

# Friends of the Randell Research Center

Vol. 1, No. 3

September 2002

## Pavilion Excavations Completed

by Corbett Torrence and Theresa Schober (Florida Gulf Coast University)

**Archaeological** excavations at the site of the future RRC teaching pavilion are finished. In compliance with the Lee County Land Development Code, the Randell Research Center (RRC) hired us to determine the impact of the planned construction on archaeological deposits.

Digging a series of small tests in March 2001, we found archaeological deposits across the project area, east of Waterfront Drive and north of Brown's Mound. Results of these tests prompted more intensive excavations, conducted during a Florida Gulf Coast University (FGCU) archaeological field school from May 21 to June 22, 2001. These pits revealed that the area is covered by fill dirt. Ted Smith once told us that this fill was drag-lined in from the bay during the early twentieth-century construction of Pineland's sea wall. Additionally, we identified at least three ridges running north-south, generally parallel. The ridges are mainly composed of shell midden — discarded shells, dirt, fish bones, and charcoal. These date to the Caloosahatchee IIA period (A.D. 500-800), judging from pottery found in them. The shell-midden layer overlies an



FGCU field school students at work at the site of the proposed teaching pavilion, June, 2001 (photo by Bill Marquardt).

earthen one, Zone 5. Deeper still, there is another layer of shell midden, with many oyster shells and only plain, sand-tempered pottery sherds, a characteristic of the Caloosahatchee I period (A.D. 1-500 at Pineland).

When we exposed the lower portion of Zone 5, we saw numerous circular sand-filled cavities extending through the compacted sediment. There were two distinct size ranges, averaging 4 and 8

inches in diameter. We believe that this part of Zone 5 might represent the remains of a "living floor," and probably of a structure, which we estimate to date to about A.D. 400-600. Because Calusa structures are so poorly known, we decided to expand the excavation to try to find the structure's limits and learn more about it. This additional exploration was funded by the RRC, through a grant from the Wentworth Foundation. We have now finished a preliminary report, and we begin detailed analysis of our findings in September, assisted by FGCU students.

Designed by Fort Myers architect Jeff Mudgett (Parker, Mudgett, and Smith, Architects) and engineer Tim Keene (Keene Engineering), the pavilion and parking area were planned to minimize impact to the archaeological deposits by placing up to 3 feet of fill over the construction areas and by placing the building up on pilings. This plan, in combination with the archaeological study, assures that no significant archaeological information will be lost due to the construction. The pavilion dig is contributing new information on Pine Islanders who lived some 1500 years before us.

## MangoMania 2002

by Lana Swearingen

**Over** 200 people showed up at the RRC booth at the MangoMania festival, July 6-7. Bud House and a crew of volunteers set up and took down the tent. Pat Blackwell, Ken Evans, Diane Maher, Joan McMahan, and Lana Swearingen set up 3 tables with displays, sale merchandise, and hands-on activities. Our banner, hung on the front of the tent, caught everyone's eye, and the shaker screen with a poster of children participating in a dig at Pineland, set outside the tent, drew them in. A replica of a Calusa fishing net served as a backdrop to the displays. Visitors couldn't resist the "Free, Take One" sign on a basket of posters. Dick Workman brought materials

for palm weaving and bracelet making and helped with those activities both days.

The displays included Calusa artifact replicas made by David Meo, shells and bones excavated from the mounds at Pineland, pottery from Cash Mound, fiber samples and cordage, and much more. The volunteers answered many questions generated by the array of interesting items. The palm weaving and twining were hits with adults and children. The enthusiasm of the volunteers encouraged people to stop and learn about the RRC and Calusa. Visitors were also encouraged to sign up for the RRC mailing list and volunteer



Volunteers Diane Maher, Joan McMahan, and Ken Evans introduce visitors to the RRC at MangoMania, July 2002 (photo by Lana Swearingen).

program. Fifteen people requested volunteer packages. Many more said that we would see them again.



# Report of the Coordinator

by John Worth

**Summer** at Pineland has been busy, despite the fact that the heat, rain, and mosquitos have kept the resident and tourist populations minimal. June witnessed our first week-long Calusa Institute for Lee County school teachers, sponsored by the Environmental Education program of Lee County Schools and the RRC. Rick Tully and I spent five busy days with a wonderful group of 20 teachers, from elementary to high school, learning about the archaeology, history, and environment of the Calusa Indians here on Pine Island (see page 4). Several teachers signed up as RRC volunteers, and future workshops are anticipated.

In July and August, while I spent a month doing archival investigations in Spain and a

week in Cuba (report to follow in the next issue), volunteer coordinator Lana Swearingen held several training sessions for docents interested in leading tours of the Pineland site. Several have already given their first tours, and we invite anyone else interested to contact Lana for more information. Several vegetation-clearing workdays were also held at Pineland, part of an ongoing struggle to keep the tropical vegetation from invading and consuming the trails and mounds.

This fall promises to be very exciting, as we continue to prepare for the imminent ground-



John Worth (foreground, right) watches as teachers pull a seine net to observe what lives in the near-shore waters near Pineland (photo by Diane Maher).

breaking on our new pavilion complex at Pineland. We hope all our members will be able to visit and see our progress over the next year.

## A Shady Porch on the Shell Mound

by Karen J. Walker

**It's** August. There's no air conditioning. Imagine cooling off with a tall glass of cold lemonade on a spacious, shady porch. And now imagine that porch to be high atop one of Pineland's ancient Calusa mounds, overlooking Pine Island Sound, catching a summer breeze off the water. From 1917 to 1927, just such a porch graced the entrance to a sizeable house on what today is known as Randell Mound. The structure is long gone, having burned in 1927.



The house that stood atop Pineland's Randell Mound from 1917 to 1927 (photo courtesy of Ted Smith).



Remains of 1920s house pillar at Randell Mound, April, 2002 (photo by Bill Marquardt).

In the old photograph that appears here, notice the pillars that supported the house. The underground concrete, brick, and mortar remains of these pillars were documented by RRC archaeologists and volunteers during a week of "historical archaeology" in April. The pillar bases were discovered a few years ago when new footer holes were dug for the construction of a privately owned new house. A turn of events ended construction plans and the property eventually became part of the RRC (see *Calusa News* no. 9, page 3, or visit [http://www.flmnh.ufl.edu/anthro/sflarch/calusa\\_9/rescued.htm](http://www.flmnh.ufl.edu/anthro/sflarch/calusa_9/rescued.htm)).

## New Friends of the RRC as of August, 2002

(Please let us know of any errors or omissions. Thank you for your support!)

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# Moundscaping

by Karen J. Walker

**Part 2** of our recent work on the Randell Mound took place in May. Our goal was to transform the mound into a place that could once again accommodate Saturday visitors without the risk of their falling into the weed-hidden holes. This is just one step of a long-term plan that eventually will open the RRC to daily visitors.

Our May objectives were to line with plastic and then fill the 29 footer holes with shell and sand and then begin to “moundscape” the property. This largely involved the skilled Bobcat work of RRC volunteer Gary Edwards, smoothing out the fill dirt without disturbing the underlying mound deposits. After that, advisory board member Dick Workman recommended, purchased, donated, and planted native railroad vine (*Ipomoea pes-caprae*) and beach sunflower (*Helianthus debilis*). Native plants such as these are low-growing and, once established, low-maintenance. Because the summer rains had not yet commenced, Pineland neighbors Rona

Stage and Pat Hagle donated water for the plants during the early days of June.

With the mound summit taken care of, moundscaping will continue with removal of invasive trees from the mound’s periphery. Also, under the guidance of Dick Workman, RRC’s volunteers are initiating a trail of identified native plants.



Pine Islander Gary Edwards works on the summit of Pineland’s Randell Mound (photo by Karen Walker).



Dick Workman and John Worth plant native railroad vine and beach sunflower on Randell Mound (photo by Karen Walker).

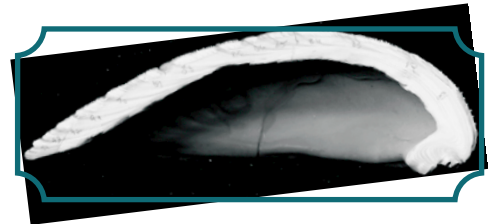
## Reading Climate from Calusa Clam Shells

by Donna Surge (Geology and Atmospheric Sciences, Iowa State University)

**People** have enjoyed eating clams for centuries. But only recently have scientists learned how to read climate information from the clams’ shells. Old shells can tell us about past climate patterns, thus helping us understand how modern trends fit into a bigger picture. One example is the current issue of how much recent climate change is due to people (burning of fossil fuels, deforestation, etc.) and how much is due to natural causes. So, where can we find pre-modern clam shells? Right! Pineland’s

middens and mounds contain many ancient shells discarded long ago by the clam-loving Calusa. They range in age from AD 50 to 1500, a stretch of time known for several climate shifts that affected human history in many parts of the world.

In association with the RRC, I am studying geochemical indicators of temperature and salinity in Pineland’s quahog clam (*Mercenaria campechiensis*) shells. Environmental archaeologist Karen Walker has already proposed past changes based in part on the diverse animal bones and shells excavated at Pineland. Now, the chemistry of the associated clam shells can test and refine those interpretations. For example, the archaeology suggests that AD 500-650 was the coldest period for the Calusa. Preliminary results from the clam-shell chemistry show that winters during this time averaged 4° to 6° F colder than those of the historically known Little Ice Age (AD 1350-1500).

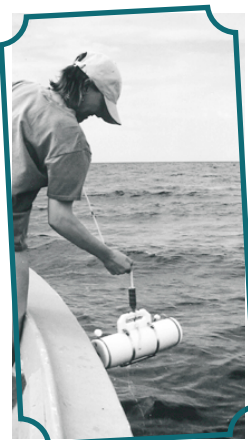


Cross-section of a quahog clam shows its annual growth rings. Geochemical analysis of small samples of the shell can reveal information about the environment in which the clam lived (photo by Donna Surge).

I appreciate the assistance of the Florida Museum’s Irv Quitmyer (Environmental Archaeology) and John Slapcinsky (Malacology) and of José Leal (Bailey-Matthews Shell Museum, Sanibel).



Pine Island fisherman Richard Lolly provided the research vessel and technical support for the June collection work (photo by Karen Walker).



An important aspect of the research is understanding modern clams and their local water conditions. In June, I collected water samples from the Peace River to the Gulf (photo by Karen Walker). This fall, we hope to locate live clams for geochemical analysis.

how much is due to natural causes. So, where can we find pre-modern clam shells? Right! Pineland’s

# Teachers Explore the Past

by Rick Tully (Lee County Environmental Education)

**Early** this summer, twenty teachers invested a week learning about the Calusa Indians and their involvement with the environment. We listened to the experts, collected samples from Pine Island Sound, studied artifacts, explored ancient village sites, and envisioned Calusa lifestyles by replicating known artifacts and technologies.

John Worth provided daily insights into the current knowledge of the Calusa and how we have gained those understandings. Our explorations included examining real artifacts, collecting real data, and fighting real mosquitoes at real habitation sites.

We visited the Barbara Sumwalt Museum on Useppa Island and toured Pine Island Sound on the *Tropic Star*.

We spent one morning dip-netting and seine-netting along the edge of the Sound to learn about current fish and shellfish populations. We imagined what this one daily event might have been like for the Calusa. We also began a process of data collection about the current faunal inhabitants of the area. This information could ultimately shed light on Calusa food resources and the environmental impacts the Calusa may have had. We capped the day

with lab work led by Karen Walker. Rough collections of broken shell and bone fragments from Calusa habitation sites were carefully sorted to help make sense of the archeological record. And yes, we all can now identify a 3-mm atlas bone from a pinfish!

No understanding of the Calusa lifestyle would be complete without some canoe travel. Our own muscle power took us to

.....  
Lee County teachers prepare to explore Brown's mound with John Worth.



Lee County teachers study the fauna of Calusa environments by sorting and identifying shells and bones from the mounds (photo by Rick Tully).

Josslyn Island, where we traversed the many small mounds that occupy its southern end. The mosquitoes seemed particularly pleased by our visit. With topographic maps in hand, we tried to imagine the size of the human population that once thrived there.

Every successful workshop provides enough information to get started and enough engagement to keep looking for more. Although this institute is finished, the work and collaboration of the teachers is just beginning. The teachers will now share their lesson plans and participate in advanced and follow-up training. Stay tuned as the learning evolves!



**RRC**  
news

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RRC Endowment Gifts as of  
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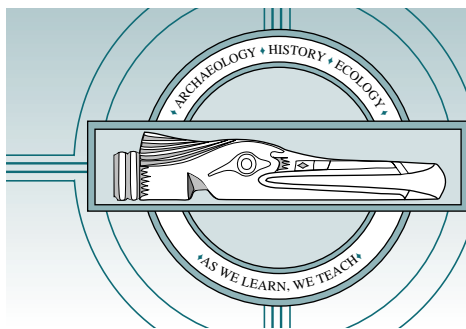


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# Friends of the Randell Research Center

Pineland, Florida • September, 2002

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Sincerely,

John E. Worth, Ph.D.  
Coordinator of Research Programs and Services  
Randell Research Center

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