fig tree. (Photo by Cindy Bear.)



*Ficus aurea* trees are an important

source of food for wildlife, including migrating songbirds. The edible fruit is no bigger than the diameter of a pencil and the flowers cannot be seen by the naked eye. A tiny wasp of the *Agonidae* family is responsible for pollination. Female wasps spread the pollen after wiggling their way inside the fruit.

Martha Kendall writes in *The Plant World of the Calusa: A View from Pineland* that some of the known uses of wild fig by Miccosukee and Creek people were production of arrows from stems and bow-strings and lashings from roots. Chewing gum and medicinal compounds were made from the latex sap. Additionally, Kendall notes that researchers at the Smithsonian Institution determined that latex from native fig was used in creating a drawing of a person on the inside of a sunray venus shell excavated in 1896 by Frank Hamilton Cushing at Key Marco in Collier County.



Latex sap oozes from the strangler fig after being sawn. (Photo by Cindy Bear.)

## UPCOMING EVENTS

*Exciting speakers, new tour offerings will highlight 2018 season*

### ONE WORLD Florida Museum Speaker Series 2018 Randell Research Center, Pineland

We are excited to announce that we will host the first-ever "One World" lecture series. This year three experts from our parent organization, the Florida Museum at the University of Florida, will present talks on topics related to biodiversity in Southwest Florida.

Admission to all sessions is free; however, pre-registration is REQUIRED. To reserve your seat, call Linda at 239-283-2062 or email at [lheffner@ufl.edu](mailto:lheffner@ufl.edu). All talks will take place in the classroom at the Calusa Heritage Trail at 11 a.m. on the dates listed below.



George Burgess, Director Emeritus, Florida Program for Shark Research

**Feb. 10, 2018**

### "How Floridians Can Save the Endangered Smalltooth Sawfish"

George is best known for work conserving shark populations around the world but he is also a founding member of the American Elasmobranch Society, the international scientific society of researchers studying sharks, skates, rays, and chimaeras.

**Feb. 24, 2018**

### "Florida's Birds from the Ice Age to Today"

David is by specialty an ornithologist but is sometimes referred to as the scientist-of-many-trades at the museum. He recently hosted an "Ask me Anything" session on Reddit.com following in the footsteps of Bill Nye, Neil deGrasse Tyson, Bill Gates, and others.



David Steadman, Ph.D., Curator of Ornithology

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# Friends of the Randell Research Center

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**March 10, 2018**



Jaret Daniels,  
Ph.D., Director  
of the McGuire  
Center for  
Lepidoptera and  
Biodiversity

## ***"Conserving the Small Critters: Efforts to Help Save our Florida Butterflies"***

Jaret specializes in the conservation of native insect pollinators, is an accomplished photographer, and is the author of *Butterflies of Florida Field Guide*, among other titles.

## **Harbor History Tours**

**Narrated by Dené Patterson,**  
author of *A Tour of the Islands of  
Pine Island Sound, Florida: Their  
Geology, Archaeology, and History*

**Tuesday, December 26 / Tuesday,  
January 16 / Tuesday, February 20  
Tuesday, March 20**

**Time on the Water:**

**12:30 p.m. – 2 p.m., check-in at the  
Calusa Heritage Trail at 12 noon**

**\$35 per adult / \$25 per child;  
to register, call Captiva Cruises:  
(239) 472-5300**

As visitors who have taken a walking tour with Dené Patterson or have heard her speak at a local event will attest, her



knowledge about the islands of Pine Island Sound is equaled only by her enthusiasm and passion for sharing those tales. Now, we are excited to

partner with Captiva Cruises to offer "Harbor History" tours through northern Pine Island Sound with Dené narrating the journey.

Her expertly researched tales dispel some pirate and other myths and highlight the true stories of the people who have called the islands home for thousands of years. Learn about the surprises encountered when Wilson's Cut was dredged, discover why the stories of Useppa Island are a metaphor for all the islands, hear how Captiva got its name, explore how geologic processes worked to create the rich estuary we marvel at today, and be joined on your journey by an array of the Sound's wildlife. There is no other place in the world like Pine Island Sound!

The tours will take place on Tuesdays, December 26, January 16, February 20, and March 20 only, and seats on The Santiva, our boat for these tours, will fill quickly. To make reservations, call Captiva Cruises soon, 239-472-5300.



## **"Power of Place... Sacred Space"**

**New Tour Offering at the  
Calusa Heritage Trail**

**Every Tuesday and Thursday at  
1 p.m. starting January 2, 2018**

**Requested Donation: \$7 per adult,  
\$5 per senior, \$4 per student**

In March 2017, we opened the recently acquired and restored five-acre parcel containing the Smith and Low Mounds. The Smith Mound was the largest burial mound of the Calusa people, and its prominence in Calusa life was unmatched. Now, beginning January 2, visitors can join us every Tuesday and Thursday for a walking tour of the parcel. The tour will focus on what we know about Calusa belief systems with discussions of Calusa resilience in the face of challenges including their confrontations with Spanish priests. The restored ecology of the land will also

be highlighted as we describe ways early people have depended on native plant species.



*Visitors gaze toward the Smith  
Mound, March 2017. (Photo by  
Kristen Grace.)*

## **RRC News**

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Cindy Bear

**Production:** GBS Productions



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# Friends of the Randell Research Center

Pineland, Florida • December 2017

Phone 239-283-2062

Email: rrc@flmnh.ufl.edu

## Dear Friend,

You are cordially invited to join, or renew your membership in, the RRC's support society, *Friends of the Randell Research Center*. All Friends of the RRC receive a quarterly newsletter and free admission to the Calusa Heritage Trail at Pineland. Supporters at higher levels are entitled to discounts on our books and merchandise, advance notice of programs, and special recognition. Your continuing support is vital to our mission. It means more research, more education, and continued site improvements at the Randell Research Center. Thank you.

Sincerely,

William H. Marquardt

Director

Randell Research Center



**Please check the membership level you prefer, and send this form with your check payable to University of Florida Foundation, to:**

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- ☐ **Sustaining Members (\$5,000-\$19,999), Benefactors (\$20,000-\$99,999), and Patrons (\$100,000 and above)** receive all of the above + complimentary RRC publications and special briefings from the Director.

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Photo by A. Bell



# Books, Videos, Cards, and RRC Gear

## BOOKS ON SOUTHWEST FLORIDA'S ARCHAEOLOGY & HISTORY

### A Tour of the Islands of Pine Island Sound, Florida: Their Geology, Archaeology, and History

by Dené Patterson. RRC Popular Series No. 2, softcover, full color, \$29.95

*Buy this book benefiting our endowment and receive 20% off all RRC gear (hats and shirts) and books indicated by \*. Offer expires April 30, 2018.*

### The Plant World of the Calusa: A View from Pineland\*

written and illustrated by Martha Kendall, RRC Popular Series No. 1, softcover, full color, \$24.95

### The Calusa and Their Legacy: South Florida People and Their Environments\*

by Darcie A. MacMahon and William H. Marquardt, U. Press of Florida, hardcover, \$39.95

### The Archaeology of Pineland: A Coastal Southwest Florida Site Complex, A.D. 50-1710\*

edited by William Marquardt and Karen Walker, Monograph 4, hardcover, 935 pages, 408 figures, 231 tables, bibliographic references, \$125.00

### Discovering Florida: First-Contact Narratives from Spanish Expeditions along the Lower Gulf Coast

edited and translated by John E. Worth, U. Press of Florida, softcover, \$27.95

### The Florida Journals of Frank Hamilton Cushing

edited by Phyllis E. Kolianos and Brent W. Weisman, University Press of Florida, hardcover \$49.95

### Sharks and Shark Products in Prehistoric South Florida

by Laura Kozuch, Monograph 2, softcover, \$5.00

### The Archaeology of Useppa Island\*

edited by William H. Marquardt, Monograph 3, hardcover \$35.00, softcover \$20.00

### New Words, Old Songs: Understanding the Lives of Ancient Peoples in

### Southwest Florida Through Archaeology

by Charles Blanchard, illustrated by Merald Clark, **SALE!** hardcover \$10.00, softcover \$5.00

### Fisherfolk of Charlotte Harbor, Florida

by Robert F. Edic, hardcover, \$35.00

### Edisonia Native Girl: The Life Story of Florence Keen Sansom

by Dené Patterson, Peppertree Press, 2010, softcover, \$39.95

### Missions to the Calusa

by John H. Hann, U. Press of Florida, hardcover, \$35.00

### Florida's Indians

by Jerald T. Milanich, U. Press of Florida, softcover, \$19.95

### Randy Wayne White's Ultimate Tarpon Book: The Birth of Big Game Fishing

edited by Randy Wayne White and Carlene Fredericka Brennen. U. Press of Florida, softcover, \$21.95

### Eyes of the Calusa

by Holly Moulder, a historical novel for young readers, winner of the silver medal in young adult fiction from the Florida Publisher's Association, White Pelican Press, \$8.95

### The Crafts of Florida's First People

by Robin Brown, a step-by-step guide to making Florida Indian tools and containers (for ages 10 and up), Pineapple Press, softcover, \$9.95

### Water from Stone: Archaeology and Conservation at Florida's Springs

by J. O'Donoghue. U. Press of Florida, hardcover, \$74.95

### Florida Weather and Climate

by J. Collins, R. Rohli and C. H. Paxton. U. Press of Florida, hardcover, \$34.95

### Sea Level Rise in Florida: Science, Impacts, and Options

by A. C. Hine, D. P. Chambers, T. D. Clayton, M.R. Hafen and G. T. Mitchum. U. Press of Florida, hardcover, \$34.95

## CALUSA POSTCARDS

### Images from the Calusa Heritage Trail

Art by Merald Clark, 4" x 6" postcards, full-color, set of 11 cards, \$4.95

### RRC postcards

Art by Patricia Randell, 4" x 6" black and white, set of 4, \$2.00

## RANDELL RESEARCH CENTER GEAR

RRC logo hat \$21.95

### Calusa Heritage Trail T-shirts designed by Merald Clark:

Specify size (S, M, L, XL)

- Seven Masks (black with white image, seven Calusa masks), \$18.95
- Pineland Crane Head (white with full color depiction), \$18.95

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