

# Friends of the Randell Research Center

Vol. 6, No. 1

March 2007

## 3,000 Years Ago on Useppa Island

### David Nutting Funds New Research on Useppa's Late Archaic

by Bill Marquardt

**With world-wide attention** focused on the issue of global warming, there has never been a greater need for reliable knowledge about climate change. In mid-November, a construction project on Useppa Island provided an opportunity to study both the climate and the culture of Pine Island Sound some 3,000 years ago.

Located about 3½ miles west of Pineland, Useppa has been studied periodically by archaeologists since 1979. Several houses are to be built on the island by VIP Structures, and Lot III-17 was the first to be affected by heavy machinery. Specifically, some dirt was to be transferred from that lot and used elsewhere. A backhoe cut exposed shells and fish bones—the remnants of many fine seafood meals—as well as a few pieces of ancient pottery and shell tools. At the invitation of the owner, the Randell Research Center's John Worth and Florida Public Archaeology Network archaeologist Kara Bridgman Sweeney, along with Bill Marquardt and visiting geoarchaeologist Julie Stein, studied the archaeological deposits and removed samples for further analysis.

Back at the laboratory, Bill Marquardt and Karen Walker water-screened the samples and selected materials for further analysis and radiocarbon dating. The dates indicate that people were on today's Lot III-17 between about 3,200 and 2,900 years ago. Because shellfish and fish are sensitive to changes in the environment, careful analysis can reveal characteristics of water salinity and temperature. Thus, the well preserved 3,000-year-old Useppa debris offers an opportunity to track climate and sea-level changes during what is thought to have been a time of abrupt climate change, coeval with the development of the famous Poverty Point village in Louisiana.

Lot III-17 is owned by architect-builder David Nutting. Familiar with Useppa's archaeological importance, and intrigued by the research potential, Mr. Nutting offered to share the costs of archaeological investigations. We plan to study past environmental conditions, seasonality, and subsistence.

To obtain information on environmental conditions 3,000 years ago, we will use a measurement of the amount of the oxygen isotope  $^{18}\text{O}$  in relation to  $^{16}\text{O}$  in the shells of surf clams. Different concentrations of these isotopes are absorbed by the clam while it is growing, depending on the temperature of the water. By collecting clams from the immediate area and determining the oxygen isotope concentrations in today's water conditions, we will calculate a modern "baseline" temperature curve for comparison. Then we will do the same analysis for the archaeological clams, in order to discover the temperature of the water 3,000 years ago.

By "seasonality" we mean determining what seasons of the year people were living at this particular place. In our previous work, we have been able



**TOP** – Visiting archaeologist Julie Stein (left) takes measurements while FPAN archaeologist Kara Bridgman Sweeney sketches the exposed midden. (Photo by B. Marquardt.)

**LEFT** – UF undergraduate intern Lauren Garroway catalogs 3,000-year-old shell hammers from Useppa's Lot III-17. (Photo by K. Walker.)

**RIGHT** – Meggan Blessing selects surf clam, quahog clam, and scallop shell specimens for use in climate and seasonality analysis. (Photo by K. Walker.)

to correlate the alternating light and dark growth bands in the shells of modern quahog clams with the seasons of year. Like tree rings, the shell bands have a predictable annual pattern that can be used to interpret the times during the year that people collected these clams for food. Bay scallops can also provide insight into seasonality. Because scallops rarely live for more than a year, their size is a good indication of what time of the year they were harvested. Both the seasonality and temperature research will be done by the Florida Museum's Irv Quitmyer and UF graduate student Meggan Blessing.

By studying the shell and bone remains, we will be able to determine food preferences as well as gain further insight into past environmental conditions. Undertaking the zooarchaeological analysis will be UF graduate student Michelle LeFebvre, assisted by UF undergraduate student Lauren Garroway. Michelle will identify the bones and shells to determine which fish and shellfish were being eaten 3,000 years ago, and what seasons of the year they were being taken.

We thank Mr. Nutting for his kind support, and we look forward to adding to our collective knowledge of southwest Florida's environment and people.

# “Art, Authors, and Archaeology” at Pineland Chamber of Commerce Joins with RRC to Celebrate Past and Present at Pineland

by Bill Marquardt

On Saturday, June 13, 2007, artists, authors, and archaeologists, and people of all ages gathered at the Randell Research Center for a day-long celebration of Pineland, past and present. Co-sponsored by the Greater Pine Island Chamber of Commerce and the RRC, the event featured over 20 painters, sculptors, potters, and jewelry-makers who entertained visitors with their works. Children enjoyed coloring, face-painting, and watching balloon creatures being made especially for them. Also of interest to many were demonstrations of ancient crafts by Robin Brown, Dick Workman, and John Beriault. FPAN archaeologist Kara Bridgman Sweeney and RRC volunteers sifted archaeological deposits from the Pineland site, and welcomed visitors to try their hand at sifting and identifying the finds.

Meanwhile, the new RRC classroom hosted five lectures by authors, who signed their books for those who wished to purchase them from the RRC's new book shop. Giving presentations were: Darcie MacMahon and William Marquardt, *The Calusa and Their Legacy*; Gerald and Loretta Hausman, *A Mind With Wings: The Story of Henry David Thoreau*; Robin Brown, *The Crafts of Florida's First People*; Charles Blanchard, *Boca Grande: Lives of an Island*; and Robert Edic, *Fisherfolk of Charlotte Harbor*.

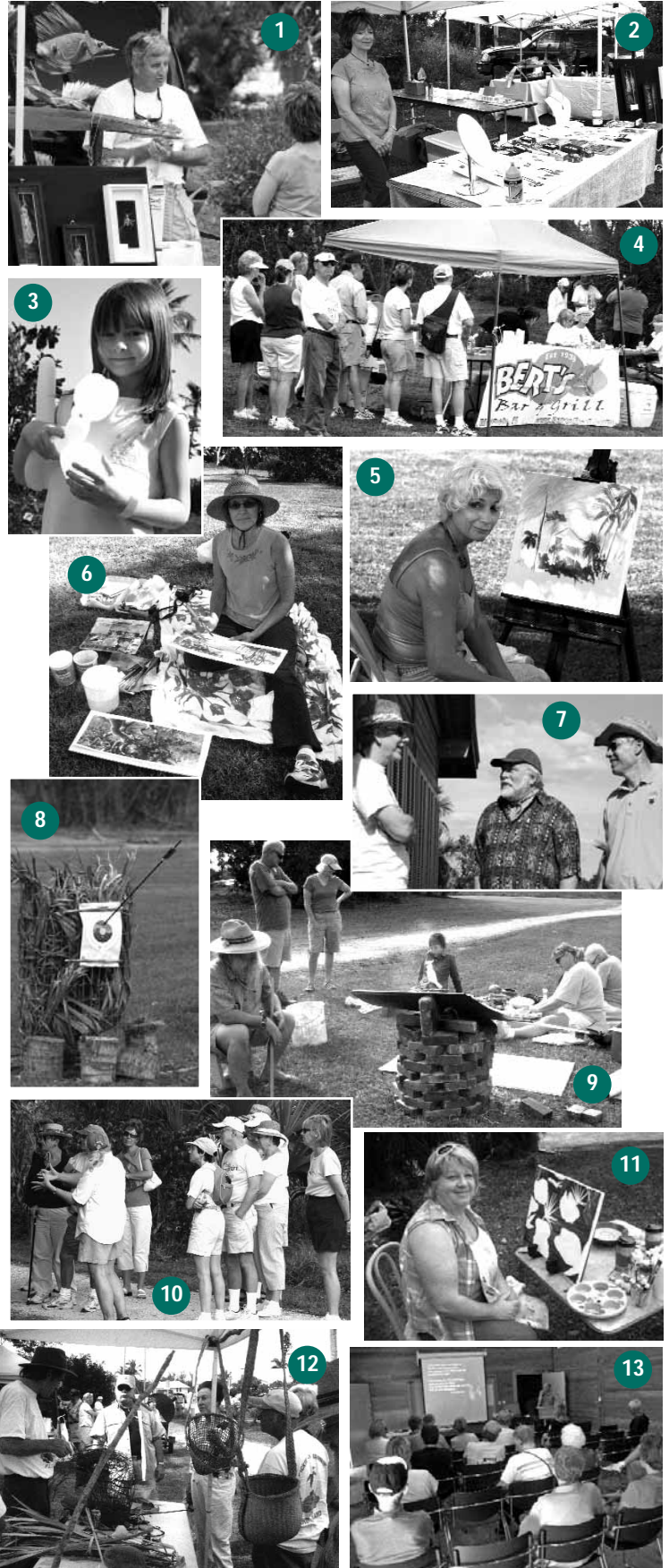
RRC docents gave guided tours of the Calusa Heritage Trail throughout the day. Other options were a “Calusa Heritage Mound Tour” through the harbor by boat with Tropic Star Cruises' Sally Tapager, or a “Calusa Ghost Tour” with John Paeno. At dusk, everyone enjoyed a bonfire and a performance by the dance troupe Danza Azteca Guadalupeana. Throughout the day, Bert's Bar and Grille from Matlacha offered hot dogs and drinks, and at dinner time home-made clam chowder and barbecue.

We thank the many volunteers who welcomed visitors, helped with parking and logistics, and made our artists and performers comfortable. We especially thank the Chamber personnel and volunteers for their hard work, and for co-sponsoring this event with the RRC. It was too much fun to do just once, so we hope to make “Art, Authors, and Archaeology” an annual affair. ➤

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1 Jack Glos discusses his colorful fish creations, made entirely from parts of palm trees. 2 Sue Brenner shows her collection of hand-crafted jewelry. 3 A happy visitor poses with her custom-made balloon poodle. 4 Visitors line up at the food tent for chowder and barbecue offered by Bert's Bar and Grill of Matlacha. 5 Rosemary Mazolla paints a nearby Pineland scene. 6 Kathleen Conover works on a painting of gumbo limbo trees. 7 Catching up: Charlie Strader, Chuck Blanchard, and Bob Edic visit on the porch of the teaching pavilion. 8 Bull's Eye! A skillful hurl of the atlatl (spear thrower) lands the dart in the center of the target. John Beriault demonstrated the ancient hunting technique to interested visitors. 9 Ceramic artist Chuck Koucky (left, seated) tends the fire while others make pottery. 10 RRC docent Diane Maher (left, foreground) gives a tour for visitors along the Calusa Heritage Trail. 11 Vicki Nichols works on a painting. 12 Dick Workman shows how ancient people used locally available materials to make sturdy baskets. 13 Robin Brown speaks about his book in the new RRC classroom.

(Photos by V. Amsler, D. MacMahon)



# FPAN Update

by Kara Bridgman Sweeney

From Diego, a fifth grader from Hancock Creek Elementary School in Fort Myers:

Dear Randell center,

*I love the center because I learn how the Calusa lived in South Florida. My favorite part was the mounds because I learn what they did with the mounds. They used the mounds for: the dead, bones, and tools. There is a special mound where they buried the dead and make a celebration close to the mounds and appreciate the spirits.*

As part of the outreach program of the Florida Public Archaeology Network (FPAN), I have spoken to some 3,500 students in local schools, where I deliver a slide show introducing archaeology and the Pineland site. Students have the chance to examine artifacts and replicas from the site during this initial meeting. I have had the pleasure of receiving thank-you notes from many of the students. Several of these groups have then come to the center for field trips, and then I have met them yet again at their schools for follow-up visits where they learn how to make pottery and cordage. I will be offering similar programs to area schools throughout the spring, as well as for Earth Week (April 16-20). Age groups who have received these programs range from second grade through fifth grade.

I have also had the opportunity to speak at several libraries in the area, and to help teach a class on local history at Edison College. These experiences have been rewarding, because I have met numerous people eager to learn a bit about archaeological methods and techniques.



FPAN archaeologist Kara Bridgman Sweeney (center, with hat) explains how to recognize bones and artifacts, as visitors try their hand at sifting archaeological deposits from Pineland. (Photo by D. MacMahon.)

The RRC partnered with the Greater Pine Island Chamber of Commerce in January for a very successful event called "Art, Authors, and Archaeology." This marked the first time the teaching pavilion was used for a major event. We set up a sifting station near the Surf Clam Ridge dig site, and showed visitors the types of materials typically recovered from a shell midden. RRC staff and numerous volunteers helped to guide visitors to their parking spots and along the trail, and I'd like to thank them for their efforts. I'd especially like to thank Roger and Beverly Stone, as well as Pat and David Townsend for assisting me in the archaeology demonstration exhibit along the Calusa Heritage Trail. Special thanks also are due to Jennifer Jennings for organizing the event.

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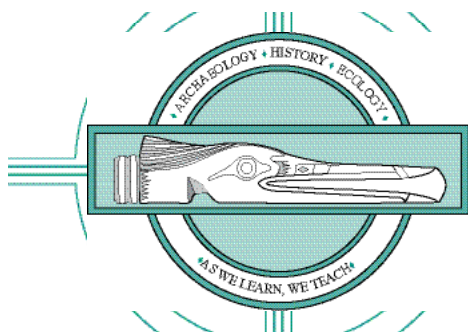
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# Friends of the Randell Research Center

Pineland, Florida • March, 2007

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Sincerely,

John E. Worth, Ph.D.  
Assistant Director  
Randell Research Center

***Please check the membership level you prefer, and send this form, along with your check payable to Friends of the Randell Research Center, to:***

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

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### *Culture and Environment in the Domain of the Calusa*

edited by William H. Marquardt; Monograph 1, softcover \$25.00

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### *Sharks and Shark Products in Prehistoric South Florida*

by Laura Kozuch; Monograph 2, softcover \$5.00

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### *The Archaeology of Useppa Island*

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

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by Charles Blanchard, illustrated by Merald Clark; hardcover \$19.95, softcover \$9.95

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### *Fisherfolk of Charlotte Harbor, Florida*

by Robert F. Edic; hardcover \$35.00

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### *Dearest Daught and Popsy Wells: Two Artists Named Sawyer*

by Marion S. Gilliland, hardcover \$20.00, softcover \$8.00

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