Friends of the
Randell Research Center

March 2020 • Vol. 19, No. 1

Calusa Island Update

Eroding Midden Focus of New Research

by Cindy Bear

There are few places in Southwest Florida where evidence of people of the Late Archaic period through modern times is preserved. Calusa Island, separated from the Northern terminus of Pine Island by Jug Creek, is one such place. In the June 2016 edition of this newsletter (available on our website), we reported on the first phases of research and monitoring on North Beach of Calusa Island where exposed midden, dating to the terminal years of the Late Archaic (1200-500 BC), was crumbling away due to shoreline erosion.

Results of limited archaeological work showed estuarine conditions of the time were especially favorable for oysters. People also collected, ate, and discarded the shells of whelks, crown conch, quahog clams, and scallops. A variety of fish were captured too including gafftopsail catfish and pinfish. Analysis of ancient burned plants from midden layers showed that mangroves and pine trees grew in the area. And, the rate of shoreline loss was calculated at approximately 94 feet over 70 years with over 30 feet lost during the previous three decades.

The jagged, eroding North Beach midden. Pictured are volunteers Gloria Andrews and Melonnie Hartl. (Photo by Michelle LeFebvre.)

In our December 2018 newsletter, we described the modified, monthly, midden measuring techniques and announced that the Florida Public Archaeology Network (FPAN) was also collaborating on the project. We also described the impact of Hurricane Irma, which cut away over 15 inches of one midden section and uprooted a gumbo limbo tree, exposing artifacts that were once safe under its roots.

Michelle LeFebvre, Kevin Lollar, and Amy Dwyer screen materials at a shovel test pit. (Photo by Paula Streeter.)

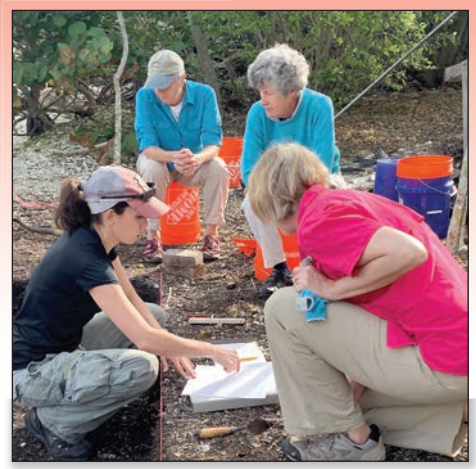
The next phase of research is now complete after a week-long project wrapped up on February 14. The project involved three types of archaeological investigation, each chosen to answer specific types of questions. We wondered how far the midden extended across the island and if it stretched into the mangrove fringe on the southern side. We wondered whether all the middens on the island were created from activities of Archaic people or if Indian people of later time periods might have been present also. We wondered what information about past environments might be found in the layers just inches below areas receiving heavy impacts from island visitors and from the profile of the eroding edge.

To answer the first question, we used a *shovel test survey.* Shovel tests are used by archaeologists to gather information with minimal impact. Holes are dug straight down, about 20 x 20 inches and less than 3 feet deep. Artifacts are recovered and soil types examined. Results can indicate areas of human activity and help guide future investigations.

We dug nine shovel test pits. All material from the pits was sifted through ¼-inch archaeological screens. Artifacts such as pottery or shell tools were removed for analysis. The placement of each hole was mapped using a

Continued on page 2

Continued from page 1



FPAN archaeologist Rachael Kangas led the excavation unit. With Rachael are volunteers Helen Fox, Pat Yourdon, and Nancy O'Brien. (Photo by Michelle LeFebvre.)

total station, an engineering and surveying tool that allows measuring a position horizontally and vertically at the same time. Strangler fig and gumbo trees and white indigo berry and white stopper shrubs made for dense, shady, and humid work areas.

While crews worked on the arduous digging, another crew worked on the shoreline to make the jagged, eroding midden edge into a vertical, straight wall known as a profile. The profile was drawn in great detail and photographed in order to reveal the layers of deposition. These layers form by the actions of people, by processes of the environment, and by the combination of the two. The profile drawing revealed complicated deposits, not just simply one layer upon another. We also cut out and bagged, by layer, a column of the midden from the top to the exposed bottom in a process known as bulk column sampling.

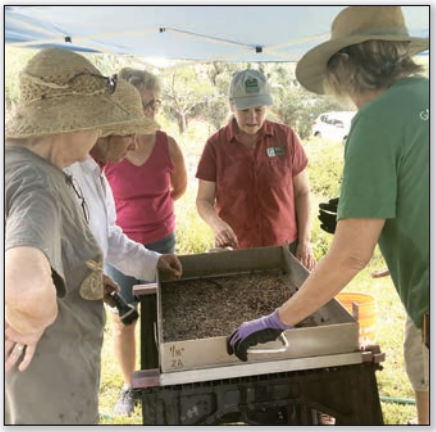
At another area of the island, an excavation unit was opened. For our purposes, the unit was 1 meter by 2 meters (about 3 x 6 feet) and sediments were carefully removed and screened for each 10 centimeters (cm) of depth. Each such 10 cm – about 4 inches – is known as a level.

After every 10-cm level, the profiles and the bottom were drawn, photographed, and any areas of potential features highlighted. "Features" may reveal the presence of past buildings, fire pits, etc. Artifacts were mapped in place and also recovered from the screens. Although the goal of an excavation unit is to reach the point where there is no longer evidence of people, with so few days and the work proceeding with due care, we concluded the unit at about 20 inches below the surface.

The next phase of work has begun at our Ruby Gill House labs and involves washing, sorting, and labeling of materials from the shovel test pits and excavation unit. Extreme care is taken to insure the exact location where individual items or features came from. These finds are recorded on a permanent catalog. The column sample materials are being water screened so that even tiny fish bones and shells can later be identified, counted, and used to create a view of the environmental conditions of the past.

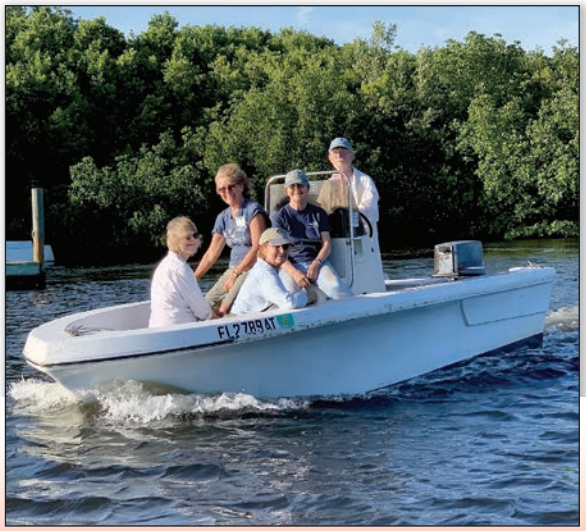
Members and benefactors of the Randell Research Center help make this work possible. RRC staff members worked on-site, coordinated all logistics, and will supervise the ongoing preparation of field materials for analysis. The Board of the Calusa Land Trust granted permission for the work to take place on their parcels. Island landowners Bill Spikowski, Alison Ackerman, Gloria Andrews, and Ed Chapin also granted permission and provided essential back-ground information and support.

Florida Public Archaeology Network staff members Rachael Kangas, Sara Ayers-Rigsby, Victoria Lincoln, and Mallory Fenn provided field leadership and expertise. Florida Museum Assistant Curator Michelle LeFebvre and RRC Co-Director Karen Walker are the lead investigators. Michelle supervised all field work.



Karen Walker instructed volunteers on the water screening tasks that that will allow analysis of tiny shells and bones. Barbara Brown, Lawrencine Mazzoli, Melonnie Hartl, and Nancy O'Brien are shown here with Karen. (Photo by Ellen Ballard.)

RRC staff member Andy Jendrusiak piloted a boat loaned to us by "Spike" Goehry. Robert Ballard, President of the Calusa Land Trust, ferried crews to and from the island each day in his boat, as did Ed Chapin. Over 15 RRC volunteers were involved in field work and in educating the visiting public about the activities. We could not have accomplished the investigation of this unique site without their dedication.

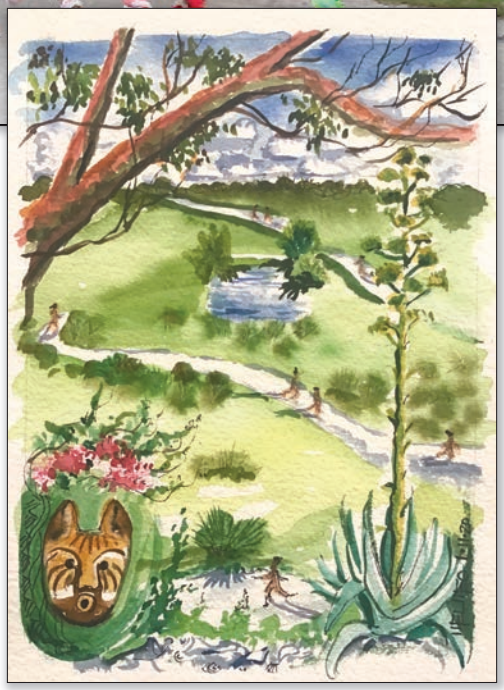


Ed Chapin provided boat transport for crews and equipment every day. Enjoying the ride are Kahla Gentry, Melonnie Hartl, Nancy O'Brien and Cindy Bear. (Photo by Michelle LeFebvre.).

(Photo by Andre Mule.)

The Calusa 5K

Hosted by the Pine Island Kiwanis Club at the Calusa Heritage Trail, the Calusa 5K took place on Saturday, January 11 with runners hailing from as far away as Chicago and ranging in age from 8 to 79. The concluding sprint on the short loop of the Calusa Heritage Trail was the course highlight. Ryan Kinney, a sophomore at Ida Baker High School, was overall winner with a time of 18 minutes and 59.8 seconds. Local artist and long-time RRC supporter Mel Meo created art work for the framed prints provided to winners in various categories. A portion of the proceeds will be shared with the RRC by the Pine Island Kiwanis Club and earmarked for education activities with children. We look forward to the second annual event with planning already underway.

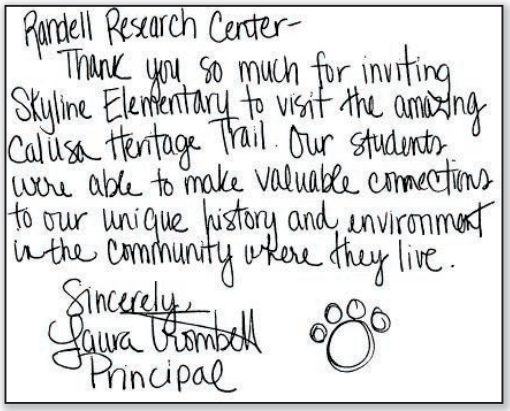


(Art work by Mel Meo.)

Making Connections

Skyline Elementary School

We know students participating in our Discovering the Calusa field trip to the Calusa Heritage Trail enjoy learning about archaeology, the estuary, and the Calusa Indians but discerning if our activities are effective in teaching specific concepts requires assessment. This season we are surveying students about their engagement and learning ways we can improve. And, a note from a principal provided some evidence we are meeting our teaching goals. In December, over four days, all the Grade 4 students of Skyline Elementary School took part in the field trip with Principal Laura Trombetti participating one day. Soon after she sent a thank you note and wrote that students were able to make "connections" between history, environment, and their community. Developing connections is vital to archaeological understandings and to understanding the interplay of humans and the environment through time. We are delighted Ms. Trombetti provided the positive feedback! Thank you to our members and donors who make these field trips possible through contributions to our endowment and our operating funds.



Randell Research Center-
Thank you so much for inviting Skyline Elementary to visit the amazing Calusa Heritage Trail. Our students were able to make valuable connections to our unique history and environment in the community where they live.
Sincerely,
Laura Trombetti
Principal

Friends of the
Randell Research Center
PO Box 608
Pineland, FL 33945-0608

Forwarding Service Requested

Non-profit
Organization
U.S. Postage
PAID
Pineland, FL
33945
Permit No. 26

Upcoming Event

One World

Florida Museum Speaker Series 2020

The One World Speaker Series brings faculty and staff, who are skilled in sharing their work, to our classroom. Admission to the talks is free. However, *pre-registration is required.* To reserve your seat, call Linda at 293-283-2062 or email at lheffner@flmnh.ufl.edu.

April 18, 11 a.m.

Calusa Heritage Trail Classroom

"Fossil Horses and Climate Change: Lessons Learned in Deep Time"

Bruce MacFadden is the Director of the Thompson Earth Systems Institute at the Florida Museum and President of the Paleontological Society. He has authored and co-written 200 peer-reviewed articles in scientific journals. His new book, *Broader Impacts of Science on Society* draws on his work with teachers, schoolchildren, scientists and fossil clubs. His talk will focus on the evidence for horse evolution and climate change as learned from the fossil record. He will also describe how his team is working to engage K-12 teachers and students to learn about these important topics.

Bruce MacFadden, Director, Thompson Earth Systems Institute, Florida Museum.

Newsletter Updates

by Cindy Bear

In January 1987, the first Calusa News, a newsletter of the Southwest Florida Project was provided to supporters of archaeological preservation and research. A great deal was accomplished between 1987 and 2002 when the newsletter name was changed to reflect the 1994 establishment of the Randell Research Center. While background colors and layout design changed, the newsletter remained our primary method for sharing content and news. Recently, we began making the print edition available in color. One thing stayed the same throughout the years. Each past edition we listed the names of donors for the quarter grouped by category of giving and each year an Annual Honor roll listed all donors at the Contributing ($100) level and above. With this edition, we will retire those lists following a trend of nonprofit organizations toward heightened donor privacy and to dispel misconceptions that some donors are more valued than others. Contributions, donations made at the Calusa Heritage Trail, sales from the bookstore, and interest income from our endowment, collectively form the majority of our operating budget. Each dollar helps us preserve and protect the Calusa legacy through research, land management and teaching. We hope you will continue to enjoy and learn from the newsletter and please let us know if you have any questions or concerns. Thank you.

RRC News

Editor: Cindy Bear
Writers: Cindy Bear
Production: GBS Productions

FLORIDA MUSEUM

UF UNIVERSITY of FLORIDA

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
Website: www.floridamuseum.ufl.edu/rrc

Friends of the Randell Research Center

Pineland, Florida • March 2020
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,

Cindy Bear
Co-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:

Membership Coordinator • Randell Research Center • PO Box 608 • Pineland, Florida 33945

- ❑ **Individual ($30) and Student ($15):** quarterly Newsletter and free admission to Calusa Heritage Trail
- ❑ **Family ($50):** The above + advance notice on special events and programs
- ❑ **Contributor ($100–$499):** The above + 10% discount on RRC publications and merchandise
- ❑ **Sponsor ($500–$999):** The above + invitation to annual Director's tour and reception
- ❑ **Supporter ($1,000–$4,999):** The above + listing on annual donor plaque at Pineland site
- ❑ **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.

Permanent Address

_____
Name

_____
Address

_____
City / State / Zipcode

_____
Email address

Seasonal Address (so we can send you your newsletter while you are away)

_____
Name

_____
Address

_____
City / State / Zipcode

Use my seasonal address from _____ to_____.
(date) (date)

Photo by A. Bell.

For more information about establishing an endowment, creating a bequest or charitable remainder trust, or giving gifts of property or securities, please contact Marie Emmerson, Senior Director of Development, emmerson@ufl.edu, cell: 352-256-9614.
The Randell Research Center is a program of the Florida Museum of Natural History, University of Florida.
Thank you for your support.

Books, Videos, Cards, and RRC Gear

BOOKS ON SOUTHWEST FLORIDA'S ARCHAEOLOGY & HISTORY

	NUMBER ORDERED	COST
A Tour of the Islands of Pine Island Sound, Florida: Their Geology, Archaeology, and History by Denége Patterson. RRC Popular Series No. 2, softcover, full color, $29.95		$
The Plant World of the Calusa: A View from Pineland written and illustrated by Martha Kendall, RRC Popular Series No. 1, softcover, full color, **SALE! $10.00**		$
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		$
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		$
Missions to the Calusa by John H. Hann, U. Press of Florida, hardcover, $35.00		$
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'Donoughe. 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		$

Total for items ordered:	$
Friends of the RRC who give at the $100 level or above may deduct 10% Discount: —	+
Florida residents add sales tax:	+
Shipping: Add $5.00 for first item, $1.00 for each additional item:	$
TOTAL:	

To place order, make check payable to **University of Florida Foundation** and mail to:

Randell Research Center
PO Box 608
Pineland, FL 33945.
Questions? 239-283-2157
E-mail: rrc@flmnh.ufl.edu

Name (please print): _____

Mailing address (please print): _____

_____

Zip code (please print): _____