



Friends of the Randell Research Center

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New Book Features Islands of Pine Island Sound

*Author reflects on what makes the
islands special to her*

by Denége Patterson

The February 2017 release of my book, *A Tour of the Islands of Pine Island Sound Florida, Their Geology, Archaeology, and History*, edited by William H. Marquardt, brought members and newcomers alike to the classroom at the Calusa Heritage Trail for a series of "Author Talks." The room filled to capacity, and some were put on a waiting list. More talks were scheduled to accommodate the interest. I worked on the book for more than three years, and every author wants her book appreciated, but the response was more than any of us had anticipated.

What made this book so timely? I suspect that much of the interest is because it includes information not previously available to the public. The book covers 24 islands, including 21 with archaeological sites. Each island has its own story—its location, geology, archaeology, and history are presented in individual chapters. I was amazed to learn how each island was treated differently by indigenous people during different eras—as villages, food-collection sites, tool-making workshops, and burial sites. Some islands were occupied for thousands of years, abandoned for a few hundred years, and then occupied again. I was also amazed by the geology. I learned how adaptable and strong the indigenous people had to be, as sea level, climate, and island forms changed over time.

The book is 160 pages in full color; size 8.5" x 11" with a splendid aerial photograph of Cayo Costa Island on the cover. It is a paperback with a sewn binding so it is strong enough to be taken on a boat. It is printed on ecologically friendly paper so it doesn't ruin the ecosystem it talks about. It has 100 photographs, 54 of which are high-resolution aerial views of islands taken while suspended from the open door of a helicopter by professional photographer Ron Mayhew of RonMayhewPhotography.com. I drew 6 color-coded maps of the islands so that readers could distinguish islands-they-could-visit from islands that are not open to the public. There are 17 maps in all and 14 illustrations, a seven-page bibliography, and an index.

The audience listened intently to my description of how I approached the subject of each island while looking at its location, geology, archaeology, and history. As a retired family therapist, I look at complicated subjects in a way that helps me see the systems



Denége signs her new book at a recent presentation in Pineland.
(Photo by Charles O'Connor.)

that surround a group of individuals. With this view applied to the islands of Pine Island Sound, I can begin to see each island's role in contributing to, and receiving from, the larger ecosystem.

Chapter 1 describes the greater Charlotte Harbor region's ecosystem of which Pine Island Sound is a part. I discovered the most astonishing and fun facts about how these islands do their job of nurturing, feeding, and creating a plume of life on an unimaginable scale. There are layers of understanding here, but by looking at the ecosystem it becomes obvious how indigenous people thrived for thousands of years and why they were wealthy without having any money.

The Calusa story as they lived at Pineland is provided in narrative form differently from the formal tour. It is beautifully illustrated with the original color artwork of Merald Clark as depicted on the signs along the Calusa Heritage Trail. This is in Chapter 2.

The book is for sale at the RRC gift shop for \$29.95, and can be ordered by mail using the form in this newsletter. One hundred percent of the proceeds from the book will go to the endowment fund of the Randell Research Center to help ensure its long term success.





New Findings on Mound Key

Evidence of Calusa water court construction, shellfish processing – and two surprises

by William Marquardt

From January 9 through February 9, 2017, a team of archaeologists from the Florida Museum of Natural History and the University of Georgia excavated on Mound Key. Located in Estero Bay near Fort Myers Beach, Mound Key was the capital town of the vast Calusa kingdom at the time of European contact in the 1500s. As reported in the June, 2016 *RRC Newsletter*, we are investigating how the Calusa were able to feed a large population and exert control over such a large area without being farmers who could produce, store, and distribute surplus foods.

Part of the answer, we thought, was the large enclosed areas on either side of the mouth of Mound Key's great canal. These large features, called "water courts" by archaeologists since Frank Cushing first used the term in 1896, could have been fish traps, or perhaps short-term fish or shellfish storage ponds. We placed trenches

through the surrounding berms, and verified that they were purposely constructed, probably around A.D. 1200. On the shell ridge near the water courts, we found evidence of large-scale cooking of thousands of oysters. These so-called "earth ovens" are used by fisher-gatherer-hunter people throughout the world. A fire is built over a layer of old mollusk shells and allowed to burn down. Then embers from the fire are spread out and fresh mollusks are placed on top — in this case, oysters. Finally, green tree branches are spread on top of the oysters, which steam open in a matter of a few minutes, ready to eat.

Much more will be known once the detailed analysis has been done and the radiocarbon dates have come back from the laboratory, but it looks as though we were able to successfully investigate the constructed berms that surround the watercourts and get good information

View toward one of the massive berms (elevated ridges) that enclose the water courts at Mound Key. Lower elevations, indicated by black mangrove trees, can be seen in the distance (top of image) and nearby (lower right). Lighter-colored area is the elevated ridge. (Photo by William Marquardt.)

from the ridges above the court. The waterlogged deposits are being carefully water-screened using a series of nested screens, in order to capture organic materials of all sizes.

Two discoveries were not expected. First, there is an extensive oyster midden that lies beneath the courts and which is a couple of feet below current sea level. This means that people were living on Mound Key when sea level was much lower than today's. The second surprise was that waterlogged levels yielded uncharred seeds, wood, palm-fiber cordage (probably from Calusa fish nets), and even fish scales



Karen Walker draws profile diagram of the excavated berm. (Photo by William Marquardt.)



A close-up view of part of an earth oven shows a layer of shell below, then remains of the fire (dark area, with charred wood, ash), and then the shells from the cooked mollusks above. The greenish color below is water — the midden continues beneath present-day water table. (Photo by Victor Thompson.)

— extraordinary organic preservation. This is only the third known southwest Florida coastal site with preserved cordage.

Participants in the January project included Karen Walker, Nathan Lawres, and me from the Florida Museum, University of Florida, and Victor Thompson, Isabelle Holland Lulewicz, Brandon Ritchison, Matt Colvin, and Michiel Kappers from the University of Georgia.

Dr. Michael Savarese (Florida Gulf Coast University), a geologist specializing in conservation paleobiology, has also played an important role in the project. He and his students from FGCU have cored deposits both at Mound Key and the surrounding oyster reefs in Estero Bay, and have been able to provide a long-term perspective on



At the Randell Research Center, volunteers Paula Streeter and Kevin Lollar waterscreen some of the deposits from Mound Key, February 25, 2017. (Photo by William Marquardt.)

geological history, environmental fluctuations, and human effects on the environment in Estero Bay and Pine Island Sound.

We are again indebted to Ted, Todd, and Tim McGee for graciously allowing access to their property and use of their dock. The research was sponsored by a collaborative research grant from the National Science Foundation and a grant from the National Geographic Society, with additional funding assistance from the John S. and James L. Knight Endowment for South Florida Archaeology, Florida Museum of Natural History. Participating institutions are the University of Florida, University of Georgia, and Florida Gulf Coast University.



All RRC newsletters are available online at <http://www.flmnh.ufl.edu/rrc/newsletter/>

Updates on findings are posted on facebook at "Mound Key Archaeology".

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RRC News

Editor: William Marquardt

Writers:

William Marquardt
Denége Patterson

Production: GBS Productions



Gift Shop & Tour Information:
(239) 283-2157

Send questions or comments to:
Randell Research Center
PO Box 608
Pineland, FL 33945-0608

Telephone: (239) 283-2062
Email: rrc@flmnh.ufl.edu
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Phone 239/283-2062
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Sincerely,
Bill Marquardt

William H. Marquardt
Director
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