

Friends of the Randell Research Center

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New Fieldwork at Pineland Excavations Build on Previous Research

by John Worth

With the advent of the new year and the combination of drier weather and pleasant temperatures, the RRC has renewed archaeological fieldwork in the south pasture of the Pineland site. In 1990, backhoe trench excavations conducted in several places across the site were designed to reveal subsurface layering. Drawings of the layers in these trenches show obvious stains from rotted ancient posts, specifically in two distinct layers of deposits in a ridge near Pineland's Old Mound. Both layers probably represent buried floors dating to the earliest centuries of Pineland's Native American occupation (before A.D. 500). We hope to perform radiocarbon dating on samples from this excavation in the near future, and are actively soliciting sponsorships to cover the expense of this work.

Both layers are above the dry-season water table, and both are located in an open area of the site that can be explored and expanded, so I

proposed new excavations in this area to the Research and Collections Committee of the RRC Advisory Board. With enthusiastic support and offers of technical advice and collaboration, the proposal was approved and fieldwork began in late January. With the considerable assistance of RRC volunteers (as well as a group of Lee County teachers who spent a day with us in the field—see article by Dan Marsh on p. 4), we have already opened two 1-x-1-meter test pits near the 1990 trench. Both pits penetrated a secondary deposit of shell apparently pushed over from Old Mound decades ago, revealing intact precolumbian deposits with abundant refuse. Included were several pottery sherds that can be fit back together. Even more important, at the base of this dark brownish gray sand we have already uncovered a number of post stains and other features that probably relate to precolumbian houses or other structures.



Teachers and RRC volunteers and staff excavate in secondary shell deposit next to Trench 5.

The excavation is only just beginning, but over the course of the next year and a half we hope to explore these occupational horizons more fully. Our pace is deliberate and methodical, but with any luck this new fieldwork will allow us to build on the rich body of information already generated at Pineland during previous projects, and shed new light on the architecture and daily lives of average Pineland residents more than 1,500 years ago.

Harbor Science Blossoms

by Ernest D. Estevez, Director, Center for Coastal Ecology, Mote Marine Laboratory, and RRC Advisory Board Member

The good work of the RRC has done much to document the importance of Charlotte Harbor in the lives of earlier humans, and now the Center's prestigious work at Pineland is joined by a new campaign to assess the same harbor's modern-day ecological health. Scientists at Mote Marine Laboratory, Sarasota, have undertaken a long-term study of the harbor's chemistry and biology, and a significant part of the work is staged at a new facility located directly across Waterfront Drive from the Pineland archaeological site. Pineland occupies the geometric center of our study area, which ranges from the Peace and Myakka to the Caloosahatchee Rivers, Charlotte Harbor and adjoining inshore waters, and the near-shore Gulf of Mexico. The study, intended to honor the memory of lab benefactor William R. Mote,

engages almost all of Mote's Ph.D.-level scientists in chemistry and biology. The Mote Scientific Foundation provides the core funding for the campaign, but investigators have attracted other grants as well as research collaborators and student interns.

The basic scientific objective is to learn the roles of freshwater inflow in the ecology of the harbor, especially as manifest in harbor plants and animals. Our Pineland facility is a residence and point of embarkation for Mote and other scientists. We have equipped it with computers, secure internet support, and a marine VHF radio. A weather station provides the public with up-to-date information over the world wide web (www.mote.org/pineland/Pineland_Weather.phtml).



Field tests of snook physiology being conducted in shallow waters off the Mote Field Station (photo by A. Adams).

In addition to exploratory probes of the Pineland tide flats with John Worth, looking for possible buried archaeological structures, I have the honor of recently joining the RRC Advisory Board and look forward to developing other joint research and educational programs between our organizations.

Annual Honor Roll

Each year the Randell Research Center will recognize all those who have given \$100 or more to the *Friends of the Randell Research Center* during the previous calendar year by listing them in the Annual Honor Roll, presented for the first time below. The *Friends* organization was inaugurated during the last three months of 2001, so this first Honor Roll covers the period

from October 2001 through December 31, 2002. In cases where 2001 memberships have already been renewed, the higher level of giving during the two years is recognized below. With this Honor Roll we extend our heartfelt appreciation for the continued financial support that these and all our gifts represent.

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Tuesday at the RRC

by Lana Swearingen, RRC Volunteer Coordinator

If it's Tuesday, you are sure to find more volunteers than usual at the RRC. In the beginning, a small group of volunteer members of the Zoo-archaeology Team met on that day to clean and catalog fish skeletons for the RRC's comparative collection. Karen Walker taught the volunteers well, and they reveled in the discovery of an identifiable fish bone or a new species awaiting maceration in the freezer. At times, crew members would find themselves in a quandary. For example, trying to collect some good-sized samples of shark skin from a 3-foot black tip shark presented a challenge. (It is believed that the Calusa may have used shark skin as sandpaper, and we wanted to try it out.) But it was quickly discovered that modern tools were just not up to the task of cleaning the underside of the skin. At the peak of their frustration, volunteer Barb Thomas suggested the Calusa method, using

a quahog clam shell as a scraper. With the ease of methods tried and true, the skin was cleaned in minutes. It can't be said enough that it always pays to have the right tool for the job.

Over time, more activities were added to Tuesday's schedule, until the hours spent at the Center grew from a few in the morning, to "Oh my gosh, is it 3 o'clock already?" In addition to the fish project, biweekly volunteer staff meetings are held on Tuesdays. John shares information about the state of the RRC and volunteer coordinator Lana Swearingen announces upcoming tours and events that require volunteer support. News of the Center's programs is spreading fast, but the docents are up to the task. Diane Maher, Dave Hurst, Marty Kendall, Gloria Andrews, Gary Edwards, and Lana Swearingen cover tour groups ranging from 4th graders to Elderhostel seniors. Recently



Docents Marty Kendall and Diane Maher lead tour of Pineland site for Elderhostel group.

added to Tuesday's schedule is a task for which volunteers are not lacking. A new dig has started at Pineland, and volunteers who attended John's archaeology training sessions now have the opportunity to apply what they learned in the field. If asked, every volunteer would tell you that the return on their time and efforts is immeasurable.

Soapberry (*Sapindus saponaria* L.)

by Dick Workman, RRC Advisory Board Member

When John K. Small was “botanizing” the shell mounds of the coasts of Florida in the early part of the last century, soapberry frequently appeared in his notes. The scientific name for this mainly-tropical genus is *Sapindus*. The name assigned to the plant by Linneaus is from the Latin for soap (*sapo*) and Indian (*indicus*) referring to the property of the seed coverings to produce a soapy lather when rubbed between the hands of Indians with water. I have tried it and it works well with non-Indian hands too.

There are two species native to Florida. *Sapindus marginatis* occurs in northern Florida and is distinguished by a lack of wings on the compound leaf stems. The tropical *Sapindus saponaria*, a.k.a. wingleaf soapberry, grows mostly in the Keys and was probably transported by people to south-west Florida for use of the biologically active saponin compounds in the plant. Mound Key, the Calusa stronghold in Estero Bay, harbors a large specimen of this tree. Lots of seeds and seedlings can usually be found under this tree.

Wildlife aren't known to eat the seeds, so they don't distribute them. But there are several reasons why people would collect the plant and move it from place to place. The hard brown seeds are round and about the size of a small marble. Their use as beads and buttons is known. In addition to use of the seed coverings for soap, the seeds can be crushed and used to poison fish — a practice that today is illegal. The compounds in the seeds when released near fish in the water interfere with their respiration and the stunned fish float to the surface for easy collection.

Fishing with plant poisons probably required a lot of trial-and-error-developed skills. Fish with too much poison in them might well spoil the chowder.

Saponins also occur in different forms in food plants such as tomatoes, beans, and other modern



Dried soapberry specimens from Mound Key in RRC botanical comparative collection (individual seeds at top).

table fare. The biological activity of saponins is currently being studied for use in fighting cancer and heart disease. One current researcher refers to some of the saponin compounds found in edible plants as “natural antibiotics.” Perhaps the Calusa medicine kit included some of these plants.

New and Renewing Friends of the RRC as of February 28, 2003

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

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Archaeologists for a Day

by Dan Marsh, RRC Volunteer, English Teacher (retired)

Unit 701S 811E – Level 86. No, this isn't an address for a condominium apartment on Pine Island, but a precise location for our archaeological dig. On Feb 14th a group of Lee County teachers met with John Worth to dig at the excavation site where John has detected indications of posts used to support Calusa structures. John had provided much anticipatory information and the group was ready to get down to some serious digging. However, we quickly realized we weren't exactly digging, but more like cutting the dirt and transferring it to buckets, with some brushing when artifacts were found. Three teachers at each 1-x-1-m hole learned how to hold the trowel at just the right angle to make the cut. The buckets of dirt where passed to the shaker-screen teams, who carefully examined the material. Before the material could be dumped into the waste pile, volunteers Barb Thomas and Gloria Andrews had to be called for a final inspection to make sure our untrained eyes had not overlooked anything. They praised us, and calmed us down when we got excited over nothing but an ordinary oyster shell.



Biology teacher Greg Koza and 3rd-grade helper Christopher Worth pose with mapped specimen from testpit.

The process continued until we passed through the shell layer and exposed the black sandy surface. Greg Koza, our marine biologist from North High, uncovered our first large pottery sherd. All work stopped as the phrase "I think we've got something here" wafted on the breeze. We excitedly peered into the hole as a small piece of orange-colored pottery was exposed. Volunteer Lana Swearingen assisted the diggers, and carefully documented the precise location and depth of the find. Then the piece was carefully passed around and catego-

rized as a "sand tempered plain rim-sherd from an open bowl, 500 A.D. or earlier." Whew, heady stuff for us neophyte archaeologists.

Before we finished at the site, John showed us one last technique for retrieving information. Like a concrete finisher smoothing out a patio pad, he carefully smoothed out the moist sand surface with the trowel, looking for subtle cultural clues. In the glistening dark sand, vague outlines of post holes were revealed as well as charcoal flakes. We were again reminded of the art and science of archaeological study.

Our thanks go out to John Worth and his volunteers for providing us with this remarkable experience and empowering us with renewed enthusiasm for archaeology and our continuing study of the Calusa Indians.

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news

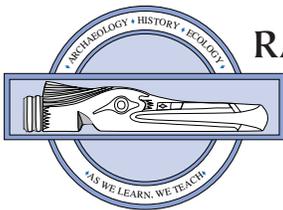
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